



# Electrical Terminal Service

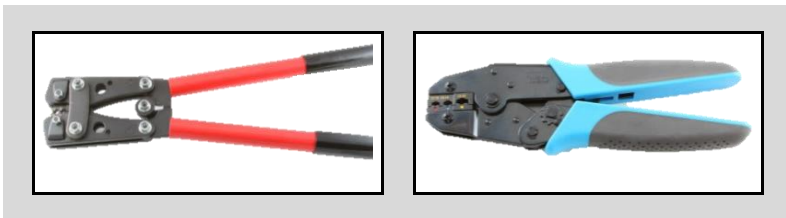
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# Butt Splice Terminals

## Butt Splice Terminals

Connects two wires together. Insert wires on each end until they reach the built-in wire stop in the center. Two crimps are required, one for each wire. **Compact** splices, also known as parallel splices, are 25-50% shorter than standard butt splices. Wires lie side by side within the terminal to save space and installation time. The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. The **nylon** insulation provides greater durability. It also allows you to see the wires in the splice to ensure a proper crimp. The **heavy duty** butt splices have extra thick walls for the most demanding applications. They are also extra long so you can double crimp for a better electrical connection.

### Non-Insulated



Wire Size (AWG)	Standard		Compact		Heavy-Duty	
		Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
26-22	MB-B	100	MB-P	100	-----	----
22-18	AB-B	100	AB-P	100	-----	----
16-14	BB-B	100	BB-P	100	-----	----
12-10	CB-B	100	CB-P	50	-----	----
8	DB-B	25	DB-P	25	DB-B-HD	10
6	EB-B	10	EB-P	10	EB-B-HD	5



Wire Size (AWG)	Standard		Compact		Heavy-Duty	
		Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
4	FB-B	10	FB-P	10	FB-B-HD	5
2	GB-B	10	GB-P	10	GB-B-HD	1
1/0	HB-B	10	HB-P	10	HB-B-HD	1
2/0	JB-B	5	JB-P	10	JB-B-HD	1
3/0	KB-B	5	-----	----	KB-B-HD	1
4/0	LB-B	5	LB-P	5	LB-B-HD	1

### Vinyl Insulated



Wire Size (AWG)	Color	Standard		Compact	
			Pkg. Qty.		Pkg. Qty.
22-18	Red	AP-B	100	AP-P	100
16-14	Blue	BP-B	100	BP-P	50
12-10	Yellow	CP-B	100	CP-P	50
8	Red	DP-B	25	-----	----



Wire Size (AWG)	Color	Standard		Compact	
			Pkg. Qty.		Pkg. Qty.
6	Blue	EP-B	10	-----	----
4	Yellow	FP-B	10	-----	----
2	Red	GP-B	10	-----	----

### Nylon Insulated



Wire Size (AWG)	Color	Standard		Compact		Heavy Duty		Window Splices	
			Pkg. Qty.		Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
26-24	Yellow	MN-B	50	-----	----	-----	----	-----	----
22-18	Red	AN-B	100	AN-P	50	AN-B-HD	25	AN-B-MS	25
16-14	Blue	BN-B	100	BN-P	50	BN-B-HD	25	BN-B-MS	25
12-10	Yellow	CN-B	50	CN-P	50	CN-B-HD	10	CN-B-MS	10

### Step-Down Butt Splice Terminals

Use step-down terminals to connect two different wire sizes and to connect two wires to one wire. The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. **Heat-shrink** butt splices are for use in harsh the environments. A **heavy duty** heat-shrink jacket makes it difficult to cut into these heat-shrink terminals during the crimping process.



Wire Size Range (AWG)	Non-Insulated		Color	Vinyl		Heat-Shrink		Heavy Duty Heat-Shrink	
		Pkg. Qty.			Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
26-24 to 22-18	-----	----	Red	AN-BM*	25	-----	----	-----	----
22-18 to 16-14	BB-BA	25	Blue	BP-BA	10	BS-BA	10	BSN-BA	10
16-14 to 12-10	CB-BB	10	Yellow	CP-BB	25	CS-BB	10	CSN-BB	10
12-10 to 8	DB-BC	10	Red	DP-BC	10	DS-BC	5	DSN-BC	10
8 to 6	EB-BD	10	Blue	EP-BD	10	-----	----	-----	----

\*AN-BM are nylon.

# Heat Shrink Butt Splice Terminals & 3-4 Way Terminals

## Heat-Shrink Butt Splice Terminals

For use in harsh environments. These terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat.

The **heavy duty** heat-shrink jacket makes it difficult to cut into these heat-shrink terminals during the crimping process, a common problem with basic heat-shrink terminals.

Use the **grease filled** terminals for sensitive environments where heat tools are restricted.

The **cool seal** terminal's gel is activated when the wire is inserted for a heat shrink like result, but requiring no heat. Simply strip, insert and crimp.

**Solder** splices have a transparent sleeve for simple installation and inspection. They have an open barrel with flux solder and an adhesive lined heat-shrink sleeve.

The **solder and crimp** butt splices are the most secure connection available. Requires one crimp on each end plus heat.



Wire Size (AWG)	Color	Standard Pkg. Qty.	Heavy Duty Pkg. Qty.	Economy Pkg. Qty.	Grease Filled Pkg. Qty.	Cool Seal Pkg. Qty.	Solder Pkg. Qty.	Solder and Crimp Pkg. Qty.
26-24	Yellow	MS-B 25	MSN-B 25	-----	-----	-----	MSS-B 25	-----
22-18	Red	AS-B 25	ASN-B 25	AS-BE 25	AN-GB 10	ACS-B 10	ASS-B 10	ASSC-B 10
16-14	Blue	BS-B 25	BSN-B 25	BS-BE 25	BN-GB 25	BCS-B 10	BSS-B 10	BSSC-B 10
12-10	Yellow	CS-B 25	CSN-B 25	-----	CN-GB 10	CCS-B 10	CSS-B 10	CSSC-B 10
8	Red	DS-B 10	DSN-B 5	-----	-----	-----	-----	-----

## High Temperature Butt Splice Terminals

Steel construction and nickel plating provide reliable electrical connections at temperatures up to 900°F. Connects two wires together. Insert wires on each end until they reach the built-in wire stop in the center. Two crimps are required, one for each wire.

Wire Size (AWG)		Pkg. Qty.
22-18	AH-B	100
16-14	BH-B	100
12-10	CH-B	50



## 3-Way & 4-Way Terminals

Securely connects multiple wires with one terminal. Constructed of three or four ring terminals riveted together through the stud holes.

The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. Requires one crimp per wire.

The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely. The nylon insulation also prevents incidental metal to metal contact that can cause shorts. Requires two crimps (terminal to wire strands, terminal to insulation of wire).

Use **heat-shrink** in harsh environments, these terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal.

A **heavy duty** heat-shrink jacket makes it very difficult to cut into these heat-shrink terminals during the crimping process, a common problem with basic heat-shrink terminals. If, in a rare instance, you do pierce the jacket, during the heat-shrink process the jacket will heal itself and fill in the hole with sealant. This is the highest quality line of heat-shrink terminals available.

### 3-Way Terminals



Wire Size (AWG)	Non-Insulated Pkg. Qty.	Color	Vinyl Insulated Pkg. Qty.	Nylon Insulated Pkg. Qty.	Heat-Shrink Pkg. Qty.	Heavy Duty Heat-Shrink Pkg. Qty.
22-18	-----	Red	AP-Y 25	AN-Y 25	AS-Y 5	ASN-Y 10
16-14	BB-Y 10	Blue	BP-Y 25	BN-Y 10	BS-Y 5	BSN-Y 10
12-10	CB-Y 10	Yellow	CP-Y 25	CN-Y 10	CS-Y 5	CSN-Y 10

### 4-Way Terminals



Wire Size (AWG)	Non-Insulated Pkg. Qty.	Color	Vinyl Insulated Pkg. Qty.	Nylon Insulated Pkg. Qty.	Heat-Shrink Pkg. Qty.	Heavy Duty Heat-Shrink Pkg. Qty.
22-18	-----	Red	AP-X 10	AN-X 10	AS-X 25	-----
16-14	-----	Blue	BP-X 10	BN-X 10	BS-X 5	BSN-X 10
12-10	-----	Yellow	CP-X 10	CN-X 10	CS-X 5	CSN-X 1

# Ring Terminals

## Ring Terminals



The **non-insulated** terminals require only one crimp onto the wire.

The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. Requires only one crimp onto the wire.

The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely. The nylon insulation also prevents incidental metal to metal contact that can cause shorts. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.

The **Mil-Spec** are rugged enough for the military, these terminals get the job done. Meets MIL-Spec MS/AS-25036.

Stud Size	Type	Non-Insulated		Vinyl Insulated			Nylon Insulated		
		Pkg.	Qty.	Color	Pkg.	Qty.	Color	Pkg.	Qty.
<b>26-24 Ga.</b>									
#2	Standard	MB-R2	100	-----	-----	----	Yellow	MN-R2	25
#4	Standard	MB-R4	100	-----	-----	----	Yellow	MN-R4	25
#6	Standard	MB-R6	100	-----	-----	----	Yellow	MN-R6	25
#8	Standard	-----	----	-----	-----	----	Yellow	MN-R8	25
#10	Standard	-----	----	-----	-----	----	Yellow	MN-R10	25
<b>22-18 Ga.</b>									
#2	Standard	AB-R2	100	-----	-----	----	Red	AN-R2	50
#4	Standard	AB-R4	100	Red	AP-R4	100	Red	AN-R4	50
#6	Standard	AB-R6	100	Red	AP-R6	100	Red	AN-R6	50
#6	Narrow-Profile	AB-R6S	100	Red	AP-R6S	100	Red	AN-R6S	50
#6	Short-Overall Length	AB-R6SN	100	-----	-----	----	-----	-----	----
#8	Standard	AB-R8	100	Red	AP-R8	100	Red	AN-R8	50
#8	Narrow-Profile	AB-R8S	100	-----	-----	----	Red	AN-R8S	50
#10	Standard	AB-R10	100	Red	AP-R10	100	Red	AN-R10	50
#10	Short-Overall Length	AB-R10SN	100	-----	-----	----	Red	AN-R10SN	50
1/4"	Narrow-Profile	AB-R14S	50	Red	AP-R14S	100	Red	AN-R14S	50
5/16"	Standard	AB-R56	100	Red	AP-R56	100	Red	AN-R56	50
3/8"	Standard	AB-R38	100	Red	AP-R38	100	Red	AN-R38	50
<b>16-14 Ga.</b>									
#4	Standard	BB-R4	100	Blue	BP-R4	100	Blue	BN-R4	50
#6	Standard	-----	----	Blue	BP-R6	100	Blue	BN-R6	50
#6	Narrow-Profile	BB-R6S	100	Blue	BP-R6S	100	Blue	BN-R6S	50
#6	Mil-Spec	-----	----	-----	-----	----	Blue	BN-R6S-MS	25
#6	Short-Overall Length	BB-R6SN	25	-----	-----	----	-----	-----	----
#8	Standard	BB-R8	100	Blue	BP-R8	100	Blue	BN-R8	50
#8	Narrow-Profile	BB-R8S	100	-----	-----	----	Blue	BN-R8S	50
#8	Short-Overall Length	BB-R8SN	100	-----	-----	----	-----	-----	----
#10	Standard	BB-R10	100	Blue	BP-R10	100	Blue	BN-R10	50
#10	Mil-Spec	-----	----	-----	-----	----	Blue	BN-R10-MS	25
#10	Star-Ring	BB-S10	100	-----	-----	----	-----	-----	----
#6, #8, #10	Multi-Stud	-----	----	Blue	BP-TD10	100	Blue	BN-TD10	50
1/4"	Narrow-Profile	BB-R14S	100	Blue	BP-R14S	100	Blue	BN-R14S	50
1/4"	Mil-Spec	-----	----	-----	-----	----	Blue	BN-R14-MS	10
5/16"	Standard	BB-R56	50	Blue	BP-R56	100	Blue	BN-R56	50
5/16"	Narrow-Profile	-----	----	-----	-----	----	Blue	BN-R56S	50
3/8"	Standard	BB-R38	50	Blue	BP-R38	100	Blue	BN-R38	50
1/2"	Standard	-----	----	-----	-----	----	Blue	BN-R12	25
<b>12-10 Ga.</b>									
#4	Standard	CB-R4	50	-----	-----	----	-----	-----	----
#6	Standard	CB-R6	50	-----	-----	----	-----	-----	----
#6	Narrow-Profile	CB-R6S	50	Yellow	CP-R6S	50	Yellow	CN-R6S	50
#8	Standard	CB-R8	50	-----	-----	----	-----	-----	----
#8	Narrow-Profile	CB-R8S	50	Yellow	CP-R8S	50	Yellow	CN-R8S	50
#10	Standard	CB-R10	100	Yellow	CP-R10	50	Yellow	CN-R10	50
#10	Mil-Spec	-----	----	-----	-----	----	Yellow	CN-R10-MS	10
#6, #8, #10	Multi-Stud	-----	----	-----	-----	----	Yellow	CN-TD10	50
1/4"	Narrow-Profile	CB-R14S	100	Yellow	CP-R14S	50	Yellow	CN-R14S	50
5/16"	Standard	CB-R56	100	Yellow	CP-R56	50	Yellow	CN-R56	50
5/16"	Mil-Spec	-----	----	-----	-----	----	Yellow	CN-R56-MS	10
3/8"	Standard	CB-R38	100	Yellow	CP-R38	50	Yellow	CN-R38	50
3/8"	Mil-Spec	-----	----	-----	-----	----	Yellow	CN-R38-MS	10
7/16"	Standard	-----	----	-----	-----	----	Yellow	CN-R76	50
1/2"	Standard	CB-R12	10	Yellow	CP-R12	50	Yellow	CN-R12	50
1/2"	Mil-Spec	-----	----	-----	-----	----	Yellow	CN-R12-MS	10
5/8"	Standard	CB-R58	5	-----	-----	----	-----	-----	----

(Continued on following page)



# Ring Terminals

## Ring Terminals (Continued from previous page)

Stud Size	Type	Non-Insulated		Vinyl Insulated			Nylon Insulated		
			Pkg. Qty.	Color		Pkg. Qty.	Color		Pkg. Qty.
<b>8 Ga.</b>									
#8	Standard	DB-R8	25	Red	DP-R8L	25	-----	-----	----
#10	Narrow-Profile	DB-R10S	25	Red	DP-R10S	25	-----	-----	----
1/4"	Narrow-Profile	DB-R14S	25	-----	-----	----	Red	DN-R14S	25
5/16"	Standard	DB-R56	25	-----	-----	----	Red	DN-R56	25
5/16"	Nylon Mil-Spec	-----	----	-----	-----	----	Red	DN-R56-MS	10
3/8"	Standard	DB-R38	25	Red	DP-R38	25	-----	-----	----
3/8"	Long Length	DB-R38L	25	-----	-----	----	-----	-----	----
7/16"	Standard	DB-R76	10	-----	-----	----	-----	-----	----
1/2"	Standard	DB-R12	25	-----	-----	----	-----	-----	----
9/16"	Standard	DB-R96	10	-----	-----	----	-----	-----	----
5/8"	Standard	DB-R58	10	-----	-----	----	-----	-----	----
3/4"	Standard	DB-R34	10	-----	-----	----	-----	-----	----
<b>6 Ga.</b>									
#10	Narrow-Profile	EB-R10S	10	-----	-----	----	Blue	EN-R10S	10
1/4"	Narrow-Profile	EB-R14S	10	-----	-----	----	Blue	EN-R14S	10
5/16"	Standard	EB-R56	10	Blue	EP-R56	10	-----	-----	----
3/8"	Standard	EB-R38	10	Blue	EP-R38	10	-----	-----	----
7/16"	Standard	EB-R76	10	-----	-----	----	-----	-----	----
1/2"	Standard	EB-R12	10	Blue	EP-R12	10	-----	-----	----
9/16"	Standard	EB-R96	10	-----	-----	----	-----	-----	----
5/8"	Standard	EB-R58	10	-----	-----	----	-----	-----	----
3/4"	Standard	EB-R34	10	-----	-----	----	-----	-----	----
<b>4 Ga.</b>									
#10	Standard	FB-R10	10	-----	-----	----	-----	-----	----
1/4"	Standard	FB-R14	10	-----	-----	----	-----	-----	----
1/4"	Narrow-Profile	FB-R14S	10	Yellow	FP-R14S	10	-----	-----	----
5/16"	Standard	FB-R56	10	-----	-----	----	Yellow	FN-R56	10
3/8"	Standard	FB-R38	10	-----	-----	----	Yellow	FN-R38	10
7/16"	Standard	FB-R76	10	-----	-----	----	-----	-----	----
1/2"	Standard	FB-R12	10	Yellow	FP-R12	10	-----	-----	----
9/16"	Standard	FB-R96	10	-----	-----	----	-----	-----	----
5/8"	Standard	FB-R58	10	-----	-----	----	-----	-----	----
3/4"	Standard	FB-R34	10	-----	-----	----	-----	-----	----
<b>2 Ga.</b>									
#10	Standard	GB-R10	10	-----	-----	----	-----	-----	----
1/4"	Standard	GB-R14	10	-----	-----	----	-----	-----	----
5/16"	Standard	GB-R56	10	-----	-----	----	-----	-----	----
3/8"	Standard	GB-R38	10	-----	-----	----	-----	-----	----
7/16"	Standard	GB-R76	5	-----	-----	----	-----	-----	----
1/2"	Standard	GB-R12	10	-----	-----	----	-----	-----	----
9/16"	Standard	GB-R96	5	-----	-----	----	-----	-----	----
5/8"	Standard	GB-R58	5	-----	-----	----	-----	-----	----
3/4"	Standard	GB-R34	10	-----	-----	----	-----	-----	----
<b>1/0 Ga.</b>									
1/4"	Standard	HB-R14	10	-----	-----	----	-----	-----	----
5/16"	Standard	HB-R56	10	-----	-----	----	-----	-----	----
3/8"	Standard	HB-R38	10	-----	-----	----	-----	-----	----
7/16"	Standard	HB-R76	5	-----	-----	----	-----	-----	----
1/2"	Standard	HB-R12	10	-----	-----	----	-----	-----	----
9/16"	Standard	HB-R96	5	-----	-----	----	-----	-----	----
5/8"	Standard	HB-R58	5	-----	-----	----	-----	-----	----
3/4"	Standard	HB-R34	5	-----	-----	----	-----	-----	----
<b>2/0 Ga.</b>									
1/4"	Standard	JB-R14	5	-----	-----	----	-----	-----	----
5/16"	Standard	JB-R56	5	-----	-----	----	-----	-----	----
3/8"	Standard	JB-R38	5	-----	-----	----	-----	-----	----
7/16"	Standard	JB-R76	5	-----	-----	----	-----	-----	----
1/2"	Standard	JB-R12	5	-----	-----	----	-----	-----	----
9/16"	Standard	JB-R96	5	-----	-----	----	-----	-----	----
5/8"	Standard	JB-R58	5	-----	-----	----	-----	-----	----
3/4"	Standard	JB-R34	5	-----	-----	----	-----	-----	----
<b>3/0 Ga.</b>									
5/16"	Standard	KB-R56	5	-----	-----	----	-----	-----	----
3/8"	Standard	KB-R38	5	-----	-----	----	-----	-----	----

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# Ring Terminals

## Ring Terminals (Continued from previous page)

Stud Size	Type	Non-Insulated		Vinyl Insulated			Nylon Insulated		
			Pkg. Qty.	Color		Pkg. Qty.	Color		Pkg. Qty.
<b>3/0 Ga.</b> (Cont.)									
7/16"	Standard	KB-R76	1	-----	-----	----	-----	-----	----
1/2"	Standard	KB-R12	5	-----	-----	----	-----	-----	----
9/16"	Standard	KB-R96	1	-----	-----	----	-----	-----	----
5/8"	Standard	KB-R58	1	-----	-----	----	-----	-----	----
3/4"	Standard	KB-R34	1	-----	-----	----	-----	-----	----
<b>4/0 Ga.</b>									
5/16"	Standard	LB-R56	5	-----	-----	----	-----	-----	----
3/8"	Standard	LB-R38	5	-----	-----	----	-----	-----	----
1/2"	Standard	LB-R12	5	-----	-----	----	-----	-----	----
9/16"	Standard	LB-R96	1	-----	-----	----	-----	-----	----
5/8"	Standard	LB-R58	1	-----	-----	----	-----	-----	----
3/4"	Standard	LB-R34	5	-----	-----	----	-----	-----	----
<b>250 MCM</b>									
5/16"	Standard	2.5MCM-56	1	-----	-----	----	-----	-----	----
3/8"	Standard	2.5MCM-38	1	-----	-----	----	-----	-----	----
1/2"	Standard	2.5MCM-12	1	-----	-----	----	-----	-----	----
5/8"	Standard	2.5MCM-58	1	-----	-----	----	-----	-----	----
<b>300 MCM</b>									
3/8"	Standard	3MCM-38	1	-----	-----	----	-----	-----	----
1/2"	Standard	3MCM-12	1	-----	-----	----	-----	-----	----
<b>400 MCM</b>									
1/2"	Standard	4MCM-12	1	-----	-----	----	-----	-----	----
<b>500 MCM</b>									
3/8"	Standard	5MCM-38	1	-----	-----	----	-----	-----	----
1/2"	Standard	5MCM-12	1	-----	-----	----	-----	-----	----

## Non-Insulated Flag Ring Terminals



Features a 90 degree orientation making the crimp more convenient and allows the ring terminal to be used in confined spaces. Requires only one crimp onto the wire.

Stud Size (AWG)		Pkg. Qty.	Stud Size (AWG)		Pkg. Qty.	Stud Size (AWG)		Pkg. Qty.
<b>22-18 Ga.</b>			<b>4 Ga.</b>			<b>1/0 Ga.</b> (Cont.)		
#6	AB-R6F	100	1/4"	FB-R14F	5	1/2"	HB-R12F	1
<b>16-14 Ga.</b>			5/16"	FB-R56F	5	<b>2/0 Ga.</b>		
#6	BB-R6F	100	3/8"	FB-R38F	5	5/16"	JB-R56F	1
#8	BB-R8F	50	<b>2 Ga.</b>			3/8"	JB-R38F	1
#10	BB-R10F	50	1/4"	GB-R14F	5	1/2"	JB-R12F	1
<b>12-10 Ga.</b>			5/16"	GB-R56F	5	<b>3/0 Ga.</b>		
#10	CB-R10F	25	3/8"	GB-R38F	5	5/16"	KB-R56F	1
<b>8 Ga.</b>			<b>1 Ga.</b>			3/8"	KB-R38F	1
1/4"	DB-R14F	10	1/4"	1B-R14F	1	1/2"	KB-R12F	1
5/16"	DB-R56F	10	<b>1/0 Ga.</b>			<b>4/0 Ga.</b>		
3/8"	DB-R38F	10	1/4"	HB-R14F	1	5/16"	LB-R56F	1
<b>6 Ga.</b>			5/16"	HB-R56F	1	3/8"	LB-R38F	1
#10	EB-R10F	10	3/8"	HB-R38F	1	1/2"	LB-R12F	1
5/16"	EB-R56F	10						

## Heavy Duty Ring Terminals

These ring terminals are made from 0.050" thick copper, rather than the typical 0.032" thick stock. Provides durability and a longer life.

The nylon insulation provides relief from vibration that can cause the wire to fail prematurely. The nylon insulation also prevents incidental metal to metal contact that can cause shorts. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.



Non-Insulated



Nylon Insulated

Stud Size	Non-Insulated		Color	Nylon Insulated	
		Pkg. Qty.			Pkg. Qty.
<b>16-12 Ga.</b>					
#6	BB-R6H	25	Yellow	BN-R6H	50
#10	BB-R10H	25	Yellow	BN-R10H	25
1/4"	BB-R14H	25	Yellow	BN-R14SH	25
5/16"	BB-R56H	25	Yellow	BN-R56H	25
3/8"	BB-R38H	25	Yellow	BN-R38H	25
1/2"	BB-R12H	25	Yellow	BN-R12H	10

## Heat-Shrink Ring Terminals

For use in harsh environments, these terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal.

A **heavy duty** heat-shrink jacket makes it difficult to cut into these heat-shrink terminals during the crimping process. If, in a rare instance, you do pierce the jacket, during the heat-shrink process, the jacket will heal itself and fill in the hole with sealant. These are the highest quality heat-shrink terminals available.

The **solder** heat-shrink terminals feature a heat-shrink connection that also has solder connection. By simply applying heat, you'll melt a small amount of solder that makes a perfect connection - no crimps required. Also keeps moisture out while ensuring your wire does not pull out of the terminal.



Stud Size	Type	Color	Standard		Heavy Duty		Solder	
				Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
<b>26-24 Ga.</b>								
#6	Standard	Yellow	MS-R6	25	-----	----	-----	----
#8	Standard	Yellow	MS-R8	25	-----	----	-----	----
#10	Standard	Yellow	MS-R10	25	-----	----	-----	----
1/4"	Standard	Yellow	MS-R14	25	-----	----	-----	----
<b>22-18 Ga.</b>								
#6	Standard	Red	AS-R6	25	ASN-R6	10	ASS-R6	10
#8	Standard	Red	AS-R8	25	ASN-R8	10	ASS-R8	10
#10	Standard	Red	AS-R10	25	ASN-R10	10	ASS-R10	10
#6, #8, #10	Multi-Stud	Red	-----	----	ASN-TD10	10	-----	----
1/4"	Standard	Red	AS-R14	25	ASN-R14	10	ASS-R14	10
5/16"	Standard	Red	AS-R56	25	ASN-R56	10	-----	----
3/8"	Standard	Red	AS-R38	25	ASN-R38	10	-----	----
<b>16-14 Ga.</b>								
#6	Standard	Blue	BS-R6	25	BSN-R6	10	-----	----
#8	Standard	Blue	BS-R8	25	BSN-R8	10	BSS-R8	10
#10	Standard	Blue	BS-R10	25	BSN-R10	10	BSS-R10	10
#6, #8, #10	Multi-Stud	Blue	-----	----	BSN-TD10	10	-----	----
1/4"	Standard	Blue	BS-R14	25	BSN-R14	10	BSS-R14	10
5/16"	Standard	Blue	BS-R56	25	BSN-R56	10	-----	----
3/8"	Standard	Blue	BS-R38	25	BSN-R38	10	BSS-R38	10
1/2"	Standard	Blue	BS-R12	25	BSN-R12	10	-----	----
<b>12-10 Ga.</b>								
#6	Standard	Yellow	CS-R6	25	CSN-R6	10	-----	----
#8	Standard	Yellow	CS-R8	25	CSN-R8	10	-----	----
#10	Standard	Yellow	CS-R10	25	CSN-R10	10	CSS-R10	10
#6, #8, #10	Multi-Stud	Yellow	-----	----	CSN-TD10	10	-----	----
1/4"	Standard	Yellow	CS-R14	25	CSN-R14	10	CSS-R14	10
5/16"	Standard	Yellow	CS-R56	25	CSN-R56	10	CSS-R56	10
3/8"	Standard	Yellow	CS-R38	25	CSN-R38	10	CSS-R38	10
1/2"	Standard	Yellow	CS-R12	10	CSN-R12	5	CSS-R12	10
<b>8 Ga.</b>								
#10	Standard	Red	DS-R10	10	DSN-R10	10	-----	----
1/4"	Standard	Red	DS-R14	10	DSN-R14	10	-----	----
5/16"	Standard	Red	DS-R56	10	DSN-R56	10	-----	----
3/8"	Standard	Red	DS-R38	10	DSN-R38	10	-----	----
1/2"	Standard	Red	DS-R12	10	DSN-R12	5	-----	----

## High Temperature Ring Terminals

One piece steel construction and nickel plating provide reliable electrical connections at temperatures up to 900°F. Requires only one crimp onto the wire.



Wire Size (AWG)		Pkg. Qty.	Wire Size (AWG)		Pkg. Qty.	Wire Size (AWG)		Pkg. Qty.
<b>22-18 Ga.</b>			<b>16-14 Ga. (Cont.)</b>			<b>8 Ga.</b>		
#6	AH-R6	50	5/16"	BH-R56	50	#10	DH-R10S	25
#8	AH-R8	50	3/8"	BH-R38	50	1/4"	DH-R14S	25
#10	AH-R10	50	<b>12-10 Ga.</b>			5/16"	DH-R56	25
1/4"	AH-R14	50	#6	CH-R6	50	3/8"	DH-R38	25
5/16"	AH-R56	50	#8	CH-R8	50	<b>6 Ga.</b>		
<b>16-14 Ga.</b>			#10	CH-R10	50	1/4"	EH-R14	5
#6	BH-R6	50	1/4"	CH-R14S	25	5/16"	EH-R56	5
#8	BH-R8	50	5/16"	CH-R56	25	3/8"	EH-R38	5
#10	BH-R10	50	3/8"	CH-R38	25	<b>4 Ga.</b>		
1/4"	BH-R14S	50				1/4"	FH-R14	5
						3/8"	FH-R38	5

# Fork Terminals

## Fork Terminals



Non-Insulated Flange



Standard Nylon Insulated



Vinyl Insulated Fork Block

The **non-insulated** terminals require only one crimp onto the wire. The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely.

Stud Size	Type	Non-Insulated		Vinyl Insulated			Nylon Insulated		
			Pkg. Qty.	Color		Pkg. Qty.	Color		Pkg. Qty.
<b>26-24 Ga.</b>									
#2	Standard	-----	----	-----	-----	----	Yellow	MN-F2	25
#4	Standard	-----	----	-----	-----	----	Yellow	MN-F4	25
#6	Standard	-----	----	-----	-----	----	Yellow	MN-F6	25
<b>24-20 Ga.</b>									
#4	Standard	MB-F4	100	-----	-----	----	-----	-----	----
#6	Standard	MB-F6	100	-----	-----	----	-----	-----	----
<b>22-18 Ga.</b>									
#4	Standard	AB-F4	100	Red	AP-F4	100	Red	AN-F4	50
#6	Standard	AB-FB6	100	Red	AP-F6	100	Red	AN-F6	50
#6	Block	AB-FB6S	100	Red	AP-FB6S	100	Red	AN-FB6S	50
#6	Narrow/Short	AB-F6XS	100	-----	-----	----	Red	AN-F6XS	50
#6	Flange Block	AB-FBF6	100	Red	AP-FBF6	100	Red	AN-FBF6	50
#6	Snap Spade	AB-SS6	100	Red	AP-SS6	100	Red	AN-SS6	50
#6	Narrow-Profile Snap Spade	-----	----	-----	-----	----	Red	AN-SS6S	50
#8	Standard	AB-F8	100	Red	AP-F8	100	Red	AN-F8	50
#8	Block	AB-FB8	100	Red	AP-FB8	100	Red	AN-FB8	50
#8	Flange Block	-----	----	-----	-----	----	Red	AN-FBF8	50
#8	Snap Spade	-----	----	Red	AP-SS8	100	Red	AN-SS8	50
#10	Standard	AB-F10	100	Red	AP-F10	100	Red	AN-F10	50
#10	Block	AB-FB10	100	Red	AP-FB10	100	Red	AN-FB10	50
#10	Flange Block	AB-FBF10	100	Red	AP-FBF10	100	Red	AN-FBF10	50
#10	Snap Spade	-----	----	Red	AP-SS10	100	Red	AN-SS10	50
1/4"	Standard	-----	----	-----	-----	----	Red	AN-F14	50
<b>16-14 Ga.</b>									
#4	Standard	BB-F4	100	Blue	BP-F4	100	Blue	BN-F4	50
#6	Flag	BB-F6F	100	-----	-----	----	-----	-----	----
#6	Block	BB-FB6	100	-----	-----	----	Blue	BN-FB6	50
#6	Flange Block	BB-FBF6	100	Blue	BP-FBF6	100	Blue	BN-FBF6	25
#6	Long Block	-----	----	Blue	BP-FB6L	100	-----	-----	----
#6	Narrow-Profile Block	BB-FB6S	100	Blue	BP-FB6S	100	Blue	BN-FB6S	50
#6	Narrow/Short	-----	----	Blue	BP-FB6XS	50	Blue	BN-FB6XS	50
#6	Narrow-Profile Long Block	-----	----	-----	-----	----	Blue	BN-FB6S-L	50
#6	Snap Spade	BB-SS6	100	Blue	BP-SS6	100	Blue	BN-SS6	50
#6	Narrow-Profile Snap Spade	2LY3.5S	100	-----	-----	----	-----	-----	----
#8	Standard	BB-F8	100	Blue	BP-F8	100	Blue	BN-F8	50
#8	Flag	BB-F8F	50	-----	-----	----	-----	-----	----
#8	Block	BB-FB8	100	Blue	BP-FB8	100	Blue	BN-FB8	50
#8	Flange Block	BB-FBF8	100	-----	-----	----	Blue	BN-FBF8	50
#8	Snap Spade	-----	----	Blue	BP-SS8	100	Blue	BN-SS8	50
#10	Standard	BB-F10	100	Blue	BP-F10	100	Blue	BN-F10	50
#10	Flag	BB-F10F	50	-----	-----	----	-----	-----	----
#10	Block	BB-FB10	100	Blue	BP-FB10	100	Blue	BN-FB10	50
#10	Flange Block	BB-FBF10	100	Blue	BP-FBF10	50	Blue	BN-FBF10	50
#10	Snap Spade	BB-SS10	100	Blue	BP-SS10	100	Blue	BN-SS10	50
1/4"	Standard	BB-F14	50	-----	-----	----	Blue	BN-F14	25
5/16"	Standard	BB-F56	50	-----	-----	----	-----	-----	----
<b>12-10 Ga.</b>									
#6	Standard	CB-F6	100	Yellow	CP-F6	100	Yellow	CN-F6	50
#6	Block	-----	----	Yellow	CP-FB6	50	Yellow	CN-FB6	50
#6	Flange Block	CB-FBF6	50	Yellow	CP-FBF6	50	Yellow	CN-FBF6	25
#6	Snap Spade	-----	----	Yellow	CP-SS6	50	Yellow	CN-SS6	50
#8	Standard	CB-F8	100	Yellow	CP-F8	100	Yellow	CN-F8	50
#8	Block	CB-FB8	100	Yellow	CP-FB8	50	Yellow	CN-FB8	50
#8	Flange Block	-----	----	-----	-----	----	Yellow	CN-FBF8	50
#8	Snap Spade	-----	----	Yellow	CP-SS8	50	Yellow	CN-SS8	50
#10	Standard	CB-F10	100	Yellow	CP-F10	50	Yellow	CN-F10	50
#10	Block	CB-FB10	100	-----	-----	----	Yellow	CN-FB10	50
#10	Flange Block	CB-FBF10	50	Yellow	CP-FBF10	50	Yellow	CN-FBF10	50
#10	Snap Spade	-----	----	Yellow	CP-SS10	50	Yellow	CN-SS10	50
1/4"	Standard	CB-F14	50	-----	-----	----	Yellow	CN-F14	25

# Fork & Hook Terminals

## Heat-Shrink Fork Terminals

For use in harsh environments, these terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal.

The **standard** heat-shrink terminal requires one crimp plus heat.

A **heavy duty** heat-shrink jacket makes it difficult to cut into these heat-shrink terminals during the crimping process, a common problem with basic heat-shrink terminals. If, in a rare instance, you do pierce the jacket, during the heat-shrink process, the jacket will heal itself and fill in the hole with sealant. This is the highest quality line of heat of heat-shrink terminals available. Requires one crimp plus heat.

The **solder** heat-shrink terminal features a heat-shrink connection that also has an internal sealant. By simply applying heat, you'll melt a small amount of solder that makes a perfect connection - no crimps required. Also keeps moisture out while ensuring your wire does not pull out of the terminal.



Standard



Heavy Duty Snap Spade

Stud Size	Type	Color	Standard		Heavy Duty		Solder	
				Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
<b>22-18 Ga.</b>								
#6	Standard	Red	AS-F6	25	ASN-F6	10	-----	----
#6	Snap Spade	Red	-----	----	ASN-SS6	25	ASS-F10	10
#8	Standard	Red	AS-F8	25	ASN-F8	10	-----	----
#8	Snap Spade	Red	-----	----	ASN-SS8	25	-----	----
#10	Standard	Red	AS-F10	25	ASN-F10	10	-----	----
#10	Snap Spade	Red	-----	----	ASN-SS10	25	-----	----
<b>16-14 Ga.</b>								
#6	Standard	Blue	BS-F6	25	BSN-F6	10	-----	----
#6	Snap Spade	Blue	-----	----	BSN-SS6	25	BSS-F10	10
#8	Standard	Blue	BS-F8	25	BSN-F8	10	-----	----
#8	Snap Spade	Blue	-----	----	BSN-SS8	25	-----	----
#10	Standard	Blue	BS-F10	25	BSN-F10	10	-----	----
#10	Snap Spade	Blue	BS-SS10	25	BSN-SS10	10	-----	----
<b>12-10 Ga.</b>								
#6	Standard	Yellow	CS-F6	25	CSN-F6	10	-----	----
#6	Snap Spade	Yellow	-----	----	CSN-SS6	10	-----	----
#8	Standard	Yellow	CS-F8	25	CSN-F8	10	-----	----
#8	Hook	Yellow	-----	----	CSN-H8	10	-----	----
#8	Snap Spade	Yellow	-----	----	CSN-SS8	10	-----	----
#10	Standard	Yellow	CS-F10	25	CSN-F10	10	CSS-F10	10
#10	Block, Flange	Yellow	-----	----	CSN-FBF10	10	-----	----
#10	Snap Spade	Yellow	-----	----	CSN-SS10	10	-----	----
1/4"	Snap Spade	Yellow	-----	----	CSN-SS14	10	-----	----

## High Temperature Fork Terminals

One piece steel construction and nickel plating provide reliable electrical connections at temperatures up to 900°F.

Requires only one crimp onto the wire.

Stud Size	Pkg. Qty.	Stud Size	Pkg. Qty.		
<b>22-18 Ga.</b>					
#6	AH-F6	50	#6	CH-F6	50
<b>16-14 Ga.</b>					
#6	BH-F6	50	#8	CH-F8	50
#8	BH-F8	50	#10	CH-F10	50
#10	BH-F10	50			



## Hook Terminals

The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. Requires only one crimp onto the wire.

The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely. The nylon insulation also prevents incidental metal to metal contact that can cause shorts. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.

Use the **heavy duty** heat-shrink in harsh environments. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal. Requires one crimp plus heat.

Non-Insulated



Vinyl Insulated



Heavy Duty Heat-Shrink



Wire Size (AWG)	Stud Size	Non-Insulated		Color	Vinyl Insulated		Nylon Insulated		Heavy Duty Heat-Shrink	
			Pkg. Qty.			Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
22-18	#8	AB-H8	100	Red	AP-H8	100	AN-H8	50	-----	----
22-18	#10	-----	----	Red	-----	----	-----	----	ASN-H10	25
16-14	#8	BB-H8	100	Blue	BP-H8	100	BN-H8	50	BSN-H8	25
16-14	#10	BB-H10	100	Blue	-----	----	-----	----	BSN-H10	25
12-10	#8	CB-H8	50	Yellow	CP-H8	50	CN-H8	25	CSN-H8	25

# Quick-Disconnect Terminals

## Quick-Disconnect Terminals

Also known as slip-on or fast-on connectors, these quick-disconnect terminals offer the fastest way to connect and disconnect two wires. They are also reusable. Simply slide the male terminal into the female terminal.

**Non-insulated** quick-disconnects require only one crimp onto the wire.

The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. Requires only one crimp onto the wire.

The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.

The **fully** insulated terminals provide a "mini-enclosure" for the point at which the two contacts meet, keeping liquids and contaminants away from the electrical connection. Requires only one crimp onto the wire.



Tab Width and Thickness	Non-Insulated			Color	Vinyl Insulated			Nylon Insulated			Fully Nylon Insulated		
	Female	Male	Pkg. Qty.		Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.
<b>26-24 Ga.</b>													
0.110" x 0.020"	-----	-----	----	Yellow	-----	-----	----	MN2-FQ1	-----	50	MN2-FZ1	-----	50
0.187" x 0.020"	MB2-FQ8	-----	100	Yellow	-----	-----	----	MN2-FQ8	-----	50	MN2-FZ8	-----	25
0.250" x 0.032"	-----	-----	----	Yellow	-----	-----	----	-----	-----	----	MN3-FZ5	-----	50
<b>22-18 Ga.</b>													
0.110" x 0.020"	AB2-FQ1	AB2-MQ1	50	Red	AP2-FQ1	AP2-MQ1	50	AN2-FQ1	AN2-MQ1	50	AN2-FZ1	-----	50
0.187" x 0.020"	AB2-FQ8	AB2-MQ8	50	Red	AP2-FQ8	AP2-MQ8	50	AN2-FQ8	AN2-MQ8	50	AN2-FZ8	AN2-MZ8	50
0.205" x 0.020"	AB2-FQ0	-----	50	Red	AP2-FQ0	-----	50	-----	-----	----	-----	-----	----
0.250" x 0.032"	AB3-FQ5	AB3-MQ5	50	Red	AP3-FQ5	AP3-MQ5	50	AN3-FQ5	AN3-MQ5	50	AN3-FZ5	AN3-MZ5	50
0.250" x 0.032"	-----	-----	----	Red	AP3-FQ5-E	-----	50	-----	-----	----	-----	-----	----
<b>16-14 Ga.</b>													
0.110" x 0.020"	BB2-FQ1	BB2-MQ1	50	Blue	BP2-FQ1	BP2-MQ1	100	BN2-FQ1	BN2-MQ1	25	BN2-FZ1	-----	25
0.187" x 0.020"	BB2-FQ8	BB2-MQ8	50	Blue	BP2-FQ8	BP2-MQ8	100	BN2-FQ8	BN2-MQ8	25	BN2-FZ8	-----	25
0.187" x 0.020"	-----	-----	----	Blue	-----	-----	----	-----	-----	----	BN2-FZ8C	BN2-MZ8C	25
0.250" x 0.032"	BB3-FQ5	BB3-MQ5	50	Blue	BP3-FQ5	BP3-MQ5	100	BN3-FQ5	BN3-MQ5	25	BN3-FZ5	BN3-MZ5	25
0.300" x 0.032"	-----	-----	----	Blue	-----	-----	----	BN3-FQ30	-----	25	-----	-----	----
<b>14-12 Ga.</b>													
0.250" x 0.032"	-----	-----	----	Yellow	-----	-----	----	CN3-FQ5S	-----	50	-----	-----	----
<b>12-10 Ga.</b>													
0.187" x 0.032"	-----	-----	----	Yellow	CP3-FQ8	-----	50	-----	-----	----	-----	-----	----
0.250" x 0.032"	CB3-FQ5	CB3-MQ5	100	Yellow	CP3-FQ5	CP3-MQ5	50	CN3-FQ5	CN3-MQ5	50	CN3-FZ5	CN3-MZ5	50
0.340" x 0.047"	-----	-----	----	Yellow	-----	-----	----	CN3-FQ9	-----	50	-----	-----	----

## High-Temperature Quick-Disconnect Terminals

Steel construction and nickel plating provide reliable electrical connections at temperatures up to 900°F. Requires only one crimp onto the wire.



Wire Size	Gender	Pkg. Qty.	Wire Size	Gender	Pkg. Qty.
<b>Standard</b>			<b>Standard (Cont.)</b>		
<b>0.187" Tab Width x .020" Tab Thickness</b>			<b>0.250" Tab Width x .032" Tab Thickness</b>		
16-14	Female	BH2-FQ8 50	12-10	Female	CH3-FQ5 50
<b>0.250" Tab Width x .032" Tab Thickness</b>			12-10	Male	CH3-MQ5 50
22-18	Female	AH3-FQ5 50	<b>90° Flag</b>		
22-18	Male	AH3-MQ5-6 50	<b>0.250" Tab Width x .032" Tab Thickness</b>		
16-14	Female	BH3-FQ5 50	16-14	Female	BH3-FFQ5 50
16-14	Male	BH3-MQ5 50			

## Flag Quick-Disconnect Terminals

Features a 90 degree orientation making the crimp more convenient and allows the quick-disconnect terminal to be used in confined spaces. The thickness of the 0.187" tab width is 0.020" and the 0.250" tab width is 0.032".



Tab Width	Non-Insulated			Color	Fully Nylon Insulated		
	Female	Male	Pkg. Qty.		Female	Male	Pkg. Qty.
<b>22-18 Ga.</b>							
0.187"	AB2-FFQ8	-----	50	Red	AN2-FFZ8	-----	50
0.250"	AB3-FFQ5	-----	50	Red	AN3-FFZ5	-----	50
<b>16-14 Ga.</b>							
0.187"	BB2-FFQ8	-----	50	Blue	BN2-FFZ8	-----	25
0.250"	BB3-FFQ5	-----	50	Blue	BN3-FFZ5	-----	25
0.250"	BB3-FFQ5L	-----	25	Blue	BN3-FFZ5L	-----	10
<b>12-10 Ga.</b>							
0.250"	CB3-FFQ5	-----	50	Yellow	CN3-FFZ5	-----	50

## Insulated Quick-Disconnect Butt-Splice Adapter



This item acts as a butt connector, but it accepts female quick-disconnect terminals. Requires no crimps - just plug in two 0.250" width female quick-disconnect terminals.

Tab Width and Thickness	Pkg. Qty.
0.250" x 0.032"	250-2NY 25

# Quick-Disconnect Terminals

## Heat-Shrink Quick-Disconnect Terminals

Also known as slip-on or fast-on connectors, these quick-disconnect terminals offer the fastest way to connect and disconnect two wires. They are also reusable. Simply slide the male terminal into the female terminal.

The **standard** heat-shrink terminals are made for use in harsh environments. These terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal.

A **heavy duty** heat-shrink jacket makes it very difficult to cut into these heat-shrink terminals during the crimping process, a common problem with basic heat-shrink terminals.

Use the **solder heat-shrink** in harsh environments. These terminals feature a heat-shrink connection that also has an internal sealant. By simply applying heat, you'll also melt a small amount of solder that makes a perfect connection - no crimps required. Also keeps moisture out while ensuring your wire does not pull out of the terminal.

**Partially insulated** quick disconnect terminals are economical. Use **fully insulated** terminals to keep moisture away from where the male and female terminals mate.

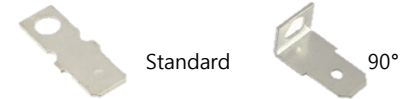
Fully Insulated



Tab Width and Thickness	Color	Insulation Style	Standard			Heavy Duty			Solder		
			Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.
<b>22-18 Ga.</b>											
0.187" x 0.020"	Red	Partially	-----	-----	----	ASN2-FQ8	ASN2-MQ8	25	-----	-----	----
0.250" x 0.032"	Red	Partially	AS3-FQ5	AS3-MQ5	25	ASN3-FQ5	ASN3-MQ5	25	-----	-----	----
0.250" x 0.032"	Red	Fully	AS3-FZ5	AS3-MZ5	25	ASN3-FZ5	ASN3-MZ5	10	-----	-----	----
0.250" x 0.032"	Red	Fully	AS3-FZ5-E	-----	10	-----	-----	----	-----	-----	----
<b>16-14 Ga.</b>											
0.187" x 0.020"	Blue	Partially	-----	-----	----	BSN2-FQ8	BSN2-MQ8	25	-----	-----	----
0.250" x 0.032"	Blue	Partially	BS3-FQ5	BS3-MQ5	25	BSN3-FQ5	BSN3-MQ5	10	BSS-FQ5	BSS-MQ5	10
0.250" x 0.032"	Blue	Fully	BS3-FZ5	BS3-MZ5	25	BSN3-FZ5	BSN3-MZ5	10	-----	-----	----
<b>12-10 Ga.</b>											
0.250" x 0.032"	Yellow	Partially	CS3-FQ5	CS3-MQ5	25	CSN3-FQ5	CSN3-MQ5	10	CSS-FQ5	CSS-MQ5	10
0.250" x 0.032"	Yellow	Fully	CS3-FZ5	CS3-MZ5	10	CSN3-FZ5	CSN3-MZ5	10	-----	-----	----

## Stud Mount Quick-Disconnect Terminals

Tab Width and Thickness	Standard		Tab Width and Thickness	Standard		90°	
	Pkg. Qty.	Pkg. Qty.		Pkg. Qty.	Pkg. Qty.		
<b>#6 Stud Size</b>							
0.187" x 0.020"	187/R6	10	0.250" x 0.032"	250/R10	25	-----	----
0.250" x 0.032"	250/R6	25				-----	----
<b>#10 Stud Size</b>							
0.250" x 0.032"	-----	----	-----	----	----	250-R10/90	50



Mount these male quick-disconnect terminals to a stud rather than to a wire. Simply mount on a screw, no crimp required.

## Quick-Disconnect Terminal Adapters

These non-insulated terminals connect two male quick-disconnect terminals to one female quick-disconnect terminal.

Tab Width and Thickness	Pkg. Qty.	Tab Width and Thickness	Pkg. Qty.	Tab Width and Thickness	Pkg. Qty.	Tab Width and Thickness	Pkg. Qty.	
0.250" x 0.032"	FAS	50	0.250" x 0.032"	VWA-O	50	0.187" x 0.020"	MMFA-187	25
0.250" x 0.032"	-----	----	0.250" x 0.032"	-----	----	0.187" x 0.020"	MMFA	25

## Piggy-Back Quick-Disconnect Terminals

Connects a male 0.250" x 0.032" tab quick-disconnect terminal to one female 0.250" x 0.032" tab quick-disconnect terminal and a wire. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.

Wire Size (AWG)	Color	Vinyl Insulated		Nylon Insulated	
		Pkg. Qty.	Pkg. Qty.	Pkg. Qty.	Pkg. Qty.
22-18	Red	-----	----	PBA-2	25
16-14	Blue	-----	----	PBT-2	25
12-10	Yellow	PBC-2	25	-----	----



## Open Barrel / Non-Insulated Quick-Disconnect Terminals

The open barrel design provides relief from vibration that can cause the wire to fail prematurely. These require a standard crimp and a "B" crimp.

**Tang** design prevents terminal from backing out of the housing. With a click, the tang locks the terminal in the housing.

Tab Width and Thick	Open Barrel			Open Barrel with Tang		
	Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.
<b>22-18 Ga.</b>						
0.187" x 0.020"	AB2-FQ8SS	-----	50	-----	-----	----
<b>16-14 Ga.</b>						
0.250" x 0.032"	BB3-FQ5SS	-----	50	BB3-FQ5ST	BB3-MQ5ST	25



# Bullet and Quick Disconnect Terminals, Banana Plugs & Mechanics Wire

## Standard Bullet Terminals

Bullet terminals are often used as a substitute for quick-disconnect terminals due to their ability to quickly mate and their reusability. Simply slide the male terminal into the female terminal.

The **vinyl** insulation prevents incidental metal to metal contact that can cause shorts. Requires only one crimp onto the wire.

The **nylon** insulation provides relief from vibration that can cause the wire to fail prematurely. The nylon insulation also prevents incidental metal to metal contact that can cause shorts. Requires two crimps (terminal to wire strands, terminal to insulation of wire). Standard tools perform both crimps. For heavier usage, use a tool that performs both crimps at the same time.



Bullet Plug Size	Non-Insulated			Color	Vinyl Insulated			Nylon Insulated		
	Female	Male	Pkg. Qty.		Female	Male	Pkg. Qty.	Female	Male	Pkg. Qty.
<b>22-18 Ga.</b>										
0.156"	-----	AB-SP56	100	Red	-----	AP-SP56	50	AN-SR56	AN-SP56	25
0.180"	-----	AB-SP80	100	Red	-----	AP-SP80	50	AN-SR80	AN-SP80	25
<b>16-14 Ga.</b>										
0.156"	-----	BB-SP56	100	Blue	-----	BP-SP56	50	BN-SR56	BN-SP56	25
0.156"	-----	-----	----	Blue	-----	-----	----	BN-SR56-2*	-----	50
0.180"	-----	BB-SP80	100	Blue	-----	BP-SP80	50	BN-SR80	BN-SP80	25

\* Accepts 0.156" male bullet terminals on each end.

## Heat-Shrink Bullet Terminals

Bullet terminals are often used as a substitute for quick-disconnect terminals due to their ability to quickly mate and their reusability. Simply slide the male terminal into the female terminal.

Use the heat-shrink bullet terminals in harsh environments. These terminals feature a heat-shrink connection that also has an internal sealant. After crimping the terminal onto the wire, simply apply heat. Keeps moisture out while ensuring your wire does not pull out of the terminal.

A **heavy duty** heat-shrink jacket makes it very difficult to cut into these heat-shrink terminals during the crimping process, a common problem with basic heat-shrink terminals.



Bullet Plug Size	Color	Standard			Color	Heavy Duty		
		Female	Male	Pkg. Qty.		Female	Male	Pkg. Qty.
<b>22-18 Ga.</b>								
0.156"	Red	AS-SR56	AS-SP56	25	Red	-----	ASN-SP56	10
<b>16-14 Ga.</b>								
0.156"	Blue	BS-SR56	BS-SP56	25	Blue	-----	BSN-SP56	10
0.180"	Blue	BS-SR80	BS-SP80	25	Blue	-----	BSN-SP80	10

## Insulated Knife Disconnect Terminals



Similar to quick-disconnect terminals, except two of the same terminals will mate with each other like a handshake - no male/female issues. Simply slide two terminals together and a tongue locks them in place. Reusable, simple splice. Requires only one crimp onto the wire.

Wire Size (AWG)	Non-Insulated		Vinyl Insulated		
	Color	Pkg. Qty.	Color	Pkg. Qty.	
22-18	-----	----	Red	AP-K	25
16-14	BB-K	25	Blue	BP-K	25
12-10	CB-K	25	Yellow	CP-K	25

## Nylon-Insulated Wrist Lock Terminals



Similar to quick-disconnect terminals, except two of the same terminals will mate with each other like a handshake - no male/female issues. Connection actually tightens when pulled - for extra security. Simply slide two terminals together and a tongue locks them in place. Reusable, simple splice.

Wire Size (AWG)	Color	Pkg. Qty.	
16-14	Blue	BN-WR	25

## Fastening Wire (Mechanic's Wire)



Annealed for extra flexibility. Made of steel. Sold on 5lb. spools.

Wire Size (AWG)	5lb. Spool Length	Part Number
18	830-ft.	MW-18
16	430-ft.	MW-16
14	295-ft.	MW-14
12	100-ft.	MW-12

## Test Lead Wire (RTLW)



Annealed, tinned copper conductor for test equipment. Very flexible.

Wire Size (AWG)	Color	Part Number
18	Black	RTLW-18B
18	Red	RTLW-18R
18	Red/Black	RTLW-25

## Banana Plugs



One piece construction with set screw that holds up to 18 gauge wire. These banana plugs are 15 amp rated and have a nickel plated brass body with a bronze spring.

Color	Length	Part Number	Pkg. Qty.
Black	1.08"	BANANA PLUG-B	5
Red	1.08"	BANANA PLUG-R	5



# Wire Connectors & Quick Splices

## Ideal Wire Connectors

Terminate wires in these color-coded Ideal wire connectors. No pre-twisting required, plus they're reusable.



Wire Combinations		Color	Pkg. Qty.
Minimum	to Maximum		
(2) 22 Ga.	(2) 16 Ga.	Gray	71B 100
(2) 22 Ga.	(2) 16 Ga.	Blue	72B 100
(2) 20 Ga.	(2) 18 Ga.	Orange	73B 100
(2) 22 Ga.	(2) 16 Ga.	Yellow	74B 100
(2) 14 Ga.	(2) 12 Ga.	Red	76B 50

## Ceramic High-Temp Wire Connectors

For use in the most demanding, high-temperature environments. Max temperature 320°F.



Wire Combinations		Color	Pkg. Qty.
Minimum	to Maximum		
(2) 18 Ga.	(1) 16 & (1) 14 Ga.	HT-1	25
(2) 18 Ga.	(2) 18 & (2) 16 Ga.	HT-2	25
(2) 18 Ga.	(3) 18 & (1) 14 Ga.	HT-3	25
(2) 14 Ga.	(2) 12 Ga.	HT-4	10

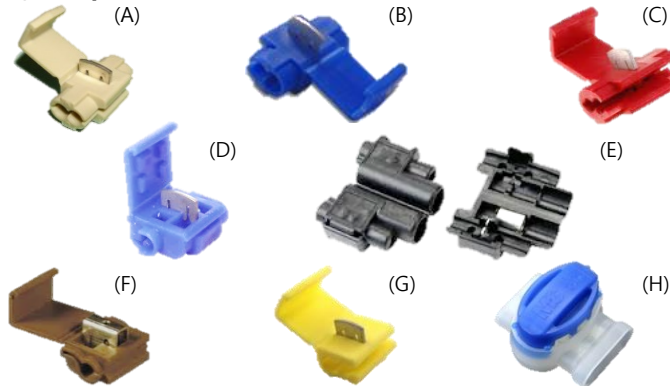
## Clear Crimp-Style Wire Connectors

Simply crimp the wire in the housing like you would with wire into a terminal. Also known as closed end wire connectors. Nylon insulation over copper insert. UL listed.



Wire Size (AWG)		Pkg. Qty.
22-16	EC-2216	100
16-14	EC-1614	100
12-10	EC-1210	100
8	EC-0808	100

## Quick Splices



Quick splices, also known as self stripping connectors, require no wire stripping or twisting. Solvent resistant plastic construction. No special tools are required.

Wire Range (AWG)	Color	Connection	Pkg. Qty.
(A) 18 to 14	White	Double Run	T-4 50
(B) 18 to 14	Blue	Run and Tap	T-4B 50
(C) 22 to 18	Red	Run and Tap	T-4R 50
(D) 18 to 16	Blue	Instant Tap with Sealant	T4-BG 25
(E) 18 to 16	Black	Bullet Disconnect	T-5 50
(F) 18 to 10	Brown	Run and Tap	T-6 25
(G) 12 to 10	Yellow	Run and Tap	T-7 25
(H) 22 to 14	Blue	Moisture Resistant Seal	ET-314 10

## Easy-Twist Ideal Wire Connectors

Exterior grips make these easy to twist onto your wire. No pre-twisting required, plus they're reusable.



Wire Combinations		Color	Pkg. Qty.
Minimum	to Maximum		
(2) 18 Ga.	(2) 12 Ga.	Yellow	451 50
(2) 18 Ga.	(2) 10 Ga.	Red	452 50
(2) 12 Ga.	(2) 6 Ga.	Blue	454 10

## Fits-All Ideal Wire Connectors

Accepting a wide range of wire sizes allows you to stock fewer wire connectors. Exterior grips make these easy to twist onto your wire. No pre-twisting required, plus they're reusable.



Wire Combinations		Color	Pkg. Qty.
Minimum	to Maximum		
(3) 22 Ga.	(3) 10 Ga.	Tan	341-TWST 50
(3) 14 Ga.	(3) 8 Ga.	Red	342-TWST 25

## Electrical Spring Connectors

The original color-coded wire connectors are flexible, yet durable. The soft outer shell is easy on the fingers and the inner shell prevents the wire from poking through.



Wire Size (AWG)	Color	Pkg. Qty.
22-10	Yellow	SLY 50
18-10	Red	SLR 50

## T-Taps

The T-taps are nylon insulated self-stripping disconnects. Mates with male fully insulated quick-connects.



Wire Range (AWG)	Color	Terminal Type	Mates with	Pkg. Qty.
22 to 18	Red	Disconnect	AN3-MZ5 T-250R	100
18 to 14	Blue	Disconnect	BN3-MZ5 T-250	100
12	Yellow	Disconnect	CN3-MZ5 T-250Y	100

## UR Connectors



UR connectors are ideal for communication applications. Self-stripping connectors, require no wire stripping or twisting. Solvent resistant plastic construction and sealant filled. No special tools are required.

Wire Range (AWG)	Color	Connection	Pkg. Qty.
26 to 19	Red	Moisture Resistant Seal	UR-RED 50
26 to 19	Green	Moisture Resistant Seal	UG 50
26 to 22	Yellow	Moisture Resistant Seal	UY 100
26 to 19	Red	RUS Listed, Full Feature	UR2-RED 50

# Terminal Kits

## Non-Insulated Terminal Kit

This kit contains 20 different terminals, 460 pieces, sizes 16 to 10 gauge, including rings, hooks, forks, and butt splices. Comes in a small metal box, 13 3/8" w x 9 1/4" d x 2" h.



Part #  
TERM KIT NON-SM

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
BB-R6S	16-14 Ga., #6 Narrow Ring Terminals	25	BB-P	16-14 Ga., Compact Butt Splice Terminals	25
BB-R8	16-14 Ga., #8 Ring Terminals	25	BB-B	16-14 Ga., Butt Splice Terminals	25
BB-R10	16-14 Ga., #10 Ring Terminals	25	CB-R10	12-10 Ga., #10 Ring Terminals	25
BB-R14S	16-14 Ga., 1/4" Narrow Ring Terminals	25	CB-R14S	12-10 Ga., 1/4" Ring Terminals	15
BB-R56	16-14 Ga., 5/16" Ring Terminals	25	CB-R56	12-10 Ga., 5/16" Ring Terminals	15
BB-R38	16-14 Ga., 3/8" Ring Terminals	25	CB-R38	12-10 Ga., 3/8" Ring Terminals	15
BB-H8	16-14 Ga., #8 Hook Terminals	25	CB-R12	12-10 Ga., 1/2" Ring Terminals	15
BB-FB6S	16-14 Ga., #6 Narrow Block Fork Terminals	25	CB-F10	12-10 Ga., #10 Fork Terminals	25
BB-F8	16-14 Ga., #8 Fork Terminals	25	CB-P	12-10 Ga., Compact Butt Splices	25
BB-F10	16-14 Ga., #10 Fork Terminals	25	CB-B	12-10 Ga., Butt Splice Terminals	25

## PVC-Insulated Terminal Kit

This kit contains 24 different terminals, 530 pieces, sizes 16 to 6 gauge, including rings, hooks, forks, quick-disconnects, and butt splices. Comes in a large metal box, 18" w x 12" d x 3" h.



Part #  
LG PVC-KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
BP-B	16-14 Ga., Butt Splice Terminals	25	BN-SR56	16-14 Ga., 0.156" Dia., Female Bullet Term.	25
BP-R6S	16-14 Ga., #6 Narrow Ring Terminals	25	CP-B	12-10 Ga., Butt Splice Terminals	25
BP-R10	16-14 Ga., #10 Ring Terminals	25	CP-BB	16-14 To 12-10 Ga., Step-Down Terminals	10
BP-R14S	16-14 Ga., 1/4" Ring Terminals	25	CP-R10	12-10 Ga., #10 Ring Terminals	25
BP-R38	16-14 Ga., 3/8" Ring Terminals	25	CP-R14S	12-10 Ga., 1/4" Ring Terminals	25
BP3-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	25	CP-R56	12-10 Ga., 5/16" Ring Terminals	25
BP3-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	25	CP-R38	12-10 Ga., 3/8" Ring Terminals	25
BP-FB6S	16-14 Ga., #6 Narrow Fork Block Terminals	25	CP-F10	12-10 Ga., #10 Fork Terminals	25
BP-F10	16-14 Ga., #10 Fork Terminals	25	DB-R10S	8 Ga., #10 Ring Terminals	15
BP-H8	16-14 Ga., #8 Hook Terminals	25	DB-R14S	8 Ga., 1/4" Non-Insulated Ring Terminals	15
BP-X	16-14 Ga., 4-Way Terminals	10	EB-R14S	6 Ga., 1/4" Non-Insulated Ring Terminals	15
BP-SP56	16-14 Ga., 0.156" Dia., Male Bullet Term.	25	EB-R38	6 Ga., 3/8" Non-Insulated Ring Terminals	15

## Nylon-Insulated Terminal Kit

This kit contains 18 different terminals, 243 pieces, sizes 22 to 10 gauge, including rings, quick-disconnects, quick splices, and butt splices. Comes in a small metal box, 13 3/8" w x 9 1/4" d x 2" h.



Part #  
TERM KIT NY-SM

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AN-B	22-18 Ga., Butt Splice Terminals	20	BN3-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	15
AN-R10	22-18 Ga., #10 Ring Terminals	15	BN3-MZ5	16-14 Ga., 0.250" W., Male Fully-Ins., Quick	10
AN-R6S	22-18 Ga., #6 Narrow Ring Terminals	15	BN3-FZ5	16-14 Ga., 0.250" W., Fem. Fully-Ins., Quick	15
BN-B	16-14 Ga., Butt Splice Terminals	20	CN-B	12-10 Ga., Butt Splice Terminals	15
BN-R6S	16-14 Ga., #6 Narrow Ring Terminals	15	CN-R10	12-10 Ga., #10 Ring Terminals	15
BN-R10	16-14 Ga., #10 Ring Terminals	15	CN-R14S	12-10 Ga., 1/4" Ring Terminals	10
BN-R14S	16-14 Ga., 1/4" Ring Terminals	15	CN-R38	12-10 Ga., 3/8" Ring Terminals	10
BN-R38	16-14 Ga., 3/8" Ring Terminals	12	CN3-FQ5	12-10 Ga., 0.250" W., Female Quick Disc.	10
BN3-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	10	T-4	18-14 Ga., Quick Splices	6

## Large Nylon-Insulated Terminal Kit

This kit contains 20 different terminals, 370 pieces, sizes 22 to 10 gauge, including rings, forks, quick-disconnects, quick splices, and butt splices. Comes in a large metal box, 18" w x 12" d x 3" h.



Part #  
TERM KIT NYL-LG

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AN-B	22-18 Ga., Butt Splice Terminals	20	BN-SP56	16-14 Ga., 0.156" Dia., Male Bullet Term.	15
AN-R6S	22-18 Ga., #6 Narrow Ring Terminals	20	BN-SR56	16-14 Ga., 0.156" Dia., Female Bullet Term.	15
AN-R10	22-18 Ga., #10 Ring Terminals	20	CN-B	12-10 Ga., Butt Splice Terminals	20
BN-B	16-14 Ga., Butt Splice Terminals	25	CN-R10	12-10 Ga., #10 Ring Terminals	15
BN-R6S	16-14 Ga., #6 Ring Terminals	20	CN-R14S	12-10 Ga., 1/4" Ring Terminals	15
BN-R10	16-14 Ga., #10 Ring Terminals	20	CN-R38	12-10 Ga., 3/8" Ring Terminals	15
BN-R14S	16-14 Ga., 1/4" Ring Terminals	20	CN3-FQ5	12-10 Ga., 0.250" W., Female Quick Disc.	15
BN3-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	20	T-4	18-14 Ga., Quick Splices	15
BN3-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	20	56M-15	16-14 Ga., 56 Series Male Unsealed Term.	20
BN-F10	16-14 Ga., #10 Fork Terminals	20	56F-15	16-14 Ga., 56 Series Female Unsealed Term.	20

## Heat-Shrink Terminal Kit

Great for maintenance applications, this kit contains 23 different heat-shrink terminals, 300 pieces, sizes 22 to 8 gauge, including rings, butt splices, and quick-disconnect terminals. Comes in a large metal box, 18"w x 12"d x 3"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AS-B	22-18 Ga., Butt Splice Terminals	25	BS3-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	10
AS-R6	22-18 Ga., #6 Ring Terminals	20	BS3-MZ5	16-14 Ga., 0.250" W., Male Fully Insulated	10
AS-R10	22-18 Ga., #10 Ring Terminals	20	BS3-FZ5	16-14 Ga., 0.250" W., Female Fully Insulated	10
AS3-MQ5	22-18 Ga., 0.250" W., Male Quick Disc.	10	CS-B	12-10 Ga., Butt Splice Terminals	15
AS3-FQ5	22-18 Ga., 0.250" W., Female Quick Disc.	10	CS-BB	16-14 To 12-10 Ga., Step-Down Butt Splices	5
BS-B	16-14 Ga., Butt Splice Terminals	25	CS-R10	12-10 Ga., #10 Ring Terminals	15
BS-R6	16-14 Ga., #6 Ring Terminals	20	CS-R14	12-10 Ga., 1/4" Ring Terminals	10
BS-R10	16-14 Ga., #10 Ring Terminals	20	CS-R56	12-10 Ga., 5/16" Ring Terminals	10
BS-R14	16-14 Ga., 1/4" Ring Terminals	10	CS-R38	12-10 Ga., 3/8" Ring Terminals	10
BS-R56	16-14 Ga., 5/16" Ring Terminals	10	CS-R12	12-10 Ga., 1/2" Ring Terminals	10
BS-R38	16-14 Ga., 3/8" Ring Terminals	10	DS-B	8 Ga., Butt Splice Terminals	5
BS3-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	10			



Part #  
SHRINK TERM KIT

## Heavy Duty Nylon Heat-Shrink Terminal Kit

These heavy duty nylon heat-shrink terminals make installation easy and will even repair themselves in the heat shrink process. Great for maintenance applications, this kit contains 23 different heat-shrink terminals, 300 pieces, sizes 22 to 8 gauge, including splices, and quick disconnect terminals. Comes in a large metal box, 18"w x 12"d x 3"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
ASN-B	22-18 Ga., Nylon Butt Splice Terminals	25	BSN3-FQ5	16-14 Ga., 0.250" Nylon Female Quick Disc.	10
ASN-R6	22-18 Ga., #6 Nylon Ring Terminals	20	BSN3-MZ5	16-14 Ga., 0.250" Nylon Male Fully Insulated	10
ASN-R10	22-18 Ga., #10 Nylon Ring Terminals	20	BSN3-FZ5	16-14 Ga., 0.250" Nylon Female Fully Insulated	10
ASN3-MQ5	22-18 Ga., 0.250" Nylon Male Quick Disc.	10	CSN-B	12-10 Ga., Nylon Butt Splice Terminals	15
ASN3-FQ5	22-18 Ga., 0.250" Nylon Female Quick Disc.	10	CSN-BB	16-14 to 12-10 Ga., Nylon Step-Down Splices	5
BSN-B	16-14 Ga., Nylon Butt Splice Terminals	25	CSN-R10	12-10 Ga., #10 Nylon Ring Terminals	15
BSN-R6	16-14 Ga., #6 Nylon Ring Terminals	20	CSN-R14	12-10 Ga., 1/4" Nylon Ring Terminals	10
BSN-R10	16-14 Ga., #10 Nylon Ring Terminals	20	CSN-R56	12-10 Ga., 5/16" Nylon Ring Terminals	10
BSN-R14	16-14 Ga., 1/4" Nylon Ring Terminals	10	CSN-R38	12-10 Ga., 3/8" Nylon Ring Terminals	10
BSN-R56	16-14 Ga., 5/16" Nylon Ring Terminals	10	CSN-R12	12-10 Ga., 1/2" Nylon Ring Terminals	10
BSN-R38	16-14 Ga., 3/8" Nylon Ring Terminals	10	DSN-B	8 Ga., Nylon Butt Splice Terminals	5
BSN3-MQ5	16-14 Ga., 0.250" Nylon Male Quick Disc.	10			



Part #  
NY SHK TERM KIT

## Heat-Shrink Terminals and Tool Kit

A compact kit contains 6 different types of heat-shrink terminals, 3 sizes of heat-shrink butt splices and 3 sizes of heat-shrink ring terminals. Also included is a ratcheting crimp tool, a wire stripping tool, and a mini torch. All contained in a soft sided case with zipper.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AS-B	22-18 Ga., Heat-Shrink Butt Splices	20	CS-R10	12-10 Ga., #10 Heat-Shrink Ring Term.	15
BS-B	16-14 Ga., Heat-Shrink Butt Splices	20	500 RATCHET UL	22-10 Ga., Heat-Shrink Crimp Tool	1
CS-B	10-12 Ga., Heat-Shrink Butt Splices	15	-----	22-10 Ga. Stripping and Crimping Tool	1
AS-R10	22-18 Ga., #10 Heat-Shrink Ring Term.	20	-----	Turbo Lite Mini Torch	1
BS-R10	16-14 Ga., #10 Heat-Shrink Ring Term.	20	-----	Soft 6 Compartment Case	1



Part # CS-KIT

## Small Heat-Shrink Butt Splice Terminals and Tool Kit

This portable heat-shrink kit contains 3 different sizes of butt splices. Also included is an economy crimping, stripping, and cutting tool and a mini torch. All contained in a soft sided case with a zipper.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AS-B	22-18 Ga., Heat-Shrink Butt Splices	20	MPT	Crimper/Stripper/Cutter Tool	1
BS-B	16-14 Ga., Heat-Shrink Butt Splices	20	-----	Turbo Lite Mini Torch	1
CS-B	10-12 Ga., Heat-Shrink Butt Splices	15	-----	Soft 3 Compartment Case	1



Part #  
CS-SPLICE-KIT

## Torch and Heat-Shrink Terminal Kit

The torch and terminal kit has 10 different types of heat-shrink terminals, ranging in size from 22 to 10 gauge. You will find a butane torch along with ring, forks, all in a large metal box, 18"w x 12"d x 3"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
PT-4000	Compact Pen Torch	1	BS-F10	16-14 Ga., #10 Fork Terminals	50
AS-B	22-18 Ga., Butt Splice Terminals	50	CS-B	12-10 Ga., Butt Splice Terminals	25
BS-B	16-14 Ga., Butt Splice Terminals	50	CS-R10	12-10 Ga., #10 Ring Terminals	25
BS-R6	16-14 Ga., #6 Ring Terminals	50	CS-R14	12-10 Ga., 1/4" Ring Terminals	25
BS-R10	16-14 Ga., #10 Ring Terminals	50	CS-R38	12-10 Ga., 3/8" Ring Terminals	25
BS-R14	16-14 Ga., 1/4" Ring Terminals	50			



Part #  
TORCH & TERM KI

## Terminal Kits

### Solder Shrink Kit

Solder heat-shrink terminals are used in harsh environments. This kit contains 480 terminals and range from 26 to 10 gauge. There are butt splices, forks, rings, and quick-disconnect terminals. Comes in a large metal box, 18" w x 12" d x 3" h.



Part #  
SOLDER SHRK KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
MSS-B	26-24 Ga., Butt Splice Terminals	25	BSS-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	25
ASS-B	22-18 Ga., Butt Splice Terminals	25	BSS-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	25
ASS-R6	22-18 Ga., #6 Ring Terminals	25	BSS-F10	16-14 Ga., #10 Fork Terminals	25
ASS-R8	22-18 Ga., #8 Ring Terminals	25	CSS-B	12-10 Ga., Butt Splice Terminals	25
ASS-R10	22-18 Ga., #10 Ring Terminals	25	CSS-R10	12-10 Ga., #10 Ring Terminals	15
ASS-R14	22-18 Ga., 1/4" Ring Terminals	25	CSS-R14	12-10 Ga., 1/4" Ring Terminals	15
ASS-F10	22-18 Ga., #10 Fork Terminals	25	CSS-R38	12-10 Ga., 3/8 Ring Terminals	15
BSS-B	16-14 Ga., Butt Splice Terminals	25	CSS-R12	12-10 Ga., 1/2" Ring Terminals	15
BSS-R10	16-14 Ga., #10 Ring Terminals	25	CSS-MQ5	12-10 Ga., 0.250" W., Male Quick Disc.	15
BSS-R14	16-14 Ga., 1/4" Ring Terminals	25	CSS-FQ5	12-10 Ga., 0.250" W., Female Quick Disc.	15
BSS-R38	16-14 Ga., 3/8" Ring Terminals	25	CSS-F10	12-10 Ga., #10 Fork Terminals	15

### Micro Terminal Kit

This kit has gained popularity as more and more computers with 26-22 gauge wire are installed in mobile applications. Kit contains 17 different 26-20 gauge terminals, over 400 pieces, including rings, forks, butt splices, quick-disconnects, and heat-shrink terminals. Comes in a small metal box, 13 3/8" w x 9 1/4" d x 2" h.



Part #  
MICRO TERM KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
MB-R2	26-24 Ga., #2 Non-Ins. Ring Terminals	25	MN-R6	26-24 Ga., #6 Nylon Ring Terminals	25
MB-R4	26-24 Ga., #4 Non-Ins. Ring Terminals	25	MN2-FQ1	26-24 Ga., 0.110" W., Nylon Female Disc.	25
MB-R6	26-24 Ga., #6 Non-Ins. Ring Terminals	25	MN2-FQ8	26-24 Ga., 0.187" W., Nylon Female Disc.	25
MB-F4	24-20 Ga., #4 Non-Ins. Fork Terminals	25	MN2-FZ1	26-22 Ga., 0.110" W., Nylon Female Disc.	25
MB-F6	24-20 Ga., #6 Non-Ins. Fork Terminals	25	MN-F2	26-24 Ga., #2 Nylon Fork Terminals	25
MB2-FQ8	26-24 Ga., 0.187" W., Female Quick Disc.	25	MN-F4	26-24 Ga., #4 Nylon Fork Terminals	25
MN-B	26-24 Ga., Nylon Butt Splice Terminals	25	MN-F6	26-24 Ga., #6 Nylon Fork Terminals	25
MN-R2	26-24 Ga., #2 Nylon Ring Terminals	25	MS-B	26-22 Ga., Heat-Shrink Butt Splices	25
MN-R4	26-24 Ga., #4 Nylon Ring Terminals	25			

### Micro Terminal Kit with Crimping Tool

This kit has gained popularity as more and more computers with 26-22 gauge wire are installed in mobile applications. Kit contains 22 different 26-20 gauge terminals, over 500 pieces, including rings, forks, butt splices, quick-disconnects, and heat-shrink terminals. It also contains the versatile 3M® TH-450 crimping tool to crimp those tiny terminals onto the tiny wire. Comes in a small metal box, 13 3/8" w x 9 1/4" d x 2" h.



Part #  
MICRO TER KT-LG

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
MB-B	26-22 Ga., Non-Ins. Butt Splice Terminals	25	MN-R10	26-24 Ga., #10 Nylon Ring Terminals	25
MB-R2	26-24 Ga., #2 Non-Ins. Ring Terminals	25	MN2-FQ1	26-24 Ga., 0.110" W., Nylon Female Disc.	25
MB-R4	26-24 Ga., #4 Non-Ins. Ring Terminals	25	MN2-FQ8	26-24 Ga., 0.187" W., Nylon Female Disc.	25
MB-R6	26-24 Ga., #6 Non-Ins. Ring Terminals	25	MN2-FZ1	26-22 Ga., 0.110" W., Nylon Female Disc.	25
MB2-FQ8	26-24 Ga., 0.187" W., Female Quick Disc.	25	MN3-FZ5	26-22 Ga., 0.250" W., Nylon Female Disc.	25
MB-F4	24-20 Ga., #4 Non-Ins. Fork Terminals	25	MN2-FZ8	26-22 Ga., 0.187" W., Nylon Female Disc.	25
MB-F6	24-20 Ga., #6 Non-Ins. Fork Terminals	25	MN-F2	26-24 Ga., #2 Nylon Fork Terminals	25
MN-B	26-24 Ga., Nylon Butt Splice Terminals	25	MN-F4	26-24 Ga., #4 Nylon Fork Terminals	25
MN-R2	26-24 Ga., #2 Nylon Ring Terminals	25	MN-F6	26-24 Ga., #6 Nylon Fork Terminals	25
MN-R4	26-24 Ga., #4 Nylon Ring Terminals	25	MS-B	26-22 Ga., Heat-Shrink Butt Splices	25
MN-R6	26-24 Ga., #6 Nylon Ring Terminals	25	TH-450	3M, Heavy Duty Crimper/Stripper	1
MN-R8	26-24 Ga., #8 Nylon Ring Terminals	25			

### High-Temperature Terminal Kit

This kit contains 20 different high-temperature terminals, 500 pieces, sizes 22 to 10 gauge, including rings, forks, butt splices, and quick-disconnect terminals. Comes in a small metal box, 13 3/8" w x 9 1/4" d x 2" h.



Part #  
HIGH TEMP KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AH-B	22-18 Ga., Butt Splice Terminals	25	BH-F10	16-14 Ga., #10 Fork Terminals	25
AH-R6	22-18 Ga., #6 Ring Terminals	25	BH3-MQ5	16-14 Ga., 0.250" W., Male Quick Disc.	25
AH-R8	22-18 Ga., #8 Ring Terminals	25	BH3-FQ5	16-14 Ga., 0.250" W., Female Quick Disc.	25
AH-R10	22-18 Ga., #10 Ring Terminals	25	CH-B	12-10 Ga., Butt Splice Terminals	25
AH-F6	22-18 Ga., #6 Fork Terminals	25	CH-R6	12-10 Ga., #6 Ring Terminals	25
BH-B	16-14 Ga., Butt Splice Terminals	25	CH-R8	12-10 Ga., #8 Ring Terminals	25
BH-R6	16-14 Ga., #6 Ring Terminals	25	CH-R10	12-10 Ga., #10 Ring Terminals	25
BH-R8	16-14 Ga., #8 Ring Terminals	25	CH-R14S	12-10 Ga., 1/4" Ring Terminals	25
BH-R10	16-14 Ga., #10 Ring Terminals	25	CH3-FQ5	12-10 Ga., 0.250" W., Female Quick Disc.	25
BH-F6	16-14 Ga., #6 Fork Terminals	25	CH-F10	12-10 Ga., #6 Fork Terminals	25

# Terminal Kits, Ferrule Kit, & Grommet Kit

## Terminal Maintenance Kit

This kit contains 21 different vinyl insulated terminals, 450 pieces, sizes 22 to 10 gauge, including rings, forks, butt splices, quick-disconnect, and bullet terminals, as well as 8" cable ties. Comes in a small metal box, 13 3/8"w x 9 1/4"d x 2"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AP-B	22-18 Ga., Vinyl Butt Splice Terminals	25	BP-F10	16-14 Ga., #10 Vinyl Fork Terminals	25
BP-B	16-14 Ga., Vinyl Butt Splice Terminals	25	BP-H8	16-14 Ga., #8 Hook Terminals	25
BP-R6S	16-14 Ga., #6 Vinyl Ring Terminals	25	CP-B	12-10 Ga., Vinyl Butt Splice Terminals	20
BP-R10	16-14 Ga., #10 Ring Terminals	25	CP-R10	12-10 Ga., #10 Vinyl Ring Terminals	20
BP-R14S	16-14 Ga., 1/4" Ring Terminals	25	CP-R14S	12-10 Ga., 1/4" Ring Terminals	15
BP-R38	16-14 Ga., 3/8" Vinyl Ring Terminals	25	CP-R56	12-10 Ga., 5/16" Ring Terminals	25
BP3-MQ5	16-14 Ga., 0.250" W., Vinyl Male Disc.	25	CP-R38	12-10 Ga., 3/8" Ring Terminals	15
BP3-FQ5	16-14 Ga., 0.250" W., Vinyl Female Disc.	25	CP-F10	12-10 Ga., #10 Vinyl Fork Terminals	20
BP-SP56	16-14 Ga., 0.156" Dia., Nylon Male Bullet	15	VWA-O	0.250" W. Female To Two Stacked Male	15
BN-SR56	16-14 Ga., 0.156" Dia., Nylon Fem. Bullet	15	T50-7-C	8", 50 lb. White, Standard Cable Ties	25
BP-FB6S	16-14 Ga., #6 Narrow Fork Block Term.	25			



Part #  
SM MAIT KIT PVC

## Heating Ventilation Air Conditioning Kit

A handy kit to have when working on heating, ventilation and air conditioning. The kit contains 26 different types of terminals, ranging from 22 to 10 gauge. There are vinyl rings, splices, bullets, quick-disconnects, forks, adapters, and cable ties. Comes in a small metal box, 13 3/8"w x 9 1/4"d x 2"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AP-B	22-18 Ga., Vinyl Butt Splice Terminals	25	BP-SP56	16-14 Ga., 0.156" Dia., Nylon Male Bullet	15
AP-R6S	22-18 Ga., #6 Narrow Vinyl Ring Terminals	25	BB3-FFQ5	16-14 Ga., 0.250" W., Female Quick Disc.	25
AP3-FQ5	22-18 Ga., 0.250" W., Vinyl Female Disc.	25	BN-SR56	16-14 Ga., 0.156" Dia., Nylon Female Bullet	15
BP-B	16-14 Ga., Vinyl Butt Splice Terminals	25	CP-B	12-10 Ga., Vinyl Butt Splice Terminals	20
BP-R6S	16-14 Ga., #6 Vinyl Ring Terminals	25	CP-R10	12-10 Ga., #10 Vinyl Ring Terminals	20
BP-R38	16-14 Ga., 3/8" Vinyl Ring Terminals	25	CP-F10	12-10 Ga., #10 Vinyl Fork Terminals	20
BP3-MQ5	16-14 Ga., 0.250" W., Vinyl Male Disc.	25	MMFA	Female To Two Male Connector, 0.250" W.	15
BP3-FQ5	16-14 Ga., 0.250" W., Vinyl Female Disc.	25	PBT-2	Male And Female Quick Disc., 0.250" W.	15
BP2-FQ8	16-14 Ga., 0.187" W., Vinyl Female Disc.	25	VWA-O	0.250" W. Female To Two Stacked Male	15
BN3-FZ5	16-14 Ga., 0.250" W., Nylon Female Disc.	25	T50-7	Standard 8", 50lb. White Cable Ties	25
BP-F10	16-14 Ga., #10 Vinyl Fork Terminals	25			



Part #  
HVAC-KIT

## Ferrule Kit

Kit contains 6 types of insulated ferrules, from 22 gauge to 12 gauge. 600 ferrules in a plastic box, 11"w x 6 3/4"d x 1 3/4"h.

Part #FERR-KIT NYLON

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
FER-22	22 Gauge White Insulated Ferrules	100	FER-16	16 Gauge Black Insulated Ferrules	100
FER-20	20 Gauge Light Blue Insulated Ferrules	100	FER-14	14 Gauge Gray Insulated Ferrules	100
FER-18	18 Gauge Red Insulated Ferrules	100	FER-12	12 Gauge Orange Insulated Ferrules	100



## Grommet Kit

(A) Inner Diameter	(B) Maximum Panel Width	(C) Panel Hole Diameter	Qty.	(A) Inner Diameter	(B) Maximum Panel Width	(C) Panel Hole Diameter	Qty.
1/8"	3/32"	3/8"	7	3/8"	1/16"	1/2"	8
5/32"	1/16"	1/4"	13	3/8"	1/16"	1"	2
3/16"	1/16"	5/16"	8	3/8"	1/4"	5/8"	3
3/16"	3/32"	9/32"	12	1/2"	3/32"	3/4"	3
3/16"	1/4"	5/16"	9	1/2"	1/4"	13/16"	2
1/4"	1/16"	7/16"	7	5/8"	1/8"	7/8"	3
5/16"	1/16"	7/16"	8	5/8"	1/16"	7/8"	3
5/16"	1/8"	9/16"	4	3/4"	1/16"	1 1/16"	2
5/16"	1/4"	9/16"	4	3/4"	1/4"	1 1/4"	1



Rubber grommets protect your wires from abrasion and seal around the panel hole.

Part #GROMMET KIT

## Let Us Customize A Kit For You


Let us build a kit that will suit your needs.

You choose the terminals, tools, and whatever else you may need. We put it all together in a plastic or metal box. You now have everything you need right at your fingertips.




# Ferrules & Pin and Blade Terminals

## Non-Insulated Ferrules

 Create a better connection under set screws, pressure plates, and in terminal blocks by capturing all of the wire strands at the contact point. Ferrules also hold up to vibration, can be reconnected multiple times without damage and make stronger mechanical connections than ring or fork terminals.


Wire Size (AWG)	Pin Length	Pkg. Qty.	Wire Size (AWG)	Pin Length	Pkg. Qty.	Wire Size (AWG)	Pin Length	Pkg. Qty.
28	0.28" (7mm)	FER-28B 100	14	0.39" (10mm)	FER-14B 100	1/0	0.71" (18mm)	FER-11/0B 25
26	0.2" (5mm)	FER-26B 100	12	0.47" (12mm)	FER-12B 100	2/0	0.98" (25mm)	FER-2/0B 10
24	0.2" (5mm)	FER-24B 100	10	0.59" (15mm)	FER-10B 100	3/0	0.98" (25mm)	FER-3/0B 10
22	0.39" (10mm)	FER-22B 100	8	0.47" (12mm)	FER-8B 100	4/0	1.26" (32mm)	FER-4/0B 10
20	0.39" (10mm)	FER-20B 100	6	0.47" (12mm)	FER-6B 50	250 MCM	1.26" (32mm)	FER-250B 10
18	0.39" (10mm)	FER-18B 100	4	0.59" (15mm)	FER-4B 50	350 MCM	1.26" (32mm)	FER-350B 10
16	0.39" (10mm)	FER-16B 100	2	0.71" (18mm)	FER-2B 25			

## Insulated Ferrules

 Create a better connection under set screws, pressure plates, and in terminal blocks by capturing all of the wire strands at the contact point. Ferrules also hold up to vibration, can be reconnected multiple times without damage, and are a stronger mechanical connection than ring or fork terminals. The nylon insulation prevents incidental contact.


Wire Size (AWG)	Pin Length	Color	Pkg. Qty.
<b>Standard</b>			
28	0.24" (6mm)	Brown	FER-28 100
26	0.24" (6mm)	Purple	FER-26 100
24	0.24" (6mm)	Pink	FER-24 100
22	0.31" (8mm)	White	FER-22 100
20	0.31" (8mm)	Light Blue	FER-20 100
18	0.31" (8mm)	Red	FER-18 100
16	0.31" (8mm)	Black	FER-16 100
14	0.31" (8mm)	Gray	FER-14 100
12	0.39" (10mm)	Orange	FER-12 100
10	0.47" (12mm)	Green	FER-10 100
8	0.47" (12mm)	Brown	FER-8 100
6	0.47" (12mm)	Blue	FER-6 50
4	0.63" (16mm)	Black	FER-4 50
2	0.63" (16mm)	Tan	FER-2 25
1/0	0.79" (20mm)	Olive	FER-11/0 10
2/0	0.83" (21mm)	Yellow	FER-2/0 10
3/0	0.98" (25mm)	Red	FER-3/0 10
4/0	1.06" (27mm)	Blue	FER-4/0 5
250 MCM	1.26" (32mm)	Yellow	FER-250MCM 5
<b>Extra Long</b>			
22	0.47" (12mm)	White	FER-22XL 100
20	0.47" (12mm)	Blue	FER-20XL 100
18	0.47" (12mm)	Yellow	FER-18XL 100
16	0.71" (18mm)	Black	FER-16XL 100
14	0.47" (12mm)	Gray	FER-14L 100
14	0.71" (18mm)	Gray	FER-14XL 100
12	0.71" (18mm)	Orange	FER-12XL 100
10	0.71" (18mm)	Green	FER-10XL 100

## Solid Pin Terminals

 Avoid frayed wire ends. Crimp your wire into this terminal and use the solid pin instead of the wire to make your electrical connection. Use the **heavy duty** pin terminals in harsh environments, these terminals feature a heat-shrink connection that also has an internal sealant. Requires one crimp plus heat.


Wire Size (AWG)	Non-Insulated		Vinyl Insulated		Nylon Insulated		Heavy Duty Heat-Shrink		
	AB-PIN	Pkg. Qty.	Color	Pkg. Qty.	AN-PIN	Pkg. Qty.	ASN-PIN	Pkg. Qty.	
22-18	AB-PIN	100	Red	-----	AN-PIN	50	ASN-PIN	25	
16-14	BB-PIN	50	Blue	BP-PIN	50	BN-PIN	50	BSN-PIN	25
12-10	CB-PIN	50	Yellow	CP-PIN	50	CN-PIN	25	CSN-PIN	10

## Blade Terminal

 Avoid frayed wire ends. Crimp your wire into this non-insulated terminal and use the blade instead of the wire to make your electrical connection. Solid tab with flat top and bottom for slipping under set screws or in compression blocks. Stackable. Requires only one crimp onto the wire.

Wire Size (AWG)	Blade Length	Pkg. Qty.
22-16	0.728"	AB-BLD-087 50
16-14	0.360"	BB-BLD110 50


## Two Wire Insulated Ferrules

 Need to terminate two wires at the same point? These are the terminals for you.

Ferrules also hold up to vibration, can be reconnected multiple times without damage, and make stronger mechanical connections than ring or fork terminals. The nylon insulation prevents incidental contact.

Wire Size (AWG)	Pin Length	Color	Pkg. Qty.
22	0.31" (8mm)	White	FER-22-2 100
20	0.31" (8mm)	Blue	FER-20-2-LTB 100
18	0.31" (8mm)	Red	FER-18-2 100
16	0.39" (10mm)	Black	FER-16-2 100
14	0.47" (12mm)	Blue	FER-14-2-BLUE 100
14	0.47" (12mm)	Gray	FER-14-2-GREY 100
12	0.47" (12mm)	Orange	FER-12-2-ORANGE 100
12	0.47" (12mm)	Gray	FER-12-2-GREY 100
10	0.47" (12mm)	Green	FER-10-2 100
8	0.47" (12mm)	Brown	FER-8-2 50
6	0.47" (12mm)	Blue	FER-6-2 50

## Insulated Ferrule Strips for High Volume Applications

 For rapid installation, use these ferrule strips. The number of ferrules in the strip matches the package size. The tin-plated copper tubes make for an easy mating point with terminal blocks, or under set screws and pressure plates. Nylon insulation prevents incidental contact.

Wire Size (AWG)	Pin Length	Color	Pkg. Qty.
22	0.31" (8mm)	White	FER-22-STP 50
20	0.31" (8mm)	Blue	FER-20-STP 50
18	0.31" (8mm)	Red	FER-18-STP 50
16	0.31" (8mm)	Black	FER-16-STP 50
14	0.31" (8mm)	Gray	FER-14-STP 50

Tool for crimping strips Part # FER TOOL STRAP

## Ferrule Tools

### Crimps:

- **22-10** gauge insulated and non-insulated

### Features:

- Quick-release
- Five crimp zones
- Economy ratcheting tool



Part # FER TOOL 22-12

### Crimps:

- **10-6** gauge insulated and non-insulated

### Features:

- Quick-release
- Three crimp zones
- Pressure adjustment wheel
- Economy ratcheting tool



Part # FER TOOL 10-6E

### Crimps:

- **20-12** gauge insulated and non-insulated wire ferrules
- US or DIN type wire ferrules

### Features:

- German precision engineered tool
- Ratcheting tool



Part # PA-1648

### Crimps:

- **8-1** gauge insulated and non-insulated wire ferrules, with a trapezoid crimp

### Features:

- Quick-release
- Extra long handle for greater leverage
- Five crimp zones
- Ratcheting tool



Part # FER TOOL 8-1

### Crimps:

- **10-6** gauge insulated and non-insulated wire ferrules, with a trapezoid crimp
- US or DIN type wire ferrules, conforms to DIN 46228 Pt #1 and #4 or EN-60947-1, three crimp zones are registered in accordance with VG 95211 (military designation VG 95236 T 145 A0001)

### Features:

- German precision engineered ratcheting tool



Part # FER TOOL 10-6

### Crimps:

- **6-2** gauge insulated and non-insulated wire ferrules

### Features:

- Quick-release
- Three crimp zones
- Pressure adjustment wheel
- Ratcheting tool



Part # FER TOOL 6-2

### Crimps:

- **4/0 gauge -250MCM** insulated and non-insulated wire ferrules with a trapezoid crimp

### Features:

- Heavy-duty Ratcheting Tool



Part # FER-TOOL 250MCM

### Crimps:

- **24-10** gauge ferrules

### Features:

- Front loading auto adjusts to wire ferrule sizes
- Precision crimp over full length of the ferrule sleeve
- German patented crimp technology produces a high quality square crimp
- Quick release
- Kits also includes 250 ferrules (50 of each size; 20, 18, 16, 14, 12 gauge), enclosed in a plastic case



Part # FERTOOL24-10KIT



Tool Part # FER TOOL 24-10

### Crimps:

- **1-3/0** gauge insulated and non-insulated wire ferrules, with a trapezoid crimp

### Features:

- Quick-release
- Extra long handle for greater leverage
- Ratcheting tool



Part # FER TOOL 1-3/0

### Crimps:

- **22-12** gauge insulated and non-insulated
- DIN 46228 Pt #1 and #4

### Features:

- One crimp zone crimps all sizes
- German precision engineered tool
- Rotary action head



Part # FER TOOL20-12-E

### Crimps:

- **24-10** gauge insulated and non-insulated, with a rotating crimp die
- DIN 46228 Pt #1 and #4 or EN-60947-1 type wire ferrules

### Features:

- Rotary action head turns 90° to allow crimp to be made from front or side
- German precision engineered tool
- Non-ratcheting tool



Part # FER TOOL ROTO

### Crimps:

- **22-14** gauge strip ferrules

### Features:

- Economical alternative to a ferrule crimping machine
- Speeds application by 200-300% over standard crimping tools
- Load strip ferrules into this tool for high volume applications



Part # FER TOOL STRAP

# Copper Compression Lugs, Sleeves & Split Bolts

## Copper Compression Lugs



The extended barrel allows you to easily make a double crimp, for good wire contact. The sight hole allows you to ensure your wire is inserted properly, plus it's UL listed and can be used up to 600 volts. Sold individually. Many other sizes available through special order.

Wire Size (AWG)	Stud Size	Length	Width	Color		Wire Size (AWG)	Stud Size	Length	Width	Color	
10	#10	0.8"	0.3"	-----	IL-CRA-10	1	3/8"	2.1"	0.7"	Green	IL-CRA-1-38
8	#10	1.2"	0.4"	Red	IL-CRA-8	1/0	1/4"	2"	0.8"	Pink	IL-CRA-0-14
8	1/4"	1.2"	0.4"	Red	IL-CRA-8-14	1/0	5/16"	2.1"	0.8"	Pink	IL-CRA-0
8	5/16"	1.3"	0.6"	Red	IL-CRA-8-56	1/0	3/8"	2.1"	0.8"	Pink	IL-CRB-0
8	3/8"	1.3"	0.6"	Red	IL-CRA-8-38	1/0	1/2"	2.4"	0.8"	Pink	IL-CRB-0-12
8	1/2"	1.5"	0.8"	Red	IL-CRA-8-12	2/0	3/8"	2.1"	0.8"	Black	IL-CRA-2/0
6	#10	1.6"	0.4"	Blue	IL-CRA-6	2/0	1/2"	2.4"	0.8"	Black	IL-CRA-2/0-12
6	1/4"	1.7"	0.4"	Blue	IL-CRB-6	3/0	3/8"	2"	0.9"	Orange	IL-CRA-3/0
6	5/16"	1.8"	0.5"	Blue	IL-CRA-6-516	3/0	1/2"	2.5"	0.9"	Orange	IL-CRB-3/0
6	3/8"	1.8"	0.6"	Blue	IL-CRA-6-38	4/0	1/4"	2.2"	1"	Purple	IL-CRA-4/0-14
4	#10	1.6"	0.5"	Gray	IL-CRA-4	4/0	3/8"	2.3"	1"	Purple	IL-CRA-4/0
4	1/4"	1.7"	0.5"	Gray	IL-CRB-4	4/0	1/2"	2.6"	1"	Purple	IL-CRB-4/0
4	5/16"	1.8"	0.6"	Gray	IL-CRA-4-516	250 MCM	1/4"	2.3"	0.4"	Yellow	IL-CRA-250-14
4	3/8"	1.8"	0.6"	Gray	IL-CRA-4-38	250 MCM	5/16"	2.3"	0.4"	Yellow	IL-CRA-250-56
2	1/4"	1.8"	0.6"	Brown	IL-CRA-2	250 MCM	3/8"	2.6"	0.4"	Yellow	IL-CRA-250-38
2	5/16"	1.9"	0.6"	Brown	IL-CRB-2	250 MCM	1/2"	2.7"	0.4"	Yellow	IL-CRA-250
2	3/8"	2"	0.6"	Brown	IL-CRC-2	350 MCM	1/2"	2.9"	1.3"	Red	IL-CRA-350
2	1/2"	2.2"	0.8"	Brown	IL-CRA-2-12	400 MCM	5/8"	3.3"	1.4"	Blue	IL-CRA-400
1	1/4"	1.4"	0.7"	Green	IL-CRA-1-14	500 MCM	5/8"	3.6"	1.5"	Brown	IL-CRA-500
1	5/16"	1.6"	0.7"	Green	IL-CRA-1	750 MCM	5/8"	4"	2"	Black	IL-CRA-750

## Two-Hole Copper Compression Lugs



The double stud connections allow you to secure this lug in two places. The extended barrel allows you to easily make a double crimp, for good wire contact. The sight hole allows you to ensure your wire is inserted properly, plus it's UL listed and can be used up to 600 volts. Sold individually.

Wire Size (AWG)	Stud Size	Length	Width	Color		Wire Size (AWG)	Stud Size	Length	Width	Color	
1/0	5/16"	3.3"	0.8"	Pink	IL-CRA-1/0L2	250 MCM	1/2"	5.1"	1.1"	Yellow	IL-CRA-250L2
2/0	1/2"	4.8"	0.8"	Black	IL-CRA-2/0L2	350 MCM	1/2"	5.6"	1.3"	Red	IL-CRA-350L2
3/0	1/2"	4.9"	0.9"	Orange	IL-CRB-3/0L2	500 MCM	1/2"	6"	1.5"	Brown	IL-CRA-500L2
4/0	1/2"	5.1"	1"	Purple	IL-CRB-4/0L2	750 MCM	1/2"	5.8"	2"	Black	IL-CRA-750L2

## Copper Compression Sleeves



Compression sleeves are heavy duty butt splices. A longer barrel allows for a double crimp and better wire contact. The seamless design won't split in the crimping process. UL listed. Sold individually.

Wire Size (AWG)	Length	Color		Wire Size (AWG)	Length	Color		Wire Size (AWG)	Length	Color	
8	1.1"	Red	IL-CT-8	1	1.9"	Green	IL-CT-1	3/0	2.1"	Orange	IL-CT-3/0
6	1.8"	Blue	IL-CT-6	1	2.9"	Green	IL-CTL-1	3/0	3.1"	Orange	IL-CTL-3/0
4	1.8"	Gray	IL-CT-4	1/0	1.9"	Pink	IL-CT-1/0	4/0	2.1"	Purple	IL-CT-4/0
4	2.4"	Gray	IL-CTL-4	1/0	2.9"	Pink	IL-CTL-1/0	4/0	3.4"	Orange	IL-CTL-4/0
2	1.9"	Brown	IL-CT-2	2/0	2"	Black	IL-CT-2/0	350 MCM	2.4"	Red	IL-CT-350
2	2.6"	Brown	IL-CTL-2	2/0	3.1"	Black	IL-CTL-2/0				

## Copper Split Bolts



Use to connect multiple copper wires together without a crimping tool - simply tighten the hex nut. Accepts a wide range of wire sizes. UL listed. Sold individually.

Wire Range (AWG)	Length	Width		Wire Range (AWG)	Length	Width		Wire Range (AWG)	Length	Width	
16-8	0.8"	0.5"	IL-IK-8	6-2	1.3"	1.3"	IL-IK-2	1/0-250 MCM	2.1"	1.3"	IL-IK-250
10-8	1.1"	0.6"	IL-IK-6	4-1/0	1.6"	0.9"	IL-IK-1/0+	1/0-350 MCM	2.6"	1.6"	IL-IK-350
6-4	1.1"	0.7"	IL-IK-4	2-2/0	1.8"	1"	IL-IK-2/0				
6-3	1.3"	0.8"	IL-IK-3	2-3/0	2"	1.1"	IL-IK-3/0				



# Neutral Bars, Power Distribution Blocks & Battery Terminal Grounding Straps

## Copper Post Connections

Easily attach multiple wires to any surface with these post connectors. Accepts a wide range of wire sizes. No crimping tools required, simply screw down the set screw. UL listed. Sold individually.



## Aluminum Mechanical Lugs

Suitable for aluminum or copper wire. Easily attach multiple wires to any surface with these post connectors. Accepts a wide range of wire sizes. No crimping tools required, simply screw down the set screw. UL listed. Sold individually.



Wire Range (AWG)	Stud Size	Length	Width	Height	
14-8	#10	1.1"	0.50"	0.50"	IL-TA-6S
14-4	1/4"	1.2"	0.50"	0.60"	IL-TA-2
14-1/0	1/4"	1.5"	0.63"	0.80"	IL-TA-0
6-250 MCM	5/16"	1.5"	0.63"	0.80"	IL-TA-2/0
6-350 MCM	3/8"	2"	1.1"	1.1"	IL-TA-250
4/0-500 MCM	1/2"	2.8"	1.3"	1.6"	IL-TA-350
					IL-TA-500

## Copper Neutral Bars

Grounds multiple wires in a very small space and accepts a wide range of wire sizes. No crimping tool is required. The copper neutral bars are made from high strength copper. Screws are included unless noted. UL listed. Sold individually.



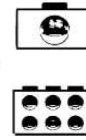
Conductor Range Main/Primary	Conductor Range Tap/Secondary	Number of Taps	Mount Hole Position	Length	
14 to 4	14 to 6	4	1 and 6	2.75"	IL-D-167-4
14 to 4	14 to 6	6	2 and 7	3.50"	IL-D-167-6
14 to 4	14 to 6	8	4 and 9	4.50"	IL-D-167-8
14 to 4	14 to 6	10	4 and 9	5.13"	IL-D-167-10
14 to 4	14 to 6	12	5 and 10	6"	IL-D-167-12
14 to 4	14 to 6	14	7 and 12	6.75"	IL-D-167-14
14 to 4	14 to 6	174	-----	69"	IL-N-174*
Ground Screws: 1/4"-28 7/16" long					IL-E-153

\*Screws Not Included

## Power Distribution Blocks

Power distribution blocks are suitable for copper or aluminum wire. They have great flexibility for using the block as an inline splice or to reduce the wire size. Made of high strength aluminum and have an insulating base. Temperature rating of 194°F and 600 volts maximum.

Use the modular design of the **IL-PDC-14-2/0-1** to combine any number of blocks for your job. Sold individually.



In (Primary)

Out (Secondary)



IL-PDB-16-2/0-1

IL-PDC-14-2/0-1

Poles Per Block	In (Primary) Wire Range	In (Primary) Openings Per Pole	Out (Secondary) Wire Range	Out (Secondary) Openings Per Pole	
1	2/0 to 12	1	4 to 14	6	IL-PDB-16-2/0-1
3	350 to 6	1	2/0 to 14	6	IL-PDB-16-350-3
3	4/0 to 6	2	4 to 14	12	ILPDB-212-4/0-3
1	2/0 to 14	1	4 to 14	4	IL-PDC-14-2/0-1

## Grounding Straps

The lug to lug grounding straps are finely stranded for maximum conductivity. They are tin coated copper, flexible, and corrosion resistant.

Wire Size (AWG)	Length	Stud Size	
4	9"	1/2"	GND-STRP-4-9
4	13"	1/2"	GND-STRP-4-13
4	18"	3/8"	GND-STRP-4-18
1/0	12"	1/2"	GND-STRP-1/0-12
1/0	18"	1/2"	GND-STRP-1/0-18



## Can't Find the IlSCO Product That You Need?

Simply provide us with their part number and we'll get it for you.



# Copper Lugs & Battery Terminal Kit

## Copper Lugs

The one-piece solid tongue of these copper lugs uniquely provides seamless transfer of electricity, a far superior product to the "sandwiched" tongue lugs commonly found in the market. Copper lugs are clearly marked for wire size and offer a flared barrel to ease insertion of finely stranded wire and welding cable. UL listed and CSA certified.

**Corrosion resistant** lugs have tin plating to stand up to harsh environments.

**Heavy-duty** copper lugs have 80% greater wall thicknesses and tin plating for corrosion resistance, these copper lugs will stand the test of time.



Wire Size (AWG)	For Stud Size	Straight				90° Angle				Straight Heavy-Duty		
		Length	Standard	Corrosion Resistant	Pkg. Qty.	Standard	Pkg. Qty.	Corrosion Resistant	Pkg. Qty.	Length	Standard	Pkg. Qty.
8	#10	1.31"	CL8-10	CL8-10T	10	CL8-10-90	10	CL8-10T-90	10	1.22"	HL-8-10	10
8	1/4"	1.17"	CL8-14	CL8-14T	10	CL8-14-90	10	CL8-14T-90	10	1.22"	HL-8-14	10
8	5/16"	1.31"	CL8-56	CL8-56T	10	CL8-56-90	10	CL8-56T-90	10	1.38"	HL-8-56	10
8	3/8"	1.31"	CL8-38	CL8-38T	10	CL8-38-90	10	CL8-38T-90	10	1.38"	HL-8-38	10
8	1/2"	1.31"	CL8-12	CL8-12T	10	CL8-12-90	10	CL8-12T-90	10	1.54"	HL-8-12	10
6	#10	1.27"	CL6-10	CL6-10T	10	CL6-10-90	10	CL6-10T-90	5	1.26"	HL-6-10	10
6	1/4"	1.27"	CL6-14	CL6-14T	10	CL6-14-90	10	CL6-14T-90	5	1.26"	HL-6-14	10
6	5/16"	1.41"	CL6-56	CL6-56T	10	CL6-56-90	10	CL6-56T-90	5	1.42"	HL-6-56	10
6	3/8"	1.41"	CL6-38	CL6-38T	10	CL6-38-90	10	CL6-38T-90	5	1.42"	HL-6-38	10
6	1/2"	1.55"	CL6-12	CL6-12T	10	CL6-12-90	10	CL6-12T-90	5	1.54"	HL-6-12	10
4	#10	1.5"	CL4-10	CL4-10T	10	CL4-10-90	5	CL4-10T-90	5	1.50"	HL-4-10	10
4	1/4"	1.5"	CL4-14	CL4-14T	10	CL4-14-90	5	CL4-14T-90	5	1.50"	HL-4-14	10
4	5/16"	1.5"	CL4-56	CL4-56T	10	CL4-56-90	5	CL4-56T-90	5	1.50"	HL-4-56	10
4	3/8"	1.53"	CL4-38	CL4-38T	10	CL4-38-90	5	CL4-38T-90	5	1.50"	HL-4-38	10
4	1/2"	1.68"	CL4-12	CL4-12T	10	CL4-12-90	5	CL4-12T-90	5	1.63"	HL-4-12	10
2	1/4"	1.62"	CL2-14	CL2-14T	10	CL2-14-90	5	CL2-14T-90	5	1.85"	HL-2-14	5
2	5/16"	1.62"	CL2-56	CL2-56T	10	CL2-56-90	5	CL2-56T-90	5	1.85"	HL-2-56	5
2	3/8"	1.62"	CL2-38	CL2-38T	10	CL2-38-90	5	CL2-38T-90	5	2.01"	HL-2-38	5
2	1/2"	1.75"	CL2-12	CL2-12T	10	CL2-12-90	5	CL2-12T-90	5	2.21"	HL-2-12	5
1	1/4"	1.72"	CL1-14	CL1-14T	10	CL1-14-90	5	CL1-14T-90	5	1.85"	HL-1-14	5
1	5/16"	1.72"	CL1-56	CL1-56T	10	CL1-56-90	5	CL1-56T-90	5	1.85"	HL-1-56	5
1	3/8"	1.72"	CL1-38	CL1-38T	10	CL1-38-90	5	CL1-38T-90	5	2.01"	HL-1-38	5
1	1/2"	1.83"	CL1-12	CL1-12T	10	CL1-12-90	5	CL1-12T-90	5	2.21"	HL-1-12	5
1/0	1/4"	1.83"	CL1/0-14	CL1/0-14T	10	CL1/0-14-90	5	CL1/0-14T-90	5	2.04"	HL-1/0-14	5
1/0	5/16"	1.83"	CL1/0-56	CL1/0-56T	10	CL1/0-56-90	5	CL1/0-56T-90	5	2.04"	HL-1/0-56	5
1/0	3/8"	1.83"	CL1/0-38	CL1/0-38T	10	CL1/0-38-90	5	CL1/0-38T-90	5	2.04"	HL-1/0-38	5
1/0	1/2"	1.9"	CL1/0-12	CL1/0-12T	10	CL1/0-12-90	5	CL1/0-12T-90	5	2.04"	HL-1/0-12	5
2/0	1/4"	2.06"	CL2/0-14	CL2/0-14T	10	CL2/0-14-90	5	CL2/0-14T-90	5	2.40"	HL-2/0-14	5
2/0	5/16"	2.06"	CL2/0-56	CL2/0-56T	10	CL2/0-56-90	5	CL2/0-56T-90	5	2.40"	HL-2/0-56	5
2/0	3/8"	2.06"	CL2/0-38	CL2/0-38T	10	CL2/0-38-90	5	CL2/0-38T-90	5	2.40"	HL-2/0-38	5
2/0	1/2"	2.06"	CL2/0-12	CL2/0-12T	5	CL2/0-12-90	5	CL2/0-12T-90	5	2.40"	HL-2/0-12	5
3/0	1/4"	2.16"	CL3/0-14	CL3/0-14T	5	CL3/0-14-90	5	CL3/0-14T-90	5	2.46"	HL-3/0-14	5
3/0	5/16"	2.16"	CL3/0-56	CL3/0-56T	5	CL3/0-56-90	5	CL3/0-56T-90	5	2.46"	HL-3/0-56	5
3/0	3/8"	2.16"	CL3/0-38	CL3/0-38T	5	CL3/0-38-90	5	CL3/0-38T-90	5	2.46"	HL-3/0-38	5
3/0	1/2"	2.16"	CL3/0-12	CL3/0-12T	5	CL3/0-12-90	5	CL3/0-12T-90	5	2.46"	HL-3/0-12	5
4/0	1/4"	2.39"	CL4/0-14	CL4/0-14T	5	CL4/0-14-90	5	CL4/0-14T-90	5	2.50"	HL-4/0-14	1
4/0	5/16"	2.39"	CL4/0-56	CL4/0-56T	5	CL4/0-56-90	5	CL4/0-56T-90	5	2.50"	HL-4/0-56	1
4/0	3/8"	2.39"	CL4/0-38	CL4/0-38T	5	CL4/0-38-90	5	CL4/0-38T-90	5	2.50"	HL-4/0-38	1
4/0	1/2"	2.39"	CL4/0-12	CL4/0-12T	5	CL4/0-12-90	5	CL4/0-12T-90	5	2.50"	HL-4/0-12	1

## Battery Terminal Kit

Comes in a large metal box, 18"w x 12"d x 3"h.

Kit Contains	Description	Qty.	Kit Contains	Description	Qty.
BTC-2/0P	2/0 Ga. Positive Battery Terminals	5	BB	Replacement Battery Term. Bolts and Nuts	25
BTC-2/0N	2/0 Ga. Negative Battery Terminals	5	X700-7R	3/4" Red HD Adhesive-Lined Shrink Tube	1
BTC-4P	4 Ga. Positive Battery Terminals	3	X700-7B	3/4" Black HD Adhesive-Lined Shrink Tube	1
BTC-4N	4 Ga. Negative Battery Terminals	2	BT-SLUG-2/0	2/0 Ga. Orange Solder Slugs	10
CL2/0-38	2/0 Ga. 3/8" Stud Copper Lugs	10	BT-SLUG-4	4 Ga. Silver Solder Slugs	10
CL2/0-12	2/0 Ga. 1/2" Stud Copper Lugs	10	TL-97944	2 oz. Tube, Corr. Preventative Compound	1
CL4-38	4 Ga. 3/8" Stud Copper Lugs	10			



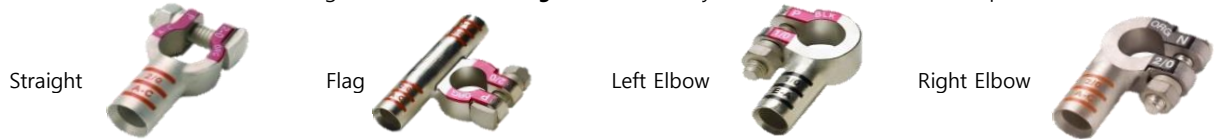
Part #  
BATT TERM KIT

# Battery Terminals & Battery Terminal and Copper Lug Covers

## Crimp or Solder Top Post Battery Terminals

The tin plating on these copper battery terminals provides corrosion resistance, making them last longer. They have 100% conductivity compared to standard copper battery terminals which only have 32% conductivity. Feature wire size, polarity markings, and color coding for crimping. Include nut and bolt. Can be crimped and soldered.

Use **flag** battery terminals to connect several batteries together. Use **left** and **right elbow** battery terminals to fit in confined spaces. Sold individually.



Polarity	(A)Straight	(B)Flag	(C)Left Elbow	(D)Right Elbow
<b>6 Ga.</b>				
Negative	BTC-6N	-----	BTCF-6N-L	BTCF-6N-R
Positive	BTC-6P	-----	BTCF-6P-L	BTCF-6P-R
<b>4 Ga.</b>				
Negative	BTC-4N	-----	BTCF-4N-L	BTCF-4N-R
Positive	BTC-4P	-----	BTCF-4P-L	BTCF-4P-R
<b>2 Ga.</b>				
Negative	-----	BTCF-2N	BTCF-2N-L	BTCF-2N-R
Positive	-----	BTCF-2P	BTCF-2P-L	BTCF-2P-R
<b>1 Ga.</b>				
Negative	BTC-1N	BTCF-1N	BTCF-1N-L	BTCF-1N-R
Positive	BTC-1P	BTCF-1P	BTCF-1P-L	BTCF-1P-R

Polarity	(A)Straight	(B)Flag	(C)Left Elbow	(D)Right Elbow
<b>1/0 Ga.</b>				
Negative	BTC-1/0N	BTCF-1/0N	BTCF-1/0N-L	BTCF-1/0N-R
Positive	BTC-1/0P	BTCF-1/0P	BTCF-1/0P-L	BTCF-1/0P-R
<b>2/0 Ga.</b>				
Negative	BTC-2/0N	BTCF-2/0N	BTCF-2/0N-L	BTCF-2/0N-R
Positive	BTC-2/0P	BTCF-2/0P	BTCF-2/0P-L	BTCF-2/0P-R
<b>3/0 Ga.</b>				
Negative	BTC-3/0N	BTCF-3/0N	BTCF-3/0N-L	BTCF-3/0N-R
Positive	BTC-3/0P	BTCF-3/0P	BTCF-3/0P-L	BTCF-3/0P-R
<b>4/0 Ga.</b>				
Negative	BTC-4/0N	BTCF-4/0N	BTCF-4/0N-L	BTCF-4/0N-R
Positive	BTC-4/0P	BTCF-4/0P	BTCF-4/0P-L	BTCF-4/0P-R

## Military Style and Marine Battery Terminals

If **military** battery terminals are good enough for the military, they can stand up to the toughest of applications. Feature an extra long 3/8" diameter bolt that's ideal for mounting lugs. Also have a 5/16" diameter short bolt. Clearly marked positive and negative.

**Marine** battery terminals withstand harsh seas. They allow you to easily connect and disconnect lugs from your battery with the spin of a wing nut. Positive has a 3/8" wing nut and the negative has a 5/16" wing nut.

**Standard** terminals are made of lead.

The **corrosion resistant** battery terminals are made of zinc alloy that last 3 times longer in harsh environments than regular lead battery terminals. They are lead free and 3.6 times more conductive than standard lead terminals. Also RoHS compliant.

Wire Size (AWG)	Polarity	Standard	Corrosion Resistant
<b>Military Style</b> (Sold individually)			
8-4/0	Negative	BTM-N	-----
8-4/0	Positive	BTM-P	-----

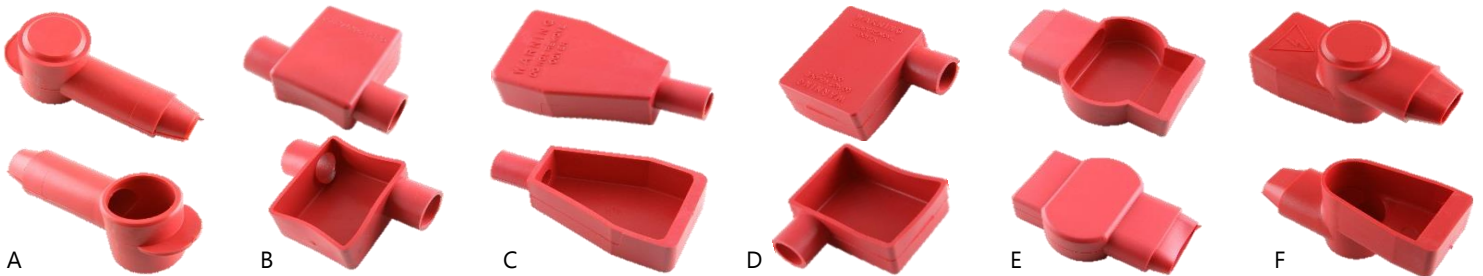


Wire Size (AWG)	Polarity	Standard	Corrosion Resistant
<b>Marine</b> (Sold in packages of 5)			
8-4/0	Negative	WNBT-56N	WNBT-56N-Z
8-4/0	Positive	WNBT-38P	WNBT-38P-Z



## Covers for Copper Lugs and Battery Terminals

Flexible vinyl covers protect copper lugs and battery terminals from short circuiting and contaminants. Color coded for easy identification of positive and negative terminals. Max temperature 194°F. Sold individually. Many other styles of boots are available through special order.



Wire Size (AWG)	Black	Red
<b>(A)Copper Lug Covers</b>		
8-2	CL8-2B-COV	CL8-2R-COV
6-1	CL6-4B-COV	CL6-4R-COV
2-1/0	CL2-1B-COV	CL2-1R-COV
2/0	CL2/0B-COV	CL2/0R-COV
3/0-4/0	CL3/0-4/0-B-COV	CL3/0-4/0-R-COV

Wire Size (AWG)	Black	Red
<b>(B)Flag Battery Terminal Covers</b>		
4/0	BTCFB-COV	BTCFR-COV
<b>(C)Copper Battery Terminal Covers</b>		
8-6	BT-86B-COV	BT-86R-COV
4-1	BT-41B-COV	BT-41R-COV
1/0	BT-1/0B-COV	BT-1/0R-COV
2/0	BT-2/0B-COV	BT-2/0R-COV
3/0-4/0	BT-4/0B-COV	BT-4/0R-COV

Wire Size (AWG)	Black	Red
<b>(D)Elbow Battery Terminal Covers</b>		
3/0 Left	BTCFB-L-COV	BTCFR-L-COV
3/0 Right	BTCFB-R-COV	BTCFR-R-COV
<b>(E)Military Battery Terminal Covers</b>		
8-4/0	BTM-OVALB-COV	BTM-OVALR-COV
<b>(F)Marine Battery Terminal Covers</b>		
8-4/0	WNBTB-COV	WNBTR-COV

# Battery Terminals & Battery Connectors

## No-Crimp Battery Terminals



Wire Size Range (AWG)	Polarity	Standard	Wire Size Range (AWG)	Polarity	Corrosion Resistant
<b>(A)One-Way, Top Post</b>			<b>(A)One-Way, Top Post</b>		
6-1	-----	BTL	6-2/0	-----	BTL-Z
2-4/0	-----	BTL-2/0	1-4/0	-----	BTL-2/0-Z
<b>(B)Three-Way, Top Post</b>			<b>(C)Quick-Replace, Top Post*</b>		
2-4/0	Positive	BTL-3P	Fits 3/8 Stud	Positive	BT-OE-P
2-4/0	Negative	BTL-3N	Fits 3/8 Stud	Negative	BT-OE-N
<b>(D)Side-Mount</b>			<b>(D)Side-Mount</b>		
6-1	-----	BTL-SM	6-2/0	-----	BTL-SM-Z

\*Tin-plated brass

No crimping tool is needed to attach your cable to these battery terminals - simply tighten the bolts. They also offer a wide wire size range to fit more applications. Sold individually.

**Standard** terminals are made of lead.

The **corrosion resistant** battery terminals are made of zinc alloy (unless noted) and last 3 times longer in harsh environments than standard lead battery terminals. They are lead free and 3.6 times more conductive than standard lead terminals. Also RoHS compliant.

**One-way** terminals can be used as positive and negative terminals.

**Three-way** terminals allow you to insert your cable from any one of three directions for added flexibility of installation.

**Quick-Replace** Simply mount your 5/6" stud copper lug on the treaded post.

## Adapters and Replacement Fasteners for Battery Terminals

	Description	Thread Size	Pkg. Qty.
A	(A)Battery Terminal Bolt and Nut, 1" Thread Length	5/16"-18	BB-KIT 25
B	(B)Brass Standard Top Post Mount Adapter Accessory Bolt	5/16"-18	BHD-L 1
C	(C)Side Mount Standard Top Post Adapter (Positive)	3/8"-16	BTAM-POS 1
D	(C)Side Mount Standard Top Post Adapter (Negative)	3/8"-16	BTAM-NEG 1
E	(D)Corrosion Resistant Zinc Alloy Seated Threaded Stud Type to Standard Top Post Adapter (Positive)	3/8"-16	BTAF-POS-Z 1
F	(D)Corrosion Resistant Zinc Alloy Seated Threaded Stud Type to Standard Top Post Adapter (Negative)	3/8"-16	BTAF-NEG-Z 1
G	(E)Side Mount Replacement Bolt with Accessory Bolt	3/8"-16 & 3/8"-24	BHD 1
H	(F)Side Mount Long Replacement Bolt with Accessory Bolt	3/8"-16	BHD-XL 1
I	(G)Side Mount Battery Terminal Bolt	3/8"-16	SMBB 10
	(H)Extra-Long Side Mount Battery Terminal Bolt	3/8"-16	SMBB-L 10
	(I)Stainless Steel Nut for Seated Threaded Stud Type Batteries	3/8"-16	SSN 25

## Solder Slugs

Soldering allows you to make a connection without needing an expensive crimp tool. Select the slug that matches your wire size. Drop the slug in your battery terminal or copper lug, heat, then insert your stripped wire.

Wire Size (AWG)	Slug Color	Qty.
6	Gray	10
4	Silver	10
2	Green	10
1	Red	10
1/0	Gray	10
2/0	Orange	10
3/0	Purple	10
4/0	Yellow	10

## Seated Threaded Stud Type Battery Terminals

Use with threaded (stud type) battery terminals. Made of tin-plated copper. Features wire size and polarity markings. Can be crimped and soldered.

Use **two-sided** terminals to connect several batteries together. Sold individually.

	Wire Size (AWG)	(A)Standard	(B)Two-Sided
A	4 Ga.	BTS-4	-----
	2-1 Ga.	BTS-2	-----
B	1/0 Ga.	BTS-1/0	BTD-1/0
	2/0 Ga.	BTS-2/0	BTD-2/0
	3/0 Ga.	BTS-3/0	BTD-3/0
	4/0 Ga.	BTS-4/0	BTD-4/0

## 2-Pole Battery Connectors



The housings are interchangeable. Two housings fit together, like a handshake. Two contacts are needed for each housing. Use the dust covers to cover the open connection.

Wire Size (AWG)	Color	Description	
<b>50 Amp Series</b>			
6	Gray	1 Housing and 2 Contacts	AN-6319
6	Black	1 Dust Cover	AN-134G1
<b>175 Amp Series</b>			
4	Gray	1 Housing and 2 Contacts	AN-6325G6
4		1 Contact only	AN-948
2	Gray	1 Housing and 2 Contacts	AN-6325G5
1/0	Gray	1 Housing and 2 Contacts	AN-6325G1
1/0	Red	1 Housing and 2 Contacts	AN-6329G1
-----	Gray	1 Housing	AN-940
-----	Blue	1 Housing	AN-941
-----	Yellow	1 Housing	AN-943
-----	Red	1 Housing	AN-949
1/0		1 Contact only	AN-944

Wire Size (AWG)	Color	Description	
<b>175 Amp Series (Cont.)</b>			
-----	Black	1 Dust Cover	AN-134G2
<b>350 Amp Series</b>			
2/0	Gray	1 Housing and 2 Contacts	AN-6320G1
3/0	Red	1 Housing and 2 Contacts	AN-6322G5
-----	Gray	1 Housing	AN-906
-----	Blue	1 Housing	AN-912
-----	Red	1 Housing	AN-913
-----	Yellow	1 Housing	AN-914
-----	Green	1 Housing	AN-931
2/0	-----	1 Contact only	AN-907
3/0	-----	1 Contact only	AN-916
4/0		1 Contact only	AN-908
-----	Black	1 Dust Cover	AN-134G3

# Powerbolts, Battery Spray & Battery Terminal Protectors

## Through-Wall Powerbolts

Powerbolts are a safe way to pass electrical current through a barrier. Handles 0-3/8" wall thickness and is 3" long. Choose red or black nylon base and weatherproof rubber cover. 440 amps continuous at 12 VDC.



Cover (Included)

Panel Thickness	Red	Black
<b>3/8"-16 Post</b>		
0"-3/8"	PBCC-3/8RW	PBCC-3/8BW

## Jumpstart Connector

Create a convenient external point to jumpstart your vehicle or equipment. Simply mount the bracket to any flat surface for ease of access. 350 amps max at 12VDC. They are 5"X3"X4" and include red and black rubber boots.



Part # JUMPSTART

## Powerposts

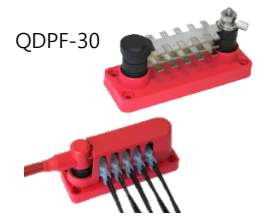
A compact design for small areas, the 8 point powerpost is used to get power to several different devices. It has a 3/8" stainless steel input power post and 8 output positions with #8-32 stainless steel screws. The base is glass filled nylon.

Color	
Red	POWERPOST8-38R
Black	POWERPOST8-38B



## Quick Disconnect Power Feed

Fast connections to power multiple devices. Simply plug 1/4" female quick disconnects to male common feed nickel plated brass tabs. 20 amps max per contact tab, 55 amps max per tier, and 48 VDC max. Red insulator included.



Number of Feeds	Amps	Part Number
10	55	QDPF-10
20	110	QDPF-20
30	120	QDPF-30


## Battery Jumper Terminals and Studs

Make easily accessible battery connections, on the inside and outside of the vehicle. Solid brass posts and can be used separately or in pairs. Contact posts 13/16" diameter and 1 1/8" long. Accepts 6-48 vdc

Polarity	Color	Jumper with Cap	Cap Only
Positive	Red	CH-46210-02	CH-97846-A
Negative	Black	CH-46210-03	CH-97846-B

## Smart Battery Isolator

Smart battery isolators are hybrid electronic/electromechanical relays that prevents the auxiliary battery from draining the starting battery.

	Amps	Volts	Terminal Studs	
	85	9-16	5/16"-24"	CH-48525
	200	9-16	5/16"-24"	CH-48530

## Battery Isolator

Battery isolators are used on vehicles with two batteries. They isolate the batteries to prevent one from draining into the other. Also both batteries can be charged at the same time from one source.

Amps	Stud sizes	Mounting Holes	Size	
90	(3) 1/4", (1) #10	(4) 9/32"	6 1/2" L x 3 1/4" W x 2 13/16" H	CH-48092
140	(3) 5/16", (1) #10	(4) 9/32"	6" L x 4 3/16" W x 3 11/32" H	CH-48122
200	(3) 5/16", (1) #10	(4) 9/32"	8 1/2" L x 4 3/16" W x 3 13/32" H	CH-48162



CH-48092



CH-48122



CH-48092

## Battery Spray

Battery spray prevents corrosion, increasing battery life and cranking ability. Use on battery terminals, cables, battery boxes, and straps.

Part # BTSP



## Battery Terminal Protectors

The top post battery terminal protectors provide a barrier against acid fumes that cause corrosion. The ID is 0.38" and the OD is 1.37". 50 protectors per package.

Part # BTWS



## Truck Multi-Terminal Blocks

Terminal blocks have 10-32 threads and a 1/4" mounting holes.

Number of Terminals	Overall Length	OEM #	
3	3 3/4"	B20303	TB-3
4	4 1/2"	B20304	TB-4
5	5 1/4"	B20305	TB-5
6	6"	B20306	TB-6
7	5 1/4"	B20307	TB-7
8	7 1/2"	B20308	TB-8



## Truck Terminal Blocks

Description	OEM #	
Insulated Mounting Bracket, 250 amps, 3/8-16 Thread Stud with Nut	BE20301	TB-1-38
Insulated Mounting Bracket, 250 amps, 2.6" Overall Height, 3/8-16 Thread Stud with Nut	BE20300	TB-1-38-THRU

TB-1-38



TB-1-38-THRU



# Packard Weather Pack Connectors

## Weather Pack Series



Pin



Socket



Seals

Use these round pin and socket terminals, housings, and seals to make connections that can handle harsh environments. Each connection requires a male and female terminal, a seal for each terminal, and a pin and socket housing.

Select **terminals** that match your wire size. All terminals work with all housings, regardless of wire size. Terminals require two crimps (terminal to wire strands, terminal to seal and wire insulation). A proper crimping tool is required. For heavier usage, use a tool that performs both crimps at the same time, such as #12014254 for 22-14 gauge. For 12 gauge use the standard two crimp tool #12085270. For less frequent crimping, we recommend our Pack Tool. For production, use 528-KIT for 22-18 gauge and the 476-KIT for 16-12 gauge. Terminal removal tool #T-3.

Select a **seal** that matches your wire size.

Now select a **housing** that offers the number of connections you would like to make.

Use the **cavity plugs** when you have an extra circuit in your housing that is not in use. It prevents corrosion from entering the electrical connection.

### Terminals

Wire Size (AWG)	Pin			Socket		
	Mfg. #		Pkg. Qty.	Mfg. #		Pkg. Qty.
22	12089307	WPM-22	25	12020801	WPF-22	25
20-18	12089040	WPM-19	25	12089188	WPF-19	25
16-14	12124582	WPM-15	25	12124580	WPF-15	25
12	12124587	WPM-12	25	12124581	WPF-12	25

### Seals

Wire Size (AWG)	Color	Mfg. #		Pkg. Qty.
22-20	Purple	12089679	15324985	50
22	Red	12015899	15324983	50
20-14	Green	12015323	15324982	50
20-16	Tan	12041351	15324984	50
16-14	Gray	12010293	15324980	50
12-10	Blue	12015193	15324981	50

### Plugs

22-12	Green	12010300	WPCV-PLG	50
-------	-------	----------	----------	----

### Housings



WPT-2 Socket



WPT-5 Socket



WPS-4 Pin



WPS-6 Pin



WPS-22 Pin

#### Circuits

1-Way
2-Way
3-Way
4-Way
4-Way
5-Way
6-Way
22-Way

Circuits	Pin		Socket	
	Mfg. #	Pkg. Qty.	Mfg. #	Pkg. Qty.
1-Way	12010996	10	12015791	10
2-Way	12010973	10	12015792	10
3-Way	12010717	10	12015793	10
4-Way	12010974	5	12015797	5
4-Way	12015024	5	12015798	5
5-Way	12065158	1	12034342	1
6-Way	12010975	5	12015799	5
22-Way	15492521	1	15492531	1

\*Use Wire Organizer (TPA) #12010852, Part #WP-22 LOCK, Pkg. Qty. 4.

### Weather Pack Kit



Part # WP-KIT

Unsure of the Weather Pack item that you need or want to create your own connection? This kit contains the most common terminals, seals, and housings so you can simply match up what you have with what's in the kit. This kit contains 13 different Weather Pack terminals, seals, and housings, over 200 pieces, all contained in a large metal box, 18"w x 12"d x 3"h.

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			<b>Terminals</b>		
WPS-1	1-Way Circuit, Pin	10	WPF-19	20-18 Ga., Socket	25
WPT-1	1-Way Circuit, Socket	10	WPM-19	20-18 Ga., Pin	25
WPS-2	2-Way Circuit, Pin	10	WPF-15	16-14 Ga., Socket	25
WPT-2	2-Way Circuit, Socket	10	WPM-15	16-14 Ga., Pin	25
WPS-3	3-Way Circuit, Pin	10	<b>Seals</b>		
WPT-3	3-Way Circuit, Socket	10	15324982	20-14 Ga., Green Seal	25
WPS-4	4-Way Circuit, Pin	10	<b>Terminal Removal Tool</b>		
WPT-4	4-Way Circuit, Socket	10	T-3		1

### Packard 56 & 59 Series



Male Terminal



Female Terminal



Male Housing



Female Housing

Terminals require two crimps (terminal to wire strands, terminal to wire insulation). A proper crimping tool is required. For heavier usage, use a tool that performs both crimps at the same time. We recommend our #8913440, ratcheting tool, for 20-14 gauge or our #6285847 economical tool, for 20-10 gauge. Use removal tool #12094430.

#### 56 Series Terminals

Wire Size (AWG)	Mfg. #	Male	Pkg. Qty.	Mfg. #	Female	Pkg. Qty.
20-18	2965481	56M-19	25	2962508	56F-19	25
18	-----	-----	---	2965510	2965510	25
16-14	2971962	56M-15	25	2962447	56F-15	25
16-14	-----	-----	25	2965867	2965867	25
12-10	8917283	56M-11	25	-----	-----	----
12	2971859	2971859	25	2989877	2989877	25
12	-----	-----	----	2965143	56F-12	25

#### 59 Series Terminals

Wire Size (AWG)	Mfg. #	Male	Pkg. Qty.	Mfg. #	Female	Pkg. Qty.
16-14	-----	-----	----	2973216	59F-15	25

#### 56 Series Housings

Circuits	Mfg. #	Male	Pkg. Qty.	Mfg. #	Female	Pkg. Qty.
1-Way	2984528	56MLS-1	10	2977253	56FLS-1	10
2-Way	2984883	2984883	10	-----	-----	----
3-Way	2984678	2984678	10	2984378	2984378	10
4-Way	6294544	6294544	10	2977048	2977048	10
5-Way	3138080	3138080	10	2973422	2973422	10
6-Way	2977042	2977042	10	2977044	2977044	10

#### Packard Corrugated Loom Clips

Type	Inside Conduit ID	Mfg. #	Pkg. Qty.
Outlet Fitting	0.500	8905793	25
Conduit Clip	0.413	8911378	25
Rosebud Clip	0.350	8911169	25

## Packard Tools

Weather Pack and 56-58 Series terminals often require different crimping tools. The more you know about what will be crimped, the easier it is to find a tool. The ratchet style design allows you to make easier crimps with less effort.

Use a **quick single motion** tool that crimps both the terminal and seal in one motion, rather than two, for higher volumes.

The **standard two crimp** tools crimp in two separate motions. One motion to crimp the terminal and one motion to crimp the seal.

## Terminal Release Tools

Releases **Weather Pack**:

- 24-12 gauge



Part # T-3

Releases **Weather Pack**:

- 24-12 gauge

Features:

- Heavy-duty tool



Part # T-3HD

Releases **Weather Pack**:

- 56, 58, and 59 series, 20-10 gauge



Part # 12094430

Releases **Metri-Pack**:

- 480, 630, and 800, series, 20-10 gauge

Releases **Packard**:

- 56, 58, and 59 series, 20-10 gauge



Releases **Metri-Pack**:

- 480, 630, and 800, series, 20-10 gauge

Features:

- Heavy-duty tool

Part # 12094430HD

## Weather Pack Crimping Tools

Crimps **Weather Pack**:

- 20-14 gauge

Crimps **Metri-Pack**:

- 280 series, sealed, 20-14 gauge (must remove terminal locator on tool)



Part # 12014254

Features:

- Ratcheting tool
- Quick Single Motion

Crimps **Packard**:

- 56, 58, and 59 series, 20-14 gauge
- 56, 58, and 59 series, 12-10 gauge (core wings only)
- 56 series, 20-10 gauge, splice clips
- Open barrel rings, unsealed, 20-14 gauge, up to 0.032" thick
- Wedge base lamp sockets, 20-14 gauge



Crimps **Pack-Con**:

- Series I & III, unsealed, 20-14 gauge
- Series II, female, unsealed, 12-10 gauge

Crimps **Metri-Pack**:

- 480 series unsealed, 16-14 gauge
- 480 pull to seat series, unsealed, 16-14 gauge
- 630 series, unsealed, 16-14 gauge
- 630 pull to seat series, 16-14 gauge, unsealed
- 630 series, unsealed, 12-10 gauge (core wings only)

Features:

- Standard Two Crimp
- Non-ratcheting tool

Part # 6285847

Crimps **Weather Pack**:

- 22-14 Gauge

Crimps **Metri-Pack**:

- 150 series, 22-14 gauge
- 280 series, 22-14 gauge



Part # PACK TOOL

Features:

- Standard Two Crimp
- Non-ratcheting tool

Crimps **Weather Pack**:

- 12 Gauge

Crimps **Metri-Pack**:

- 280 series, sealed 12-10 gauge

Crimps **Packard**:

- Open barrel rings, 12-10 gauge

Features:

- Standard Two Crimp
- Ratcheting tool



Part # 15155975

Crimps **Packard**:

- 56, 58 and 59 series, 20-14 Gauge
- Open barrel rings, unsealed, 20-14 gauge, up to 0.032" thick
- Wedge base lamp sockets, 20-14 gauge



Crimps **Pack-Con**:

- Series I & III, unsealed 20-14 Gauge

Features:

- Quick Single Motion
- Ratcheting tool

Part # 8913440

Crimps **Packard**:

- 56, 58, and 59 series, 12-10 gauge
- Open barrel rings, 14-10 gauge

Crimps **Metri-Pack**:

- 280, 480, and 63 series, unsealed, 16-12 gauge

Crimps **Heat Shrink**:

- 22-10 gauge heat shrink

Features:

- Standard Two Crimp
- Ratchet tool



Part # 12085115

Crimps **Weather Pack**:

- 12 gauge

Crimps **Metri-Pack**:

- 280 series, sealed, 12 gauge
- 480 series, sealed, 18-14 gauge
- 480 series, unsealed, 16-14 gauge
- 480 pull to seat series, unsealed, 18-14 gauge
- 150, 480, and 630 series (crimps seals only)
- 630 series, sealed 18-14 gauge

Features:

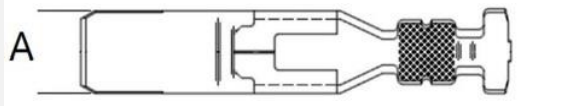
- Standard Two Crimp



Part # 12085270

# Packard Metri-Pack

## About Packard Metri-Pack Terminals, Seals, and Housings



Metri-Pack Series	Male Tab Width (A)
150	1.5 mm
280	2.8 mm
480	4.8 mm
630	6.3 mm
800	8.0 mm

**Metri-Pack** terminals are different from Weather Pack terminals in that the male terminals have flat tabs, similar to quick-disconnects, rather than Weather Pack's round pins.

The **Metri-Pack series** can easily be determined by measuring the width of the male flat tab (see table). Example: If the male tab measures 1.5 mm, that is the 150 Series.

**Sealed vs Unsealed Terminals** - Sealed Metri-Pack terminals can be identified by the seal attached at the wire end of the terminal. Sealed terminals require a **seal** for each terminal. Select a seal that matches your wire size and series. Unsealed terminals require unsealed housings.

Use **plugs** when you have an extra circuit in your housing that is not in use.

A proper **crimping tool** is required. Terminals require two crimps (terminal to wire strands, terminal to wire insulation).

For **pull-to-seat** terminals, the wire is inserted through the back of the housing, out the front, wire is stripped and double crimped onto the terminal. The terminal is pulled back through until it seats in the housing, making a secure connection.

### Metri-Pack Kit



Unsure of the Metri-Pack item you need? This kit contains the most common terminals and seals so you can simply match up what you have with what's in the kit. No need to buy a new harness, just replace the corroded terminal. This kit contains 12 different Metri-Pack terminals and seals, 350 pieces, including 150, 280 and 480 Series. It is all contained in a small plastic box, 11"w x 6 3/4"d x 1 3/4"h. Use #PACK TOOL (not included) to crimp terminals.

#### Part #METRIPAK KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
<b>150 Series</b>			<b>280 Series</b>		
12048074	18-16 Ga., Sealed, Female Terminals	25	12066214	16-14 Ga., Unsealed, Female Terminals	25
12045773	18-16 Ga., Sealed, Male Terminals	25	12020116	16-14 Ga., Unsealed, Male Terminals	25
12103881	18-16 Ga., Unsealed, Female Terminals	25	<b>480 Series</b>		
12047581	18-16 Ga., Unsealed, Male Terminals	25	12124304	16-14 Ga., Unsealed, Female Terminals	25
12047767	18-16 Ga., Unsealed, Female Terminals	25	<b>Seals</b>		
<b>280 Series</b>			<b>Part #</b>	<b>Series</b>	<b>Description</b>
12129493	14-12 Ga., Sealed, Female Terminals	25	15324973	150	18-16 Ga., Red Seals
12129497	14-12 Ga., Sealed Male Terminals	25	15324982	280	20-14 Ga., Green Seals

### Metri-Pack 150 Series, Sealed Kit



This kit contains Metri-Pack 150 series housings, terminals, seals, (CPA) housing locks, (TPA) wire organizers, and a removal tool. There are 697 pieces in a large metal box, 18"w x 12"d x 3"h. Use #12155975 (not included) to crimp terminals.

#### Part #MP 150 SLD KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			<b>Terminals</b>			<b>(CPA) Housing Locks</b>		
12052641	2-Way Female Housings	10	12084200	22-20 Ga., Female Terminals	50	12020833	(CPA) Housing Locks	10
12162000	2-Way Male Housings	10	12077628	22-20 Ga., Male Terminals	50	<b>(TPA) Wire Organizers</b>		
12110293	3-Way Female Housings	6	12048074	18-16 Ga., Female Terminals	50	12052634	2-Way (TPA) Wire Organizers	20
12129615	3-Way Male Housings	6	12045773	18-16 Ga., Male Terminals	50	12052845	3-Way (TPA) Wire Organizers	12
12162144	4-Way Female Housings	6	<b>Seals</b>			12047948	4-Way (TPA) Wire Organizers	12
12162102	4-Way Male Housings	6	15324974	22 Ga., Blue Seals	100	12052850	6-Way (TPA) Wire Organizers	12
12052848	6-Way Female Housings	6	15324973	20-16 Ga., Dk. Red Seals	50	12066304	8-Way (TPA) Wire Organizers	8
12124107	6-Way Male Housings	6	15324976	20 Ga., White Seals	100	12047936	8-Way (TPA) Wire Organizers	8
12047937	8-Way Female Housings	4	<b>Cavity Plugs</b>			<b>Removal Tool</b>		
12047931	8-Way Male Housings	4	12059168	Cavity Plugs, Dk. Red	30	12094429	Removal Tool	1



## Metri-Pack 280 Series, Sealed Kit

This kit contains Metri-Pack 280 series housings, terminals, seals, (CPA) housing locks, (TPA) wire organizers, and a removal tool. There are 1011 pieces in a large metal box, 18" w x 12" d x 3" h. To crimp terminals 20-14 ga. use #12155975 (not included) and for 12 ga. use #12085270 (not included).



### Part #MP 280 SLD KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			12077411	18-16 Ga., Female Terminals	50	<b>(CPA) Housing Locks</b>		
12065172	1-Way Female Housings	5	12048159	18-16 Ga., Male Terminals	50	12020833	(CPA) Housing Locks	10
12065171	1-Way Male Housings	5	12129493	14-12 Ga., Female Terminals	50	<b>(TPA) Wire Organizers</b>		
15300027	2-Way Female Housings	5	12129497	14-12 Ga., Male Terminals	50	12065249	1-Way (TPA) Wire Organizer	10
15300002	2-Way Male Housings	5	12077413	12 Ga., Female Terminals	50	15300014	2-Way (TPA) Wire Organizer	10
12040977	3-Way Female Housings	4	12048254	12 Ga., Male Terminals	50	12034145	3-Way (TPA) Wire Organizer	4
15300003	3-Way Male Housings	4	<b>Seals</b>			15300016	4-Way (TPA) Wire Organizer	3
12129565	4-Way Female Housings	3	15324983	22 Ga., Dk. Red Seals	100	15324857	5-Way (TPA) Wire Organizer	3
12129600	4-Way Male Housings	3	15324985	22-20 Ga., Purple Seals	100	15300015	3-Way (TPA) Wire Organizer	4
12084891	5-Way Female Housings	3	15324982	18-16 Ga., Green Seals	100	15324063	4-Way (TPA) Wire Organizer	3
12186400	5-Way Male Housings	3	15324980	14 Ga., Gray Seals	100	12084673	5-Way (TPA) Wire Organizer	3
<b>Terminals</b>			15324981	12 Ga., Blue Seals	100	<b>Removal Tool</b>		
12084201	22-20 Ga., Female Terminals	50	<b>Cavity Plugs</b>			12094429	Removal Tool	1
12124977	22-20 Ga., Male Terminals	50	12010300	Cavity Plugs, Green	20			

## Metri-Pack 480 Series, Sealed Kit

This kit contains Metri-Pack 480 series housings, terminals, seals, (CPA) housing locks, (TPA) wire organizers, and plugs. There are 261 pieces in a small metal box, 13 3/8" w x 9 1/4" d x 2" h. Use #12085270 (not included) to crimp 18-14 gauge terminals and #12071687 (not included) for 12-10 gauge terminals. Use release tools #12094430 (not included).



### Part #MP 480 SLD KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			<b>Terminals</b>			<b>Cavity Plugs</b>		
12052613	2-Way Female Housings	4	12065197	12 Ga., Male Terminals	25	12066082	Cavity Plugs, Green	15
12065863	2-Way Male Housings	4	12052172	10 Ga., Male Terminals	25	<b>(CPA) Housing Locks</b>		
<b>Terminals</b>			<b>Seals</b>			12020833	(CPA) Housing Locks	4
12048451	16-14 Ga., Female Terminals	25	12048441	20-14 Ga., White	25	<b>(TPA) Wire Organizers</b>		
12065196	16-14 Ga., Male Terminals	25	15324989	14-12 Ga., Red	25	12059897	2-Way (TPA) Wire Organizer	8
12052139	12-10 Ga., Female Terminals	25	12048443	12-10 Ga., Purple	25	<b>Removal Tool</b>		
			12034170	10 Ga., Orange	25	12094430	Removal Tool	1

## Metri-Pack GT 150 Series, Sealed Kit

This kit contains Metri-Pack GT 150 series housings, terminals, seals, cavity plugs and (CPA) housing locks.. There are 362 pieces in a small metal box, 13 3/8" w x 9 1/4" d x 2" h. Use #15359995 (not included) to crimp terminals. Use #12094429 (not included), and #12094430 (not included) to release terminals from the housings.



### Part #MP150GT SLD KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			<b>Housings</b>			<b>Seals</b>		
13510085	2-Way Female Housings	4	13519051	5-Way Female Housings	4	15366021	22-20 Ga., White Seals	50
13510099	2-Way Male Housings	4	13519053	5-Way Male Housings	4	15366060	18-16 Ga., Blue Seals	50
13519047	3-Way Female Housings	4	<b>Terminals</b>			<b>Cavity Plugs</b>		
15326813	3-Way Male Housings	4	12191818	22-20 Ga., Female Terminals	50	15305171	Cavity Plugs, Green	20
15487756	4-Way Female Housings	4	15326268	22-20 Ga., Male Terminals	50	<b>(CPA) Housing Locks</b>		
15487755	4-Way Male Housings	4	12191819	18-16 Ga., Female Terminals	50	15317832	(CPA) Housing Locks	10
			15326269	18-16 Ga., Male Terminals	50			

## Metri-Pack GT 280 Series, Sealed Kit

This kit contains Metri-Pack GT 280 series housings, terminals, seals, (CPA) housing locks, and plugs. There are 362 pieces in a small metal box, 13 3/8" w x 9 1/4" d x 2" h. Use #15359995 (not included) to crimp terminals. Use release tools #12094429 and #12094430 (not included) release terminals from the housings.



### Part #MP280GT SLD KIT

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.	(Cont.)	Description	Qty.
<b>Housings</b>			<b>Housings</b>			<b>Seals</b>		
13518845	2-Way Female Housings	4	13521463	5-Way Female Housings	4	15366065	22-20 Ga., Orange Seals	50
15326678	2-Way Male Housings	4	15326647	5-Way Male Housings	4	15366066	18-16 Ga., Blue Seals	50
15326614	3-Way Female Housings	4	<b>Terminals</b>			<b>Cavity Plugs</b>		
15326623	3-Way Male Housings	4	15304718	22-20 Ga., Female Terminals	50	15305170	Cavity Plugs, Green	20
13521459	4-Way Female Housings	4	15304730	22-20 Ga., Male Terminals	50	<b>(CPA) Housing Locks</b>		
15326633	4-Way Male Housings	4	15304719	18-16 Ga., Female Terminals	50	15317832	(CPA) Housing Locks	10
			15304731	18-16 Ga., Male Terminals	50			

# Packard Metri-Pack 150 Series, Sealed

## Metri-Pack 150 Series, Sealed



Male tab width = 1.5 mm. 14 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require seals and a proper crimping tool, listed below.

Kit part #MP 150 SLD KIT available on page #30.

### Terminals and Seals



Female



Male



Seal

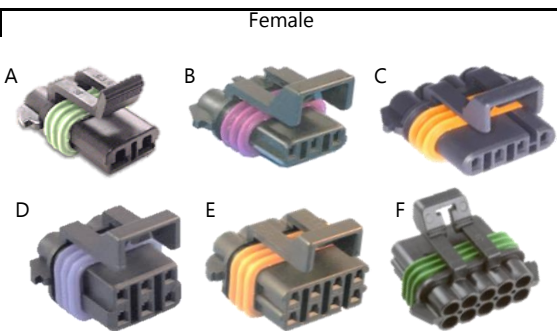


Cavity Plug

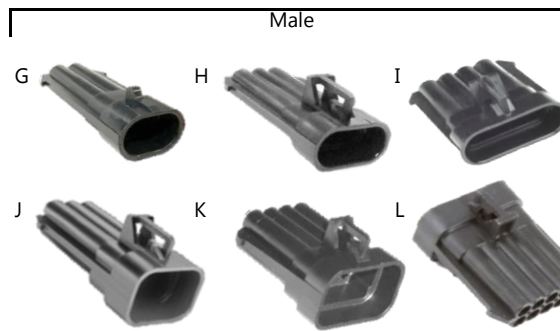
Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Female & Male Terminal Seals	Color	Pkg. Qty.
22	-----	----	-----	----	15324974/12048087	Blue	50
22-20	12084200	25	12077628	25	15324976	White	50
18-16	12048074	25	12045773	25	15324973/12048086	Dark Red	50

Cavity Plugs to Fill Unused Circuits, Dark Red (Pkg. of 25) Part #12059168

### Housings



Female



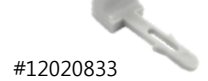
Male

Wire Organizer (TPA)



#12052634

Housing Lock (CPA)



#12020833

No. of Cavities	Female Housings	Pkg. Qty.	Male Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housing Locks (CPA)	Pkg. Qty.
2	(A) 12052641	5	(G) 12162000	5	12052634	10	-----	----
3	(B) 12110293	5	(H) 12129615	5	12052845	10	12020833	5
4	(C) 12162144	5	(I) 12162102	5	12047948	10	12020833	5
6	(D) 12052848	5	(J) 12124107	5	12052850	10	12020833	5
8	(E) 12047937	5	(K) 12047931*	5	12066304	10	12020833	5
10	(F) 12065425**	5	(L) 12045808	5	12124264	10	12020833	5

\*Use wire organizer (TPA) #12047936.

\*\*Also available in gray Part #12065426

### Metri-Pack 150 Series, Sealed Tools

	Works With	Style	Crimp Method	Part Number
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
	<b>Delphi Recommended Tool</b> Metri-Pack 150 Series, Sealed, 20-14 Gauge Metri-Pack 280 Series, Sealed, 20-14 Gauge	Ratchet	Standard Two Crimp	12155975
	Metri-Pack 150 Series, 22-14 Gauge Metri-Pack 280 Series, 22-14 Gauge Weather Pack, 22-14 Gauge	Non-Ratchet	Standard Two Crimp	PACK TOOL

# Packard Metri-Pack 150 Series, Unsealed

## Metri-Pack 150 Series, Unsealed

Male tab width = 1.5 mm. 14 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require a proper crimping tool, listed below.



## Terminals



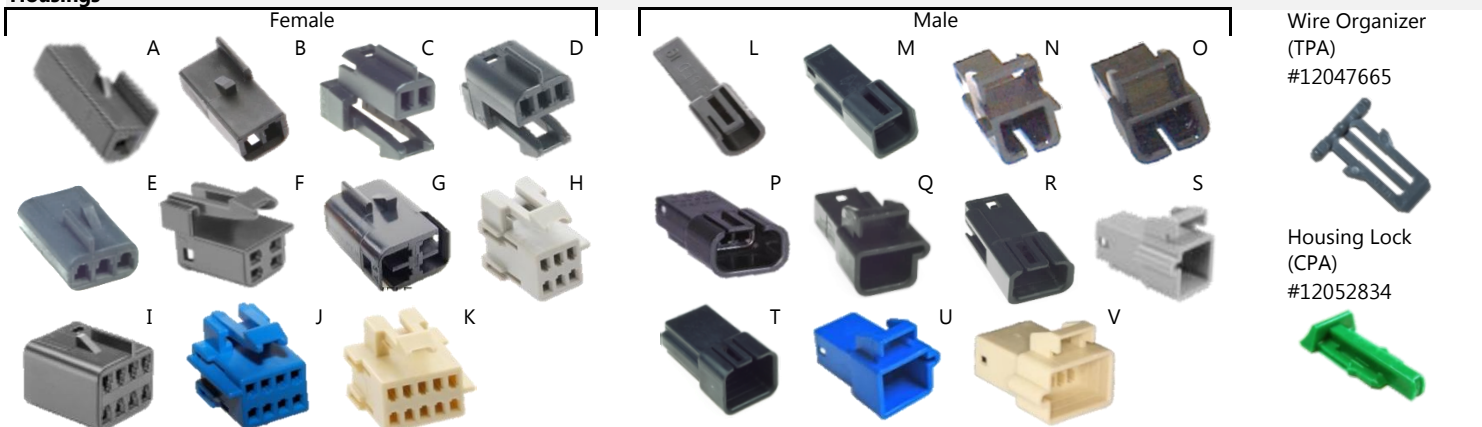
Female



Male

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.
22-20	12064971	25	12059894	25
18-16	12047767	25	12047581	25

## Housings



No. of Cavities	Female				Male				Housing Locks (CPA)	Pkg. Qty.
	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.		
1	(A) 12047682	25	-----	----	(L) 12047683	25	-----	----	-----	----
2	(B) 12047662	10	12047664	10	(M) 12047663	10	12047665	10	-----	----
2	(C) 12052832	10	12047664	10	(N) 12052833	10	12047665	10	12052834	5
3	(D) 12064758	10	12047783	10	(O) 12064759	10	12047784	10	12052834	5
3	(E) 12047781	10	12047783	10	(P) 12047782	10	12047784	10	-----	----
4	(F) 12064760	10	12047664*	10	(Q) 12064761	10	12047787	10	12052834	5
4	(G) 12047785	10	12047664*	10	(R) 12047786	10	12047787	10	-----	----
6	(H) 12064762	10	12064764*	10	(S) 12064763	10	12064765	10	12052834	5
8	(I) 12047886	10	12045689*	20	(T) 12045688	10	12045690	10	-----	----
8	(J) 12064766	10	12064768*	20	(U) 12064767	10	12045690	10	12052834	5
10	(K) 12064769	5	12064771*	10	(V) 12064770	5	12064772	5	12052834	5

\*Uses two wire organizers (TPA)

## Metri-Pack 150 Series, Unsealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD

## Delphi Recommended Tool

Metri-Pack 150 Series, Unsealed, 22-16 Gauge Metri-Pack 150 Pull to Seat Series, Unsealed, 22-16 Gauge Metri-Pack 150.1 Pull to Seat Series, Unsealed, 22-16 Gauge Metri-Pack 150.2 Pull to Seat Series, Unsealed, 22-16 Gauge	Ratchet	Quick Single Motion	12039500
Metri-Pack 150 Series, 22-14 Gauge Metri-Pack 280 Series, 22-14 Gauge Weather Pack, 22-14 Gauge	Non-Ratchet	Standard Two Crimp	PACK TOOL

# Packard Metri-Pack 280 Series, Sealed

## Metri-Pack 280 Series, Sealed



Male tab width = 2.8 mm. 30 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require seals and a proper crimping tool, listed below.

Kit part #MP 280 SLD KIT available on page #31.

## Terminals and Seals

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Female & Male Terminal Seals	Color	Pkg. Qty.
22	-----	-----	-----	-----	15324983/12015899	Dark Red	50
22-20	12084201	25	12124977	25	15324985/12089679	Purple	50
18-16	12077411	25	12048159	25	15324982/12015323	Green	50
14-12	12129493	25	12129497	25	15324980	Gray	50
12	12077413	10	12048254	10	15324981	Blue	50

Cavity Plugs to Fill Unused Circuits, Green (Pkg. of 25) Part #12010300

## Housings

No. of Cavities	Female				Male				Housing Locks (CPA)	Pkg. Qty.
	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.		
1	(A) 12065172	5	12065249	10	(F) 12065171	5	12065249	10	12052834	5
2	(B) 15300027	5	15300014	10	(G) 15300002	5	15300014	10	-----	-----
3	(C) 12040977	5	12034145	5	(H) 15300003	5	15300015	5	12020833	5
4	(D) 12129565	5	15300016	5	(I) 12129600	5	15324063	5	12020833	5
5	(E) 12084891	5	15324857	5	(J) 12186400	5	12084673	5	12020833	5

Wire Organizer (TPA) #12065249  
Housing Lock (CPA) #12020833

## Metri-Pack 280 Series, Sealed Tools

	Works With	Style	Crimp Method	Part Number
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
	<b>Delphi Recommended Tool</b> Metri-Pack 150 Series, Sealed, 20-14 Gauge Metri-Pack 280 Series, Sealed, 20-14 Gauge	Ratchet	Standard Two Crimp	12155975
	Weather Pack, 12 Gauge Metri-Pack 280 Series, Sealed, 12-10 Gauge Packard Open Barrel Rings, 12-10 Gauge	Ratchet	Standard Two Crimp	15155975
	Weather Pack Series, 20-14 Gauge Metri-Pack 280 Series, Sealed, 20-14 Gauge (must remove terminal locator on tool)	Ratchet	Quick Single Motion	12014254
	Weather Pack Series, 12 Gauge Metri-Pack 280 Series, Sealed, 12 Gauge Metri-Pack 480 Series, Sealed, 18-14 Ga. and Unsealed, 16-14 Ga. Metri-Pack 480 Pull to Seat Series, Unsealed, 18-14 Gauge Metri-Pack 150, 480, and 630 Series (Crimps Seals Only) Metri-Pack 630 Series, Sealed 18-14 Gauge	Ratchet	Standard Two Crimp	12085270
	Metri-Pack 150 Series, 22-14 Gauge Metri-Pack 280 Series, 22-14 Gauge Weather Pack, 22-14 Gauge	Non-Ratchet	Standard Two Crimp	PACK TOOL

# Packard Metri-Pack 280 Series, Unsealed

## Metri-Pack 280 Series, Unsealed

Male tab width = 2.8 mm. 30 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require a proper crimping tool, listed below.



## Terminals

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.
22-20	12052217	25	12066271	25
18-16	12034046	25	12034047	25
16-14	12066214	25	12020116	25
14-12	12129494	25	12129498	25
12-10	12015858	25	12084586	25

## Housings

Female					Male					Wire Organizer (TPA) #12064753	
No. of Cavities	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housing Locks (CPA) #12052834	Pkg. Qty.	
3	(A) 12020397	10	-----	-----	(D) 12020398	10	-----	-----	12052834	5	
6	(B) 12064752*	10	12064753	10	(E) 12064754*	10	12064755	10	12052834	5	
8	(C) 12064998*	10	12064999	10	(F) 12066195	10	12065141	10	12052834	5	

\*Two wire organizers (TPA) are required for this connector.

## Metri-Pack 280 Series, Unsealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
<b>Delphi Recommended Tool</b> Metri-Pack 280 Series, Unsealed, 20-14 Gauge Metri-Pack 280 ACT Pull to Seat Series, Unsealed, 20-14 Gauge Metri-Pack 480 Series, Unsealed, 20-18 Gauge Metri-Pack 480 and 630 Pull to Seat Series, Unsealed, 20-18 Gauge Metri-Pack 630 Series, Unsealed, 20-18 Gauge Pack-Con Series II, Unsealed, Female, 20-14 Gauge	Ratchet	Standard Two Crimp	12085271
<b>Delphi Recommended Tool</b> Metri-Pack 280 and 480 Series, Unsealed, 12-10 Gauge Metri-Pack 280 ACT Series, Unsealed, 12-10 Gauge Metri-Pack 480 Pull to Seat Series, Unsealed, 12-10 Gauge Metri-Pack 630 Series, Unsealed, 12-10 Gauge Metri-Pack 630 Pull to Seat Series, Unsealed, 12-10 Gauge Metri-Pack 800 Series, Unsealed, Female, 14-10 Gauge Pack-Con Series I & III, Unsealed, 12-10 Gauge	Ratchet	Quick Single Motion	12070947
Metri-Pack 280, 480, and 630 Series, Unsealed, 16-12 Gauge Packard 56, 58, and 59 Series, 12-10 Gauge Packard Open Barrel Rings, 14-10 Gauge Heat Shrink, 22-10 Gauge	Ratchet	Standard Two Crimp	12085115
Metri-Pack 150 Series, 22-14 Gauge Metri-Pack 280 Series, 22-14 Gauge Weather Pack, 22-14 Gauge	Non-Ratchet	Standard Two Crimp	PACK TOOL

# Packard Metri-Pack 480 Series, Sealed

## Metri-Pack 480 Series, Sealed



Male tab width = 4.8 mm. 42 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require seals and a proper crimping tool, listed below.

Kit part #MP 480 SLD KIT available on page #31.

## Terminals and Seals



Female



Male



Seal



Cavity Plug

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Female & Male Terminal Seals	Color	Pkg. Qty.
20-18	12048450	5	-----	-----	12048441	White	50
16-14	12048451	10	12065196	10	12048441	White	50
12	12052139	10	12065197	10	15324989	Red	25
10	12052139	10	12052172	10	12048443	Purple	25
10	-----	-----	-----	-----	12048444	Orange	25

Cavity Plugs to Fill Unused Circuits, Green (Pkg. of 25) Part #12066082

## Housings



Female



Male



Wire Organizer (TPA)



Housing Lock (CPA)

No. of Cavities	Female			Male			Housing Locks (CPA)	Pkg. Qty.		
	Housings	Pkg. Qty.	Wire Organizers (TPA)	Housings	Pkg. Qty.	Wire Organizers (TPA)				
2	(A) 12052613	5	(C) 12059897	10	(B) 12065863	5	(C) 12059897	10	(D) 12020833	5

## Metri-Pack 480 Series, Sealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD

### Delphi Recommended Tool

	Weather Pack Series, 12 Gauge Metri-Pack 280 Series, Sealed, 12 Gauge Metri-Pack 480 Series, Sealed, 18-14 Gauge Metri-Pack 480 Series, Unsealed, 16-14 Gauge Metri-Pack 480 Pull to Seat Series, Unsealed, 18-14 Gauge Metri-Pack 150, 480, and 630 Series (Crimps Seals Only) Metri-Pack 630 Series, Sealed 18-14 Gauge	Ratchet	Standard Two Crimp	12085270
	Metri-Pack 480 Series, 12-10 Gauge (Crimps Sealed Only) Metri-Pack 630 Series, 12-10 Gauge (Crimps Sealed Only)	Non-Ratchet	Standard Two Crimp	12071687

# Packard Metri-Pack 480 Series, Unsealed

## Metri-Pack 480 Series, Unsealed

Male tab width = 4.8 mm. 42 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require a proper crimping tool, listed below.



### Terminals

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.
22-20	12052219	25	-----	-----
18	12015860	25	12020119	25
16-14	12124304	25	12020120	25
12	12052221	25	12052827	25
10	12084595	25	12033820	10

### Housings

Female		Male		Wire Organizer (TPA)#12059860	Housing Lock (CPA)#12052834	
A	B	C	D			
Female		Male				
No. of Cavities	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housing Locks (CPA)	Pkg. Qty.
1	(A) 12015952	10	-----	-----	-----	-----
2	(B) 12064749	10	12059860	10	(C) 12015987	10
					(D) 12064750	10
					12064751	10
					12052834	5

### Metri-Pack 480 Series, Unsealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge			
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge			
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Packard 56, 58, and 59 Series, 20-10 Gauge			
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
Packard 56, 58, and 59 Series, 20-10 Gauge			

### Delphi Recommended Tool

Metri-Pack 480 Series, Unsealed, 16-14 Gauge	Non-Ratchet	Standard Two Crimp	6285847
Metri-Pack 480 Pull to Seat Series, Unsealed, 16-14 Gauge			
Metri-Pack 630 Series, Unsealed, 16-14 Gauge			
Metri-Pack 630 Pull to Seat Series, 16-14 Gauge, Unsealed			
Metri-Pack 630 Series, Unsealed, 12-10 Gauge (Core Wings Only)			
Pack-Con Series I & III, Unsealed, 20-14 Gauge			
Pack-Con Series II, Female, Unsealed, 12-10 Gauge			
Packard 56, 58, and 59 Series, 20-14 Gauge			
Packard 56, 58, and 59 Series, 12-10 Gauge (Core Wings Only)			
Packard 56 Series, 20-10 Gauge, Splice Clips			
Packard Open Barrel Rings, Unsealed, 20-14 Gauge, Up to 0.032" Thick			
Packard Wedge Base Lamp Sockets, 20-14 Gauge			

### Delphi Recommended Tool

Metri-Pack 280 and 480 Series, Unsealed, 12-10 Gauge	Ratchet	Quick Single Motion	12070947
Metri-Pack 280 ACT Series, Unsealed, 12-10 Gauge			
Metri-Pack 480 Pull to Seat Series, Unsealed, 12-10 Gauge			
Metri-Pack 630 Series, Unsealed, 12-10 Gauge			
Metri-Pack 630 Pull to Seat Series, Unsealed, 12-10 Gauge			
Metri-Pack 800 Series, Unsealed, Female, 14-10 Gauge			
Pack-Con Series I & III, Unsealed, 12-10 Gauge			
Weather Pack Series, 12 Gauge	Ratchet	Standard Two Crimp	12085270
Metri-Pack 280 Series, Sealed, 12 Gauge			
Metri-Pack 480 Series, Sealed, 18-14 Gauge			
Metri-Pack 480 Series, Unsealed, 16-14 Gauge			
Metri-Pack 480 Pull to Seat Series, Unsealed, 18-14 Gauge			
Metri-Pack 150, 480, and 630 Series (Crimps Seals Only)			
Metri-Pack 630 Series, Sealed 18-14 Gauge			
Metri-Pack 280 Series, Unsealed, 20-14 Gauge	Ratchet	Standard Two Crimp	12085271
Metri-Pack 280 ACT Pull to Seat Series, Unsealed, 20-14 Gauge			
Metri-Pack 480 Series, Unsealed, 20-18 Gauge			
Metri-Pack 480 and 630 Pull to Seat Series, Unsealed, 20-18 Gauge			
Metri-Pack 630 Series, Unsealed, 20-18 Gauge			
Pack-Con Series II, Unsealed, Female, 20-14 Gauge			

# Packard Metri-Pack 630 Series, Sealed

## Metri-Pack 630 Series, Sealed, 2-Way Housings



Male tab width = 6.3 mm. 46 amps max. per circuit.  
 For durable, long-term connections each housing uses a wire organizer (TPA).  
 Female housing is pull-to-seat (Seal is inside). Male housing requires an entry seal.  
 Terminals require a proper crimping tool, listed below.

### Terminals

Wire Size (AWG)	Female	Male	Cavity Plug
20-18	12020156	10	12020125
16-14	12066614	10	12020126
12	12033997	10	12052826
12-10	-----	-----	12066493

Cavity Plugs to Fill Unused Circuits, Green (Pkg. of 25) Part #12059255

### Housings

No. of Cavities	Female	Male	Male Housing Entry Seal	Male Wire Organizers (TPA)
2	(A) 12033769	5 (B) 12034269	5 (C) 12034364	5 (D) 12034363

## Metri-Pack 630 Series, Sealed, 3-Way Housings

Male tab width = 6.3 mm. 46 amps max. per circuit.  
 For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted.  
 Terminals require seals and a proper crimping tool, listed below.

### Terminals and Seals

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Seal	Pkg. Qty.	Female and Male Terminal Seals	Color	Pkg. Qty.
20-18	12052457	10	12064734	10	-----	-----	-----	-----	-----
16-14	12052455	10	12064735	10	12052388	10	12052388	Dk. Red	25
12	12052456	10	12064737	10	15324996/12052668	10	15324996/12052668	Blue	25
10	12052456	10	12064736	10	12052386	10	12052386	Green	25

Cavity Plugs to Fill Unused Circuits, Green (Pkg. of 25) Part #12059255

### Housings

No. of Cavities	Female Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Male Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housing Locks (CPA)	Pkg. Qty.
3	(A) 12124685	5	(C) 12045699	10	(B) 12124686	5	(C) 12045699	10	(D) 12020833	5

## Metri-Pack 630 Series, Sealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
<b>Delphi Recommended Tool</b> Metri-Pack 480 Series, 12-10 Gauge (Crimps Sealed Only) Metri-Pack 630 Series, 12-10 Gauge (Crimps Sealed Only)	Non-Ratchet	Standard Two Crimp	12071687
<b>Delphi Recommended Tool</b> Weather Pack Series, 12 Gauge Metri-Pack 280 Series, Sealed, 12 Gauge Metri-Pack 480 Series, Sealed, 18-14 Gauge Metri-Pack 480 Series, Unsealed, 16-14 Gauge Metri-Pack 480 Pull to Seat Series, Unsealed, 18-14 Gauge Metri-Pack 150, 480, and 630 Series (Crimps Seals Only) Metri-Pack 630 Series, Sealed 18-14 Gauge	Ratchet	Standard Two Crimp	12085270



# Packard Metri-Pack 630 Series, Unsealed

## Metri-Pack 630 Series, Unsealed

Male tab width = 6.3 mm. 46 amps max. per circuit.

For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted. Terminals require a proper crimping tool, listed below.



### Terminals

Wire Size (AWG)	Female		Male	
	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.
22-20	12052222	10	-----	-----
20-18	12015869	10	12020125	10
16-14	12015870	10	12020126	10
12	12052224	10	12052826	10
10	12084590	10	12066493	10

### Housings

Female		Male		Wire Organizer (TPA)	Housing Lock (CPA)	
A	B	C	D	#12129940	#12052834	
No. of Cavities	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housing Locks (CPA)	Pkg. Qty.
2	(A) 12129939	10	12129940	10	(C) 12129938	10
4	(B) 12015664	10	-----	-----	(D) 12052623	10

### Metri-Pack 630 Series, Unsealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD

### Delphi Recommended Tool

Metri-Pack 280 Series, Unsealed, 20-14 Gauge	Ratchet	Standard Two Crimp	12085271
Metri-Pack 280 ACT Pull to Seat Series, Unsealed, 20-14 Gauge			
Metri-Pack 480 Series, Unsealed, 20-18 Gauge			
Metri-Pack 480 and 630 Pull to Seat Series, Unsealed, 20-18 Gauge			
Metri-Pack 630 Series, Unsealed, 20-18 Gauge			
Pack-Con Series II, Unsealed, Female, 20-14 Gauge			

### Delphi Recommended Tool

Metri-Pack 480 Series, Unsealed, 16-14 Gauge	Non-Ratchet	Standard Two Crimp	6285847
Metri-Pack 480 Pull to Seat Series, Unsealed, 16-14 Gauge			
Metri-Pack 630 Series, Unsealed, 16-14 Gauge			
Metri-Pack 630 Pull to Seat Series, 16-14 Gauge, Unsealed			
Metri-Pack 630 Series, Unsealed, 12-10 Gauge (Core Wings Only)			
Pack-Con Series I & III, Unsealed, 20-14 Gauge			
Pack-Con Series II, Female, Unsealed, 12-10 Gauge			
Packard 56, 58, and 59 Series, 20-14 Gauge			
Packard 56, 58, and 59 Series, 12-10 Gauge (Core Wings Only)			
Packard 56 Series, 20-10 Gauge, Splice Clips			
Packard Open Barrel Rings, Unsealed, 20-14 Gauge, Up to 0.032" Thick			
Packard Wedge Base Lamp Sockets, 20-14 Gauge			

### Delphi Recommended Tool

Metri-Pack 280 and 480 Series, Unsealed, 12-10 Gauge	Ratchet	Quick Single Motion	12070947
Metri-Pack 280 ACT Series, Unsealed, 12-10 Gauge			
Metri-Pack 480 Pull to Seat Series, Unsealed, 12-10 Gauge			
Metri-Pack 630 Series, Unsealed, 12-10 Gauge			
Metri-Pack 630 Pull to Seat Series, Unsealed, 12-10 Gauge			
Metri-Pack 800 Series, Unsealed, Female, 14-10 Gauge			
Pack-Con Series I & III, Unsealed, 12-10 Gauge			

# Packard Metri-Pack 800 Series, Unsealed

## Metri-Pack 800 Series, Unsealed



Male tab width = 8.0 mm. 60 amps max. per circuit.  
 For durable, long-term connections each housing uses a wire organizer (TPA) and mating pairs of housings use housing locks (CPA), unless noted.  
 Terminals require a proper crimping tool, listed below.

### Terminals



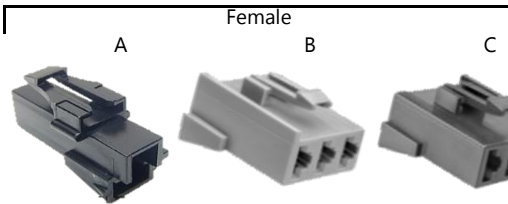
Female



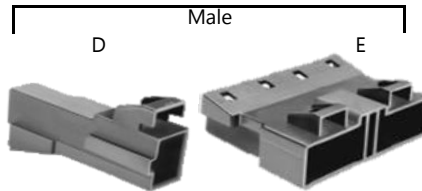
Male

Female Wire Size (AWG)	Female Terminals	Pkg. Qty.	10 AWG Male Terminals	Pkg. Qty.
10	12110127	5	12110700	5
Two 10 Gauge Wires	12092445	5	12110700	5
Two 12 Gauge Wires	12092444	5	12110700	5
14-12	12065916	5	12110700	5

### Housings



Female



Male

Wire Organizer (TPA)  
#12092401

Housing Lock (CPA)  
#12052834

No. of Cavities	Female				Male				Housing Locks (CPA)	Pkg. Qty.
	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.	Housings	Pkg. Qty.	Wire Organizers (TPA)	Pkg. Qty.		
1	(A) 12160893	10	12160895	10	(D) 12160894	10	12160895	10	12052834	5
3/6*	(B) 12092399	10	12092401	20	(E) 12110698♦	1	12092401	20	12052834	5
3/6*	(C) 12092400	10	12092401	20	(E) 12110698♦	1	12092401	20	12052834	5

\* Two 3-way female housings fit one 6-way male housing.  
 ♦ Requires two male wire organizers (TPA) and two housing locks (CPA).

### Metri-Pack 800 Series, Unsealed Tools

	Works With	Style	Crimp Method	Part Number
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
	Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
	Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
	<b>Delphi Recommended Tool</b> Metri-Pack 280 and 480 Series, Unsealed, 12-10 Gauge Metri-Pack 280 ACT Series, Unsealed, 12-10 Gauge Metri-Pack 480 Pull to Seat Series, Unsealed, 12-10 Gauge Metri-Pack 630 Series, Unsealed, 12-10 Gauge Metri-Pack 630 Pull to Seat Series, Unsealed, 12-10 Gauge Metri-Pack 800 Series, Unsealed, Female, 14-10 Gauge Pack-Con Series I & III, Unsealed, 12-10 Gauge	Ratchet	Quick Single Motion	12070947

# Packard Metri-Pack GT 150 Series, Sealed

## Metri-Pack GT 150 Series, Sealed

Male tab width = 1.5 mm. 15 amps max. per circuit.

For durable, long-term connections mating pairs of housings use housing locks (CPA), unless noted. Terminals require seals and a proper crimping tool, listed below.

Kit part #MP150GT SLD KIT available on page #31.



## Terminals and Seals



Female



Male



Seal



Cavity Plug

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Female & Male Terminal Seals	Color	Pkg. Qty.
22-20	12191818	25	15326268	25	15366021	White	100
18-16	12191819	25	15326269	25	15366060	Blue	50

Cavity Plugs to Fill Unused Circuits, Green (Pkg. of 25) Part #15305171

## Housings

Female			Male				Housing Lock (CPA)	
A	B	C	D	K	L	M	N	<p>#15317832</p>
E	F	G		O	P	Q		
H	I	J		R	S	T		
No. of Cavities	Female Housings	Pkg. Qty.	Male Housings	Pkg. Qty.	Housing Lock (CPA)	Pkg. Qty.		
2	(A) 13510085	5	(K) 13510099	5	15317832	10		
3	(B) 13519047	5	(L) 15326813	5	15317832	10		
4	(C) 15487756	5	(M) 15487755	5	15317832	10		
5	(D) 13519051	5	(N) 13519053	5	15317832	10		
6	(E) 15397577	5	(O) 15397579	5	15317832	10		
8	(F) 15326835	1	(P) 15326840	1	15317832	10		
10	(G) 15326842	1	(Q) 15326847	1	15317832	10		
12	(H) 13530777	1	(R) 15326854	1	15317832	10		
14	(I) 15326856	1	(S) 15326861	1	15317832	10		
16	(J) 15326863	1	(T) 15326868	1	15317832	10		

## Metri-Pack GT 150 Series, Sealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
<b>Delphi Recommended Tool</b> Metri-Pack GT 150 Series, Sealed, 22-16 Gauge Metri-Pack GT 280 Series, 22-16 Gauge (Must remove locator on tool)	Ratchet	Quick Single Motion	15359995

# Packard Metri-Pack GT 280 Series, Sealed

## Metri-Pack GT 280 Series, Sealed Connectors



Male tab width = 2.8 mm. 25 amps max. per circuit.  
 For durable, long-term connections mating pairs of housings use housing locks (CPA), unless noted. Terminals require seals and a proper crimping tool, listed below.  
 Kit part #MP280GT SLD KIT available on page #31.

### Terminals and Seals



Female



Male



Seal



Cavity Plug

Wire Size (AWG)	Female Terminals	Pkg. Qty.	Male Terminals	Pkg. Qty.	Female & Male Seal Part #	Color	Pkg. Qty.
22-20	15304718	25	15304730	25	15366065	Orange	50
18-16	15304719	25	15304731	25	15366066	Yellow	50
14-12	15304717	25	15304732	25	15366067	Tan	50
10	15326004	25	-----	-----	12191235	Purple	50

Cavity Plugs to Fill Unused Circuits, White (Pkg. of 25) Part #15305170

### Housings

Female			Male			Housing Lock (CPA)	
No. of Cavities	Female Housings	Pkg. Qty.	Male Housings	Pkg. Qty.	Housing Lock (CPA)	Pkg. Qty.	
2	(A) 13518845	10	(J) 15326678	10	15317832	10	<p>#15317832</p>
3	(B) 15326614	10	(K) 15326623	10	15317832	10	
4	(C) 13521459	10	(L) 15326633	10	15317832	10	
5	(D) 13521463	1	(M) 15326647	5	15317832	10	
6	(E) 13521467	5	(N) 15326640	5	15317832	10	
8	(F) 15326654	1	(O) 15326655	1	15317832	10	
10	(G) 15326660	1	(P) 15326661	1	15317832	10	
12	(H) 15326910	1	(Q) 15326915	1	15317832	10	
16	(I) 15326666	1	(R) 15326667	1	15317832	10	

### Metri-Pack GT 280 Series, Sealed Tools

Works With	Style	Crimp Method	Part Number
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58 and 59, Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD
<b>Delphi Recommended Tool</b> Metri-Pack GT 150 Series, Sealed, 22-16 Gauge Metri-Pack GT 280 Series, 22-16 Gauge (Must remove locator on tool)	Ratchet	Quick Single Motion	15359995

# Packard Metri-Pack Pull-to-Seat Housings and Terminals for Devices

## Metri-Pack Pull-to-Seat Housings and Terminals for Devices


Metri-Pack pull-to-seat device connections are female housings and terminals which connect directly to specific devices. Pull-to-seat housings have built in seals. 14 amps max. per circuit.

To assemble pull-to-seat the wire is inserted through the back of the housing, out the front, wire is stripped and double crimped on to the terminal. The terminal is pulled back through until it seats in the housing, making a secure connection.

### Female Pull-to-Seat Terminals for 150 Series Pull-to-Seat Housings

Wire Size (AWG)	Female Terminals	Pkg. Qty.		
22-20	12089290	25	Female	Cavity Plug
18-16	12103881	25		
Cavity Plugs to Fill Unused Circuits, Gray (Pkg. of 25)	Part #12065266			









### Female 150 Series Housings, Pull-to-Seat

Number of Cavities	Typical Applications	Female Housings	Pkg. Qty.	
3	A/C Compressor	12065287	5	





### Female Pull-to-Seat Terminals for 150.2 Series Pull-to-Seat Housings

Wire Size (AWG)	Female Terminals	Pkg. Qty.		
22-20	12124076	10	Female	Cavity Plug
20-18	12124075	10		
Cavity Plugs to Fill Unused Circuits, Gray (Pkg. of 25)	Part #12065266			


### Female 150.2 Series Housings, Pull-to-Seat

No. of Cavities	Typical Applications	Female Housings	Pkg. Qty.		No. of Cavities	Typical Applications	Female Housings	Pkg. Qty.	
2	Temperature Sensors	12162193	5		3	Crankshaft Sensors, Head Lamps	12162280	1	
2	Temperature Sensors	12162197	1		4	Distributor Modules	12162188	1	
2	Throttle Bodies, Injectors	12162215	1		5	Sensors, Modules	12162825	1	
3	Crankshaft Sensors, Head Lamps	12162182	1		6	Various Applications	12162210	1	

### Metri-Pack 150 Series, Unsealed Tools

Works With	Style	Crimp Method	Part Number	
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Terminal Release Tool	-----	12094429	
Metri-Pack 150, 280, and 630 Series, 22-10 Gauge Metri-Pack GT 150 and GT 280 Series, 22-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094429HD	
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Terminal Release Tool	-----	12094430	
Metri-Pack 480, 630, and 800 Series, 20-10 Gauge Packard 56, 58, and 59 Series, 20-10 Gauge	Heavy Duty Terminal Release Tool	-----	12094430HD	

### Delphi Recommended Tool

Metri-Pack 150 Series, Unsealed, 22-16 Gauge Metri-Pack 150 Pull to Seat Series, Unsealed, 22-16 Gauge Metri-Pack 150.1 Pull to Seat Series, Unsealed, 22-16 Gauge Metri-Pack 150.2 Pull to Seat Series, Unsealed, 22-16 Gauge	Ratchet	Quick Single Motion	12039500	
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# Deutsch DT and DTP Series Connectors & Kits

## Deutsch DT Series Connectors

Deutsch's DT Series connectors offer field proven reliability in corrosive and rugged environments.






### Terminals

Select the terminal that fits your wire size. Use a plug in place of a terminal to fill an empty slot. Crimp terminals with HDT-48-00 crimping tool. Use release tool #0411-291-1405. Stamped and formed terminals are available on reels.

	Wire Size (AWG)	Feature	Pin		Socket	
			Pkg. Qty.		Pkg. Qty.	
 Pin	20-16	Standard	0460-202-16141	25	0462-201-16141	25
 Socket	20-16	High Conductivity (Gold)	0460-202-1631	10	0462-201-1631	10
 Plug	14	Standard (Green Band)	0460-215-16141	25	0462-209-16141	25
	14	High Conductivity (Gold)	0460-215-1631	10	0462-209-1631	10
	Plug for empty slot #114017 (25/pkg.)					

### Housings

Select the housing that has the number of circuits you need. Each housing requires a wedgelock to hold terminals in place.

	Circuits	Housing	Pin		Socket	
			Pkg. Qty.	Wedgelock	Pkg. Qty.	Wedgelock
 Pin Housing	2-Way	DT04-2P	10	W2P	10	DT06-2S
 Pin Wedgelock	3-Way	DT04-3P	5	W3P	10	DT06-3S
 Quick Splice	4-Way	DT04-4P	5	W4P	10	DT06-4S
 Socket Housing	6-Way	DT04-6P	1	W6P	10	DT06-6S
 Socket Wedgelock	8-Way	DT04-08PA	1	W8P	10	DT06-08SA
	12-Way	DT04-12PA	1	W12P	10	DT06-12SA
	Quick Splice for DT Series Terminals #JS16-00 (1/pkg.)					

## Deutsch DT Series Kit

This kit contains all of the DT series housings, wedgelocks, and pin and socket terminals you need to create a connection - 30 items, over 190 pieces in a large metal box, 18"w x 12"d x 3"h. This kit is perfect for maintenance applications where you don't know which pieces you might need.

Part #	Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
	0462-201-16141	20-16 Gauge Socket Terminals	25	DT04-6P	6-Way Pin Housings	1
	0460-215-16141	14 Gauge Pin Terminals	25	W6P	6-Way Pin Wedgelocks	1
	0462-209-16141	14 Gauge Socket Terminals	25	DT06-6S	6-Way Socket Housings	1
	DT04-2P	2-Way Pin Housings	5	W6S	6-Way Socket Wedgelocks	1
	W2P	2-Way Pin Wedgelocks	5	DT04-08PA	8-Way Pin Housings	1
	DT06-2S	2-Way Socket Housings	5	W8P	8-Way Pin Wedgelocks	1
	W2S	2-Way Socket Wedgelocks	5	DT06-08SA	8-Way Socket Housings	1
	DT04-3P	3-Way Pin Housings	5	W8S	8-Way Socket Wedgelocks	1
	W3P	3-Way Pin Wedgelocks	5	DT04-12PA	12-Way Pin Housings	1
	DT06-3S	3-Way Socket Housings	5	W12P	12-Way Pin Wedgelocks	1
	W3S	3-Way Socket Wedgelocks	5	DT06-12SA	12-Way Socket Housings	1
	DT04-4P	4-Way Pin Housings	5	W12S	12-Way Socket Wedgelocks	1
	W4P	4-Way Pin Wedgelocks	5	0411-310-1605	18-16 Gauge Light Blue Removal Tool	1
	DT06-4S	4-Way Socket Housings	5	114017	Plugs for DT and DTP Series	25

## Small Deutsch DT Series Kit

Deutsch Kit contains 72 pieces, housings, wedgelocks, terminals, and 2 removal tools. Comes in a small plastic box, 11"w x 6

Part #	Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
	0462-209-16141	14 Gauge Socket Terminals	25	W2S	2-Way Socket Wedgelocks	5
	DT04-2P	2-Way Pin Housings	5	DT-RT	Pick Removal Tool	1
	W2P	2-Way Pin Wedgelocks	5	0411-310-1605	18-16 Ga. Light Blue Removal Tool	1

## Deutsch DTP Series Kit

This kit contains all of the DTP series housings, wedgelocks, and pin and socket terminals you need to create a connection - 13 items, over 100 pieces in a small plastic box, 11"w x 6 3/4"d x 1 3/4"h. This kit is perfect for maintenance applications where you don't know which pieces you might need.

Part #	Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
	0462-203-12141	14-12 Ga. Socket Terminals	25	DTP06-4S	4-Way Socket Housings	5
	DTP04-2P	2-Way Pin Housings	5	WP-4S	4-Way Socket Wedgelocks	5
	WP-2P	2-Way Pin Wedgelocks	5	114010	Deutsch 12 Ga. Yellow Removal Tool	1
	DTP06-2S	2-Way Socket Housings	5	DT-RT	Deutsch Pick Removal Tool #DT-RT1	1
	WP-2S	2-Way Socket Wedgelocks	5	114017	Plugs for DT and DTP Series	25
	DTP04-4P	4-Way Pin Housings	5			

# Deutsch DTP and DTM Series Connectors & Kits


## Deutsch DTP Series Connectors

Deutsch's DTP Series connectors are the solution for your power application requirements. Building on the DT series design strengths, the DTP connector line was developed for higher amperage applications, up to 25 amps.

### Terminals

Crimp terminals with HDT-48-00 crimping tool. Use release tool #0411-291-1405.


Wire Size (AWG)	Feature	Pin		Socket	
		Pkg. Qty.		Pkg. Qty.	
14-12	Standard	0460-204-12141	10	0462-203-12141	10



### Housings

Select the housing that has the number of circuits you need. Each housing requires a wedgelock to hold terminals in place.

Circuits	Housing	Pin		Socket				
		Pkg. Qty.	Wedgelock Qty.	Pkg. Qty.	Wedgelock Qty.			
2-Way	DTP04-2P	1	WP-2P	10	DTP06-2S	1	WP-2S	10
4-Way	DTP04-4P	1	WP-4P	10	DTP06-4S	1	WP-4S	10




## Deutsch DTM Series Connectors

Deutsch's DTM Series connectors are small by design and fit tight spaces. Designed for the same harsh, wet environments as the DT Series. For wire sizes 16 to 20 gauge wire. 7.5 amps.

### Terminals

Select the terminal that fits your wire size. Use a plug in place of a terminal to fill an empty slot. Crimp terminals with HDT-48-00 crimping tool. Use release tool #0411-240-2005.

Wire Size (AWG)	Feature	Pin		Socket	
		Pkg. Qty.		Pkg. Qty.	
20	Standard	0460-202-20141	10	0462-201-20141	10
18-16	Standard	0460-010-20141	5	0462-005-20141	5




Plug for empty slot #0413-204-2005 (25/pkg.)

### Housings

Select the housing that has the number of circuits you need. Each housing requires a wedgelock to hold terminals in place.


Circuits	Housing	Pin		Socket				
		Pkg. Qty.	Wedgelock Qty.	Pkg. Qty.	Wedgelock Qty.			
2-Way	DTM04-2P	5	WM-2P	10	DTM06-2S	5	WM-2S	10
3-Way	DTM04-3P	1	WM-3P	5	DTM06-3S	1	WM-3S	5
4-Way	DTM04-4P	1	WM-4P	5	DTM06-4S	1	WM-4S	5
6-Way	DTM04-6P	1	WM-6P	5	DTM06-6S	1	WM-6S	5
8-Way	DTM04-08PA	1	WM-8P	5	DTM06-08SA	1	WM-8S	5
12-Way	DTM04-12PA	1	WM-12P	5	DTM06-12SA	1	WM-12S	5



## Deutsch DTM Series Kit

This kit contains all of the DTM series housings, wedgelocks, and pin and socket terminals you need to create a connection - 31 items, over 200 pieces in a large metal box, 18"w x 12"d x 3"h. This kit is perfect for maintenance applications where you don't know which pieces you might need.


Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
0460-202-20141	20 Ga. Pin Terminals	25	DTM04-6P	6-Way Pin Housings	3
0462-201-20141	20 Ga. Socket Terminals	25	WM-6P	6-Way Pin Wedgelocks	3
0460-010-20141	18-16 Ga. Pin Terminals	25	DTM06-6S	6-Way Socket Housings	3
0462-005-20141	18-16 Ga. Socket Terminals	25	WM-6S	6-Way Socket Wedgelocks	3
DTM04-2P	2-Way Pin Housings	5	DTM04-08PA	8-Way Pin Housings	3
WM-2P	2-Way Pin Wedgelocks	5	WM-8P	8-Way Pin Wedgelocks	3
DTM06-2S	2-Way Socket Housings	5	DTM06-08SA	8-Way Socket Housings	3
WM-2S	2-Way Socket Wedgelocks	5	WM-8S	8-Way Socket Wedgelocks	3
DTM04-3P	3-Way Pin Housings	5	DTM04-12PA	12-Way Pin Housings	3
WM-3P	3-Way Pin Wedgelocks	5	WM-12P	12-Way Pin Wedgelocks	3
DTM06-3S	3-Way Socket Housings	5	DTM06-12SA	12-Way Socket Housings	3
WM-3S	3-Way Socket Wedgelocks	5	WM-12S	12-Way Socket Wedgelocks	3
DTM04-4P	4-Way Pin Housings	5	0411-240-2005	Deutsch 24-20 Ga. Red Removal Tool	1
WM-4P	4-Way Pin Wedgelocks	5	0411-310-1605	Deutsch 18-16 Ga. Lt Blue Removal Tool	1
DTM06-4S	4-Way Socket Housings	5	0413-204-2005	Plugs for DTM Series	25
WM-4S	4-Way Socket Wedgelocks	5			



Part # DEUTSCH DTM-KIT

## Solid Terminals for HD30, HDP20, HD10, DTHD, and DRB Series

Wire Size (AWG)	Pin	Socket	Plug	Removal Tool
10-8	0460-204-08141	0462-203-08141	114018	114008
6	0460-204-0490	0462-203-04141	114019	114009



# Deutsch Tools

## Pick Removal Tools



Works with  
Deutsch DT, DTM, DTP Series

Description  
The tool has a double ended removal tool. One end has a sturdy 90° hook for non-slip wedgelock removal. The other end has a standard flat head screwdriver which can be used as a straight pick or driver.

Part Number  
DT-RT

## Terminal Removal Tools

Removal tools remove the Deutsch contacts from their housings. The **plastic** removal tools are economical. The **metal** removal tools are more durable.



Wire Size (AWG)	Works with	Plastic		Metal	
		Color	Part Number	Color	Part Number
18-16	DT, DRC, HD, HDP, and HD10 Series	Lt. Blue	(A) 0411-310-1605	Lt. Blue	(G) 0411-310-1605HD
24-20	DTM, DRC20, HDP, and HD30 Series	Red	(B) 0411-240-2005	Red	(H) 0411-240-2005HD
12	DTP, DTCE, DTHD, HD10, HD30 Series	Yellow	(C) 114010	Yellow	(I) 114010HD
16-14	DRC, HD, HDP, and HD10 Series	Green	(D) 0411-291-1405	-----	-----
10-8	DTHD, DTCE, HD, and HDP Series	Green	(E) 114008	Gray	(J) 114008HD
6	DTHD, DTCE, HD, and HDP Series	White	(F) 114009	Green	(K) 114009HD
Metal Removal Tool Set / Contains all three metal tools: 0411-310-1605HD, 0411-240-2005HD, 114010HD.					(L) REMOVAL KIT

## Crimp Tools for Deutsch DT, DTM, DTP, HD30, HDP20, HD10, DRC, DRB, DTHD, DTV, AEC Series Terminals



Production ratcheting tool  
Part # HDT-48-00

Crimps **20-12** gauge.

- Use with the following Deutsch terminals:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-010-20141 (Pin),	0462-005-20141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)	0460-204-121 (S Pin),	0462-203-12141 (Socket)



Field Service Ratchet Tool  
Part # HDT-1561

Crimps **20-12** gauge.

Use with the Following Deutsch Part Numbers:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-204-12141 (Pin),	0462-203-12141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)		



Economy ratcheting tool  
Part # DT-TOOL-E

Crimps **20-12** gauge.

Use with the Following Deutsch Part Numbers:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-010-20141 (Pin),	0462-005-20141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)	0460-204-12141 (Pin),	0462-203-12141 (Socket)



Part # DTT-12-00

Crimps **14-12** gauge.

- Use with Deutsch the following size 12 terminals:
- |                       |  |
|-----------------------|--|
| 1060-12-0166 (Pin)    |  |
| 1062-12-0166 (Socket) |  |



Part # DTT-12-01

Crimps **10** gauge.

- Use with Deutsch the following size 12 terminals:
- |                       |  |
|-----------------------|--|
| 1060-12-0222 (Pin)    |  |
| 1062-12-0222 (Socket) |  |



Part # DTT-16-00

Crimps **16-14** gauge.

- Use with Deutsch the following size 16 terminals:
- |                     |                       |
|---------------------|-----------------------|
| 1060-16-0722 (Pin), | 1062-16-0722 (Socket) |
| 1060-16-0622 (Pin), | 1062-16-0622 (Socket) |
| 1060-16-0122 (Pin), | 1062-16-0122 (Socket) |
| 1060-14-0122 (Pin), | 1062-14-0122 (Socket) |



Part # DTT-20-00

Crimps **20-16** gauge.

- Use with Deutsch the following size 20 terminals:
- |                     |                       |
|---------------------|-----------------------|
| 1060-20-0122 (Pin), | 1062-20-0122 (Socket) |
|---------------------|-----------------------|



Part # DTT-16-01

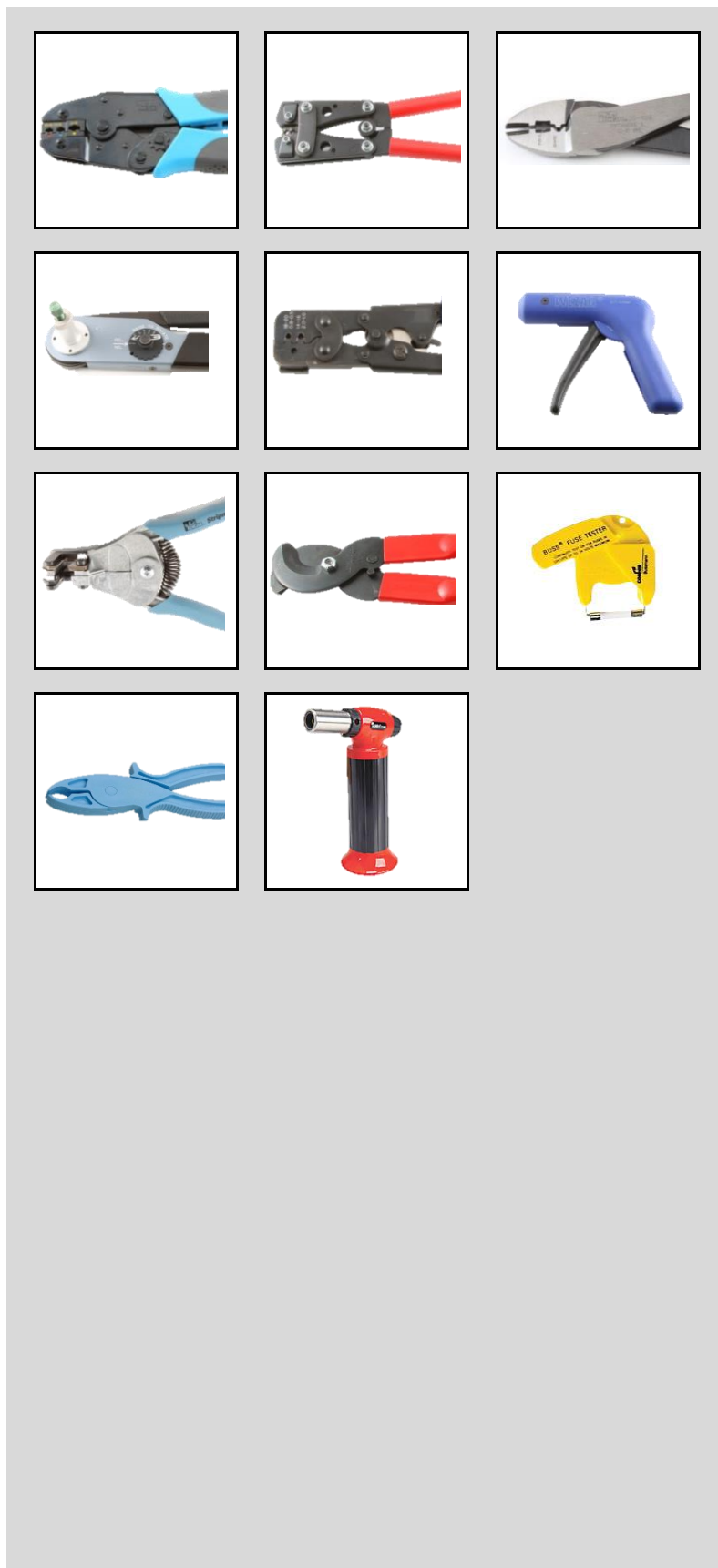
Crimps **20-18** gauge.

- Use with Deutsch the following size 16 terminals:
- |                     |                       |
|---------------------|-----------------------|
| 1060-16-0122 (Pin), | 1062-16-0122 (Socket) |
| 1060-16-0622 (Pin), | 1062-16-0622 (Socket) |



**Tools**

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# Crimping Tools for Insulated Terminals

## Crimping Tools for Insulated Terminals



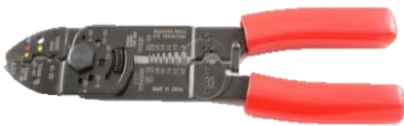
Part # TH-450

- Crimps:
- 26-6 gauge insulated terminals
  - 26-6 gauge non-insulated terminals
  - 22-10 gauge non-insulated flag terminals
  - 26-10 gauge closed end connectors
- Strips:
- 20-8 gauge wire
- Features:
- Heavy-duty multi-purpose tool



Part # RATCHET TRIO

- Crimps:
- 20-10 gauge insulated terminals
  - 26-8 gauge non-insulated terminals
  - 20-10 gauge "B" crimp (wing type) terminals
- Features:
- Three quick change dies
  - Release lever
  - Ratcheting tool



Part # MPT

- Crimps:
- 26-10 gauge insulated terminals
  - 22-10 gauge non-insulated terminals
- Strips:
- 26-8 gauge wire
- Features:
- Economy multi-purpose tool



Part # RATCHET 2614

- Crimps:
- 26-16 gauge insulated terminals
  - 26-16 gauge wire ferrules
- Features:
- Release lever
  - Pressure adjustment lever
  - Ratcheting tool



Part # 500RATCHET26-14

- Crimps:
- 26-14 gauge insulated terminals
- Features:
- Release lever
  - Pressure adjustment lever
  - Ratcheting tool



Part # 500 RATCHET

- Crimps:
- 22-10 gauge insulated terminals
- Features:
- Release lever
  - Pressure adjustment lever
  - Ratcheting tool



Part # 500RATCHET UL-S

- Crimps:
- 26-14 gauge insulated and heat shrink terminals
- Features:
- Release lever
  - Ratcheting action



Part # 500 RATCHET UL

- Crimps:
- 22-10 gauge insulated and heat shrink terminals
- Features:
- Release lever
  - Ratcheting tool



Part # 429

- Crimps:
- 22-10 gauge insulated terminals
  - 22-10 gauge non-insulated terminals
- Features:
- Cutter on nose



Part # 500RATCHET UL-L

- Crimps:
- 16-8 gauge insulated and heat shrink terminals
- Features:
- Release lever
  - Ratcheting tool



Part # 500 RATCHET-ERG

- Crimps:
- 22-10 gauge insulated terminals
- Features:
- Release lever
  - Pressure adjustment lever
  - Ratcheting tool



Part # 6220

- Crimps:
- 8-2 gauge insulated terminals
  - 8-2 gauge non-insulated terminals
- Features:
- 18.5" long
  - Compound crimping

# Crimping Tools for Non-Insulated Terminals

## Crimping Tools for Non-Insulated Terminals

Crimps:

- 26-6 gauge non-insulated terminals
- 26-6 gauge insulated terminals
- 22-10 gauge non-insulated flag terminals
- 26-10 gauge closed end connectors

Strips:

- 20-8 gauge wire

Features:

- Heavy-duty multi-purpose tool



Part # TH-450

Crimps:

- 8 gauge-250MCM non-insulated terminals
- 8-4/0 gauge non-insulated flag terminals
- 8 gauge-250MCM copper lugs

Features:

- 22" long handles
- Dieless indent
- Wire calibration screw
- Single indent



Part # MT-25

Crimps:

- 22-10 gauge non-insulated terminals
- 22-10 gauge insulated terminals

Features:

- Cutter on nose



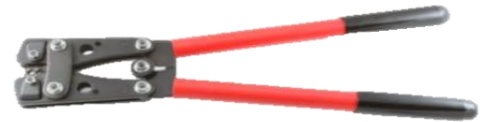
Part # 429

Crimps:

- 8-1/0 gauge non-insulated terminals
- 8-1/0 gauge battery terminals
- 8-1/0 gauge copper lugs

Features:

- 18" long handles
- Compound action



Part # ET10-1JR

Crimps:

- 26-8 gauge non-insulated terminals
- 20-10 gauge insulated terminals
- 20-10 gauge "B" crimp (wing type) terminals

Features:

- Three quick change dies
- Release lever
- Ratcheting tool



Part # RATCHET TRIO

Crimps:

- 8-2 gauge non-insulated terminals

Features:

- Release lever
- Ergonomic extended handles
- Four rotating dies
- Ratcheting tool



Part # 4290

Crimps:

- 22-10 gauge non-insulated terminals
- 26-10 gauge insulated terminals

Strips:

- 26-8 gauge wire

Features:

- Economy multi-purpose tool



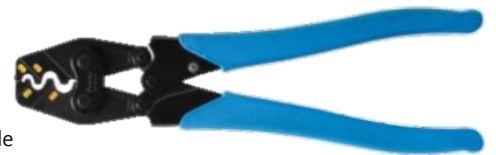
Part # MPT

Crimps:

- 8-2 gauge non-insulated terminals

Features:

- 13.75" long high leverage TPR handle
- Four die nests: 8 ga., 6 ga., 4 ga., 2 ga.
- Ratcheting tool



Part # NON INS 8-2

Crimps:

- 8-2 gauge non-insulated terminals
- 8-2 gauge insulated terminals

Features:

- 18.5" long
- Compound crimping



Part # 6220

Crimps:

- 20-8 gauge non-insulated terminals

Features:

- Release Lever
- Pressure adjustment wheel
- Ratcheting tool



Part # 501 RATCHET

Crimps:

- 16-6 gauge non-insulated terminals

Features:

- 11" long spring loaded handles
- Release Lever

- Four die nests: 16-14 ga., 12-10 ga., 8 ga., 6 ga.



Part # RT-6

Crimps:

- 8-2 gauge non-insulated terminals
- 8-2 gauge non-insulated flag terminals
- 8-2 gauge copper lugs

Features:

- 24.75" long
- Four rotating dies



Part # CT-38

# Crimping Tools for Non-Insulated, Heat Shrink & Insulated Flag Terminals

## Crimping Tools for Non-Insulated Terminals (Continued from previous page)



Part # ET8-6/0

- Crimps:
- 6 gauge - 250MCM non-insulated terminals
  - 6 gauge - 250MCM battery terminals
  - 6 gauge - 250MCM copper lugs
- Features:
- 25" long handles
  - Rotating dies
  - Compound action



Part # ET8-6/0-R  
Ratcheting Tool

- Crimps:
- 6 gauge - 250MCM non-insulated terminals
  - 6 gauge - 250MCM battery terminals
  - 6 gauge - 250MCM copper lugs
- Features:
- 25" long handles
  - Rotating dies
  - Compound action



Part # ETH8-4/0

- Crimps:
- 6-4/0 gauge non-insulated terminals
  - 6-4/0 gauge battery terminals
  - 6-4/0 gauge copper lugs
- Features:
- Three quick change dies
  - Hammer indent tool



Part # ET8-6/0 BENCH

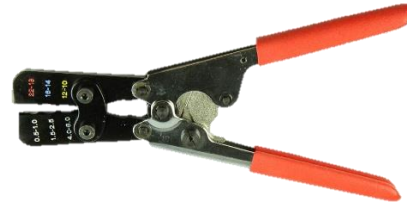
- Crimps:
- 6 gauge - 250MCM non-insulated terminals
- Features:
- Simple setting changes
  - Compound crimping
  - Bench mount

## Crimping Tools for Heat Shrink Terminals



Part # 500RATCHET UL-S

- Crimps:
- 26-14 gauge heat shrink and insulated terminals
- Features:
- UL listed with 26-14 gauge heavy-duty heat shrink terminals
  - Release lever
  - Ratcheting tool



Part # 500 RATCHET UL

- Crimps:
- 22-10 gauge heat shrink and insulated terminals
- Features:
- UL listed with 22-10 gauge heavy-duty heat shrink terminals
  - Release lever
  - Ratcheting tool



Part # SHRINK 22-8

- Crimps:
- 22-10 gauge heat shrink terminals
  - 22-10 gauge insulated terminals
- Features:
- Release lever
  - Ratcheting tool



Part # 500RATCHET UL-L

- Crimps:
- 16-8 gauge heat shrink and insulated terminals
- Features:
- UL listed with 16-8 gauge heavy duty heat shrink terminals
  - Release lever
  - Ratcheting tool

## Crimping Tools for Insulated Flag Terminals



Part # FLAG-INS 2214

- Crimps:
- 22-14 gauge insulated terminals
- Features:
- Pressure adjustment wheel
  - Release lever
  - Ratcheting tool



Part # FLAG-INS 1410

- Crimps:
- 16-10 gauge insulated terminals
- Features:
- Pressure adjustment wheel
  - Release lever
  - Ratcheting tool

# Crimping Tools for Non-Insulated Flag Terminals & "B" Crimp Wing Terminals

## Crimping Tools for Non-Insulated Flag Terminals

Crimps:

- 22-10 gauge non-insulated flag terminals
- 26-14 gauge insulated terminals
- 26-6 gauge non-insulated terminals
- 26-10 gauge closed end connectors

Strips:

- 20-8 gauge wire

Features:

- Heavy-duty multi-purpose tool



Part # TH-450

Crimps:

- 8-4/0 gauge non-insulated flag terminals
- 8 gauge-250MCM non-insulated terminals
- 8 gauge-250MCM copper lugs

Features:

- 22" long handles
- Dieless indent
- Wire calibration screw



Part # MT-25

Crimps:

- 22-14 gauge non-insulated flag terminals

Features:

- Pressure adjustment wheel
- Release lever
- Ratcheting tool



Part # FLAG-NON 2214

Crimps:

- 8-2 gauge non-insulated flag terminals
- 8-2 gauge non-insulated terminals
- 8-2 gauge copper lugs

Features:

- 24.75" long
- Four rotating dies



Part # CT-38

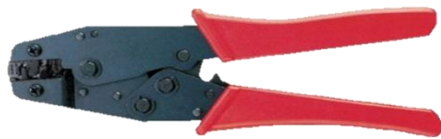
## Crimping Tools for "B" Crimp-Wing Terminals

Crimps:

- 30-18 gauge open barrel used in D-SubS, Molex, and AMP Mate-N-Lok connectors

Features:

- Release lever
- Ratcheting tool



Part # OB RATCHET30-18

Crimps:

- 22-10 gauge "B" crimp (wing type) terminals

Features:

- Crimping wings are folded over to capture wire
- Open barrel type
- Release lever
- Ratcheting tool



Part # 480 RATCHET

Crimps:

- 24-14 gauge "B" crimp (wing type) terminals

Features:

- 5 different open barrel wing crimps
- Compound Action
- Crimping Tool



Part # T-11

Crimps:

- 20-10 gauge "B" crimp (wing type) terminals
- 26-8 gauge non-insulated terminals
- 20-10 gauge insulated terminals

Features:

- Three quick change dies
- Release lever
- Ratcheting tool



Part # RATCHET TRIO

Crimps:

- 6-2 gauge "B" crimp and open barrel terminals

Features:

- No dies to move
- 19" handles
- Compound crimping



Part # OB 6-2

# Heavy Duty Crimping Tools for Lugs and Battery Terminals

## Heavy Duty Crimping Tools for Compression Lugs, Copper Lugs, and Battery Terminals



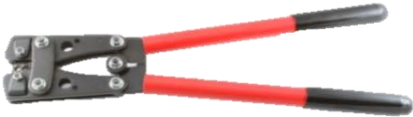
Part # MT-25

- Crimps:
- 8 gauge-250MCM copper lugs
  - 8 gauge-250MCM non-insulated terminals
  - 8-4/0 gauge non-insulated flag flag terminals
- Features:
- 22" long handles
  - Dieless indent
  - Wire calibration screw
  - Single indent



Part # ET8-6/0

- Crimps:
- 6 gauge - 250MCM battery terminals
  - 6 gauge - 250MCM copper lugs
  - 6 gauge - 250MCM non-insulated terminals
- Features:
- 25" long handles
  - Rotating dies
  - Compound crimping tool



Part # ET10-1JR

- Crimps:
- 8-1/0 gauge battery terminals
  - 8-1/0 gauge copper lugs
  - 8-1/0 gauge non-insulated terminals
- Features:
- 18" long handles
  - Compound crimping tool



Part # ET8-6/0-R

- Crimps:
- 6 gauge - 250MCM battery terminals
  - 6 gauge - 250MCM copper lugs
  - 6 gauge - 250MCM non-insulated terminals
- Features:
- 25" long handles
  - Rotating dies
  - Compound crimping ratcheting tool



Part # 6220

- Crimps:
- 8-2 gauge insulated terminals
  - 8-2 gauge non-insulated terminals
- Features:
- 18.5" long
  - Compound crimping tool



Part # ET8-6/0 BENCH

- Crimps:
- 6 gauge-250MCM non-insulated terminals
- Features:
- Simple setting changes
  - Compound crimping tool



Part # CT-38

- Crimps:
- 8-2 gauge copper lugs
  - 8-2 gauge non-insulated terminals
  - 8-2 gauge non-insulated flag terminals
- Features:
- 24.75" long
  - Four rotating dies



Part # ETH8-4/0

- Crimps:
- 6-4/0 gauge battery terminals
  - 6-4/0 gauge copper lugs
  - 6-4/0 gauge non-insulated terminals
- Features:
- Three quick change dies
  - Economy hammer indent tool

**Pick Removal Tools**

Works with	Description	Part Number
Deutsch DT, DTM, and DTP Series	The tool has a double ended removal tool. One end has a sturdy 90° hook for non-slip wedgelock removal. The other end has a standard flat head screwdriver which can be used as a straight pick or driver.	DT-RT



**Terminal Removal Tools**

Removal tools remove the Deutsch contacts from their housings. The **plastic** removal tools are economical. The **metal** removal tools are more durable.



Wire Size (AWG)	Works with	Plastic		Metal	
		Color	Part Number	Color	Part Number
18-16	DT, DRC, HD, HDP, and HD10 Series	Lt. Blue	(A) 0411-310-1605	Lt. Blue	(G) 0411-310-1605HD
24-20	DTM, DRC20, HDP, and HD30 Series	Red	(B) 0411-240-2005	Red	(H) 0411-240-2005HD
12	DTP, DTCE, DTHD, HD10, HD30 Series	Yellow	(C) 114010	Yellow	(I) 114010HD
16-14	DRC, HD, HDP, and HD10 Series	Green	(D) 0411-291-1405	-----	-----
10-8	DTHD, DTCE, HD, and HDP Series	Green	(E) 114008	Gray	(J) 114008HD
6	DTHD, DTCE, HD, and HDP Series	White	(F) 114009	Green	(K) 114009HD
Metal Removal Tool Set / Contains all three metal tools: 0411-310-1605HD, 0411-240-2005HD, 114010HD.					(L) REMOVAL KIT

**Crimp Tools for Deutsch DT, DTM, DTP, HD30, HDP20, HD10, DRC, DRB, DTHD, DTV, AEC Series Terminals**

Crimps **20-12** gauge.

• Use with the following Deutsch terminals:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-010-20141 (Pin),	0462-005-20141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)	0460-204-12141 (Pin),	0462-203-12141 (Socket)



Part # HDT-48-00

Crimps **20-12** gauge.

• Use with the following Deutsch terminals:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-204-12141 (Pin),	0462-203-12141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)		



Part # HDT-1561

Crimps **20-12** gauge.

• Use with the following Deutsch terminals:

0460-202-16141 (Pin),	0462-201-16141 (Socket)	0460-202-20141 (Pin),	0462-201-20141 (Socket)
0460-202-1631 (Pin),	0462-201-1631 (Socket)	0460-010-20141 (Pin),	0462-005-20141 (Socket)
0460-215-16141 (Pin),	0462-209-16141 (Socket)	0460-204-12141 (Pin),	0462-203-12141 (Socket)



Part # DT-TOOL-E

Crimps **14-12** gauge

• Use with Deutsch the following size 12 terminals:

1060-12-0166 (Pin)
1062-12-0166 (Socket)



Part # DTT-12-00

Crimps **10** gauge

• Use with Deutsch the following size 12 terminals:

1060-12-0222 (Pin)
1062-12-0222 (Socket)



Part # DTT-12-01

Crimps **20-18** gauge

• Use with Deutsch the following size 16 terminals:

1060-16-0122 (Pin),	1062-16-0122 (Socket)
1060-16-0622 (Pin),	1062-16-0622 (Socket)



Part # DTT-16-01

Crimps **20-16** gauge

• Use with Deutsch the following size 20 terminals:

1060-20-0122 (Pin),	1062-20-0122 (Socket)
---------------------	-----------------------

Part # DTT-20-00

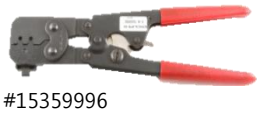
Crimps **16-14** gauge

• Use with Deutsch the following size 16 terminals:

1060-16-0722 (Pin),	1062-16-0722 (Socket)
1060-16-0622 (Pin),	1062-16-0622 (Socket)
1060-16-0122 (Pin),	1062-16-0122 (Socket)
1060-14-0122 (Pin),	1062-14-0122 (Socket)

Part # DTT-16-00

# Packard Weather Pack & Metri-Pack Tools



#15359996



#12085270

Weather Pack, Metri-Pack, Micro-Pack, Pack-Con, and 56-58 Series terminals often require different crimping tools. The more you know about what will be crimped, the easier it is to find a tool. The **ratchet** style design allows you to make easier crimps with less effort.

Use a **quick single motion** tool that crimps both the terminal and seal in one motion, rather than two, for higher volumes.

The **standard two crimp** tools crimp in two separate motions. One motion to crimp the terminal and one motion to crimp the seal.

## Crimping Tools



Part # 12014254

Crimps **Weather Pack:**

- 20-14 gauge

Crimps **Metri-Pack:**

- 280 series, sealed, 20-14 gauge (must remove terminal locator on tool)

Features:

- Ratcheting tool



Part # PACK TOOL

Crimps **Weather Pack:**

- 22-14 gauge

Crimps **Metri-Pack:**

- 150 series, sealed, 22-14 gauge
- 280 series, sealed, 22-14 gauge

Features:

- Non-ratcheting tool



Part # 15155975

Crimps **Weather Pack:**

- 12 gauge

Crimps **Metri-Pack:**

- 280 series, sealed, 12-10 gauge

Also Crimps:

- Open barrel rings, 12-10 gauge

Features:

- Ratcheting tool



Crimps **Metri-Pack:**

- 480 series, unsealed, 16-14 gauge
- 480 pull to seat series, unsealed, 16-14 gauge
- 630 series, unsealed, 16-14 gauge
- 630 pull to seat series, unsealed, 16-14 gauge

Crimps **Pack-Con:**

- Series I & II, unsealed, female, 20-14 gauge
- Series II, unsealed, female, 12-10 gauge

Crimps **Packard:**

- 56, 58, and 59 series, 20-14 gauge
- 56, 58, and 59 series, 12-10 gauge (core wings only)
- 56 Series, 20-10 gauge, splice clips
- Open barrel rings, unsealed, 20-14 gauge, up to 0.032" thick
- wedge base lamp sockets, 20-14 gauge

Features:

- Non-ratcheting tool



Part # 12085270

Crimps **Weather Pack:**

- 12 gauge

Crimps **Metri-Pack:**

- 280 series, sealed, 12 gauge
- 480 series, sealed, 18-14 gauge
- 480 series, unsealed, 16-14 gauge
- 480 pull to seat series, unsealed, 18-14 gauge
- 150, 480, and 630 series (crimps seals only)
- 630 series, sealed, 18-14 gauge

Features:

- Ratcheting tool

Part # 6285847



Part # 12085115

Crimps **Metri-Pack:**

- 280, 480, and 630 series, unsealed, 16-12 gauge

Crimps **Packard:**

- 56, 58, and 59 series, 12-10 gauge
- Open barrel rings, 14-10 gauge,

Crimps **Heat Shrink:**

- 22-10 gauge heat shrink terminals

Features:

- Standard two crimp
- Ratchet tool



Part # 8913440

Crimps **Pack-Con:**

- Series I & II, unsealed, female, 20-14 gauge

Crimps **Packard:**

- 56, 58, and 59 series, 20-14 gauge
- Open barrel rings, unsealed, 20-14 gauge, up to 0.032" thick
- wedge base lamp sockets, 20-14 gauge

Features:

- Ratcheting tool

(Continued on following page)



## Crimping Tools (Continued from previous page)

### Crimps **Metri-Pack:**

- 150 series, sealed, 20-14 gauge
- 280 series, sealed 20-14 gauge

#### Features:

- Ratcheting tool



Part # 12155975

### Crimps **Metri-Pack:**

- 800 series, sealed 8 gauge (female only)

#### Features:

- Quick single motion ratcheting tool



Part # 15370042

### Crimps **Metri-Pack:**

- 280 series, unsealed, 20-14 gauge
- 280 ACT pull to seat series, unsealed, 20-14 gauge
- 480 series, unsealed, 20-18 gauge
- 480 and 630 pull to pull to seat series, unsealed, 20-18 gauge
- 630 series, unsealed, 20-18 gauge

### Crimps **Pack-Con:**

- Series II, unsealed, female, 20-14 gauge

#### Features:

- Ratcheting tool



Part # 12085271

### Crimps **Metri-Pack:**

- 280 and 480 series, unsealed, 12-10 gauge
- 280 ACT series, unsealed, 12-10 gauge
- 480 pull to seat series, 12-10 gauge
- 630 series, unsealed, 12-10 gauge
- 630 pull to seat series, 22-10 gauge
- 800 series, unsealed, female, 14-10 gauge

### Crimps **Pack-Con**

- Series I & III, unsealed, 12-10 gauge

#### Features:

- Quick single motion ratcheting tool



Part # 12070947

### Crimps **Metri-Pack:**

- 150 series, unsealed, 22-16 gauge
- 150, 150-1, and 150-2 pull to seat series, 22-16 gauge

#### Features:

- Quick single motion ratcheting tool



Part # 12039500

### Crimps **Metri-Pack:**

- GT 150 series, sealed 22-16 gauge
- GT 280 series, 22-16 gauge (must remove locator on tool)

#### Features:

- Quick single motion ratcheting tool



Part # 15359995

### Crimps **Metri-Pack:**

- 480 series, sealed, 12-10 gauge
- 630 series, sealed, 12-10 gauge

#### Features:

- Standard two crimp non-ratcheting tool



Part # 12071687

### Crimps **Micro-Pack**

- 100 series, unsealed, 22-14 gauge (female only)

#### Features:

- Quick single motion ratcheting tool



Part # 12070948

### Crimps **Metri-Pack:**

- GT 150 series, sealed 22-16 gauge

#### Features:

- Quick single motion ratcheting tool



Part # 15359996

### Crimps **Micro-Pack**

- 100 W series, 22-18 gauge, 3.5 mm center line

#### Features:

- Quick single motion ratcheting tool



Part # 12125080

# Terminal Release Tools, Rennsteig Tools & Wire Ferrule Tools

## Terminal Release Tools



Part # T-3

Releases **Weather Pack**:  
 • 24-12 gauge



Part # T-3HD

Releases **Weather Pack**:  
 • 24-12 gauge  
 Features:  
 • Heavy-duty tool

## Terminal Release Pick Tools



Part # 12094429

Releases **Metri-Pack**:  
 • 150, 280, and 630 series, 22-10 gauge  
 • 150 GT and 280 GT series, 22-10 gauge



Part # 12094429HD

Releases **Metri-Pack**:  
 • 150, 280, and 630 series, 22-10 gauge  
 • 150 GT and 280 GT series, 22-10 gauge  
 Features:  
 • Heavy-duty tool



Part # 12094430

Releases **Metri-Pack**:  
 • 480, 630, and 800, series, 20-10 gauge  
 Releases **Weather Pack**:  
 • 56, 58, and 59 series, 20-10 gauge



Part # 12094430HD

Releases **Metri-Pack**:  
 • 480, 630, and 800, series, 20-10 gauge  
 Releases **Packard**:  
 • 56, 58, and 59 series, 20-10 gauge  
 Features:  
 • Heavy-duty tool

## Rennsteig Crimping Kits & Dies for Metri-Pack and Weather Pack Terminals



This German-made tool offers the most precise crimp available for production and high volume.

**Kits** include a die and a crimping handle. Additional dies can be purchased to fit this handle.

**Dies** fit any handle from the 624 series kits.

GM/Delphi recommended crimpers and dies.

Wire Size (AWG)	Series		Rennsteig Number	Die	Kit
22-12	Metri-Pack 280	Unsealed	624 1504	504-DIE	504-KIT
22-16	Metri-Pack 150	Sealed	624 1495	495-DIE	495-KIT
22-16	Metri-Pack 150.2	Unsealed	624 1490	490-DIE	490-KIT
22-16	Metri-Pack GT150	Sealed	624 1489	489-DIE	489-KIT
22-16	Metri-Pack 280	Sealed	624 1501	501-DIE	501-KIT
22-16	Metri-Pack GT280	Sealed	624 1486	486-DIE	486-KIT
22-18	Micro-Pack	-----	624 1545	545-DIE	545-KIT
22-18	Metri-Pack GT150	Sealed	624 1488	488-DIE	488-KIT
20-16	Metri-Pack 150	Sealed	624 1527	527-DIE	527-KIT

Wire Size (AWG)	Series		Rennsteig Number	Die	Kit
20-16	Metri-Pack 150	Unsealed	624 1530	530-DIE	530-KIT
20-16	Metri-Pack 280	Sealed	624 1513	513-DIE	513-KIT
20-16	Metri-Pack 280	Unsealed	624 1506	506-DIE	506-KIT
20-18	Weather Pack	-----	624 1528	528-DIE	528-KIT
20-18	Metri-Pack 630	Unsealed	624 1511	511-DIE	511-KIT
16-12	Weather Pack	-----	624 1476	476-DIE	476-KIT
16-12	Metri-Pack 630	Unsealed	624 1510	510-DIE	510-KIT
14-10	Metri-Pack 280	Sealed	624 1498	498-DIE	498-KIT
12-10	Metri-Pack 280	Sealed	624 1492	492-DIE	492-KIT

## Wire Ferrule Crimping Tools



Part # FER TOOL 22-12

Crimps:  
 • **22-10** gauge insulated and non-insulated  
 Features:  
 • Quick-release  
 • Five crimp zones  
 • Economy ratcheting tool



Part # FER TOOL 10-6

Crimps:  
 • **10-6** gauge insulated and non-insulated wire ferrules, with a trapezoid crimp  
 • US or DIN type wire ferrules, conforms to DIN 46228 Pt #1 and #4 or EN-60947-1, three crimp zones are registered in accordance with VG 95211 (military designation VG 95236 T 14 A0001)  
 Features:  
 • German precision engineered tool  
 • Ratcheting tool



Part # FER TOOL 10-6E

Crimps:  
 • **10-6** gauge insulated and non-insulated  
 Features:  
 • Quick-release  
 • Pressure adjustment wheel  
 • Three crimp zones  
 • Economy ratcheting tool

(Continued on following page)

## Wire Ferrule Crimping Tools (Continued from previous page)

Crimps:

- 20-12 gauge insulated and non-insulated wire ferrules
- US or DIN type wire ferrules

Features:

- German precision engineered tool
- Ratcheting tool



Part # PA-1648

Crimps:

- 22-12 gauge insulated and non-insulated
- DIN 46228 Pt #1 and #4

Features:

- One crimp zone crimps all sizes
- German precision engineered tool
- Rotary action head



Part # FER TOOL20-12-E

Crimps:

- 24-10 gauge insulated and non-insulated wire ferrules

Features:

- Front loading tool automatically adjusts to wire ferrule sizes
- Precision crimp over full length of the sleeve
- German patented crimp technology produces a high quality square crimp
- Ratcheting tool



Part # FER TOOL 24-10

Crimps:

- 24-10 gauge insulated and non-insulated, with a rotating crimp die
- DIN 46228 Pt #1 and #4 or EN-60947-1 type wire ferrules

Features:

- Rotary action head turns 90° to allow crimp to be made from front or side
- German precision engineered tool
- Non-ratcheting tool



Part # FER TOOL ROTO

Crimps:

- 24-10 gauge ferrules

Features:

- Front loading auto adjusts to wire ferrule sizes
- Precision crimp over the full length of the ferrule sleeve
- German patented crimp technology produces a high quality square crimp
- Quick release
- Kits also includes 250 ferrules (50 of each size; 20, 18, 16, 14, 12 gauge), enclosed in a plastic case
- Ratcheting tool



Part # FER TOOL24-10KIT

Crimps:

- 22-14 gauge strip ferrules

Features:

- Economical alternative to a ferrule crimping machine
- Speeds application by 200-300% over over standing crimping tools
- Load strip ferrules into this tool for high volume applications



Part # FER TOOL STRAP

Crimps:

- 4/0 gauge -250MCM insulated and non-insulated wire ferrules with a trapezoid crimp

Features:

- Heavy-duty ratchet tool



Part # FER-TOOL 250MCM

Crimps:

- 26-16 gauge insulated terminals
- 26-16 gauge wire ferrules

Features:

- Release lever
- Pressure adjustment lever
- Ratcheting tool



Part # RATCHET 2614

Crimps:

- 8-1 gauge insulated and non-insulated wire ferrules, with a trapezoid crimp

Features:

- Quick-release
- Extra long handle
- Five crimp zones
- Ratcheting tool



Part # FER TOOL 8-1

Crimps:

- 1-3/0 gauge insulated and non-insulated wire ferrules, with a trapezoid crimp

Features:

- Quick-release
- Extra long handle for greater leverage
- Ratcheting tool



Part # FER TOOL 1-3/0

# Stripping Tools

## Stripping Tools



Part # STRIPIT 6

- Strips:
- 28-10 gauge wire
- Features:
- Settable strip depth up to 5/16"
  - Adjustable switch on the tool for insulation thickness
  - Fiberglass
  - Hand pressure tool



Part # MPT

- Strips:
- 26-8 gauge wire
- Crimps:
- 26-10 gauge insulated terminals
  - 22-10 gauge non-insulated terminals
- Features:
- Economy multi-purpose tool



Part # EZ STRIP

- Strips:
- 20-12 gauge wire
- Features:
- Spring action
  - Self adjusting blades
  - Fiberglass
  - Hand pressure tool



Part # 45-120

- Strips:
- 20-12 gauge wire
  - 18-10 gauge solid wire
- Features:
- Spring loaded
  - Plier nose ends for extra gripping strength
  - Hand pressure tool



Part # TH-450

- Strips:
- 20-8 gauge wire
- Crimps:
- 26-6 gauge non-insulated terminals
  - 26-6 gauge insulated terminals
  - 22-10 gauge non-insulated flag terminals
  - 26-10 gauge closed end connector
- Features:
- Heavy-duty multi-purpose tool



Part # 45-128

- Strips:
- 0.25"-0.75"
- For center of power cable up to 5/32" thick
- Features:
- Extra blade stored in the handle



Part # 45-129

- Strips:
- 0.75"-1.5"
- For end or center of power cable up to 5/32" thick
- Features:
- Extra swivel blade stored in the handle



Part # 45-100

- Strips:
- 24-10 gauge wire
- Features:
- Hand pressure tool



Part # 45-101

- Strips:
- 24-10 gauge wire
- Features:
- Spring release
  - Hand pressure tool



Part # 45-227

- Strips:
- 20-12 gauge wire
- Features:
- Pistol Handle
  - Self adjusting blades
  - Strip length gauge
  - Fiberglass
  - Hand Pressure Tool



Part # 45-092

- Strips:
- 22-10 gauge wire
- Features:
- Eliminates nicking, cutting, and fraying of wire
  - Spring action with wire gripper
  - Replacement blades #L-4421
  - Hand pressure tool

# Cable Cutting Tools, Fuse Testers & Fuse Pullers

## Cable Cutting Tools

Cuts:

- Up to 4/0 cable

Features:

- Offset bite which eliminates frayed ends and compression
- Heavy duty tool
- Hand pressure tool



Part # WCC-HD

Cuts:

- 10 gauge to 350MCM cable

Features:

- Clean scissor action cuts
- 18" long handle
- Hand pressure tool



Part # CABLE CUTTER

Cuts:

- Up to 2/0 cable

Features:

- Lightweight
- Compact
- Hand pressure tool



Part # WCC

## Glass Fuse and Ferrule Fuse Testers

Features:

- Test glass fuses and ferrule fuses, up to 24 volt, up to 1 7/8" length
- Green light shines when fuse is good
- Not for use with fuses in fuse panel



Part # FT-2

Features:

- Test automotive, glass tube and ferrule fuses, up to 1 1/4" length
- Adjustable probe for appropriate fuse length
- Replaceable battery
- Not for use with fuses in fuse panel



Part # FT-3

## Fuse Pullers

Removes:

- 13/32" to 13/16" diameter fuses



Part # FP-2

Removes:

- 1" to 1 3/4" diameter fuses



Part # FP-3

Removes:

- 1 3/4" to 2 1/2" diameter fuses



Part # FP-4

Removes:

- 0-60A T-Tron fuses



Part # FP-6

Removes:

- Dual fuse puller removes glass tube and blade fuses



Part # FP-C

Removes:

- This 3-way fuse puller removes glass tube and ATC blade fuses



Part # BK2/FP-A3

Removes:

- 9/32" to 1/2" diameter fuses

Features:

- 5" long, with a fully insulated no-slip handle
- 250 volts, amperage ranges are marked on the handle



Part # FUSEPULL-S

Removes:

- 1/2" to 1" diameter fuses

Features:

- 7 1/2" long, with a fully insulated no-slip handle
- 0 to 100 amps at 250 volts and 600 volts, amperage ranges are marked on the handle



Part # FUSEPULL-M

Removes:

- 2 1/2" diameter fuses

Features:

- 7 1/2" long, with a fully insulated no-slip handle
- 31 to 600 amps at 250 volts and 31 to 400 amps at 600 volts, amperage ranges are marked on the handle



Part # FUSEPULL-L

# Torches, Heat Gun & Miscellaneous Tools

## Torches, Heat Gun and Refills

### Torches



- Features:
- Powerful high output flame
  - Piezzo ignition

Part # MEGA BLASTER



- Features:
- Adjustable flame
  - Piezzo ignition
  - 2500° F
  - 5.3" tall polymer body with stand

Part # HG-3000



- Features:
- 120 minutes of fuel
  - Adjustable flame
  - Piezzo ignition
  - 2500° F
  - 5.5" tall brass body with rubber grip
  - Long use torch

Part # HG-2001



- Features:
- 6" long cigar torch
  - Flip out stand
  - Piezzo button ignition
  - 2500° F
  - Burn time 30 minutes
  - Compact torch

Part # PT-4000

### Heat Gun



- Features:
- 120 vac, 1200 watt
  - Heat deflector
  - High/Low/Off
  - High=1,100°F and Low=250°F
  - UL approved
  - CSA certified

Part # HEAT GUN

### Butane Refills



- Features:
- **5.3 oz.**
  - multiple tips included

Part # RF-CAN



- Features:
- **1 oz.**
  - multiple tips included

Part # RF-CAN-SM

## Miscellaneous Tools

### Circuit Testing Tools



- Features:
- Test **12 and 24 volt** vehicle systems
  - Hand operated
  - Hook on end of tool tip holds while piercing wire insulation

Part # 121



- Features:
- Test **6 and 12 volt** vehicle systems
  - "Ice pick" type
  - Flexible Hypalon ground wire
  - Hand Operated
  - Spring strain relief on wire to handle
  - Replaceable bulb

Part # 27000



- Features:
- Small voltage testing tool for **12-440 vac** circuits
  - Hand Operated
  - Pocket clip

Part # 61-050

### Rosin Core Wire Solder 63/37



Diameter	Part Number
0.032	RC-.032
0.062	RC-.062
0.093	RC-.093

One pound spools.

### Hot Knife Tool



- Features:
- 600° blade cuts most any style sleeve
  - Hot blade fuses sleeving fibers
  - Preventing fraying on expandable sleeving
  - Bench mount
  - Replaceable blades #BLADES

Part # HOT KNIFE

### Razor Blades



- Features:
- Single edge razor blades
  - 1 1/4" x 4 7/8"

Part # RZB

**Wire**

GPT Wire	62
GXL Wire	63
Trailer Cable	62
Boat Cable	63
Welding Cable	63
Jumper Cable Ends	64
Machine Tool Wire (MTW)	64
THHN Wire	64
High Temperature Wire (SRML, MG)	64
Service Cord (SJO, SO, STO)	64
Lamp Cord	64
Speaker Wire	64
Fastening Wire (Mechanic's Wire)	14
Test Lead Wire (RTLW)	14

**Fuses and Circuit Breakers**

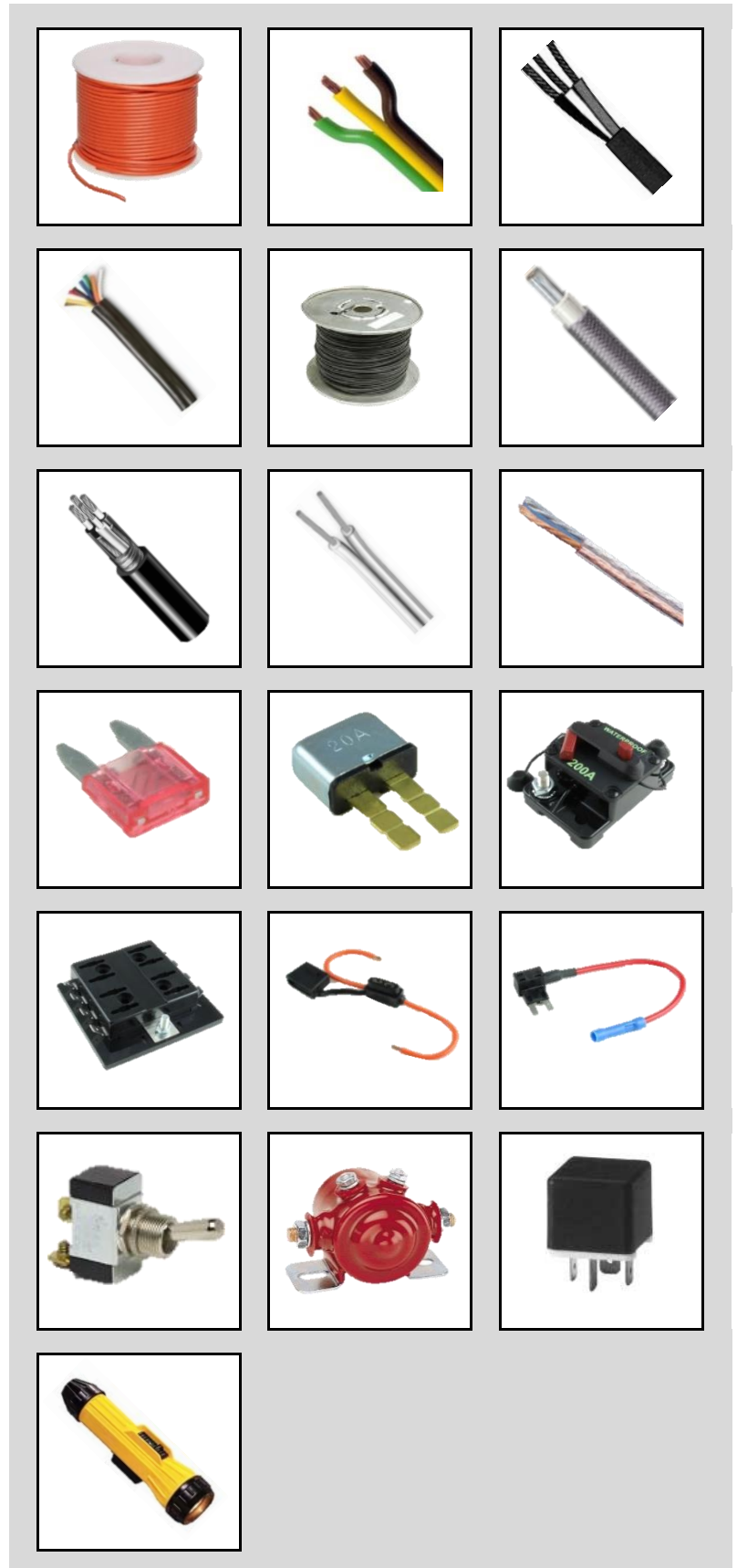
Glass, Industrial & Ceramic Fuses	65-70
Automotive Fuses & Kits	72-73
Inline Fuse Holders	71,73
Fuse Panels	74
Automotive Circuit Breakers	76-78
Terminal Blocks	78

**Switches, Solenoids & Relays**

Switches	79-81
Solenoids	81
Relays	82

**Flashlights**

Flashlights	82
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# Wire & Trailer Cable

## General Purpose Wire (GPT)



Commonly used in automotive, truck, trailer, boat, and other low voltage applications. Smooth PVC jacket is resistant to abrasion. Made in the USA. 60 volts max. Maximum temperature rating of 176°F. Order in 50-ft., 100-ft., 500-ft. and 1,000-ft. spool sizes.

Color		Color		Color		Color		Color	
<b>22 Ga.</b>		<b>18 Ga.</b>		<b>16 Ga. (cont.)</b>		<b>14 Ga. (cont.)</b>		<b>10 Ga.</b>	
Black	22GPT-BK	Black	18GPT-BK	Gray	16GPT-GY	Pink	14GPT-PK	Black	10GPT-BK
Brown	22GPT-BN	Brown	18GPT-BN	Dark Green	16GPT-DKG	Purple	14GPT-PU	Brown	10GPT-BN
Dark Blue	22GPT-DKB	Dark Blue	18GPT-DKB	Light Green	16GPT-LTG	Red	14GPT-R	Dark Blue	10GPT-DKB
Light Blue	22GPT-LTB	Light Blue	18GPT-LTB	Orange	16GPT-O	Tan	14GPT-TAN	Light Blue	10GPT-LTB
Gray	22GPT-GY	Gray	18GPT-GY	Pink	16GPT-PK	White	14GPT-W	Dark Green	10GPT-DKG
Green	22GPT-GRN	Dark Green	18GPT-DKG	Purple	16GPT-PU	Yellow	14GPT-Y	Light Green	10GPT-LTG
Orange	22GPT-O	Light Green	18GPT-LTG	Red	16GPT-R	<b>12 Ga.</b>		Red	10GPT-R
Purple	22GPT-PU	Orange	18GPT-O	Tan	16GPT-TAN	Black	12GPT-BK	White	10GPT-W
Red	22GPT-R	Pink	18GPT-PK	White	16GPT-W	Brown	12GPT-BN	Yellow	10GPT-Y
White	22GPT-W	Purple	18GPT-PU	Yellow	16GPT-Y	Dark Blue	12GPT-DKB	<b>8 Ga.</b>	
Yellow	22GPT-Y	Red	18GPT-R	<b>14 Ga.</b>		Light Blue	12GPT-LTB	Black	8GPT-BK
<b>20 Ga.</b>		Tan	18GPT-TAN	Black	14GPT-BK	Gray	12GPT-GY	Light Green	8GPT-LTG
Black	20GPT-BK	White	18GPT-W	Brown	14GPT-BN	Dark Green	12GPT-DKG	Red	8GPT-R
Brown	20GPT-BN	Yellow	18GPT-Y	Dark Blue	14GPT-DKB	Light Green	12GPT-LTG	White	8GPT-W
Light Blue	20GPT-LTB	<b>16 Ga.</b>		Light Blue	14GPT-LTB	Orange	12GPT-O		
Light Green	20GPT-LTG	Black	16GPT-BK	Gray	14GPT-GY	Red	12GPT-R		
Red	20GPT-R	Brown	16GPT-BN	Dark Green	14GPT-DKG	White	12GPT-W		
White	20GPT-W	Dark Blue	16GPT-DKB	Light Green	14GPT-LTG	Yellow	12GPT-Y		
Yellow	20GPT-Y	Light Blue	16GPT-LTB	Orange	14GPT-O				

## Bonded GPT Wire



Need to run multiple wires? This wire makes it easy. The bonded GPT wires are color coded and have PVC insulation. -22°F to 176°F. Order in 50-ft., 100-ft., 500-ft., and 1,000-ft. spool sizes.

Wire Size (AWG)	2 Conductor Red/Black	2 Conductor Yellow/Brown	2 Conductor Green/Brown	3 Conductor Brown/Yellow/Green	4 Conductor White/Brown/Yellow/Green	5 Conductor White/Brown/Yellow/Green/Blue
18	18-2B	-----	-----	EP-02923	EP-02926	-----
16	16-2B	EP-02929	EP-02932	16-3B	16-4B	EP-02939
14	14-2B	-----	-----	14-3B	14-4B	EP-02935
12	12-2B	-----	-----	-----	-----	-----

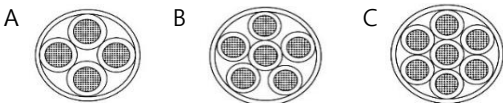
## Duplex GPT Wire



Run and protect multiple circuits in this easy to use wire. Duplex wire has excellent protection against cuts and corrosion. This heavy duty wire has GPT conductors covered in a flat PVC jacket. -22°F to 221°F, for 60 volts or less. Order in 50-ft., 100-ft., 500-ft., and 1,000-ft. spool sizes.

Wire Size (AWG)	2 Conductor Black/White	2 Conductor Black/Red	2 Conductor Black/Blue	3 Conductor Black/Green/White	4 Conductor White/Green/Red/Black
18	18-2D	-----	-----	-----	-----
16	16-2D	EP-03205	-----	16-3D	16-4D
14	14-2D	EP-03211	-----	14-3D	14-4D
12	12-2D	EP-03217	EP-03220	12-3D	EP-03246
10	10-2D	-----	-----	EP-03237	EP-03249
8	8-2D	-----	-----	-----	-----

## Trailer Cable



The trailer cable wires are color-coded with PVC Insulation and have a heavy duty black jacket to keep them protected from the weather, chemicals and abrasion. They have a temperature rating of -40°F to 176°F. Order in 100-ft., 500-ft. spool sizes.

Wire Size	Color of Conductors	Wire Size	Color of Conductors		
<b>2 Conductors</b>		<b>(B) 6 Conductors</b>			
14 Ga.(2)	Green/Yellow	EP-03674	16 Ga.(6)	Red/Green/Brown/White/Black/Yellow	EP-04903
<b>(A) 4 Conductors</b>		16 Ga.(6)	Green/Blue/Yellow/Black/Red/Brown	EP-04922	
16 Ga.(4)	Black/Red/Brown/White	EP-04901	14 Ga.(6)	Red/Green/Brown/White/Black/Yellow	TC-6N
16 Ga.(4)	Yellow/Red/Green/Brown	EP-04920	14 Ga.(6)	Red/Blue/Green/Yellow/Brown/Black	EP-04926
14 Ga.(4)	Black/Red/Brown/White	TC-4N	12 Ga.(6)	Red/Green/Brown/White/Black/Yellow	EP-14875
14 Ga.(4)	Yellow/Red/Green/Brown	EP-99104	<b>(C) 7 Conductors</b>		
14 Ga.(4)	White/Brown/Yellow/Green	EP-98224	14 Ga.(7)	Red/Green/Brown/White/Black/Yellow/Blue	TC-7P
12 Ga.(4)	Black/Red/Brown/White	EP-04911	14 Ga.(6), 12 Ga.(1)	White/Black/Yellow/Red/Green/Brown/Blue	EP-98044
			12 Ga.(6), 10 Ga.(1)	White/Black/Yellow/Red/Green/Brown/Blue	TC-7N



# Welding Cable, GXL Wire, Boat Cable & Alligator Clips

## Welding Cable

This weather resistant cable is commonly used to wire truck and car batteries and for jumper cables. Excellent flexibility and able to carry a higher amperage load due to a larger number of strands. The thick EPDM jacket allows the cable to stand the test of time. Resists abrasion, cuts, flame, grease, oil, and solvents. Made in the USA. 600 volts max. Check website for larger spool quantities.



Wire Size (AWG)	Jacket OD	Stranding OD	Black	Red	Wire Size (AWG)	Jacket OD	Stranding OD	Black	Red	Wire Size (AWG)	Jacket OD	Stranding OD	Black	Red
8	0.28"	0.14"	SF8-B	SF8-R	1	0.49"	0.31"	SF1-B	SF1-R	4/0	0.69"	0.52"	SF4/0-B	SF4/0-R
6	0.31"	0.18"	SF6-B	SF6-R	1/0	0.53"	0.36"	SF1/0-B	SF1/0-R	250	0.81"	0.60"	SF250-B	----
4	0.34"	0.20"	SF4-B	SF4-R	2/0	0.57"	0.40"	SF2/0-B	SF2/0-R	350	0.93"	0.72"	SF350-B	----
2	0.42"	0.29"	SF2-B	SF2-R	3/0	0.62"	0.45"	SF3/0-B	SF3/0-R					

## Bonded Welding Cable

Need to run two leads? This welding cable has two welding cables bonded together to make installation and wire management easier. Used on lifts, jumper cables, auxiliary power sources. Packaged in 1-ft. and 50-ft. lengths.

Wire Size (AWG)	Color	Wire Size (AWG)	Color		
8	Black and Yellow	SF-88	4	Black and White	SF-44
6	Black and Orange	SF-66	2	Black and White	SF-22



## Abrasion Resistant Wire (GXL)

A step up from GPT wire, the polyethylene coating of this wire holds up to oil, heat and flame. It stands up to scrapes and cuts that can occur in the field. It's so tough that it's commonly found in automotive applications and engine compartments where vibration and heat can cause wire fatigue. Also know as high-temperature automotive wire. Maximum temperature rating of 257°F. Made in the USA. 60 volts max. Order in 25-ft., 50-ft., 100-ft., 500-ft., and 1,000-ft. spool sizes.



Color	Color	Color	Color	Color
<b>20 Ga.</b>	<b>18 Ga. (cont.)</b>	<b>16 Ga. (cont.)</b>	<b>14 Ga. (cont.)</b>	<b>12 Ga. (cont.)</b>
Black 20GXL-BK	Pink 18GXL-PK	Pink 16GXL-PK	Pink 14GXL-PK	White 12GXL-W
Blue 20GXL-BLUE	Purple 18GXL-PU	Purple 16GXL-PU	Purple 14GXL-PU	Yellow 12GXL-Y
Green 20GXL-GRN	Red 18GXL-R	Red 16GXL-R	Red 14GXL-R	<b>10 Ga.</b>
Red 20GXL-R	Tan 18GXL-TAN	White 16GXL-W	Tan 14GXL-TAN	Black 10GXL-BK
White 20GXL-W	White 18GXL-W	Yellow 16GXL-Y	White 14GXL-W	Dark Green 10GXL-DKG
<b>18 Ga.</b>	Yellow 18GXL-Y	<b>14 Ga.</b>	Yellow 14GXL-Y	Red 10GXL-R
Black 18GXL-BK	<b>16 Ga.</b>	Black 14GXL-BK	<b>12 Ga.</b>	White 10GXL-W
Brown 18GXL-BN	Black 16GXL-BK	Brown 14GXL-BN	Black 12GXL-BK	<b>8 Ga.</b>
Dark Blue 18GXL-DKB	Brown 16GXL-BN	Dark Blue 14GXL-DKB	Brown 12GXL-BN	Black 8GXL-BK
Light Blue 18GXL-LTB	Dark Blue 16GXL-DKB	Light Blue 14GXL-LTB	Dark Blue 12GXL-DKB	Red 8GXL-R
Gray 18GXL-GY	Light Blue 16GXL-LTB	Gray 14GXL-GY	Light Blue 12GXL-LTB	White 8GXL-W
Dark Green 18GXL-DKG	Dark Green 16GXL-DKG	Dark Green 14GXL-DKG	Dark Green 12GXL-DKG	
Light Green 18GXL-LTG	Light Green 16GXL-LTG	Light Green 14GXL-LTG	Light Green 12GXL-LTG	
Orange 18GXL-O	Orange 16GXL-O	Orange 14GXL-O	Orange 12GXL-O	
			Red 12GXL-R	

## Corrosion Resistant Wire (Boat Cable)

This corrosion resistant wire is used in the most corrosive of environments and is Coast Guard approved. It is rated for use up to 600 volts and temperatures up to 221°F in dry conditions and 167°F in wet conditions. Has copper wire with a flat PVC jacket and is UL listed. Order in 50-ft., 100-ft., 500-ft., and 1,000-ft. spool sizes.

2-Conductor Black/White	2-Conductor Red/Black	2-Conductor Yellow/Red	3-Conductor Black/Green/White
EP-04510	EP-04065	EP-04534	EP-04522
14-2 BOAT CABLE	EP-04064	EP-04531	14-3 BOAT CABLE
12-2 BOAT CABLE	EP-04063	EP-04528	12-3 BOAT CABLE
-----	-----	-----	10-3 BOAT CABLE



## Alligator Clips



Amps	Length	Opening	Material	Type	Clip Only	Clip & Cover	Black Cover Only	Red Cover Only
10	2"	5/16"	Zinc Plated Steel	(A) Alligator Clip with Screw	60-A	60-C	60 COVER BLACK	60 COVER RED
10	2"	7/16"	Zinc Plated Steel	(B) Clip with Spring	55-A	55-C	55 COVER BLACK	55 COVER RED
20	2.4"	5/8"	Zinc Plated Steel	(B) Clip with Spring	27-A	27-C	27 COVER BLACK	27 COVER RED
25	2.8"	3/4"	HD Zinc Plated Steel	(B) Grounding Cable Clip	24-A	24-C	24 COVER BLACK	24 COVER RED
50	4.1"	1 1/16"	HD Zinc Plated Steel	(B) Automotive Clip with Spring	21-A	21-C	21 COVER BLACK	21 COVER RED
75	2.95"	7/16"	Copper	(C) Charging Clip with Black Handle	-----	46-C-B	-----	-----
75	2.95"	7/16"	Copper	(C) Charging Clip with Red Handle	-----	46-C-R	-----	-----
75	3"	3/4"	Solid Copper	(D) Automotive Clip with Spring	25-A	25-C	25 COVER BLACK	25 COVER RED
100	4.6"	1 1/16"	HD Solid Copper	(D) Automotive Clip with Spring	21 COPPER	-----	21 COVER BLACK	21 COVER RED
100	6"	1 5/8"	HD Zinc Plated Steel	(B) HD Grounding Cable Clip	11-A	11-C	11 COVER BLACK	11 COVER RED

# High-Temperature, MTW, THHN/TFFN Wire & Service Cord

## 392°F High-Temperature Wire (SRML)



Glass braid silicone rubber motor lead wire is for hazardous locations and for equipment in high temperature environments. Also quite flexible. Fire resistant. Color is black. Can handle 600 volts maximum. Use with our high temperature (900°) terminals. Order in 25-ft., 50-ft., and 100-ft. spool sizes.

Wire Size (AWG)	Wire Size (AWG)	Wire Size (AWG)	Wire Size (AWG)
18	18-SRML	12	12-SRML
16	16-SRML	10	10-SRML
14	14-SRML		

## 868°F Extreme-Temperature Wire (MG)



Often used in industrial ovens, this braided glass yarn wire withstands temperatures up to 868°F. Max 600 volts and is UL listed. Order in 10-ft., 25-ft., 50-ft., and 100-ft. spool sizes.

Wire Size (AWG)	Wire Size (AWG)	Wire Size (AWG)	Wire Size (AWG)
18	18MG	12	12MG
16	16MG	10	10MG
14	14MG	8	8MG

## Machine Tool Wire (MTW)



Machine tool wire is bare stranded copper with PVC insulation. It is rated for use up to 600 volts and temperatures up to 194°F. UL & CSA listed. Colors available black, blue, brown, green, red, white, yellow, dark green, dark green, light blue, light green, orange, pink, and purple. Order in 100-ft., and 500-ft. spool sizes.

Wire Size (AWG)	Stranding	Insulation Thickness	
18	16	0.031"	18 MTW
16	19	0.031"	16 MTW
14	19	0.031"	14 MTW
12	19	0.031"	12 MTW
10	19	0.031"	10 MTW
8	19	0.047"	8 MTW

## Lamp Cord



Our lamp cord is ribbed for polarity. It is rated for use up to 300 volts. UL listed and CSA certified. Order in 25-ft., 50-ft., 100-ft., and 250-ft. spool sizes.

Wire Size (AWG)	Color	Conductor	
18	Black	2	18/2-LC-BK
18	White	2	18/2-LC-W

## THHN/TFFN Wire



THHN is bare stranded copper with a nylon jacket over the PVC insulation. It is rated for use up to 600 volts and temperatures up to 194°F. Has an abrasion resistant slippery surface. Highly resistant to acids, chemicals, gasoline & flame. Colors available black, red, white, green, dark blue, brown, yellow, and orange. Order in 10-ft., 25-ft., 50-ft., 100-ft., and 500-ft. spool sizes.

Wire Size (AWG)	Stranding	Insulation Thickness	
18	16	0.004"	18 THHN
16	19	0.004"	16 THHN
14	19	0.004"	14 THHN
12	19	0.004"	12 THHN
10	19	0.004"	10 THHN
8	19	0.005"	8 THHN

## Speaker Wire



Speaker wire has a clear coating with a polarity stripe. Order in 100-ft., and 500-ft. spool sizes.

Wire Size (AWG)	
18	18-2SW

## Service Cord



**SJO** and **SO** CSA certified. All of our service cord is UL listed and can be purchased in 10-ft., 25-ft., 50-ft., 100-ft., and 500-ft. spool sizes.

### Service Cord (SJO)

SJO is a hard service cord, with an oil resistant round jacket. It is rated for use up to 300 volts and temperatures up to 194°F.

Wire Size (AWG)	Conductors	Overall O.D.	Wire Size (AWG)	Conductors	Overall O.D.	Wire Size (AWG)	Conductors	Overall O.D.
18	3	0.300"	16	4	0.350"	12	3	0.425"
		18-3 SJO			16-4 SJO			12-3 SJO
16	3	0.325"	14	3	0.360"	12	4	0.465"
		16-3 SJO			14-3 SJO			12-4 SJO
16	3	0.325"	14	4	0.390"	10	3	0.565"
		16-3 SJO YELLOW			14-4 SJO			10-3 SJO

### Heavy Duty Service Cord (SO)

SO is an extra hard service cord, with an oil resistant round jacket. It is rated for use up to 600 volts and temperatures up to 194°F.

Wire Size (AWG)	Conductors	Overall O.D.	
14	3	0.540"	14-3 SO
12	3	0.610"	12-3 SO
10	3	0.671"	10-3 SO

### Ultra Flexible Service Cord (STO)

Very flexible, STO is a hard service cord, with a yellow oil resistant round jacket. Used as portable cord and dock/marine extensions. It is rated for use up to 600 volts and temperatures up to 194°F.

Wire Size (AWG)	Conductors	Overall O.D.	
16	3	0.400"	16-3 STO
16	4	0.430"	16-4 STO
14	3	0.540"	14-3 STO
12	3	0.610"	12-3 STO

## Jumper Cable Ends

The **500 amp jumper cable ends** have copper jaws and accept up to 1/0 gauge welding cable. They come in red and black. The **900 amp jumper cable ends** are solid copper and accept up to 2/0 gauge welding cable. The lugs bolt to the booster clamp. The jaws grip the battery posts, studs and side terminals. They come with red or black insulated grips.



900 Amp

Amps	Black	Red
900	JCE900-B	JCE900-R

## Glass, Industrial, and Ceramic Fuses

Glass Fuses			Glass Fuses (Cont.)			Glass Fuses (Cont.)			Glass Fuses (Cont.)			Glass Fuses (Cont.)		
Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.
<b>AGA</b>			<b>AGC</b> (Cont.)			<b>AGX</b> (Cont.)			<b>GDB</b> (Cont.)			<b>GMA</b> (Cont.)		
1/4	AGA-1/4	5	25	AGC-25	25	3/4	AGX-3/4	1	500	GDB-500MA	1	2 1/2	GMA-2.5	5
1/2	AGA-1/2	5	30	AGC-30	25	1	AGX-1	5	630	GDB-630MA	1	3	GMA-3	5
3/4	AGA-3/4	1	35	AGC-35	25	1 1/4	AGX-1-1/4	5	800	GDB-800MA	1	3.15	GMA-3.15	5
1	AGA-1	10	40	AGC-40	25	1 1/2	AGX-1-1/2	5	<b>GDC</b>			3.5	GMA-3.5	5
1 1/2	AGA-1-1/2	10	50	AGC-50	10	2	AGX-2-1/2	5	1	GDC-1A	1	4	GMA-4	5
2	AGA-2	50	<b>AGC-V</b>			2 1/2	AGX-2	10	1.25	GDC-1.25A	1	5	GMA-5	5
2 1/2	AGA-2-1/2	10	1/32	AGC-V-1/32	1	3	AGX-3	10	1.6	GDC-1.6A	1	6	GMA-6	5
3	AGA-3	10	1/2	AGC-V-1/2	1	4	AGX-4	5	2	GDC-2A	1	7	GMA-7	5
5	AGA-5	50	1	AGC-V-1	1	5	AGX-5	25	2.5	GDC-2.5A	1	8	GMA-8	5
6	AGA-6	25	1 1/4	AGC-V-1-1/4	1	6	AGX-6	10	3.15	GDC-3.15A	1	10	GMA-10	5
7	AGA-7	10	2	AGC-V-2	1	7	AGX-7	10	4	GDC-4A	1	15	GMA-15	5
7 1/2	AGA-7-1/2	25	3	AGC-V-3	1	8	AGX-8	10	5	GDC-5A	1	63	GMA-63	5
10	AGA-10	10	5	AGC-V-5	1	10	AGX-10	25	6.3	GDC-6.3A	1	100	GMA-100	5
15	AGA-15	50	20	AGC-V-20	1	15	AGX-15	10	32	GDC-32MA	1	125	GMA-125	5
20	AGA-20	25	<b>AGU</b>			20	AGX-20	25	40	GDC-40MA	1	200	GMA-200	5
25	AGA-25	50	1	AGU-1	10	25	AGX-25	10	50	GDC-50MA	1	250	GMA-250	5
30	AGA-30	50	2	AGU-2	10	30	AGX-30	25	63	GDC-63MA	1	300	GMA-300	5
<b>AGC</b>			3	AGU-3	10	<b>CF</b>			100	GDC-100MA	1	315	GMA-315	5
1/200	AGC-1/200	1	4	AGU-4	10	1	CF-1	1	125	GDC-125MA	1	500	GMA-500	5
1/50	AGC-1/50	1	5	AGU-5	10	1.5	CF-1.5	1	160	GDC-160MA	1	600	GMA-600	5
1/32	AGC-1/32	1	8	AGU-8	10	2	CF-3	1	200	GDC-200MA	1	750	GMA-750	5
1/20	AGC-1/20	1	10	AGU-10	10	3	CF-2	1	250	GDC-250MA	1	800	GMA-800	5
1/10	AGC-1/10	1	15	AGU-15	10	5	CF-5	1	315	GDC-315MA	1	<b>GMA-V</b>		
1/8	AGC-1/8	5	20	AGU-20	10	125	CF-125	1	500	GDC-500MA	1	4	GMA-V-4	1
15/100	AGC-15/100	1	25	AGU-25	10	250	CF-250	1	630	GDC-630MA	1	<b>GMC</b>		
175/10	AGC-175/1000	1	30	AGU-30	5	500	CF-500	1	800	GDC-800MA	1	1	GMC-1	1
3/16	AGC-3/16	1	35	AGU-35	10	<b>C520</b>			1/2	GLD-1/2	1	1.5	GMC-1.5	1
2/10	AGC-2/10	1	40	AGU-40	5	2	C520-2	1	3/4	GLD-3/4	1	1.6	GMC-1.6	1
1/4	AGC-1/4	5	50	AGU-50	10	3	C520-3A	1	1	GLD-1	1	2	GMC-2	1
3/10	AGC-3/10	5	60	AGU-60	10	5	C520-5	1	1 1/2	GLD-1-1/2	1	2.5	GMC-2.5	1
3/8	AGC-3/8	5	<b>AGU-Gold Plated</b>			125	C520-125MA	1	2	GLD-2	1	3	GMC-3	1
4/10	AGC-4/10	1	20	AGU-20GP	10	250	C520-250	1	3	GLD-3	5	3.15	GMC-3.15	1
45/100	AGC-45/100	1	35	AGU-35GP	10	<b>GBC</b>			4	GLD-4	1	3.5	GMC-3.5	1
1/2	AGC-1/2	10	40	AGU-40GP	10	5	GBC-5	10	5	GLD-5	1	4	GMC-4	1
6/10	AGC-6/10	10	50	AGU-50GP	10	8	GBC-8	5	6	GLD-6	1	5	GMC-5A	1
3/4	AGC-3/4	25	60	AGU-60GP	10	15	GBC-15	5	10	GLD-10	1	6	GMC-6	1
8/10	AGC-8/10	10	<b>AGW</b>			16	GBC-16	10	15	GLD-15	1	6.3	GMC-6.3	1
1	AGC-1	25	1	AGW-1	10	25	GBC-25	10	15	GLD-15	1	7	GMC-7	1
1 2/10	AGC-1-2/10	5	1 1/2	AGW-1-1/2	10	30	GBC-30	5	<b>GLQ</b>			8	GMC-8	1
1 1/4	AGC-1-1/4	25	2	AGW-2	5	<b>GDB</b>			2	GLQ-2	1	10	GMC-10	1
1 1/2	AGC-1-1/2	25	2 1/2	AGW-2-1/2	10	1	GDB-1A	1	3	GLQ-3	1	63	GMC-63	1
1 6/10	AGC-1-6/10	10	3	AGW-3	10	1.25	GDB-1.25A	1	5	GLQ-5	1	80	GMC-80	1
1 3/4	AGC-1-3/4	10	4	AGW-4	25	1.6	GDB-1.6A	1	<b>GLR</b>			100	GMC-100	1
1 8/10	AGC-1-8/10	10	5	AGW-5	10	2	GDB-2A	1	1/2	GLR-1/2	1	125	GMC-125	1
2	AGC-2	25	6	AGW-6	10	2.5	GDB-2.5A	1	1	GLR-1	1	150	GMC-150	1
2 1/4	AGC-2-1/4	10	7 1/2	AGW-7-1/2	5	3	GDB-3.15A	1	1 1/2	GLR-1-1/2	1	200	GMC-200	1
2 1/2	AGC-2-1/2	25	10	AGW-10	5	4	GDB-4A	1	1 6/10	GLR-1-6/10	1	250	GMC-250	1
3	AGC-3	25	15	AGW-15	25	5	GDB-5A	1	2	GLR-2	1	300	GMC-300	1
3 2/10	AGC-3-2/10	10	20	AGW-20	25	6	GDB-6.3A	1	3	GLR-3	1	315	GMC-315	1
3 1/2	AGC-3-1/2	10	25	AGW-25	5	8	GDB-8A	1	4	GLR-4	1	400	GMC-400	1
4	AGC-4	25	30	AGW-30	25	10	GDB-10A	1	5	GLR-5	1	500	GMC-500	1
4 1/2	AGC-4-1/2	1	<b>AGX</b>			16	GDB-16A	1	6	GLR-6	1	600	GMC-600	1
5	AGC-5	25	1/200	AGX-1/200	1	32	GDB-32MA	1	7	GLR-7	1	630	GMC-630	1
6	AGC-6	25	1/100	AGX-1/100	1	40	GDB-40MA	1	8	GLR-8	1	750	GMC-750	1
6 1/4	AGC-6-1/4	10	1/32	AGX-1/32	1	50	GDB-50MA	1	9	GLR-9	1	800	GMC-800	1
7	AGC-7	25	1/10	AGX-1/10	1	63	GDB-63MA	1	10	GLR-10	1	<b>GMC-V</b>		
7 1/2	AGC-7-1/2	25	1/8	AGX-1/8	1	80	GDB-80MA	1	12	GLR-12	1	5	GMC-V-5A	1
8	AGC-8	25	3/16	AGX-3/16	1	100	GDB-100MA	1	15	GLR-15	1	8	GMC-V-8	1
9	AGC-9	25	2/10	AGX-2/10	1	125	GDB-125MA	1	<b>GMA</b>			10	GMC-V-10	5
10	AGC-10	25	1/4	AGX-1/4	10	160	GDB-160MA	1	1	GMA-1	5	<b>GMD</b>		
12	AGC-12	25	3/10	AGX-3/10	1	200	GDB-200MA	1	1.25	GMA-1.25	5	1	GMD-1	1
14	AGC-14	25	3/8	AGX-3/8	1	250	GDB-250MA	1	1.5	GMA-1.5	5	1.25	GMD-1.25	1
15	AGC-15	25	4/10	AGX-4/10	1	315	GDB-315MA	1	1.6	GMA-1.6	5	1.5	GMD-1.5	1
20	AGC-20	25	1/2	AGX-1/2	10	400	GDB-400MA	1	2	GMA-2	5	<b>(Continued on following page)</b>		

# Glass & Ceramic Fuses

## Glass, Industrial, and Ceramic Fuses

Glass Fuses (Cont.)			Glass Fuses (Cont.)			Glass Fuses (Cont.)			Glass Fuses (Cont.)			Ceramic Fuses (Cont.)		
Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.
<b>GMD (Cont.)</b>			<b>MDA (Cont.)</b>			<b>MDL-V</b>			<b>S500 (Cont.)</b>			<b>ABC (Cont.)</b>		
1.6	GMD-1.6	1	5	MDA-5	1	3/4	MDL-V-3/4	1	3.15	S500-3.15	1	2	ABC-2	5
2	GMD-2	1	6	MDA-6	1	1	MDL-V-1	1	4	S500-4	1	2	ABC-2-1/2	5
2.5	GMD-2.5	1	6 1/4	MDA-6-1/4	1	1-1/4	MDL-V-1-1/4	1	5	S500-5	1	3	ABC-3	5
3	GMD-3	1	7	MDA-7	1	<b>MDM</b>			6.3	S500-6.3	1	4	ABC-4	5
4	GMD-4	1	8	MDA-8	1	6/10	MDM-6/10	1	8	S500-8	1	5	ABC-5	5
125	GMD-125	1	10	MDA-10	5	3	MDM-3	1	10	S500-10	1	6	ABC-6	5
150	GMD-150	1	12	MDA-12	5	10	MDM-10	1	32	S500-32	1	7	ABC-7	5
200	GMD-200MA	1	15	MDA-15	5	15	MDM-15	1	40	S500-40	1	8	ABC-8	5
250	GMD-250	1	20	MDA-20	5	20	MDM-20	1	50	S500-50	1	9	ABC-9	5
300	GMD-300	1	25	MDA-25	1	30	MDM-30	1	63	S500-63	1	10	ABC-10	5
315	GMD-315	1	25	MDA-25A	1	<b>MDQ</b>			80	S500-80	1	12	ABC-12	5
400	GMD-400	1	30	MDA-30	5	1/32	MDQ-1/32	1	100	S500-100	1	13	ABC-13	5
500	GMD-500	1	<b>MDA-V</b>			1/16	MDQ-1/16	1	125	S500-125	1	15	ABC-15	5
600	GMD-600	1	20	MDA-V-20	1	1/32	MDQ-1/8	1	160	S500-160	1	20	ABC-20	5
630	GMD-630	1	<b>MDL</b>			1/16	MDQ-15/100	1	200	S500-200	1	25	ABC-25	5
750	GMD-750	1	1/100	MDL-1/100	1	15/100	MDQ-1/10	1	250	S500-250	1	30	ABC-30	5
800	GMD-800	1	1/32	MDL-1/32	1	3/16	MDQ-3/16	1	315	S500-315	1	<b>ABS</b>		
<b>GMF</b>			1/16	MDL-1/16	1	2/10	MDQ-2/10	1	400	S500-400	1	5	ABS-5	1
1/2	GMF-1/2	1	1/10	MDL-1/10	1	1/4	MDQ-1/4	1	500	S500-500	1	10	ABS-10	1
1	GMF-1	1	1/8	MDL-1/8	1	3/10	MDQ-3/10	1	630	S500-630	1	15	ABS-15	1
2	GMF-2	1	15/100	MDL-15/100	1	3/8	MDQ-3/8	1	800	S500-800	1	20	ABS-20	1
2 1/2	GMF-2-1/2	1	175/1000	MDL-175/1000	1	4/10	MDQ-4/10	1	<b>S506</b>			25	ABS-25	1
3	GMF-3	1	3/16	MDL-3/16	1	1/2	MDQ-1/2	1	1	S506-1	1	30	ABS-30	1
3 2/10	GMF-3-2/10	1	2/10	MDL-2/10	1	6/10	MDQ-6/10	1	1.25	S506-1.25	1	<b>GBB</b>		
4	GMF-4	1	1/4	MDL-1/4	1	7/10	MDQ-7/10	1	1.6	S506-1.6	1	1	GBB-1	1
5	GMF-5	1	3/10	MDL-3/10	1	3/4	MDQ-3/4	1	2	S506-2	1	1 1/4	GBB-1-1/4	1
6/10	GMF-6/10	1	3/8	MDL-3/8	1	8/10	MDQ-8/10	1	2.5	S506-2.5	1	2	GBB-2	1
<b>GMQ</b>			4/10	MDL-4/10	1	1	MDQ-1	1	3.15	S506-3.15	1	3	GBB-3	1
1/2	GMQ-1/2	1	1/2	MDL-1/2	1	1 2/10	MDQ-1-2/10	1	4	S506-4	1	4	GBB-4	1
6/10	GMQ-6/10	1	6/10	MDL-6/10	1	1 1/4	MDQ-1-1/4	1	5	S506-5	1	5	GBB-5	1
8/10	GMQ-8/10	1	7/10	MDL-7/10	1	1 1/2	MDQ-1-1/2	1	6.3	S506-6.3	1	6	GBB-6	1
1	GMQ-1	1	3/4	MDL-3/4	1	1 6/10	MDQ-1-6/10	1	8	S506-8	1	7	GBB-7	1
1 1/4	GMQ-1-1/4	1	8/10	MDL-8/10	1	1 8/10	MDQ-1-8/10	1	10	S506-10	1	8	GBB-8	1
1 6/10	GMQ-1-6/10	1	1	MDL-1	1	2	MDQ-2	1	12.5	S506-12.5	1	9	GBB-9	1
2	GMQ-2	1	1 2/10	MDL-1-2/10	1	2 1/4	MDQ-2-1/4	1	15	S506-15	1	10	GBB-10	1
2 1/2	GMQ-2-1/2	1	1 1/4	MDL-1-1/4	1	2 1/2	MDQ-2-1/2	1	32	S506-32	1	12	GBB-12	1
3	GMQ-3	1	1 1/2	MDL-1-1/2	5	2-8/10	MDQ-2-8/10	1	40	S506-40	1	15	GBB-15	1
3 2/10	GMQ-3-2/10	1	1 6/10	MDL-1-6/10	1	3	MDQ-3	1	50	S506-50	1	20	GBB-20	1
4	GMQ-4	1	1 8/10	MDL-1-8/10	1	3 2/10	MDQ-3-2/10	1	63	S506-63	1	25	GBB-25	1
5	GMQ-5	1	2	MDL-2	5	3 1/2	MDQ-3-1/2	1	80	S506-80	1	30	GBB-30	1
6 1/4	GMQ-6-1/4	1	2 1/4	MDL-2-1/4	1	4	MDQ-4	1	100	S506-100	1	<b>GDA</b>		
<b>MDA</b>			2 1/2	MDL-2-1/2	1	5	MDQ-5	1	125	S506-125	1	1	GDA-1	1
1/10	MDA-1/10	1	2 8/10	MDL-2-8/10	1	6	MDQ-6	1	160	S506-160	1	1.25	GDA-1.25A	1
1/8	MDA-1/8	1	3	MDL-3	1	6 1/4	MDQ-6-1/4	1	200	S506-200	1	1.6	GDA-1.6A	1
15/100	MDA-15/100	1	3 2/10	MDL-3-2/10	1	7	MDQ-7	1	250	S506-250	1	2	GDA-2A	1
2/10	MDA-2/10	1	3 1/2	MDL-3-1/2	1	7 1/2	MDQ-7-1/2	1	315	S506-315	1	2.5	GDA-2.5A	1
1/4	MDA-1/4	1	4	MDL-4	1	8	MDQ-8	1	400	S506-400	1	3.15	GDA-3.15A	1
3/10	MDA-3/10	1	5	MDL-5	5	9	MDQ-9	1	500	S506-500	1	4	GDA-4A	1
3/8	MDA-3/8	1	6	MDL-6	1	10	MDQ-10	1	630	S506-630	1	5	GDA-5A	1
4/10	MDA-4/10	1	6 1/4	MDL-6-1/4	1	12	MDQ-12	1	800	S506-800	1	6.3	GDA-6.3A	1
1/2	MDA-1/2	5	7	MDL-7	1	15	MDQ-15	1	<b>S506-V</b>			50	GDA-50MA	1
6/10	MDA-6/10	1	7 1/2	MDL-7-1/2	1	<b>SFE</b>			8	S506-V-8	1	63	GDA-63MA	1
3/4	MDA-3/4	1	8	MDL-8	1	4	SFE-4	25	<b>Ceramic Fuses</b>			80	GDA-80MA	1
8/10	MDA-8/10	1	9	MDL-9	1	6	SFE-6	25	<b>ABC</b>			100	GDA-100MA	1
1	MDA-1	1	10	MDL-10	1	7 1/2	SFE-7-1/2	25	1/16	ABC-1/16	1	125	GDA-125MA	1
1 1/4	MDA-1-1/4	1	12	MDL-12	1	9	SFE-9	25	1/10	ABC-1/10	1	160	GDA-160MA	1
1 1/2	MDA-1-1/2	1	15	MDL-15	1	14	SFE-14	25	1/8	ABC-1/8	5	200	GDA-200MA	1
1 6/10	MDA-1-6/10	1	20	MDL-20	1	20	SFE-20	25	1/4	ABC-1/4	5	250	GDA-250MA	1
2	MDA-2	1	25	MDL-25	1	30	SFE-30	25	3/8	ABC-3/8	5	315	GDA-315MA	1
2 1/2	MDA-2-1/2	1	30	MDL-30	1	<b>S500</b>			1/2	ABC-1/2	5	400	GDA-400MA	1
2 8/10	MDA-2-8/10	1	35	MDL-35	1	1	S500-1	1	3/4	ABC-3/4	5	500	GDA-500MA	1
3	MDA-3	1	40	MDL-40	1	1.25	S500-1.25	1	1	ABC-1	5	630	GDA-630MA	1
3 2/10	MDA-3-2/10	1				1.6	S500-1.6	1	1 1/4	ABC-1-1/4	5	800	GDA-800MA	1
4	MDA-4	1				2	S500-2	1	1 1/2	ABC-1-1/2	5	<b>(Continued on following page)</b>		

# Ceramic & Industrial Fuses

## Ceramic and Industrial Fuses

Ceramic Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)		
Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.	Amps		Pkg. Qty.
<b>MBO</b>			<b>ANL</b> (Cont.)			<b>BBS</b> (Cont.)			<b>ECNR</b> (Cont.)			<b>FNA</b> (Cont.)		
2	MBO-2	1	275	ANL-275	1	5	BBS-5	1	45	ECNR45	1	1 6/10	FNA-1-6/10	1
10	MBO-10	1	300	ANL-300	5	6	BBS-6	1	50	ECNR50	1	2	FNA-2	10
15	MBO-15	1	325	ANL-325	1	7	BBS-7	1	60	ECNR60	1	2 1/2	FNA-2-1/2	1
<b>S501</b>			350	ANL-350	1	8	BBS-8	1	70	ECNR70	1	3	FNA-3	10
1	S501-1	1	400	ANL-400	1	20	BBS-20	1	80	ECNR80	1	3 1/2	FNA-3-1/2	1
1.25	S501-1.25	1	500	ANL-500	1	25	BBS-25	1	90	ECNR90	1	4	FNA-4	1
2	S501-2	1	600	ANL-600	1	30	BBS-30	1	100	ECNR100	1	5	FNA-5	10
2.5	S501-2.5	1	675	ANL-675	1	<b>CDS</b>			125	ECNR125	1	6	FNA-6	1
3.15	S501-3.15	1	750	ANL-750	1	15	CDS15	1	150	ECNR150	1	6 1/4	FNA-6-1/4	1
4	S501-4	1	<b>ANN</b>			20	CDS20	1	175	ECNR175	1	7	FNA-7	1
5	S501-5	1	10	ANN-10	1	30	CDS30	1	200	ECNR200	1	8	FNA-8	1
6.3	S501-6.3	1	35	ANN-35	1	35	CDS35	1	225	ECNR225	1	10	FNA-10	10
8	S501-8	1	40	ANN-40	1	45	CDS45	1	250	ECNR250	1	12	FNA-12	1
10	S501-10	1	50	ANN-50	1	50	CDS50	1	300	ECNR300	1	15	FNA-15	5
50	S501-50	1	60	ANN-60	1	90	CDS90	1	400	ECNR400	1	20	FNA-20	1
63	S501-63	1	80	ANN-80	1	125	CDS125	1	600	ECNR600	1	25	FNA-25	1
80	S501-80	1	90	ANN-90	1	150	CDS150	1	<b>ECSR</b>			30	FNA-30	1
100	S501-100	1	100	ANN-100	1	200	CDS200	1	1	ECSR1	1	<b>FNM</b>		
125	S501-125	1	125	ANN-125	1	<b>CGL</b>			2	ECSR2	1	1/10	FNM-1/10	10
160	S501-160	1	150	ANN-150	1	15	CGL-15	1	2.5	ECSR2.5	1	1/8	FNM-1/8	10
200	S501-200	1	175	ANN-175	1	20	CGL-20	1	3	ECSR3	1	15/100	FNM-15/100	10
250	S501-250	1	200	ANN-200	1	100	CGL-100	1	3.2	ECSR3.2	1	2/10	FNM-2/10	10
500	S501-500	1	225	ANN-225	1	<b>CDN</b>			3.5	ECSR3.5	1	1/4	FNM-1/4	10
800	S501-800	1	250	ANN-250	1	10	CDN10	1	4	ECSR4	1	3/10	FNM-3/10	1
<b>S505</b>			275	ANN-275	1	12	CDN12	1	5	ECSR5	1	4/10	FNM-4/10	1
1	S505-1	1	300	ANN-300	1	15	CDN15	1	6	ECSR6	1	1/2	FNM-1/2	1
1.25	S505-1.25	1	325	ANN-325	1	20	CDN20	1	7	ECSR7	1	6/10	FNM-6/10	1
1.6	S505-1.6	1	350	ANN-350	1	25	CDN25	1	8	ECSR8	1	3/4	FNM-3/4	1
2	S505-2	1	400	ANN-400	1	30	CDN30	1	9	ECSR9	1	8/10	FNM-8/10	10
2.5	S505-2.5	1	500	ANN-500	1	35	CDN35	1	10	ECSR10	1	1	FNM-1	1
3.15	S505-3.15	1	600	ANN-600	1	40	CDN40	1	12	ECSR12	1	1 1/8	FNM-1-1/8	1
4	S505-4	1	700	ANN-700	1	45	CDN45	1	15	ECSR15	1	1 1/4	FNM-1-1/4	1
5	S505-5	1	800	ANN-800	1	50	CDN50	1	17.5	ECSR17.5	1	1 4/10	FNM-1-4/10	1
6.3	S505-6.3	1	<b>BAF</b>			60	CDN60	1	20	ECSR20	1	1 1/2	FNM-1-1/2	1
8	S505-8	1	1/2	BAF-1/2	1	100	CDN100	1	25	ECSR25	1	1 6/10	FNM-1-6/10	1
10	S505-10	1	1	BAF-1	1	110	CDN110	1	30	ECSR30	1	1 8/10	FNM-1-8/10	1
12	S505-12	1	1 1/2	BAF-1-1/2	1	175	CDN175	1	35	ECSR35	1	2	FNM-2	1
500	S505-500	1	2	BAF-2	1	200	CDN200	1	40	ECSR40	1	2 1/4	FNM-2-1/4	1
800	S505-800	1	2 1/2	BAF-2-1/2	1	<b>DFJ</b>			45	ECSR45	1	2 1/2	FNM-2-1/2	1
<b>Industrial Fuses</b>			3	BAF-3	1	40	DFJ-40	1	50	ECSR50	1	2 8/10	FNM-2-8/10	1
<b>ACK</b>			4	BAF-4	1	60	DFJ-60	1	60	ECSR60	1	3	FNM-3	1
40	ACK-40	1	5	BAF-5	1	100	DFJ-100	1	70	ECSR70	1	3 2/10	FNM-3-2/10	1
60	ACK-60	1	6	BAF-6	1	150	DFJ-150	1	80	ECSR80	1	3 1/2	FNM-3-1/2	1
80	ACK-80	1	6 1/4	BAF-6-1/4	1	200	DFJ-200	1	90	ECSR90	1	4	FNM-4	1
100	ACK-100	1	7	BAF-7	1	400	DFJ-400	1	100	ECSR100	1	4 1/2	FNM-4-1/2	1
140	ACK-140	1	8	BAF-8	1	600	DFJ-600	1	110	ECSR110	1	5	FNM-5	1
160	ACK-160	1	9	BAF-9	1	<b>ECNR</b>			125	ECSR125	1	5 6/10	FNM-5-6/10	1
175	ACK-175	1	10	BAF-10	1	1	ECNR1	1	150	ECSR150	1	6	FNM-6	1
200	ACK-200	1	12	BAF-12	1	2	ECNR2	1	175	ECSR175	1	6 1/4	FNM-6-1/4	1
200	ACK-300	1	15	BAF-15	1	2.5	ECNR2.5	1	200	ECSR200	1	7	FNM-7	1
<b>ANL</b>			20	BAF-20	1	3	ECNR3	1	225	ECSR225	1	8	FNM-8	10
35	ANL-35	1	25	BAF-25	1	3.2	ECNR3.2	1	250	ECSR250	1	9	FNM-9	1
40	ANL-40	1	30	BAF-30	1	4	ECNR4	1	300	ECSR300	1	10	FNM-10	10
50	ANL-50	1	<b>BBS</b>			5	ECNR5	1	350	ECSR350	1	12	FNM-12	1
60	ANL-60	1	2/10	BBS-2/10	1	6	ECNR6	1	400	ECSR400	1	15	FNM-15	1
80	ANL-80	1	4/10	BBS-4/10	1	8	ECNR8	1	500	ECSR500	1	20	FNM-20	10
100	ANL-100	1	6/10	BBS-6/10	1	10	ECNR10	1	600	ECSR600	1	25	FNM-25	1
125	ANL-125	1	3/4	BBS-3/4	1	12	ECNR12	1	<b>FNA</b>			30	FNM-30	10
130	ANL-130	1	8/10	BBS-8/10	1	15	ECNR15	1	2/10	FNA-2/10	1	35	FNM-35	1
150	ANL-150	1	1 6/10	BBS-1-6/10	1	20	ECNR20	1	8/10	FNA-8/10	1	40	FNM-40	1
175	ANL-175	1	1 8/10	BBS-1-8/10	1	25	ECNR25	1	1/2	FNA-1/2	1			
200	ANL-200	1	2	BBS-2	1	30	ECNR30	1	1	FNA-1	10			
225	ANL-225	1	3	BBS-3	1	35	ECNR35	1	1 1/8	FNA-1-1/8	1			
250	ANL-250	1	4	BBS-4	1	40	ECNR40	1	1 1/4	FNA-1-1/4	1			

(Continued on following page)

# Industrial Fuses

## Industrial Fuses

### Industrial Fuses (Cont.)

Amps	Pkg.	Qty.
<b>FNQ</b>		
1/10	FNQ-1/10	1
1/8	FNQ-1/8	1
15/100	FNQ-15/100	1
3/16	FNQ-3/16	1
2/10	FNQ-2/10	1
1/4	FNQ-1/4	1
3/10	FNQ-3/10	1
4/10	FNQ-4/10	1
1/2	FNQ-1/2	1
6/10	FNQ-6/10	1
8/10	FNQ-8/10	1
1	FNQ-1	1
1 1/8	FNQ-1-1/8	1
1 1/4	FNQ-1-1/4	1
1 3/10	FNQ-1-3/10	1
1 1/2	FNQ-1-1/2	1
1 6/10	FNQ-1-6/10	1
2	FNQ-2	1
2 1/4	FNQ-2-1/4	1
2 1/2	FNQ-2-1/2	1
2 8/10	FNQ-2-8/10	1
3	FNQ-3	1
3 2/10	FNQ-3-2/10	1
3 1/2	FNQ-3-1/2	1
4	FNQ-4	1
4 1/2	FNQ-4-1/2	1
5	FNQ-5	1
5 6/10	FNQ-5-6/10	1
6	FNQ-6	1
6 1/4	FNQ-6-1/4	1
7	FNQ-7	1
8	FNQ-8	10
9	FNQ-9	1
10	FNQ-10	1
12	FNQ-12	1
14	FNQ-14	1
15	FNQ-15	1
20	FNQ-20	1
25	FNQ-25	10
30	FNQ-30	1
<b>FNQ-R</b>		
1/4	FNQ-R-1/4	1
3/10	FNQ-R-3/10	1
4/10	FNQ-R-4/10	1
1/2	FNQ-R-1/2	10
6/10	FNQ-R-6/10	1
3/4	FNQ-R-3/4	1
8/10	FNQ-R-8/10	1
1	FNQ-R-1	10
1 1/8	FNQ-R-1-1/8	1
1 1/4	FNQ-R-1-1/4	1
1 4/10	FNQ-R-1-4/10	1
1 1/2	FNQ-R-1-1/2	1
1 6/10	FNQ-R-1-6/10	1
1 8/10	FNQ-R-1-8/10	1
2	FNQ-R-2	10
2 1/4	FNQ-R-2-1/4	1
2 1/2	FNQ-R-2-1/2	1
3	FNQ-R-3	10
3 2/10	FNQ-R-3-2/10	1
3 1/2	FNQ-R-3-1/2	1
4	FNQ-R-4	10
4 1/2	FNQ-R-4-1/2	1
5	FNQ-R-5	10

### Industrial Fuses (Cont.)

Amps	Pkg.	Qty.
<b>FNQ-R (Cont.)</b>		
6	FNQ-R-6	10
6 1/4	FNQ-R-6-1/4	1
7	FNQ-R-7	1
7 1/2	FNQ-R-7-1/2	1
8	FNQ-R-8	10
9	FNQ-R-9	1
10	FNQ-R-10	10
12	FNQ-R-12	10
15	FNQ-R-15	10
17 1/2	FNQ-R-17-1/2	1
20	FNQ-R-20	10
25	FNQ-R-25	1
30	FNQ-R-30	10
<b>FRN-R</b>		
1/10	FRN-R1/10	1
1/8	FRN-R1/8	1
15/10	FRN-R15/100	1
2/10	FRN-R2/10	1
1/4	FRN-R1/4	1
3/10	FRN-R3/10	1
4/10	FRN-R4/10	10
1/2	FRN-R1/2	1
6/10	FRN-R6/10	1
8/10	FRN-R8/10	10
1	FRN-R1	1
1 1/8	FRN-R1-1/8	1
1 1/4	FRN-R1-1/4	1
1 4/10	FRN-R1-4/10	1
1 1/2	FRN-R1-1/2	10
1 6/10	FRN-R1-6/10	10
1 8/10	FRN-R1-8/10	10
2	FRN-R2	1
2 1/4	FRN-R2-1/4	1
2 1/2	FRN-R2-1/2	1
2 8/10	FRN-R2-8/10	10
3	FRN-R3	1
3 2/10	FRN-R3-2/10	1
3 1/2	FRN-R3-1/2	10
4	FRN-R4	1
4 1/2	FRN-R4-1/2	10
5	FRN-R5	1
5 6/10	FRN-R5-6/10	10
6	FRN-R6	1
6 1/4	FRN-R6-1/4	1
7	FRN-R7	1
7 1/2	FRN-R7-1/2	1
8	FRN-R8	1
9	FRN-R9	10
10	FRN-R10	10
12	FRN-R12	10
15	FRN-R15	10
17 1/2	FRN-R17-1/2	10
20	FRN-R20	10
25	FRN-R25	10
30	FRN-R30	1
35	FRN-R35	10
40	FRN-R40	1
45	FRN-R45	10
50	FRN-R50	10
60	FRN-R60	1
70	FRN-R70	1
75	FRN-R75	1
80	FRN-R80	1
85	FRN-R85	1

### Industrial Fuses (Cont.)

Amps	Pkg.	Qty.
<b>FRN-R (Cont.)</b>		
90	FRN-R90	5
100	FRN-R100	1
110	FRN-R110	1
125	FRN-R125	1
150	FRN-R150	1
175	FRN-R175	1
200	FRN-R200	1
225	FRN-R225	1
250	FRN-R250	1
300	FRN-R300	1
350	FRN-R350	1
400	FRN-R400	1
450	FRN-R450	1
500	FRN-R500	1
600	FRN-R600	1
<b>FRN-R ID™</b>		
10	FRN-R10ID	1
15	FRN-R15ID	1
20	FRN-R20ID	1
25	FRN-R25ID	1
30	FRN-R30ID	1
40	FRN-R40ID	1
50	FRN-R50ID	1
60	FRN-R60ID	1
<b>FRS-R</b>		
1/10	FRS-R1/10	1
1/8	FRS-R1/8	1
15/100	FRS-R15/100	1
2/10	FRS-R2/10	1
1/4	FRS-R1/4	1
3/10	FRS-R3/10	1
4/10	FRS-R4/10	1
1/2	FRS-R1/2	1
6/10	FRS-R6/10	1
8/10	FRS-R8/10	1
1	FRS-R1	1
1 1/8	FRS-R1-1/8	1
1 1/4	FRS-R1-1/4	1
1 4/10	FRS-R1-4/10	1
1 1/2	FRS-R1-1/2	1
1 6/10	FRS-R1-6/10	1
1 8/10	FRS-R1-8/10	1
2	FRS-R2	1
2 1/4	FRS-R2-1/4	1
2 1/2	FRS-R2-1/2	1
2 8/10	FRS-R2-8/10	1
3	FRS-R3	1
3 2/10	FRS-R3-2/10	1
3 1/2	FRS-R3-1/2	1
4	FRS-R4	1
4 1/2	FRS-R4-1/2	1
5	FRS-R5	1
5 6/10	FRS-R5-6/10	1
6	FRS-R6	1
6 1/4	FRS-R6-1/4	1
7	FRS-R7	1
7 1/2	FRS-R7-1/2	1
8	FRS-R8	1
9	FRS-R9	1
10	FRS-R10	1
12	FRS-R12	1
15	FRS-R15	1
17 1/2	FRS-R17-1/2	1
20	FRS-R20	1

### Industrial Fuses (Cont.)

Amps	Pkg.	Qty.
<b>FRS-R (Cont.)</b>		
25	FRS-R25	1
30	FRS-R30	1
35	FRS-R35	10
40	FRS-R40	10
45	FRS-R45	1
50	FRS-R50	10
60	FRS-R60	10
65	FRS-R65	1
70	FRS-R70	1
75	FRS-R75	1
80	FRS-R80	10
90	FRS-R90	1
100	FRS-R100	1
110	FRS-R110	1
125	FRS-R125	1
150	FRS-R150	1
175	FRS-R175	1
200	FRS-R200	1
225	FRS-R225	1
250	FRS-R250	1
300	FRS-R300	1
350	FRS-R350	1
400	FRS-R400	1
450	FRS-R450	1
500	FRS-R500	1
600	FRS-R600	1
<b>FRS-R ID™</b>		
6	FRS-R6ID	1
10	FRS-R10ID	1
12	FRS-R12ID	1
15	FRS-R15ID	1
20	FRS-R20ID	1
25	FRS-R25ID	1
30	FRS-R30ID	1
35	FRS-R35ID	1
40	FRS-R40ID	1
45	FRS-R45ID	1
50	FRS-R50ID	1
60	FRS-R60ID	1
<b>FWA</b>		
70	FWA-70B	1
80	FWA-80B	1
100	FWA-100B	1
125	FWA-125B	1
150	FWA-150B	1
200	FWA-200B	1
250	FWA-250B	1
300	FWA-300B	1
350	FWA-350B	1
400	FWA-400B	1
600	FWA-600A	1
<b>FWA-F</b>		
5	FWA-5A10F	1
10	FWA-10A10F	1
15	FWA-15A10F	1
20	FWA-20A10F	1
25	FWA-25A10F	1
30	FWA-30A10F	1
35	FWA-35A21F	1
40	FWA-40A21F	1
<b>FWC-F</b>		
8	FWC-8A10F	1
10	FWC-10A10F	1
12	FWC-12A10F	1

### Industrial Fuses (Cont.)

Amps	Pkg.	Qty.
<b>FWC-F (Cont.)</b>		
16	FWC-16A10F	1
20	FWC-20A10F	1
25	FWC-25A10F	1
32	FWC-32A10F	1
<b>FWH</b>		
35	FWH-35A	1
35	FWH-35B	1
40	FWH-40B	1
50	FWH-50B	1
60	FWH-60B	1
70	FWH-70B	1
80	FWH-80A	1
80	FWH-80B	1
100	FWH-100B	1
125	FWH-125B	1
150	FWH-150A	1
150	FWH-150B	1
175	FWH-175A	1
175	FWH-175B	1
200	FWH-200B	1
250	FWH-250A	1
400	FWH-400A	1
600	FWH-600A	1
<b>FWH-F</b>		
0.50	FWH-.500A6F	1
1	FWH-001A6F	1
2	FWH-002A6F	1
5	FWH-005A6F	1
10	FWH-10A14F	1
20	FWH-20A14F	1
30	FWH-30A14F	1
<b>FWP</b>		
30	FWP-30B	1
40	FWP-40B	1
50	FWP-50A	1
50	FWP-50B	1
60	FWP-60B	1
70	FWP-70B	1
80	FWP-80B	1
90	FWP-90A	1
90	FWP-90B	1
100	FWP-100B	1
125	FWP-125A	1
150	FWP-150A	1
175	FWP-175A	1
200	FWP-200A	1
300	FWP-300A	1
350	FWP-350A	1
<b>FWP-F</b>		
10	FWP-10A14F	1
15	FWP-15A14F	1
20	FWP-20A14F	1
25	FWP-25A14F	1
25	FWP-25A14FI	1
30	FWP-30A14F	1
32	FWP-32A14F	1
40	FWP-40A14F	1
40	FWP-40A22FI	1
50	FWP-50A14F	1
50	FWP-50A22F	1
80	FWP-80A22F	1
80	FWP-80A22FI	1
100	FWP-100A22F	1

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# Industrial Fuses

## Industrial Fuses

Industrial Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)			Industrial Fuses (Cont.)		
Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.	Amps	Pkg.	Qty.
<b>FWX</b>			<b>JJN (Cont.)</b>			<b>KBC</b>			<b>KTK (Cont.)</b>			<b>KTN (Cont.)</b>		
35	FWX-35A	1	125	JJN-125	1	3	KBC-3	1	20	KTK-20	10	110	KTN-110	1
40	FWX-40A	1	150	JJN-150	1	15	KBC-15	1	25	KTK-25	1	175	KTN-175	1
50	FWX-50A	1	175	JJN-175	1	400	KBC-400	1	30	KTK-30	10	200	KTN-200	1
60	FWX-60A	1	200	JJN-200	1	<b>KLM</b>			35	KTK-35	1	250	KTN-250	1
90	FWX-90A	1	225	JJN-225	1	3/10	KLM-3/10	1	40	KTK-40	10	400	KTN-400	1
100	FWX-100A	1	250	JJN-250	1	1	KLM-1/2	1	45	KTK-45	1	<b>KTU</b>		
175	FWX-175A	1	300	JJN-300	1	1 1/2	KLM-1-1/2	1	50	KTK-50	1	700	KTU-700	1
200	FWX-200A	1	350	JJN-350	1	2	KLM-2	1	<b>KTK-R</b>			800	KTU-800	1
250	FWX-250A	1	400	JJN-400	1	3	KLM-3	1	1/10	KTK-R1/10	1	1000	KTU-1000	1
400	FWX-400A	1	450	JJN-450	1	5	KLM-5	1	1/8	KTK-R1/8	1	1500	KTU-1500	1
600	FWX-600A	1	500	JJN-500	1	10	KLM-10	1	2/10	KTK-R2/10	1	2000	KTU-2000	1
<b>FWX-F</b>			600	JJN-600	1	12	KLM-12	1	1/4	KTK-R1/4	1	3000	KTU-3000	1
2	FWX-2A14F	1	800	JJN-800	1	15	KLM-15	1	3/10	KTK-R3/10	1	<b>LKN</b>		
10	FWX-10A14F	1	1000	JJN-1000	1	20	KLM-20	1	4/10	KTK-R4/10	1	5	LKN-5	1
12	FWX-125A	1	1200	JJN-1200	1	25	KLM-25	1	1/2	KTK-R1/2	1	6	LKN-6	1
12	FWX-12A14F	1	<b>JKS</b>			30	KLM-30	1	6/10	KTK-R6/10	1	10	LKN-10	1
25	FWX-25A14F	1	3	JKS-3	1	<b>KLU</b>			3/4	KTK-R3/4	1	15	LKN-15	1
30	FWX-30A14F	1	4	JKS-4	1	601	KLU-601	1	1	KTK-R-1	10	20	LKN-20	1
<b>GBA</b>			6	JKS-6	10	650	KLU-650	1	1 1/2	KTK-R1-1/2	1	25	LKN-25	1
2	GBA-2	1	10	JKS-10	1	800	KLU-800	1	2	KTK-R2	10	30	LKN-30	1
3	GBA-3	1	12	JKS-12	10	1000	KLU-1000	1	2 1/2	KTK-R2-1/2	1	40	LKN-40	1
5	GBA-5	1	15	JKS-15	10	1200	KLU-1200	1	3	KTK-R3	1	50	LKN-50	1
10	GBA-10	1	20	JKS-20	10	<b>KRP-C</b>			3 1/2	KTK-R3-1/2	1	60	LKN-60	1
<b>JJS</b>			25	JKS-25	10	601	KRP-C-601SP	1	4	KTK-R4	1	70	LKN-70	1
1	JJS-1	1	30	JKS-30	10	650	KRP-C-650SP	1	5	KTK-R5	1	80	LKN-80	1
3	JJS-3	1	35	JKS-35	10	700	KRP-C-700SP	1	6	KTK-R6	1	80	LKN-80B	1
6	JJS-6	10	40	JKS-40	1	750	KRP-C-750SP	1	7	KTK-R7	1	100	LKN-100	10
10	JJS-10	1	45	JKS-45	1	800	KRP-C-800SP	1	8	KTK-R8	1	110	LKN-110	1
15	JJS-15	10	50	JKS-50	1	1000	KRP-C-1000SP	1	9	KTK-R9	1	125	LKN-125	1
20	JJS-20	10	60	JKS-60	1	1200	KRP-C-1200SP	1	10	KTK-R10	10	150	LKN-150	10
25	JJS-25	10	70	JKS-70	1	1600	KRP-C-1600SP	1	12	KTK-R12	1	200	LKN-200	10
30	JJS-30	10	80	JKS-80	1	2000	KRP-C-2000SP	1	15	KTK-R15	10	250	LKN-250	1
35	JJS-35	10	90	JKS-90	1	2500	KRP-C-2500SP	1	20	KTK-R20	10	300	LKN-300	1
40	JJS-40	10	100	JKS-100	1	3000	KRP-C-3000SP	1	25	KTK-R25	10	350	LKN-350	1
45	JJS-45	1	110	JKS-110	1	5000	KRP-C-5000SP	1	30	KTK-R30	10	400	LKN-400	1
50	JJS-50	1	125	JKS-125	1	<b>KRP-CL</b>			<b>KTS</b>					
60	JJS-60	1	150	JKS-150	1	400	KRP-CL-400	1	6	KTS-6	1	3	LKS-3	1
70	JJS-70	1	175	JKS-175	1	<b>KTK</b>			30	KTS-30	1	6	LKS-6	1
80	JJS-80	1	200	JKS-200	1	1/10	KTK-1/10	10	60	KTS-60	1	10	LKS-10	1
90	JJS-90	1	225	JKS-225	1	1/8	KTK-1/8	1	70	KTS-70	1	15	LKS-15	1
100	JJS-100	1	300	JKS-300	1	2/10	KTK-2/10	1	80	KTS-80	1	20	LKS-20	1
110	JJS-110	1	<b>KAB</b>			1/4	KTK-1/4	1	100	KTS-100	1	25	LKS-25	1
125	JJS-125	1	2	KAB-2	1	3/10	KTK-3/10	1	150	KTS-150	1	30	LKS-30	1
150	JJS-150	1	3	KAB-3	1	4/10	KTK-4/10	1	200	KTS-200	1	35	LKS-35	1
175	JJS-175	1	4	KAB-4	1	1/2	KTK-1/2	1	350	KTS-350	1	40	LKS-40	1
200	JJS-200	1	5	KAB-5	1	6/10	KTK-6/10	1	400	KTS-400	1	45	LKS-45	1
250	JJS-250	1	15	KAB-15	1	3/4	KTK-3/4	1	<b>KTN</b>			50	LKS-50	1
350	JJS-350	1	20	KAB-20	1	1	KTK-1	1	1	KTN-1	1	60	LKS-60	1
400	JJS-400	1	25	KAB-25	1	1 1/4	KTK-1-1/4	1	2	KTN-2	1	70	LKS-70	1
500	JJS-500	1	30	KAB-30	1	1 1/2	KTK-1-1/2	1	3	KTN-3	1	100	LKS-100	10
600	JJS-600	1	<b>KAC</b>			2	KTK-2	1	4	KTN-4	1	150	LKS-150	10
<b>JJN</b>			25	KAC-25	1	2 1/2	KTK-2-1/2	1	5	KTN-5	1	200	LKS-200	10
6	JJN-6	10	35	KAC-35	1	3	KTK-3	1	6	KTN-6	1	250	LKS-250	1
10	JJN-10	1	60	KAC-60	1	3 1/2	KTK-3-1/2	1	8	KTN-8	1	300	LKS-300	1
15	JJN-15	1	80	KAC-80	1	4	KTK-4	1	10	KTN-10	1	400	LKS-400	1
30	JJN-30	1	150	KAC-150	1	5	KTK-5	10	15	KTN-15	1	600	LKS-600	1
40	JJN-40	1	175	KAC-175	1	6	KTK-6	1	20	KTN-20	1	<b>LP-CC</b>		
50	JJN-50	1	300	KAC-300	1	7	KTK-7	1	25	KTN-25	1	1/2	LP-CC-1/2	1
60	JJN-60	1	<b>KAX</b>			7 1/2	KTK-7-1/2	1	30	KTN-30	1	6/10	LP-CC-6/10	1
70	JJN-70	1	5	KAX-5	1	8	KTK-8	1	40	KTN-40	1	8/10	LP-CC-8/10	1
80	JJN-80	1	10	KAX-10	1	9	KTK-9	1	45	KTN-45	1	1	LP-CC-1	1
90	JJN-90	1	12	KAX-12	1	10	KTK-10	10	60	KTN-60	1	1 1/8	LP-CC-1-1/8	1
100	JJN-100	1	15	KAX-15	1	12	KTK-12	1	90	KTN-90	1	1 1/4	LP-CC-1-1/4	1
110	JJN-110	1	20	KAX-20	1	15	KTK-15	10	100	KTN-100	1	<b>(Continued on following page)</b>		

# Industrial Fuses

## Industrial Fuses

### Industrial Fuses (Cont.)

Amps	Pkg. Qty.
<b>LP-CC (Cont.)</b>	
1 4/10 LP-CC-1-4/10	1
1 1/2 LP-CC-1-1/2	1
1 6/10 LP-CC-1-6/10	1
1 8/10 LP-CC-1-8/10	1
2 LP-CC-2	1
2 1/4 LP-CC-2-1/4	1
2 1/2 LP-CC-2-1/2	1
2 8/10 LP-CC-2-8/10	1
3 LP-CC-3	1
3 2/10 LP-CC-3-2/10	1
3 1/2 LP-CC-3-1/2	1
4 LP-CC-4	1
4 1/2 LP-CC-4-1/2	1
5 LP-CC-5	1
5 6/10 LP-CC-5-6/10	1
6 LP-CC-6	1
6 1/4 LP-CC-6-1/4	1
7 LP-CC-7	1
7 1/2 LP-CC-7-1/2	1
8 LP-CC-8	1
9 LP-CC-9	1
10 LP-CC-10	1
12 LP-CC-12	1
15 LP-CC-15	1
20 LP-CC-20	1
25 LP-CC-25	1
30 LP-CC-30	1
<b>LPJ-SP</b>	
1 LPJ-1SP	10
1 1/4 LPJ-1-1/4SP	10
1 6/10 LPJ-1-6/10SP	10
1 8/10 LPJ-1-8/10SP	10
2 LPJ-2SP	10
2 1/4 LPJ-2-1/4SP	10
2 1/2 LPJ-2-1/2SP	10
2 8/10 LPJ-2-8/10SP	10
3 LPJ-3SP	10
3 1/2 LPJ-3-1/2SP	10
4 LPJ-4SP	10
4 1/2 LPJ-4-1/2SP	10
5 LPJ-5SP	10
6 LPJ-6SP	10
7 LPJ-7SP	10
8 LPJ-8SP	10
10 LPJ-10SP	10
12 LPJ-12SP	10
15 LPJ-15SP	10
17 1/2 LPJ-17-1/2SP	10
20 LPJ-20SP	10
25 LPJ-25SP	10
30 LPJ-30SP	10
35 LPJ-35SP	10
40 LPJ-40SP	10
45 LPJ-45SP	10
50 LPJ-50SP	10
60 LPJ-60SP	10
70 LPJ-70SP	10
80 LPJ-80SP	10
90 LPJ-90SP	10
100 LPJ-100SP	10
110 LPJ-110SP	10
125 LPJ-125SP	10
150 LPJ-150SP	10
175 LPJ-175SP	10

### Industrial Fuses (Cont.)

Amps	Pkg. Qty.
<b>LPJ-SP (Cont.)</b>	
200 LPJ-200SP	1
225 LPJ-225SP	1
250 LPJ-250SP	1
300 LPJ-300SP	1
350 LPJ-350SP	1
400 LPJ-400SP	1
450 LPJ-450SP	1
<b>LPJ-SPI</b>	
6 LPJ-6SPI	1
10 LPJ-10SPI	1
15 LPJ-15SPI	1
17 1/2 LPJ-17-1/2SPI	1
20 LPJ-20SPI	1
25 LPJ-25SPI	1
30 LPJ-30SPI	1
40 LPJ-40SPI	1
45 LPJ-45SPI	1
50 LPJ-50SPI	1
60 LPJ-60SPI	1
70 LPJ-70SPI	1
80 LPJ-80SPI	1
90 LPJ-90SPI	1
100 LPJ-100SPI	1
200 LPJ-200SPI	1
225 LPJ-225SPI	1
355 LPJ-355SPI	1
400 LPJ-400SPI	1
<b>LPNK-SP</b>	
1/2 LPNK-1/2SP	1
1 LPNK-1SP	1
2 LPNK-2SP	1
2 1/2 LPNK-2-1/2SP	1
2 8/10 LPNK-2-8/10SP	1
3 LPNK-3SP	1
5 LPNK-5SP	1
5 6/10 LPNK-5-6/10SP	1
6 LPNK-6SP	1
8 LPNK-8SP	1
10 LPNK-10SP	1
12 LPNK-12SP	1
15 LPNK-15SP	1
20 LPNK-20SP	1
25 LPNK-25SP	1
30 LPNK-30SP	1
35 LPNK-35SP	1
40 LPNK-40SP	1
45 LPNK-45SP	1
50 LPNK-50SP	1
60 LPNK-60SP	1
70 LPNK-70SP	1
80 LPNK-80SP	1
90 LPNK-90SP	1
100 LPNK-100SP	1
125 LPNK-125SP	1
150 LPNK-150SP	1
200 LPNK-200SP	1
225 LPNK-225SP	1
250 LPNK-250SP	1
300 LPNK-300SP	1
350 LPNK-350SP	1
400 LPNK-400SP	1
600 LPNK-600SP	1

### Industrial Fuses (Cont.)

Amps	Pkg. Qty.
<b>LPNK-SPI</b>	
35 LPNK-35SPI	1
40 LPNK-40SPI	1
60 LPNK-60SPI	1
100 LPNK-100SPI	1
300 LPNK-300SPI	1
350 LPNK-350SPI	1
<b>LPSK-SP</b>	
1 1/4 LPSK-1-1/4SP	1
2 LPSK-2SP	1
2 1/2 LPSK-2-1/2SP	1
3 LPSK-3SP	1
4 LPSK-4SP	1
5 LPSK-5SP	1
6 LPSK-6SP	1
6 1/4 LPSK-6-1/4SP	1
10 LPSK-10SP	1
12 LPSK-12SP	1
15 LPSK-15SP	1
17 1/2 LPSK-17-1/2SP	1
20 LPSK-20SP	1
25 LPSK-25SP	1
30 LPSK-30SP	1
35 LPSK-35SP	1
40 LPSK-40SP	1
45 LPSK-45SP	1
50 LPSK-50SP	1
60 LPSK-60SP	1
70 LPSK-70SP	1
80 LPSK-80SP	1
90 LPSK-90SP	1
100 LPSK-100SP	1
125 LPSK-125SP	1
150 LPSK-150SP	1
175 LPSK-175SP	1
200 LPSK-200SP	1
225 LPSK-225SP	1
300 LPSK-300SP	1
350 LPSK-350SP	1
400 LPSK-400SP	1
500 LPSK-500SP	1
600 LPSK-600SP	1
<b>LPSK-SPI</b>	
7 LPSK-7SPI	1
15 LPSK-15SPI	1
20 LPSK-20SPI	1
30 LPSK-30SPI	1
40 LPSK-40SPI	1
100 LPSK-100SPI	1
110 LPSK-110SPI	1
150 LPSK-150SPI	1
200 LPSK-200SPI	1
600 LPSK-600SPI	1
<b>MIC</b>	
1 MIC-1	1
3 MIC-3	1
5 MIC-5	1
10 MIC-10	1
15 MIC-15	1
20 MIC-20	1
30 MIC-30	1
<b>NITD</b>	
2 NITD2	1
4 NITD4	1
6 NITD6	1

### Industrial Fuses (Cont.)

Amps	Pkg. Qty.
<b>NITD (Cont.)</b>	
10 NITD10	1
20 NITD20	1
25 NITD25	1
32 NITD32	1
<b>NON</b>	
1/8 NON-1/8	1
1/2 NON-1/2	1
3/4 NON-3/4	1
8/10 NON-8/10	1
1 NON-1	1
1 1/4 NON-1-1/4	1
1 1/2 NON-1-1/2	1
1 6/10 NON-1-6/10	1
6/10 NON-2	1
2 1/2 NON-2-1/2	1
3 NON-3	1
3 2/10 NON-3-2/10	1
4 NON-4	1
5 NON-5	1
6 NON-6	1
6 1/4 NON-6-1/4	1
7 NON-7	1
8 NON-8	1
9 NON-9	1
10 NON-10	1
12 NON-12	1
15 NON-15	1
20 NON-20	1
25 NON-25	1
30 NON-30	1
35 NON-35	1
40 NON-40	1
45 NON-45	1
50 NON-50	1
60 NON-60	1
65 NON-65	1
70 NON-70	1
75 NON-75	1
80 NON-80	1
90 NON-90	1
100 NON-100	1
110 NON-110	1
125 NON-125	1
150 NON-150	1
175 NON-175	1
225 NON-225	1
200 NON-200	1
250 NON-250	1
300 NON-300	1
350 NON-350	1
400 NON-400	1
450 NON-450	1
500 NON-500	1
600 NON-600	1
<b>NOS</b>	
1 NOS-1	1
2 NOS-2	1
3 NOS-3	1
4 NOS-4	1
5 NOS-5	1
6 NOS-6	1
7 NOS-7	1
8 NOS-8	1
9 NOS-9	1

### Industrial Fuses (Cont.)

Amps	Pkg. Qty.
<b>NOS (Cont.)</b>	
10 NOS-10	1
12 NOS-12	1
15 NOS-15	1
20 NOS-20	1
25 NOS-25	1
30 NOS-30	1
35 NOS-35	1
40 NOS-40	1
45 NOS-45	1
50 NOS-50	1
60 NOS-60	1
70 NOS-70	1
75 NOS-75	1
80 NOS-80	1
90 NOS-90	1
100 NOS-100	1
110 NOS-110	1
125 NOS-125	1
150 NOS-150	1
175 NOS-175	1
200 NOS-200	1
225 NOS-225	1
250 NOS-250	1
300 NOS-300	1
350 NOS-350	1
400 NOS-400	1
450 NOS-450	1
500 NOS-500	1
600 NOS-600	1
<b>PON</b>	
15 PON15	1
20 PON20	1
25 PON25	1
30 PON30	1
35 PON35	1
40 PON40	1
45 PON45	1
50 PON50	1
60 PON60	1
<b>SC</b>	
1/2 SC-1/2	1
1 SC-1	1
1 1/2 SC-1-1/2	1
2 SC-2	1
2 1/2 SC-2-1/2	1
3 SC-3	1
4 SC-4	1
5 SC-5	1
6 SC-6	1
7 SC-7	1
8 SC-8	1
10 SC-10	1
12 SC-12	1
15 SC-15	1
20 SC-20	1
25 SC-25	1
30 SC-30	1
35 SC-35	1
40 SC-40	1
45 SC-45	1
50 SC-50	1
60 SC-60	1

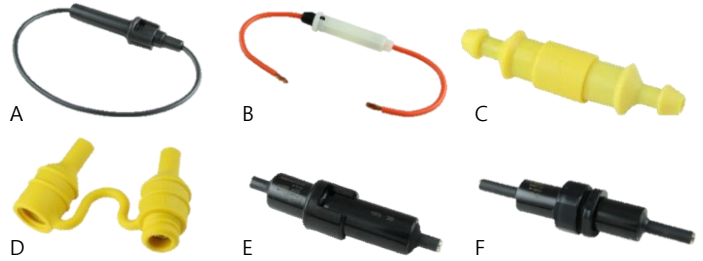


# Glass Fuse Holders, Fuse Testers, Fuse Pullers & Glass Fuse Kit

## Glass Inline Fuse Holders

Protect your precious electronics with this inline fuse holder. The cap seals out moisture to protect the circuit from the harsh environment. Simply splice this into your wiring. Fuses/circuit breakers sold separately. Fuse holders can be purchased individually.

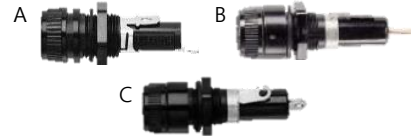
Wire Size (AWG)	Maximum Amps	Connection	
<b>AGC, 312, 313, GDL, GGC, MDL</b>			
16	20	Wire Leads	(A)GFH
12	30	Wire Leads	(B)GFH-12
18-12	30	Crimp On	(C)GAFH-2
<b>Harsh-Environment</b>			
18-12	30	Crimp On	(D)HFB
16-12	20	Crimp On	(E)HFA
<b>High-Voltage / 600 VAC</b>			
12-8	30	Wire Leads	(F)HEB-AA
<b>Glass Fuse Accessories</b>			
Glass Fuse Clip (Not shown)			GFC-1/4



## Panel-Mount Fuse Holder

Amps	Volts	Connection	Fuse Size	
(A) 15	250	3/16" Quick Connects	1/4" X 1-1/4"	HTB-26I
(B) 15	250	1/4" Quick Connects	1/4" X 1-1/4"	HKP-HH
(C) 30	250	Solder	1/4" X 1-1/4"	HKP
Replacement cap for HKP-HH and HKP			#FHP-CAP	

Use these panel-mount fuse holders with 1/4" x 1 1/4" glass fuses. Max panel thickness of 0.312" and 0.505" hole diameter.



## Fuse Testers and Pullers

### Glass Fuse and Ferrule Fuse Tester

Features:

- Test glass fuses and ferrule fuses, up to 24 volt, up to 1 7/8" length
- Green light shines when fuse is good
- Not for use with fuses in fuse panel



Part # FT-2

Features:

- Test automotive, glass tube and ferrule fuses, up to 1 1/4" length
- Adjustable probe for appropriate fuse length
- Replaceable battery
- Not for use with fuses in fuse panel



Part # FT-3

### Fuse Pullers

Removes:

- 13/32" to 13/16" diameter fuses



Part # FP-2

Removes:

- 1/2" to 1" diameter fuses

- Features:
- 7 1/2" long, with a fully insulated no-slip handle
  - 0 to 100 amps at 250 volts and 600 volts, amperage ranges are marked on the handle



Part # FUSEPULL-M

Removes:

- 1" to 1 3/4" diameter fuses



Part # FP-3

Removes:

- 1 3/4" to 2 1/2" diameter fuses



Part # FP-4

Removes:

- 2 1/2" diameter fuses

- Features:
- 7 1/2" long, with a fully insulated no-slip handle
  - 31 to 600 amps at 250 volts and 31 to 400 amps at 600 volts, amperage ranges marked on the handle



Part # FUSEPULL-L

Removes:

- 0-60A T-Tron fuses



Part # FP-6

Removes

- This 3-way fuse puller removes glass tube and ATC blade fuses



Part # BK2/FP-A3

Removes:

- Dual fuse puller removes **glass tube** and **blade** fuses



Part # FP-C

## Glass Fuse Kit

Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
AGC-2	2 Amp AGC Glass Fuse	15	AGC-25	25 Amp AGC Glass Fuse	15
AGC-3	3 Amp AGC Glass Fuse	15	AGC-30	30 Amp AGC Glass Fuse	15
AGC-5	5 Amp AGC Glass Fuse	15	GFA-250	250 Amp GFA Glass Fuse	15
AGC-7-1/2	7 1/2 Amp AGC Glass Fuse	15	SFE-9	9 Amp SFE Glass Fuse	15
AGC-10	10 Amp AGC Glass Fuse	15	SFE-14	14 Amp SFE Glass Fuse	15
AGC-15	15 Amp AGC Glass Fuse	15	SFE-30	30 Amp SFE Glass Fuse	15
AGC-20	20 Amp AGC Glass Fuse	15			

Glass fuse kit includes 180 pieces. 13 different sizes in a small plastic box, 11"w x 6 3/4"d x 1 3/4"h.

Part # GF-KIT

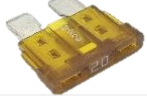


# Fuses

## Automotive Fuses



Amps	Color		Pkg. Qty.
<b>ATC/ATO</b>			
<b>Fuse Types: ATC, ATO, AF, 257</b>			
1	Black	ATO-1	25
2	Gray	ATO-2	25
3	Violet	ATO-3	25
4	Pink	ATO-4	25
5	Tan	ATO-5	25
7.5	Brown	ATO-7-1/2	25
10	Red	ATO-10	25
15	Blue	ATO-15	25
20	Yellow	ATO-20	25
25	Clear	ATO-25	25
30	Green	ATO-30	25
35	Blue/Grn	ATO-35	25
40	Amber	ATO-40	25



Amps	Color		Pkg. Qty.
<b>ATC ID™</b>			
<b>Fuse Types: ATC, ATO, AF, 257</b>			
3	Violet	ATC-3ID	1
5	Tan	ATC-5ID	1
7.5	Brown	ATC-7-1/2ID	1
10	Red	ATC-10ID	1
15	Tan	ATC-15ID	1
20	Blue	ATC-20ID	1
25	Clear	ATC-25ID	1
30	Green	ATC-30ID	1
40	Orange	ATC-40ID	1



Amps	Color		Pkg. Qty.
<b>Mini/ATM</b>			
<b>Fuse Types: ATM, AF2, 297</b>			
1	Black	MINI-1	25
2	Gray	MINI-2	25
3	Violet	MINI-3	25
4	Pink	MINI-4	25
5	Tan	MINI-5	25
7.5	Brown	MINI-7-1/2	25
10	Red	MINI-10	25
15	Blue	MINI-15	25
20	Yellow	MINI-20	25
25	Clear	MINI-25	25
30	Green	MINI-30	25



Amps	Color		Pkg. Qty.
<b>Mini/ATM ID™</b>			
<b>Fuse Types: ATM, AF2, 297</b>			
3	Violet	MINI-3ID	1
5	Tan	MINI-5ID	1
7.5	Brown	MINI-7-1/2ID	1
10	Red	MINI-10ID	1
15	Blue	MINI-15ID	1
20	Yellow	MINI-20ID	1
25	Clear	MINI-25ID	1
30	Green	MINI-30ID	1



Amps	Color		Pkg. Qty.
<b>Low-Profile Mini</b>			
<b>Fuse Types: APS, ATT</b>			
2	Gray	MINI-2LP	10
3	Violet	MINI-3LP	10
4	Pink	MINI-4LP	10
5	Tan	MINI-5LP	10
7.5	Brown	MINI-7.5LP	10
10	Red	MINI-10LP	10
15	Blue	MINI-15LP	10
20	Yellow	MINI-20LP	10
25	Clear	MINI-25LP	10
30	Green	MINI-30LP	10



Amps	Color		Pkg. Qty.
<b>Micro</b>			
<b>Fuse Types: ATR</b>			
5	Tan	MICRO-5	5
7.5	Brown	MICRO-7.5	5
10	Red	MICRO-10	5
15	Blue	MICRO-15	5
20	Yellow	MICRO-20	5
25	Clear	MICRO-25	5
30	Green	MICRO-30	5



Amps	Color		Pkg. Qty.
<b>Micro 3-Leg</b>			
<b>Fuse Types: ATL, ANK</b>			
5	Tan	MICRO3-5	5
7.5	Brown	MICRO3-7.5	5
10	Red	MICRO3-10	5
15	Blue	MICRO3-15	5



Amps	Color		Pkg. Qty.
<b>Maxi</b>			
<b>Fuse Types: AF3, APX, 299</b>			
20	Yellow	ATO-MAX-20	1
25	Gray	ATO-MAX-25	1
30	Green	ATO-MAX-30	1
35	Brown	ATO-MAX-35	1
40	Orange	ATO-MAX-40	1
50	Red	ATO-MAX-50	1
60	Blue	ATO-MAX-60	1
70	Tan	ATO-MAX-70	1
80	Clear	ATO-MAX-80	1



Amps	Color		Pkg. Qty.
<b>Maxi ID™</b>			
<b>Fuse Types: AF3, APX, 299</b>			
20	Yellow	MAX-20ID	1
30	Green	MAX-30ID	1
40	Orange	MAX-40ID	1
50	Red	MAX-50ID	1



Amps	Color		Pkg. Qty.
<b>Maxi ID™ (Cont.)</b>			
<b>Fuse Types: AF3, APX, 299</b>			
60	Blue	MAX-60ID	1
70	Tan	MAX-70ID	1
80	Clear	MAX-80ID	1
100	Violet	MAX-100ID	1



Amps	Color		Pkg. Qty.
<b>AMG</b>			
80	Red	AMG-80	1
100	Yellow	AMG-100	1
125	Green	AMG-125	1
150	Tan	AMG-150	1
175	White	AMG-175	1
200	Blue	AMG-200	1
225	Gray	AMG-225	1
250	Purple	AMG-250	1
300	White	AMG-300	1
400	Purple	AMG-400	1
450	Gold	AMG-450	1
500	-----	AMG-500	1



Amps	Color		Pkg. Qty.
<b>AMI</b>			
30	Orange	AMI-030	1
40	Lt/Green	AMI-040	1
50	Red	AMI-050	1
60	Yellow	AMI-060	1
70	Brown	AMI-070	1
80	White	AMI-080	1
100	Blue	AMI-100	1
125	Pink	AMI-125	1
175	-----	AMI-175	1
200	-----	AMI-200	1



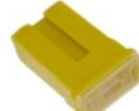
Amps	Color		Pkg. Qty.
<b>FLB</b>			
20	-----	FLB-20	1
30	Pink	FLB-30	1
40	Green	FLB-40	1
50	Red	FLB-50	1
60	Yellow	FLB-60	1
70	Brown	FLB-70	1
80	Black	FLB-80	1
100	Blue	FLB-100	1
120	Gray	FLB-120	1
140	Maroon	FLB-140	1



Amps	Color		Pkg. Qty.
<b>FLD</b>			
30	Pink	FLD-30	1
40	Green	FLD-40	1
50	Red	FLD-50	1
60	Yellow	FLD-60	1
70	Brown	FLD-70	1
80	Black	FLD-80	1
100	Blue	FLD-100	1
120	Gray	FLD-120	1
140	Maroon	FLD-140	1



Amps	Color		Pkg. Qty.
<b>FLF</b>			
20	Blue	FLF-20	1
30	Pink	FLF-30	1
40	Green	FLF-40	1
50	Red	FLF-50	1
60	Yellow	FLF-60	1



Amps	Color		Pkg. Qty.
<b>FLG</b>			
50	Red	FLG-50	1
60	Yellow	FLG-60	1
80	Black	FLG-80	1



Amps	Color		Pkg. Qty.
<b>FLM</b>			
30	Pink	FLM-30	1
40	Green	FLM-40	1
50	Red	FLM-50	1
60	Yellow	FLM-60	1
70	Brown	FLM-70	1
80	Black	FLM-80	1
100	Blue	FLM-100	1
120	Gray	FLM-120	1
140	Maroon	FLM-140	1



Amps	Color		Pkg. Qty.
<b>FLN</b>			
25	Brown	FLN-25	1
30	Green	FLN-30	1



Amps	Color		Pkg. Qty.
<b>FLS</b>			
30	Pink	FLS-30	1
40	Green	FLS-40	1

# Fuses, Fuse Holders and Fuse Taps

## Automotive Fuses

Amps	Color		Pkg. Qty.
<b>FMX</b>			
20	Blue	FMX-20	1
25	White	FMX-25	1
30	Pink	FMX-30	1
40	Green	FMX-40	1
50	Red	FMX-50	1
60	Yellow	FMX-60	1



## FMX-ID™

20	Blue	FMX-20ID	1
30	Pink	FMX-30ID	1
40	Green	FMX-40ID	1
50	Red	FMX-50ID	1
60	Yellow	FMX-60ID	1



Amps	Color		Pkg. Qty.
<b>FMM</b>			
15	Gray	FMM-15	1
20	Blue	FMM-20	1
25	White	FMM-25	1
30	Pink	FMM-30	1
40	Green	FMM-40	1



## Low-Profile FMX

20	Blue	FMX-20-LP	1
25	White	FMX-25-LP	1
30	Pink	FMX-30-LP	1
40	Green	FMX-40-LP	1
50	Red	FMX-50-LP	1
60	Yellow	FMX-60-LP	1



Amps	Color		Pkg. Qty.
<b>MPF</b>			
40,30,30	Pink	MPF-433X	1
40,40,40	Green	MPF-444X	1
50,30,30	Red	MPF-533X	1
50,30,40	Blue	MPF-534X	1
60,30,30	Yellow	MPF-633X	1



## MPF2

30,20,40	Yellow	MPF2-324X	1
40,30,30	Pink	MPF2-433X	1
40,40,40	Green	MPF2-444X	1
50,30,30	Red	MPF2-533X	1
50,30,40	Blue	MPF2-534X	1
50,30,50	Black	MPF2-535X	1
50,50,50	Maroon	MPF2-555X	1

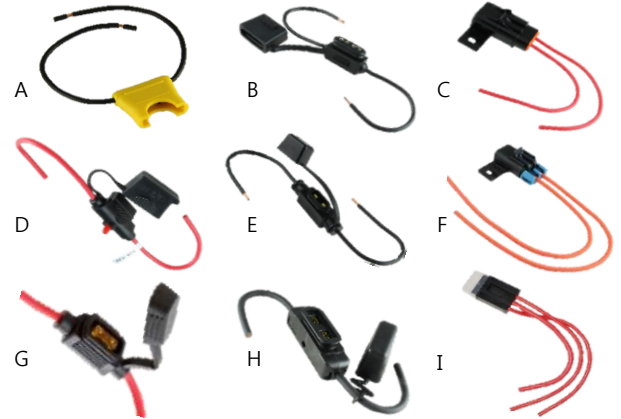


## Fuse Holders

Protect your precious electronics with this inline fuse holder. The cap seals out moisture to protect the circuit from the harsh environment. Simply splice this into your wiring. Fuses/circuit breakers sold separately. Fuse holders can be purchased individually.

### Inline Fuse Holders

Wire Size (AWG)	Without Cap	With Cap	Mounting Bracket With Cap	LED Indicator With Cap
<b>ATC/ATO</b>				
16	(A)FH-ATO	(B)FH-ATO-W	(C)FH-ATO-16WP	(D)ATC-FHID
12	(A)FH-ATO-12	(B)FH-ATO-12W	(C)FH-ATO-12WP	(D)FH-ATO-12-LED
<b>Mini/ATM</b>				
18	-----	(E)FH-ATOM-18W	-----	-----
16	-----	(E)FH-ATOM-16W	(F)FH-ATOM-16WP	(D)ATM-FHID
12	-----	(E)FH-ATOM-12W	(F)FH-ATOM-12WP	-----
<b>Mini/ATM Low-Profile</b>				
18	-----	(G)FH-LPM-18W	-----	-----
<b>Maxi, 299, AF3, APX, Max</b>				
6	-----	(H)MAXI-H	-----	(D)MAX-FHID
<b>Micro3, ATL</b>				
14		(I)FH-MICRO3-14W*		



\* Also has a 12 gauge ground

### Maxi Fuse Holder

Two screw posts allow you to connect your wire with a fork/ring terminal. Max 60 amps. Mounting hole in holder. Fuses sold separately.

Part #  
MAXI-BLOCK



### AMG Fuse Holder

Has two posts to connect your wiring to. Supports 8-2 gauge wire. 300 amps. AMG fuses sold separately.

Part #  
HMEG



### Water Resistant AMG Fuse Holder

Fuse holder base and cover are securely sealed to create water resistant protection. 500 amps. AMG fuses sold separately.

Part #  
CH-880014



### ANN/ANL Fuse Holder

Commonly found on fork lifts, fuse block supports ANN and ANL fuses. 800 amps. Fuses sold separately.

Part #  
SFR



### Add-A-Fuse Fuse Taps

This fuse holder allows you to replace one fuse with two fuses which allows you to protect an additional circuit. The primary circuit protects the existing circuit wired into the panel. The auxiliary fuse protects the 16 gauge wire that comes off this unit that is butt spliced (included) to another wire. The maximum combined current for both circuits is 30 amps. The maximum for the primary circuit is 25 amps and the maximum for the auxiliary circuit is 15 amps. Fuse/circuit breakers sold separately.

Fuse Type		Pkg. Qty.
ATC/ATO	FH-ATO-10A	1
Mini/ATM	FH-ATOM-10A	1
Mini/ATM Low-Profile	FH-ATMLP-10A	1
Micro/ATR	FH-MICRO-10A	1
Micro3/ATL	FH-MICRO3-10A	1



ATC/ATO



Mini/ATM Low-Profile



Micro3/ATL

### Easy-Install Inline Fuse Tap

Rather than splicing, simply hand squeeze this tap onto your wire and add an ATC / ATO fuse to protect your electronics. Fuses/circuit breakers sold separately.

Part #ATO-TAP



### Add a Circuit Fuse Taps

These fuse taps fit over the fuse to create a non-fused circuit.

Fuse Type		Pkg. Qty.
(A)ATC/ATO	ATC-TAP	25
(B)Mini/ATM	ATM-TAP	10



# Fuse Panels

## Fuse Panels

### Surface-Mount Fuse Panels

Commonly used to add new electronics in mobile applications, these surface-mount fuse panels are cost effective and make the installation process easy.

The **standard**, **standard with cover**, and the **LED with cover** have a common feed that provides power to all of the circuits with just one wire in. Maximum 60 amps per panel and maximum 30 amps per circuit.

The **compact with cover** fuse panels offer a smaller footprint. Maximum 15 amps per circuit. The maximum amps per panel are: 30 amps for 4 position, 45 amps for 6 position, 60 amps for 8 position, and 90 amps for 10 position. The compact fuse panels have a IPX4 splash-proof rating.

Fuses/circuit breakers sold separately.



Standard



Standard with Cover



LED with Cover



Compact with Cover

Positions	ATC/ATO			Mini/ATM			Micro/ATR	Mini Low Profile/APS
	Standard	LED w/Cover	Compact w/Cover	Standard w/Cover	LED w/Cover	Compact w/Cover	Compact w/Cover	Standard w/Cover
4	15600-04-20	FB-ATO-4-LED	FBC-ATO-4	FB-ATM-4	FB-ATM-4-LED	FBC-ATM-4	FBC-MICRO-4	-----
6	FB-ATO-6	FB-ATO-6-LED	FBC-ATO-6	FB-ATM-6	FB-ATM-6-LED	FBC-ATM-6	FBC-MICRO-6	-----
8	FB-ATO-8	-----	FBC-ATO-8	-----	-----	FBC-ATM-8	FBC-MICRO-8	-----
10	FB-ATO-10	FB-ATO-10-LED	FBC-ATO-10	FB-ATM-10	FB-ATM-10-LED	FBC-ATM-10	FBC-MICRO-10	FB-MINI-LP-10
14	FB-ATO-14	-----	-----	-----	-----	-----	-----	-----

### High Amperage 2 Position Low-Profile FMX Fuse Panel



High amperage, two position fuse block. Made for high vibration rough duty applications. Waterproof. One common feed powers two fuse protected circuits. Measures 3.75" x 1.5" x 1.625". Uses FMX 20 to 60 amp fuses. Fuses sold separately.

Description	FMX Fuse Positions	Pigtails
Power Fuse Panel	Two positions for separate circuits	CBPFM
Power Relay Panel	Two positions, one protects relay and the other is a single circuit in-line fuse	CBPRM

### 20 Position Mini/ATM Fuse Panel



RTMF-DC

For large scale electrical installations in mobile applications, these surface mount fuse panels give you space for 20 circuits. IP66 rated housing and cover provide a weather-tight enclosure for harsh environments. Measures 3.4" x 4" x 2.4", including the cover. Fuses/circuit breakers sold separately.

Preassembled pigtails for OEM mini/ATM fuse panels can be purchased in any color or wire size in 6" lengths and simply inserted into the back of the panel on the RTMF-DC. Any circuit not being used should be plugged with Part #12010300 cavity plug to ensure weather proofing.

Description	Pigtails
20 Position fuse block with no cover	RTMF
20 Position fuse block with shallow cover	RTMF-SC
20 Position fuse block with deep cover	RTMF-DC

### Preassembled Pigtails for OEM Mini/ATM Fuse Panels (RTMF-DC)



Wire Size (AWG)	Amperage	Wire Color	Length	Pigtails	Terminals Only	Tools
22	10	Any	6"	280TS-21PIG	12110846	12155975
18	15	Any	6"	280TS-17PIG	12110847	12155975
16	20	Any	6"	280TS-15PIG	12129409	12155975
14	25	Any	6"	280TS-13PIG	12110845	15155975
12	30	Any	6"	280TS-11PIG	12110853	15155975

# Fuse Kits & All-in-One Fuse Kits

## Automotive Fuse Kits

### ATC/ATO Fuse Kit

ATO/ATC fuses kit includes 180 pieces. 5 different sizes in a 7" x 3 3/4" plastic box.

Part #  
ATO-KIT



Kit Contains	Description	Qty.
ATO-1	1 Amp Black ATC/ATO Fuses	15
ATO-2	2 Amp Gray ATC/ATO Fuses	15
ATO-3	3 Amp Violet ATC/ATO Fuses	15
ATO-5	5 Amp Tan ATC/ATO Fuses	15
ATO-7-1/2	7.5 Amp Brown ATC/ATO Fuses	15
ATO-10	10 Amp Red ATC/ATO Fuses	15
ATO-15	15 Amp Blue ATC/ATO Fuses	15
ATO-20	20 Amp Yellow ATC/ATO Fuses	15
ATO-25	25 Amp Clear ATC/ATO Fuses	15
ATO-30	30 Amp Green ATC/ATO Fuses	15
ATO-40	40 Amp Amber ATC/ATO Fuses	15
ATO-A	Adapter	15

### Mini Low-Profile Fuse Kit

Mini Low-Profile fuse kit includes 50 fuses. 10 different sizes in a 7" x 3 3/4" plastic box.

Part #  
MINI LP KIT



Kit Contains	Description	Qty.
MINI-2LP	2 Amp Gray/APS Fuse	5
MINI-3LP	3 Amp Violet/APS Fuse	5
MINI-4LP	4 Amp Pink/APS Fuse	5
MINI-5LP	5 Amp Tan/APS Fuse	5
MINI-7.5LP	7.5 Amp Brown/APS Fuse	5
MINI-10LP	10 Amp Red/APS Fuse	5
MINI-15LP	15 Amp Blue/APS Fuse	5
MINI-20LP	20 Amp Yellow/APS Fuse	5
MINI-25LP	25 Amp Clear/APS Fuse	5
MINI-30LP	30 Amp Green/APS Fuse	5

### Micro Fuse Kit

Space-saving micro-fuse link kit includes 136 pieces total. 16 different sizes, and a fuse puller in a plastic box.

Part #  
MICRO FUSE KIT



Kit Contains	Description	Qty.
MICRO-5	5 Amp Tan ATR Fuses	10
MICRO-7.5	7.5 Amp Brown ATR Fuses	10
MICRO-10	10 Amp Red ATR Fuses	10
MICRO-15	15 Amp Blue ATR Fuses	10
MICRO-20	20 Amp Yellow ATR Fuses	10
MICRO-25	25 Amp Clear ATR Fuses	10
MICRO-30	30 Amp Green ATR Fuses	10
MICRO3-5	5 Amp Tan ATL Fuses	10
MICRO3-7.5	7.5 Amp Brown ATL Fuses	10
MICRO3-10	10 Amp Red ATL Fuses	10
MICRO3-15	15 Amp Blue ATL Fuses	10
FMM-15	15 Amp Gray FMM Fuses	5
FMM-20	20 Amp Blue FMM Fuses	5
FMM-25	25 Amp White FMM Fuses	5
FMM-30	30 Amp Pink FMM Fuses	5
FMM-40	40 Amp Green FMM Fuses	5

### Maxi Fuse Kit

Maxi fuse kit includes 25 pieces. 5 different sizes in a 7" x 3 3/4" plastic box.

Part #  
MAXI-KIT



Kit Contains	Description	Qty.
ATO-MAX-20	20 Amp Yellow Maxi Fuses	5
ATO-MAX-30	30 Amp Green Maxi Fuses	5
ATO-MAX-40	40 Amp Orange Maxi Fuses	5
ATO-MAX-50	50 Amp Red Maxi Fuses	5
ATO-MAX-60	60 Amp Blue Maxi Fuses	5

### Fuse Link Kit

Fuse link kit includes 24 pieces total. 13 different sizes in a 11" x 6 3/4" x 1 3/4" plastic box.

Part #  
FUSE LINK KIT



Kit Contains	Description	Qty.
FLF-20	20 Amp Blue FLF Fuses	2
FMX-20	20 Amp Blue FMX Fuses	2
FLF-30	30 Amp Pink FLF Fuses	2
FLS-30	30 Amp Pink FLS Fuses	2
FMX-30	30 Amp Pink FMX Fuses	2
FLF-40	40 Amp Green FLF Fuses	2
FLS-40	40 Amp Green FLS Fuses	2
FMX-40	40 Amp Green FMX Fuses	2
FLF-50	50 Amp Red FLF Fuses	2
FMX-50	50 Amp Red FMX Fuses	2
FLF-60	60 Amp Yellow FLF Fuses	2
FLB-80	80 Amp Black FLB Fuses	1
FLB-100	100 Amp Blue FLB Fuses	1

### Mini-ATM Fuse Kit

Mini-ATM fuse kit includes 80 pieces. 7 different sizes in a 7" x 3 3/4" plastic box.

Part #  
MINI-ATO-KIT



Kit Contains	Description	Qty.
MINI-3	3 Amp Violet Mini/ATM Fuses	10
MINI-5	5 Amp Tan Mini/ATM Fuses	10
MINI-10	10 Amp Red Mini/ATM Fuses	10
MINI-15	15 Amp Blue Mini/ATM Fuses	10
MINI-20	20 Amp Yellow Mini/ATM Fuses	10
MINI-25	25 Amp Clear Mini/ATM Fuses	10
MINI-30	30 Amp Green Mini/ATM Fuses	10
ATO-AM	Fuse Tape for Mini Blade Fuses	10

## All-in-One Automotive Fuse Kits

These automotive fuse kits come with a caddy that easily allows you to access all of the most common fuses you may need in one single carrier. The caddies have secure latches and clear trays for easy identification.

**FUSE KIT 5** includes the five trays in the first column.

**FUSE KIT 10** includes all 10 trays in both columns.



**ATC/ATO Fuse Tray** - Included in FUSE KIT 5 & 10

Contains: ATO-3, 4, 5, 7-1/2, 10, 15, 20, 25, 30, 35, and 40.

**Mini-ATM Fuse Tray** - Included in FUSE KIT 5 & 10

Contains: Mini ATM-2, 3, 4, 5, 7-1/2, 10, 15, 20, 25, and 30.

**Mini Low-Profile Fuse Tray** - Included in FUSE KIT 5 & 10

Contains: Low-Profile APS-2, 3, 4, 5, 7-1/2, 10, 15, 20, 25, and 30.

**Maxi Fuse Tray** - Included in FUSE KIT 5 & 10

Contains: Maxi ATO-20, 30, 40, 50, 60, 70, 80, and 100ID.

**FMX Fuse Tray** - Included in FUSE KIT 5 & 10

Contains: Maxi FMX-20, 30, 40, 50, and 60.

**FLF and FLS Fuse Tray** - Included in FUSE KIT 10

Contains: FLF-20, 30, 40, 50, and 60. Mini FLS-30, and 40.

**FMM and FMX Low-Profile Fuse Tray** - Included in FUSE KIT 10

Contains: FMM-15, 20, 25, 30, and 40. Low-Profile FMX-20, 25, 30, 40, 50, and

**Micro Fuse Tray** - Included in FUSE KIT 10

Contains: Micro ATR-5, 7.5, 10, 15, 20, 25, and 30. 3-Leg ATL-5, 7.5, 10, and 15.

**FLB, FLD, and FLM Fuse Tray** - Included in FUSE KIT 10

Contains: Bolt-Mount FLB-80, 140. FLD-40 and 80. FLM-30, 60, 80, 100, and 120.

**AMG and AMI Fuse Tray** - Included in FUSE KIT 10

Contains: Stud-Mount AMG-80, 100, 125, 150, 175, 200, 225, 250, and 300. AMI-40, 50, and 80.

# Circuit Breakers

## High Amp Circuit Breakers

These circuit breakers offer high amperage protection. Also can be used as an on/off switch. The **surface mount** circuit breakers are waterproof.

The **extra lug clearance** circuit breakers offer extra clearance between the stud and body.

These type III circuit breakers reset with a push of a button. Sold individually.

### Surface Mount



Amps	Volts	Standard		Extra Lug Clearance		
		Volts	Stud Size	Volts	Stud Size	
25	6-42	1/4-28	CB185-25	6-48	M6 (1/4")	CB285-25
30	6-42	1/4-28	CB185-30	6-48	M6 (1/4")	CB285-30
35	6-42	1/4-28	CB185-35	6-48	M6 (1/4")	CB285-35
40	6-42	1/4-28	CB185-40	6-48	M6 (1/4")	CB285-40
50	6-42	1/4-28	CB185-50	6-48	M6 (1/4")	CB285-50
60	6-42	1/4-28	CB185-60	6-48	M6 (1/4")	CB285-60
70	6-42	1/4-28	CB185-70	6-48	M6 (1/4")	CB285-70
80	6-42	1/4-28	CB185-80	6-48	M6 (1/4")	CB285-80
90	6-42	1/4-28	CB185-90	6-48	M6 (1/4")	CB285-90
100	6-42	1/4-28	CB185-100	6-48	M6 (1/4")	CB285-100
110	6-42	1/4-28	CB185-110	6-48	M6 (1/4")	CB285-110
120	6-42	1/4-28	CB185-120	6-48	M6 (1/4")	CB285-120
135	6-42	1/4-28	CB185-135	6-48	M6 (1/4")	CB285-135
150	6-42	1/4-28	CB185-150	6-48	M6 (1/4")	CB285-150
180	6-42	3/8-16	CB185-180	-----	-----	-----
200	6-42	3/8-16	CB185-200	-----	-----	-----
250	6-42	3/8-16	CB185-250	-----	-----	-----

### Panel Mount



Amps	Volts	Standard		Commercial		
		Volts	Stud Size	Volts	Stud Size	
25	6-42	1/4-28	CB185P-25	6-48	M6 (1/4")	CB285P-25S
30	6-42	1/4-28	CB185P-30	6-48	M6 (1/4")	CB285P-30S
35	6-42	1/4-28	CB185P-35	6-48	M6 (1/4")	CB285P-35S
40	6-42	1/4-28	CB185P-40	6-48	M6 (1/4")	CB285P-40S
50	6-42	1/4-28	CB185P-50	6-48	M6 (1/4")	CB285P-50S
60	6-42	1/4-28	CB185P-60	6-48	M6 (1/4")	CB285P-60S
70	6-42	1/4-28	CB185P-70	6-48	M6 (1/4")	CB285P-70S
80	6-42	1/4-28	CB185P-80	6-48	M6 (1/4")	CB285P-80S
90	6-42	1/4-28	CB185P-90	6-48	M6 (1/4")	CB285P-90S
100	6-42	1/4-28	CB185P-100	6-48	M6 (1/4")	CB285P-100S
110	6-42	1/4-28	CB185P-110	6-48	M6 (1/4")	CB285P-110S
120	6-42	1/4-28	CB185P-120	6-48	M6 (1/4")	CB285P-120S
135	6-42	1/4-28	CB185P-135	6-48	M6 (1/4")	CB285P-135S
150	6-42	1/4-28	CB185P-150	6-48	M6 (1/4")	CB285P-150S

## Corrosive Environment Circuit Breakers - CB187

Created for the marine industry, the corrosive-environment circuit breakers offer low voltage and high amperage protection in the most demanding environments. Weatherproof.

These type III circuit breakers reset with a push of a button. Sold individually.

### Surface Mount



Amps	Volts	Stud Size	
25	6-48	5/16-18	CB-187F-25
30	6-48	5/16-18	CB-187F-30
35	6-48	5/16-18	CB-187F-35
40	6-48	5/16-18	CB-187F-40
50	6-48	5/16-18	CB-187F-50
60	6-48	5/16-18	CB-187F-60
70	6-48	5/16-18	CB-187F-70
80	6-48	5/16-18	CB-187F-80
-----	-----	-----	-----
100	6-48	5/16-18	CB-187F-100
110	6-48	5/16-18	CB-187F-110
120	6-48	5/16-18	CB-187F-120
135	6-48	5/16-18	CB-187F-135
150	6-48	5/16-18	CB-187F-150
200	6-48	5/16-18	CB-187F-200

### Panel Mount



Amps	Volts	Stud Size	
25	6-48	5/16-18	CB-187P-25
30	6-48	5/16-18	CB-187P-30
35	6-48	5/16-18	CB-187P-35
40	6-48	5/16-18	CB-187P-40
50	6-48	5/16-18	CB-187P-50
60	6-48	5/16-18	CB-187P-60
70	6-48	5/16-18	CB-187P-70
80	6-48	5/16-18	CB-187P-80
90	6-48	5/16-18	CB-187P-90
100	6-48	5/16-18	CB-187P-100
110	6-48	5/16-18	CB-187P-110
120	6-48	5/16-18	CB-187P-120
135	6-48	5/16-18	CB-187P-135
150	6-48	5/16-18	CB-187P-150
200	6-48	5/16-18	CB-187P-200

## Automotive Circuit Breakers

### ATC/ATO

The metallic (silver) circuit breakers are suitable replacements for ATO, ATC, AF, 257, and APR circuit breakers and fuses. The type II and type III circuit breakers are thin, allowing them to fit in tighter spaces. Sold individually.

### Auto-Reset

These type I circuit breakers will automatically reset after overload. 6-12 volts.

Amps		Amps		Amps	
6	211-6	15	211-15	30	211-30
8	211-8	20	211-20	40	211-40
10	211-10	25	211-25		



### Power-Off Reset Ultra Thin

These type II circuit breakers will reset after power is turned off and back on. 12 volts.

Amps		Amps		Amps	
10	CB-222-10	20	CB-222-20	30	CB-222-30
15	CB-222-15	25	CB-222-25		



### Manual-Reset Ultra Thin

These type III circuit breakers reset with a push of a button. 12-24 volts.

Amps		Amps		Amps	
7.5	CB-223-7-1/2	15	CB-223-15	25	CB-223-25
10	CB-223-10	20	CB-223-20	30	CB-223-30



### Low-Profile Manual-Reset

These type III circuit breakers reset with a push of a button. 12-24 volts.

Amps	Color	Part No.	Amps	Color	Part No.
5	Tan	CB-227-5	15	Blue	CB-227-15
6	Green	CB-227-6	20	Yellow	CB-227-20
7.5	Brown	CB-227-7-1/2	25	White	CB-227-25
10	Red	CB-227-10	30	Green	CB-227-30



### Mini/ATM

The gold **auto-reset**, type I and **manual-reset**, type III circuit breakers are suitable replacements for Mini, ATM, AF2, 297, and APM circuit breakers and fuses. Sold individually.

#### Auto-Reset

The type I circuit breakers will automatically reset after overload. 12 volts.

Amps		Amps	
7.5	211M-7-1/2	20	211M-20
10	211M-10	25	211M-25
15	211M-15	30	211M-30



#### Manual-Reset

The type III circuit breakers reset with a push of a button. 12-24 volts.

Amps	Color	Part No.	Amps	Color	Part No.
5	Tan	211MR-5	20	Yellow	211MR-20
7.5	Brown	211MR-7.5	25	White	211MR-25
10	Red	211MR-10	30	Green	211MR-30
15	Blue	211MR-15			



### Mini Low-Profile Manual-Reset Ultra Thin

The mini low-profile manual-reset, type III are suitable replacements for Mini Low-Profile, APS, and ATT circuit breakers and fuses. Reset with a push of a button. 12-48 volts. Sold individually.

Amps	Color	Part No.
5	Tan	211MRLP-5
7.5	Brown	211MRLP-7.5
10	Red	211MRLP-10
15	Blue	211MRLP-15



## Maxi

These metallic (silver) circuit breakers are suitable replacements for Maxi, Max, AF3, 299, and APX circuit breakers and fuses. 12 volts. Sold individually. The **auto-reset**, type I circuit breakers will automatically reset after overload. The **power-off reset**, type II circuit breakers will reset after power is turned off and back on.

### Auto-Reset

Amps		Amps		Amps	
10	211MAXI-10	25	211MAXI-25	40	211MAXI-40
15	211MAXI-15	30	211MAXI-30	50	211MAXI-50
20	211MAXI-20	35	211MAXI-35		

### Power-Off Reset

Amps		Amps	
10	212MAXI-10	25	212MAXI-25
15	212MAXI-15	30	212MAXI-30
20	212MAXI-20		



### Mack Plug In

Blades are 1" apart to fit Mack breaker format. These type II circuit breakers will reset after power is turned off and back on. 6-12 volts. Sold individually.

Amps	Part No.	Amps	Part No.
10	CB-MK-10	25	CB-MK-25
15	CB-MK-15	30	CB-MK-30
20	CB-MK-20		



### Mount for Stud Style Circuit Breakers

These mounts allow you to easily mount stud style circuit breakers (CB-10 thru CB-50). Mounts two circuit breakers with the studs up (turtle). Sold Individually.

Number of Circuits It Will Hold	Manufacturer	Part No.
2	Cole Hersee	CH-30090-2
2	Pollak	PLK-52-240P
8	Cole Hersee	CH-30090-8
8	Pollak	PLK-52-243P



### Circuit Breakers to Replace 1/4"X1-1/4" Glass Fuses

These circuit breakers are suitable replacements for 1/4" X 1-1/4" AGC, MDL, GDL, GGC, 312, and 313 glass fuses. These type II circuit breakers will reset after power is turned off and back on. 6-12 volts. Sold Individually.

Amps		Amps	
6	CBF-6	25	CBF-25
10	CBF-10	30	CBF-30
15	CBF-15	35	CBF-35
20	CBF-20	40	CBF-40



### Low-Profile Circuit Breakers to Replace 1/4"X1-1/4" Glass Fuses

The 6-12 volt circuit breakers are suitable replacements for 1/4" X 1-1/4" AGC, MDL, GDL, GGC, 312, and 313 glass fuses. The low profile allows them to fit in tight spaces. These type II circuit breakers will reset after power is turned off and back on. Sold Individually.

Amps		Amps	
10	FO-CB-10	25	FO-CB-25
15	FO-CB-15	30	FO-CB-30
20	FO-CB-20	40	FO-CB-40



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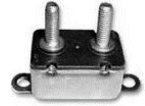
# Circuit Breakers

## Automotive Circuit Breakers (Continued from previous page)

### Stud Style

These metallic (silver) stud style circuit breakers allow you to easily attach your wire to these circuit breakers. **Standard** body measures 1.3" lg. X 0.8" wd. X 0.6" ht. and has two 10-32 threaded studs. **Narrow-profile** body measures 1.1" lg. X 0.4" wd. X 0.6" ht. and has two 10-32 threaded studs. The narrow profile allows you to fit more in tight spaces. These type I circuit breakers will automatically reset after overload. Sold individually.

### Standard Body - Metal Housings



Amps	No Bracket				Crosswise Bracket			Lengthwise Bracket	
	Standard	Economy	Cole Hersee	Cole Hersee/Sealed	Standard	Economy	Cole Hersee	Standard	Cole Hersee
<b>6-12 Volts</b>									
6	-----	-----	-----	-----	-----	-----	-----	-----	-----
8	CBC-8	-----	CH-30056-8	-----	CBC-8B	-----	-----	-----	CH-30055-8
10	CBC-10	CB-10	CH-30056-10	-----	CBC-10B	CBP-10	CH-30128-10	CBC-10HB	CH-30055-10
15	CBC-15	CB-15	CH-30056-15	CH-30137-15	CBC-15B	CBP-15	CH-30128-15	CBC-15HB	CH-30055-15
20	CBC-20	CB-20	CH-30056-20	CH-30137-20	CBC-20B	CBP-20	CH-30128-20	CBC-20HB	CH-30055-20
25	CBC-25	CB-25	CH-30056-25	-----	CBC-25B	-----	-----	CBC-25HB	CH-30055-25
30	CBC-30	CB-30	CH-30056-30	CH-30137-30	CBC-30B	CBP-30	CH-30128-30	CBC-30HB	CH-30055-30
35	CBC-35	-----	-----	-----	CBC-35B	-----	-----	-----	-----
40	CBC-40	CB-40	CH-30056-40	-----	CBC-40B	CBP-40	CH-30128-40	CBC-40HB	CH-30055-40
50	CBC-50	CB-50	CH-30056-50	-----	CBC-50B	CBP-50	-----	CBC-50HB	CH-30055-50
<b>24 Volts</b>									
10	-----	-----	CH-30171-10	-----	-----	-----	-----	-----	-----
15	-----	-----	CH-30171-15	-----	-----	-----	-----	-----	CH-30172-15
20	-----	-----	CH-30171-20	-----	-----	-----	-----	-----	CH-30172-20
30	-----	-----	-----	-----	-----	-----	-----	-----	CH-30172-30

### Standard Body - Non-Corrosive Plastic Housings



Amps	Crosswise Bracket		Lengthwise Bracket	
	Standard	Economy	Standard	Economy
15	CBP-15BA	-----	CBP-15B	-----
20	CBP-20BA	-----	CBP-20B	-----
25	CBP-25BA	-----	CBP-25B	-----
30	CBP-30BA	-----	CBP-30B	-----
35	-----	-----	CBP-35B	-----
40	CBP-40BA	-----	CBP-40B	-----
50	CBP-50BA	-----	CBP-50B	-----

### Narrow Profile - Metal Housings



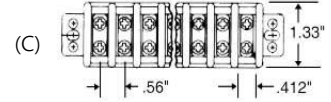
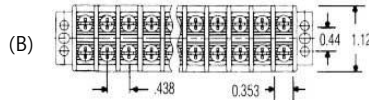
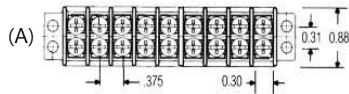
Amps	Narrow-No Bracket		Narrow-With Bracket	
	Standard	Economy	Standard	Economy
6	CBS-6	-----	-----	-----
10	CBS-10	CBS-10-CEC	CBS-MP10	-----
15	CBS-15	CBS-15-CEC	CBS-MP15	-----
20	CBS-20	CBS-20-CEC	CBS-MP20	-----
25	CBS-25	CBS-25-CEC	CBS-MP25	-----
30	CBS-30	CBS-30-CEC	CBS-MP30	-----
40	CBS-40	CBS-40-CEC	CBS-MP40	-----



# Terminal Blocks

## Double Row Terminal Blocks - Surface Mounted

**15 amp** and **20 amp** have a rating of 20 amp, 300 volts. They have #6-32 screws and #6 mounting screws. The **30 amp** have a rating of 30 amp, 600 volts. They have #8-32 screws and #8 mounting screws. 14-22 gauge wire range. UL listed and CSA certified. Screws are zinc-plated steel unless noted below.



Number of Poles	(A) 15 Amp				(B) 20 Amp				(C) 30 Amp			
	Overall Length	Zinc-Plated Steel Screws	Nickel-Plated Brass Screws	SS Screws	Overall Length	Zinc-Plated Steel Screws	Nickel-Plated Brass Screws	SS Screws	Overall Length	Zinc-Plated Steel Screws	Nickel-Plated Brass Screws	SS Screws
2	1.40"	TB-102	-----	-----	1.63"	TB-202	-----	-----	2.13"	TB-302	-----	-----
3	1.78"	TB-103	-----	-----	2.07"	TB-203	-----	-----	2.69"	TB-303	-----	-----
4	2.16"	TB-104	-----	-----	2.51"	TB-204	TB-204B	TB-204ST	3.25"	TB-304	TB-304B	-----
5	2.53"	TB-105	-----	-----	2.94"	TB-205	-----	-----	3.81"	TB-305	-----	-----
6	2.90"	TB-106	TB-106B	-----	3.38"	TB-206	TB-206B	-----	4.37"	TB-306	TB-306B	-----
7	3.28"	TB-107	-----	-----	3.82"	TB-207	-----	-----	4.94"	TB-307	-----	-----
8	3.66"	TB-108	-----	-----	4.25"	TB-208	TB-208B	TB-208ST	5.50"	TB-308	TB-308B	-----
9	-----	-----	-----	-----	4.69"	TB-209	-----	-----	6.06"	TB-309	-----	-----
10	4.40"	TB-110	-----	-----	5.13"	TB-210	TB-210B	-----	6.62"	TB-310	TB-310B	-----
11	-----	-----	-----	-----	5.13"	TB-211	-----	-----	7.18"	TB-311	-----	-----
12	5.16"	TB-112	TB-112B	-----	6.00"	TB-212	TB-212B	-----	7.75"	TB-312	TB-312B	-----
14	5.90"	TB-114	TB-114B	-----	6.87"	TB-214	TB-214B	-----	8.87"	TB-314	-----	-----
15	6.28"	-----	-----	-----	7.31"	-----	TB-215B	-----	-----	-----	-----	-----
18	7.40"	TB-118	-----	-----	8.62"	TB-218	-----	-----	11.12"	TB-318	-----	-----
20	8.16"	TB-120	TB-120B	-----	9.50"	-----	TB-220B	-----	12.24"	TB-320	TB-320B	-----
22	8.90"	TB-122	-----	-----	10.37"	TB-222	-----	-----	-----	-----	-----	-----
24	-----	-----	-----	-----	-----	-----	-----	-----	14.49"	TB-324	-----	-----

### Terminal Block Jumpers










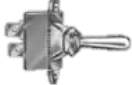






Use forks, rings and flat slip-ons to connect two circuits together.

Stud Size	Forks	Rings	Flat Slip-ons
15A	3712	OJ7	J101
20A	3812	OJ7	J201
30A	3910	3900	J301

## Low Voltage Automotive Switches

### SPST On/Off






Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features		
15	12	Screw (2)	1/2"	Toggle		Indicator Plate	2102	
50	12	Screw (2)	1/2"	Toggle		Indicator Plate	2150	
50	12	Blade (2)	1/2"	Toggle		Indicator Plate	2250	
15	12	Screw (2)	1/2"	Push/Pull		Ivory Knob	1811	
75	6-28	Screw (2)	5/8"	Push/Pull		High Amperage	1820 SWITCH	
10	12	12" Leads	5/8"	Push/Pull		PVC Coating	CH-M-606	
25	12	Screw (2)	15/32"	Toggle	Cole Hersee	"O" Ring Seal in Stem	CH-5520	
25	12	Screw (2)	15/32"	Toggle	Cole Hersee		CH-5582	
20	12	Screw (2)	15/32"	Toggle	Pollak		PLK-34-571P	
25	12	Blade (2)	15/32"	Toggle	Cole Hersee	"O" Ring Seal in Stem, Weatherproof	CH-55014-05	
25	12	Blade (2)	15/32"	Toggle	Cole Hersee		CH-55014	
20	12	Blade (2)	15/32"	Toggle	Pollak		PLK-34-571QP	
25	12	Blade (3)	1.45" x .83"	Rocker	Cole Hersee	Red Pilot Light	CH-58328-04	
25	12	8" Leads	15/32"	Toggle	Cole Hersee	Plasticized Housing, Weatherproof "O" Ring Seal in Stem	CH-5582-10	
20	12				Pollak	Plasticized Housing, with 8" Coated Leads	PLK-34-571C	
20	12	Blade (3)	1/2"	Toggle		Amber Pilot Light in Handle	2012A	
20	12	Blade (3)	1/2"	Toggle		Red Pilot Light in Handle	2012R	
20	12	Blade (2)	1/2"	Rocker		Red Pilot Light	2033	
20	12	Blade (3)	1/2" x 1"	Rocker		Amber Pilot Light	ROCK/PILOT-A	
20	12	Blade (3)	1/2" x 1"	Rocker		Blue Pilot Light	ROCK/PILOT-B	
20	12	Blade (3)	1/2" x 1"	Rocker		Green Pilot Light	ROCK/PILOT-G	
20	12	Blade (3)	1/2" x 1"	Rocker		Red Pilot Light	ROCK/PILOT-R	
-----	-----	-----	-----	-----		Easy Snap-On Housing, Surface Mounting	MTG/HOUSE	
<b>SPST Momentary</b>								
Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features		
20	6-12	Blade (2)	15/32"	Toggle		Momentary On/Off, Heavy duty	CH-551001	
10	12	Screw (2)	5/8"	Push Button		On/Momentary Off, Weather Proof, Sealed Case, "O" Ring Seal in Stem,	CH-90002	
10	12	Screw (2)	5/8"	Push Button		Identical to Above, Plus Sealed and Silver Contacts, Plasticized	CH-90002-01	
50	12		5/8"	Push Button		Off/Momentary On, Plastic Push Button, Rubber Cap	90031	
25	12	Screw (2)	15/32"	Toggle	Cole Hersee	Off/Momentary "O" Ring Seal in Stem	CH-55020	
20	12	Screw (2)	15/32"	Toggle	Pollak	Off/Momentary On, Extra Heavy Duty	PLK-34-570P	
25	12	8"Wires (2)	15/32"	Toggle	Cole Hersee	Off/Momentary On, Extra Heavy Duty Weather Sealed "O" Ring in Stem, All Dipped in PVC Coating	CH-55020-04	
35	12	Screw (2)	5/8"	Push Button	Cole Hersee	Off/Momentary on, Weather Resistant, Plastic Push Button, Rubber Cap	CH-90030	
35	12	Screw (2)	5/8"	Push Button	Cole Hersee	Off/Momentary on, Marine Construction, Plastic Push Button, Rubber Cap	CH-M-626-02	
70	12	Screw (2)	5/8"	Push Button	Cole Hersee	Off/Momentary on, Weather Resistant, Plastic Push Button, Rubber Cap	PLK-24-360P	

(Continued on following page)





# Switches

## Low Voltage Automotive Switches (Continued from previous page)


### SPDT Single Power Source to One of Two Circuits

	Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features	
	50	12	Screw (3)	1/2"	Toggle		On/Off/On, Chrome Handle, Silver Contacts	2159
	50	12	Screw (3)	1/2"	Toggle		Momentary On/Off/Momentary On, Chrome Handle, Silver Contacts	2160
	25	12	Screw (3)	15/32"	Toggle	Cole Hersee	On/On, Chrome Button/Face Nut	CH-5584
	20	12	Screw (3)	15/32"	Toggle	Pollak	On/On, Chrome Button/Face Nut	PLK-34-572P
	25	12	Blade (3)	15/32"	Toggle	Cole Hersee	On/Off/On, Extra Heavy Duty	CH-55016
	20	12	Blade (3)	15/32"	Toggle	Pollak	On/Off/On, Extra Heavy Duty	PLK-34-573QP
	25	12	Blade (3)	15/32"	Toggle	Cole Hersee	On/On, Chrome Button/Face Nut	CH-55015
	20	12	Blade (3)	15/32"	Toggle	Pollak	On/On, Chrome Button/Face Nut	PLK-34-572QP
	30	6-12	Screw (3)	15/32"	Toggle		On/Off/On, Extra Heavy Duty Silver Contacts, Die Cast Housing	CH-551842
	25	12	Blade (4)	1.45" x 0.83"	Rocker		On/Off/On, 2 Red Dual Pilot Lights Weather Resistant, Silver Contacts, Brass Blade Terminals	CH-58327-06




### SPDT Momentary

	Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features	
	25	12	Screw (3)	15/32"	Toggle		On/Off/Momentary On,	CH-55088
	25	12	Blade (3)	15/32"	Toggle	Cole Hersee	Momentary On/Off/Momentary On, Silver Contacts, Face Nut	CH-55033-01
	20	12	Blade (3)	15/32"	Toggle	Pollak	Momentary On/Off/Momentary On, Face Nut	PLK-34-575QP
	25	12	Screw (3)	15/32"	Toggle	Cole Hersee	Momentary On/Off/Momentary On, Face Nut, "O" Ring Seal in Stem	CH-55021-04
	15	24						
	10	36						
	25	12	8 Wires (2)	15/32"	Toggle	Cole Hersee	Momentary On/Off/Momentary On, Face Nut, "O" Ring Seal in Stem, 8" Leads, All Dipped in PVC Coating	CH-55021-07


### DPST Two Separate Circuits Turned On/Off at One Time

	Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features	
	25	12	Screw (4)	15/32"	Toggle	Cole Hersee	On/Off, Heavy Duty, Silver Contacts	CH-5588
	20	12	Screw (4)	15/32"	Toggle	Pollak	On/Off, Heavy Duty, Silver Contacts	PLK-34-574P
	25	12	Blade (4)	15/32"	Toggle	Cole Hersee	On/Off, Heavy Duty, Silver Contacts	CH-55017
	20	12	Blade (4)	15/32"	Toggle	Pollak	On/Off, Heavy Duty, Silver Contacts	PLK-34-574QP


### DPDT Two Power Sources Used to Power One of Two Pairs of Circuits

	Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features	
	25	12	Screw (6)	15/32"	Toggle	Cole Hersee	On/On	CH-5590
	25	12	Blade (6)	15/32"	Toggle	Cole Hersee	On/On	CH-55018
	20	12	Blade (6)	15/32"	Toggle	Pollak	On/On	PLK-34-576QP
	25	12	Screw (6)	15/32"	Toggle	Cole Hersee	On/Off/On	CH-5592
	20	12	Screw (6)	15/32"	Toggle	Pollak	On/Off/On	PLK-34-577P
	25	12	Blade (6)	15/32"	Toggle	Cole Hersee	On/Off/On	CH-55019
	20	12	Blade (6)	15/32"	Toggle	Pollak	On/Off/On	PLK-34-577QP
	25	12	Blade (6)	15/32"	Toggle	Cole Hersee	On/Off/On, Long Handle	CH-55057


### DPDT Momentary

	Amps	Volts	Terminals	Mounting Hole	Switch Type	Mfg.	Features	
	25	12	Screw (6)	15/32"	Toggle	Cole Hersee	Momentary On/Off/Momentary On	CH-55054
	20	12	Screw (6)	15/32"	Toggle	Pollak	Momentary On/Off/Momentary On	PLK-34-580P
	25	12	Blade (6)	15/32"	Toggle	Cole Hersee	Momentary On/Off/Momentary On	CH-55065-03
	20	12	Blade (6)	15/32"	Toggle	Pollak	Momentary On/Off/Momentary On	PLK-34-580QP

### SPDT Dimmers


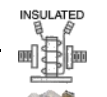




	Terminals	Mounting Hole	Mounting Location	Features	
	Blade (3)	(2) 9/32" Diameter Holes, 1 3/4" on Center.	On Floorboard	On/On, Depress-Release for Low Beam and Depress-Release for High Beam, Moisture-Repellent Insulators	CH-7762

### Pigtails



	Terminals	
	Pigtail to Fit CH-7762	CH-30155

## Solenoids, 12 Volt


### Continuous Duty - SPST, Normally Open, One Circuit: Off/On

Amps	Volts	Bracket Mounting Holes	Mfg.	Features		
85	12	5/16" x 19/32" on 2 13/64" Center	Cole Hersee	Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads	CH-24059	
85	12	5/16" x 19/32" on 2 13/64" Center	Cole Hersee	Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads	CH-24213	
85	12	5/16" x 19/32" on 2 13/64" Center	Cole Hersee	Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads	CH-24063	
85	12	5/16" x 19/32" on 2 13/64" Center	Pollak	Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads.	PLK-52-307P	
85	12	5/16" x 19/32" on 2 13/64" Center	Pollak	Large studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads.	CH-24115	
85	12	Curved Bracket, 5/16" x 19/32" on 2 13/64" Center		Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads.	CH-24082	
110	12	5/16" x 19/32" on 2 13/64" Center		Use as heavy current remote battery isolator. Very little heat due to coil de-energizing.	CH-24200	
225	12	5/16" x 19/32" on 2 13/64" Center		Large studs have copper 5/16"-24 threads. Heavy duty.	CH-24812	

### Continuous Duty - DPST, Normally Open Contacts

85	12	5/16" x 19/32" on 2 13/64" Center	Cole Hersee	Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads	CH-24401	
85	12	5/16" x 19/32" on 2 13/64" Center		Studs have copper 5/16"-24 threads. Coil, ignition, and ground terminals have steel 10-32 threads. Grounded	CH-24106	

### Intermittent Duty - SPST, One Circuit: Off/On

750/100	12	5/16" x 19/32" on 2 13/64" Center		Contacts and terminals are copper. Small ignition and ground terminals have 10-32 Threads. Large terminals have 5/16"-24 threads. Phenolic/Plated Steel Housing.	CH-24022	
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## Miscellaneous Switches













Amps	Volts	Terminals	Mounting Hole	Mfg.	Switch Type	Features	
15	12	Screw (4)	1/2" - 20, 1.25" Long	Cole Hersee	Rotary	Silver Contacts, Spring Return to Off from Both Directions, Plated Steel Case	CH-90005-01
-----	-----	-----	-----	Cole Hersee	-----	Rubber Boot for Toggle Switch with Brass Nut, O-Ring Seal on Nut, Covers Toggle for 15/32"-32 Thread	CH-81264
-----	-----	-----	-----	Pollak	-----	Rubber Boot for Toggle Switch with Brass Nut, O-Ring Seal on Nut, Covers Toggle for 15/32"-32 Thread	PLK-25-370P
5	12		0.800-0.850" Diameter		Plunger	Compact Push-Button Switch for Momentary Grounding, Normally On/ Push to Momentary Off/Spring to On, Molded Plastic, Plunger 9/16" Long	CH-9075
5	12		45/64" Body Diameter		Plunger	Momentary Door Switch, Off With Plunger Depressed/Spring to On, With Faceplate, Plated Steel Case, Plunger 7/16"	CH-9087
5	12		Mounting Center 2 1/16"		Push Button	Fog Horn and Siren Switch, Momentary On/Off, Surface Mount Only, 1 5/8" Diameter	3930
20	12	Screw (2)	3/4" Diameter	Cole Hersee	Rotary	Master Disconnect Switch, On/Off, Copper Contacts, Plated Steel Case	CH-2484
20	12	Screw (2)	3/4" Diameter	Cole Hersee	Rotary	Master Disconnect Switch, On/Off, Silver Contacts, Plated Steel Case	CH-2484-16
20	12	Screw (2)	3/4" Diameter	Cole Hersee	Rotary	Master Disconnect Switch, On/Off, Silver Laminated Contacts, Plated Steel Case	CH-M-284
10	12-24			Cole Hersee	Ignition	3 Position Key Switch, Off/Ign-Acc/Start Removal Key with Boot	CH-95060-03
10	12-48			Cole Hersee	Ignition	4 Position Key Switch, Acc/Off/Ign-Acc/Start Spring Return to Off, Removal Key with Boot	CH-95060-23

# Relays, Switch Kit, Flashlights & Batteries


## Relays

Automotive relays are switches that use electrical current rather than a mechanical switch, to open and close circuits. Five 1/4" tabs mate with sockets or relay blocks. Max inrush current of 150 amps.

### SPDT (Single Pole Double Throw)


			Volts	Amps	Hella #	Descriptions	
			12	40	87401		RLY30
			24	20	87115	Resistor, High Temperature	24V-RLY20
			12	40	87423	Resistor	RLY40
			12	50	87429	Potted with Resistor	RLY50
			12	30	49400	Resistor, Mounting Bracket	RLY30MB
			12	40	87420	Resistor, Mounting Bracket	RLY40MB
			12	20/40	87499	Mounting Bracket	87499

### Relay Block




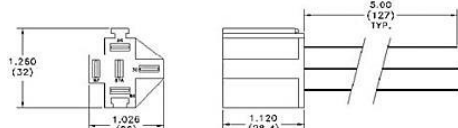
**Description**  
Mini 5 Terminal Harness Connector with Lock, Interlocking Bodies Can Be Put in Series, Fits All Relays Here

### Relay Block Terminals



Wire Size (AWG)	
<b>Metri-Pack 630, Unsealed</b>	
22-18	12015869
16-14	12015870
12-10	12084590

### Prewired Relay Sockets

**Description**  
Fits All Relays Above, 5" Leads  
2 14 Gauge (coil) Wires: (1) Blue and (1) Yellow  
3 12 Gauge (Contact) Wires: (1) White, (1) Black and (1) Red

### Switch Kit

This kit contains 11 different switches, a total of 56 pieces. It also includes a snap-on housing. Comes in a large metal box, 18" w x 12" d x 3" h.




Part #  
SWITCH KIT

### Kit

Contains	Description	Qty.	(Cont.)	Description	Qty.
1820	On-Off (SPST) Push/Pull	3	2012R	On-Off (SPST) Toggle Pilot Light	5
2102	On-Off (SPST) Toggle	5	2012A	On-Off (SPST) Toggle Pilot Light	5
2150	On-Off (SPST) Toggle	3	ROCK/PILOT-R	On-Off (SPST) Rocker Pilot Light	5
2159	On-Off-On (SPDT) Toggle	3	ROCK/PILOT-A	On-Off (SPST) Rocker Pilot Light	5
2160	Mom On-Off-Mom On (SPDT) Toggle	3	MTG/HOUSE	Housing	10
90031	Off-Mom On (SPST) Push Button	3	1811	On-Off (SPST) Push/Pull	3
2033	Red On-Off (SPST) Rocker Pilot Light	3			

### Warning Light and Buzzer



This universal warning light and buzzer can be used with any electrical switch. Red lens and long-life LED bulb. 11/16" diameter mounting stem, 17/32" long.

Voltage	Size	
12	1 7/8" L x 1" W x 1 11/32" H	CH-4112-RC000


### Flashlights

#### LED Flashlights - 2 D Batteries

This LED flashlight is 10 times brighter than our incandescent flashlight and has an indestructible bulb. The batteries also last four times longer than with a standard incandescent bulb. Buy 96 and have your information imprinted on the flashlights free.

Color	Feature	Part Number
Yellow Body with Black Trim	Magnetic Base	FL-LED


#### Mini LED Flashlights - 3 AAA Batteries



Body color	LEDs	Features	Part Number
Black	14		FL-14L-B
Silver	32		FL-32L
Black	10	Laser Pointer	FL-10/5/LASER


#### Upgrade-to-LED Flashlight Bulbs

Converts any standard flashlight to a LED flashlight with this LED bulb. The LED bulb will make your flashlight 10 times as bright and last 5 times longer. They are shock and vibration resistant. 2-3 VDC.




Description	Part Number
LED bulbs for standard flashlights	LED-BULB

#### Incandescent Flashlights - 2 D Batteries



Trim color	Features	Part Number
<b>Yellow body</b>		
Blue Trim	Magnetic Base	FL-M
Black Trim	Spare Bulb in Holder	FL-Yellow

### Duracell Batteries



	Pkg.	Qty.		Pkg.	Qty.		Pkg.	Qty.		Pkg.	Qty.
AAA-ALK	2	AA-ALK	4	D-ALK	12	9V-ALK	1	6V-ALK-SPRING	1		
AAA-ALK	4	C-ALK	12	D-HD	12	6V-ALK-SCREW	1	6V-LANTERN	1		

**Tape**

Electrical Tape 84  
 Duct Tape 84  
 Hook and Loop 84  
 Specialty Tapes & Adhesives 85

**Heat-Shrink Tubing**

Standard (2-1) 86  
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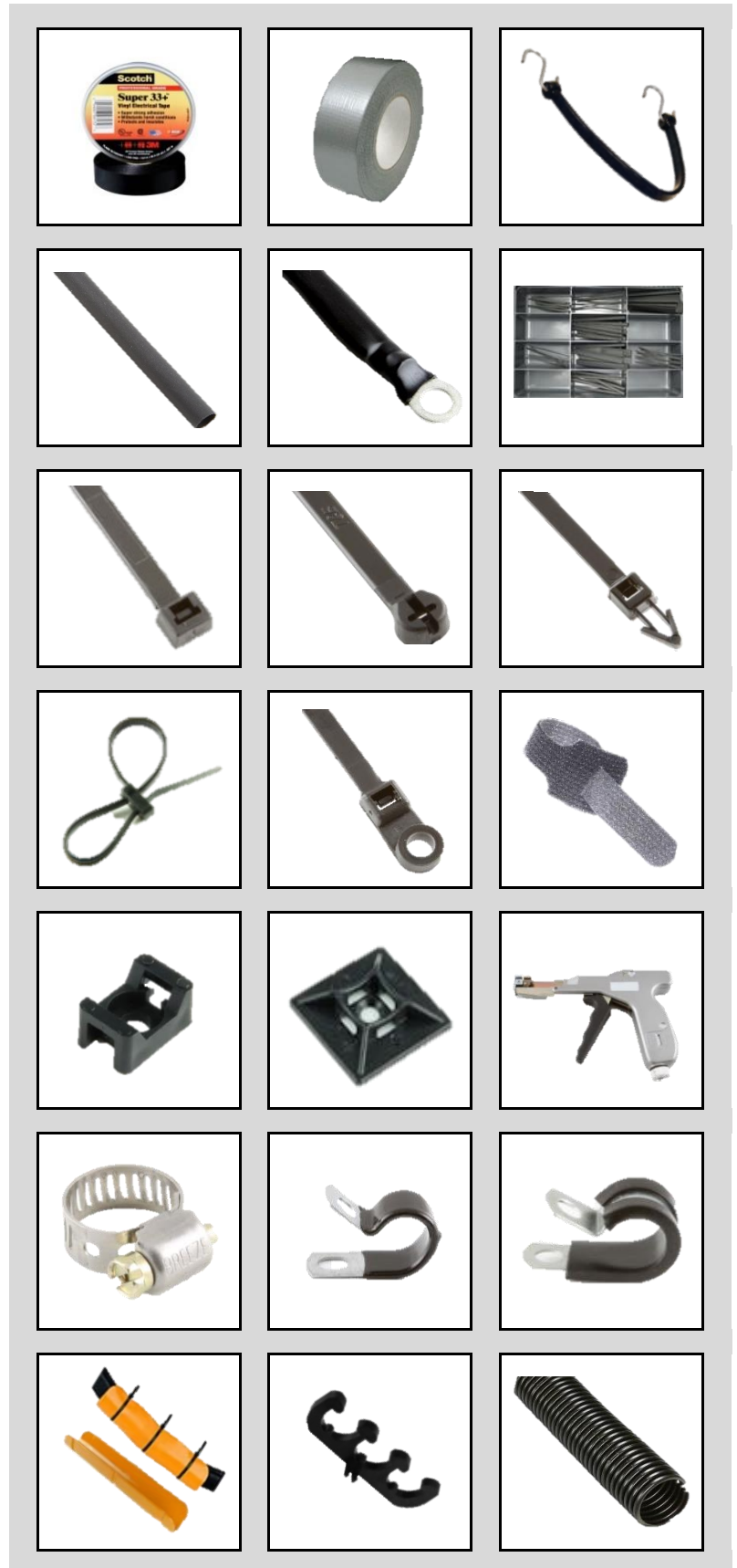
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# Electrical Tape, Duct Tape & Hook and Loop

## Electrical Tape

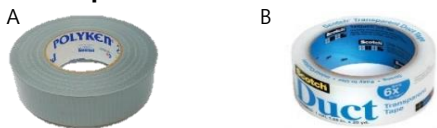
Our economical (A) **ET-66UL** electrical tapes offers all of the benefits of more expensive tapes, but without the name brand.

Our 3M (C) **ST-33**, (D) **ST-35**, and (E) **ST-88** electrical tapes are the most popular and trusted tapes on the market. (C) **ST-33** tape handles 90% of applications and installations in both hot and cold environments. Use (D) **ST-35** to color-code electrical installations and repairs. Often used in harsh environments and on critical equipment, (E) **ST-88** is thicker than standard electrical tape allowing it to last longer and better handle abrasion.



	Width	Length	Color	Thickness	Approval	Feature	Part Number
(A)	3/4"	66'	Black	7 Mil	UL Listed	Economical	ET-66UL
(A)	3/4"	66'	White	7 Mil	UL Listed	Economical	ET-66UL-W
(B)	3/4"	60'	Black	7 Mil	UL Listed	Economical	1700-TAPE
(C)	3/4"	66'	Black	7 Mil	UL Listed	All Weather	ST-33
(C)	3/4"	44'	Black	7 Mil	UL Listed	All Weather	ST-33S
(D)	3/4"	66'	Blue	7 Mil	UL Listed	All Weather	ST-35-BLUE
(D)	3/4"	66'	Brown	7 Mil	UL Listed	All Weather	ST-35-BROWN
(D)	3/4"	66'	Gray	7 Mil	UL Listed	All Weather	ST-35-GRAY
(D)	3/4"	66'	Green	7 Mil	UL Listed	All Weather	ST-35-GRN
(D)	3/4"	66'	Orange	7 Mil	UL Listed	All Weather	ST-35-ORANGE
(D)	3/4"	66'	Pink	7 Mil	UL Listed	All Weather	ST-35-PINK
(D)	3/4"	66'	Red	7 Mil	UL Listed	All Weather	ST-35-RED
(D)	3/4"	66'	Violet	7 Mil	UL Listed	All Weather	ST-35-VIOLET
(D)	3/4"	66'	White	7 Mil	UL Listed	All Weather	ST-35-WHITE
(D)	3/4"	66'	Yellow	7 Mil	UL Listed	All Weather	ST-35-YELLOW
(E)	3/4"	66'	Black	8.5 Mil	UL Listed	Heavy Duty	ST-88
(F)	3/4"	30'	Black	30 Mil	-----	High Voltage Super-Duty Self-Fusing	130C
(F)	1"	30'	Black	30 Mil	-----	High Voltage Super-Duty Self-Fusing	130C-1
(G)	1"	30'	Black	30 Mil	RoHS	Same as 130C, but with Peel off Liner	23-130
(H)	1/2"	66'	White	7 Mil	UL Listed	High Temperature, 266°F	ET-2712
(H)	3/4"	66'	White	7 Mil	UL Listed	High Temperature, 266°F	ET-2734
(I)	1/2"	66'	White	7 Mil	UL Listed	Super High Temperature, 356°F	69-TAPE

## Duct Tape

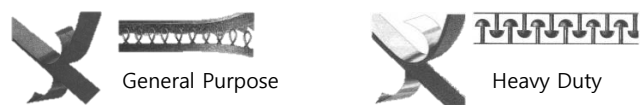


Classic duct tape handles just about any job. Super sticky, this tape will stand the test of time, even in wet environments.

This transparent duct tape makes repairs less obvious. Use like classic duct tape in tough conditions.

	Width	Length	Color	Thickness	Feature	Part Number
(A)	2"	60 yards	Silver	11 Mil	Super Adhesive	DT-60
(A)	2"	60 yards	Black	11 Mil	Super Adhesive	DT-60 BLACK
(B)	2"	20 yards	Clear	5.4 Mil	Heavy Duty, Last 6 Times Longer	DT-CLEAR

## Hook and Loop



**General purpose** hook and loop has rubber adhesive. Pull the straps apart by hand. The hook side has tiny stiff hooks and the loop side is covered with pliable loops.

**Heavy duty** hook and loop has a pressure sensitive adhesive. It has dual lock reclosable fasteners, that are constructed of nylon stems with a mushroom shaped tops. This construction offers five times the strength of general purpose Velcro.

Both styles are black, have a temperature range of -20°F to 120°F, and are 1" wide.

Orientation	General Purpose	Heavy Duty	Pkg. Qty.
Hook	V-HOOK	V-HD/HOOK	1 foot
Loop	V-LOOP	V-HD/LOOP	1 foot

(Continued on following page)

# Tapes, Spray Cleaners, Conspicuity Tape & Rubber Straps

## Specialty Tape

### Cambric Tape

Width	Length	Color	Feature	Part Number
3/4"	60'	Yellow	Excellent Dielectric Strength, Non Corrosive Adhesive, 220°F, 7 Mil	2520-TAPE
1"	60'	Yellow	Excellent Dielectric Strength, No Adhesive, 220°F, 7 Mil	VCT-1x108



### Shrink Tubing in a Tape Form

Width	Length	Feature	Color	Part Number
1"	10'	Ideal for Underground Applications, Sets in Seconds, and, Cures in Hours, 266°F, Ethylene Propylene Rubber, Requires No Heat, Insulates, and Bundles, Forms a Solid Shrink Tubing for Odd Shapes	Black	S-TAPE-BK
			White	S-TAPE-W
1"	10'	Forms a Permanent Air and Water Seal, Extreme Temperatures 500°F to -60°F, Silicone Wrap Adheres to Itself, No Adhesive, Stretches 3 Times its Length, Rated 8,000 volts and 600 PSI	Black	XS-TAPE-BK
			Gray	XS-TAPE-GY
			Red	XS-TAPE-R
			Green	XS-TAPE-GR
			Blue	XS-TAPE-BL
			Orange	XS-TAPE-O
			Clear	XS-TAPE-CL
			White	XS-TAPE-W
		Yellow	XS-TAPE-Y	



### Friction Tape

Width	Length	Color	Feature	Part Number
3/4"	60'	Black	Good Protection Against Abrasion, Penetration of Cables, Splices, and Wire, Fabric Feel, 1500 Volt Dielectric Strength	F-TAPE



### Corrosion Protection Tape

Width	Length	Color	Feature	Part Number
2"	100'	Black	Tough PVC with High-Tack Adhesives, Resists Corrosion of Metal Piping Resistant to Impact, Abrasions, and Punctures	50-TAPE



1 1/2"	60'	Black	Scotchfil™, Soft and Pliable, Use as Build-Up Compound on Irregular Surfaces to Provide a Smooth, Waterproof Taping Surface, 176°F, 125 Mil	SCTCH INS PUTTY
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### Sealing and Insulating Tape

Width	Length	Color	Feature	Part Number
2 1/2"	10'	Black	Protects against Moisture, Vibration, Grime, and Abrasion, Self-Fusing Rubber-Based Thin Insulating Mastic Compound Laminated to a PVC Backing	6147



6 1/2"	4 1/2"	Black	Rubber/PVC, All Weather, Resistant to Abrasion, Acids, UV, and Moisture, 176°F, 125 Mil	2200 MASTIC PAD
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### Pipe Thread Tape

Width	Length	Color	Feature	Part Number
1/4"	43'	White	Teflon Tape, Leak Proof Joints, Mil Spec Approved	TEF-520-1/4
1/2"	43'	White	Teflon Tape, Leak Proof Joints, Mil Spec Approved	TEF-520
3/4"	43'	White	Teflon Tape, Leak Proof Joints, Mil Spec Approved	TEF-520-3/4



### Carton Sealing Tape

Width	Length	Color	Feature	Part Number
2"	110 yards	Clear	Package Sealing Tape, 20 lb. Tensile Strength	CST



## Brush-On Electrical Tape

Liquid spreadable tape comes in a 4oz can with a brush in the top. Protects, waterproofs, and seals.

Part # L-TAPE



## Spray Cleaners

Contact cleaner removes oils, light grease, particulates, and silicones. It is fast drying, non-corrosive and non-flammable, safe for plastics, metals, electrical components, and live circuits. Odorless. 11oz spray can.

Part # 3M-CONTACT



Electronic degreaser removes oils, silicones, grease and light soiling. It is fast drying, non-corrosive and non-flammable, safe for most metals and most plastics. It is odorless and comes in a 12oz spray can.

Part # 3M-DEGREASER



## Reflective Tape - Conspicuity Tape

Conspicuity tape has a prismatic design, to mark the sides and rear of vehicles for greater visibility. This tape has pressure-sensitive adhesive back and paper liner.

DOT-C2 approved. Durable, impact and solvent resistant.



Color	Print Pattern	Width	Length	Part Number
Silver/Red	7"/11"	2"	150'	GR-41160

## Rubber Straps

The high density nylon rubber straps are ultraviolet resistant. The hooks are made of galvanized steel for extra strength.

Strap Length	Maximum Stretch	Part Number
10"	14"	RS-10
15"	22"	RS-15
21"	31"	RS-21
31"	46"	RS-31
41"	61"	RS-41





# Heat Shrink Tubing

## Standard Heat Shrink Tubing (2 to 1)



Polyolefin is the most popular style of shrink tubing. With a 2 to 1 shrink ratio, it heats evenly, doesn't bubble or split, and is self-extinguishing. It also offers greater flexibility. Maximum temperature of 275°F.

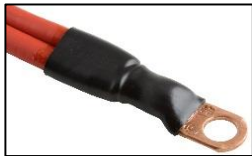
Meets UL 224, CSA 198.1 and MIL-I-23053/5.

Color	4-ft. Lengths	100-ft. Spools
<b>3/64" ID Before Shrink, 1/64" ID After Shrink</b>		
Black	X221-3/64	X221-3/64-SPL
Clear	X221-3/64-C	X221-3/64-C-SPL
Green	X221-3/64-GRN	X221-3/64-GN-SP
Red	X221-3/64-R	X221-3/64-R-SPL
White	X221-3/64-W	X221-3/64-W-SP
Yellow	X221-3/64-Y	X221-3/64-Y-SPL
<b>1/16" ID Before Shrink, 1/32" ID After Shrink</b>		
Black	X221-1/16	X221-1/16-SPL
Blue	X221-1/16-BLUE	X221-1/16-BL-SP
Clear	X221-1/16-C	X221-1/16-C-SPL
Green	X221-1/16-GRN	X221-1/16-GN-SP
Red	X221-1/16-R	X221-1/16-R-SPL
White	X221-1/16-W	X221-1/16-W-SPL
Yellow	X221-1/16-Y	X221-1/16-Y-SPL
<b>3/32" ID Before Shrink, 3/64" ID After Shrink</b>		
Black	X221-3/32	X221-3/32-SPL
Blue	X221-3/32-BLUE	X221-3/32BLU-SP
Clear	X221-3/32-C	X221-3/32-C-SPL
Red	X221-3/32-R	X221-3/32-R-SPL
White	X221-3/32-W	X221-3/32-W-SPL
Yellow	X221-3/32-Y	X221-3/32-Y-SPL
<b>1/8" ID Before Shrink, 1/16" ID After Shrink</b>		
Black	X221-1/8	X221-1/8-SPL
Blue	X221-1/8-BLUE	X221-1/8BLUE-SP
Clear	X221-1/8-C	X221-1/8-C-SPL
Green	X221-1/8-GRN	X221-1/8-GRN-SP
Orange	X221-1/8-OR	X221-1/8-OR-SPL
Red	X221-1/8-R	X221-1/8-R-SPL
White	X221-1/8-W	X221-1/8-W-SPL
Yellow	X221-1/8-Y	X221-1/8-Y-SP
<b>3/16" ID Before Shrink, 3/32" ID After Shrink</b>		
Black	X221-3/16	X221-3/16-SPL
Blue	X221-3/16-BLUE	X221-3/16BLUE-S
Clear	X221-3/16-C	X221-3/16-C-SPL

Color	4-ft. Lengths	100-ft. Spools
<b>3/16" ID Before Shrink, 3/32" After Shrink</b>		
(Cont.)		
Green	X221-3/16-GRN	X221-3/16-GN-SP
Orange	X221-3/16-OR	X221-3/16-OR-SP
Red	X221-3/16-R	X221-3/16-R-SPL
White	X221-3/16-W	X221-3/16-W-SPL
Yellow	X221-3/16-Y	X221-3/16-Y-SPL
<b>1/4" ID Before Shrink, 1/8" After Shrink</b>		
Black	X221-1/4	X221-1/4-SPL
Blue	X221-1/4-BLUE	X221-1/4BLUE-SP
Clear	X221-1/4-C	X221-1/4-C-SPL
Green	X221-1/4-GRN	X221-1/4-GRN-SP
Gray	X221-1/4-GY	X221-1/4-GY-SPL
Red	X221-1/4-R	X221-1/4-R-SPL
White	X221-1/4-W	X221-1/4-W-SPL
Yellow	X221-1/4-Y	X221-1/4-Y-SPL
<b>5/16" ID Before Shrink, 5/32" ID After Shrink</b>		
Black	X221-5/16	X221-5/16-SPL
<b>3/8" ID Before Shrink, 3/16" ID After Shrink</b>		
Black	X221-3/8	X221-3/8-SPL
Blue	X221-3/8-BLUE	X221-3/8BLUE-SP
Clear	X221-3/8-C	X221-3/8-C-SPL
Green	X221-3/8-GRN	X221-3/8-GRN-SP
Red	X221-3/8-R	X221-3/8-R-SPL
White	X221-3/8-W	X221-3/8-W-SPL
Yellow	X221-3/8-Y	X221-3/8-Y-SPL
<b>1/2" ID Before Shrink, 1/4" ID After Shrink</b>		
Black	X221-1/2	X221-1/2-SPL
Blue	X221-1/2-BLUE	X221-1/2BLUE-SP
Clear	X221-1/2-C	X221-1/2-C-SPL
Green	X221-1/2-GRN	X221-1/2-GRN-SP
Red	X221-1/2-R	X221-1/2-R-SPL
White	X221-1/2-W	X221-1/2-W-SPL
Yellow	X221-1/2-Y	X221-1/2-Y-SPL

Color	4-ft. Lengths	100-ft. Spools
<b>5/8" ID Before Shrink, 5/16" ID After Shrink</b>		
Black	X221-5/8	X221-5/8-SPL
Red	X221-5/8-R	X221-5/8-R-SPL
White	X221-5/8-W	X221-5/8-W-SPL
<b>3/4" ID Before Shrink, 3/8" ID After Shrink</b>		
Black	X221-3/4	X221-3/4-SPL
Blue	X221-3/4-BLUE	X221-3/4BLUE-SP
Clear	X221-3/4-C	X221-3/4-C-SPL
Green	X221-3/4-GRN	X221-3/4-GRN-SP
Red	X221-3/4-R	X221-3/4-R-SPL
White	X221-3/4-W	X221-3/4-W-SPL
Yellow	X221-3/4-Y	X221-3/4-Y-SPL
<b>1" ID Before Shrink, 1/2" ID After Shrink</b>		
Black	X221-1	X221-1-SPL
Blue	X221-1-BLUE	X221-1-BLUE-SPL
Clear	X221-1-C	X221-1-C-SPL
Green	X221-1-GRN	X221-1-GRN-SPL
Red	X221-1-R	X221-1-R-SPL
White	X221-1-W	X221-1-W-SPL
Yellow	X221-1-Y	X221-1-Y-SPL
<b>1 1/4" ID Before Shrink, 5/8" ID After Shrink</b>		
Black	X221-1-1/4	X221-1-1/4-SPL
<b>1 1/2" ID Before Shrink, 3/4" ID After Shrink</b>		
Black	X221-1-1/2	X221-1-1/2-SPL
Blue	X221-1-1/2-BLUE	X221-1-1/2BL-SP
Clear	X221-1-1/2-C	X221-1-1/2-C-SPL
<b>2" ID Before Shrink, 1" ID After Shrink</b>		
Black	X221-2	X221-2-SPL
Clear	X221-2-C	X221-2-C-SPL
Red	X221-2-RED	X221-2-RED-SPL
White	X221-2-W	X221-2-W-SPL
<b>3" ID Before Shrink, 1 1/2" ID After Shrink</b>		
Black	X221-3	X221-3-SPL
<b>4" ID Before Shrink, 2" ID After Shrink</b>		
Black	X221-4	X221-4-SPL

## Heavy Duty Adhesive-Lined Heat Shrink Tubing (3 to 1)



Use this heavy wall shrink tubing in the harshest of applications, including direct burial, submersible, corrosive, severe mechanical, and high voltage jobs. Adhesive lining allows the shrink tubing to attach itself to the wire or terminal it is encapsulating, giving it a watertight seal. The high shrink ratio (3 to 1) enables easy bridging and encapsulation of odd shaped connectors or applications. Polyolefin is the standard-bearer in the shrink tubing market. It heats evenly, doesn't bubble or split, and is self-extinguishing. Install with a butane torch or heat gun.

Maximum temperature of 230°F. Meets MIL-I-23053/15 Class 1, AMS-DTL-23053/15, UL 486D (rated for direct burial), UL 224, VW-1.

ID Before Shrink	ID After Shrink	Color	6" Lengths	4-ft. Lengths
5/16"	1/16"	Black	X700-3B	X700-3B-4
5/16"	1/16"	Red	X700-3R	X700-3R-4
3/8"	1/8"	Black	X700-3/8B	X700-3/8B-4
3/8"	1/8"	Black	X700-4B	X700-4B-4
3/8"	1/8"	Red	X700-4R	X700-4R-4
1/2"	3/16"	Black	X700-5B	X700-5B-4
1/2"	3/16"	Red	X700-5R	X700-5R-4

ID Before Shrink	ID After Shrink	Color	1-ft. Lengths	4-ft. Lengths
3/4"	1/4"	Black	X700-7B	X700-7B-4
3/4"	1/4"	Red	X700-7R	X700-7R-4
1 1/8"	5/16"	Black	X700-11B	X700-11B-4
1 1/8"	5/16"	Red	X700-11R	X700-11R-4
1 3/8"	1/2"	Black	X700-14B	X700-14B-4
1 1/2"	1/2"	Black	X700-15B	X700-15B-4
1 1/2"	1/2"	Red	X700-15R	X700-15R-4
2"	5/8"	Black	X700-20B	X700-20B-4
2"	5/8"	Red	X700-20R	X700-20R-4
3 3/4"	1 1/8"	Black	X700-35B	X700-35B-4
4 1/2"	1 1/2"	Black	X700-4.50B	X700-4.50B-4
5"	1 5/8"	Black	X700-5.00B	X700-5.00B-4
7"	2 3/8"	Black	X700-7.00B	X700-7.00B-4

## Adhesive-Lined Heat Shrink Tubing (3 to 1)

Adhesive lining allows the shrink tubing to attach itself to the wire or terminal, giving it a watertight seal. Use this shrink tubing in applications that need shelter from the elements or contaminants. The high shrink ratio (3 to 1) enables easy bridging and encapsulation of odd shaped connectors or applications. The medium wall heats evenly, doesn't bubble or split, and is self-extinguishing. Install with a butane torch or heat gun. Maximum temperature of 230°F.

Meets MIL-I-23053/4 Class 3, AMS-DTL 23053, UL 224, VW-1, and CSA OFT Recognized.



Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>1/8" ID Before Shrink, 1/32" ID After Shrink</b>			
Black	X750-1/8	-----	X750-1/8-4
Blue	X752-1/8-BL	-----	X752-1/8-BL-4
Clear	X751-1/8-CLEAR	-----	X751-1/8CLEAR-4
Green	X752-1/8-GN	-----	X752-1/8-GN-4
Red	X750-1/8R	-----	X750-1/8R-4
White	X752-1/8-W	-----	X752-1/8-W-4
Yellow	X752-1/8-Y	-----	X752-1/8-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>3/16" ID Before Shrink, 3/64" ID After Shrink</b>			
Black	X750-3/16	-----	X750-3/16-4
Blue	X752-3/16-BL	-----	X752-3/16-BL-4
Clear	X751-3/16-CLEAR	-----	X751-3/16-CLR-4
Green	X752-3/16-GN	-----	X752-3/16-GN-4
Red	X750-3/16R	-----	X750-3/16R-4
White	X752-3/16-W	-----	X752-3/16-W-4
Yellow	X752-3/16-Y	-----	X752-3/16-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>1/4" ID Before Shrink, 3/32" ID After Shrink</b>			
Black	X750-1/4	-----	X750-1/4-4
Blue	-----	X752-1/4-BL	X752-1/4-BL-4
Clear	X751-1/4-CLEAR	-----	X751-1/4CLEAR-4
Green	-----	X752-1/4-GN	X752-1/4-GN-4
Red	X750-1/4R	-----	X750-1/4R-4
White	-----	X752-1/4-W	X752-1/4-W-4
Yellow	-----	X752-1/4-Y	X752-1/4-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>3/8" ID Before Shrink, 1/8" ID After Shrink</b>			
Black	X750-3/8	-----	X750-3/8-4
Blue	-----	X752-3/8-BL	X752-3/8-BL-4
Clear	X751-3/8-CLEAR	-----	X751-3/8CLEAR-4
Green	-----	X752-3/8-GN	X752-3/8-GN-4
Red	X750-3/8R	-----	X750-3/8R-4
White	-----	X752-3/8-W	X752-3/8-W-4
Yellow	-----	X752-3/8-Y	X752-3/8-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>1/2" ID Before Shrink, 5/32" ID After Shrink</b>			
Black	X750-1/2	-----	X750-1/2-4
Blue	-----	X752-1/2-BL	X752-1/2-BL-4
Clear	X751-1/2-CLEAR	-----	X751-1/2CLEAR-4
Green	-----	X752-1/2-GN	X752-1/2-GN-4
Red	X750-1/2R	-----	X750-1/2R-4
White	-----	X752-1/2-W	X752-1/2-W-4
Yellow	-----	X752-1/2-Y	X752-1/2-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>3/4" ID Before Shrink, 1/4" ID After Shrink</b>			
Black	X750-3/4	-----	X750-3/4-4
Blue	-----	X752-3/4-BL	X752-3/4-BL-4
Clear	X751-3/4-CLEAR	-----	X751-3/4CLEAR-4
Green	-----	X752-3/4-GN	X752-3/4-GN-4
Red	X750-3/4R	-----	X750-3/4R-4
White	-----	X752-3/4-W	X752-3/4-W-4
Yellow	-----	X752-3/4-Y	X752-3/4-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>1" ID Before Shrink, 5/16" ID After Shrink</b>			
Black	-----	X750-1	X750-1-4
Blue	-----	X752-1-BL	X752-1-BL-4
Clear	-----	X751-1-CLEAR	X751-1-CLEAR-4
Green	-----	X752-1-GN	X752-1-GN-4
Red	-----	X750-1R	X750-1R-4
White	-----	X752-1-W	X752-1-W-4
Yellow	-----	X752-1-Y	X752-1-Y-4

Color	6" Lengths	1-ft. Lengths	4-ft. Lengths
<b>1 1/2" ID Before Shrink, 1/2" ID After Shrink</b>			
Black	-----	X750-1-1/2	X750-1-1/2-4
Clear	-----	X751-1-1/2-CL	X751-1-1/2-CL-4
Red	-----	X750-1-1/2R	X750-1-1/2R-4

## Adhesive-Lined Black Heat Shrink Tubing for Odd Shapes (4 to 1)

With a 4 to 1 shrink ratio, this shrink tubing can encapsulate just about any odd shape you may need to permanently seal off from the environment. Adhesive lining allows the shrink tubing to attach itself to the wire or terminal for a watertight seal. Use this shrink tubing in applications that need shelter from the elements or contaminants. This medium wall heats evenly, doesn't bubble or split, and is self-extinguishing. It also offers greater flexibility than PVC shrink tubing. Install with a butane torch or heat gun. Maximum temperature of 230°F.

Meets MIL-I-23053/4 Class 3, UL 224 600V, 125 Degree C, VW-1, CSA OFT Recognized.



ID Before Shrink	ID After Shrink	1-ft. Lengths	4-ft. Lengths
5/32"	1/32"	X450-5/32	X450-5/32-4
5/16"	1/16"	X450-5/16	X450-5/16-4
1/2"	1/8"	X450-1/2	X450-1/2-4
5/8"	5/32"	X450-5/8	X450-5/8-4
1"	1/4"	X450-1	X450-1-4
1 1/4"	5/16"	X450-1-1/4	X450-1-1/4-4
2"	1/2"	X450-2	X450-2-4

## Color-Coded Adhesive-Lined Heat Shrink Tubing (3 to 1)

The translucent color tint is matched to the terminal it can encapsulate: red for 22-18 gauge terminals, blue 16-14 gauge terminals and yellow 12-10 gauge terminals. Wire gauges are imprinted on the exterior of the shrink tubing. The clarity allows you to see inside while installing or maintaining. Adhesive lining allows the shrink tubing to attach itself to the wire or terminal, giving it a watertight seal. The high shrink ratio (3 to 1) enables easy bridging and encapsulation of odd shaped connectors or applications. Maximum temperature of 230°F. Meets MIL-DTL-23053/4 and UL E157227.



ID Before Shrink	ID After Shrink	Color	6" Lengths	4-ft. Lengths
<b>For 22-18 Ga. Terminals</b>				
1/8"	1/32"	Clear Red	ST-RED	ST-RED-4
<b>For 16-14 Ga. Terminals</b>				
1/4"	5/64"	Clear Blue	ST-BLUE	ST-BLUE-4
<b>For 12-10 Ga. Terminals</b>				
3/8"	1/64"	Clear Yellow	ST-YELLOW	ST-YELLOW-4

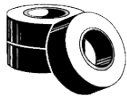
# Heat Shrink Tubing and Kits, Hose Clamp Kit & Hose Clamp Racks

## Economy Heat Shrink Tubing (2 to 1)

This economical PVC shrink tubing is not as easy to install as polyolefin, but it does offer better resistance to chemicals and has a tougher outer layer. It also stands up better to direct sunlight. Offers a 2 to 1 shrink ratio and maximum temperature of 221°F. Meets MIL-I-23053/2, MIL-DTL-2 CLASS 2, UL 224 VW-1, and CSA OFT Recognized.

ID Before Shrink	ID After Shrink	Color	Part Number	Pkg. Qty.	ID Before Shrink	ID After Shrink	Color	Part Number	Pkg. Qty.
3/64"	1/64"	Black	X105-3/64	100-ft. Spools	3/8"	3/16"	Black	X105-3/8	100-ft. Spools
3/64"	1/64"	Clear	X105-3/64-C	100-ft. Spools	3/8"	3/16"	Clear	X105-3/8-C	100-ft. Spools
1/16"	1/32"	Black	X105-1/16	100-ft. Spools	1/2"	1/4"	Black	X105-1/2	100-ft. Spools
1/16"	1/32"	Clear	X105-1/16-C	100-ft. Spools	1/2"	1/4"	Clear	X105-1/2-C	100-ft. Spools
3/32"	3/64"	Black	X105-3/32	100-ft. Spools	5/8"	5/16"	Black	X105-5/8	50-ft. Spools
3/32"	3/64"	Clear	X105-3/32-C	100-ft. Spools	3/4"	3/8"	Black	X105-3/4	50-ft. Spools
1/8"	1/16"	Black	X105-1/8	100-ft. Spools	3/4"	3/8"	Clear	X105-3/4-C	50-ft. Spools
1/8"	1/16"	Clear	X105-1/8-C	100-ft. Spools	1"	1/2"	Black	X105-1	4-ft. Lengths
1/8"	1/16"	Yellow	X105-1/8-Y	100-ft. Spools	1 1/4"	5/8"	Black	X105-1-1/4	4-ft. Lengths
3/16"	3/32"	Black	X105-3/16	100-ft. Spools	1 1/2"	3/4"	Black	X105-1-1/2	4-ft. Lengths
3/16"	3/32"	Clear	X105-3/16-C	100-ft. Spools	2"	1"	Black	X105-2	4-ft. Lengths
1/4"	1/8"	Black	X105-1/4	100-ft. Spools	4"	2"	Black	X105-4	1-ft. Lengths
5/16"	5/32"	Black	X105-5/16	100-ft. Spools					

## Shrink Tubing in a Tape Form



Use shrink tubing tape for odd shaped items or in hard to reach spaces. Simply stretch the tape and wrap. After a few minutes you have a solid piece of shrink tubing.

Width	Length	Color	Stretch	Max Temperature	Max Pressure	
1"	10'	Black	2X	266°F	-----	S-TAPE
1"	10'	Black	3X	500°F	600PSI	XS-TAPE

## Adhesive-Lined Shrink Tubing (3 to 1) Kit



This kit contains 7 different black (3 to 1) adhesive-lined shrink tubing sizes from 1/8" to 3/4", 65 pieces total. Comes in a large metal box, 18"w x 12"d x 3"h. Adhesive lining allows the shrink tubing to attach itself to the wire or terminal, giving it a watertight seal. Use this shrink tubing in applications that need shelter from the elements or contaminants.

Part # HW/SHK-KIT

Kit Contains	Description	Qty.
<b>Medium Wall</b>		
X750-1/8	1/8" Diameter Black Adhesive-Lined	10
X750-3/16	3/16" Diameter Black Adhesive-Lined	10
X750-1/4	1/4" Diameter Black Adhesive-Lined	10
<b>Heavy Wall</b>		
X700-3B	5/16" Dia. Black Heavy Duty Adhesive-Lined	10
X700-4B	13/32" Dia. Black Heavy Duty Adhesive-Lined	10
X700-5B	1/2" Dia. Black Heavy Duty Adhesive-Lined	10
X700-7B	3/4" Dia. Black Heavy Duty Adhesive-Lined	5

## Standard Heat Shrink Tubing (2 to 1) Kit



This kit contains 8 different black (2 to 1) standard shrink tubing sizes from 1/16" to 3/4", 32 feet total. Comes in a large metal box, 18"w x 12"d x 3"h. Polyolefin is the most popular style of shrink tubing. It heats evenly and doesn't bubble or split.

Part # SHRINK TUBE KIT

Kit Contains	Description	Qty.
X221-1/16	1/16" Diameter Black Shrink Tubing	4 feet
X221-3/32	3/32" Diameter Black Shrink Tubing	4 feet
X221-1/8	1/8" Diameter Black Shrink Tubing	4 feet
X221-3/16	3/16" Diameter Black Shrink Tubing	4 feet
X221-1/4	1/4" Diameter Black Shrink Tubing	4 feet
X221-3/8	3/8" Diameter Black Shrink Tubing	4 feet
X221-1/2	1/2" Dia. Diameter Black Shrink Tubing	4 feet
X221-3/4	3/4" Diameter Black Shrink Tubing	4 feet

## Worm-Drive Hose Clamp Kit



Full diameter coverage of nine different sizes of standard worm drive hose clamps. From 7/32" to 2 3/4". Includes rack.



Part # HC-KIT

Kit Contains	Quantity	Kit Contains	Quantity	Kit Contains	Quantity
4M-HC	30	12-HC	20	28-HC	20
6M-HC	30	20-HC	20	32-HC	20
10-HC	20	24-HC	20	36-HC	20

## Hose Clamp Racks

These racks are free standing and designed not to tip. They also can be peg board mounted or wall mounted. Hose clamps are not included.



Overall Height	Overall Width	Part Number
(A) 16.75"	21.6"	HC-RACK
(B) 18"	14"	HC-RACK-M
(C) 22.75"	22.5"	HC-RACK-L

# Hose Clamps, Protectors, Organizers & Spacers

## Worm-Drive Hose Clamps

The **standard** are the most popular style of hose clamps for industrial and automotive applications.

Use these **soft-touch** worm-drive hose clamps with soft hoses and tubes. An integral smooth inner liner covers up the fastening slots that can cut into soft hoses. There are no bumps under the housing to jeopardize the concentricity of the seal and no laminated coverings to disintegrate under heat, ultraviolet, or corrosive attacks.

The **regular** hose clamps have stainless steel bands and housings with carbon steel slotted hex screws. The **harsh environment** hose clamps are commonly used in marine and burial applications, the all stainless steel design allows these hose clamps to stand up to tough environments. No steel or spot welds to rust, corrode, or rupture. Meet SAE J1508.



### Standard

Fits Hose OD	SAE #	Pkg. Qty.	Regular	Harsh Environ.
1/4"-5/8"	4 Mini	10	4M-HC	4M-HCS
7/16"-3/4"	6 Mini	10	6M-HC	6M-HCS
7/16"-3/4"	6	10	6-HC	6-HCS
1/2"-7/8"	8	10	8-HC	8-HCS
9/16"-1 1/16"	10	10	10-HC	10-HCS
11/16"-1 1/4"	12	10	12-HC	12-HCS
13/16"-1 1/2"	16	10	16-HC	16-HCS
13/16"-1 3/4"	20	10	20-HC	20-HCS
1 1/16"-2"	24	10	24-HC	24-HCS
1 5/16"-2 1/4"	28	10	28-HC	28-HCS
1 9/16"-2 1/2"	32	10	32-HC	32-HCS
1 13/16"-2 3/4"	36	10	36-HC	36-HCS
2 1/16"-3"	40	10	40-HC	40-HCS
2 5/16"-3 1/4"	44	10	44-HC	-----

### Soft Touch

Fits Hose OD	SAE #	Pkg. Qty.	Regular	Harsh Environ.
1/4"-5/8"	4 Mini	10	4M-HCL	-----
7/16"-3/4"	6 Mini	10	-----	-----
7/16"-3/4"	6	10	6-HCL	6-HCLS
1/2"-7/8"	8	10	8-HCL	8-HCLS
9/16"-1 1/16"	10	10	10-HCL	10-HCLS
11/16"-1 1/4"	12	10	12-HCL	12-HCLS
13/16"-1 1/2"	16	10	16-HCL	16-HCLS
13/16"-1 3/4"	20	10	20-HCL	20-HCLS
1 1/16"-2"	24	10	24-HCL	24-HCLS
1 5/16"-2 1/4"	28	10	28-HCL	28-HCLS
1 9/16"-2 1/2"	32	10	32-HCL	32-HCLS
1 13/16"-2 3/4"	36	10	36-HCL	36-HCLS
2 1/16"-3"	40	10	40-HCL	40-HCLS
2 5/16"-3 1/4"	44	10	44-HCL	-----

## Constant-Tension Worm-Drive Hose Clamps

As fluid runs through your hose, thermal expansion and contraction will occur. These hose clamps will adjust right along with it, keeping the same tension on your hose. Commonly used in commercial vehicle truck/diesel engine agricultural off-road applications. The all stainless steel design allows these hose clamps to stand up to tough environments. Meet SAE J1508.



Fits Hose OD	SAE #	Pkg. Qty.	Fits Hose OD	SAE #	Pkg. Qty.	Fits Hose OD	SAE #	Pkg. Qty.			
9/16"-1 1/16"	10	10-HCCT	10	3/4"-1 1/16"	175	175-HCCT	10	2 1/4"-3 1/8"	312	300-HCCT	10
11/16"-1 1/4"	12	12-HCCT	10	1 1/4"-2 1/8"	212	200-HCCT	10	2 3/4"-3 5/8"	362	350-HCCT	10
13/16"-1 1/2"	16	16-HCCT	10	1 3/4"-2 5/8"	262	250-HCCT	10	3 3/4"-4 5/8"	462	450-HCCT	10

## No-Maintenance Constant-Tension T-Bolt Hose Clamps

No maintenance required - the large spring allows for greater thermal expansion and contraction than a standard hose clamp. Commonly used in charge air cooling systems, for maintaining tension on hoses that experience high temperature and pressure swings. Band is 3/4" wide. Meet SAE J1508.



Fits Hose OD	SAE Number	Pkg. Qty.	Fits Hose OD	SAE Number	Pkg. Qty.	Fits Hose OD	SAE Number	Pkg. Qty.			
2 1/2"-2 3/4"	52	52-SLTB	10	3 9/16"-3 7/8"	86	86-SLTB	10	4 9/16"-4 7/8"	118	118-SLTB	10
3 1/16"-3 3/8"	70	70-SLTB	10	4 1/16"-4 3/8"	102	102-SLTB	10				

## Hose Protectors

Prevent failures in your hydraulic, air line and electrical cables by adding these heavy duty protectors where your hose may wear due to vibration, abrasion or puncture. Impervious to solvents, oils, grease, and gasoline. -40° to 400° F. Sold Individually.



For Hose Diameter	Length	Black	Orange	Yellow	For Hose Diameter	Length	Black	Orange	Yellow
1/4" - 1"	4"	HOSEPRO-4	HOSEPRO-4-O	HOSEPRO-4-Y	1 1/4" - 2 1/4"	10"	HOSEPRO-10	HOSEPRO-10-O	HOSEPRO-10-Y
3/4" - 1 1/4"	6"	HOSEPRO-6	HOSEPRO-6-O	HOSEPRO-6-Y	1 1/2" - 2 1/2"	12"	HOSEPRO-12	HOSEPRO-12-O	HOSEPRO-12-Y
1" - 1 1/2"	8"	HOSEPRO-8	HOSEPRO-8-O	HOSEPRO-8-Y					

## Hose Organizers

Simplify the routing and prevent damage to your hose lines. Simply snap the hose in the organizer. For the 3/4" sizes and larger, and use the optional mounting tabs to secure the organizer to your surface. Color is black. Sold individually.



For Hose Diameter	Number of Hoses	For Hose Diameter	Number of Hoses	For Hose Diameter	Number of Hoses
3/16"	4	HL-316X4	1/2"	4	HL-12X4
1/4"	4	HL-14X4	3/4"	4	HL-34X4
3/8"	4	HL-38X4	1"	4	HL-1X4

3/4" x 1 3/8" with Mounting Tab

## Hose Spacers

Simplify the routing and prevent damage to your hose lines. Simply cable tie your two lines into place in this block. Color is black. Sold individually.

Hose Diameters		Hose Diameters	
1st Hose	2nd Hose	1st Hose	2nd Hose
3/4"	x 3/4"	1 1/8"	x 1 1/8"
1"	x 1"	1 3/8"	x 1 3/8"



# Cable Ties

## Cable Ties



Made of nylon. Choose UV black ties for outdoor applications. The UV black protection allows cable ties to last longer in the sun. UL listed. **Heavy duty** cable ties are wider, giving them greater strength for demanding applications.

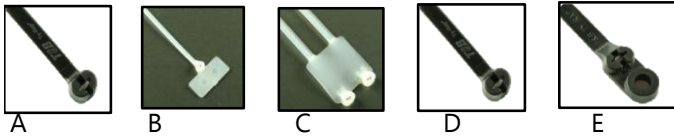
Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>Standard — White and UV Black</b>						
4"	18 lbs.	White	.875"	0.1"	T18-4	100
4"	18 lbs.	UV Black	.875"	0.1"	T18-4B	100
5.5"	18 lbs.	White	1.25"	0.1"	T18-6	100
5.5"	18 lbs.	UV Black	1.25"	0.1"	T18-6B	100
5.7"	40 lbs.	White	1.63"	0.14"	T30-5	100
5.5"	40 lbs.	UV Black	1.63"	0.14"	T30-5B	100
8"	18 lbs.	White	2"	0.1"	T18-8	100
8"	18 lbs.	UV Black	2"	0.1"	T18-8B	100
8"	40 lbs.	White	2"	0.14"	T40-8	100
8"	40 lbs.	UV Black	2"	0.14"	T40-8B	100
8"	50 lbs.	White	2"	0.2"	T50-7	100
8"	50 lbs.	UV Black	2"	0.2"	T50-7B	100
11.5"	40 lbs.	White	3.2"	0.14"	T40-11	100
11.8"	50 lbs.	White	3"	0.2"	T50-11	100
11.8"	50 lbs.	UV Black	3"	0.2"	T50-11B	100
14.5"	40 lbs.	White	4"	0.14"	T30-14	100
14.5"	40 lbs.	UV Black	4"	0.14"	T30-14B	100
14.8"	50 lbs.	White	4"	0.2"	T50-14	100
14.8"	50 lbs.	UV Black	4"	0.2"	T50-14B	100
17"	50 lbs.	White	4.75"	0.2"	T50-17	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>Standard — Colors</b>						
4"	18 lbs.	Blue	0.75"	0.1"	T18-4-BLUE	100
4"	18 lbs.	Green	0.75"	0.1"	T18-4-GN	100
4"	18 lbs.	Gray	0.75"	0.1"	T18-4-GY	100
4"	18 lbs.	Orange	0.75"	0.1"	T18-4-O	100
4"	18 lbs.	Red	0.75"	0.1"	T18-4-RED	100
4"	18 lbs.	Yellow	0.75"	0.1"	T18-4-Y	100
5.7"	40 lbs.	Blue	1.63"	0.14"	T30-5-BLUE	100
5.7"	40 lbs.	Brown	1.63"	0.14"	T30-5-BN	100
5.7"	40 lbs.	Green	1.63"	0.14"	T30-5-GN	100
5.7"	40 lbs.	Gray	1.63"	0.14"	T30-5-GY	100
5.7"	40 lbs.	Orange	1.63"	0.14"	T30-5-O	100
5.7"	40 lbs.	Purple	1.63"	0.14"	T30-5-PU	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>Standard Colors (Cont.)</b>						
5.7"	40 lbs.	Red	1.63"	0.14"	T30-5-R	100
5.7"	40 lbs.	Yellow	1.63"	0.14"	T30-5-Y	100
8"	50 lbs.	Blue	2"	0.2"	T50-7-BLUE	100
8"	50 lbs.	Brown	2"	0.2"	T50-7-BN	100
8"	50 lbs.	Green	2"	0.2"	T50-7-GN	100
8"	50 lbs.	Orange	2"	0.2"	T50-7-O	100
8"	50 lbs.	Purple	2"	0.2"	T50-7-PU	100
8"	50 lbs.	Red	2"	0.2"	T50-7-RED	100
8"	50 lbs.	Yellow	2"	0.2"	T50-7-Y	100
8"	50 lbs.	Assortment	2"	0.2"	T50-7ASST	100
11.8"	50 lbs.	Blue	3"	0.2"	T50-11-BLUE	100
11.8"	50 lbs.	Green	3"	0.2"	T50-11-GN	100
11.8"	50 lbs.	Gray	3"	0.2"	T50-11-GY	100
11.8"	50 lbs.	Yellow	3"	0.2"	T50-11-Y	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>Heavy Duty</b>						
9"	120 lbs.	White	2"	0.3"	T120-8	100
9"	120 lbs.	UV Black	2"	0.3"	T120-8B	100
15"	120 lbs.	White	4"	0.3"	T120-14	100
15"	120 lbs.	UV Black	4"	0.3"	T120-14B	100
15"	250 lbs.	UV Black	4"	0.5"	T250-14B	100
17.75"	120 lbs.	White	5"	0.3"	T120-18	100
17.75"	120 lbs.	UV Black	5"	0.3"	T120-18B	100
22"	250 lbs.	UV Black	6"	0.5"	T250-21B	100
24.5"	120 lbs.	White	7"	0.3"	T120-24	100
24.5"	120 lbs.	UV Black	7"	0.3"	T120-24B	100
25.2"	175 lbs.	White	7"	0.4"	T175-24	100
25.2"	175 lbs.	UV Black	7"	0.4"	T175-24B	100
32"	175 lbs.	White	9.4"	0.4"	T175-32	100
32"	175 lbs.	UV Black	9.4"	0.4"	T175-32B	100
36"	175 lbs.	White	10.7"	0.4"	T175-36	100
36.5"	175 lbs.	UV Black	10.4"	0.4"	T175-36B	100
48"	175 lbs.	White	14.4"	0.4"	T175-48	100
48"	175 lbs.	UV Black	14.4"	0.4"	T175-48B	100

## Thomas & Betts Cable Ties



The Thomas & Betts Ty-Rap® brand you know and love offers a stainless steel lock embedded in the nylon head for extra durability. Operating temperature -40°F to 185°F, unless noted. UL Flame rating 94V-2.

Cable ties with UV black protection allow them to last longer in the sun.

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>(A) Standard</b>						
3.6"	18 lbs.	White	0.63"	0.1"	TY-23M	100
3.6"	18 lbs.	UV Black	0.63"	0.1"	TY-23MB	100
5.5"	40 lbs.	White	1.13"	0.14"	TY-24M	100
5.5"	40 lbs.	UV Black	1.13"	0.14"	TY-24MB	100
7.3"	50 lbs.	White	1.75"	0.2"	TY-25M	100
7.3"	50 lbs.	UV Black	1.75"	0.2"	TY-25MB	100
8"	18 lbs.	White	2"	0.1"	TY-232M	100
8.2"	40 lbs.	White	2"	0.14"	TY-242M	100
11.1"	40 lbs.	White	3"	0.14"	TY-26M	100
11.1"	40 lbs.	UV Black	3"	0.14"	TY-26MB	100
11.4"	50 lbs.	White	3"	0.2"	TY-253M	100
11.4"	50 lbs.	UV Black	3"	0.2"	TY-253MB	100
13.4"	120 lbs.	White	3.5"	0.3"	TY-27M	100
13.4"	120 lbs.	UV Black	3.5"	0.3"	TY-27MB	100
14.2"	50 lbs.	White	4"	0.2"	TY-28M	100
14.2"	50 lbs.	UV Black	4"	0.2"	TY-28MB	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>(A) Standard (Cont.)</b>						
18"	120 lbs.	UV Black	5"	0.3"	TY-275MB	100
30"	120 lbs.	White	9"	0.3"	TY-29M	100
<b>Specialty</b>						
<b>(B) ID Tag</b>						
4"	18 lbs.	White	0.63"	0.09"	TY-53M	100
<b>(C) Double ID Tag</b>						
7.25"	50 lbs.	White	1.75"	0.19"	T50-7/2ID	100
<b>(D) High Temperature (-50°F to 302°F)</b>						
13.4"	120 lbs.	Blue	3.5"	0.3"	TYZ-27M	100
<b>(E) Screw-Mount</b>						
Length	Burst Strength	Color	Max. Bundle Dia.	Width	Hole Dia.	Pkg. Qty.
6"	40 lbs.	White	1.13"	0.14"	#8	TY-34M 100
7.8"	50 lbs.	White	1.75"	0.18"	#10	TY-35M 100
13.9"	120 lbs.	UV Black	3.5"	0.3"	1/4"	TY-37MB 100

# Specialty Cable Ties & Cable Tie Mounts

## Specialty Cable Ties



Are made of nylon. Choose UV black ties for outdoor applications. The UV black protection allows cable ties to last longer in the sun. The round shape head of the **hose clamp style** cable ties allows 360° compression for fuel, water, and air lines. **Snag free** has a head that sits low to avoid scraping things around it. **Push mount** cable ties will fit through panel wall thickness 0.04" to 0.14" and **winged push mount** through panel wall thickness up to 0.125". **Washer head** cable ties have a plastic washer to prevent the cable tie from pulling through a hole. UL listed.

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>(A) Double Loop</b>						
7.5"	50 lbs.	White	1.75"	0.2"	T50-7DL	100
8"	50 lbs.	UV Black	1.5"	0.2"	T50-7DL-B	100
12"	50 lbs.	UV Black	3"	0.2"	T50-11DL-B	100
<b>(B) Hose Clamp Style</b>						
8"	60 lbs.	White	1.75"	0.2"	T60-8-RND	100
8"	60 lbs.	UV Black	1.75"	0.2"	T60-8B-RND	100
<b>ID Tag</b>						
<b>(C) Parallel ID Tag</b>						
4"	18 lbs.	White	0.875"	0.1"	T18-4XID	100
4"	18 lbs.	White	0.625"	0.1"	TY-53M	100
<b>(D) Perpendicular ID Tag</b>						
4.3"	18 lbs.	White	0.7"	0.1"	T18-4ID	100
<b>(E) Perpendicular ID Tag</b>						
7.5"	50 lbs.	White	1.75"	0.2"	T50-7ID	100
15"	50 lbs.	White	4"	0.2"	T50-14ID	100
<b>(F) Double Tie ID Tag</b>						
7.25"	50 lbs.	White	1.75"	0.2"	T50-7/2ID	100
<b>Push Mount</b>						
<b>(G) Push Mount (Requires 1/4" predrilled hole)</b>						
7.5"	50 lbs.	White	1.75"	0.2"	T50-7PM	100
7.5"	50 lbs.	UV Black	1.75"	0.2"	T50-7PM-B	100
<b>(H) Winged Push Mount (Requires 1/4" predrilled hole)</b>						
7.9"	50 lbs.	White	1.8"	0.2"	T50-7WPM	100
7.9"	50 lbs.	UV Black	1.8"	0.2"	T50-7WPM-B	100
<b>(I) Snag Free</b>						
16"	120 lbs.	White	4"	0.3"	T120-14LP-C	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width		Pkg. Qty.
<b>(J) Releasable</b>						
7.5"	50 lbs.	UV Black	1.75"	0.2"	T50-7RB	100
7.8"	50 lbs.	White	2"	0.3"	T50-7RW	100
11"	50 lbs.	White	3"	0.2"	T50-10RW	100
11"	50 lbs.	UV Black	3"	0.2"	T50-10RB	100
14.5"	50 lbs.	UV Black	4"	0.2"	T50-15RB	100
<b>(K) High Temperature (-50°F to 302°F)</b>						
13.4"	120 lbs.	Blue	3.5"	0.3"	TYZ-27M	100
<b>(L) Washer Head</b>						
9.6"	150 lbs.	Black	2.62"	0.22"	T100-9BH	100
15"	150 lbs.	Black	4.33"	0.22"	T100-14BH	100

Length	Burst Strength	Color	Max. Bundle Dia.	Width	Hole Dia.		Pkg. Qty.
<b>(M) Screw Mount</b>							
5.5"	30 lbs.	White	1"	0.14"	#4	T30-5H	100
5.9"	40 lbs.	UV Black	1.25"	0.14"	#4	T30-5HB	100
6"	40 lbs.	White	1.13"	0.14"	#8	TY-34M	100
7.8"	50 lbs.	White	1.75"	0.2"	#10	TY-35M	100
8"	50 lbs.	White	2"	0.2"	#10	T50-7H	100
8"	50 lbs.	UV Black	2"	0.2"	#10	T50-7HB	100
13.9"	120 lbs.	UV Black	3.5"	0.3"	1/4"	TY-37MB	100
14.5"	50 lbs.	White	4"	0.2"	#10	T50-14H	100
14.5"	50 lbs.	UV Black	4"	0.2"	#10	T50-14HB	100
15"	120 lbs.	White	4"	0.3"	1/4"	T120-14H	100
15"	120 lbs.	UV Black	4"	0.3"	1/4"	T120-14HB	100

## Adhesive-Backed Cable Tie Mounts

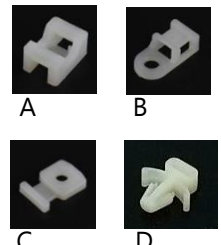
Attach cable ties to flat surfaces with these mounts. UV black mounts resist the sun's fatigue. **Adhesive backed** mounts are rated for 125°F. Our **super-stick** adhesive backed mounts have extra holding capacity for heavy duty jobs, and are rated for 185°F. Simply peel and stick. Sets in seconds. Made of nylon. Acrylic based adhesive.



Mounting Base Size	For Cable Tie Sizes	Adhesive Backed			Super-Stick Adhesive Backed			
		White	UV Black	Pkg. Qty.	White	UV Black	Pkg. Qty.	
0.5" Square	18#	TRMP-XSM	TRMP-XSM-B	50	-----	-----	-----	----
0.75" Square	18, 30, 40, 50#	TRMP-SM	TRMP-SM-B	50	18, 30, 40#	TRMP-SM-ACRL	TRMP-SM-B-ACRL	25
1" Square	18, 30, 40, 50#	TRMP-2	TRMP-2-B	50	18, 30, 40, 50#	TRMP-2-ACRL	TRMP-2-B-ACRL	25
1.12" Square	18, 30, 40, 50#	TRMP	TRMP-B	50	18, 30, 40, 50#	TRMP-ACRL	TRMP-B-ACRL	25
1.5" Square	50, 120#	TRMP-HD	TRMP-HD-B	50	50, 120#	TRMP-HD-ACRL	TRMP-HD-B-ACRL	10
2" Square	120, 175#	TRMP-XHD	TRMP-XHDB	10	120, 175#	TRMP-XHD-ACRL	TRMP-XHDB-ACRL	10

## Specialty Cable Tie Mounts

Mounting Base Size	For Cable Tie Sizes	Color	Screw Size	Pkg. Qty.	Mounting Base Size	For Cable Tie Sizes	Color	Screw Size	Pkg. Qty.	
<b>(A) Screw-In Saddle</b>					<b>(B) Easy-Screw-In</b>					
0.54" X 0.34"	18#	White	#4	SCM-S4	50	0.75" X 0.38"	30, 40, 50#	White #8	SCB-8	100
0.60" X 0.385"	30, 40, 50#	UV Black	#8	SCM-SB	50	0.75" X 0.38"	30, 40, 50#	White #10	SCB-10	100
0.60" X 0.385"	30, 40, 50#	White	#8	SCM-S	50	<b>(C) Low-Profile Screw-In</b>				
0.875" X 0.625"	120, 50#	White	#10	SCM	50	0.73" X 0.49"	30, 40, 50#	White #6-8	LPM	50
0.875" X 0.625"	120, 50#	UV Black	#10	SCM-B	50	<b>(D) Push Mount</b>				
0.86" X 0.62"	175#	UV Black	1/4"	SCM-1/4B	25	0.28" X 0.62"	Up to 50#	White 1/4"	T50-1/4PM	50



# Hook and Loop Cable Ties, Cable Tie Guns & Cable Management

## Hook and Loop Cable Ties



These hook and loop ties are reusable and won't cut into your bundle. No jagged edge to catch on. Color is black.

Length	Max. Bundle Dia.	Width	Pkg. Qty.	Length	Max. Bundle Dia.	Width	Pkg. Qty.
6"	1.3"	0.5"	VT-6	15"	4.1"	0.75"	VT-15
8"	1.9"	0.5"	VT-8	18"	5.1"	0.75"	VT-18
11"	2.9"	0.5"	VT-11	24"	7"	0.75"	VT-24

## Cable Tie Kits and Tools

### White and UV Black Cable Tie Kits



Unsure of which cable tie will meet your needs? These kits contain 1,000 pieces. Each kit has six sizes of cable ties and two sizes of cable tie mounts. It is all contained in a large metal box, 18"w x 12"d x 3"h.

The sun won't fatigue our UV black cable ties.

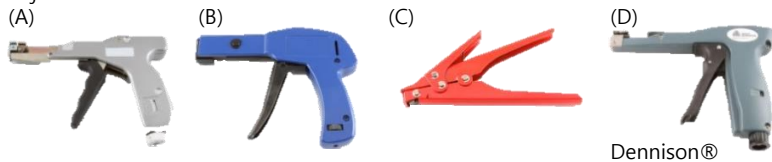
Kit Contains	Description	Qty.	(Cont.)	Description	Qty.
T120-14	15", 120 lb., White, Heavy Duty	50	T30-5-C	5.7", 40 lb., White, Standard	200
T50-14-C	14.8", 50 lb., White, Standard	100	T18-4-C	4", 18 lb., White, Mini	300
T50-11-C	11.8", 50 lb., White, Standard	100	TRMP	1.12", White, Mount	25
T50-7-C	8", 50 lb., White, Standard	200	TRMP-SM	0.75", White, Mount	25

Part # TY-KIT

Part # TY-B KIT (Contains same items as above, but in UV black.)

## Cable Tie Bundling Guns

Cable tie guns are used for bundling cable ties. Tightens and cuts flush in one motion. Die cast construction. Durable and high volume tools. Easy to adjust.



Key	Used with	Width Range
(A)	18lb. To 50lb. Cable Ties	Up to 0.18"
(B)	18lb. To 50lb. Cable Ties	0.094" to 0.344"
(C)	Heavy Duty Cable Ties	Up to 0.375"
(D)	18lb. To 50lb. Cable Ties	Up to 0.19"

Dennison®

## Cable Management

### Spiral Bundling Wrap-Around Sleeving



Bundle wire and tubes in this flexible, abrasion-resistant spiral wrap. Features the ability to access the bundle at any point along the way. Create bundles by wrapping this material on as you would with tape - easy to install and reusable. Use **UV black** style for outdoor applications to resist fatigue from the sun.

Diameter (At Rest)	Max. Diameter	UV Black		Clear	
		Pkg. Qty.	Pkg. Qty.	Pkg. Qty.	Pkg. Qty.
1/8"	1/2"	SW-1/8B	100	SW-1/8	100
1/4"	2"	SW-1/4B	100	SW-1/4	100
3/8"	3"	SW-3/8B	100	SW-3/8	100
1/2"	4"	SW-1/2B	100	SW-1/2	100
5/8"	4 1/2"	SW-5/8B	100	SW-5/8	100
3/4"	5"	SW-3/4B	100	SW-3/4	100
1"	7"	SW-1B	100	SW-1	100

### Convuluted Nylon Sleeving



Bundle and protect wire and tubes with this nylon abrasion-resistant convuluted split loom. Black with grey stripe. Maximum temperature rating of -40°F to 320°F.

Diameter (At Rest)	Pkg. Qty.	Diameter (At Rest)	Pkg. Qty.
<b>Black</b>		<b>Dark Green</b>	
1/4"	SL-1/4	3/8"	SL-3/8-DKG
3/8"	SL-3/8		
1/2"	SL-1/2		
5/8"	SL-5/8		
3/4"	SL-3/4		
1"	SL-1		
1 1/8"	SL-1-1/8		
1 1/4"	SL-1-1/4		
1 1/2"	SL-1-1/2		
2"	SL-2		

### Packard Corrugated Loom Clips

Type	Inside Conduit ID	Mfg. #	Pkg. Qty.
Outlet Fitting	0.500	8905793	25
Conduit Clip	0.413	8911378	25
Rosebud Clip	0.350	8911169	25

### Mesh Sleeving

Resists gasoline, engine chemicals, and cleaning solvents. The diameter of the mesh sleeving expands for easy installation and a tight, secure bundle. Great flexibility and excellent cut and abrasion resistance. Black in color. Maximum temperature rating of 257°F.

**Standard** style cuts with a hot knife. The **no-fray** style makes it easy to install. Cutting this material to size is easy - simply use sharp scissors. **Flame-retardant** mesh sleeving is made from flame-retardant material to make it extra safe. The X-tracer signifies the flame-retardant material. Cut with a hot knife.

	Diameter (At Rest)	Max. Diameter	Standard		No-Fray		Flame-Retardant	
			Pkg. Qty.	Pkg. Qty.	Pkg. Qty.	Pkg. Qty.		
Standard	1/8"	1/4"	EXPET-1/8	100	EXPETNF-1/8	50	EXPETFR-1/8	100
	1/4"	3/4"	EXPET-1/4	100	EXPETNF-1/4	50	EXPETFR-1/4	100
	3/8"	5/8"	EXPET-3/8	50	EXPETNF-3/8	25	EXPETFR-3/8	50
	1/2"	3/4"	EXPET-1/2	50	EXPETNF-1/2	25	EXPETFR-1/2	25
Flame-Retardant	3/4"	1 1/4"	EXPET-3/4	25	EXPETNF-3/4	25	EXPETFR-3/4	25
	1"	1 1/2"	-----	----	EXPETNF-1	25	-----	----
	1 1/4"	1 3/4"	EXPET-1-1/4	25	-----	----	EXPETFR-1-1/4	10
	1 3/4"	2 1/4"	EXPET-1-3/4	10	EXPETNF-1-3/4	10	EXPETFR-1-3/4	10
	2"	3"	EXPET-2	10	-----	----	EXPETFR-2	10
	2 1/2"	4 1/2"	EXPET-2-1/2	5	-----	----	EXPETFR-2-1/2	5

# Clamps, Clamp Kits & Frame Clips

## Vinyl Coated Clamps

An easy way to secure cables while reducing vibration. Made of galvanized steel with a vinyl cover. Fasteners not included.



Full Clamp      Half Clamp

Clamp Diameter	Pkg. Qty.	Clamp Diameter	Pkg. Qty.
<b>1/2" Wd., 0.28" Hole Dia.</b>		<b>3/4" Wd., 0.41" Hole Dia.</b>	
<b>Full Clamps</b>			
1/8"	RC-1/8S      50	3/8"	RC-3/8      25
1/4"	RC-1/4      25	1/2"	RC-1/2      25
5/16"	RC-5/16      25	5/8"	RC-5/8      25
3/8"	RC-3/8S      25	3/4"	RC-3/4      10
1/2"	RC-1/2S      25	7/8"	RC-7/8      10
5/8"	RC-5/8S      25	1"	RC-1      10
3/4"	RC-3/4S      10	1 1/4"	RC-1-1/4      10
1 1/2"	RC-1-1/2S      25	1 1/2"	RC-1-1/2      25
2 1/2"	RC-2-1/2      25	1 3/4"	RC-1-3/4      10
<b>Half Clamps</b>			
1/4"	RCH-1/4      25	2"	RC-2      5
3/8"	RCH-3/8      25	3"	RC-3      1
1/2"	RCH-1/2      10		
3/4"	RCH-3/4      10		

## Vinyl Coated Clamp Kit

This kit contains 10 different vinyl coated galvanized steel clamps, 235 pieces, sizes 1/8" to 1 1/2" diameter. Comes in a large metal box, 18"w x 12"d x 3"h.



Part #RC-KIT

Kit Contains	Description	Qty.
RC-1/8S	1/8" Vinyl Coated Clamps	50
RC-1/4	1/4" Vinyl Coated Clamps	50
RC-5/16	5/16" Vinyl Coated Clamps	25
RC-3/8	3/8" Vinyl Coated Clamps	25
RC-1/2	1/2" Vinyl Coated Clamps	25
RC-5/8	5/8" Vinyl Coated Clamps	15
RC-3/4	3/4" Vinyl Coated Clamps	15
RC-1	1" Vinyl Coated Clamps	10
RC-1-1/4	1 1/4" Vinyl Coated Clamps	10
RC-1-1/2	1 1/2" Vinyl Coated Clamps	10

## Cushion Cable Clamps

The cushion will not cut into soft cable when vibration occurs, and it will keep a good hold. Also is more durable than a plastic clamp. Made of steel with a neoprene cushion cover. Fastener hole diameter is 0.26". Fasteners not included.



Clamp Diameter	Pkg. Qty.	Clamp Diameter	Pkg. Qty.
1/8"	RCC-1/8      50	7/8"	RCC-7/8      25
1/4"	RCC-1/4      50	1"	RCC-1      25
3/8"	RCC-3/8      25	1 1/4"	RCC-1-1/4      10
1/2"	RCC-1/2      25	1 1/2"	RCC-1-1/2      10
5/8"	RCC-5/8      50	2"	RCC-2      5
3/4"	RCC-3/4      25	2 1/2"	RCC-2-1/2      5

## Nylon Cable Clamps

An easy and economical way to secure cables. Made entirely from nylon, so there's nothing to corrode or rust. Fasteners not included.



Clamp Diameter	Black		White	
	Pkg. Qty.		Pkg. Qty.	
<b>0.17" Fastener Hole Diameter</b>				
1/8"	NYC-1/8B      50		NYC-1/8      100	
3/16"	NYC-3/16B      50		NYC-3/16      100	
1/4"	NYC-1/4B      50		NYC-1/4      100	
5/16"	NYC-5/16B      50		NYC-5/16      50	
3/8"	NYC-3/8B      50		NYC-3/8      100	
1/2"	NYC-1/2B      50		NYC-1/2      100	
<b>0.20" Fastener Hole Diameter</b>				
5/8"	NYC-5/8B      50		NYC-5/8      100	
3/4"	NYC-3/4B      50		NYC-3/4      50	
7/8"	NYC-7/8B      50		NYC-7/8      50	
1"	NYC-1B      50		NYC-1      50	
1 1/8"	-----      ----		NYC-1-1/8      50	
1 1/4"	NYC-1 1/4B      50		NYC-1-1/4      50	

## Nylon Cable Clamp Kit

This kit contains 10 different white nylon cable clamps, 300 pieces, sizes 1/8" to 1 1/8" diameter. Comes in a large metal box, 18"w x 12"d x 3"h.



Part #NYC-KIT

Kit Contains	Description	Qty.
NYC-1/8	1/8" White Nylon Cable Clamps	50
NYC-3/16	3/16" White Nylon Cable Clamps	50
NYC-1/4	1/4" White Nylon Cable Clamps	50
NYC-5/16	5/16" White Nylon Cable Clamps	25
NYC-3/8	3/8" White Nylon Cable Clamps	25
NYC-1/2	1/2" White Nylon Cable Clamps	25
NYC-5/8	5/8" White Nylon Cable Clamps	25
NYC-3/4	3/4" White Nylon Cable Clamps	25
NYC-1	1" White Nylon Cable Clamps	20
NYC-1-1/8	1 1/8" White Nylon Cable Clamp	20

## Cushion Cable Clamp Kit

This kit contains 10 different cushion clamps, 225 pieces, sizes 1/8" to 1 1/2" diameter. Made of fine-plated steel with a neoprene cushion cover. Comes in a large metal box, 18"w x 12"d x 3"h.



Part #RCC-KIT

Kit Contains	Description	Qty.
RCC-1/8	1/8" Cushion Clamps	50
RCC-1/4	1/4" Cushion Clamps	50
RCC-3/8	3/8" Cushion Clamps	25
RCC-1/2	1/2" Cushion Clamps	25
RCC-5/8	5/8" Cushion Clamps	15
RCC-3/4	3/4" Cushion Clamps	15
RCC-7/8	7/8" Cushion Clamps	15
RCC-1	1" Cushion Clamps	10
RCC-1-1/4	1 1/4" Cushion Clamps	10
RCC-1-1/2	1 1/2" Cushion Clamps	10

## Frame Clips

Secures wires to frame of truck or angle iron. Heat treated steel coated in black zinc finish. Sold in packages of 50.



Small Part # FCS



Medium Part # FCM



Large Part # FCL



# Wire Duct & DIN Rail

## Wire Duct - Iboco

### Wire Duct



Use this wire duct to organize and protect wires and cables in industrial environments. Wire duct is sold complete with covers. Standard length is actually 6' 6 3/4", but is counted as 6 feet for packaging and pricing. Gray in color.

Nominal Size		Actual Dimensions		Part Number	Lengths Per Carton	Nominal Size		Actual Dimensions		Part Number	Lengths Per Carton
Width	Height	Width	Height			Width	Height	Width	Height		
0.5"	0.625"	0.60"	0.71"	T1-0506G	20 x 6' Lengths	2.25"	3"	2.36"	3.15"	T1-2230G	12 x 6' Lengths
0.5"	1"	0.60"	1.18"	T1-0510G	20 x 6' Lengths	2.25"	4"	2.36"	3.94"	T1-2240G	4 x 6' Lengths
1"	1"	1.00"	1.18"	T1-1010G	18 x 6' Lengths	3"	1.5"	3.15"	1.57"	T1-3015G	12 x 6' Lengths
1"	1.5"	1.00"	1.57"	T1-1015G	18 x 6' Lengths	3"	2.25"	3.15"	2.36"	T1-3022G	12 x 6' Lengths
1"	2.25"	1.00"	2.36"	T1-1022G	24 x 6' Lengths	3"	3"	3.15"	3.15"	T1-3030G	12 x 6' Lengths
1"	3"	1.00"	3.15"	T1-1030G	24 x 6' Lengths	3"	4"	3.15"	3.94"	T1-3040G	4 x 6' Lengths
1"	4"	1.00"	3.94"	T1-1040G	8 x 6' Lengths	3"	5"	2.95"	4.92"	T1-3050G	6 x 6' Lengths
1.5"	1.5"	1.57"	1.57"	T1-1515G	20 x 6' Lengths	4"	1.5"	3.94"	1.57"	T1-4015G	8 x 6' Lengths
1.5"	2.25"	1.57"	2.36"	T1-1522G	18 x 6' Lengths	4"	2.25"	3.94"	2.36"	T1-4022G	8 x 6' Lengths
1.5"	3"	1.57"	3.15"	T1-1530G	16 x 6' Lengths	4"	3"	3.94"	3.15"	T1-4030G	8 x 6' Lengths
1.5"	4"	1.57"	3.94"	T1-1540G	8 x 6' Lengths	4"	4"	3.94"	3.94"	T1-4040G	4 x 6' Lengths
2.25"	1.5"	2.36"	1.57"	T1-2215G	12 x 6' Lengths	4"	5"	3.94"	4.92"	T1-4050G	4 x 6' Lengths
2.25"	2.25"	2.36"	2.36"	T1-2222G	12 x 6' Lengths	6"	4"	5.91"	3.94"	T1-6040G	4 x 6' Lengths

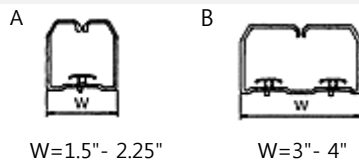
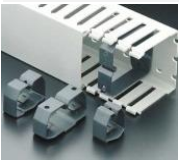
### Wire Duct Separators



Allows the physical subdividing of internal duct space. Creates a wall between different voltages and functions within the duct.

Duct Height	Part Number	Lengths Per Carton
1 1/2"	SEP-15E	32 x 6' Lengths
2 1/4"	SEP-22E	20 x 6' Lengths
3"	SEP-30E	12 x 6' Lengths

### Wire Duct Retainers



W=1.5"- 2.25"

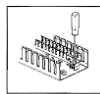
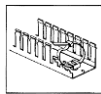
W=3"- 4"

Ridged PVC retainers firmly anchor to duct and maintain wire position when cover is removed. Strain relief of the sidewall eliminates bulging at 90° angles.

Key	Width	Height		Pieces Per Carton
A	1.5"	2.25"	CL-1522	40
A	1.5"	3"	CL-1530	20
A	2.25"	1.5"	CL-2215	40
A	2.25"	3"	CL-2230	20
A	2.25"	4"	CL-2240	20
B	3"	3"	CL-3030	10
B	3"	3 x 4	CL-3040	10
B	4"	1.5"	CL-4015	10
B	4"	2.25"	CL-4022	10
B	4"	3"	CL-4030	10

### Mounting Inserts

A quarter turn of ZP1, mounts components, and separators inside wire duct. It also can be used to mount smaller sizes of wire duct inside larger sizes. The ZP2 can be used to tighten a wire bundle inside the wire duct.



Feature	Part #	Pkg. Qty.
Mounting Components	ZP1	100
Spacer/Cable Tie Mount	ZP2	50

### Duct Markers



Black single identification tag snaps on the sidewall of duct. Each tag consists of a base, a label, and a shield.



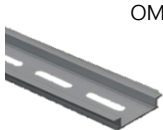
Sold in packages of 50 pieces. Part # DM1

## DIN Rails

Mount terminal blocks, power supplies, relays, and other control and distribution devices on walls and other flat surfaces and in enclosures.

### DIN Rails

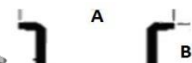
Rails conform to EN 60715 and EN 50022. Zinc plated steel.



OMEGA-3F

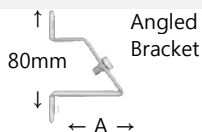


OMEGA-3AF

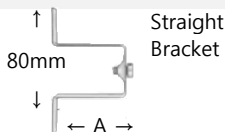


(A) Height	(B) Depth	Mounting Holes		
		Diameter	Center-to-Center	
35mm	7.5mm	0.25"	1"	OMEGA-3F
35mm	7.5mm	0.25"	1"	OMEGA-3F1
35mm	15mm	0.25"	1"	OMEGA-3AF

### Brackets



Angled Bracket



Straight Bracket

Brackets provide extra mounting space behind the DIN rail to accommodate bulky items. They have two 0.26" diameter holes for surface mounting (screws not included). Steel with zinc plating.

Width	(A) Depth	Mounting Holes	Diameter of Holes	
<b>Angled Brackets</b>				
25mm	50mm	1	0.24"	ST
<b>Straight Brackets</b>				
20mm	25mm	1	0.24"	STS-25
20mm	50mm	1	0.24"	STS-50
20mm	70mm	1	0.24"	STS-70
20mm	90mm	1	0.24"	STS-90

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Work Gloves 109



# Stop/Tail/Turn Lights

## 4" Round Stop/Tail/Turn Lights

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.

**GR-55162** combines all standard stop/tail/turn and back-up functions into one industry standard size light. Provides high level protection against reverse voltage, over voltage and overheating. Standard 4-pin hard shell connector sold separately. 12 volt.



Color	Manufacturer	Manufacturer #	Feature	
<b>(A) Incandescent</b>				
Red	Optronics	ST45RB	-----	LT2-4040
Red	Grote	52922	-----	LT-4040R
Red	Optronics	ST46RB	Reflector	LT2-4044
Amber	Optronics	ST45AB	-----	LT2-4040A
Clear	Optronics	BU45CB	Back Up	LT2-4041C
White	UB Lights	SE4000W	Back Up	LT2-4041W

<b>(B) LED</b>				
Red	Truck Lite	44351R	6 Diodes, Pigtail Included	TL-44351R
Red	Optronics	STL43RB	10 Diodes	LT2-44002R
Red	A.L. Lightech	T01901304	Pigtail Included	ALL-4RKIT5
Clear	Optronics	BUL53CB	36 Diodes, Back Up	OPT-BUL-53CB

<b>(C) LED Light Kit (Contains: light, grommet, and harness)</b>				
Red	A.L. Lightech	019-01-325	Light Kit, Convex Lens	ALL-4RKIT1ELITE
Red	A.L. Lightech	T01901305	Light Kit	ALL-4RKIT1

<b>LED Stop/Tail/Turn with Back-Up Light</b>				
(D)Red	Optronics	STL201XRB	Back Up	STL201XRB
(E)Red	Grote	55162	Integrated Back Up	GR-55162
-----	Grote	66864*	4-Pin Hard Shell Connector	GR-66864

\*This connector must be ordered with GR-55162

## Accessories



Description	
Universal Grommet	LT-9127
Universal Bracket	LT-9238
Straight 2-Wire Plug, for Amber, Clear	LT-9123
Straight 3-Wire Plug, for Red	LT-9124
90° 2-Wire Plug	LT-9125
90° 3-Wire Plug, for Red	LT-9128
Metri-Pack to Stop/Tail/Turn Plug	TL-94706
Metri-Pack to Wire Lead	TL-94707
Power Tester Tool	ALL-PWR-TESTER

## 6" Oval Stop/Tail/Turn Lights

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.

**GR-54682** is DOT approved.



Color	Manufacturer	Manufacturer #	Feature	
<b>(A) Incandescent</b>				
Red	Optronics	ST70RB	-----	LT2-4070R
Amber	Optronics	ST70AB	-----	LT2-4070A
White	Truck Lite	60204C	Back Up	LT-4071W
White	Optronics	BU70CB	Back Up	LT2-4071W
Clear	UB Lights	SE2238C	Utility / Dome	LT2-4071C

<b>(B) LED (10 Diodes)</b>				
Red	Optronics	STL72RB	-----	LT2-64602R
Amber	Optronics	STL72AB	-----	LT2-64503A

<b>(C) LED Light Kit (Contains: light, grommet, and harness)</b>				
Red	A.L. Lightech	T01903305	Light Kit	ALL-6RKIT1

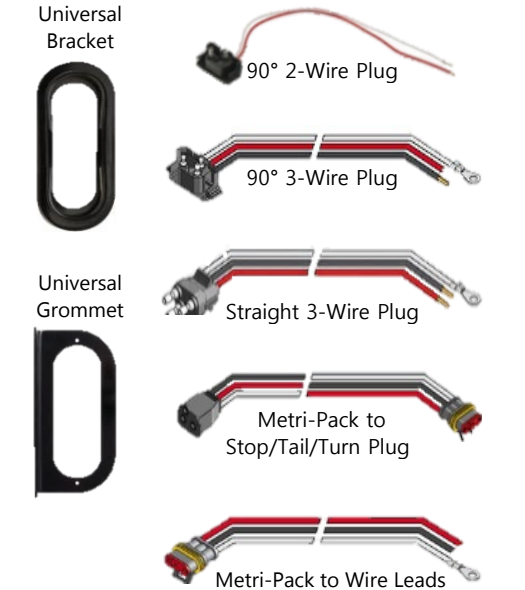
<b>LED with Back-Up Light</b>				
(D)Red	Grote	54682**	Back Up	GR-54682
(E)Red	Optronics	STL211XRB**	Back Up	STL211XRB**

\*\* For Stop/Tail/Turn suggested plug LT-9124,  
for Back-up suggested plug LT-9123

<b>(F) Incandescent Mid Trailer Turn Lights</b>				
Amber	Optronics	ST75AB	-----	LT2-4073A

<b>(G) LED Mid Trailer Turn Lights</b>				
Amber	Optronics	STL75AB	9 Diodes	OPT-STL-75AB

## Accessories



Description	
Universal Grommet	LT-9157
Universal Bracket	LT-9292
Straight 2-Wire Plug, for Amber, Clear	LT-9123
Straight 3-Wire Plug, for Red	LT-9124
90° 2-Wire Plug	LT-9125
90° 3-Wire Plug, for Red	LT-9128
Metri-Pack to Stop/Tail/Turn Plug	TL-94706
Metri-Pack to Wire Lead	TL-94707

# Stop/Tail/Turn Lights & Marker Lights

## RV Stop/Tail/Turn Lights

### 2 Stud Mounts

Color	Manufacturer	Mfg. #	Feature	
Red	Optronics	ST8RB	Right	LT2-M440
Red	Optronics	ST9RB	Left with License Light.	LT2-M440L



### Accessories

Description	1157	168
Replacement Bulb (Tail)		
Replacement Bulb (Side)		

## Stud Mount Box Type Stop/Tail/Turn Lights

Color	Manufacturer	Mfg. #	Feature	
Red	UB Lights	TL6400	Universal Combination Red Lamp with 3 Studs, Stop/Tail/Turn and Back Up, Rear Reflector & License Light.	LT2-4027



### Accessories

Description	1156	1157	
Replacement Bulb			
Replacement Bulb			
Replacement Lens			TLR-6400R

## 2 1/2" Round Side Marker Lights

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.



Color	Manufacturer	Manufacturer #	Feature	
<b>Standard</b>				
Red	Optronics	MC55RB		LT2-1010R
Red	Optronics	MC57RB	Reflector	LT2-1011R
Amber	Optronics	MC55AB		LT2-1010A
Amber	Optronics	MC57AB	Reflector	LT2-1011A
<b>LED (3 Diodes)</b>				
Red	Optronics	MCL57RB		LT2-17000R
Amber	Optronics	MCL57AB		LT2-17000A

### Accessories

Description			
Universal Grommet		Closed Back Grommet	
Branch Deflector		Heavy Duty Grommet	
90° 2-Wire Plug			
Universal Grommet			LT-9119
Universal (Closed Back) Grommet			LT-9156
Heavy Duty Grommet			LT-9121
Branch Deflector			LT2-9391
90° 2-Wire Plug			LT-9122

## 2" Round Side Marker Lights

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.



Color	Manufacturer	Manufacturer #	
<b>Standard</b>			
Red	Optronics	MC53RB	LT2-1030R
Amber	Optronics	MC53AB	LT2-1030A
<b>LED (3 Diodes)</b>			
Red	Optronics	MCL55RB	LT2-16000R
Amber	Optronics	MCL55AB	LT2-16000A

### Accessories

Description			
Universal Grommet		Grommet For Use w/Bracket	
Branch Deflector		Bracket	
90° 2-Wire Plug			
Universal Grommet			LT-9139
Universal Bracket			LT2-9397
Branch Deflector			LT2-9395
Grommet for Use with Branch Deflector			LT-9118
90° 2-Wire Plug			LT-9122

## Rectangular Side Marker Lights

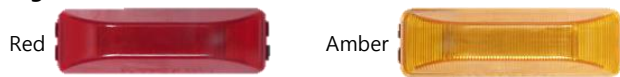


Color	Manufacturer	Manufacturer #	
<b>Standard 2 1/2" x 1 3/16"</b>			
Red	Optronics	A91RB	LT2-1500R
Amber	Optronics	A91AB	LT2-1500A
<b>LED 2 1/2" x 1 1/4" (3 Diodes)</b>			
Red	Optronics	AL91RB	LT2-15200R
Amber	Optronics	AL91AB	LT2-15200A

### Accessories

Description			
Branch Deflector		Rail Mount	
90° 2-Wire Plug		Chrome Base	
Branch Deflector (Single Wire Included)			LT-9393
Rail Mount (Two Wire Plug Needed)			LT2-9387
Chrome Base (Two Wire Plug Needed)			LT2-9381
90° 2-Wire Plug			LT-9122

## Rectangular Side Marker Lights - 3 15/16" X 1 1/4"



Color	Manufacturer	Manufacturer #	Feature	
<b>Standard</b>				
Red	Optronics	MC65RB		LT2-1900R
Amber	Optronics	MC65AB		LT2-1900A
Clear	UB Lights	SE1040C	Utility / Dome Light	LT2-1900W
<b>LED (4 Diodes)</b>				
Red	Optronics	MCL75RB		LT2-15000R
Amber	Optronics	MCL75AB		LT2-15000A

### Accessories

Description	
Base (Single Wire/Self Grounding)	LT-9389

## Marker Lights & ID Light Bars

### Rectangular Side Marker Lights - 4 1/16" X 1 1/8"



Color	Manufacturer	Manufacturer #	Feature
Red	Optronics	MC66RB	Surface Mount, 2 Wire
Amber	Optronics	MC66AB	Surface Mount, 2 Wire

### Accessories



Description	Quantity
Replacement Bulb	193

### Rectangular Bullseye Side Marker Lights - 4 1/16" X 1 1/8"



Color	Manufacturer	Manufacturer #	Feature
Red	Optronics	MC42RB	Surface Mount, 2 Wire
Amber	Optronics	MC42AB	Surface Mount, 2 Wire

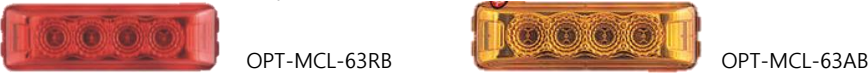
### Accessories



Description	Quantity
Red Lens	LT-9007R
Amber Lens	LT-9007A
Replacement Bulb	193
Chrome Guard	LT-9179

### Rectangular Micro Thin Line Side Marker Lights - 4 1/16" X 1 1/4"

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.



Color	Manufacturer	Manufacturer #	Feature
Red	Optronics	MCL63RB	Surface Mount, 2 Wire
Amber	Optronics	MCL63AB	Surface Mount, 2 Wire

### Accessories



Description	Quantity
Base (Single Wire/Self Grounding)	LT-9389

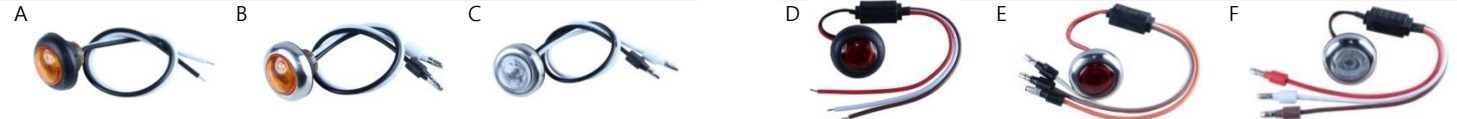
### Mini LED Marker Lights - 2 1/2" X 1 1/16"

Color	Manufacturer	Manufacturer #	Feature
Red	Optronics	MCL13R2B	Red Lens and LED
Amber	Optronics	MCL13A2B	Amber Lens and LED
Red	Optronics	MCL13CR2B	Clear Lens and Red LED
Amber	Optronics	MCL13CA2B	Clear Lens and Amber LED

### 3/4" Round LED Marker Lights

3/4" Round LED Marker Lights, 2-Wire

3/4" Round LED Marker and Supplemental Stop Lights, 3-Wire



The **2-wire** LED marker lights are a great space saving option. Rather than use a 2" round marker light, use this tiny but powerful DOT approved 3/4" marker light. Can be corner mounted, serving both side and front or back. (PC rated, viewable at 90°). Use bullets for ease of installation.

The **3-wire** LED add additional markers to supplement your stop/tail/turn lights in a small space. These lights are used to supplement, not replace your stop/tail/turn lights.

The **red** 3-wire LED lights have a dual function as a marker light and a supplemental stop light.

The **amber** 3-wire LED lights have a dual function as a marker light and a stop/tail/turn light.

The 2-wire and 3-wire all have 8" long wire leads and are 12 volt. Requires 3/4" mounting hole. Grommets are included.

Color	Black Grommet with Open End Wires		Stainless Steel Cover with Bullet Connectors		Stainless Steel Cover with Clear Lens and Bullet Connectors	
	(A) 2-Wire	(D) 3-Wire	(B) 2-Wire	(E) 3-Wire	(C) 2-Wire	(F) 3-Wire
Red	ALT-0201300	ALT-0201310	ALT-0201301	ALT-0201311	ALT-0201302	ALT-0201312
Amber	ALT-0201100	-----	ALT-0201101	ALT-0201111	ALT-0201102	ALT-0201112

### ID Light Bars



Description	Length	Color	Material
3 - 2 1/2" x 1 3/16" Rectangle	15"	Red	Rectangular Side Markers on a White Steel Base
3 - 2 1/2" Round	16"	Red	Round Side Markers on a Black Steel Base
3 - LEDs and 11 Reflectors	17"	Red	Rectangular All-Weather Plastic Housing

# Strobe Lights

## 4" Round LED General Purpose Light

LEDs use approximately 85% less power and last ten times longer, approximately 100,000 hours. LEDs are unaffected by shock or vibration.



## Accessories



Grommet

90° 2-Wire Plug

Color	Manufacturer	Manufacturer #	Feature	Description	
Clear	Optronics	BUL43CB	10 Diodes	Universal Grommet	LT-9127
				Straight 2-Wire Plug	LT-9123
				90° 2-Wire Plug	LT-9125

## Strobe Lights

Beacon lights are designed to create maximum visibility to reduce accidents on the road and in the workplace.

**Ultra (Class 1)** are commonly used on police, fire, ambulances, and road commission vehicles. They are 4 times brighter than the High (Class 2) strobes and 10 times brighter than the Medium (Class 3) strobes.

**High (Class 2)** are commonly used on construction, maintenance, and service vehicles. They are 2 1/2 times brighter than Medium (Class 3) strobes.

**Medium (Class 3)** are commonly used for indoor vehicles, such as forklifts, sweepers, and floor cleaners.

**LED** have superior durability, shock resistance, and energy efficiency.



	Intensity	Mount	Voltage	Amps	Size (H x D)	Part Number
(A)	Ultra (Class 1)	Permanent, Wire Leads	12-48 VDC	2.0	6" x 5.5"	FLST-SC12-7
(B)	High (Class 2)	Permanent, Wire Leads, Short Lens	12-30 VDC	0.4	5" x 6.5"	ST-256TSL-A
(B)	High (Class 2)	Permanent, Wire Leads, Short Clear Lens	12-30 VDC	0.4	5" x 6.5"	ST-256TSL-C
(C)	High (Class 2)	Permanent, Wire Leads, Tall Lens	12-30 VDC	0.4	6.7" x 6.5"	ST-256TCL-A
(D)	High (Class 2)	Magnet, Cigarette Plug, Short Lens	12-30 VDC	0.4	5" x 6.5"	ST-256TSLM-A
(E)	High (Class 2)	Magnet, Cigarette Plug, Tall Lens	12-30 VDC	0.4	6.7" x 6.5"	ST-256TCLM-A
(F)	Medium (Class 3)	Permanent, Wire Leads	12-80 VDC	2.7	3.8" x 5.6"	PR-7314A
(G)	Medium (Class 3)	Magnet, Cigarette Plug	12-80 VDC	2.7	3.8" x 5.6"	PR-7314A-MG
(H)	Low	Magnet, Uses 2 "D" Batteries	N/A	N/A	5" x 4.25"	NAS-PSLM2-A

## Accessories



	Description	Voltage	Part Number
(A)	Vacuum-Magnet, Cigarette Adapter, For use with PR-7512A	12-48 VDC	PR-MKS4000
(B)	LED Strobe Pigtail, Powers 40 LED Lamps, 850 FPM, Potted	9-16 VDC	PT-LED/ST
(C)	LED Quad Flash Pigtail, Powers 16 Lights, Potted	12 VDC	PT-LED/QUAD





**Halogen** have replaceable bulbs.







	Intensity	Mount	Voltage	Amps	Size (H x D)	Part Number
(A)	Ultra (Class 1)	Permanent, Wire Leads	12-48 VDC	2.0	4.5" x 5.5"	FLST-SC12-4
(B)	High (Class 2)	Permanent, Wire Leads	12-24 VDC	2.0	4.25" x 5.5"	STAR 240SFQ
(C)	High (Class 2)	Permanent, Wire Leads	12-24 VDC	0.9	4.5" x 5.5"	NAS-DFS625-A
(D)	Low	Permanent, Wire Leads	12-110 VDC	0.25	3.8" x 5.6"	PR-3318A
(A)	Low	Permanent, Wire Leads	12-36 VDC	0.25	3 5/8" x 4"	FLST-SC20-4
(A)	Low	Permanent, Wire Leads	12-36 VDC	0.5	4" x 4"	FLST-SC40-4
(E)	Low	Magnet, Cigarette Plug	12 VDC	0.5	4" x 4"	FLST-SC4041-12V

# Strobe Lights, Light Bars & Snow Plow Lights




## Flashing LED Lights

Amber					
	Description	Size	Voltage	Flashes/Min	Part Number
	High Powered LED, No Control Box, Can be Wired to Alternate with Second Light, Grommet Included, Will fit Standard 4" Round Stop/Tail/Turn Hole	4" Diameter	12-24 VDC	18 Quad Flashes	NAS-LEDQR-A
	High Powered LED, No Control Box, Can be Wired to Alternate with Second Light, Grommet Included, Will fit Standard Oval Stop/Tail/Turn Hole	6.25" L x 2.25" H Oval	12-24 VDC	18 Quad Flash	NAS-LEDQO-A
	LED Flashing Light, Polycarbonate Housing Kit, Includes Grommet, Light and Pigtail, Will fit Standard Oval Stop/Tail/Turn Hole	6.5" L x 2.36" H Oval	12-24 VDC	72 Quad Flash	TT-607101-02
	High Powered Grill-Light Features Two 6 LED Lamps with 10' of Cable Between the Two Heads, Mounting Clips for Installation, Class 2	1.25"H x 7"L x 1.25"W (each lamp size)	12 VDC	-----	GLED8000-A



## Green and Amber

	Description	Size	Voltage	Flashes/Min	Part Number
	Green and Amber, LED, Recessed Grommet Mount, Includes Grommet, Light and Pigtail, Alternating or Synchronized Flash Patterns	6.5" L x 2.25" H Oval	12-24 VDC	284 Quad Flash	BY-SL66AG
	Green and Amber, LED, Ultra Thin, Clear Lens, Permanent Mount, Includes Self Adhesive Tape, 0.65 Amps, 23 Flash Patterns	4.38" L x 1.18" H	12-24 VDC	-----	BY-8892250
	Green, LED, LED, Ultra Thin, Clear Lens, Permanent Mount, Includes Self Adhesive Tape, 1 Amp, 23 Flash Patterns	5.14" L x 1.18" H	12-24 VDC	-----	BY-8892209
	Green and Amber, LED, Ultra Thin, Clear Lens, Permanent Mount, Includes Self Adhesive Tape, 1 Amp, 23 Flash Patterns	5.14" L x 1.18" H	12-24 VDC	-----	BY-8892210


## LED Mini Light Bars

Amber					
	Description	Size	Voltage	Flashes/Min	Part Number
	Magnetic Mount, LED Mini, Ultra-Bright, Clear Dome, 8 Flash Patterns, Permanent Mounting Bar Included, Cigarette Lighter Plug with On/Off Switch	2"H x 10.9"L x 6.4"W	12-24 VDC		ALT-F2410100
	Permanent Mount, LED Mini Low-Profile, Class 2 80 LEDs, Clear Dome, 1.2 Amp Draw, Cycles Through Three Flash Patterns, Steel Base	2.75"H x 13.5"L x 9.5"W	12-24 VDC		NAS-MINIFL-C/A
	Magnetic Mount, LED Mini Low-Profile, Class 2 80 LEDs, Clear Dome, 1.2 Amp Draw, Cycles Through Three Flash Patterns, Steel Base, Cigarette Lighter Plug	2.75"H x 13.5"L x 9.5"W	12-24 VDC		NAS-MINIFLM-C/A

## Green and Amber

	Green, LED, Magnetic or Permanent Mount Included, Clear Dome, 2 Amps, Cigarette Lighter Plug with On/Off Switch, 10 Flash Patterns	2.25"H x 11"L x 6.5"W	12-24 VDC		BY-8891048
	Green and Amber, LED, Magnetic or Permanent Mount Included, Clear Dome, 2 Amps, Cigarette Lighter Plug with On/Off Switch, 10 Flash Patterns	2.25"H x 11"L x 6.5"W	12-24 VDC		BY-8891049

## Snow Plow Lights

	The pair are packed in a Grote kit with switch, hardware, and instructions.				
Style	Voltage	Amperage	Description	Bulbs	Part Number
High-Low Beam	12	5.0 / 3.5	Polycarbonate	H6545 and 1157	GR-64261-4

# LED Work Lights, Work Lights & Cigarette Plug Adapters

## LED Work Lights



ALT-W0503500



SYLEDECWLR



ALL-W0904500



PR-PW2401

Style	Voltage	Amperage	Description	Part Number
<b>3.4" Magnetic Portable Ultra-Bright LED Work Light</b>				
Work Light	12-24		Aluminum, Rechargeable, Cigarette Plug Charger	ALT-W0503500
<b>4.5" White LED Work Lights</b>				
Flood	12-24	1.25	Aluminum, 1ft. Wire Lead	SYLEDECWLR
<b>5" Ultra-Bright White LED Work Lights</b>				
Spot	12-24	2.25	Aluminum, 1ft. Wire Lead	ALL-W0904500
<b>2 1/2" X 2 1/2" LED Work Lights</b>				
Work/Flood	12-24	0.9	4 LEDs, 550 Lumens	PR-PW2401

## Sealed-Beam Work Lights



LT2-620W



LT2-630W



GR-43300

Style	Voltage	Amperage	Description	Bulbs	Part Number
<b>5" Rubber Work Lights</b>					
Trapezoid/Work	12	2.7	Rubber	4411	LT2-620W
Flood	12	3.9	Rubber	H7606	LT2-622W
<b>6" Rubber Work Light</b>					
Trapezoid/Work	12	2.7	Rubber	4419	LT2-630W
	12		Housing Only	4419	LT2-630H
<b>Accessory</b>					
Magnetic Base, Replaces Threaded Bolt			Chrome Steel, Fits All Standard Work Lights		GR-43300

## Rectangular Work Lights



ALT-W0606500



AG4601



AG4620



AG3501

Style	Voltage	Amperage	Description	Bulbs	Part Number
<b>2.36 x 6.3" Low-Profile, High Intensity LED Work Light</b>					
Spot	12-24	1.4	Aluminum, 1ft. Wire Lead		ALT-W0606500
<b>4" x 6" Halogen Work Lights</b>					
<b>1 Bulb</b>					
Trapezoid	12	4.6	High Strength Plastic	1255-H3	AG4601
Flood	12	4.6	High Strength Plastic	1255-H3	AG4602
Spot	12	4.6	High Strength Plastic	1255-H3	AG4603
<b>2 Bulb</b>					
Spot and Flood	12	9	High Strength Plastic	1255-H3	AG4620
<b>3" X 5" Halogen Work Lights</b>					
<b>1 Bulb</b>					
Trapezoid	12	4.6	High Strength Plastic	1255-H3	AG3501
Flood	12	4.6	High Strength Plastic	1255-H3	AG3502
Spot	12	4.6	High Strength Plastic	1255-H3	AG3503

## 12 Volt Cigarette Plug Adapters

12 volt receptacles work with any standard 12-volt plugs. Cigarette plug adapters are sold individually.



Description	Description
(A) Cigarette Plug Black with 3 amp Fuse	CIG-M
(B) Cigarette Plug Black with 3 amp Fuse	MR-21070
(C) Cigarette Socket Black	CIG-F
(D) Cigarette Socket Metal Insulated with Insert Lock	CIG-FPP
(E) Cigarette Socket Black with Snap-in Design	MR-12VRCSP



# Automotive Incandescent Bulbs

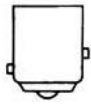
## Automotive Incandescent Bulbs



S.C.  
Bayonet



D.C.  
Bayonet



D.C.  
Indexing



Miniature  
Screw



Miniature  
Bayonet



Wedge



Candelabra  
Screw



C. Midget  
Flanged



Midget  
Screw



Midget  
Grooved



Rigid  
Loop














Miniature  
Cap

Part Number	Volts	Watt	Base Type	Overall Length	Part Number	Volts	Watt	Base Type	Overall Length
24L	14	3.36	Wedge	0.86"	1142	12.8	18.43	D.C. Bayonet	2.00"
24NA	14	3.36	Wedge	0.86"	1155	13.5	7.97	S.C. Bayonet	1.44"
24-PSB	24	1.75	Slide No.5	0.91"	1156	12.8	26.88	S.C. Bayonet	2.00"
28-PSB	28	1.12	Slide No.5	0.91"	1156DC	12.8	26.88	D.C. Bayonet	2.00"
37	14	1.26	Subminiature Wedge	0.80"	1156NA	12.8	26.88	S.C. Bayonet	2.00"
PC37	14	1.26	Printed Circuit	0.84"	1157	12.8	26.88	D.C. Index	2.00"
53	14	1.73	Miniature Bayonet	0.94"	1157NA	12.8	26.88	D.C. Index	2.00"
57	14	3.36	Miniature Bayonet	1.07"	1195	12.5	37.5	S.C. Bayonet	2.25"
67	13.5	7.97	S.C. Bayonet	0.81"	1203	28	19.88	S.C. Bayonet	2.00"
68	13.5	7.97	D.C. Bayonet	0.81"	1251	28	6.44	S.C. Bayonet	1.44"
70	14	2.1	Subminiature Wedge	0.80"	1252	28	6.44	D.C. Bayonet	1.44"
73	14	1.12	Subminiature Wedge	0.80"	1445	14.4	1.87	Miniature Bayonet	0.94"
74	14	1.4	Subminiature Bayonet	0.80"	1450	24	0.84	Miniature Bayonet	0.94"
85	28	1.12	Subminiature Wedge	0.80"	1638	28	28.56	D.C. Bayonet	2.00"
89	13	7.54	S.C. Bayonet	1.44"	1662	28/28	25.2	D.C. Index	2.00"
90	13	7.54	D.C. Bayonet	1.44"	1683	28	28.56	S.C. Bayonet	2.00"
93	12.8	13.31	S.C. Bayonet	2.00"	1816	13	4.29	Miniature Bayonet	1.19"
94	12.8	13.31	D.C. Bayonet	2.00"	1819	28	1.12	Miniature Bayonet	1.19"
97	13.5	9.3	S.C. Bayonet	1.44"	1820L	28	2.8	Miniature Bayonet	1.19"
98	13	8.06	S.C. Bayonet	1.44"	1821	28	4.76	Miniature Screw	1.19"
105	12.8	12.8	S.C. Bayonet	1.75"	1847	6.3	0.95	Miniature Bayonet	1.19"
161	14	2.66	Wedge	1.06"	1850	5	0.45	Miniature Bayonet	1.19"
168	14	4.9	Wedge	1.06"	1864	28	4.76	Miniature Bayonet	1.19"
193	14	4.62	Wedge	1.06"	1866	6.3	1.58	Miniature Bayonet	1.19"
194	14	3.78	Wedge	1.06"	1873	28	5.6	Miniature Bayonet	1.19"
194NA	14	3.78	Wedge	1.06"	1889	14	3.78	Miniature Bayonet	1.19"
194PC	14	3.78	Printed Circuit	1.11"	1891	14	3.36	Miniature Bayonet	1.19"
198	14	28.8	D.C. Index	1.25"	1893	14	4.62	Miniature Bayonet	1.19"
199	12.8	28.8	S.C. Bayonet	1.25"	1895	14	3.78	Miniature Bayonet	1.07"
211	12.8	12.42	Festoon Caps	1.75"	2057	12.8	26.88	D.C. Index	2.00"
211-2	12.8	12.42	End Caps	1.72"	2057NA	12.8	26.88	D.C. Index	2.00"
222	2.25	0.56	Miniature Screw	0.94"	2233	28	22.4	S.C. Bayonet	2.00"
265	28	2.24	Miniature Bayonet	0.94"	2357	12.8	28.16	D.C. Index	2.00"
293	14	4.62	Miniature Bayonet	1.07"	2357NA	12.8	28.16	D.C. Index	2.00"
382	14	1.12	S.C. Midget Flanged	0.63"	3057	12.8	26.88	D.F. Wedge	2.09"
400	28	2.8	Wedge	1.06"	3057NA	12.8	26.88	D.F. Wedge	2.09"
425	5	2.5	Miniature Screw	1.06"	3156	12.8	26.88	S.F. Wedge	2.09"
464	28	4.76	Wedge	1.06"	3156NA	12.8	26.88	S.F. Wedge	2.09"
456	28	4.76	Miniature Bayonet	1.07"	3157	12.8	26.88	D.F. Wedge	2.09"
561	12.8	12.42	Rigid Loop	1.72"	3157NA	12.8	26.9	D.F. Wedge	2.09"
571	12.8	26.9	D.C. Rigid Loop	1.91"	3175	12	10	Festoon	1.22"
623	28	10.36	S.C. Bayonet	1.44"	3457	12.8/14	28.1	D.F. Wedge	2.09"
624	28	10.36	D.C. Bayonet	1.44"	3457NA	12.8/14	28.2/8.3	D.F. Wedge	2.09"
755	6.3	0.95	Miniature Bayonet	1.19"	3797	24	2	Miniature Bayonet	0.93"
757	28	2.24	Miniature Bayonet	1.19"	4114LL	14/14	31.2/8.3	D.F. Wedge	2.09"
795	12.8	50	S.C. Bayonet	2.50"	4157LL	12.8/14	28.5/8.3	D.F. Wedge	2.09"
904	13.5	9.32	Wedge	1.49"	PR-2	2.38	1.2	S.C. Mini. Flanged	1.25"
906	13	9.32	Wedge	1.49"	PR-3	3.57	1.8	S.C. Mini. Flanged	1.50"
912	12.8	12.8	Wedge	1.49"	11009	14.4	1.7	BA7s	0.75"
914	4	3.6	Wedge	1.49"	13050	13	4.9	SV7	1.14"
921	12.8	17.92	Wedge	1.49"	17053	12	2.0	BA9s	0.93"
922	12.8	12.54	Wedge	1.49"	78270	12	1.40	Wedge	0.80"
1003	12.8	12.03	S.C. Bayonet	1.75"	PC118	14	1.68	Printed Circuit	0.98"
1004	12.8	12.03	D.C. Bayonet	1.75"	120-PSB	120	3	Slide No.5	1.10"
1076	12.8	23.04	D.C. Bayonet	2.00"	120-MB	120	3	Miniature Bayonet	1.19"
1141	12.8	18.43	S.C. Bayonet	2.00"	130-MB	130	3.25	Miniature Bayonet	1.19"

## Pigtails & Halogen Headlight Capsules











### Pigtails for Automotive Incandescent Bulbs

Use With	# of Leads	Lead Length	Part Number		Use With	# of Leads	Lead Length	Part Number	
63, 67, 89, 1156	1	12"	PT-SC		3057, 3057A, 3157, 3157A	3	10"	PT-3057	
1034, 1157, 2057	2	12"	PT-DC		194, 194A, 168, 161	2	9"	PT-194-90	
194, 194A	2	12"	PT-ML-194		196, 1016, 1034, 1154, 1157	2	12"	PT-GM-1157S	
51, 53, 55, 57	1	12"	PT-57		Flashers and Sealed Beams	3	12"	PT-SB-3	
1156	1	10"	PT-1156		2-Prong Flashers and Sealed Beams	3	12"	PT-SB-2	
1157, 195, 2057	2	8"	PT-1157						








### Halogen Headlight Capsules

Part Number	Volts	Watt	Overall Length	Pigtail Part #	Part Number	Volts	Watt	Overall Length	Pigtail Part #
1210/H1	12	100	2.46"	-----	9003	12	60	3.62"	PT-H4/9003H-W
1210/H3	12	100	1.65"	-----	9004	12.8	65	3.74"	PT-9004
1255-H1	12	55	2.46"	-----	9005	12.8	65	3.09"	PT-9005
1255-H2	12	55	1.22"	-----	9005XS LL	12.8	55	3.09"	PT-9005
1255-H3	12	55	1.65"	-----	9006	12.8	65	3.09"	PT-9006
1255-H7	12	55	3.62"	PT-H7	9006XS LL	12.8	55	3.09"	PT-9006
1255-H11	13.2	55	2.63"	PT-H8-11	9007	12.8	65	3.74"	PT-9004
2470/H1	24	70	2.46"	-----	9007BL	12.8	65	2.76"	PT-9004
2470/H3	24	70	1.65"	-----	9008	12.8	65	3.54"	-----
2470/H4	24	70	3.62"	-----	9140	12	40	3.09"	-----
					9145	12	45	3.09"	-----

### Pigtails for Halogen Headlight Capsules

Feature	Lead Length	Part Number		Feature	Lead Length	Part Number	
High Temp. Socket Use with H4/9003	5"	PT-H4/9003HW		Straight Socket Pigtail	10"	PT-800	
Headlight Hi-Lo Contact Use with 9004	9"	PT-9004		90° Socket Pigtail Use with 800 Series	10"	PT-800-90	
Headlight High Beam Use with 9005	9"	PT-9005		H7 Series	5"	PT-H7	
Headlight Low Beam Use with 9006		PT-9006		H9 Series	10"	PT-H9	
H8, H11 Series	10"	PT-H8-11		9000 Series, H10, Use with H12 Series	10"	PT-9000-H10-12	

### Miscellaneous Pigtails

Feature	Lead Length	Part Number		Feature	Lead Length	Part Number	
Ford Voltage Regulator	8"	PT-REG/FO		Continuous Pigtails with Connectors on 9" Centers	9"	PT-6020-100	
Ford Regulator HD, 6 Color Coded Wire Leads	8"	PT-FO/REG HD		Mates with .157 Male Snap Plug	11"	RP1-12	
For Alternator with Internal Voltage Regulator	6"	PT-ALT/GM		Mates with Itself Molded 2-Wire Plug	9"	RP2-12	
Under Dash Headlight Switch Pigtail, F Series	6"	PT-F0-HLS					

# Sealed-Beams & Flashers

## Sealed-Beams



4912-1



4412



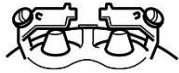
H-6054



4636-3



Slip On



Screw Base



3 Lug Base



Multipurpose

Part Number	Volts	Watts	Base Type	Application	PAR/Size	Diameter
4000	12.8	37.5 Hi / 60 Lo	3 Lug	Auto Headlamp	PAR46	5 3/4"
4350	36	60	Slip On	Work Light/Elect. Truck	PAR36	4 1/2"
4405	12.8	30	Screw	Spot	PAR36	4 1/2"
4411	12.8	35	Screw	Tractor	PAR36	4 1/2"
4412	12.8	35	Screw	Fog/Automotive	PAR46	5 3/4"
4412A	12.8	35	Screw	Fog/Automotive	PAR46	5 3/4"
4416	12.8	30	Screw	Spot/Automotive	PAR36	4 1/2"
4502	28	50	Screw	Military Headlamp	PAR36	4 1/2"
4505	28	50	Screw	Spot Aircraft	PAR36	4 1/2"
4578	28	60	2 Lug	Flood/Construction	PAR46	5 3/4"
4579	28	80 Hi / 60 Lo	3 Lug	Headlamp/Construction	PAR46	5 3/4"
4589	28	50	Screw	Construction	PAR36	4 1/2"
4636-3	14	80	Multipurpose	Signal	PAR46	5 3/4"
4651	12.8	50	2 Lug	Headlamp-Hi	100mm x 165mm	-----
4652	12.8	40 Hi / 60 Lo	3 Lug	Headlamp-Hi/Low	100mm x 165mm	-----
4912-1	12.8	50	Slip On	Tractor-Trap	100mm x 165mm	-----
4921-1	12.8	100	Multipurpose	Fog/Automotive	100mm x 165mm	-----
6015	12.8	60 Hi / 50 Lo	3 Lug	Headlamp Heavy duty	PAR56	7"
6052	12.8	65 Hi / 55 Lo	3 Lug	Headlamp-Hi/Low	142mm x 200mm	-----
7400	12.8	35	Multipurpose	Rotating Beacon	PAR36	4 1/2"
H-4651	12.8	50	2 Lug	Auto-Hi Halogen	100mm x 165mm	-----
H-4656	12.8	35 Hi / 35 Lo	3 Lug	Auto-Hi/Low Halogen	100mm x 165mm	-----
H-4656BL	12.8	40 Hi / 55 Lo	3 Lug	Headlamp-Hi/Low-Xenon	100mm x 165mm	-----
H-4701	12.8	65	2 Lug	Headlamp-Hi Halogen	92mm x 150mm	-----
H-4703	12.8	55	2 Lug	Headlamp-Low Halogen	92mm x 150mm	-----
H-5001	12.8	50	2 Lug	Headlamp-Hi Halogen	PAR46	5 3/4"
H-5006	12.8	35 Hi / 35 Lo	2 Lug	Auto-Hi Halogen	PAR46	5 3/4"
H-6024	12.8	60 Hi / 35 Lo	3 Lug	Auto-Hi/Low Halogen	PAR56	7"
H-6054	12.8	65 Hi / 35 Lo	3 Lug	Auto-Hi/Low Halogen	142mm x 200mm	-----
H-6054HO	12.8	65 Hi / 55 Lo	3 Lug	Auto-Hi/Low Halogen	142mm x 200mm	-----
H-6545	12.8	65 Hi / 45 Lo	3 Lug	Auto-Hi/Low Halogen	100mm x 165mm	-----
H-7604	12.8	50	Screw	Auto Spot Halogen	PAR36	4 1/2"
H-7921-1	12.8	50	Slip On	Fog/Automotive Halogen	100mm x 165mm	-----

## Automotive Flashers



576



EF-32



EF-33H



EL-13A

Flashers are commonly used for turn signals and emergency lights to make lights flash rhythmically.

Volts	Terminals	Number of Lights Controlled	Part Number	Alternate Part Number	Volts	Terminals	Number of Lights Controlled	Part Number	Alternate Part Number
12	2	1-6	552	-----	12	3	1-10	EL-13	EF33
12	2	2-6	552-BUSS	-----	12	3	1-6	EL-13A	EF30A
12	3	1-6	550	-----	12	2	16	EL-16	EF40
12	3	2-6	550-BUSS	-----	12	5	2-10	EF-27	-----
12	2	1-8	575	-----	12	2	1-12	EF-32H	-----
12	2	1-20	576	-----	12	2	1-12	EF-32L	EF-32LED
12	3	1-20	577	-----	12	3	1-12	EF-33H	-----
12	2	1-10	852-5X	-----	12	3	16	EF-41	-----
12	3	1-10	850-5X	-----	24	2	1-6	EG-22	-----
12	2	1-10	EL-12	EF32	24	3	1-6	EG-23	EF-23

# Truck Mirrors, Techniq Lights & License Plate Lights

## West Coast, OEM & Economy Mirrors

All the west coast mirrors have heavy 3mm glass. Come in two sizes: 6"x16" and 7"x16". Stainless steel west coast mirrors have stainless steel bodies and end caps. Rods and hardware are plated for corrosion resistance.



Size	Type	Feature	
<b>Mirrors</b>			
6"x16"	Stainless Steel	Standard	WC6160SS
6"x16"	Stainless Steel	Heated	WC6165SS
6"x16"	Stainless Steel	Heated and Light	WC6169SS
7"x16"	Stainless Steel	Standard	LT2-7815
7"x16"	Stainless Steel	Heated	LT2-7817
7"x16"	Stainless Steel	Heated and Light	LT2-7817A
7"x16"	Stainless Steel	OEM / Standard	LT2-7084
7"x16"	Stainless Steel	OEM / Heated	LT2-7085

Size	Type	Feature	
<b>Mirrors (Cont.)</b>			
7"x16"	Stainless Steel	OEM / Heated and Light	LT2-7085A
6"x16"	Aluminum	Economy / Standard	LT2-7010
6"x16"	Stainless Steel	Economy / Standard	WC6160EC
7"x16"	Stainless Steel	Economy / Standard	WC7160EC
<b>Mirror Arm Assembly</b>			
-----	Stainless Steel	-----	LT2-7117
-----	Black	-----	LT2-7113
-----	White	-----	LT2-7115

## Convex Round & Rectangular Mirrors

All the convex round mirrors have 2mm thick glass. They have a nickel plated ball stud and have stainless steel hardware and "L" brackets.



Diameter	Mounting		Type	
	Hole	Position		
5"	Center	Stainless Steel	LT2-7062	
6"	Center	Black	LT2-7071	
6"	Center	Stainless Steel	LT2-7072	
7.5"	Center	Black	LT2-7077-CTR-B	
7.5"	Center	Stainless Steel	LT2-7077-CTR	

Diameter	Mounting		Type	
	Hole	Position		
7.5"	Offset	Stainless Steel	LT2-7077	
8.5"	Center	Black	LT2-7073	
8.5"	Center	Stainless Steel	LT2-7074	
8.5"	Offset	Stainless Steel	LT2-7074-OFF	
8.5"	Center	Stainless Steel, Heated	LT2-7078-CTR	

## Round Courtesy Lights - 1 1/2" X 7/8"

Color	Manufacturer	Manufacturer Number	Feature	Part Number
Clear	Grote	60101	Steel-chrome finish, #67 Bulb, Fits 1 1/4" Hole	LT-430W



## Document Holder

Moisture resistant document holder has a see through cover. Designed for ease of installation. Rubber gasket for moisture resistance. Sold individually.

Color	Width	Depth	
Gray	5.860"	5.220"	TL-97960



## Techniq Lights

### Mini Side Marker Lamp

Features	Part Number
P2 Rated Mini Red Side Marker, 3/4" Mounting Hole and Includes Grommet, 12 VDC, 180° Light Output, 100,000 Hours, Low Profile Makes it Damage Resistant	TN-S33-RR00



### Waterproof ID Bar

Features	Part Number
Tough Waterproof ID Bar, 3 Super Bright Red LED Marker Lights Mounted in Black Poly Body, 12 VDC, Mounts with #10 Screws, 9" Pigtail, Dimensions: 14.6"Length x 1.35"Wide x .95"Thick	TN-S50-RRB0



### License Plate Lamp



Features	Part Number
Tough Single Piece Sealed LED Lamp, Black Poly Body, 12 VDC, 50,000 Hours, Pigtail Wire, Waterproof, Vertical Place Surface Mount, DOT	TN-L110-WB00



## License Plate Lights

				
LT2-9315K	LT2-436W	LT2-420W	OPT-LPL31CB	OPT-LPL91CB

## Accessories for OPT-LPL91CB

	Chrome Base	
		90° 2-Wire Plug

Color	Manufacturer	Manufacturer #	Feature	Description	
Clear	UB Lights	LP2002	Light, Housing and Pigtail	LT2-9315K	LT2-9381
Clear	UB Lights	SE1225L	Replacement Light Only	LT2-1502W	LT-9122
-----	UB Lights	LP2000	Housing Only	LT2-9315	
Clear	UB Lights	LP1001	Light and Chrome Housing	LT2-436W	
Clear	Optronics	LP56CB	Gray Surface Mount Housing, #67	LT2-420W	
Clear	Optronics	LPL31CB	Light, Chrome Housing and Wiring	OPT-LPL31CB	
Clear	Optronics	LPL91CB	2 1/2" x 1 1/4" LED Light Only	OPT-LPL91CB	

# Back-Up Alarms, Coiled Cords, Connectors, Sealant & Circuit Tester

## Universal Mount Back-Up Alarms

### Economy



The back-up alarm has a potted circuit board. It is surface mounted and has stud connections.

Decibels	Voltage	Size	
97	12-24 VDC	3"H x 3"W	BU-97

### Preco



The back-up alarm has a potted circuit board. It is surface mounted and has stud connections.

	Decibels	Voltage	Size	
(A)	87	12 VDC	2.6"H x 4"W	PR-220
(A)	97	12 VDC	2.6"H x 4"W	PR-230
(A)	97	12 VDC	2.6"H x 4"W	PR-230GS
(A)	97	12-24 VDC	2.6"H x 4"W	PR-240
(A)	102	12-24 VDC	2.6"H x 4"W	PR-250
(B)	97	12 VDC	4.5"H x 4.5"W	PR-LDA-50

## Back-Up Alarm Switches



When it isn't possible to wire back-up alarms directly to vehicle back-up light circuit. Install adjacent to gear shift lever or linkage. Switch activates alarm when the shaft is moved.

### Direction

Activates in all directions.	TT-210298
Activates in one direction only.	TT-210299

## Flat Type Connectors



Flat type molded inline connectors are an economical way of connecting electrical systems. Wires are color coded for installation. These connectors offer weather protection.

Length	2-Way		4-Way		6-Way	
	Male	Female	Male	Female	Male	Female
12"	-----	RP2-12*	FM-12	FF-12	FM-6	FF-6
48"	-----	-----	FM-48	FF-48	-----	-----
72"	-----	-----	-----	FF-72	-----	-----

4-Way Adapter Part # 4/ADPT

\* RP2-12 has 4" leads

## Coiled Cords



Standard



ABS

The coiled cords are designed to be flexible in extreme temperatures. They have die cast plugs with spring guards.

Use our **ABS** power coil for a second tractor/trailer connection that requires auxiliary style connectors. The inverted ground pin prevents incorrect connections.

Conductor-Gauges	Lead Length	Working Length	
<b>Standard</b>			
6-12 GA. & 1-10 GA.	12"	12'	CC-612/10-12'
6-12 GA. & 1-10 GA.	12"	15'	CC-612/10-15'
6-14 GA. & 1-12 GA.	12"	12'	CC-614/12-12'
6-14 GA. & 1-12 GA.	12"	15'	CC-712-15'
<b>ABS</b>			
4-12 GA. & 2-10 GA. & 1-8 GA.	12"	15'	CC-7YELL-15'ISO

## Corrosion & Rust Preventive Sealant

Prevents corrosion in electrical contacts, switches, and junction boxes. Clear gel with great coating abilities.



Description	
4 oz. Tube, Sealant	GR-99170
2 oz. Tube, Compound	TL-97944
8 oz. Can, Compound	TL-97940
14 oz. Cartridge, Compound	TL-97948

## Circuit Testing Tools



Part # 27000

### Description

Hand Operated  
Test 6 and 12 Volt Vehicle Systems  
"Ice Pick" Type  
Flexible Hypalon Ground Wire,  
Spring Strain Relief on Wire  
to Handle  
Replaceable Bulb

## LED Adhesive Mount String Lights



Great for lighting tool drawers or other internal spaces. These string lights can be used individually or together.

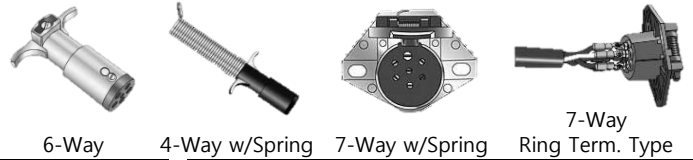
Color	Length	Voltage	Feature
White	120"	12 VDC	20 Bars per strip

LEDSTRINGLIGHTS

# Trailer Connectors & Junction Boxes

## Tractor/Trailer Plugs

The 1, 2, and 3-way corresponds to the number of wires. All are made of cast zinc bodies with brass pins, except the **poly** plugs and sockets are nylon bodies filled with glass. For secondary power source use our **ISO** auxiliary plugs and sockets. Rated 6-28 volts and 40 amps of continuous duty.



Poles	Plug				Receptacle			
	Tectran #	Pollak #	Phillips #	Cole Hersee #	Tectran #	Pollak #	Cole Hersee #	Ring Term. Type
1-Way	670-11SG	-----	-----	-----	MP-1	670-12	-----	FP-1
2-Way	-----	12-800EP	-----	-----	MP-2	-----	12-801EP	FP-2-POLLAK
2-Way	-----	-----	-----	11042-05	CH-11042-05	-----	-----	CH-11041-06
4-Way	670-41	11-402EP	-----	-----	MP-4	670-42	11-404EP	FP-4-POLLAK
4-Way	-----	-----	-----	-----	-----	-----	1232	CH-1232
4-Way w/Spring	670-41SG	11-403EP	-----	-----	MP-4 SPRING	-----	-----	-----
6-Way	670-61	11-604EP	-----	-----	MP-6	670-62	11-609EP	FP-6-POLLAK
6-Way w/Spring	670-61SG	11-605EP	-----	-----	MP-6 SPRING	-----	-----	-----
7-Way w/Spring	670-71SG	11-702EP	-----	-----	MP-7	670-72	11-721EP	FP-7
7-Way w/Spring	-----	-----	15-730	-----	MP-7 MB	-----	-----	-----
7-Way Nylon	670P-71SG	11-710EP	-----	-----	MP-7 POLY	670P-72	11-724EP	FP-7 POLY
7-Way ISO Auxiliary	680-E71SG	-----	-----	-----	MP-7 ISO	680-E72	-----	FP-7 ISO
7-Way Ring Terminal Type	-----	-----	-----	-----	-----	-----	-----	FP-7 TERM

## Tractor/Trailer Plug Boots and Bracket



4 or 6-Way  
Socket Boot



4 or 6-Way  
Socket Boot

### Description

4 or 6-Way Socket Boot	11-616
7-Way Socket Boot	11-761

## Tractor/Trailer Plug Accessories

The battery brush cleans terminals, posts, and cable connectors. It has a tapered circular wire brush and a carbon steel bristles.

For cleaning the plugs and receptacles, try our plug scrub tool. There is a built in guide and the wire bristles are steel.

Plug Scrubber



### Description

7-Way Cleaning Tool	PLG-SCB-7
6-Way Cleaning Tool	PLG-SCB-6
4-Way Cleaning Tool	PLG-SCB-4

## Tractor/Trailer and Recreational Vehicle Connector Adapters

### Connects

6-Way Plugs to Trailers with 7-Way Sockets	ADP-6P/7F
7-Way Plugs to Trailers with 6-Way Sockets	ADP-7P/6F

Use these adapters to make a connection between a trailer and a vehicle.



ADP-6P/7F



ADP-7P/6F

## Pollak Recreational Vehicle Connectors



RV7-M



RV7-F



Mtg. Bracket

### Description

7-Way Male Trailer End	RV7-M
7-Way Female Automobile End	RV7-F
Right Angle Mounting Bracket	12-701

## Recreational Vehicle Connector Adapters

Use adapters to make any connection between any trailer and any vehicle.



ADF7-4



ADP-7RV/6P



AD6-4



ADR7-4

### Description

7-Way Blade Style to a 4-Way Flat Connection	ADF7-4
7-Way Blade Style to a 6-Way Round Pin Connection	ADP-7RV/6P
6-Way Round Pin to a 4-Way Round Pin Connection	AD6-4
7-Way Round Pin to a 4-Way Flat Connection	ADR7-4

## 7-Way Plug Checker

Test your 7-way trailer plug with this tester from the seat of your cab. Activate each switch and the corresponding LED light on the tool will illuminate. Faulty wiring or shorts will be indicated if LEDs are dimmer than usual, fail to light, or if more than one LED lights at the same time. Each LED on tool is labeled for function and number. Sold individually.



Part #  
CK-7

## "Bull-Nosed" Circuit Breaker Socket

7-way trailer socket with circuit breakers included. Weather resistant and has isolated ground and circuit protection. Sold individually.



Front



Back

Breaker Amperage	Description	Part Number
20	Split Pin	24020
30	Split Pin	24030

## Junction Boxes

Type	Size	Part #
7 Terminal Style	7 3/8" x 3 3/8"	22040
7 Circuit Breaker Style	7 3/8" x 3 3/8"	22070

Junction boxes include cover, strain relief collars, and are made of a molded composite.

Circuit breakers are not included in the 7 circuit breaker style.



7 Terminal  
Style



7 Circuit  
Breaker Style

# Surface Conditioning Discs

## General Purpose Surface Conditioning Discs



Plastic Screw (TR)

General Purpose surface conditioning discs remove grind marks, rust, and coatings with ease. Made of aluminum oxide. Color coded for grade/grit. Simply match the diameter, color, and mounting style to replace an existing surface condition disc.

**Made in USA** - offers high quality results at an economical price.

**3M's Roloc™** - offer the quality you've come to know with 3M.

Color	Grit	Grade	Made in USA	Pkg. Qty.	3M's Roloc™	Pkg. Qty.
<b>1" Diameter</b>						
Brown	120	Coarse	-----	----	ROL-SC1TR-BR	5
Maroon	150	Medium	-----	----	ROL-SC1TR-MA	5
Blue	320	Very Fine	-----	----	ROL-SC1TR-BL	5
Gray	600	Super Fine	-----	----	ROL-SC1TR-GR	5
<b>1.5" Diameter</b>						
Brown	120	Coarse	-----	----	ROL-SC1.5TR-BR	5
Maroon	150	Medium	-----	----	ROL-SC1.5TR-MA	5
Blue	320	Very Fine	-----	----	ROL-SC1.5TR-BL	5
Gray	600	Super Fine	-----	----	ROL-SC1.5TR-GR	5
<b>2" Diameter</b>						
Brown	120	Coarse	SD-2-BR	25	ROL-SC2TR-BR	5
Maroon	150	Medium	SD-2-MAR	25	ROL-SC2TR-MA	5

Color	Grit	Grade	Made in USA	Pkg. Qty.	3M's Roloc™	Pkg. Qty.
<b>2" Diameter (cont.)</b>						
Blue	320	Very Fine	SD-2-BL	25	ROL-SC2TR-BL	5
Gray	600	Super Fine	SD-2-GR	25	ROL-SC2TR-GR	5
<b>3" Diameter</b>						
Brown	120	Coarse	SD-3-BR	25	ROL-SC3TR-BR	1
Maroon	150	Medium	SD-3-MAR	25	ROL-SC3TR-MA	1
Blue	320	Very Fine	SD-3-BL	25	ROL-SC3TR-BL	1
Gray	600	Super Fine	SD-3-GR	25	ROL-SC3TR-GR	1
<b>4" Diameter</b>						
Brown	120	Coarse	-----	----	ROL-SC4TR-BR	1
Maroon	150	Medium	-----	----	ROL-SC4TR-MA	1
Blue	320	Very Fine	-----	----	ROL-SC4TR-BL	1
Gray	600	Super Fine	-----	----	ROL-SC4TR-GR	1

## Disc Holders



Surface prep disc holders offer firm support for plastic screw style (TR) discs.

Diameter	Backing Pad	Pkg. Qty.
2"	Twist-Type	SD-HOLDER-2
3"	Twist-Type	SD-HOLDER-3

## General Purpose Plastic Snap (TP) and Metal Fastener (TS and TSM) Surface Conditioning Discs



Plastic Snap (TP)



Metal Fastener (TS & TSM)

3M's Roloc™ SC surface conditioning discs remove grind marks, rust, and coatings with ease. Made of aluminum oxide. Color coded for grade/grit. Simply match the diameter, color, and mounting style to replace an existing surface condition disc.

Color	Grit	Grade	Pkg. Qty.
<b>Plastic Snap (TP)</b>			
<b>2" Diameter</b>			
Brown	120	Coarse	ROL-SC2TP-BR 5
<b>3" Diameter</b>			
Brown	120	Coarse	ROL-SC3TP-BR 1
Blue	320	Very Fine	ROL-SC3TP-BL 1
<b>TS (Metal Fastener)</b>			
<b>1.5" Diameter</b>			
Brown	120	Coarse	ROL-SC1.5TS-BR 5
<b>3" Diameter</b>			
Brown	120	Coarse	ROL-SC3TS-BR 1
Maroon	150	Medium	ROL-SC3TS-MA 1
Blue	320	Very Fine	ROL-SC3TS-BL 1
Gray	600	Super Fine	ROL-SC3TS-GR 1

Color	Grit	Grade	Pkg. Qty.
<b>Metal Fastener (TSM)</b>			
<b>1.5" Diameter</b>			
Brown	120	Coarse	ROL-SC1.5TSM-BR 5
Maroon	150	Medium	ROL-SC1.5TSM-MA 5
Blue	320	Very Fine	ROL-SC1.5TSM-BL 5
<b>2" Diameter</b>			
Brown	120	Coarse	ROL-SC2TSM-BR 5
Maroon	150	Medium	ROL-SC2TSM-MA 5
Blue	320	Very Fine	ROL-SC2TSM-BL 5
<b>3" Diameter</b>			
Brown	120	Coarse	ROL-SC3TSM-BR 1
Maroon	150	Medium	ROL-SC3TSM-MA 1
Blue	320	Very Fine	ROL-SC3TSM-BL 1

## Heavy Duty Surface Conditioning Discs



The same general purpose surface conditioning disc but offers greater durability and a higher cut rate than basic Roloc™ discs. These 3M's Roloc™ SE surface conditioning discs are ideal for heavy duty deburring and finishing.

Color	Grit	Grade	Pkg. Qty.
<b>Plastic Screw (TR)</b>			
<b>2" Diameter</b>			
Brown	120	Coarse	ROL-SE2TR-BR 5
Maroon	150	Medium	ROL-SE2TR-MA 5
Green	240	Fine	ROL-SE2TR-GR 5
<b>3" Diameter</b>			
Brown	120	Coarse	ROL-SE3TR-BR 1
Maroon	150	Medium	ROL-SE3TR-MA 1
Green	240	Fine	ROL-SE3TR-GR 1

## Super Duty Surface Conditioning Discs



These 3M's Roloc™ SL surface conditioning discs can last up to twice as long. The same general purpose surface conditioning disc but offers greater durability and a higher cut rate than basic Roloc™ discs.

Color	Grit	Grade	Pkg. Qty.
<b>Plastic Screw (TR)</b>			
<b>2" Diameter</b>			
Black	120	Coarse	ROL-SL2TR-BLK 1
Dark Brown	120	Coarse	ROL-SL2TR-DBR 1
Brown	120	Coarse	ROL-SL2TR-BR 1
Maroon	150	Medium	ROL-SL2TR-MA 1
<b>3" Diameter</b>			
Black	120	Coarse	ROL-SL3TR-BLK 1
Dark Brown	120	Coarse	ROL-SL3TR-DBR 1
Brown	120	Coarse	ROL-SL3TR-BR 1
Maroon	150	Medium	ROL-SL3TR-MA 1

# Surface Conditioning Discs, Grinding Discs, Cut-off Wheels & Work Gloves

## Abrasive Surface Conditioning Discs

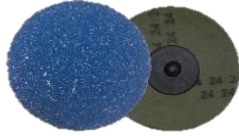
3M's Roloc™ Green Corps™ surface conditioning discs remove paint, rust, and welds in collision repair. Made of aluminum oxide. Color coded for grade/grit. Simply match the diameter, color, and mounting style to replace an existing surface condition disc.

Diameter	Color	Grit	Grade	Pkg. Qty.
2"	Green	50	Coarse	SD-01406 1
3"	Green	50	Coarse	SD-01397 1



## Grinding Discs

Often used in light welds, blending surfaces, and pre-paint surface preparation, grinding discs have a tough aluminum oxide grain and are made of heavy-duty resin fiber, with an epoxy backing.



Diameter	Grit		Pkg. Qty.
2"	24	GD-224A	25
2"	36	GD-236A	25
2"	50	GD-250A	25
3"	24	GD-324A	25
3"	36	GD-336A	25
3"	50	GD-350A	25

## Sanding Pads

Use before applying paint and primer. Also can be used for cleaning needs. Rinses clean and won't rust. Can be used several times.



Part # SP-96

## Work Gloves

### 6 Mil Nitrile Gloves

While most nitrile work gloves are 4 mil, our gloves are 50% thicker at 6 mil. The greater thickness provides superior longevity and cut resistance. Use these gloves where you need maximum dexterity and oil resistance.



Size	Color	Part Number	Pkg. Qty.
Medium	Blue	6M NITR GLV M	100 Gloves
Large	Blue	6M NITR GLV L	100 Gloves
X-Large	Blue	6M NITR GLV XL	100 Gloves

### Extra-Thick Rubber Palm Work Gloves

The rubber palm of this glove is extra thick, providing superior durability, abrasion, and puncture resistance. Excellent wet and dry grip. Machine washable.



Size	Color	Part Number	Pkg. Qty.
Small	Gray with Blue Palm	PLM GLV S	1 pair
Medium	Gray with Blue Palm	PLM GLV M	1 pair
Large	Gray with Blue Palm	PLM GLV L	1 pair
X-Large	Gray with Blue Palm	PLM GLV XL	1 pair

### Knit Cotton Work Gloves

Lightweight and inexpensive cotton work gloves. Use these for light-duty general maintenance applications. Cheap enough that you can use them once and throw them away.

Size	Color	Part Number	Pkg. Qty.
One Size Fits Most	Gray	ECO GLV	12 pair



## Cut-Off Wheels

Cut-off wheels are used in cutting automotive sheet metal, clamps, frame rails, and rusted bolts.

Long-life cut-off wheels last at least three times longer than standard cut-off wheels.

Use mandrels to convert any die grinder or power drill into a cutting tool.



Cut-Off Wheel



Mandrel

Thickness	Arbor	Grit		Pkg. Qty.
-----------	-------	------	--	-----------

### 3" Diameter Cut-Off Wheels

1/32"	3/8"	54	CW-3-132	10
1/16"	3/8"	54	CW-3-116	10

### Long-Life 3" Diameter Cut-Off Wheels

1/32"	3/8"	54	CWZ-3-132	6
1/16"	3/8"	54	CWZ-3-116	6

### Mandrels

Mandrel (3/8" Shoulder Screw)	CW-MANDREL-38	1
Mandrel (1/4" and 3/8" Shoulder Screw)	CW-MANDREL-1438	1

## Foamed Nitrile Palm Grip Gloves

The foamed nitrile palm provides superior grip in regular and oily environments. They are also quite breathable. These gloves maximize your use of your finger tips for small and difficult to grip items while also protecting your hands from incidental bumps, cuts, and oils on the job.



Size	Color	Part Number	Pkg. Qty.
Medium	Blue with Black Palm	GRIP GLV M	1 pair
Large	Blue with Black Palm	GRIP GLV L	1 pair
X-Large	Blue with Black Palm	GRIP GLV XL	1 pair

## Leather Work Gloves

This cowhide leather work glove is ideal for general maintenance lifting, pulling, and warehousing. Gloves protect hands from bumps and scratches.



Size	Color	Part Number	Pkg. Qty.
Medium	Gray	ECO LTHR GLV M	1 pair
Large	Gray	ECO LTHR GLV L	1 pair
X-Large	Gray	ECO LTHR GLV XL	1 pair



# Drop Lights, Replacement Bulbs, Extension Cords & Plugs and Receptacles

## Drop Lights

### LED



- Features:
- 25 foot cord
  - 16 gauge wire
  - Black handle
  - Outlet on handle
  - Metal guard
  - Push through switch
  - 750 Lumens

Part # WL300R



Part # WL200C

- Features:
- Replacement light cage for WL300R

### Standard



- Part # 16/3-25TL  
 • 25 foot cord  
 Part # 16/3-50TL  
 • 50 foot cord

- Features:
- 16 gauge wire
  - Black high strength handle with push through switch
  - Outlet on handle
  - Metal guard



Part # CR-50

- Features:
- 50 foot retractable cord
  - 18 gauge wire
  - Vinyl handle with outlet
  - Metal guard
  - Switch
  - 10 amp, 1250 watts
  - Wall hanger

### Heavy Duty Ericson Drop Lights



Part # ER-9450-RS

- Features:
- 50 foot cord
  - 16 gauge wire
  - Switch
  - Outlet on handle
  - Industrial grade



Part # ER-944RS

- Features:
- Replacement head
  - Heavy duty guard with reflector, socket, ground clip, switch on handle
  - No cord



Part # TL-HEAD KIT

- Features:
- Replacement head
  - Metal swing open reflector, 3-wire outlet and push switch on handle, interior socket
  - No cord

### Incandescent Rough Service Replacement Bulbs



Rough service bulbs resist vibration and are known for their durability.

Wattage	Standard	Tough Skin	Pkg. Qty.
75	RSB-75	RSB-75T	6
100	RSB-100	RSB-100T	6

## Replacement Bulbs

### LED Replacement Bulbs



Part # WL100C

- Features:
- 100 watts
  - 750 lumens
  - LED super white light
  - Wide beam spread

### Fluorescent Replacement Bulbs



Part # TLQFS

- Features:
- 13 watts, 120 volts
  - Fluorescent double tube lamp
  - 2 Pin Base
  - 4 11/16" length

## Extension Cords



Our extension cords are good for all-weather applications down to -58°F and are UL listed for indoor/outdoor use. They are blue, 3 wire grounded, and have molded ends.

Wire Size (AWG)	Cord Length	
<b>Single Connector</b>		
16	25 feet	16/3 CORD-25
16	50 feet	16/3 CORD-50
14	25 feet	14/3 CORD-25
14	50 feet	14/3 CORD-50
12	15 feet	12/3 CORD-15
12	25 feet	12/3 CORD-25
12	50 feet	12/3 CORD-50
<b>Triple Connector</b>		
12	50 feet	12/3 CORD-50-3

## Plugs and Receptacles

Prevent accidental disconnection with twist lock plugs.



ER-1510-P and ER-1610-C



MR-5266 and MR-5259

Type	NEMA	Diameter	Male	Female
<b>15 Amp, 125 Volt, 3-Wire</b>				
Standard	5-15	1.53"	(A) ER-1510-P	(A) ER-1610-C
Economy	5-15	1.47"	(A) MR-5266	(A) MR-5269
Twist Lock	L5-15	1.53"	(B) ER-1520-P	(B) ER-1620-C
<b>20 Amp, 125 Volt, 3-Wire</b>				
Twist Lock	L5-20	2.12"	(C) ER-2310-P	(C) ER-2410-C
<b>20 Amp, 250 Volt, 3-Wire</b>				
Locking	-----	2.14"	-----	(D) ER-2416-C

\*Many other styles available.

**Hex Head Caps Screws,  
Nuts & Washers**

Hex Head Cap Screws	112-113
Hex Nuts	114
Flat Washers	114
Split-Lock Washers	114
Metric Hex Head Cap Screws, Nuts & Washers	115
Stainless Steel Nuts & Washers	116

**Machine Screws**

Machine Screws	116
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**Self Drilling Screws**

Self Drilling Screws	117
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**Drill Bits**

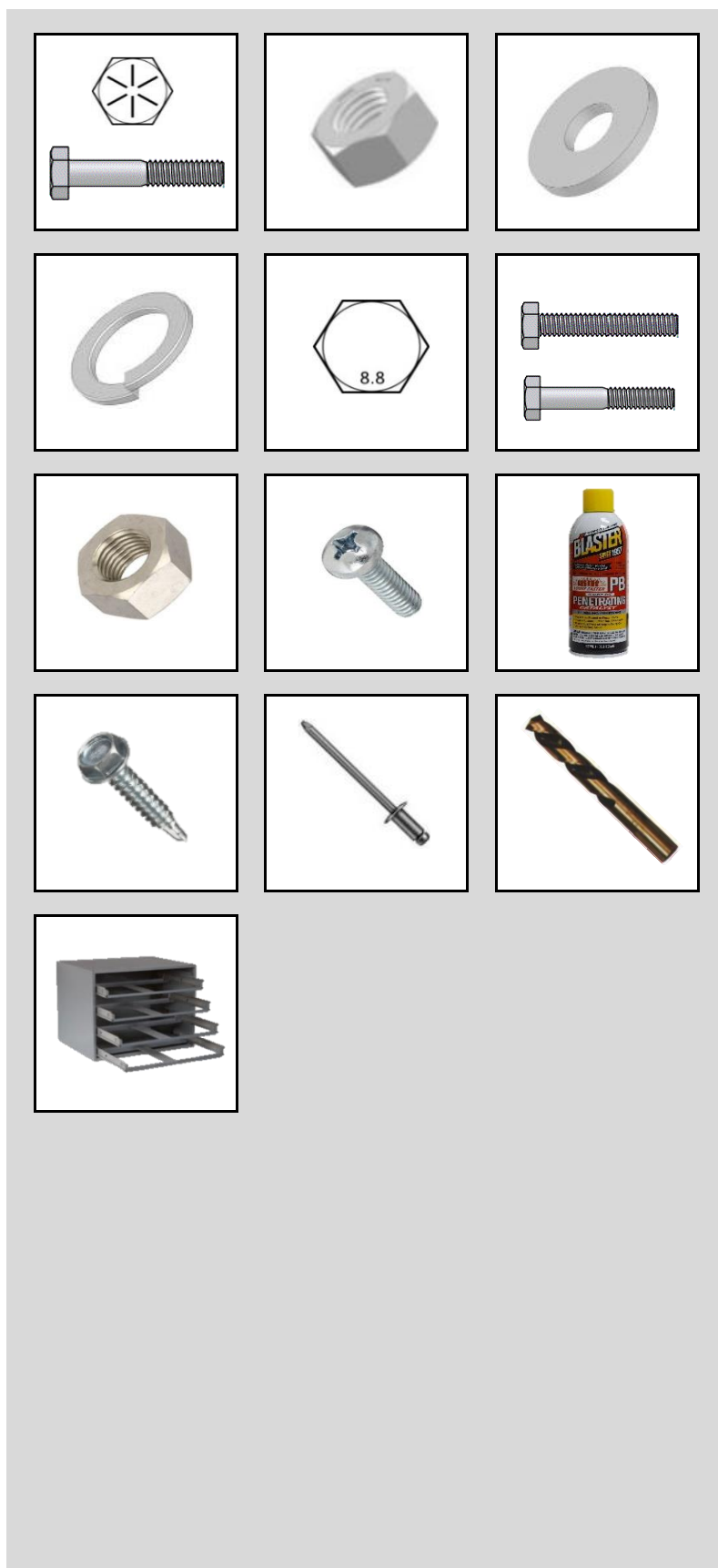
Drill Bits	117
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**Rivets**

Rivets	118
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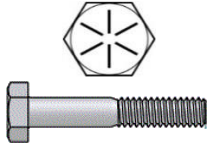
**Boxes & Racks**

Boxes & Racks	119
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# Hex Head Cap Screws

## Hex Head Cap Screws — Grade 8 — Made in North America



The six ticks on the head of our steel screws signify that they are Grade 8, offering greater strength and durability than traditional Grade 5 cap screws. The zinc-yellow chromate coating offers a high level of corrosion resistance and rust protection.

The minimum thread length can be calculated using the following formula:  
 Minimum Thread Length = 2 x Diameter + 1/4".

### Course Thread (UNC)

Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.
<b>1/4"-20</b>		<b>3/8"-16</b> (Cont.)		<b>1/2"-13</b> (Cont.)		<b>3/4"-10</b> (Cont.)	
0.375"	HS8Y-14C-0.375 100	1.5"	HS8Y-38C-1.5 50	5.5"	HS8Y-12C-5.5 5	2.5"	HS8Y-34C-2.5 5
0.5"	HS8Y-14C-0.5 100	1.75"	HS8Y-38C-1.75 50	6.0"	HS8Y-12C-6 5	2.75"	HS8Y-34C-2.75 5
0.625"	HS8Y-14C-0.625 100	2.0"	HS8Y-38C-2 25	6.5"	HS8Y-12C-6.5 1	3.0"	HS8Y-34C-3 1
0.75"	HS8Y-14C-0.75 100	2.25"	HS8Y-38C-2.25 25	7.0"	HS8Y-12C-7 1	3.25"	HS8Y-34C-3.25 1
0.875"	HS8Y-14C-0.875 100	2.5"	HS8Y-38C-2.5 25	8.0"	HS8Y-12C-8 1	3.5"	HS8Y-34C-3.5 1
1.0"	HS8Y-14C-1 100	2.75"	HS8Y-38C-2.75 25	<b>9/16"-12</b>		3.75"	HS8Y-34C-3.75 1
1.25"	HS8Y-14C-1.25 100	3.0"	HS8Y-38C-3 25	1.0"	HS8Y-916C-1 10	4.0"	HS8Y-34C-4 1
1.5"	HS8Y-14C-1.5 100	3.25"	HS8Y-38C-3.25 10	1.25"	HS8Y-916C-1.25 10	4.5"	HS8Y-34C-4.5 1
1.75"	HS8Y-14C-1.75 50	3.5"	HS8Y-38C-3.5 10	1.5"	HS8Y-916C-1.5 10	5.0"	HS8Y-34C-5 1
2.0"	HS8Y-14C-2 50	3.75"	HS8Y-38C-3.75 10	1.75"	HS8Y-916C-1.75 5	5.5"	HS8Y-34C-5.5 1
2.25"	HS8Y-14C-2.25 50	4.0"	HS8Y-38C-4 10	2.0"	HS8Y-916C-2 5	6.0"	HS8Y-34C-6 1
2.5"	HS8Y-14C-2.5 50	4.5"	HS8Y-38C-4.5 5	2.25"	HS8Y-916C-2.25 5	6.5"	HS8Y-34C-6.5 1
2.75"	HS8Y-14C-2.75 25	5.0"	HS8Y-38C-5 5	2.5"	HS8Y-916C-2.5 5	7.0"	HS8Y-34C-7 1
3.0"	HS8Y-14C-3 25	5.5"	HS8Y-38C-5.5 5	2.75"	HS8Y-916C-2.75 5	7.5"	HS8Y-34C-7.5 1
3.25"	HS8Y-14C-3.25 25	6.0"	HS8Y-38C-6 5	3.0"	HS8Y-916C-3 5	8.0"	HS8Y-34C-8 1
3.5"	HS8Y-14C-3.5 25	6.5"	HS8Y-38C-6.5 5	3.25"	HS8Y-916C-3.25 5	8.5"	HS8Y-34C-8.5 1
3.75"	HS8Y-14C-3.75 25	7.0"	HS8Y-38C-7 5	3.5"	HS8Y-916C-3.5 5	9.0"	HS8Y-34C-9 1
4.0"	HS8Y-14C-4 10	8.0"	HS8Y-38C-8 1	3.75"	HS8Y-916C-3.75 5	9.5"	HS8Y-34C-9.5 1
4.5"	HS8Y-14C-4.5 10	<b>7/16"-14</b>		4.0"	HS8Y-916C-4 5	10.0"	HS8Y-34C-10 1
5.0"	HS8Y-14C-5 10	0.75"	HS8Y-716C-0.75 25	4.5"	HS8Y-916C-4.5 1	<b>7/8"-9</b>	
5.5"	HS8Y-14C-5.5 5	0.875"	HS8Y-716C-0.875 25	5.0"	HS8Y-916C-5 1	1.5"	HS8Y-78C-1.5 1
6.0"	HS8Y-14C-6 5	1.0"	HS8Y-716C-1 25	5.5"	HS8Y-916C-5.5 1	2.0"	HS8Y-78C-2 1
6.5"	HS8Y-14C-6.5 5	1.25"	HS8Y-716C-1.25 25	6.0"	HS8Y-916C-6 1	2.5"	HS8Y-78C-2.5 1
7.0"	HS8Y-14C-7 5	1.5"	HS8Y-716C-1.5 25	6.5"	HS8Y-916C-6.5 1	3.0"	HS8Y-78C-3 1
7.5"	HS8Y-14C-7.5 5	1.75"	HS8Y-716C-1.75 10	<b>5/8"-11</b>		3.5"	HS8Y-78C-3.5 1
<b>5/16"-18</b>		2.0"	HS8Y-716C-2 10	1.0"	HS8Y-58C-1 10	4.0"	HS8Y-78C-4 1
0.5"	HS8Y-516C-0.5 100	2.25"	HS8Y-716C-2.25 10	1.25"	HS8Y-58C-1.25 10	4.5"	HS8Y-78C-4.5 1
0.625"	HS8Y-516C-0.625 50	2.5"	HS8Y-716C-2.5 10	1.5"	HS8Y-58C-1.5 10	5.0"	HS8Y-78C-5 1
0.75"	HS8Y-516C-0.75 50	2.75"	HS8Y-716C-2.75 10	1.75"	HS8Y-58C-1.75 10	5.5"	HS8Y-78C-5.5 1
0.875"	HS8Y-516C-0.875 50	3.0"	HS8Y-716C-3 10	2.0"	HS8Y-58C-2 10	6.0"	HS8Y-78C-6 1
1.0"	HS8Y-516C-1 50	3.5"	HS8Y-716C-3.5 10	2.25"	HS8Y-58C-2.25 5	6.5"	HS8Y-78C-6.5 1
1.25"	HS8Y-516C-1.25 50	4.0"	HS8Y-716C-4 5	2.5"	HS8Y-58C-2.5 5	7.0"	HS8Y-78C-7 1
1.5"	HS8Y-516C-1.5 50	4.5"	HS8Y-716C-4.5 5	2.75"	HS8Y-58C-2.75 5	7.5"	HS8Y-78C-7.5 1
1.75"	HS8Y-516C-1.75 50	5.0"	HS8Y-716C-5 5	3.0"	HS8Y-58C-3 5	8.0"	HS8Y-78C-8 1
2.0"	HS8Y-516C-2 50	5.5"	HS8Y-716C-5.5 5	3.25"	HS8Y-58C-3.25 5	9.0"	HS8Y-78C-9 1
2.25"	HS8Y-516C-2.25 25	6.0"	HS8Y-716C-6 5	3.5"	HS8Y-58C-3.5 5	10.0"	HS8Y-78C-10 1
2.5"	HS8Y-516C-2.5 25	6.5"	HS8Y-716C-6.5 1	3.75"	HS8Y-58C-3.75 5	<b>1"-8</b>	
2.75"	HS8Y-516C-2.75 25	7.0"	HS8Y-716C-7 1	4.0"	HS8Y-58C-4 5	1.5"	HS8Y-1C-1.5 1
3.0"	HS8Y-516C-3 25	8.0"	HS8Y-716C-8 1	4.5"	HS8Y-58C-4.5 1	2.0"	HS8Y-1C-2 1
3.25"	HS8Y-516C-3.25 25	<b>1/2"-13</b>		5.0"	HS8Y-58C-5 1	2.25"	HS8Y-1C-2.25 1
3.5"	HS8Y-516C-3.5 10	0.75"	HS8Y-12C-0.75 25	5.5"	HS8Y-58C-5.5 1	2.5"	HS8Y-1C-2.5 1
3.75"	HS8Y-516C-3.75 10	0.875"	HS8Y-12C-0.875 25	6.0"	HS8Y-58C-6 1	2.75"	HS8Y-1C-2.75 1
4.0"	HS8Y-516C-4 10	1.0"	HS8Y-12C-1 25	6.5"	HS8Y-58C-6.5 1	3.0"	HS8Y-1C-3 1
4.5"	HS8Y-516C-4.5 10	1.25"	HS8Y-12C-1.25 25	7.0"	HS8Y-58C-7 1	3.25"	HS8Y-1C-3.25 1
5.0"	HS8Y-516C-5 5	1.5"	HS8Y-12C-1.5 25	7.5"	HS8Y-58C-7.5 1	3.5"	HS8Y-1C-3.5 1
5.5"	HS8Y-516C-5.5 5	1.75"	HS8Y-12C-1.75 10	8.0"	HS8Y-58C-8 1	4.0"	HS8Y-1C-4 1
6.0"	HS8Y-516C-6 5	2.0"	HS8Y-12C-2 10	8.5"	HS8Y-58C-8.5 1	4.5"	HS8Y-1C-4.5 1
7.0"	HS8Y-516C-7 5	2.25"	HS8Y-12C-2.25 10	9.0"	HS8Y-58C-9 1	5.0"	HS8Y-1C-5 1
7.5"	HS8Y-516C-7.5 1	2.5"	HS8Y-12C-2.5 10	9.5"	HS8Y-58C-9.5 1	5.5"	HS8Y-1C-5.5 1
8.0"	HS8Y-516C-8 1	2.75"	HS8Y-12C-2.75 10	10.0"	HS8Y-58C-10 1	6.0"	HS8Y-1C-6 1
<b>3/8"-16</b>		3.0"	HS8Y-12C-3 10	<b>3/4"-10</b>		6.5"	HS8Y-1C-6.5 1
0.5"	HS8Y-38C-0.5 50	3.25"	HS8Y-12C-3.25 10	1.0"	HS8Y-34C-1 5	7.0"	HS8Y-1C-7 1
0.625"	HS8Y-38C-0.625 50	3.5"	HS8Y-12C-3.5 10	1.25"	HS8Y-34C-1.25 5	7.5"	HS8Y-1C-7.5 1
0.75"	HS8Y-38C-0.75 50	3.75"	HS8Y-12C-3.75 5	1.5"	HS8Y-34C-1.5 5	8.0"	HS8Y-1C-8 1
0.875"	HS8Y-38C-0.875 50	4.0"	HS8Y-12C-4 5	1.75"	HS8Y-34C-1.75 5	8.5"	HS8Y-1C-8.5 1
1.0"	HS8Y-38C-1 50	4.5"	HS8Y-12C-4.5 5	2.0"	HS8Y-34C-2 5	9.0"	HS8Y-1C-9 1
1.25"	HS8Y-38C-1.25 50	5.0"	HS8Y-12C-5 5	2.25"	HS8Y-34C-2.25 5		

(Continued on following page)

# Hex Head Cap Screws

Hex Head Cap Screws — Grade 8 — Made in North America (Continued from previous page)

Course Thread (UNC) (Cont.)			Length			Length			Length		
Length		Pkg. Qty.	Length		Pkg. Qty.	Length		Pkg. Qty.	Length		Pkg. Qty.
<b>1"-8</b> (Cont.)			<b>1 1/8"-7</b> (Cont.)			<b>1 1/4"-7</b>			<b>1 1/4"-7</b> (Cont.)		
9.5"	HS8Y-1C-9.5	1	4.0"	HS8Y-118C-4	1	2.5"	HS8Y-114C-2.5	1	6.5"	HS8Y-114C-6.5	1
10.0"	HS8Y-1C-10	1	4.5"	HS8Y-118C-4.5	1	3.0"	HS8Y-114C-3	1	7.0"	HS8Y-114C-7	1
<b>1 1/8"-7</b>			5.0"	HS8Y-118C-5	1	3.5"	HS8Y-114C-3.5	1	8.0"	HS8Y-114C-8	1
2.5"	HS8Y-118C-2.5	1	6.0"	HS8Y-118C-6	1	4.0"	HS8Y-114C-4	1	9.0"	HS8Y-114C-9	1
3.0"	HS8Y-118C-3	1	6.5"	HS8Y-118C-6.5	1	4.5"	HS8Y-114C-4.5	1	10.0"	HS8Y-114C-10	1
3.5"	HS8Y-118C-3.5	1	8.0"	HS8Y-118C-8	1	5.5"	HS8Y-114C-5.5	1			
<b>Fine Thread (UNF)</b>			Length			Length			Length		
Length		Pkg. Qty.	Length		Pkg. Qty.	Length		Pkg. Qty.	Length		Pkg. Qty.
<b>1/4"-28</b>			<b>3/8"-24</b> (Cont.)			<b>1/2"-20</b> (Cont.)			<b>3/4"-16</b> (Cont.)		
0.5"	HS8Y-14F-0.5	100	1.5"	HS8Y-38F-1.5	10	5.5"	HS8Y-12F-5.5	5	7.5"	HS8Y-34F-7.5	1
0.625"	HS8Y-14F-0.625	100	1.75"	HS8Y-38F-1.75	10	6.0"	HS8Y-12F-6	1	8.0"	HS8Y-34F-8	1
0.75"	HS8Y-14F-0.75	100	2.0"	HS8Y-38F-2	10	6.5"	HS8Y-12F-6.5	1	8.5"	HS8Y-34F-8.5	1
1.0"	HS8Y-14F-1	50	2.25"	HS8Y-38F-2.25	10	7.0"	HS8Y-12F-7	1	9.0"	HS8Y-34F-9	1
1.25"	HS8Y-14F-1.25	50	2.5"	HS8Y-38F-2.5	10	7.5"	HS8Y-12F-7.5	1	10.0"	HS8Y-34F-10	1
1.5"	HS8Y-14F-1.5	25	3.0"	HS8Y-38F-3	10	8.0"	HS8Y-12F-8	1	<b>7/8"-14</b>		
1.75"	HS8Y-14F-1.75	25	3.25"	HS8Y-38F-3.25	10	<b>9/16"-12</b>			2.0"	HS8Y-78F-2	1
2.0"	HS8Y-14F-2	25	3.5"	HS8Y-38F-3.5	10	1.0"	HS8Y-916F-1	10	2.25"	HS8Y-78F-2.25	1
2.25"	HS8Y-14F-2.25	25	3.75"	HS8Y-38F-3.75	10	1.25"	HS8Y-916F-1.25	10	2.5"	HS8Y-78F-2.5	1
2.5"	HS8Y-14F-2.5	10	4.0"	HS8Y-38F-4	10	1.5"	HS8Y-916F-1.5	10	3.0"	HS8Y-78F-3	1
2.75"	HS8Y-14F-2.75	10	4.5"	HS8Y-38F-4.5	5	2.0"	HS8Y-916F-2	10	3.25"	HS8Y-78F-3.25	1
3.0"	HS8Y-14F-3	10	5.0"	HS8Y-38F-5	5	3.0"	HS8Y-916F-3	5	3.5"	HS8Y-78F-3.5	1
3.25"	HS8Y-14F-3.25	10	5.5"	HS8Y-38F-5.5	5	3.5"	HS8Y-916F-3.5	5	3.75"	HS8Y-78F-3.75	1
3.5"	HS8Y-14F-3.5	10	6.0"	HS8Y-38F-6	5	4.0"	HS8Y-916F-4	5	4.0"	HS8Y-78F-4	1
3.75"	HS8Y-14F-3.75	10	6.5"	HS8Y-38F-6.5	1	4.5"	HS8Y-916F-4.5	5	4.5"	HS8Y-78F-4.5	1
4.0"	HS8Y-14F-4	5	7.0"	HS8Y-38F-7	1	5.0"	HS8Y-916F-5	1	5.0"	HS8Y-78F-5	1
4.5"	HS8Y-14F-4.5	5	8.0"	HS8Y-38F-8	1	6.0"	HS8Y-916F-6	1	5.5"	HS8Y-78F-5.5	1
5.0"	HS8Y-14F-5	5	<b>7/16"-20</b>			<b>5/8"-18</b>			6.0"	HS8Y-78F-6	1
5.5"	HS8Y-14F-5.5	5	0.75"	HS8Y-716F-0.75	25	1.0"	HS8Y-58F-1	10	6.5"	HS8Y-78F-6.5	1
6.0"	HS8Y-14F-6	5	1.0"	HS8Y-716F-1	25	1.25"	HS8Y-58F-1.25	10	7.0"	HS8Y-78F-7	1
6.5"	HS8Y-14F-6.5	5	1.25"	HS8Y-716F-1.25	25	1.5"	HS8Y-58F-1.5	10	7.5"	HS8Y-78F-7.5	1
7.0"	HS8Y-14F-7	5	1.5"	HS8Y-716F-1.5	10	1.75"	HS8Y-58F-1.75	10	8.0"	HS8Y-78F-8	1
7.5"	HS8Y-14F-7.5	5	1.75"	HS8Y-716F-1.75	10	2.0"	HS8Y-58F-2	5	8.5"	HS8Y-78F-8.5	1
8.0"	HS8Y-14F-8	5	2.0"	HS8Y-716F-2	10	2.25"	HS8Y-58F-2.25	1	9.0"	HS8Y-78F-9	1
<b>5/16"-24</b>			2.25"	HS8Y-716F-2.25	10	2.5"	HS8Y-58F-2.5	1	10.0"	HS8Y-78F-10	1
0.5"	HS8Y-516F-0.5	50	2.5"	HS8Y-716F-2.5	10	3.0"	HS8Y-58F-3	1	<b>1"-14</b>		
0.625"	HS8Y-516F-0.625	50	2.75"	HS8Y-716F-2.75	10	3.25"	HS8Y-58F-3.25	5	4.0"	HS8Y-1F-4	1
0.75"	HS8Y-516F-0.75	50	3.0"	HS8Y-716F-3	10	3.5"	HS8Y-58F-3.5	5	5.0"	HS8Y-1F-5	1
0.875"	HS8Y-516F-0.875	50	3.5"	HS8Y-716F-3.5	10	3.75"	HS8Y-58F-3.75	5	6.0"	HS8Y-1F-6	1
1.0"	HS8Y-516F-1	50	4.0"	HS8Y-716F-4	5	4.0"	HS8Y-58F-4	1	7.0"	HS8Y-1F-7	1
1.25"	HS8Y-516F-1.25	50	5.0"	HS8Y-716F-5	5	4.5"	HS8Y-58F-4.5	1	8.0"	HS8Y-1F-8	1
1.5"	HS8Y-516F-1.5	50	5.5"	HS8Y-716F-5.5	5	5.0"	HS8Y-58F-5	1	9.0"	HS8Y-1F-9	1
1.75"	HS8Y-516F-1.75	25	6.0"	HS8Y-716F-6	5	6.0"	HS8Y-58F-6	1	10.0"	HS8Y-1F-10	1
2.0"	HS8Y-516F-2	25	6.5"	HS8Y-716F-6.5	1	6.5"	HS8Y-58F-6.5	1			
2.25"	HS8Y-516F-2.25	25	7.0"	HS8Y-716F-7	1	7.0"	HS8Y-58F-7	1			
2.5"	HS8Y-516F-2.5	25	<b>1/2"-20</b>			7.5"	HS8Y-58F-7.5	1			
2.75"	HS8Y-516F-2.75	25	0.75"	HS8Y-12F-0.75	10	8.0"	HS8Y-58F-8	1			
3.0"	HS8Y-516F-3	25	0.875"	HS8Y-12F-0.875	10	<b>3/4"-16</b>					
3.25"	HS8Y-516F-3.25	10	1.0"	HS8Y-12F-1	10	1.25"	HS8Y-34F-1.25	5			
3.5"	HS8Y-516F-3.5	10	1.25"	HS8Y-12F-1.25	10	1.5"	HS8Y-34F-1.5	5			
4.0"	HS8Y-516F-4	10	1.5"	HS8Y-12F-1.5	10	1.75"	HS8Y-34F-1.75	5			
4.5"	HS8Y-516F-4.5	5	1.75"	HS8Y-12F-1.75	10	2.0"	HS8Y-34F-2	5			
5.0"	HS8Y-516F-5	5	2.0"	HS8Y-12F-2	10	2.5"	HS8Y-34F-2.5	5			
5.5"	HS8Y-516F-5.5	5	2.25"	HS8Y-12F-2.25	10	2.75"	HS8Y-34F-2.75	1			
6.0"	HS8Y-516F-6	5	2.5"	HS8Y-12F-2.5	5	3.0"	HS8Y-34F-3	1			
7.0"	HS8Y-516F-7	1	2.75"	HS8Y-12F-2.75	5	3.5"	HS8Y-34F-3.5	1			
<b>3/8"-24</b>			3.0"	HS8Y-12F-3	5	4.0"	HS8Y-34F-4	1			
0.5"	HS8Y-38F-0.5	25	3.25"	HS8Y-12F-3.25	5	4.5"	HS8Y-34F-4.5	1			
0.625"	HS8Y-38F-0.625	25	3.5"	HS8Y-12F-3.5	5	5.0"	HS8Y-34F-5	1			
0.75"	HS8Y-38F-0.75	25	3.75"	HS8Y-12F-3.75	5	5.5"	HS8Y-34F-5.5	1			
0.875"	HS8Y-38F-0.875	25	4.0"	HS8Y-12F-4	5	6.0"	HS8Y-34F-6	1			
1.0"	HS8Y-38F-1	25	4.5"	HS8Y-12F-4.5	5	6.5"	HS8Y-34F-6.5	1			
1.25"	HS8Y-38F-1.25	25	5.0"	HS8Y-12F-5	5	7.0"	HS8Y-34F-7	1			

### Fastener Loosener / Lubricator

Saves time by eliminating the need to burn off or drill out nuts and bolts. The rust inhibitor quickly breaks loose surface tension rust and corrosion. It can be used in hard to reach places and is ideal for brake, exhaust and suspension system projects. The spray also leaves a lubricating film on parts to further inhibit rust. 11oz can.



Part #  
PB BLASTER

# Hex Nuts & Washers

## Hex Nuts — Grade 8



**Standard** These Grade 8 steel hex nuts offer greater strength and durability than their Grade 5 counterparts. The zinc-yellow chromate coating offers a high level of corrosion resistance and rust protection.



**Nylon Lock** The **nylon lock** insert in these hex nuts eliminates the worry of vibration loosening the nut. They're also reusable.

Size	Standard	Nylon Lock	Pkg. Qty.	Size	Standard	Nylon Lock	Pkg. Qty.
<b>Coarse Thread (UNC)</b>				<b>Fine Thread (UNF)</b>			
1/4"-20	HN8Y-14C	NHN8Y-14C	100	1/4"-28	HN8Y-14F	NHN8Y-14F	100
5/16"-18	HN8Y-516C	NHN8Y-516C	100	5/16"-24	HN8Y-516F	NHN8Y-516F	100
3/8"-16	HN8Y-38C	NHN8Y-38C	100	3/8"-24	HN8Y-38F	NHN8Y-38F	50
7/16"-14	HN8Y-716C	NHN8Y-716C	50	7/16"-20	HN8Y-716F	NHN8Y-716F	50
1/2"-13	HN8Y-12C	NHN8Y-12C	50	1/2"-20	HN8Y-12F	NHN8Y-12F	25
9/16"-12	HN8Y-916C	NHN8Y-916C	25	9/16"-18	HN8Y-916F	NHN8Y-916F	10
5/8"-11	HN8Y-58C	NHN8Y-58C	10	5/8"-18	HN8Y-58F	NHN8Y-58F	10
3/4"-10	HN8Y-34C	NHN8Y-34C	10	3/4"-16	HN8Y-34F	NHN8Y-34F	10
7/8"-9	HN8Y-78C	NHN8Y-78C	10	7/8"-14	HN8Y-78F	NHN8Y-78F	5
1"-8	HN8Y-1C	NHN8Y-1C	10	1"-14	HN8Y-1F	NHN8Y-1F	5
1 1/8"-7	HN8Y-118C	NHN8Y-118C	5	1 1/8"-12	HN8Y-118F	-----	5
1 1/4"-7	HN8Y-114C	NHN8Y-114C	1	1 1/4"-12	HN8Y-114F	-----	1
1 3/8"-6	HN8Y-138C	-----	1	1 3/8"-12	HN8Y-138F	-----	1
1 1/2"-6	HN8Y-112C	NHN8Y-112C	1	1 1/2"-12	HN8Y-112F	-----	1
1 3/4"-5	HN8Y-134C	-----	1	1 3/4"-12	HN8Y-134F	-----	1
2"-4.5	HN8Y-2C	-----	1	2"-12	HN8Y-2F	-----	1

## Split-Lock Washers



Split-lock washers decrease the likelihood that your fasteners will come unfastened by adding tension to the contact point. Made of high strength steel, with a zinc-yellow chromate finish.

Screw/Bolt Size	ID	OD	Thick.		Pkg. Qty.
1/4"	0.25"	0.49"	0.07"	LWY-14	100
5/16"	0.32"	0.59"	0.09"	LWY-516	100
3/8"	0.38"	0.68"	0.10"	LWY-38	100
7/16"	0.44"	0.78"	0.12"	LWY-716	50
1/2"	0.5"	0.87"	0.13"	LWY-12	50
9/16"	0.57"	0.97"	0.14"	LWY-916	25
5/8"	0.63"	1.08"	0.16"	LWY-58	25
3/4"	0.75"	1.27"	0.19"	LWY-34	25
7/8"	0.88"	1.46"	0.23"	LWY-78	10
1"	1"	1.66"	0.26"	LWY-1	10
1 1/4"	1.25"	2.04"	0.32"	LWY-114	5
1 1/2"	1.5"	2.42"	0.38"	LWY-112	1

## Flat Washers



We offer two types of flat washers. Our premium washers are made of through-hardened **high-strength steel** and have a zinc-yellow chromate finish that provides superior corrosion and rust protection. Our more economical option is our steel washers with a **zinc-clear** coating that provides good corrosion resistance and rust protection.

SAE washers have a smaller ID and OD than their USS washer counterparts.

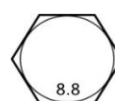
Large-diameter washers cover up oversized holes.

Screw/Bolt Size	ID	OD	Thick.		Pkg. Qty.	Screw/Bolt Size	ID	OD	Thick.		Pkg. Qty.	Screw/Bolt Size	ID	OD	Thick.		Pkg. Qty.
<b>SAE Flat</b>						<b>SAE Flat (Cont.)</b>						<b>USS Flat (Cont.)</b>					
<b>High Strength, Zinc-Yellow</b>						<b>Zinc-Clear (Cont.)</b>						<b>Zinc-Clear (Cont.)</b>					
1/4"	9/32"	5/8"	0.06"	W8Y-SAE-14	100	1"	1 1/16"	2"	0.12"	WZ-SAE-1	50	3/4"	13/16"	2"	0.12"	WZ-USS-34	25
5/16"	11/32"	11/16"	0.06"	W8Y-SAE-516	100	1 1/8"	1 1/4"	2 1/4"	0.12"	WZ-SAE-118	25	7/8"	15/16"	2 1/4"	0.14"	WZ-USS-78	25
3/8"	13/32"	13/16"	0.05"	W8Y-SAE-38	100	1 1/4"	1 3/8"	2 1/2"	0.15"	WZ-SAE-114	10	1"	1 1/16"	2 1/2"	0.17"	WZ-USS-1	10
7/16"	15/32"	59/64"	0.05"	W8Y-SAE-716	100	1 1/2"	1 5/8"	3"	0.14"	WZ-SAE-112	10	1 1/8"	1 1/4"	2 3/4"	0.16"	WZ-USS-118	10
1/2"	17/32"	1 1/16"	0.08"	W8Y-SAE-12	100	<b>USS Flat</b>						1 1/4"	1 3/8"	3"	0.16"	WZ-USS-114	10
9/16"	19/32"	1 5/32"	0.08"	W8Y-SAE-916	100	<b>High Strength, Zinc-Yellow</b>						1 3/8"	1 1/2"	3 1/4"	0.16"	WZ-USS-138	10
5/8"	21/32"	1 5/16"	0.08"	W8Y-SAE-58	50	1/4"	5/16"	47/64"	0.06"	W8Y-USS-14	100	1 1/2"	1 5/8"	3 1/2"	0.17"	WZ-USS-112	5
3/4"	13/16"	1 1/2"	0.11"	W8Y-SAE-34	25	5/16"	3/8"	7/8"	0.07"	W8Y-USS-516	100	1 5/8"	1 3/4"	3 3/4"	0.17"	WZ-USS-158	5
7/8"	15/16"	1 3/4"	0.13"	W8Y-SAE-78	25	3/8"	7/16"	1"	0.07"	W8Y-USS-38	100	1 3/4"	1 7/8"	4"	0.17"	WZ-USS-134	5
1"	1 1/16"	2"	0.13"	W8Y-SAE-1	25	7/16"	1/2"	1 1/4"	0.08"	W8Y-USS-716	100	2"	2 1/8"	4 1/2"	0.19"	WZ-USS-2	5
1 1/8"	1 1/4"	2 1/4"	0.13"	W8Y-SAE-118	10	1/2"	9/16"	1 3/8"	0.09"	W8Y-USS-12	50	2 1/4"	2 3/8"	4 3/4"	0.21"	WZ-USS-214	5
1 1/4"	1 3/8"	2 1/2"	0.14"	W8Y-SAE-114	5	9/16"	5/8"	1 1/2"	0.09"	W8Y-USS-916	50	2 1/2"	2 5/8"	5"	0.23"	WZ-USS-212	1
1 3/8"	1 1/2"	2 3/4"	0.13"	W8Y-SAE-138	5	5/8"	11/16"	1 3/4"	0.12"	W8Y-USS-58	25	3"	3 1/8"	5 1/2"	0.29"	WZ-USS-3	1
1 1/2"	1 5/8"	3"	0.12"	W8Y-SAE-112	5	3/4"	13/16"	2"	0.12"	W8Y-USS-34	10	<b>Large-Diameter Washers — Fender</b>					
<b>Zinc-Clear</b>						7/8"	15/16"	2 1/4"	0.14"	W8Y-USS-78	10	<b>Screw/Bolt</b>					
No. 6	5/32"	3/8"	0.05"	WZ-SAE-N6	100	1"	1 1/16"	2 1/2"	0.13"	W8Y-USS-1	10	Size	ID	OD	Thick.		Pkg. Qty.
No. 8	3/16"	7/16"	0.06"	WZ-SAE-N8	100	1 1/8"	1 1/4"	2 3/4"	0.13"	W8Y-USS-118	5	# 10	9/32"	1"	0.06"	FWZ-N10-1	100
No. 10	7/32"	1/2"	0.05"	WZ-SAE-N10	100	1 1/4"	1 3/8"	3"	0.14"	W8Y-USS-114	5	# 10	9/32"	1 1/4"	0.06"	FWZ-N10-114	100
1/4"	9/32"	5/8"	0.05"	WZ-SAE-14	100	1 1/2"	1 5/8"	3 1/2"	0.17"	W8Y-USS-112	5	1/4"	9/32"	1"	0.05"	FWZ-14-1	100
5/16"	11/32"	11/16"	0.07"	WZ-SAE-516	100	<b>Zinc-Clear</b>						1/4"	9/32"	1 1/4"	0.06"	FWZ-14-114	100
3/8"	13/32"	13/16"	0.07"	WZ-SAE-38	100	1/4"	5/16"	47/64"	0.06"	WZ-USS-14	100	1/4"	9/32"	1 1/2"	0.06"	FWZ-14-112	100
7/16"	15/32"	59/64"	0.05"	WZ-SAE-716	100	5/16"	3/8"	7/8"	0.10"	WZ-USS-516	100	5/16"	11/32"	1 1/4"	0.07"	FWZ-516-114	100
1/2"	17/32"	1 1/16"	0.08"	WZ-SAE-12	100	3/8"	7/16"	1"	0.08"	WZ-USS-38	100	5/16"	11/32"	1 1/2"	0.06"	FWZ-516-112	100
9/16"	19/32"	1 5/32"	0.09"	WZ-SAE-916	100	7/16"	1/2"	1 1/4"	0.08"	WZ-USS-716	100	3/8"	13/32"	1 1/4"	0.05"	FWZ-38-114	100
5/8"	21/32"	1 5/16"	0.12"	WZ-SAE-58	100	1/2"	9/16"	1 3/8"	0.11"	WZ-USS-12	50	3/8"	13/32"	1 1/2"	0.06"	FWZ-38-112	100
3/4"	13/16"	1 1/2"	0.11"	WZ-SAE-34	100	9/16"	5/8"	1 1/2"	0.09"	WZ-USS-916	50	1/2"	17/32"	2"	0.06"	FWZ-12-2	100
7/8"	15/16"	1 3/4"	0.13"	WZ-SAE-78	50	5/8"	11/16"	1 3/4"	0.11"	WZ-USS-58	25						

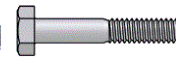
# Metric Hex Head Cap Screws, Nuts & Washers

## Metric Hex Head Cap Screws — Class 8.8

These metric hex head cap screws are made of heat-treated steel with a zinc-clear coating that offer good corrosion resistance and rust protection. These Class 8.8 metric screws correspond to Class 8 nuts. The **fully** threaded screws meet DIN 933, the **partially** threaded screws meet DIN 931.



Fully Threaded



Partially Threaded

### Fully Threaded

Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.
<b>M6-1</b>		<b>M10-1.5</b>		<b>M12-1.75</b> (Cont.)		<b>M20-2.5</b>	
12	HS8.8Z-M6-12F 100	16	HS8.8Z-M10-16F 25	50	HS8.8Z-M12-50F 25	40	HS8.8Z-M20-40F 5
16	HS8.8Z-M6-16F 100	20	HS8.8Z-M10-20F 25	60	HS8.8Z-M12-60F 10	45	HS8.8Z-M20-45F 5
20	HS8.8Z-M6-20F 100	25	HS8.8Z-M10-25F 25	<b>M14-2.0</b>		50	HS8.8Z-M20-50F 1
25	HS8.8Z-M6-25F 100	30	HS8.8Z-M10-30F 25	25	HS8.8Z-M14-25F 10	55	HS8.8Z-M20-55F 1
30	HS8.8Z-M6-30F 100	35	HS8.8Z-M10-35F 25	30	HS8.8Z-M14-30F 10	60	HS8.8Z-M20-60F 1
35	HS8.8Z-M6-35F 50	40	HS8.8Z-M10-40F 25	35	HS8.8Z-M14-35F 10	<b>M24-3.0</b>	
40	HS8.8Z-M6-40F 50	45	HS8.8Z-M10-45F 25	40	HS8.8Z-M14-40F 10	40	HS8.8Z-M24-40F 1
<b>M8-1.25</b>		50	HS8.8Z-M10-50F 25	45	HS8.8Z-M14-45F 10	50	HS8.8Z-M24-50F 1
16	HS8.8Z-M8-16F 50	60	HS8.8Z-M10-60F 10	50	HS8.8Z-M14-50F 10	60	HS8.8Z-M24-60F 1
20	HS8.8Z-M8-20F 50	<b>M12-1.75</b>		<b>M16-2.0</b>		65	HS8.8Z-M24-65F 1
25	HS8.8Z-M8-25F 50	20	HS8.8Z-M12-20F 25	30	HS8.8Z-M16-30F 10	70	HS8.8Z-M24-70F 1
30	HS8.8Z-M8-30F 50	25	HS8.8Z-M12-25F 25	35	HS8.8Z-M16-35F 10	<b>M30-3.5</b>	
35	HS8.8Z-M8-35F 50	30	HS8.8Z-M12-30F 25	40	HS8.8Z-M16-40F 10	70	HS8.8Z-M30-70F 1
40	HS8.8Z-M8-40F 50	35	HS8.8Z-M12-35F 25	45	HS8.8Z-M16-45F 10	80	HS8.8Z-M30-80F 1
50	HS8.8Z-M8-50F 25	40	HS8.8Z-M12-40F 25	50	HS8.8Z-M16-50F 10	90	HS8.8Z-M30-90F 1
60	HS8.8Z-M8-60F 25	45	HS8.8Z-M12-45F 25	55	HS8.8Z-M16-55F 5	100	HS8.8Z-M30-100F 1

### Partial Threaded

Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.
<b>M6-1</b>		<b>M10-1.5</b> (Cont.)		<b>M12-1.75</b> (Cont.)		<b>M16-2.0</b> (Cont.)	
30	HS8.8Z-M6-30 50	40	HS8.8Z-M10-40 25	75	HS8.8Z-M12-75 10	80	HS8.8Z-M16-80 5
40	HS8.8Z-M6-40 50	45	HS8.8Z-M10-45 25	80	HS8.8Z-M12-80 10	90	HS8.8Z-M16-90 5
45	HS8.8Z-M6-45 50	50	HS8.8Z-M10-50 25	90	HS8.8Z-M12-90 10	100	HS8.8Z-M16-100 5
50	HS8.8Z-M6-50 50	60	HS8.8Z-M10-60 25	100	HS8.8Z-M12-100 10	110	HS8.8Z-M16-110 1
<b>M8-1.25</b>		65	HS8.8Z-M10-65 10	110	HS8.8Z-M12-110 5	120	HS8.8Z-M16-120 5
30	HS8.8Z-M8-30 25	70	HS8.8Z-M10-70 10	120	HS8.8Z-M12-120 5	<b>M20-2.5</b>	
35	HS8.8Z-M8-35 25	75	HS8.8Z-M10-75 10	<b>M14-2.0</b>		70	HS8.8Z-M20-70 5
40	HS8.8Z-M8-40 25	80	HS8.8Z-M10-80 10	50	HS8.8Z-M14-50 10	80	HS8.8Z-M20-80 5
45	HS8.8Z-M8-45 25	90	HS8.8Z-M10-90 10	60	HS8.8Z-M14-60 10	90	HS8.8Z-M20-90 5
50	HS8.8Z-M8-50 25	100	HS8.8Z-M10-100 10	70	HS8.8Z-M14-70 5	100	HS8.8Z-M20-100 1
55	HS8.8Z-M8-55 25	110	HS8.8Z-M10-110 10	80	HS8.8Z-M14-80 5	110	HS8.8Z-M20-110 1
60	HS8.8Z-M8-60 25	120	HS8.8Z-M10-120 10	90	HS8.8Z-M14-90 5	120	HS8.8Z-M20-120 1
70	HS8.8Z-M8-70 25	<b>M12-1.75</b>		100	HS8.8Z-M14-100 5	<b>M24-3.0</b>	
75	HS8.8Z-M8-75 25	40	HS8.8Z-M12-40 10	<b>M16-2.0</b>		80	HS8.8Z-M24-80 1
80	HS8.8Z-M8-80 25	45	HS8.8Z-M12-45 10	50	HS8.8Z-M16-50 10	90	HS8.8Z-M24-90 1
90	HS8.8Z-M8-90 25	50	HS8.8Z-M12-50 10	55	HS8.8Z-M16-55 10	100	HS8.8Z-M24-100 1
100	HS8.8Z-M8-100 25	55	HS8.8Z-M12-55 10	60	HS8.8Z-M16-60 10	110	HS8.8Z-M24-110 1
130	HS8.8Z-M8-130 25	60	HS8.8Z-M12-60 10	65	HS8.8Z-M16-65 5	120	HS8.8Z-M24-120 1
<b>M10-1.5</b>		65	HS8.8Z-M12-65 10	70	HS8.8Z-M16-70 5		
35	HS8.8Z-M10-35 25	70	HS8.8Z-M12-70 10	75	HS8.8Z-M16-75 5		

## Metric Hex Nuts — Class 8

Our metric Class 8 steel hex nuts have a zinc-clear coating which offers good corrosion resistance. These Class 8 nuts correspond to Class 8.8 metric screws. Meet DIN 934.



Size		Pkg. Qty.
M6-1.0	HN8Z-M6	100
M8-1.25	HN8Z-M8	100
M10-1.5	HN8Z-M10	100
M12-1.75	HN8Z-M12	100
M14-2.0	HN8Z-M14	50
M16-2.0	HN8Z-M16	50
M20-2.5	HN8Z-M20	10
M24-3.0	HN8Z-M24	10
M30-3.5	HN8Z-M30	5

## Metric Washers

Made of steel with a zinc-clear coating which offers good corrosion resistance.

**Flat** washers meet DIN 125A.

**Split-lock** washers decrease the likelihood that your fasteners will come unfastened by adding tension to the contact point. Meet DIN 127B.



### Flat Washers

Screw/Bolt Size	ID	OD	Thick.	Pkg. Qty.
M6	6.4	12	1.27	100
M8	8.4	16	1.52	100
M10	10.5	20	1.78	100
M12	13	24	2.29	100
M14	15	28	2.54	100
M16	17	30	2.79	100
M20	21	37	2.79	50
M24	25	44	3.56	25
M30	31	56	3.81	10

### Split-Lock Washers

Screw/Bolt Size	ID	OD	Thick.	Pkg. Qty.
M6	6.5	9.9	1.78	100
M8	8.5	12.7	2.03	100
M10	10.7	16	2.29	100
M12	12.7	18	2.54	100
M14	14.7	21.1	3.05	100
M16	17.0	24.4	3.56	50
M20	21.2	30.6	4.06	25
M24	25.5	35.9	4.83	10
M30	31.7	44.1	5.59	10

# Steel Machine Screws and Hex Nuts & Stainless Steel Hex Nuts and Washers

## Steel Machine Screws



Made of heat-treated steel, these machine screws have a zinc-clear coating that offer good corrosion resistance and rust protection. They have a pan head Phillips head and are fully threaded. Meet ASME B18.6.3.

Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.
<b>Coarse Thread (UNC)</b>		<b>Coarse Thread (UNC)</b> (Cont.)		<b>Coarse Thread (UNC)</b> (Cont.)		<b>Coarse Thread (UNC)</b> (Cont.)	
<b>#2-56</b>		<b>#6-32</b> (Cont.)		<b>#10-24</b> (Cont.)		<b>1/4"-20</b> (Cont.)	
0.313"	MSPPZ-N2C-0.313 100	2.5"	MSPPZ-N6C-2.5 100	1.75"	MSPPZ-N10C-1.75 100	3.5"	MSPPZ-14C-3.5 25
0.375"	MSPPZ-N2C-0.375 100	3"	MSPPZ-N6C-3 100	2"	MSPPZ-N10C-2 100	4"	MSPPZ-14C-4 50
<b>#4-40</b>		<b>#8-32</b>		2.5"		<b>5/16"-18</b>	
0.1875"	MSPPZ-N4C-0.187 100	0.25"	MSPPZ-N8C-0.25 100	3"	MSPPZ-N10C-3 50	0.625"	MSPPZ-516C-0.62 50
0.25"	MSPPZ-N4C-0.25 100	0.313"	MSPPZ-N8C-0.313 100	3.5"	MSPPZ-N10C-3.5 50	0.75"	MSPPZ-516C-0.75 50
0.313"	MSPPZ-N4C-0.313 100	0.375"	MSPPZ-N8C-0.375 100	4"	MSPPZ-N10C-4 50	1"	MSPPZ-516C-1 50
0.375"	MSPPZ-N4C-0.375 100	0.5"	MSPPZ-N8C-0.5 100	<b>#12-24</b>		1.5"	MSPPZ-516C-1.5 50
0.5"	MSPPZ-N4C-0.5 100	0.625"	MSPPZ-N8C-0.625 100	0.375"	MSPPZ-N12C-0.37 50	2"	MSPPZ-516C-2 25
0.75"	MSPPZ-N4C-0.75 100	0.75"	MSPPZ-N8C-0.75 100	0.5"	MSPPZ-N12C-0.5 100	<b>Fine (UNF)</b>	
0.875"	MSPPZ-N4C-0.875 100	1"	MSPPZ-N8C-1 100	0.75"	MSPPZ-N12C-0.75 100	<b>#10-32</b>	
1"	MSPPZ-N4C-1 100	1.25"	MSPPZ-N8C-1.25 100	1"	MSPPZ-N12C-1 100	0.25"	MSPPZ-N10F-0.25 100
1.25"	MSPPZ-N4C-1.25 50	1.5"	MSPPZ-N8C-1.5 100	1.25"	MSPPZ-N12C-1.25 100	0.375"	MSPPZ-N10F-0.37 100
1.5"	MSPPZ-N4C-1.5 25	1.75"	MSPPZ-N8C-1.75 100	2"	MSPPZ-N12C-2 25	0.5"	MSPPZ-N10F-0.5 100
<b>#6-32</b>		2"	MSPPZ-N8C-2 100	<b>1/4"-20</b>		0.625"	MSPPZ-N10F-0.62 100
0.25"	MSPPZ-N6C-0.25 100	2.5"	MSPPZ-N8C-2.5 100	0.375"	MSPPZ-14C-0.375 100	0.75"	MSPPZ-N10F-0.75 100
0.313"	MSPPZ-N6C-0.313 100	3"	MSPPZ-N8C-3 100	0.5"	MSPPZ-14C-0.5 100	0.875"	MSPPZ-N10F-0.87 100
0.375"	MSPPZ-N6C-0.375 100	<b>#10-24</b>		0.625"	MSPPZ-14C-0.625 100	1"	MSPPZ-N10F-1 100
0.5"	MSPPZ-N6C-0.5 100	0.25"	MSPPZ-N10C-0.25 100	0.75"	MSPPZ-14C-0.75 100	1.25"	MSPPZ-N10F-1.25 100
0.625"	MSPPZ-N6C-0.625 100	0.375"	MSPPZ-N10C-0.37 100	1"	MSPPZ-14C-1 100	1.5"	MSPPZ-N10F-1.5 100
0.75"	MSPPZ-N6C-0.75 100	0.5"	MSPPZ-N10C-0.5 100	1.25"	MSPPZ-14C-1.25 100	1.75"	MSPPZ-N10F-1.75 100
1"	MSPPZ-N6C-1 100	0.625"	MSPPZ-N10C-0.62 100	1.5"	MSPPZ-14C-1.5 50	2"	MSPPZ-N10F-2 100
1.25"	MSPPZ-N6C-1.25 100	0.75"	MSPPZ-N10C-0.75 100	1.75"	MSPPZ-14C-1.75 50	2.5"	MSPPZ-N10F-2.5 100
1.5"	MSPPZ-N6C-1.5 100	1"	MSPPZ-N10C-1 100	2"	MSPPZ-14C-2 50	3"	MSPPZ-N10F-3 50
1.75"	MSPPZ-N6C-1.75 100	1.25"	MSPPZ-N10C-1.25 100	2.5"	MSPPZ-14C-2.5 50		
2"	MSPPZ-N6C-2 100	1.5"	MSPPZ-N10C-1.5 100	3"	MSPPZ-14C-3 25		

## Machine Screw Hex Nuts



These zinc plated steel hex nuts thread onto smaller diameter machine screws. They have a coarse internal thread. They are thinner than standard hex nuts and have a flat side to fit closer to the material surface.

Screw/Bolt Size	Pkg. Qty.
8-32	MHN-832 100
10-24	MHN-1024 100
10-32	MHN-1032 100
1/2"-13	MHN-1420 100

## Stainless Steel Hex Nuts



These hex nuts are made of 18-8 stainless steel for excellent corrosion resistance and rust protection. Coarse threads.

Screw/Bolt Size	Part Number	Pkg. Qty.
1/4"-20	HNSS-14C	100
5/16"-18	HNSS-516C	100
3/8"-16	HNSS-38C	100
7/16"-14	HNSS-716C	50
1/2"-13	HNSS-12C	25
9/16"-12	HNSS-916C	10
5/8"-11	HNSS-58C	10
3/4"-10	HNSS-34C	5
7/8"-9	HNSS-78C	5
1"-8	HNSS-1C	1

## Stainless Steel Flat Washers



These SAE & USS flat washers are made of 18-8 stainless steel for excellent corrosion resistance and rust protection. USS washers have a larger ID and OD than their SAE washer counterparts.

Screw/Bolt Size	ID	OD	Thick.	Pkg. Qty.	Screw/Bolt Size	ID	OD	Thick.	Pkg. Qty.
<b>SAE Flat</b>					<b>USS Flat</b>				
1/4"	9/32"	5/8"	0.05"	WSS-SAE-14 100	1/4"	9/32"	5/8"	0.03"	WSS-USS-14 100
5/16"	11/32"	11/16"	0.05"	WSS-SAE-516 100	5/16"	11/32"	11/16"	0.03"	WSS-USS-516 100
3/8"	13/32"	13/16"	0.05"	WSS-SAE-38 100	3/8"	13/32"	13/16"	0.04"	WSS-USS-38 100
7/16"	15/32"	59/64"	0.05"	WSS-SAE-716 50	7/16"	15/32"	59/64"	0.06"	WSS-USS-716 50
1/2"	17/32"	1 1/16"	0.07"	WSS-SAE-12 50	1/2"	17/32"	1 1/16"	0.06"	WSS-USS-12 25
5/8"	21/32"	1 5/16"	0.08"	WSS-SAE-58 10	9/16"	19/32"	1 5/32"	0.05"	WSS-USS-916 25
3/4"	13/16"	1 1/2"	0.11"	WSS-SAE-34 10	5/8"	21/32"	1 5/16"	0.05"	WSS-USS-58 10
7/8"	15/16"	1 3/4"	0.11"	WSS-SAE-78 5	3/4"	13/16"	1 1/2"	0.09"	WSS-USS-34 5
					7/8"	15/16"	1 3/4"	0.10"	WSS-USS-78 5
					1"	1 1/16"	2"	0.12"	WSS-USS-1 5

# Self Drilling Screws & Drill Bits

## Self Drilling Screws

### Hex Washer Head Self Drilling Screws

Made of heat-treated steel, these self-drilling screws have a zinc-clear coating that offer good corrosion resistance and rust protection. They have a hex washer head and are fully threaded. Meet J78.



Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.	Length	Pkg. Qty.
<b>#6-20</b>		<b>#8-18</b> (Cont.)		<b>#10-16</b> (Cont.)		<b>#14-14</b>	
0.375" TSHW-638	100	1.25" TSHW-8114	100	1.5" TSHW-10112	100	0.75" TSHW-1434	50
0.5" TSHW-612	100	1.5" TSHW-8112	100	2" TSHW-102	50	1" TSHW-141	50
0.75" TSHW-634	100	<b>#10-16</b>		<b>#12-14</b>		1.25" TSHW-14114	50
<b>#8-18</b>		0.5" TSHW-1012	100	0.75" TSHW-1234	100	1.5" TSHW-14112	50
0.5" TSHW-812	100	0.625" TSHW-1058	100	1" TSHW-121	100	1.75" TSHW-14134	50
0.625" TSHW-858	100	0.75" TSHW-1034	100	1.25" TSHW-12114	50	2" TSHW-142	50
0.75" TSHW-834	100	1" TSHW-101	100	1.5" TSHW-12112	25	3" TSHW-143	50
1" TSHW-81	100	1.25" TSHW-10114	100	2" TSHW-122	25		

### Pan Phillips Self Drilling Screws

These self drilling screws that have a phillips pan head that provides good control when driving. They are zinc plated steel and fully threaded.

Thread	Length	Color	Pkg. Qty.	Image	Thread	Length	Color	Pkg. Qty.	Image		
<b>Pan Head</b>					<b>Pan Washer Head</b>						
#8-18	1.5"	Silver	TSP-812		100	#8-18	1.5"	Silver		TSPPW-8112	100
#10-16	1"	Silver	TSP-101		100	#8-18	0.5"	Black		TSPPW-812	100
					#8-18	1"	Black	TSPPW-81		100	
					#8-18	1.5"	Black	TSPPW-8112	100		

## Drill Bits

### Drill Bits

These mechanic length drill bits are made of special hi-molybdenum tool steel. They have a 135° split point to stop the drill from walking. To eliminate drill slippage, there are 3 flats on the shank. These drill bits are heat treated to 2185°F and are nitro-carburized to reduce friction, for a longer life.

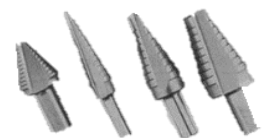


Diameter	Overall Length	Flute Length	Pkg. Qty.	Diameter	Overall Length	Flute Length	Pkg. Qty.		
<b>Standard (Diameter = Shank Diameter)</b>				<b>Standard (Diameter = Shank Diameter) (Cont.)</b>					
1/16"	1-7/8"	7/8"	175AG-1/16	12	11/32"	4-1/8"	2-5/8"	175AG-11/32	6
5/64"	2"	1"	175AG-5/64	12	23/64"	4-3/16"	2-11/16"	175AG-23/64	6
3/32"	2-1/4"	1-1/4"	175AG-3/32	12	3/8"	4-1/4"	2-11/16"	175AG-3/8	6
7/64"	2-3/8"	1-5/16"	175AG-7/64	12	25/64"	4-5/16"	2-3/4"	175AG-25/64	6
1/8"	2-1/2"	1-7/16"	175AG-1/8	12	13/32"	4-3/8"	2-13/16"	175AG-13/32	6
9/64"	2-5/8"	1-9/16"	175AG-9/64	12	27/64"	4-7/16"	2-7/8"	175AG-27/64	6
5/32"	2-3/4"	1-11/16"	175AG-5/32	12	7/16"	4-1/2"	2-15/16"	175AG-7/16	6
11/64"	2-7/8"	1-13/16"	175AG-11/64	12	29/64"	4-5/8"	3"	175AG-29/64	6
3/16"	3"	1-7/8"	175AG-3/16	12	15/32"	4-3/4"	3-1/8"	175AG-15/32	6
13/64"	3-1/8"	1-15/16"	175AG-13/64	12	31/64"	4-7/8"	3-1/4"	175AG-31/64	6
7/32"	3-1/4"	2"	175AG-7/32	12	1/2"	5"	3-3/8"	175AG-1/2	6
15/64"	3-3/8"	2-1/16"	175AG-15/64	12	<b>3/8" Shank</b>				
1/4"	3-1/2"	2"	175AG-1/4	12	27/64"	4-7/16"	2-7/8"	178AG-27/64	6
17/64"	3-5/8"	2-1/8"	175AG-17/64	12	7/16"	4-1/2"	2-15/16"	178AG-7/16	6
9/32"	3-3/4"	2-1/4"	175AG-9/32	12	29/64"	4-5/8"	3"	178AG-29/64	6
19/64"	3-7/8"	2-3/8"	175AG-19/64	6	15/32"	4-3/4"	3-1/8"	178AG-15/32	6
5/16"	4"	2-1/2"	175AG-5/16	6	31/64"	4-7/8"	3-1/4"	178AG-31/64	6
21-64"	4-1/16"	2-9/16"	175AG-21/64	6	1/2"	5"	3-3/8"	178AG-1/2	6

### Step Drill Bits

Self-starting point eliminates starter holes or punctures, even on curved surfaces. They have a double-fluted design for balanced cuts and cooler operation. 1" long shafts and titanium coating.

Size Range	Number of Hole Sizes	Size Increments	Shank Diameter	Step Thickness	Pkg. Qty.
1/8" to 1/2"	13	1/32	1/4"	1/8"	35-511
1/4" to 3/4"	9	1/16	3/8"	1/8"	35-512
1/4" to 7/8"	11	1/16	3/8"	1/16"	35-513
1/4" to 1 1/8"	16	1/16	3/8"	1/16"	35-515



### Drill Bit Sets

Description	Pieces in Set	Description	Pieces in Set
<b>By 1/64" Increments</b>			
1/16" to 1/4"	13	SPM-13	
1/16" to 3/8"	21	SPM-21	
1/16" to 1/2"	29	SPM-29	
3/32" to 3/8"	29	SPM-29P	
<b>Bolt Remover Sets / Type 420 and 190-AL</b>			
Extractors 3/32" to 3/8", and Left Hand	8	BR-8	
Drills 3/32", 1/8", 3/16" and 1/4"			
Extractors 3/32" to 5/8", and Left Hand	10	BR-10	
Drills 3/32", 1/8", 3/16", 1/4" and 5/16"			





## Rivets & Coarse and Fine Thread Dimensions

### Domed Blind Rivets



Also known as pop rivets, our **all steel** domed rivets offer added strength.

Our **all aluminum** domed rivets offer superior corrosion resistance and are ideal where minimizing weight is a concern.

Our **all stainless steel** domed rivets offer superior corrosion resistance.

Diameter	Material Thickness	All Steel		All Aluminum		All Stainless Steel	
			Pkg. Qty.		Pkg. Qty.		Pkg. Qty.
1/8"	0.032"-0.062"	R41-SD	250	R41-AD	100	-----	----
1/8"	0.063"-0.125"	R42-SD	250	R42-AD	100	R42-SSD	50
1/8"	0.126"-0.187"	R43-SD	250	R43-AD	100	R43-SSD	50
1/8"	0.188"-0.25"	R44-SD	250	R44-AD	100	R44-SSD	50
1/8"	0.251"-0.312"	R45-SD	250	R45-AD	100	-----	----
1/8"	0.313"-0.375"	R46-SD	250	R46-AD	100	R46-SSD	50
1/8"	0.376"-0.5"	R48-SD	250	R48-AD	100	R48-SSD	50
1/8"	0.501"-0.625"	R410-SD	250	-----	----	-----	----
3/16"	0.020"-0.125"	R62-SD	100	R62-AD	100	R62-SSD	50
3/16"	0.188"-0.25"	R64-SD	100	R64-AD	100	R64-SSD	50
3/16"	0.251"-0.375"	R66-SD	100	R66-AD	100	R66-SSD	50
3/16"	0.376"-0.5"	R68-SD	100	R68-AD	100	R68-SSD	50
3/16"	0.501"-0.625"	R610-SD	100	R610-AD	100	-----	----
3/16"	0.626"-0.75"	R612-SD	100	R612-AD	100	-----	----
3/16"	0.751"-0.875"	R614-SD	100	R614-AD	100	-----	----
3/16"	0.876"-1"	R616-SD	100	R616-AD	100	-----	----

### American National and Unified Coarse and Fine Thread Dimensions

Diameter	Threads Per Inch		Outside Diameter
	Coarse (UNC)	Fine (UNF)	
#0	-----	80	0.0600"
#1	64	72	0.0730"
#2	56	64	0.0860"
#3	48	56	0.0990"
#4	40	48	0.1120"
#5	40	44	0.1250"
#6	32	40	0.1380"
#8	32	36	0.1640"
#10	24	32	0.1900"
#12	24	28	0.2160"
1/4"	20	28	0.2500"
5/16"	18	24	0.3215"
3/8"	16	24	0.3750"
7/16"	14	20	0.4375"
1/2"	13	20	0.5000"
9/16"	12	18	0.5625"
5/8"	11	18	0.6250"
3/4"	10	16	0.7500"
7/8"	9	14	0.8750"
1"	8	12	1.0000"
1 1/8"	7	12	1.1250"
1 1/4"	7	12	1.2500"
1 3/8"	6	12	1.3750"
1 1/2"	6	12	1.5000"
1 3/4"	5	-----	1.7500"
2"	4 1/2	-----	2.0000"
2 1/4"	4 1/2	-----	2.2500"
2 1/2"	4 1/2	-----	2.5000"
2 3/4"	4	-----	2.7500"
3"	4	-----	3.0000"
2 1/4"	4 1/2	-----	2.2500"
2 1/2"	4 1/2	-----	2.5000"
2 3/4"	4	-----	2.7500"
3"	4	-----	3.0000"

## Boxes, Wall Cabinets & Wire Racks

### Metal Boxes and Racks

All of our metal boxes, housings, and bases are constructed of steel. Welded construction with a secure metal clasp. They have a durable gray powder coat finish.

#### Large Boxes

Key	Number Compartments	Dimensions	
(A)	6	18"W x 12"D x 3"H	LMB-6
(B)	12	18"W x 12"D x 3"H	LMB-12
(C)	24	18"W x 12"D x 3"H	LMB-24
(D)	32	18"W x 12"D x 3"H	LMB-32
(E)	3 Adjustable Rows	18"W x 12"D x 3"H	LMB-A

#### Housing for Large Boxes

Key	Number of Drawers	Dimensions	
(F)	4 Easy Glide	20"W x 15"D x 15 3/4"H	LMB-H

#### Base for Housing for Large Boxes

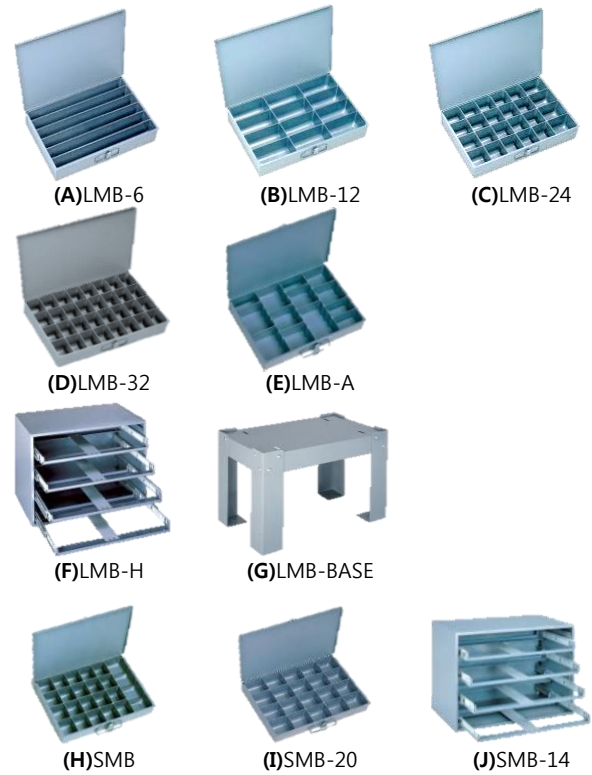
Key	Notes	Dimensions	
(G)	Use with LMB-H	20 5/8"W x 16 1/4"D x 15-5/8"H	LMB-BASE

#### Small Boxes

Key	Number Compartments	Dimensions	
(H)	21	13 3/8"W x 9 1/4"D x 2"H	SMB
(I)	20	13 3/8"W x 9 1/4"D x 2"H	SMB-20

#### Housing for Small Boxes

Key	Number of Drawers	Dimensions	
(J)	4 Easy Glide	15 1/4"W x 11 3/4"D x 11 1/4"H	SMB-H4



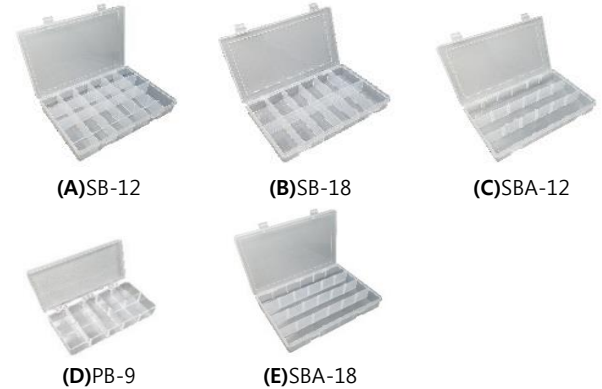
### Plastic Boxes

#### Small Boxes

Key	Number Compartments	Dimensions	
(A)	12	11"W x 6 3/4"D x 1 3/4"H	SB-12
(B)	18	11"W x 6 3/4"D x 1 3/4"H	SB-18
(C)	3 Adjustable Rows	11"W x 6 3/4"D x 1 3/4"H	SBA-12
(D)	9	7"W x 3 1/4"D x 1 1/4"H	PB-9

#### Large Box

Key	Number Compartments	Dimensions	
(E)	3 Adjustable Rows	13 1/8"W x 9"D x 2 5/16"H	SBA-18



### Modular Compartment Wall Cabinet

Compartments	Dimensions	
--------------	------------	--

#### Separate Sections

8 (2 Rows of 4 Bins)	11.75"W x 7.75"H x 3.25"D	P-308
6 (2 Rows of 3 Bins)	11.75"W x 9.75"H x 4"D	P-306
4 (1 Row of 4 Bins)	23.5" x 8" x 7"	P-604

#### Complete Wall Cabinet

44 Comprised of the following sections: (2) P-308, (4) P-306, and (1) P-604.	23.5"W x 35.25"H x 7"D	P-44
---------------------------------------------------------------------------------	------------------------	------



P-44

The modular wall cabinet is ideal for organizing small parts. The modular components fit together enabling custom layout of cabinet. It has clear compartment windows and is wall mountable.



P-306



P-308



P-604

### Wire Racks

Easy to store different sized spools on the same rod. The punched side panels allow for quick spool changes. Gray powder coat finish.

Description	Size	
1 Rod, Handle	26 1/8"W x 6"D x 10 3/8"H	WR-1
2 Rods	26 1/8"W x 6"D x 17 7/8"H	WR-2
4 Rods	26 1/8"W x 6"D x 37 1/8"H	WR-4

Please note: Wire not included



WR-1



WR-2



WR-4

### Wire Caddy

All in one, wire caddy and storage for terminals and crimp tool. Heavy duty steel construction, gray in color. Exterior dimensions: 11"W x 7 1/2"D x 16 3/4"H.

Part # WIRE CADDY



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Butt Splices, Rings and Forks  
Flags and Quick Connects  
High Temp Terminals  
Shrink Terminals  
Solder Shrink Terminals  
Wire Connectors  
Quick Splices  
Terminal Kits  
Ferrules  
Compression Lugs  
Copper Lugs and Covers  
Battery Terminals and Covers  
Power Distribution Blocks  
Neutral Bars  
Packard Weather Pack  
Packard Metri-Pack  
Deutsch Terminals  
Boxes and Racks

### TOOLS

Crimping  
Stripping and Cutting  
Packard Tools  
Deutsch Tools  
Ferrule Tools  
Torches  
Flashlights  
Work Gloves

### ELECTRICAL PROTECTION

Glass Fuses  
Automotive Fuses  
Fuse Kits  
Circuit Breakers  
Fuse Holders  
Fuse Panels  
Fuse Blocks  
Terminal Blocks  
Relays  
Switches  
Solenoids

### SHRINK TUBING

Standard 2:1  
Adhesive Lined 3:1  
Heavy Duty Adhesive  
Color Coded Adhesive  
Economy  
Shrink Tube Kits

### CLIPS / CLAMPS

Hose Clamps  
Vinyl Coated & Nylon Clamps  
Cable Management  
Spiral Wrap  
Split Loom  
Mesh Sleeving  
Hose Protection  
Hose Organization

### WIRE

GPT  
GXL  
Boat Cable  
Trailer Cable  
Welding Cable  
Jumper Cable Ends  
MTW/THHN Wire  
High Temp Wire  
Mechanics Wire  
SJO, SO, STO  
Grommet Kit

### CABLE TIES

Standard Ties  
T&B Ties  
Specialty Ties  
Cable Tie Mounts  
Cable Tie Tools

### TAPE

Electrical Tape  
Duct Tape  
Specialty Tapes & Adhesives

### TRAILER CONNECTORS

Trailer Connectors  
Extension Cords  
Plugs and Receptacles  
Drill Bits  
Rubber Straps

### TRUCK LIGHTING

Stop, Tail, Turn Lights  
Marker & License Plate  
ID Light Bars  
Strobe Lights  
Work Lights  
Back-Up Alarms  
Mirrors  
Pigtails

### BULBS

Incandescent Bulbs  
Halogen Capsules  
Sealed Beams  
Flashers

### FASTENERS

Hex Head Cap Screws  
Hex Nuts  
Flat Washers  
Split-Lock Washers  
Metric Screws/Nuts/Washers  
Stainless Nuts & Washers  
Machine Screws  
Rivets

### PIPE, TUBE, AND HOSE FITTINGS

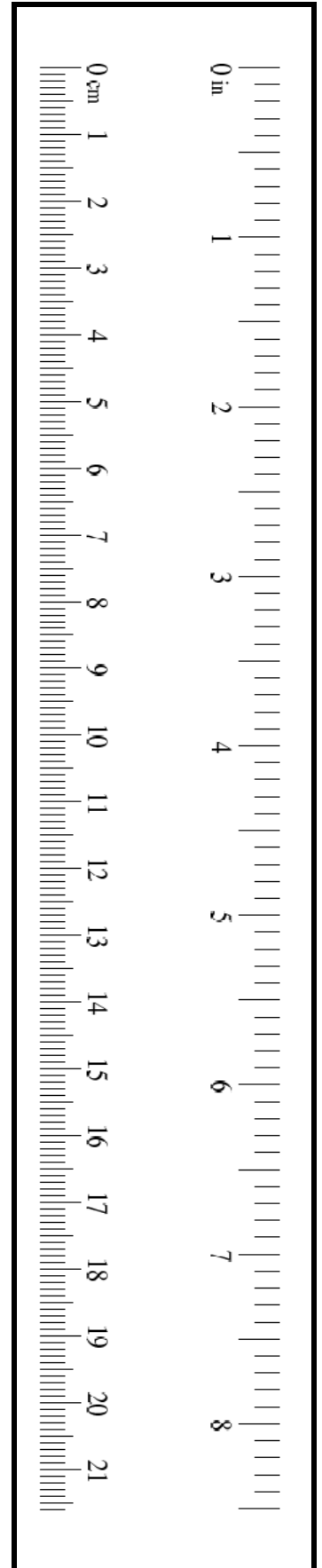
Tube Fittings  
Pipe Fittings  
Hose Fittings

### WELDING CABLE AMPACITY

Amps	Distance				
	50'	75'	100'	125'	150'
100	4	4	2	2	1
150	3	2	1	1/0	2/0
200	2	1	1/0	2/0	3/0
250	1	1/0	2/0	3/0	4/0
300	1	2/0	3/0	4/0	
350	1/0	3/0	4/0		
400	2/0	3/0	4/0		
450	2/0	4/0			
500	3/0	4/0			
550	4/0				
600	4/0				

### COMMON STUD SIZES

Stud Size	Screw Diameter
#6 9/64"	0.138"
#8 5/32"	0.164"
#10 3/16"	0.190"
1/4	0.250"
5/16	0.312"
3/8	0.375"
1/2	0.500"
3/4	0.750"



### PRIMARY WIRE AMPACITY / 12 VOLT CIRCUITS

Amps	Distance				
	10'	20'	30'	50'	100'
2	18 Ga.	18 Ga.	18 Ga.	18 Ga.	16 Ga.
6	18 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.
12	18 Ga.	16 Ga.	14 Ga.	12 Ga.	8 Ga.
20	16 Ga.	12 Ga.	12 Ga.	10 Ga.	6 Ga.
36	14 Ga.	10 Ga.	8 Ga.	8 Ga.	4 Ga.
40	12 Ga.	10 Ga.	8 Ga.	6 Ga.	2 Ga.
50	12 Ga.	10 Ga.	8 Ga.	6 Ga.	2 Ga.
100	10 Ga.	6 Ga.	4 Ga.	2 Ga.	1/0 Ga.
150	8 Ga.	4 Ga.	2 Ga.	1 Ga.	2/0 Ga.
200	6 Ga.	4 Ga.	2 Ga.	1/0 Ga.	4/0 Ga.



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