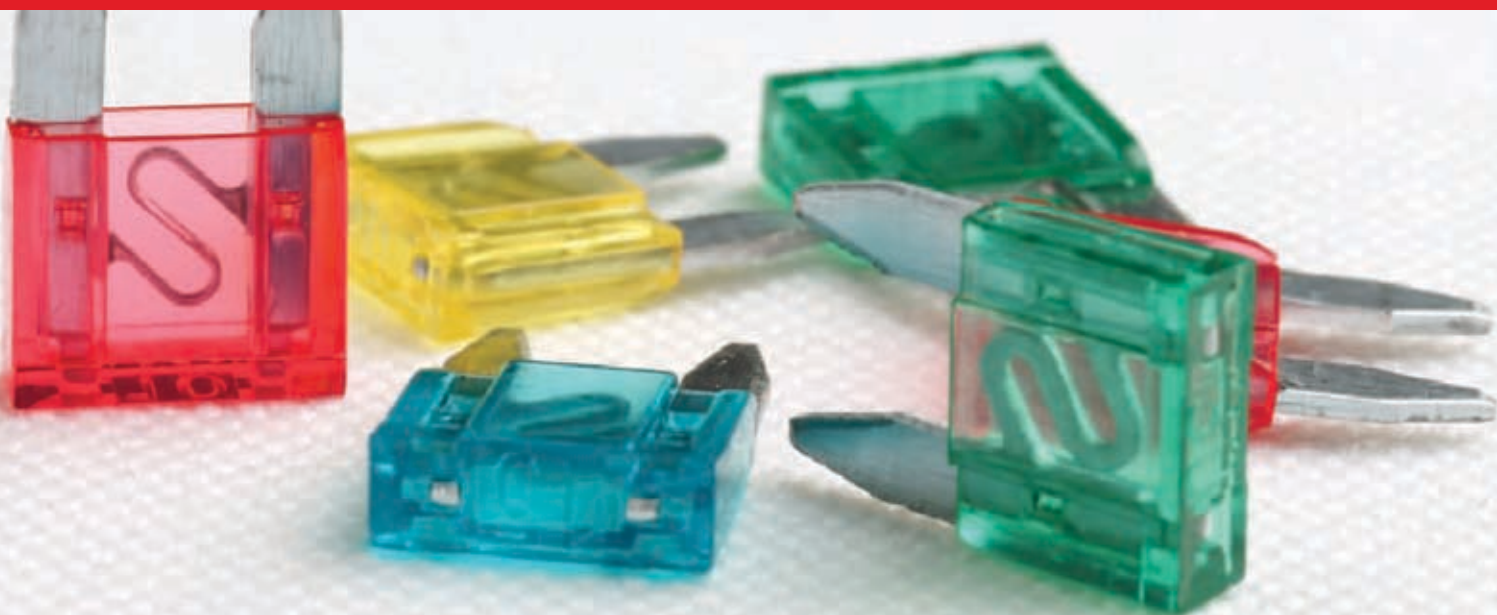
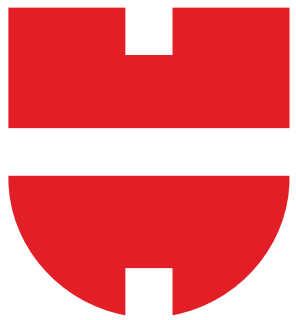


ELECTRICAL





WÜRTH

03**Electrical**

Batteries	03.0375
Battery Connectors, Terminals, Cable & Supplies	03.0290 - 03.0325
Cable Ties	03.0360 - 03.0370
Cavity Connectors	03.0200
Circuit Breakers, Flashers & Fuse Taps	03.0255 - 03.0265
Clips & Lugs	03.0280 - 03.0285
Closed-End Connectors	03.0155
Crimp Ring Connectors	03.0270 - 03.0275
Crimp/Seal Connectors	03.0105 - 03.0115
Crimp/Solder/Seal Connectors	03.0135 - 03.0145
Electrical Assortments	03.0005 - 03.0015
Electrical Connectors	03.0205 - 03.0220
Fuse Holders	03.0225 - 03.0230
Fuses	03.0235 - 03.0250
Harnesses	03.0380 - 03.0415
In-Line Butt Connectors	03.0150
Light Bulbs	03.0420 - 03.0475
Nylon Insulated Connectors	03.0085 - 03.0100
OEM Connectors	03.0180 - 03.0195
Protective Tubing	03.0330 - 03.0340
Solder	03.0045
Solder/Seal Connectors	03.0120 - 03.0130
Specialty Heat Shrink Tubing	03.0160
Tape	03.0050 - 03.0060
Universal Uninsulated Connectors	03.0165 - 03.0175
Vinyl Insulated Connectors	03.0070 - 03.0080
Wire	03.0020 - 03.0040
Wiring Grommets	03.0345 - 03.0355

ELECTRICAL ASSORTMENTS

Battery Terminals & Solder Slugs
Art. # 1964 1510

68 Pieces

- Battery Solder Slugs
- Crimp Battery Terminals
- Polyolefin Heat Shrink Tubing


Battery Ring Terminals & Solder Slugs
Art. # 1964 05572

65 Pieces

- Battery Solder Slugs
- Copper Lugs
- Polyolefin Heat Shrink Tubing


Rubber Wiring Grommets
Art. # 1964 05616

240 Pieces

- Blanking Grommets 6mm - 38mm
- Wiring Grommets 18mm


ATO Mini Blade Fuses
Art. # 1964 17311

100 Pieces

- Mini Blade 3-30 amp.


ATO Standard Blade Fuses
Art. # 1964 17310

160 Pieces

- Standard Blade 3-30 amp.


Assorted Fuses
Art. # 1964 1730

160 Pieces

- Selection of most popular fuses including:
- Blade
 - Ceramic
 - Glass


Maxi & Mini Fuses
Art. # 1964 17312

60 Pieces

- Mini Blade 2-30 amp.
- Maxi Blade 20-60 amp.


ATO/ATC Mini, Standard & Maxi Fuses
Art. # 1964 00008

215 Pieces

- Standard 3 - 40 amp.
- Mini 2 - 30 amp.
- Maxi 20 - 60 amp.

ELECTRICAL ASSORTMENTS

Nylon Insulated Connectors
Art. # 1964 1559

475 Pieces

- Ring Terminals
- Push-on Fully Insulated
- Spade Terminals
- Butt Connectors
- Bullet Connectors
- Scotch Lock & T-Tap


Weather Pak Connectors
Art. # 1964 15593

100 Pieces

- Pack Connectors
- 2-Part Terminals
- Metri & Micro Pak
- Electric Control
- Wedgloc Pin
- Tab Terminals and more


Crimp/Seal Connectors
Art. # 1964 15591

160 Pieces

- Ring Terminals
- Push-on Fully Insulated
- Spade Terminals
- Butt Connectors
- Bullet Connectors


Solder/Seal Connectors
Art. # 1964 15552

120 Pieces

- Spade Terminals
- Ring Terminals
- Butt Connectors


Solder/Seal Connectors
Art. # 1964 15553

240 Pieces

- Ring Terminals
- Fork Terminals
- Spade Terminals
- Butt Connectors


Crimp/Solder Seal Connectors
Art. # 1964 15592

170 Pieces

- Ring Terminals
- Spade Terminals
- Butt Connectors
- Fork Terminals


Vinyl Insulated Connectors
Art. # 1964 05581

445 Pieces

- Scotch Lock
- Ring Terminals
- Piggyback Spade
- Spade Terminals
- Butt Connectors
- Bullet Connectors


European Bulbs
Art. # 1964 1720

175 Pieces

- Halogen Bulbs
- Dome Bulbs
- Dash Bulbs
- Brake Light Bulbs
- Soffit Bulbs
- Tail / Stop Bulbs

ELECTRICAL ASSORTMENTS

Light Bulbs
Art. # 1964 1721

176 Pieces
 Selection of most popular
 12 volt bulbs including:

- Halogen
- Wedge
- Dome
- Amber


Black Tie Straps
Art. # 1964 15021

200 Pieces

- 3/32" - 3/16" width
- 4" - 14-1/2" lengths


Heat Shrink Tubing
Art. # 1964 07710

65 Pieces

- Shrink Tubing

2mm x 100mm, 3mm x 100mm, 4mm x 100mm, 6mm x 100mm, 9mm x 100mm, 12mm x 100mm, 19mm x 100mm, 25mm x 100mm

CROSSOVERS
Cable Tie Rack
Art. # 050205020

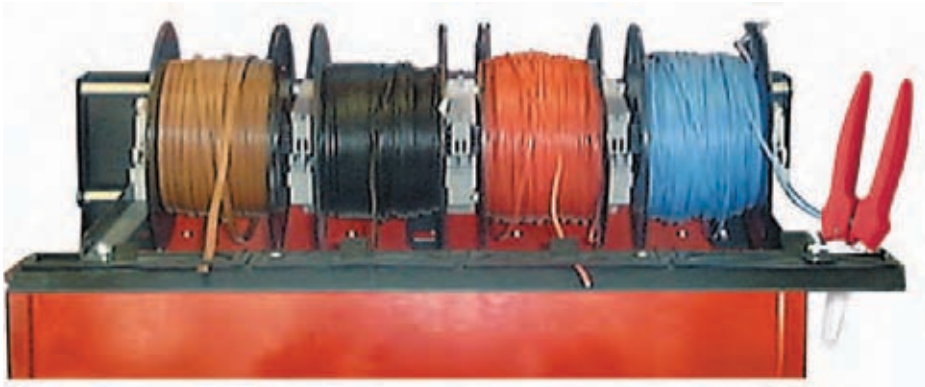
See Tools/Shop Supplies


4 Drawer Cabinet
Art. # 1955104

See Tools/Shop Supplies


Bulb Rack
Art. # 1966720

See Tools/Shop Supplies

ORSY® WIRE REEL SYSTEM

Dispenser Includes:

- Dispenser assembly
- 5 reel holders - Art. # 0956 10903
- 8 small stars (holds 4 rolls) Art. # 0956 10901
- Mounting hardware

Note:

- Order wire separately.
- Combination shears sold separately Art. # 0714 0314.

Description	Art #
Small Dispenser	0956109
Large Reel System Stars	095610902
Small Reel System Stars	095610901
Reel Holder	095610903
Coil Core Plastic Insert	095610904

Versatile:

- Because it can be fitted to both the rack and to the wall

Economical:

- Because it is clear and space-saving, provides quick access and a clear overview of the stock

Environmentally safe:

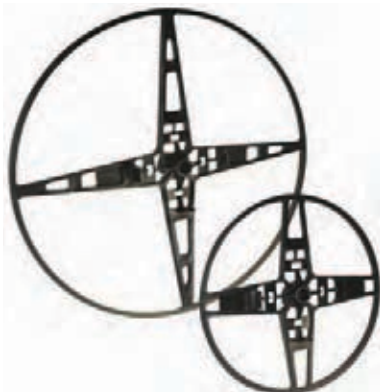
- Because the product being unrolled has as little packaging as possible

Functional:

- Because it is a fully developed and practical solution
- Run-out safeguard thanks to integrated ratchet
- No abrasion with abrasive materials thanks to clamping roller
- Adjustable holder for coils

Universal:

- Because it can be used for six different unrolled products
- Vehicle hose lines
- Fuel hose
- Zebra abrasive paper
- Dry sandpaper
- Nylon sanding fleece



WIRE FOR ORSY® 10 SYSTEM

- WURTH ORSY® wire is manufactured of the highest grade material available
- The ORSY® wire insulation is a special “extra flexible” compound available only from WURTH
- The ORSY® wire is packaged in bulk which makes it very cost effective and installs on the ORSY® 10 System in seconds
- No more unraveling and wasted wire!
- DIN/ISO 6722
- PVC outer casing, black
- Nominal voltage: U2=50 V, U4=60 V
- Temperature range: Class A, -40°F to +185°F
- Silicone-free, free from cadmium and lead

Note: Different length sizes per gauge.



Gauge	Color	Art #
(.75) 18ga. 100 meters (328') length	Black	0770075
	Red	07700751
	Blue	07700752
	Yellow	07700753
	Green	07700754
	White	077007542
	Purple	077007543
	Brown	07700759
(1.0) 16ga. 100 meters (328') length	Red	07700901
	Blue	07700902
	Green	07700904
	Brown	07700909
(1.5) 14ga. 100 meters (328') length	Black	077010
	Red	0770101
	Blue	0770102
	Purple	07701020
	Yellow	0770103
	Green	0770104
	White	07701042

Gauge	Color	Art #
(1.5) 14ga. 100 meters (328') length	Red/Yellow	077010451
	Black/White	077010454
	Red/Black	077010455
(2.5) 12ga. 50 meters (164') length	Black	0770105
	Red	0770106
	Blue	0770107
	Purple	07701070
	Yellow	0770108
	Green	0770109
(4.0) 10ga. 25 meters (82') length	Brown	07701099
	Black	0770110
	Red	07701100
(6.0) 8ga. 50 meters (164') length	Black	07701112
	Red	077011121

DOMESTIC WIRE 100' SPOOL

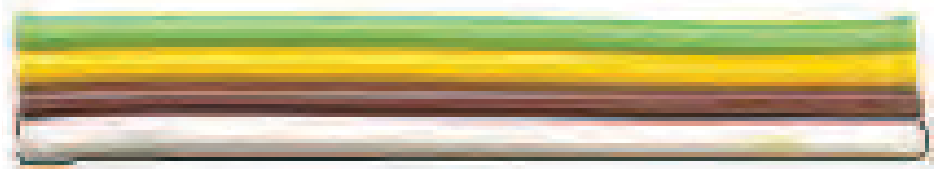
- Single conductor copper strand
- Flexible, permanent colored high abrasion resistance
- Highest quality polyvinyl chloride insulation
- Resistant to acids, grease, oil and diesel fuels
- Meets all SAE J1128 type GPT specifications
- Works safely between -40° F and +176 °F
- For use at 50 volts or less



Gauge	Color	Art #
22	Black	1770992210
	Red	1770992230
18	Blue	1770991800
	Black	1770991810
	Grey	1770991815
	Green	1770991820
	Red	1770991830
	Yellow	1770991840
	Brown	1770991850
	White	1770991860
	Orange	1770991870
	Purple	1770991880
	Pink	1770991885
16	Blue	1770991600
	Black	1770991610
	Grey	1770991615
	Green	1770991620
	Red	1770991630
	Yellow	1770991640
	Brown	1770991650
	White	1770991660
	Orange	1770991670
	Purple	1770991680
	Pink	1770991685

Gauge	Color	Art #
14	Blue	1770991400
	Black	1770991410
	Grey	1770991415
	Green	1770991420
	Red	1770991430
	Yellow	1770991440
	Brown	1770991450
	White	1770991460
	Orange	1770991470
	Purple	1770991480
	Pink	1770991485
12	Blue	1770991200
	Black	1770991210
	Grey	1770991215
	Green	1770991220
	Red	1770991230
	Yellow	1770991240
	Brown	1770991250
	White	1770991260
10	Blue	1770991000
	Black	1770991010
	Green	1770991020
	Red	1770991030
	Yellow	1770991040
	White	1770991060
8	Black	1770990810
	Red	1770990830

BONDED PARALLEL TRAILER WIRE



Description	Art #
Bonded Parallel Trailer Wire	17709090

- Especially for RV's and boat trailers
- Meets all SAE J1128, type GPT specifications
- Works safely between -20°F and +176°F
- For use at 50 volts or less
- Spool size: 100 ft. 16 ga.
- ROHS compliant
- All copper strand core

FUSIBLE LINK WIRE

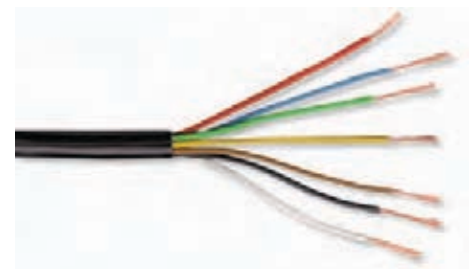


Gauge	Color	Length	Art #
12	Blue	10 ft.	17709501
14	Grey	10 ft.	17709502
16	Black	10 ft.	17709503

- Acts like a fuse when a short or overload occurs.
- Should be used only to repair factory installed fusible links with the same exact length and gauge being matched.

MULTI-STRAND WIRE

- WURTH Multi-Strand Wire is ideal for wiring trailers, trucks, RV units, etc
- The insulation is very flexible and protects against abrasion
- PVC outer sheathing
- Silicone, cadmium and lead free
- Temperature -40°F to 70°F
- Voltage AC = 50 V, DC = 60 V
- DIN/ISO 6722
- Imported from Germany
- Sold by the meter



Gauge	# Wires	Colors	Art #
16	2	White, Black	0770122
16	5	White, Black, Brown, Yellow, Green	0770117
14	4	White, Black, Brown, Yellow	0770119

TRACER WIRE 100' WIRE SPOOL
Automotive lead-free polyvinylchloride (PVC) wire SAE J-1128

- Great for use on automotive, motorcycle and marine applications for general circuit wiring
- Color coded for easy identification through a fire wall or in a pigtail
- Demanded by Harley Davidson shops across the country
- Lead free polyvinylchloride (PVC) wire
- SAE J-1128 (-40 ° F to 221 ° F)



Gauge	Color	Art #
18	Grey/Green	1770981521
	Black/Red	1770991131
	Black/White	1770991161
	Black/Green	1770991171
	Gray/Black	1770991511
	Gray/Yellow	1770991541
	Gray/White	1770991561
	Gray/Orange	1770991571
	Green/Yellow	1770992041
	Green/Blue	1770992051
	Green/Orange	1770992071
	Lt. Green/Brown	1770992131
	Green/Brown	1770992151
	Red/Yellow	1770993041
	Red/White	1770993061
	Red/Orange	1770993062
	Red/Blue	1770993063
	Yellow/Black	1770994011
	Yellow/Orange	1770994021
	Yellow/Violet	1770994023
	Yellow/Red	1770994031
	Yellow/White	1770994061
	Brown/White	1770995061
	Brown/Black	1770995062
	Tan/Yellow	1770995141
	White/Black	1770996011
	White/Green	1770996021
	White/Red	1770996031
	White/Blue	1770996041
	White/Brown	1770996051
	White/Orange	1770996071
	White/Purple	1770996081
	Orange/Black	1770997011
	Orange/White	1770997061
Orange/Purple	1770997081	
Purple/Black	1770998011	
Purple/Gray	17709980151	
Purple/White	1770998061	
Pink/White	1770998561	
Blue/Yellow	1770999011	
Blue/Black	1770999021	
Violet/Green	1770999111	

Gauge	Color	Art #
20	Black/Red	1770981031
	Black/White	1770981061
	Black/Green	1770981171
	Gray/Black	1770981511
	Gray/Yellow	1770981541
	Gray/White	1770981561
	Gray/Orange	1770981571
	Green/Yellow	1770982041
	Green/Blue	1770982051
	Green/Orange	1770982071
	Lt. Green/Brown	1770982131
	Green/Brown	1770982151
	Red/Yellow	1770983041
	Red/White	1770983061
	Red/Orange	1770983062
	Red/Blue	1770983063
	Yellow/Black	1770984011
	Yellow/Orange	1770984021
	Yellow/Violet	1770984023
	Yellow/Red	1770984031
	Yellow/White	1770984061
	Brown/White	1770985061
	Brown/Black	1770985062
	Tan/Yellow	1770985141
	White/Black	1770986011
	White/Green	1770986021
	White/Red	1770986031
	White/Blue	1770986041
	White/Brown	1770986051
	White/Orange	1770986071
	White/Purple	1770986081
	Orange/Black	1770987011
	Orange/White	1770987061
	Orange/Purple	1770987081
Purple/Black	1770988011	
Purple/Gray	17709880151	
Purple/White	1770988061	
Pink/White	1770988561	
Blue/Yellow	1770989011	
Blue/Black	1770989021	
Violet/Green	1770989111	
Grey/Green	1770991521	

ROSIN CORE SOLDER 60/40

- Exceeds all military, government, and J-STD-006 specifications for electronic and industrial solders
- .062 dia.
- General purpose, automotive solder
- Solder easily dispensed through tube in red cap
- .5 oz. spool

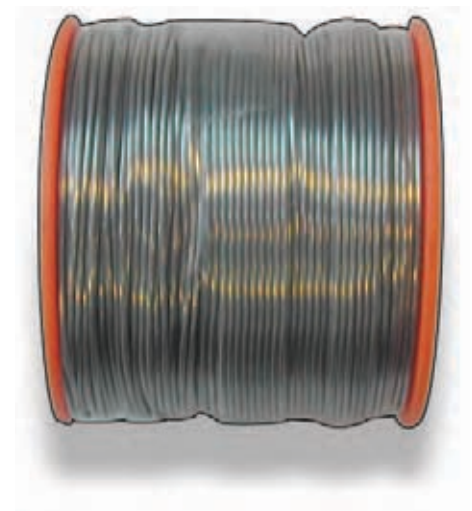
Description	Art #
Rosin Core Solder 60/40	1987062



ELECTRIC SOLDER NO. 10

- 60/40 tin/lead according to DIN EN 29453 (DIN 1707)
- Continuous feed of flux DIN EN 29454-1/1.1.3.B (F-SW 32 DIN 8511) due to 5 solder cores
- Processing temperature: 240-260°C
- Melting temperature: 183-190°C
- Flux residues have no corrosive effect
- Low soldering temperature due to quick flowing solder
- Specially suitable for printed circuit boards
- 300' spool
- 1 lb.

Description	Art #
Electric Solder No. 10	0987105



COLD SHRINK TAPE

- Water resistant
Your advantages:
 - The shrink tape provides various materials with a water and steam proof seal
- Good insulation properties
Your advantages:
 - Thanks to its disruptive strength, the tape is highly suitable for insulating cables and electrical lines
- Highly compatible with any insulation and sheathing materials
Your advantages:
 - Good compatibility with PE, PVC, butyl, neoprene etc. allows to be used in many different areas in the automotive and electrical fields
- Highly elastic
Your advantages:
 - The tape can be stretched considerably and nestles very close to the material to be processed

Applications

- Sealing of pipes and hoses
- Emergency sealing of radiator and gas hoses
- Insulation of electrical lines and cables
- For use in places where heat shrink tubes can no longer be used
- Bundling lines

Base material	Polyisobutylene (black)
Elongation at tear	600%
Application temperature	41 °F to +95 °F
Temperature resistance	-40 °F to +194 °F
Disruptive strength	40kV/mm
Shelf life (at approx. 68 °F and 50% humidity)	24 months (store dry, lying and dust-free)
UV resistance	conditional
Moisture resistance	given



Notes on application

- The surfaces to be sealed must be dry and free of dust and grease
- Remove PVC cover foil and stretch the tape considerably
- To achieve problem-free adhesion and a water-proof seal, wrap the tape tightly around the material to be processed and then overlap
- The shrink tape is only conditionally UV-resistant and should therefore be protected from direct sunlight

Description	Art #
Cold Shrink Tape	19850771

BRUSHABLE ELECTRICAL TAPE

- 4fl oz. brush can
- Protects vehicle wiring from all weather conditions as well as corrosion from salt and calcium
- Flexible waterproof coating
- Easy to use brush applicator
- Coats, seals and insulates
- Won't crack, fray or unravel like tape
- Great for hard to reach areas

Description	Art #
Brushable Electrical Tape	0893198010



ELECTRICAL TAPE

- Plasticised PVC tape with good mechanical and electrical properties
- UL/CSA listed for use in electrical insulation application
- Having a modified rubber-resin adhesive coating provides good ageing resistance and high adhesion strength
- Suitable for most electrical insulation application in the building, construction, automotive, cycle and marine industries
- Also useful in sealing, binding, protection and decorative application
- Size roll: 3/4 x 60'
- Thickness: 7 mil.
- High quality electrical tape for all your electrical needs
- Suitable for use at no more than 600v and not more than 176 ° F
- 10 rolls per sleeve



Description	Art #
Electrical Tape	1985615

IMPORTED ELECTRICAL TAPE

- VDE-tested according to DIN EN 60454-3-1 Type 5
Your advantages:
 - Safety thanks to tested properties
 - Up to 9kV disruptive strength
 - Hardly flammable
- Safe, easy use
Your advantages:
 - Tear-proof and resistant to ageing
 - High flexibility and adhesive strength
- Following assembly, consistently positive properties, even at changing temperatures
- Largely resistant to diluted acid and caustic solution



Application

For insulating, marking electrical cables and securing cable harnesses etc.

Note:

Protect tape from exposure to direct sunlight.

Description	Art #
Imported Electrical Tape	09856

Chemical basis	Acrylate, soft PVC foil
Thermal stability	32 °F to +194 °F
Disruptive strength	9 kV
Minimum shelf life	24 months

3M® LINERLESS ELECTRICAL SPLICING TAPE

- Size roll: 3/4" x 15' x 0.030" thickness
- Moisture sealing
- Insulating
- Flame retardant

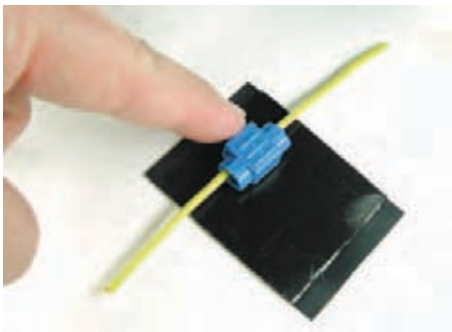


Description	Art #
3M Linerless Electrical Splicing Tape	1985617

MOISTURE SEAL TAPE

- Size roll: 2.5" x 10' x 0.045" thickness
- Moisture proof connectors
- Tough vinyl backing prevents abrasion
- Protects terminal blocks
- Adds strain relief to splices
- Vulcanizes when both tape surfaces meet giving all season, all weather protection

Description	Art #
Moisture Seal Tape	1985616



Place



Join Tape Surface



Sealed Permanently

BLACK CLOTH FRICTION TAPE

(Cotton cloth impregnated with a rubber based adhesive)

Applications:

Offers good mechanical protection against abrasion and penetration of low voltage cable, splices and wire. Used for insulation and protection of industrial harnesses and electrical wires from physical damage caused by friction.

Features/Benefits:

Black cotton cloth with non-corrosive rubber resin adhesive. It's cloth backing makes this tape easily torn by hand and extremely conformable. Highly resistant to humidity and galvanic corrosion. For contractors who demand a consistent, trouble-free product.

Performance Specifications:

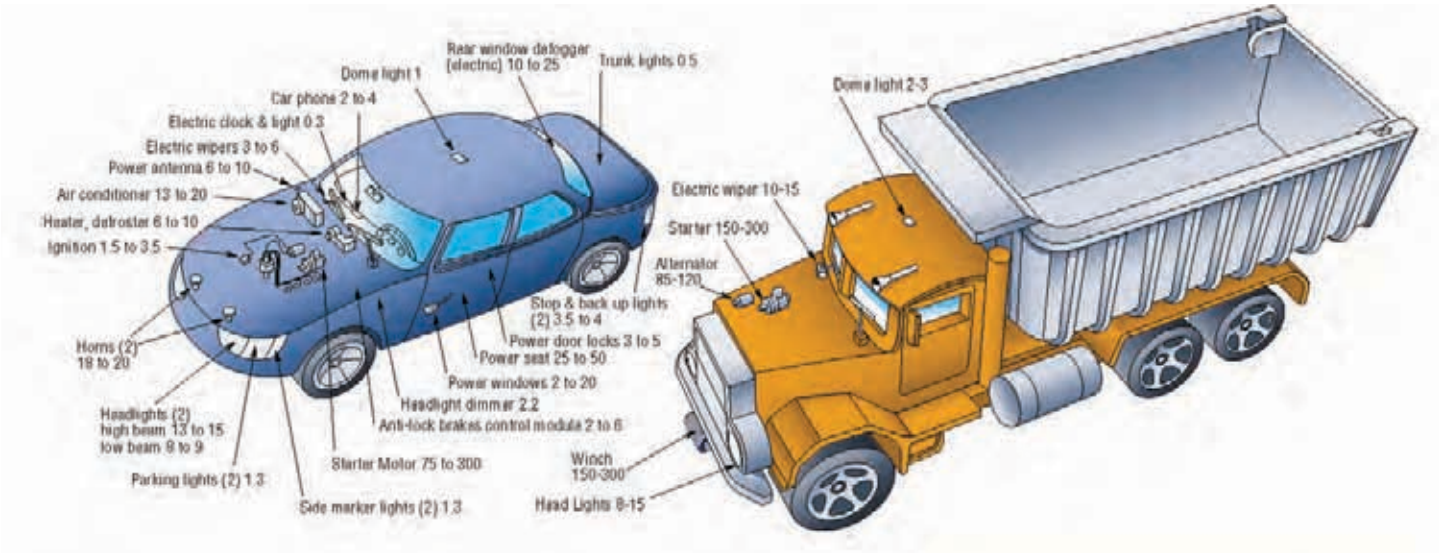
- Maximum Temperature of 176 ° F
- Dielectric Strength of 1,000 volts

Description	Art #
Moisture Seal Tape	1985616



WIRE AND CABLE GUIDE

Typical Amperage Draw



Determining Wire and Cable Gauge Size by Circuit Amps and Length

Total Circuit Amps	Wire Gauge for Length in Feet (Total circuit length)												
	3'	5'	7'	10'	15'	20'	25'	30'	40'	50'	75'	100'	
12v													
1	18	18	18	18	18	18	18	18	18	18	18	18	18
3	18	18	18	18	18	18	18	18	18	18	14	14	14
5	18	18	18	18	18	18	18	18	14	14	12	12	12
7	18	18	18	18	18	18	16	16	14	14	10	10	10
10	18	18	18	18	16	16	16	14	12	12	10	10	10
15	18	18	18	18	14	14	12	12	10	10	8	8	8
20	16	16	16	16	14	12	10	10	10	10	8	6	6
24	14	14	14	14	12	12	10	10	8	8	6	6	6
30	12	12	12	12	10	10	10	10	6	6	4	4	4
40	10	10	10	10	10	10	8	8	6	6	4	2	2
50	8	8	8	8	8	8	8	8	6	6	2	2	2
100	4	4	4	4	4	4	4	4	2	2	1	1/0	1/0
150	2	2	2	2	2	2	2	2	1	1	2/0	2/0	2/0
200	1/0	1/0	1/0	1/0	1/0	1/0	1/0	1/0	1/0	1/0	4/0	4/0	4/0

Installation Tips & Safety

- Accompanying charts are guides only, always follow wire and cable sizes recommended by original equipment manufacturer
- Increasing wire and cable size typically increases conductivity and safety
- Never use lighter wire and cable as it could cause component failure, heat build up and fire

Metric and AWG Wire Size

Metric values are expressed as a range and vary by country

mm ²	1	2	3	4	5	6	8	10	13	16	21	22	35	36	42	43	53	54	68	69	86	87	107		
AWG	16	14	12	10	8	6	4	2	1	1/0	2/0	3/0	4/0	1/0	2/0	3/0	4/0	1/0	2/0	3/0	4/0	1/0	2/0	3/0	4/0

System Voltage & Type	Cable Path	Total Cranking Circuit Length In Inches*											
		6	4	2	1	1/0	2/0	3/0	4/0 or 2-2/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel	
12 Volt Heavy Duty	Single	6	4	2	1	1/0	2/0	3/0	4/0 or 2-2/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel	
12 Volt Light & Medium Duty 24 & 32 Volt HD	Single	6	4	2	1	1/0	2/0	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel	
24 Volt Light & Medium Duty	Single	6	4	2	1	1/0	2/0	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel	
12 Volt High Output Heavy Duty	Single	2/0**	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel						
12 Volt High Output Heavy Duty	Dual Path to and from Starter	2/0**	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel						
12 Volt Super Heavy Duty	Single	2/0**	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel						
12 Volt Super Heavy Duty	Dual Path	2/0**	3/0	4/0 or 2-1/0 in Parallel	2-2/0 in Parallel	2-3/0 in Parallel	2-4/0 in Parallel						

* Assumes eight series connections with frame ground. Return path length includes cable from battery(ies) to starter and return to battery(ies), batter-to-battery series connections, and length of frame member used in return. No external contactors are included in calculations.
 ** Minimum gauge size recommended for high-output system. Dual path system preferred.

VINYL INSULATED CONNECTORS

Polycarbonate (Makrolon) Insulated Crimp Cable Connectors

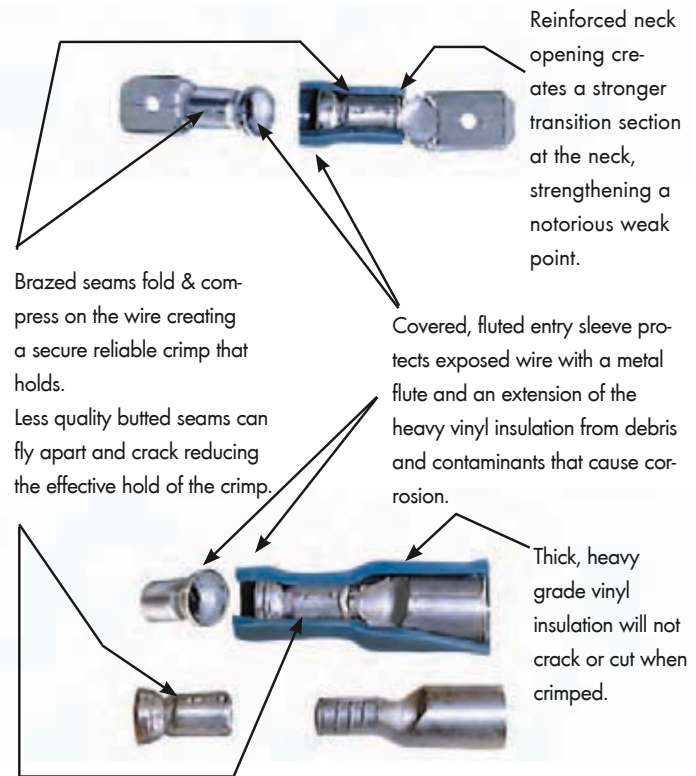
- The inner part of the cable lug is made from high-quality electrolytic copper and electroplated with tin then soldered in the sleeve.
- The dimensions comply with DIN Standards.
- Halogen-free, self-extinguishing polycarbonate (makrolon) is used as insulating material which has a superior heat resistant rating of up to 248 °F. In contrast, PVC is heat rated to 167 °F and both polyvinyl chloride and nylon are heat rated to 221 °F.
- Excellent resistance properties against alcohols, mineral acids, gasoline, greases and oils.
- Excellent non-deformability properties - does not crack or create white stress points at crimp folds.



Art. #
05589192
M4

Art. #
05589542
M5

Art. #
05589224
M5



VINYL INSULATED BUTT CONNECTORS

Cross-Section in mm ²	Color	Length in mm approx.	Art #
0.5 - 1.0	Red	25	05589251
1.5 - 2.5	Blue	25	05589262
4.0 - 6.0	Yellow	27	05589274

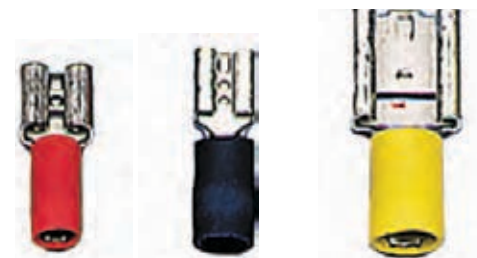


VINYL INSULATED RING LUGS

Cross-Section in mm ²	Color	Flange Hole	Art #
0.5 - 1.0	Red	M3	05589001
		M4	05589011
		M5	05589021
		M6	05589031
		M8	05589041
1.5 - 2.5	Blue	M3.5	05589072
		M4	05589082
		M5	05589092
		M6	05589102
		M8	05589112
		M10	05589122
4.0 - 6.0	Yellow	M4	05589144
		M5	05589154
		M6	05589164
		M8	05589174
		M10	05589184


VINYL INSULATED PUSH-ON RECEPTACLE

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	2.8 x 0.8	0558960
		4.8 x 0.5	05589761
		6.3 x 0.8	05589051
1.5 - 2.5	Blue	4.8 x 0.5	05589762
		6.3 x 0.8	05589052
		8.2 x 8.0	05589402
4.0 - 6.0	Yellow	6.3 x 0.8	05589054
		9.5	05589414


VINYL INSULATED FULLY INSULATED PUSH-ON RECEPTACLE

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	6.3 x 0.8	055890511
1.5 - 2.5	Blue		055890522



PUSH-ON RECEPTACLES INCLUDING PUSH-ON TABS

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	6.3 x 0.8	05589421
1.5 - 2.5	Blue		05589432


PUSH-ON TABS

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	2.8 - 0.8	05589751
		4.8 - 0.8	05589391
		6.3 - 0.8	05589441
1.5 - 2.5	Blue	4.8 - 0.8	05589392
		6.3 - 0.8	05589452


FULLY INSULATED CIRCULAR PLUG SLEEVES

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	4	05589471
1.5 - 2.5	Blue	5	05589492
4.0 - 6.0	Yellow	5	0558962


CIRCULAR PLUGS

Cross-Section in mm ²	Color	Size in mm	Art #
0.5 - 1.0	Red	4	05589461
1.5 - 2.5	Blue	5	05589482
4.0 - 6.0	Yellow	5	0558961



NYLON INSULATED CONNECTORS

- Designed for heavy duty applications and superior performance for extreme vibration and moisture
- Tin plated annealed copper for improved corrosion resistance, max conductivity and crimp strength
- Serrated barrel for greater wire retention/pullout strength
- Operating temperature range from -67°F to 221°F
- UL/CSA listed where applicable



	Gauge Size	Color	Size	Art #
1	22 - 18	Red	1/4"	1559611514
2				1559611414
3				1559511514
4				1559511414
5			#6	155962106
6			#8	15596214
7			#10	1559621010
8			1/4"	1559621014

	Gauge Size	Color	Size	Art #
9	22 - 18	Red	#6	15596613
10			#8	15596614
11			#10	15596615
12			–	1559641
13			–	15596419
14			–	15596914
15			–	15596915
16			1/4"	15596814

NYLON INSULATED CONNECTORS (CONTINUED)



	Gauge Size	Color	Size	Art #
1	16 - 14	Blue	1/4"	1559612514
2				1559612414
3				1559512514
4				1559512414
5			#8	155962208
6			#10	15596225
7			1/4"	15596226
8			5/16"	15596228
9			3/8"	1559622038
10			#8	15593324
11			#10	155963204
12			#10	15596625

	Gauge Size	Color	Size	Art #
13	16 - 14	Blue	—	1559642
14			—	15596429
15			—	15596924
16			—	1559692
17			1/4"	15596524
18				15596525
19			3/16"	1559652436
20				1559652536
21			0.110"	155965242*
22			#10	1559632
23			1/4"	15596824
24			—	155967414

*Not UL Listed or CSA Certified

NYLON INSULATED CONNECTORS (CONTINUED)


	Gauge Size	Color	Size	Art #
1	12 - 10	Yellow	1/4"	1559613514
2				1559613414
3				1559003
4				155951359
5				155951349
6			#8	155962308
7			#10	1559623010
8			1/4"	15591375
9			5/16"	1559623056
10			3/8"	1559623038

	Gauge Size	Color	Size	Art #
11	12 - 10	Yellow	#10	15596635
12			-	1559643
13			-	15596439
14			-	155967412

NYLON INSULATED CONNECTORS (CONTINUED)

	Gauge Size	Color	Size	Art #
1	6 ga	Blue	–	155964206
2	8 ga	Red	–	155964108
3			3/8" ring	1559621056



Gauge Size	Description	Art #
16 - 14	4-way connector	155964294



CRIMP/SEAL CONNECTORS

Features and Benefits...

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents corrosion and provides a waterproof seal.
- Conforms to automotive manufacturers' specifications for wiring repairs necessary for maintaining electrical warranties.
- Seamless butt connectors & brazed seam rings and spades prevent opening of connector barrel.
- Color-coded tubing with wire gauge imprint provides easy identification of the correct part for the job.



Crimped

- Mechanically Sound
- Seamless Barrel - Butt Connectors
- Brazed Seam - Rings and Spades

Sealed

- Durable Insulation
- Watertight Connection
- Color-coded with Wire Gauge Imprint

Differences...

Brazed Seam Connectors

Formed much like a butted seam, except the seam is brazed together with a silver alloy. May be used with solid wire and can be crimped on any side of the barrel without opening the seam.

Seamless Connectors

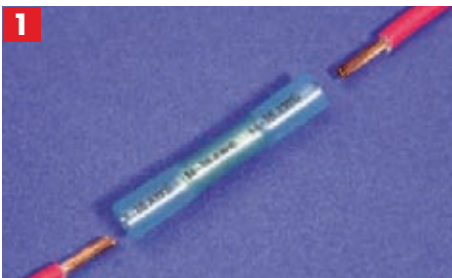
Generally only available for a butt connector or splice. The barrel is created from one seamless piece of metal. This eliminates the problem of the barrel opening when crimped.

May be used with solid wire.

Butted Seam Connectors

Formed when metal is stamped, rolled and butted to create the connector barrel. Should only be used with stranded wire and must be crimped in the proper place to avoid opening the seam.

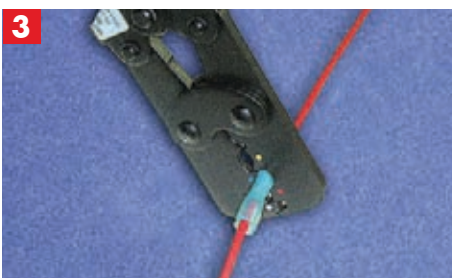
Easy Installation...



Strip wires 3/8" and insert wire into the connector barrel.



Seat wires.



Crimp the wires using an insulated crimping tool.



Apply even heat over entire connector.



Finished product.



UL LISTED PARTS FILE #E141071



WURTH Crimp/Seal Connectors
Brazed & Seamless Connector



Competitors Connectors
Butted Connector

Advantages...

- Better wire contact with seamless barrels or brazed seams
- Less voltage drop with a solid and secure crimp
- Increased current flow with mechanically sound connections
- Prevents wiring failures related to butted connectors
- Decreases repair cost - reworks
- Reduces equipment downtime
- Superior tensile strength

CRIMP/SEAL CONNECTORS (CONTINUED)



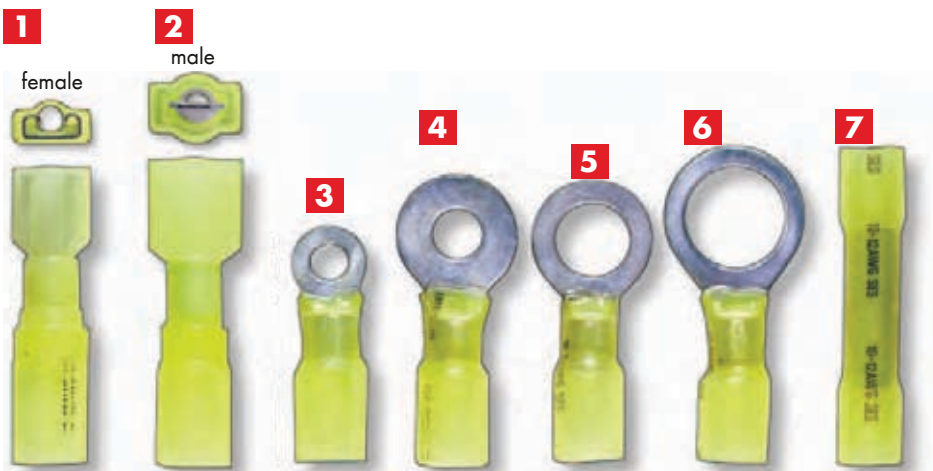
	Gauge Size	Color	Size	Art #
1	22 - 18	Red	1/4"	1559651518
2				15595114
3			#6	1559721618
4			#8	1559721818
5			#10	1559721010
6			1/4"	1559721114
7			-	15597914
8			-	15597915
9			-	1559741

CRIMP/SEAL CONNECTORS (CONTINUED)



	Gauge Size	Color	Size	Art #
1	16 - 14	Blue	1/4"	1559512516
2				15595124
3			#6	155972206
4			#8	155972208
5			#10	155972210
6			1/4"	155972214

	Gauge Size	Color	Size	Art #
7	16 - 14	Blue	5/16"	155972256
8			3/8"	155972238
9			—	15597924
10			—	15597925
11			—	1559742



	Gauge Size	Color	Size	Art #
1	12 - 10	Yellow	1/4"	1559652010
2				15595134
3			#10	155972310
4			1/4"	155972314
5			3/8"	155972338
6			1/2"	155972312
7			—	1559743



Gauge Size	Color	Art #
8	Red	15597411

SOLDER/SEAL CONNECTORS

Features and Benefits...

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents corrosion and provides a waterproof seal.
- Easy installation with pre-measured solder takes the guesswork out of the soldering process.
- A soldered electrical connection provides superior current flow and tensile strength.
- Color-coded tubing with wire gauge imprint provides easy identification of the correct part for the job.

Soldered

- Exact, Pre-Measured Solder
- Superior Strength
- Better Conductivity

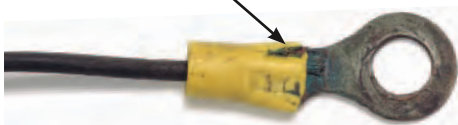
Sealed

- Durable Installation
- Watertight Connection
- Transparent Tubing for Visual Inspection

Problems/Solutions...

Problem

Corrosion on wire causes voltage drop.



Wire pulled loose due to strain and/or vibration.



Cannot see whether terminal is properly installed.

Solution

Adhesive-lined polyolefin tubing prevents corrosion.



Translucent tubing allows visual inspection of installation.



Adhesive-lined heat shrink tubing and solder combine to increase tensile strength.



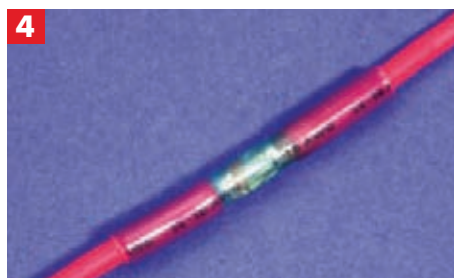
Strip wires 3/8", overlap and slide into connector.



Align wires evenly with solder.



Apply even heat over entire connector.



Finished product.

UL LISTED PARTS FILE #E141071



Advantages...

- Improved wire contact with pre-measured solder
- Eliminates voltage drops with improved current flow
- Eliminates connector failure from vibration and strain
- Allows visual inspection of soldered section
- Prevents wiring failure due to corrosion
- Increased tensile strength

SOLDER/SEAL CONNECTORS

Gauge Size	Color	Size	Art #
24 - 22	Clear	–	1559844



	Gauge Size	Color	Size	Art #
1	22 - 18	Red	1/4"	05559051
2				05559441
3				155985101
4			#6	155982106
5			#8	155982108
6			#10	1559821010
7			1/4"	1559821014
8				1559831
9			–	1559841

SOLDER/SEAL CONNECTORS (CONTINUED)



	Gauge Size	Color	Size	Art #
1	16 - 14	Blue	1/4"	05559052
2				05559452
3				155985102
4			#8	155982208
5			#10	1559822010

	Gauge Size	Color	Size	Art #
6	16 - 14	Blue	1/4"	1559822014
7			5/16"	1559822056
8			3/8"	1559822038
9			1/4"	1559832
10			—	1559842



	Gauge Size	Color	Size	Art #
1	12 - 10	Yellow	1/4"	05559054
2				05559462
3			#10	1559823010
4			1/4"	1559823014
5			5/16"	1559823056
6			3/8"	1559823038
7			1/2"	1559823012
8			1/4"	1559833
9			—	1559843

	Ga. Size	Color	Size	Art #
1	6	Yellow	5/16"	1559821056
2			3/8"	1559821038

CRIMP/SOLDER/SEAL CONNECTORS

Features and Benefits...

- High quality crimp connectors provide a secure mechanical connection.
- Pre-fluxed low temperature solder delivers superior current flow and tensile strength.
- Adhesive-lined heat shrink tubing allows for visual inspection and provides a seal against corrosion.
- Crimped, soldered and sealed connections meets or exceeds the most stringent OEM standards.

The Ultimate 3-Way Connection

Crimped

- Mechanical Reliability
- Easy Installation

Soldered

- Additional Strength
- Better Conductivity
- Exact, Pre-Measured Solder

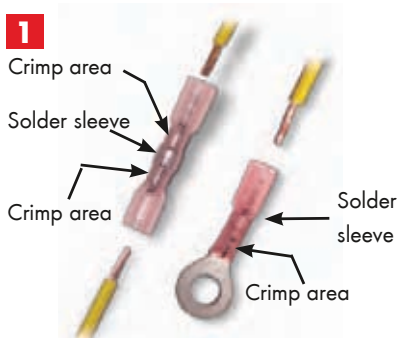
Sealed

- Durable Insulation
- Watertight Connection

The Ultimate Connection...



UL LISTED PARTS FILE #E141071



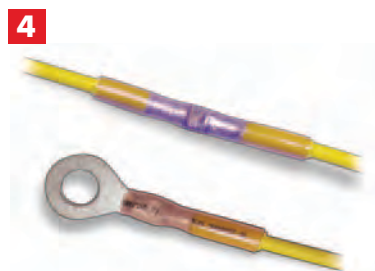
Strip wires 3/8" and insert wire into the proper size connector barrel.



Seat wires and crimp the connector using an insulated crimping tool. **Do not crimp the solder sleeve.**



Apply heat evenly along connector from center out.

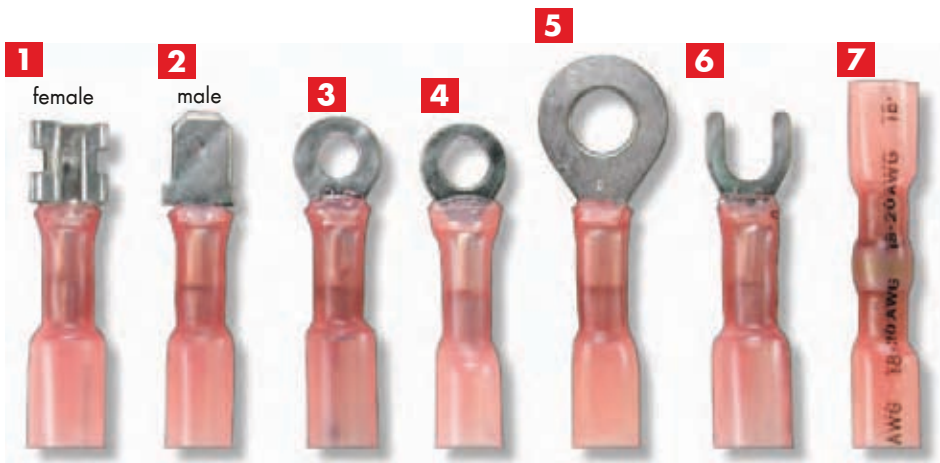


Finished product

Advantages...

- Improved wire contact with pre-measured solder
- Eliminates voltage drops with improved current flow
- Eliminates connector failure due to vibration and strain
- Allows visual inspection of soldered section
- Meets or exceeds most stringent OEM standards
- Superior 3-Way tensile strength with Crimp + Solder + Seal
- Prevents wiring failure due to corrosion

CRIMP/SOLDER/SEAL CONNECTORS (CONTINUED)



	Gauge Size	Color	Size	Art #
1	22 - 18	Red	1/4"	1559951214
2				1559951114
3			#8	155991108
4			#10	155991110
5			1/4"	155991114
6			#10	155993110
7			-	1559941



	Gauge Size	Color	Size	Art #
1	16 - 14	Blue	1/4"	1559952214
2				1559952114
3			#8	155991208
4			#10	155991210
5			1/4"	155991214

	Gauge Size	Color	Size	Art #
6	16 - 14	Blue	5/16"	155991256
7			3/8"	155991238
8			#10	155993210
9			-	1559942

CRIMP/SOLDER/SEAL CONNECTORS (CONTINUED)



	Gauge Size	Color	Size	Art #
1	12 - 10	Yellow	1/4"	1559953214
2				1559953114
3				155991314
4			3/8"	155991338
5			-	1559943

UL LISTED PARTS FILE #E141071

CROSSOVERS



Turbo-Lite
See Tool Section
Art. # 1702 612

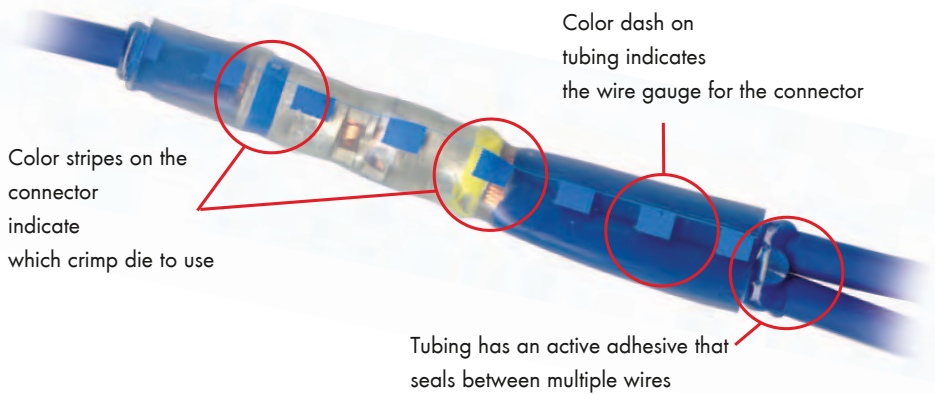


Ultra-Therm Heat Gun (Flameless)
See Tool Section
Art. # 1702 613

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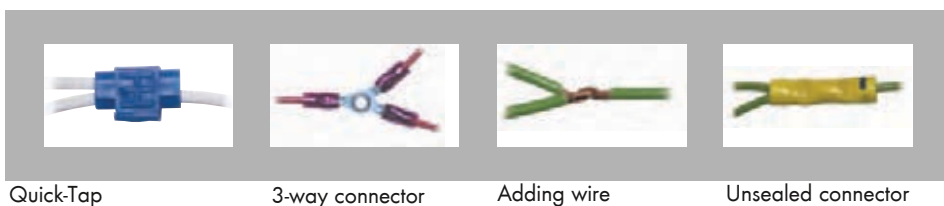
IN-LINE BUTT CONNECTORS

Join Two Wires to One Wire...



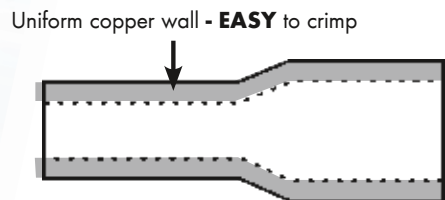
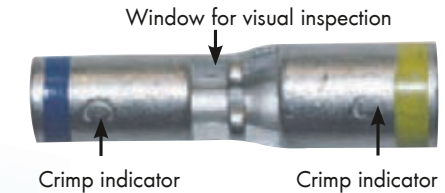
Wire Gauge	Tubing Color	Color Stripe on Connect.	Wire	Crimp Die (Ins)	Art #
24 - 22	Clear/White Dashes	Side 1: White Side 2: Red	One 24 - 22 Two 24 - 22	White (24 - 22) Red (20 - 18)	15555720
20 - 18	Clear/Red Dashes	Side 1: Red Side 2: Blue	One 20 - 18 Two 20 - 18	Red (20 - 18) Blue (16 - 14)	15555716
16 - 14	Clear/Blue Dashes	Side 1: Blue Side 2: Yellow	One 16 - 14 Two 16 - 14	Blue (16 - 14) Yel (12 - 10)	15555714
12 - 10	Clear/Yellow Dashes	Side 1: Yellow Side 2: Red	One 12 - 10 Two 12 - 10	Yel (12 - 10) Red (8)	15555710

THE IN-LINE BUTT CONNECTOR IS THE SOLUTION FOR THE EXISTING PROBLEMS:



THE COMPONENTS

THE MULTIPLE WIRE CONNECTOR



The inside AND the outside diameter of the connector is varied which means that both sides will make a sound mechanical crimp.

The barrel has two stripes - one on each end - to indicate which wire size to insert. Plus, the stripe matches the crimp die that needs to be used. For example, the blue stripe indicates the side where a 14 or 16 AWG wire is to be inserted, and it will be crimped in the blue crimp die.

STRONG MECHANICAL TERMINATION!

ADDITIONAL FEATURES OF THE CRIMP CONNECTOR

- Seamless butt connectors provide superior crimp performance
- Window in butt connectors allows for visual inspection to ensure all wires are fully inserted
- Butt connectors have indicators where the installation tool should be positioned to crimp connector
- Wire-stop in butt connector prevents over-insertion of the wires

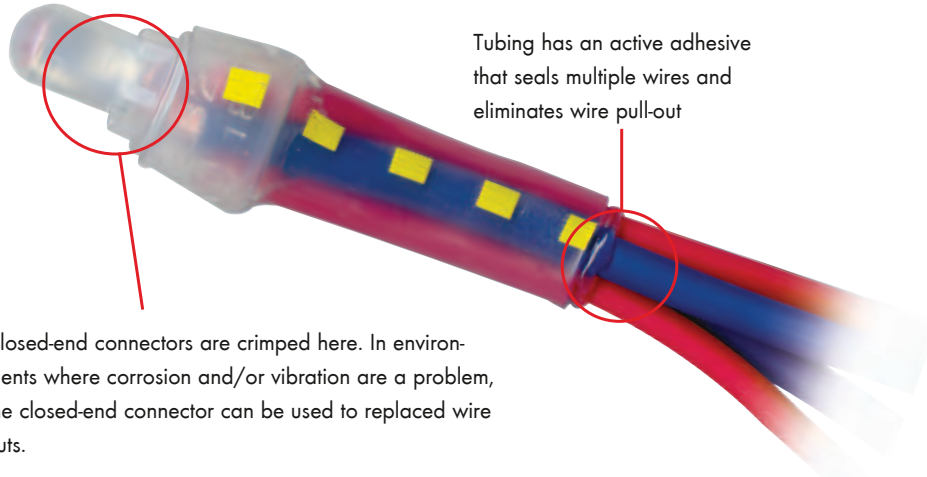
THE HEAT SHRINK TUBING



- High adhesive-flow polyolefin to seal multiple wires
- Color-coded dash on tubing to indicate the wire gauge for the connector
- Clear tubing to allow for visual inspection

CLOSED-END CONNECTORS

Join Two to Four Wires...



Closed-end connectors are crimped here. In environments where corrosion and/or vibration are a problem, the closed-end connector can be used to replace wire nuts.



Connector Wire Range	Tubing Color	Art #
22 - 14	Clear/Blue Dashes	155882214
18 - 10	Clear/Yellow Dashes	155881810

THE CLOSED-END CONNECTOR IS THE SOLUTION FOR THE EXISTING PROBLEMS:



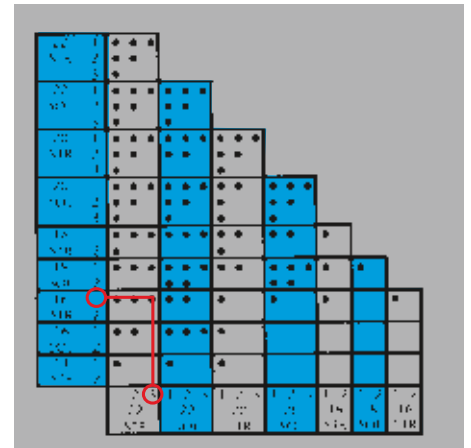
Wire Nut

End-Cap



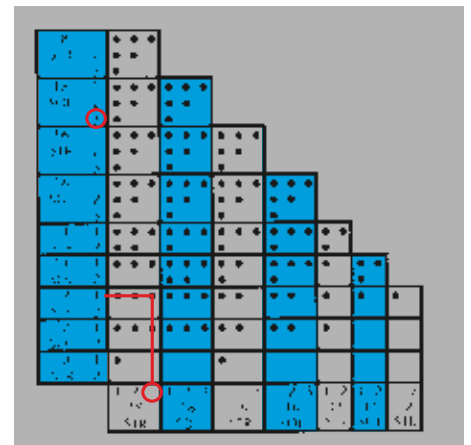
ADDITIONAL FEATURES OF THE CLOSED-END CONNECTOR

- Crimp termination provides superior mechanical performance
- High adhesive-flow polyolefin tubing to seal multiple wires
- Color-coded dash on tubing to indicate the size of the connector
- Clear tubing to allow for visual inspection



How to read chart for 155882214:

One #16 Stranded plus three #22 Stranded (equaling four wires) can be connected using an 155882214 connector.



How to read chart for 155881810:

One #12 Stranded plus three #18 Stranded (equaling four wires) can be connected using an 155881810 connector.

SPECIALTY HEAT SHRINK TUBING

Specs	Material	Recover Temp.	Continuous Operating Temp.	Flammability
Chrysler MS-DB56 CAN 3686	Polyolefin	250°F		Non-Flame Retardant
Ford ESB-M97D56A1	CP7	250°F	-67°F to 230°F	

Shrink Ratio: 4 to 1

All weather polyolefin tubing with a very active adhesive lining.

- Excellent for sealing multiple wires
- Puncture resistant
- Provides superior strain relief

High Adhesive Flow Heat Shrink Tubing

6" Cut Lengths



Pre-Shrink ID	Rec ID	Wire Range	Color	Art. #
0.220" (7/32)	0.045"	24 - 12	Clear/White Dashes	17715406
0.300" (5/16")	0.060"	22 - 10	Clear/Red Dashes	17715416
0.350" (3/8")	0.080"	16 - 8	Clear/Blue Dashes	17715426
0.450" (29/64)	0.105"	14 - 4	Clear/Yellow Dashes	17715436

CROSSOVERS



Hand Held Micro Torch
Art. # 1702 616



Ultratane Butane Fuel
Art. # 1892 702

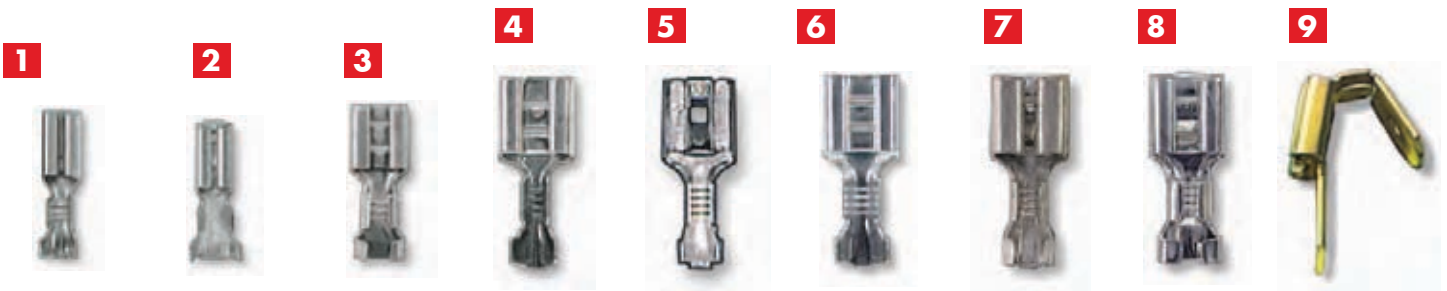


Self-Igniting Multi-Function Heat Tool
Art. # 1702 614

UNIVERSAL UNINSULATED CONNECTORS


	Gauge Size	Size	Art #
1	22 - 18	1/8"	05585029
2			05586010
3	16 - 14	3/16"	05585312
4	22 - 18	1/4"	05585040
5	16 - 14		055845040
6			0558929

	Gauge Size	Size	Art #
7	16 - 14	1/4"	05586032 (w/locking tab)
8			05585047
9	12 - 10	5/16"	05585020 (w/locking tab)
10		3/8"	05585266
11	22 - 18	1/8"	05589923 (w/locking tab)



	Gauge Size	Size	Art #
1	22 - 18	1/8"	05589955 (w/locking tab)
2	16 - 14		05589956 (w/locking tab)
3		3/16"	05589921
4	22 - 18	1/4"	05589919 (w/locking tab)
5			05589916

	Gauge Size	Size	Art #
6	16 - 14	1/4"	05589925
7			05589917 (w/locking tab)
8	12 - 10		05589962 (w/locking tab)
9	—		0558928

UNIVERSAL UNINSULATED CONNECTORS (CONTINUED)

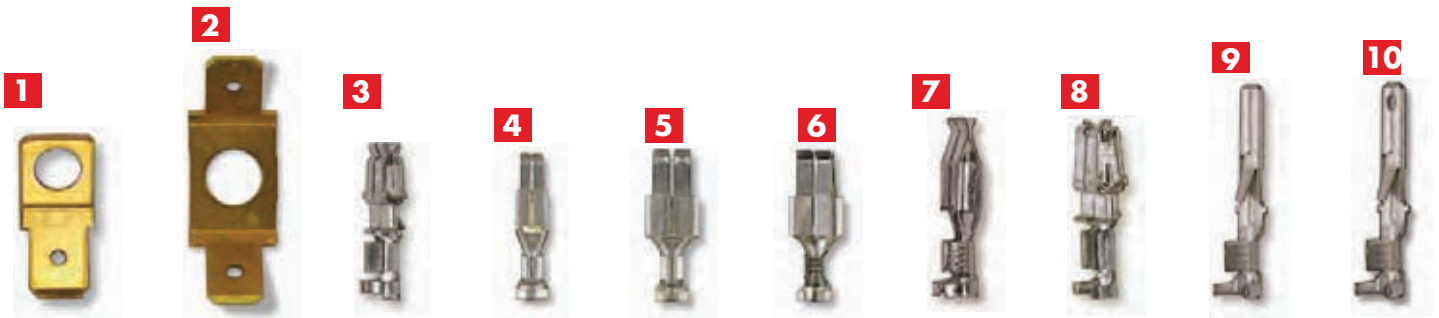

	Gauge Size	Size	Art #
1	22 - 18	1/4"	05585143
2	16 - 14		05589941 (w/locking tab)
3			05586302 (w/locking tab)
4			05589961
5		1/8"	05585144

	Gauge Size	Size	Art #
6	22 - 18	1/4"	05585135
7			05589960
8	16 - 14		05585054
9	12 - 10		05589963



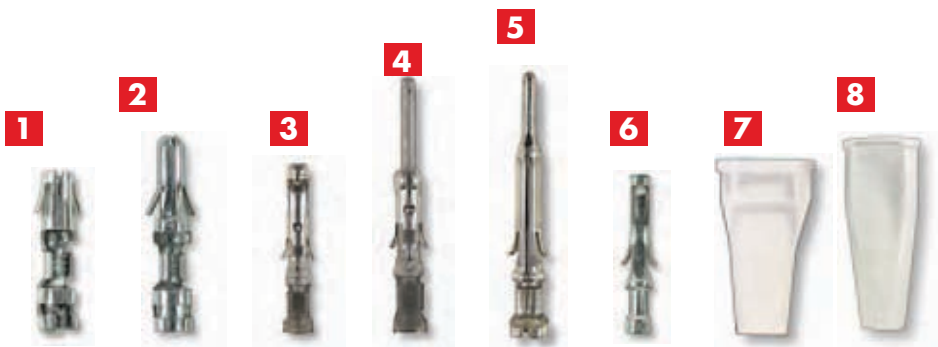
	Gauge Size	Size	Art #
1	22 - 18	-	0558930
2		-	05585038
3	16 - 14	-	05585051
4		-	05585133
5		-	05585005

	Gauge Size	Size	Art #	
6	16 - 14	-	05585042	
7		#8	05585215	
8		#10	05585217	
9		#12	05585219	
10		5/16"		
				05585221

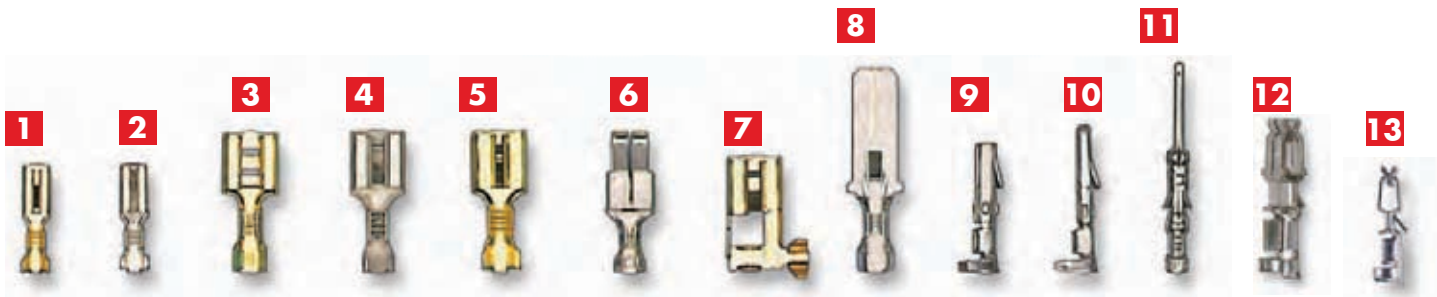
UNIVERSAL UNINSULATED CONNECTORS (CONTINUED)


	Gauge Size	Size	Art #
1	#10	1/4" terminal	055816061
2	1/4"		05581935
3	22 - 18	–	05589909 (w/locking tab)
4		–	05589967
5		–	05589972

	Gauge Size	Size	Art #
6	16 - 14	–	05589973
7		–	05589969 (w/locking tab)
8		–	055899100 (w/locking tab)
9		1/8"	055899570
10			05589924



	Gauge Size	Art #
1	16 - 14	05589901
2		05589902
3	20 - 16	05589908
4		05589907
5	16 - 14	05589971
6	22 - 18	05589964
7	–	05581810
8	–	05581809

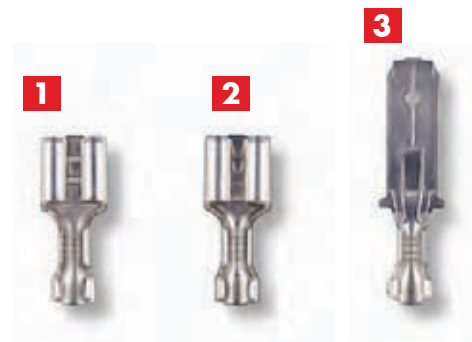
BMW CONNECTORS


	Gauge Size	Size	Art #
1	22 - 18	#4	05586010
2			05589922
3			05585040
4	16 - 14	1/4"	05589916
5			05586032
6	16 - 14	-	05589973
7	18 - 14	1/4"	05586431

	Gauge Size	Size	Art #
8	18 - 14	1/4"	05589918
9		-	05589905
10		-	05589906
11	20 - 16	-	05589907
12	18 - 16	-	05589909
13	16 - 14	#4	05589911

MERCEDES BENZ CONNECTORS

	Gauge Size	Size	Art #
1	18 - 14	1/4"	05589925
2			05589928
3	20 - 14		05589935


BUTT CONNECTORS

	Gauge Size	Art #
1	12 - 10	155715812
2	16 - 14	155715816
3	22 - 18	155715818



OEM TERMINAL CONNECTORS - CHRYSLER

Gauge Size	Size	OEM #	Art #
20 - 18	1/4"	3843386	1558252002



OEM TERMINAL CONNECTORS - FORD

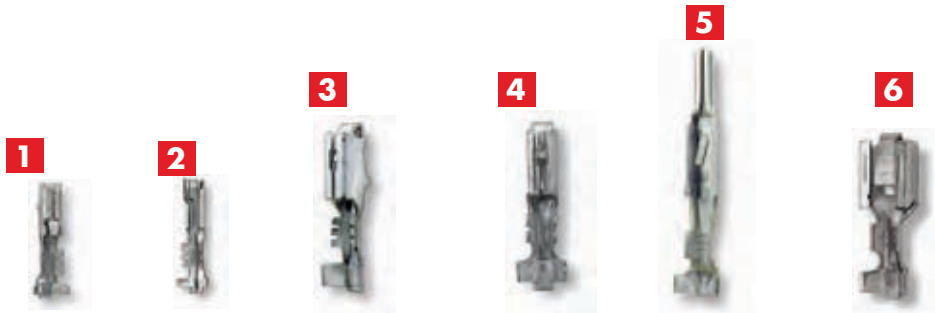
Gauge Size	OEM #	Art #
20 - 18	D8BB-14474-BA	1558142002
	D3AB-14474-DA	



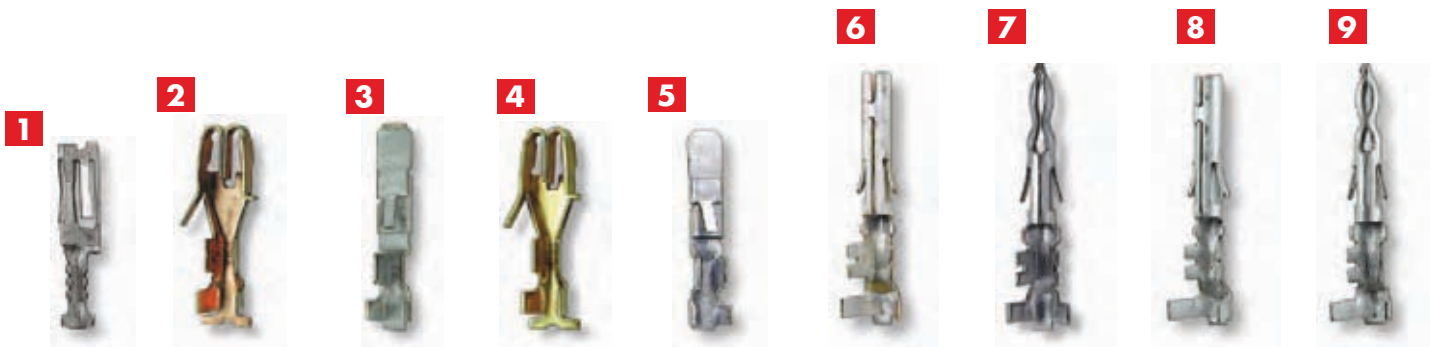
OEM TERMINAL CONNECTORS - GM



	Gauge Size	Size	OEM #	Art #
1	16 - 14	—	2965142	1558351605
2		5/16"	2973216	1558341604
3	20 - 18	—	12034053 12004610	1558342007
4	20 - 16	—	12047767 4368618	1558342010
5	20 - 18	—	12048074	1558342002

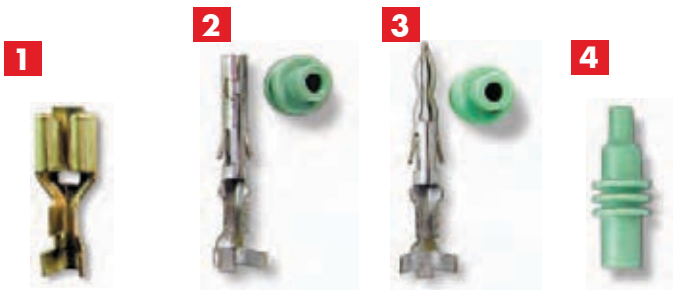
OEM TERMINAL CONNECTORS - GM (CONTINUED)


	Gauge Size	OEM #	Art #
1	20 - 18	12047680	1558342009
2		12052922	1558342013
		12089340	
3	18 - 14	12034046	1558342011
4		12015857	1558341801
5		12020116	1558351801
6	16 - 14	12015870	1558341609



	Gauge Size	Max Amp	OEM #	Art #
1	20 - 18	—	12020757	1558342008
2	16 - 14	—	12020347	1558341401
3			8900524	1558352004
			12020320	
4	20 - 18	—	6294512	1558342012
			14020346	
5		—	6294511	1558352002

	Gauge Size	Max Amp	OEM #	Art #
6	12	20	12015917	1558341202
			12124581	
7	16 - 14	20	12089306	1558351202
			12124587	
8	16 - 14	—	12010085	1558341607
			12124580	
9		—	12010085	1558351604
			12089305	

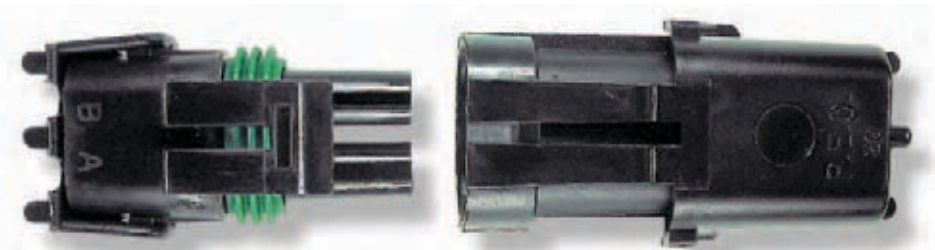
OEM TERMINAL CONNECTORS - GM (CONTINUED)


	Gauge Size	Size	OEM #	Art #
1	20 - 18	1/4"	2965470	1558440001
			2096466	
			C5AB-14474-B	
2		—	12014837	15589104
3	—	12014836	15585103	
4	—	—	12010300	15589101

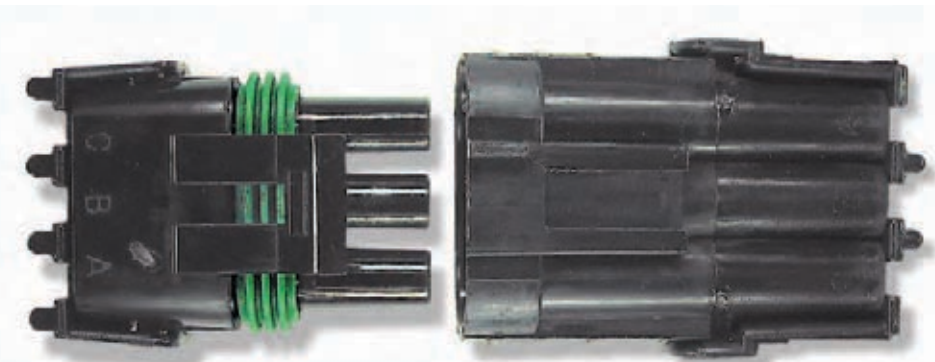
CAVITY CONNECTORS

1 Cavity Connectors

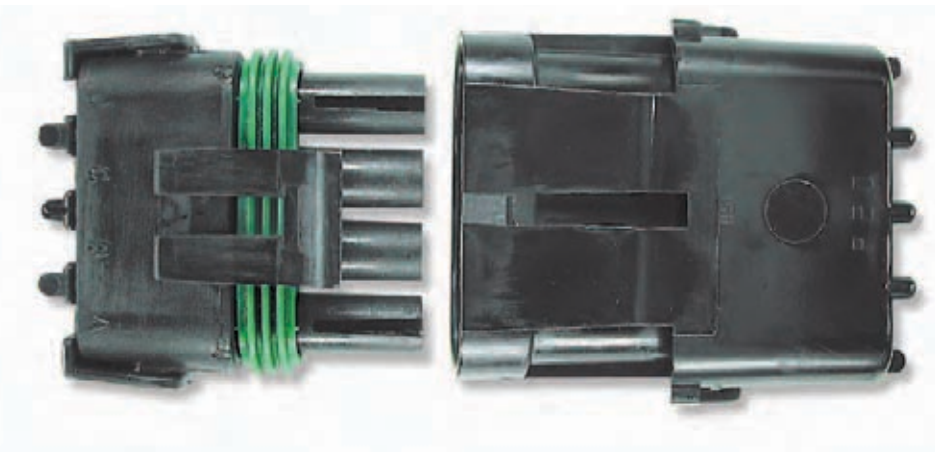
OEM	Mates	Art #
Male 12015791	155591031	155591021
Female 12010996	155591021	155591031


2 Cavity Connectors

OEM	Mates	Art #
Male 12010973	155591032	155591022
Female 12015792	155591022	155591032


3 Cavity Connectors

OEM	Mates	Art #
Male 12015793	155591033	155591023
Female 12010717	155591023	155591033

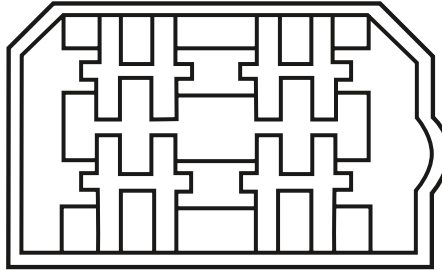

4 Cavity Connectors

OEM	Mates	Art #
Male 1201577	1555910241	155591034
Female 12010974	155591034	1555910241

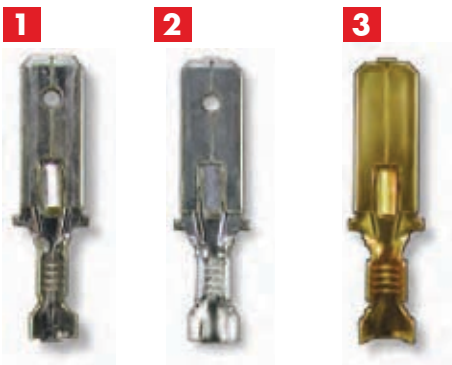
MULTIPLE PLUG CONNECTOR BLOCKS



- For flat connector terminals
- Plug in width 6.3 x 0.8mm terminals
- Cable diameter up to 6mm²
- Made from polyamide, natural
- Temperature resistance from -40°F to 176°F



Plug in Connections Number/Type	Art #
1/1 horizontal (-)	05551001
2/2 horizontal (=)	05551002
2/1 horiz. & 1 vert. (-)	055510022
3/2 horiz. & 1 vert. (=)	05551003
4/4 horizontal (==)	05551004
6/6 horizontal (===)	05551006

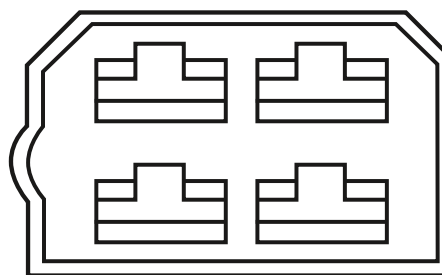


Flat Male Connector Terminals (for Connector Blocks above)

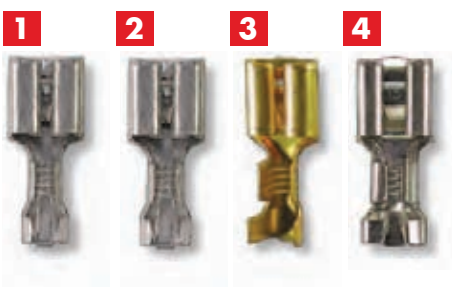
- With locking tongue

Gauge	Art #
22 - 18	05589960
20 - 16	05589935
20 - 16	05585054*

*Brass



Plug in Connections Number/Type	Art #
1/1 horizontal (-)	055510011
2/2 horizontal (=)	055510021
2/1 horiz. & 1 vert. (-)	055510023
3/2 horiz. & 1 vert. (=)	055510031
4/4 horizontal (==)	055510041



Female Connector Terminals (for Connector Blocks above)

- With locking tongue

Gauge	Art #
22 - 18	05589916
18 - 14	05589917
18 - 14	05586032*
12 - 10	05589962

*Brass

FLAT PLUG CONNECTORS

Art. #	055511	05552
Dimensions (L x W in mm)	54 x 21	152 x 25.8
Plugging Width (in mm)	6.3	6.3
Number of Connections	1-2	12
Max Voltage (V)	300	300
Max Temperature (°F)	167°F	167°F

**Art. # 0555 11****Art. # 0555 2**

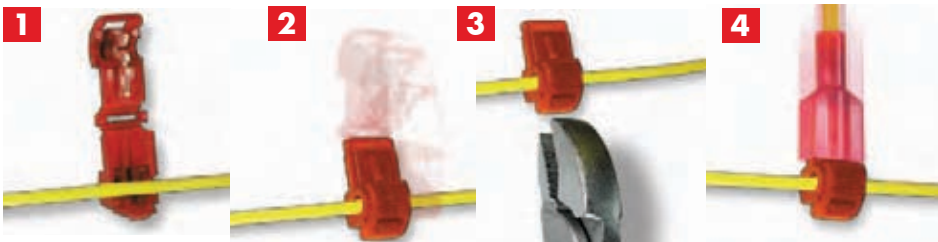
TEE TAPS



Gauge	Color	Tee Tap Art. #	Male Disconnect Art. #
22 - 18	Red	0555951	05559511
14 - 16	Blue	0555952	05559521
10 - 12	Yellow	0555953	05559531

- Connects tap wires to power or ground wires
- Penetrates insulation and makes positive contact when crimped
- Mates with special 1/4" male quick disconnect
- Color coded for easy identification

4 Easy Steps...



SCOTCHLOC™ WITH GEL

- Gel filled connector provides a moisture resistant barrier to destructive substances
- Special locking feature of cap insures a protected connection over time
- No cutting or stripping is required, making connections easier and faster
- Withstands continuous operating temperatures of -40°F to 167°F

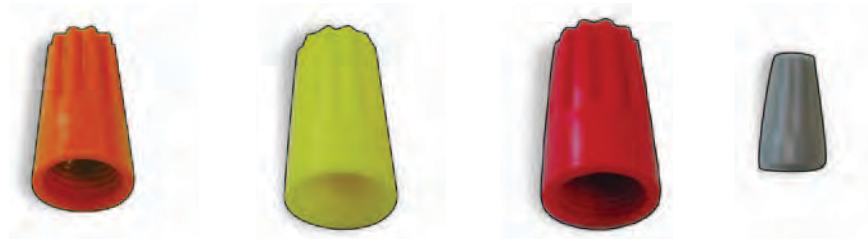
Description	Color	Gauge	Art. #
Scotchloc™ with Gel	Blue	16 - 18	15555649



SCOTCHLOC™ TAP CONNECTORS


- Produces pre-insulated splices without stripping, twisting or soldering.
- No wiring or special tools required.
- Color coded for easy identification.

Gauge	Tap Run	Color	Wire Stop	Art. #
16 - 18	14 - 16 - 18	Red	Yes	0555557
14 - 18		White	No	1555566
12 - 16		Blue	Yes	0555564
18 - 14	10 - 12	Brown	Yes	1555567
10 - 12		Yellow	Yes	0555562

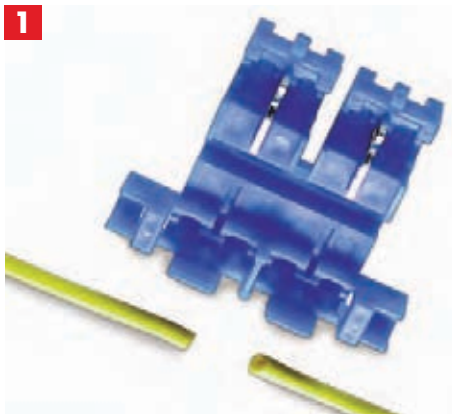
WIRE NUTS


Joins	Min.	Max.	Color	Art. #
18 - 14 ga.	2 # 18 ga.	3 # 16 ga. 1 # 18 ga.	Orange	05599900
18 - 12 ga.	1 # 14 ga. 1 # 18 ga.	2 # 14 ga. 3 # 16 ga.	Yellow	05599901
18 - 10 ga.	1 # 12 ga. 2 # 18 ga.	2 # 10 ga. 1 # 12 ga.	Red	05599902
18 & 16 ga.	2 # 18 ga.	2 # 16 ga.	Gray	05599903

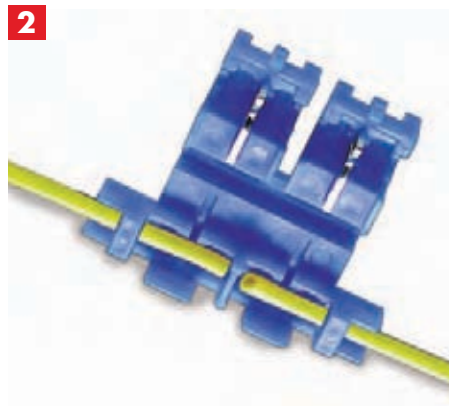
IN-LINE ATO /ATC FUSE HOLDER CRIMP ON

- Use with blade type fuses up to 20 amp.
- Use with 18-14 gauge wire.
- Quick three step installation.

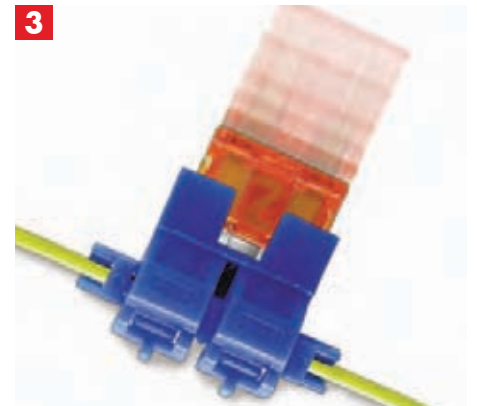
Description	Art. #
In-Line ATO/ATC Fuse Holder Crimp On	0725972



1
Cut wire



2
Slide wires into holder

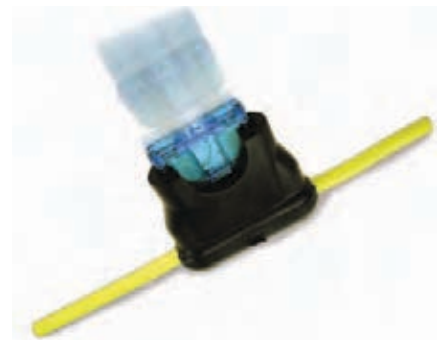


3
Snap lid closed & insert fuse

ATC IN-LINE FUSE HOLDER

- For use with ATO fuses up to 30 amp. in A/C or other applications
- Supplied with two 4" leads of 12 gauge wire
- Fuse not included

Description	Art. #
ATC In-Line Fuse Holder	07251002



ATO /ATC FUSE HOLDER

- Resistant to moisture, salt spray and engine compartments fluids
- Withstands 50g physical shock
- Operating temperature range from -40° to 257°F
- Nylon body with latching cap
- Silicone rubber seals at wire and cap
- 12 gauge GXL wire leads 9" length
- 3 to 30 amp. capacity ATC/ATO fuses

Description	Art. #
ATO/ATC Fuse Holder	07256204



MAXI FUSE IN-LINE FUSE HOLDER

- For use with ATO Maxi fuses up to 60 amp.
- Supplied with two 6" leads of 6 gauge wire and protective cover.
- Mounting hole permits easy firewall installation.

Description	Art. #
Maxi Fuse In-Line Fuse Holder	0725975



GLASS FUSE HOLDER

- For all 1/4" diam. fuses 5/8" to 1-1/4" long
- Supplied with 8" of 14 gauge wire
- Constructed of weather resistant nylon
- Simple twist lock allows for easy fuse removal and replacement

Description	Art. #
Glass Fuse Holder	07251001



HOLDER FOR CERAMIC FUSES

- For ceramic strip fuse (including 8 A ceramic fuse)
- Up to 2.5mm², 5 - 25 amps
- With bayonet catch

Description	Art. #
Holder for Ceramic Fuses	0555625



MINI FUSE HOLDER WITH CAP

- Use with MINI Fuse 2 to 20 amps
- Supplied with two 4" wire leads of 14 gauge black wire
- Includes protective cap for harsh environment

Description	Art. #
MINI Fuse Holder with Cap	1725973



FUSIBLE LINKS

- Withstands high levels of current and high temperatures for extended periods

Amp.	Color	Type	Art. #
30	Pink	mini female	17709130
40	Green	mini female	17709140
20	Lt. Blue	female	17709220
30	Pink	female	17709230
40	Green	female	17709240
60	Yellow	female	17709260
30	Pink	male	17709330
60	Yellow	male	17709360
80	Black	male	17709380
100	Blue	male	177093100
120	White	male	177093120
30	Pink	bolt-through	17709430
40	Green	bolt-through	17709440
70	Brown	bolt-through	17709470
100	Blue	bolt-through	177094100

Male



Female



Bolt-through



MINI BLADE FUSES

- Meet the OEM need to protect a greater number of circuits without utilizing more space
- Features silver plated blades and Littlefuse designed industry standard color coding to indicate am rating
- Fuse provides reliable vehicle circuit protection in a compact, miniature size.
- Color coded to match ATO blade fuses.

Amp.	Color	Art. #
2	Black	1731102
3	Purple	1731103
4	Orange	1731104
5	Yellow	1731105
7.5	Brown	1731175
10	Red	1731110
15	Blue	1731115
20	Yellow	1731120
25	Clear	1731125
30	Green	1731130



ATC BLADE FUSES

- Found on most cars, trucks, buses and off road vehicles world-wide
- Features Littlefuse designed industry standard color coding to indicate amp rating

Amp.	Color	Art. #
1	Black	0731001
2	Grey	0731002
3	Purple	0731003
4	Pink	0731004
5	Gold	0731005
7.5	Brown	07310075
10	Red	0731010
15	Blue	0731015
20	Yellow	0731020
25	Grey	0731025
30	Green	0731030
40	Amber	0731040



MAXI BLADE FUSES

- Primarily used for under hood applications and are produced with a high temperature polymer and silver plated blades
- Replace the commonly used fusible wire or fusible link to protect a high current segment or system of the wiring harness
- Feature Littlefuse designed industry standard color coding to indicate amp rating
- Replaces the commonly used fusible wire or link to protect a high current segment or system of the wiring harness.

Amp.	Color	Art. #
20	Yellow	1731220
30	Green	1731230
40	Orange	1731240
50	Red	1731250
60	Blue	1731260
70	Amber	1731270
80	Natural	1731280



LOW PROFILE MINI FUSE

- Lower overall height allows for more space and weight savings
- Designed to mate with tuning-fork terminals
- 32 VDC
- Fast-acting



Amp.	Color	Art. #
2	Black	1731302
5	Gold	1731305
7.5	Brown	17313075
10	Red	1731310
15	Blue	1731315
20	Yellow	1731320
25	Clear	1731325
30	Green	1731330

MOTOR FUSES

- Ceramic type, torpedo shaped.
- Found in many European Cars.
- 25mm length, 100 per pack.



Amp.	Color	Element	Art. #
8	White	Copper	073002508
16	Red	Copper	073002516
25	Blue	Copper	073002525
5	Yellow	Aluminum	0730255
8	White	Aluminum	0730258
15	White	Aluminum	07302515
16	Red	Aluminum	073025161
25	Blue	Aluminum	07302525
40	Black	Aluminum	07302540

GLOW PLUG FUSES

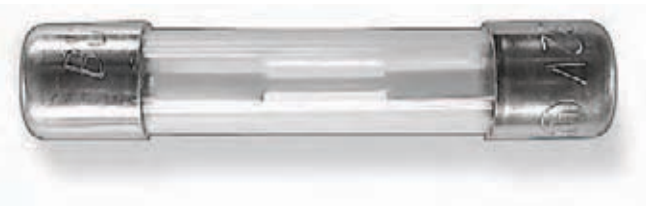
- A strip of zinc metal for bolt on applications for many European diesel cars

Amp.	Art. #
50	073150
80	073180



GLASS FUSES (AG FUSES)

- Originally stood for "all glass". The automotive industry uses the "AG" prefix (AGC, AGX) for most glass fuses



SFE 14

All are 1/4" dia., but vary in length according to the ampere rating to ensure accurate fuse replacement.

Amp.	Length	Art #
20	1-1/4"	173320
30	1-7/16"	173330



AGC

1/4" x 1-1/4"

Amp.	Art #
2	173292
4	173294
5	173295
7.5	17329712
10	1732910
15	1732915
20	1732920
25	1732925
30	1732930

UNIVERSAL CIRCUIT BREAKER

- Universal blade type for heavy duty applications
- Automatic reset when power is removed from affected circuit

Amp.	Art. #
5	17340505
10	173405010
15	173405015
20	173405020
25	173405025
30	173405030



FLASHER FOR U.S. CARS

- Replaces 12-volt, two terminal flashers
- Flashes two to three standard or long life lamps for turn signals
- Flashes two to six lamps for hazard warning
- Features durable, simplified flashing mechanism for increased reliability
- Meets D.O.T., S.A.E. and all applications state and federal requirements

Description	Art. #
Littlefuse # FLR 536/552	17340536



FLASHER FOR IMPORT CARS & U.S. TRUCKS

- Replaces most 12 volt, three terminal flashers
- Flashes two to three standard or long life lamps for turn signals
- Separate pilot circuit

Description	Art. #
Littlefuse # FLR 550	17340550



FLASHER FOR CARS & LIGHT TRUCKS

- Flashes two to three standard or long life turn signal lamps
- Flashes two to six lamps for hazard warning
- 12 volt, three terminal

Description	Art. #
Littlefuse # FLR 569	17340569



JCASE™ HIGH AMP FUSES

- Currently OEM on many new domestic and Japanese models
- Smaller space saving foot-print is being designed in by many OEM's
- Provides both increased time delay and low voltage drop
- Features ANSI standard OCR-A front inspection systems, double spring-beam box terminal and unique secondary locking feature holds terminal firmly in place

Voltage Rating Characteristics : 32V AC/DC Slo-Blo®

	Amp	Color	Art. #
1	20	Blue	17311020
2	30	Pink	17311030
3	40	Green	17311040
4	50	Red	17311050
5	60	Yellow	17311060



LOW PROFILE JCASE™ HIGH AMP FUSES

The Low Profile JCase™ fuse has similar performance characteristics as the standard JCase™ fuse. The lower overall height reduction allows for more space and weight savings and also allows for a shorter male blade terminal, saving additional weight and material savings in fuse box designs.

Voltage Rating	58 VDC
Interrupting Rating	1000A @ 58 VDC
Operating Temperature Range	-40 °F to +257 °F
Insertion Force	53N Max (12lb.)
Extraction Force	9N Min (2lb.)

	Amp	Color	Art. #
1	20	Blue	17311220
2	30	Pink	17311230
3	40	Green	17311240
4	50	Red	17311250
5	60	Yellow	17311260



MINI FUSE ADD-A-CIRCUIT

- Same as ATO Add-A-Circuit except for use with MINI fuses up to 10 amps

Description	Art. #
MINI Fuse Add-A-Line Circuit	15590006



ADD-A-LINE BLADE FUSE TAP

- Plugs into any fuse slot, even if that slot has a fuse installed
- Allows you to add an additional circuit to an existing circuit while providing protection for both
- Since there is no altering the existing circuits by cutting wires and the potential danger of creating a short circuit, installation does not void factory warranties or interfere with today's sophisticated on-board computer systems
- No cutting, splicing or drilling required
- Add any accessory, up to 10 amps, such as: Car phone, fax machine, radar detector, CD player, beverage cooler/warmer...just to name a few

Description	Art. #
Add-A-Line Blade Fuse Tap	15590005



FUSE TAPS/SPECIAL ADAPTERS

	Description	Art. #
1	ATO Spade Take-off - Regular Blade Fuse Tap	05590003
2	3-Way Adapter	15590091
3	ATO Spade Take-off - Mini Blade Fuse Tap	15590004
4	Piggy Back DBL Male Adapter	0558928



CRIMP O-RING CONNECTORS

CRIMP RING CONNECTORS (CONTINUED)

	Gauge	Cross-section in mm²	Flange hole	Cable entry in mm	Material thickness approx. in mm	Length x width approx. in mm	Art. #
1	10 - 8	6.0 - 16.0	M6	6.0 x 4.3	1.20	26.5 x 11.0	05579219
2			M8	8.0 x 4.3		31.5 x 15.0	05579220
3			M10	10.0 x 4.3		35.5 x 19.0	05579221
4	8 - 4	10.0 - 25.0	M6	6.0 x 5.4	1.50	29.4 x 11.0	05579223
5			M8	8.0 x 5.4		34.4 x 15.0	05579224
6			M10	10.0 x 5.4		38.4 x 19.0	05579225
7	6 - 2	16.0 - 35.0	M8	8.0 x 6.8	1.80	37.5 x 15.0	05579228
8		25.0 - 50.0	M8	8.0 x 8.2	2.00	40.5 x 15.0	055792281
9		16.0 - 35.0	M10	10.0 x 6.8	1.80	41.5 x 19.0	05579229
10			M12	12.0 x 6.8		46.0 x 22.0	05579230
11	4 - 1	25.0 - 50.0	M10	10.0 x 8.2	2.00	44.5 x 19.0	05579233
12			M12	12.0 x 8.2		49.0 x 22.0	05579234
13	2 - 2/0	35.0 - 70.0	M8	8.0 x 9.5	2.50	44.4 x 17.0	05579236
14	1 - 3/0	50.0 - 95.0	M10	10.0 x 11.2	3.00	54.5 x 21.0	05579240
15			M12	12.0 x 11.2		58.0 x 22.0	05579241

HEAVY DUTY CHARGER CLIPS

- 50 amp. clamp for "small" battery chargers, tune-up and test equipment
- Color-coded vinyl boots protect crimp ears
- Use for OEM repair & custom build
- Sold as one pair

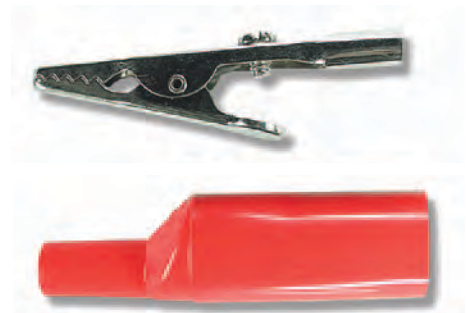
Description	Art. #
Heavy Duty Charger Clips	15104010



ALLIGATOR CLIPS & VINYL BOOTS

- Vinyl installation boots shield exposed metal
- Use to build custom test leads of any length

Description	Art. #
5 amp. clamps with screws	0558698
Red alligator boot	05586982



HEAVY DUTY LUGS

- Made of cast copper, tin plated for added conductivity and to resist corrosion
- 25 times better than SAE conductivity standard, J163 & J1811
- Permanent, indelible, readable gauge & polarity stamped on clamp
- Made in North America

Size	Gauge	Art. #
3/8"	8	15575838
	6	15575638
	4	15575438
	1	15575138
	1/0	155751038
	2/0	155752038



STANDARD LUGS

- Seamless 100% copper tube construction
- Can be crimped or soldered
- Ideal for general wiring as well as starter

Size	Gauge	Art. #
1/4"	8	15574814
	6	15574614
	4	15574414
	2	15574214
	1	15574114
5/16"	8	155748516
	4	155744516
	2	155742516
3/8"	6	15574638
	4	15574438
	2	15574238
	1	15574138
	1/0	155741038
	2/0	155742038
	3/0	155743038
	4/0	155744038
1/2"	1/0	155741012
	2/0	155742012



WURTH BATTERY SOLDER SLUGS

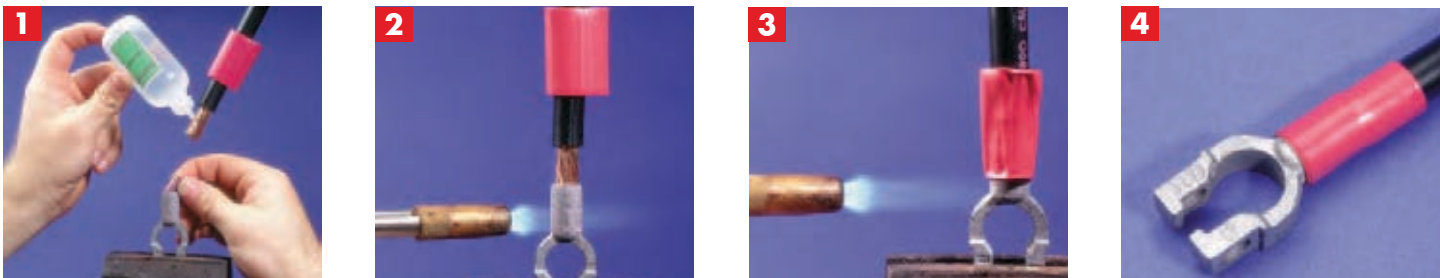
- An innovative solution for soldering cable terminals
- Color-coded solder pellets conform to industry standards & ensure correct product identification
- Pre-measured solder pellets assure the right amount of solder will be used in each connection
- Flux core and liquid flux prevent dirt and contaminants from hindering the soldering process
- Installation requires only standard shop tools which eliminates crimping



	Gauge	Color	Art. #
1	4	Gray	15109501
2	2	Green	15109502
3	1	Red	15109503
4	1/0	Black	15109504
5	2/0	Orange	15109505
6	3/0	Purple	15109506
7	4/0	Yellow	15109507



Easy Installation...



1. Strip the proper size cable so the exposed cable will reach the top of the battery terminal. The cable installation should fit snugly against the top. Insert proper size solder slug and apply solder flux.
2. Secure the battery terminal in a vise. Slide the proper size heat shrink tubing over the cable. Insert the exposed cable into the terminal. Heat the base of the battery terminal while applying gentle downward pressure on the cable.
3. As the solder melts, allow the cable to slide into the terminal until the installation is snug against the top of the terminal. Remove from heat. Slide the heat shrink tubing over the connection. Apply indirect heat to the tubing.
4. Allow connection to cool. You now have "The Perfect Connection".

BEFORE

- Improperly installed connectors
- Voltage Drop
- Vibration damage
- Corrosion on cable



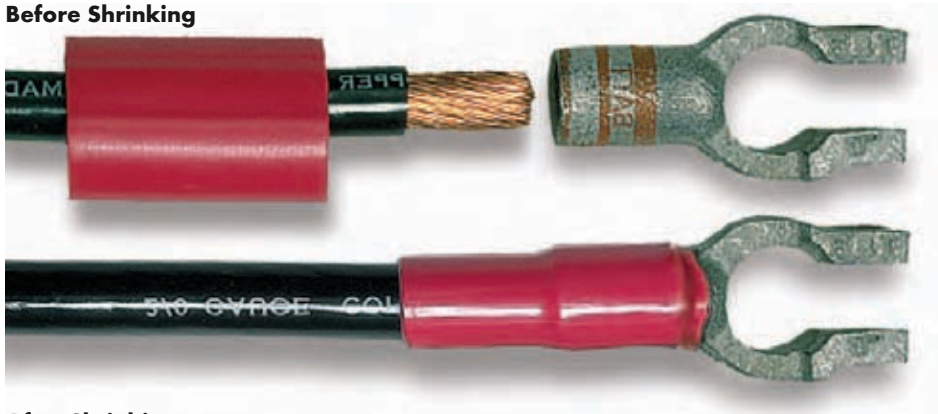
AFTER

- Easily installed termination system
- Soldered connections for maximum conductivity
- Superior tensile strength from a soldered bond
- Adhesive-lined tubing prevents cable corrosion



BATTERY CABLE HEAT SHRINK TUBING

Before Shrinking



After Shrinking

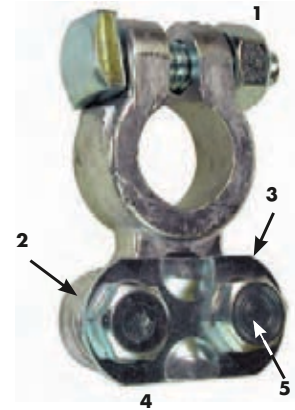
- Adhesive lined polyolefin
- Heat activated adhesive liner
- Resistant to abrasion, salt, water and corrosion
- Shrink ratio 2.5:1

Gauge	Length	Color	Art. #
4	1.5"	Black	17719121
		Red	17719122
2, 1, 1/0		Black	17719341
		Red	17719342
2/0, 3/0, 4/0	2"	Black	1771991
		Red	17719912
8	1.5"	Black	177121201
		Red	177121301
4/0	2"	Black	177121401
		Red	177121501

UNIVERSAL BATTERY TERMINAL

- Fits 6 to 2/0 gauge cable, positive or negative posts
 1. Bolt locks firmly from left to right side
 2. Universal-holds cable or strap
 3. Removable plate for easy assembly
 4. Threaded clamp avoids pull-out
 5. Imbedded steel nut eliminates stripping

Description	Art. #
Universal Battery Terminal	15104002



UNIVERSAL SIDE MOUNT TERMINAL

- Replace corroded OE terminals
- Automotive and light truck applications
- Universal polarity
- Accepts 6 to 2/0 gauge cable sizes
- Lead, zinc plated steel fasteners

Description	Art. #
Universal Side Mount Terminal	15104003



UNIVERSAL MARINE TERMINAL

- Converts conventional post type battery for marine use or any clamp type application
- Clamp type wing nut terminals convert standard post to marine or other special uses
- Positive terminal stud size is 3/8"
- Negative and universal terminal stud size is 5/16"
- Brass plated wing nut

Description	Art. #
Universal Marine Terminal	151040010



UNIVERSAL REPLACEMENT CABLE END

- Restores your original starting power
- Convenient for field service, work near battery not under engine
- Ideal for mobile repair vans, tow trucks & other service vehicles
- Cuts inventory by reducing stock of slow moving longer cables, permits proper fitting repair parts to be available anytime
- Auxiliary lead included with tie-bolt style replacement end
- Insulator covers coupler
- Copper cable

Description	Art. #
Universal Replacement Cable End	15104004



CRIMP BATTERY TERMINALS

- Made of cast copper, tin plated to resist corrosion
- Exceeds SAE conductivity standards, J163 and J1811
- Permanent, indelible, readable gauge & polarity stamped on clamp, color coded
- Clamp full height of battery post for maximum electrical contact. Other connectors 25% to 40% shorter
- Thick wall, perfectly centered barrel, stronger crimps, longer life
- Includes tin plated 5/16" battery bolts and shoulder nuts

Gauge	Color Code	Polarity	Art. #
2	Green	Negative	151040301
		Positive	151040302
4	Grey	Negative	151040401
		Positive	151040402
2/0	Orange	Negative	151040201
		Positive	151040202



ORIGINAL BILFRO® BATTERY TERMINALS

- Pure #131 contact copper & bright tin plating, exceeds SAE conductivity standard J163
- Ultra-smooth, pit-free Mictron™ cast surface effectively resists salt & corrosion
- Connectors can be installed with major crimping tools and are solderable
- Includes 5/16" battery bolts & shoulder nuts, fully assembled for your convenience

Gauge	Polarity	Art. #
4	Negative	15105010
	Positive	15105020
1-2	Negative	15105030
	Positive	15105040
1/0	Negative	15105050
	Positive	15105060
2/0	Negative	15105070
	Positive	151050809



BATTERY CABLE

- Our battery cable meets or exceeds SAE standards
- Insulated with PVC, is flame-retardant & resistant to fuel, oil, acid & salt
- Full gauge copper conductor
- For use at 60 volts or less
- Temperature rating of 221 °F
- RoHS compliant
- Nominal low temperature rating of -58 °F
- By using both black and red cable, your wiring system will be easier to install & troubleshoot
- Recommended for connecting battery to switch, starter and ground










Gauge	Description	Color	Roll Size	Art. #
8		Black	25'	1770908
6	Stranding 49/22.5 Nominal OD .330	Red		17709061
		Black		1770906
4	Stranding 70/22.5 Nominal OD .380	Red		17709041
		Black		1770904
2	Stranding 133/23 Nominal OD .450	Red		17709021
		Black		1770902
1/0	Stranding 133/21 Nominal OD .550	Red		177090101
		Black		17709010
2/0	Stranding 133/20 Nominal OD .605	Red		177090201
		Black		17709020

TIPS FOR MATCHING CABLE

- When replacing cable, always install cable of equal or heavier gauge, never lighter
- In cold climates, use a heavier cable gauge to improve starting
- The size bullets below will help you determine the gauge (size) of an unmarked starter cable
- **Measure the bare conductor only, not the insulation**
- Actual diameters vary depending on specific wire stranding



Type of Equipment		Typical Wire Gauge
	Garden Tractors, Golf Carts	8, 6, 4
	Compact Cars, RV	6, 4
	Standard Cars	4, 2
	Full-Size Cars, Vans	2, 1
	Tractor, Light Trucks, Construction	1/0
	HD Tractors, Trucks, Buses, Construction	2/0, 3/0
	Extra Heavy Duty	4/0

COMPACT CRIMPING TOOL HAMMER TYPE

- Crimping tool driven by hammer impact with locking lever for easy loading
- Crimps terminals 8 to 4/0 gauge

Description	Art. #
Compact Crimping Tool Hammer Type	171599840



CIGARETTE LIGHTER SAFETY PLUG

- Used to replace unwanted cigarette lighters
- Prevents accidental shocks and burns
- Discourages smoking in the car
- The tight fit deters removal

Description	Art. #
Cigarette Lighter Safety Plug	150159650



ACCESSORY BOLT

- Precision-machined from solid brass, includes zinc plated steel nut & washer
- Connects power accessories directly to battery
- Fits standard battery bolt, select from three input threads
- 3/8" side terminal accessory bolt replaces regular side terminal and 5/16" - 18 x 1/2" stud for accessory wires



Accessory Post Adapter Description	Specifications	Material	Art. #
Adapter bolt, side terminal accessory post for single power lead	3/8" - 16 x 13/32" Accessory stud: 5/16" - 18 x 1/2"	Brass; zinc plated steel fasteners	15104001

BATTERY BOLTS

- Includes bolt and shoulder nut

Material	Size	Art. #
Steel, zinc plated	5/16" - 18 x 1-1/4"	151040021
Steel, oil treated	1/4" - 20 x 1-5/8"	151040022



OE SIDE MOUNT BOLTS

- Steel, zinc plated

Description	Size	Art. #
For single mounted leads	3/8" - 16 x 13/32"	151040031
For dual power leads	3/8" - 16 x 1"	151040032



ORSY® HEAT SHRINK TUBING REEL

- With mesh on polyolefin basis
- Self-extinguishing
- Flame-retardant
- Silicone-free
- Good electrical, chemical and physical characteristics

Art. # 0956109-Small Dispenser Includes:

- Dispenser assembly
- 5 reel holders - **Art. # 095610903**
- 8 small stars (holds 4 rolls) **Art. #**

095610901

- Mounting hardware

Note:

- Order tubing separately
- Combination shears sold separately **Art. #**

07140314



I.D.	Size	Art. #
1/16"	10m	07718024
1/8"		07718032
3/16"	5m	07718048
1/4"		07718064
3/8"		07718095
1/2"		07718127
3/4"		07718190
1"		07718254

HEAT SHRINK TUBING

Installation:

- The inside diameter of the heat shrink tube should always be chosen so that the diameter is only slightly smaller after free shrinking than that of the part to be shrunk around (approx. 10 - 15%).
- When cutting the heat shrink tube to length, ensure smooth cut edges.
- Shrink the heat shrink tube from the center outward with a heating device.
- Observe optimum shrinking temperature (see table). It is important for a short shrinking time. WÜRTH heat shrink tubing shrinks so quickly that the part to be shrunk around only heats up very slightly.
- With heat shrink tubes with internal adhesive, the melting inner layer can escape slightly at the ends.



- High-performance, flexible multi-purpose heat shrink tube
- Flame-retardant
- Good to very good printability
- Good electrical, chemical and physical properties
- Application range: electrical insulation, mechanical protection, marking, bundling, strain relief and as a corrosion protection

I.D.	4" Length Art. #	12" Length Art. #
1/16"	077100240	
1/8"	077100320	17719032
3/16"	077100480	17719048
1/4"	077100640	17719064
3/8"	077100950	17719095
1/2"	077101270	17719127
3/4"	077101900	17719190
1"	077102540	

Shrinking rate	2:1
Temp. Range	-67°F to +275°F
Shrinking Temp.	+194°F to +200°F
Change in length after shrinking	approx. ± 10%
Dielectric strength	20 kV/mm min
Certifications	UL 224

CRYSTAL CLEAR PVC HEAT SHRINK TUBING


Size	Art. #
3/8"	17719601
1/2"	17719602
5/8"	17719603
3/4"	17719604

- No yellowing, 2:1 shrink ratio
- Flexible, flame retardant
- Resistant to grease, oils & chlorinated solvents
- UL subject 222VW-1; CSA OFT rated for 600V
- ASTM D 3150; ML-DTL-23053/2 Class 2
- Sold per foot

MULTIPLE WALL HEAT SHRINK TUBING

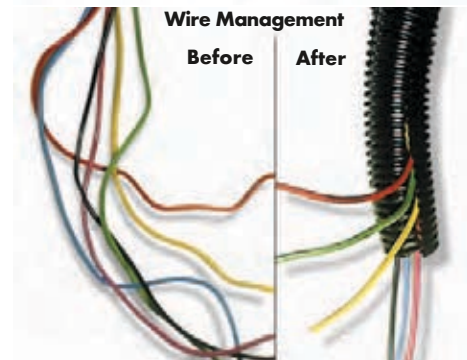

I.D.	Gauge	Length	Color	Art. #	
1/8"	20 - 24	6"	Clear	1771918	
3/16"	22 - 18		Red	17719316	
1/4"	16 - 14		Blue	1771914	
5/16"	12 - 10		Yellow	17719516	
3/8"	8 - 6		Black		1771938
1/2"	4 - 2				1771912
3/4"	2, 1, 1/0				1771934
1"	2/0, 3/0, 4/0				177191

- Adhesive lined polyolefin
- Rated for continuous operation from -67°F to 230°F
- Radiation cross-linked with meltable adhesive liner
- Shrink ratio 2.5:1, sizes shown are pre-shrink sizes
- ML specs: MIL-1-23053/4 Class 1

SPLIT WIRE LOOM

- Black polyethylene corrugated loom is durable and split for easy installation
- Shields wire, cable & hose from heat, shorts & corrosion
- Convoluted design stays flexible at all temperatures for easy routing
- Operating temperatures -30°F to 220°F
- Sold in 100 foot rolls

I.D.	O.D.	Art #
1/4"	3/8"	177114197
3/8"	9/16"	177114198
1/2"	11/16"	177114199
3/4"	15/16"	177114200



WIRE CONDUIT

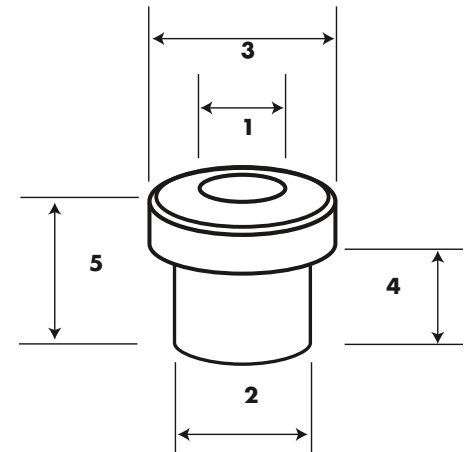
- For insulating electrical leads, connectors, e.g. cable lugs or soldering points, serving as mechanical protection
- According to DIN 40621
- Flame resistant, self-extinguishing
- Resistant against aging
- Good resistance against chemicals
- Temperature stability: -40°F up to approx. +194°F
- Material: PVC, silicone-free, textile-free
- Color: black



I.D. (mm)	Wall Thickness	Art #
4	0.5	07714
6	0.6	07716
8	0.7	07718
10		077110

WIRING GROMMETS SINGLE FLANGE

- Made of rubber and PVC, in black
- Resistant to corrosion, heat, aging, ozone, oil, splashes from gasoline and solvents
- Protects against mechanical damage
- Temperature range: -40°F to +248°F
- Silicone-free
- ROHS conform
- Tolerances acc. to ISO 3302-1 M2



1 (mm)	2 (mm)	3 (mm)	4 (mm)	5 (mm)	Art #
10	14	18	10	15	05616640

Index Key

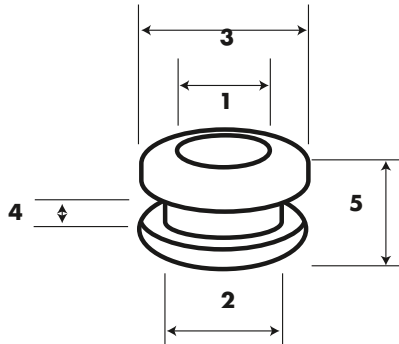
1. Bore Diameter
2. Groove Width
3. Overall Diameter
4. Inset Height
5. Overall Height

WIRING GROMMETS DOUBLE FLANGE (METRIC & US)

- Made of rubber and PVC, in black
- Resistant to corrosion, heat, aging, ozone, oil, splashes from gasoline and solvents
- Protects against mechanical damage
- Temperature range: -40 °F to +248 °F
- Silicone-free
- ROHS conform
- Tolerances acc. to ISO 3302-1 M26861110

Index Key

1. Bore Diameter
2. Groove Width
3. Overall Diameter
4. Inset Height
5. Overall Height

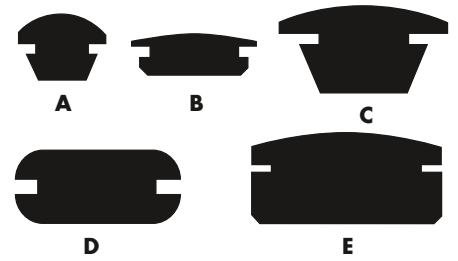


Metric					
1 (mm)	2 (mm)	3 (mm)	4 (mm)	5 (mm)	Art #
6	9	11	1	6	05616632
	10	13	2	8	05616646
9	11	16	1	6	05616648
10	12	18		11	05616650
12	20	24	4	10	05616652
16	24	30	3	11	05616663
21	31	38	1.5		05616665

US					
1	2	3	4	5	Art #
1/8"	3/8"	1/2"	3/32"	5/16"	15611838
3/16"	5/16"		1/16"	1/4"	1561316516
1/4"	3/8"	5/8"		3/16"	15611438
	7/16"	9/16"	156114716		
5/16"	3/4"	1"	5/16"	1561516716	
	3/8"	1/2"	5/8"	9/32"	156151634
1"		1-1/4"	1/4"	15613812	
1/2"	3/4"	31/32"	3/32"	9/32"	1561381
		1"	1/8"	1/2"	15611234
5/8"	7/8"	1-1/8"		3/8"	1561121
3/4"	15/16"	1-5/8"	1/16"	1/4"	15615878
	1-1/4"		1/4"	7/16"	1561341516
					156134114

BLANKING GROMMETS

- For sealing or closing drilled holes
- Silicone-free
- Made of rubber, in black
- Sealed on one side
- Resistant to corrosion, heat, aging, ozone, oil, splashes from gasoline and solvents
- Protects against mechanical damage



Bore (mm)	Groove (mm)	Material	Style	Art #
6	2	Rubber	A	056116
8			B	156118
10			C	0561110
12			D	0561112
14			E	0561114
16			E	0561116

CABLE TIES

- For fast, easy and reliable bundling of wires, cables, looms, hoses, etc.
- Preformed leading edge allows fast insertion into buckle
- Absolutely secure with long life
- High tensile strength achieved from one piece design
 - Advanced pawl and teeth design
 - Manufactured from filtered nylon reducing particle contamination
- Angled tail provides quicker initial insertion alignment
 - Tail finger grips allow easier handling and tightening
- Rounded edges provides added safety and eliminates insulation damage
- Formulated molding processes
- Resistant to cold, will not crack or deteriorate
- Flame resistant
- Resistant to oil, fats, solvents and many organic substances. Caution when in contact with strong mineral acids and/or oxidizing chemicals, especially at high temperatures

Material: PA 6.6

Temperature Range: -40° to 185°F

Durability:

- White: Weather resistant at normal temperatures. For internal applications.
- Black: UV resistant, due to carbon structure. The effect of UV rays is minimized.



Description	Art #
Cable Tie Rack	050205020

SELF ADHESIVE MOUNTING PAD

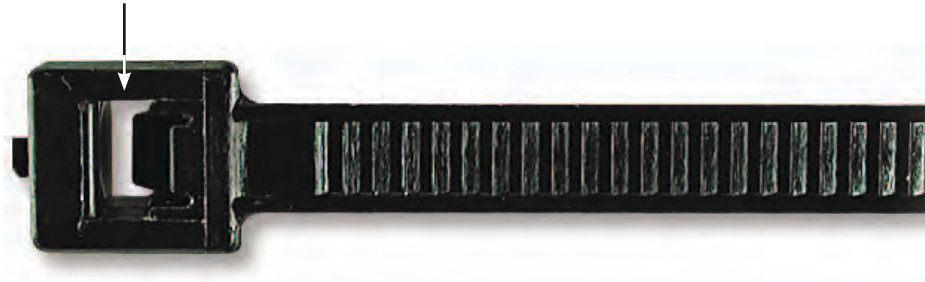
- For securing cable ties to any dust and grease-free surfaces; metal, paint, plastic, wood, plaster, paper, etc.
- Size: 1" x 1"
- Polyamide 6.6
- Temperature range 41 °F to 122 °F

Description	Art #
Self Adhesive Mounting Pad	0502665



PLASTIC TONGUE CABLE TIES

Plastic tongue



- Plastic tongue mechanism

Length	Width	Bundle Dia.	Tensile Strength	Natural Art. #	UV Black Art. #	UV Black Packs 500	UV Black Packs 1000
4"	3/32"	1/16" - 7/8"	18#	050211	0502111		15029111
5-11/16"	9/64"	1/16" - 1-7/16"	40#	050212	0502121		
7-1/2"	11/64"	1/16" - 1-7/8"	50#	050214	0502141		15029141
11-3/16"	3/16"	1/16" - 3-1/16"		050215	0502151	15029151	
14-1/2"		1/16" - 4-1/8"		050216	0502161	15029161	
15"	5/16"	3/16" - 4-1/16"	120#	050218	0502181		
25-1/4"	11/32"	3/16" - 7-3/16"	175#		0502191		

METAL TONGUE CABLE TIES

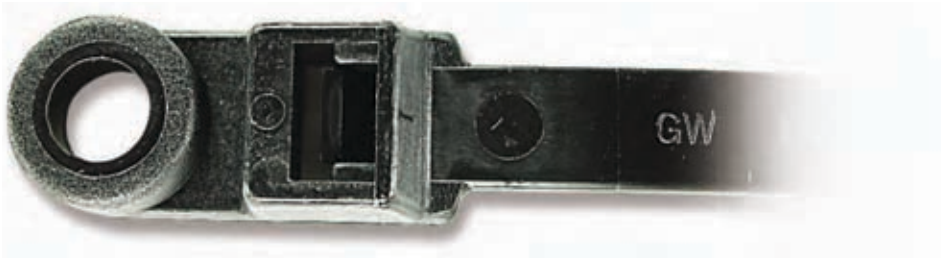
Metal tongue



- Metal tongue closure made from stainless steel, antimagnetic steel
- Extremely high retaining strength
- Effortless with low force required
- No sharp edges
- Stoppers prevent sideways movement
- With UL certification

Length	Width	Bundle Dia.	Tensile Strength	Natural Art. #	Black Art. #
4"	3/32"	1/16" - 5/8"	18#		0502221
7-7/16"	3/16"	1/16" - 1-3/8"	50#		0502231
14"	3/16"			050224	

SPECIAL PURPOSE CABLE TIES



- With fixing eyes which can be fixed directly to the chassis or bodywork after tying
- Material: Polyamide 6.6
- Suitable for temperature range from -40°F to +185°F
- Free from halogen and silicone
- With UL certification

Length	Width	Bundle Dia.	Tensile Strength	Hole	Material	Art. #
8"	3/16"	1/8" - 1-13/16"	50#	3/16"	UV Natural	05022611
7-1/4"				1/8"	UV Natural w/side eyelet	05022711
8-1/8"		1/8" - 3"		#10	Nylon	15021401
15-5/8"	5/16"	3/16" - 4"	UV Black		05021812	

RE-USABLE CABLE TIES



- Plastic tongue mechanism
- Re-usable
- No sharp edges
- Temperature range -50 ° to + 176 ° F

Length	Color	Art. #
8"	White	0502300430
	Black	0502300431
11"	White	0502300432
	Black	0502300433
14"	White	0502300434
	Black	0502300435

INDUSTRIAL BATTERIES

- Energizer industrial alkaline batteries are manufactured especially for the industrial market
- These well-known batteries are rated "ZMA" (Zero Mercury Added)



	Type	Volts	Art. #
1	AAA	1.5	182701
2	AA		182702
3	C		182703
4	D		182704
5	9 Volt	9	182705
6	A23	12	18279101
7	AAAA	1.5	182700

LITHIUM AND ALKALINE BATTERIES

- For automotive keyless entry systems
- Features include excellent shelf life, (lithium is 10 years), stable voltage, broad range of temperature efficiency



	Type	Volts	Art. #
1	ECR 1616	3	0827081616
2	ECR 1620		0827081620
3	ECR 2025		0827082025
4	ECR 2016		0827082016
5	CR1632		0827081632
6	CR 2032		1827912
7	CR 2450		0827082450
8	Button Cell	1.5	0827085351



FUEL INJECTION CONNECTOR

- Offset left
- For Nissan '85-'92

Description	Art #
Fuel Injection Connector	15567065



FUEL INJECTION WIRED HOUSING

- Center tab
- With quick clip

Description	Art #
Fuel Injectio Wired Housing	15567062



TAPERED BOOT

- Fits Art. # 1556 7062-7065 fuel injection housings above

Description	Art #
Tapered Boot	15567120



"L" JETRONIC

- Domestic Applications:
AMC, Chrysler, Ford, GM
- Import Applications:
BMW, Nissan, Jaguar, Porsche, Toyota, Triumph, Volvo, VW



	Description	Art #
1	Connector with wires	15567060
2	Connector without wires	15567070
3	Wired Contact	15567075
4	Spring Clip	15567100

"D" JETRONIC

- Not supplied by OEM
- 18 gauge 7" GPT wire leads



Description	Art #
"D" Jetronic	15567080

A/C BLOWER MOTOR

- Not supplied by OEM
- Fits resistor E7TZ-19A706-A
- 4-14 gauge 8" wire leads
- For Ford trucks '86 and up

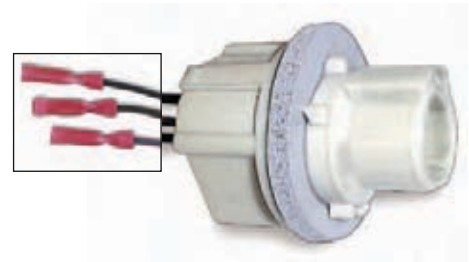
Description	Art #
A/C Blower Motor	155618015



BULB SOCKET FOR 1157

- Replaces E2SZ-13410-A pigtail socket assembly
- 8" wire leads
- Parking and rear 1157 bulbs
- For Ford products

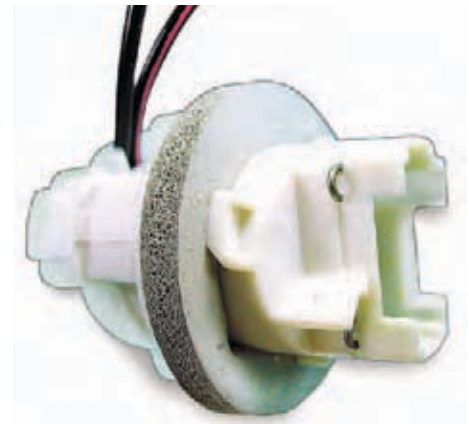
Description	Art #
Bulb Socket for 1157	155618065



BULB SOCKET FOR 3156

- Replaces E2SZ-13410-A pigtail socket assembly
- 8" wire leads
- Parking and rear 1157 bulbs
- For Ford products

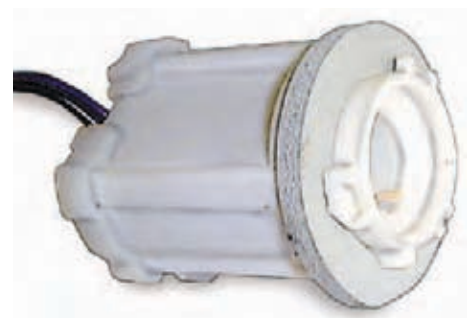
Description	Art #
Bulb Socket for 3156	155617005



BULB SOCKET FOR 1156

- Not supplied by OEM repair harness pigtail assembly
- 2-18 gauge 8" GPT wire leads
- Back up lamps for 1156 bayonet style bulb
- For Ford '84 and up

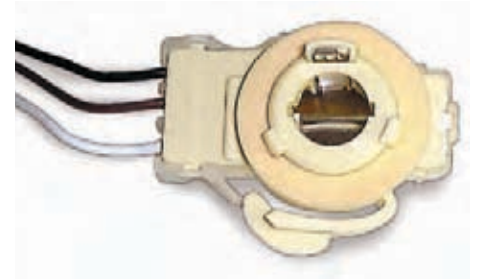
Description	Art #
Bulb Socket for 1156	155617006



BULB SOCKET FOR 1157

- Not supplied by OEM
- Fits double filament bayonet bulbs. Stop, park and turn lamps
- Replaces 12003759
- 3-18 gauge 10" wire leads
- For Chrysler '88 and up, GM '77 and up, AMC '79 and up

Description	Art #
Bulb Socket for 1157	155638001



BULB SOCKET FOR 194

- Replaces 12001470, formerly 80-5241
- Socket and wire assembly
- Side marker light right angle
- For Ford products '80 and up & GM products '71 and up

Description	Art #
Bulb Socket for 194	155617013



BULB SOCKET FOR 194 & 194A

- Marker light pigtail socket
- For Chrysler products '71 and up

Description	Art #
Bulb Socket for 194 & 194A	155647002



BULB SOCKET FOR 9004 & 9007

- 3 prong headlamp pigtail assembly
- 3-18 gauge 10" wire leads
- For GM, Ford and Chrysler products

Description	Art #
Bulb Socket for 9004 & 9007	155647003



BULB SOCKET FOR 9005

- 2 prong headlamp pigtail assembly, high beam
- Double guided groove
- 2-18 gauge 10" wire leads
- For GM products

Description	Art #
Bulb Socket for 9005	155647004



BULB SOCKET FOR 9006

- 2 prong headlamp pigtail assembly, low beam
- Single guided groove
- 2-18 gauge 10" wire leads
- For GM products

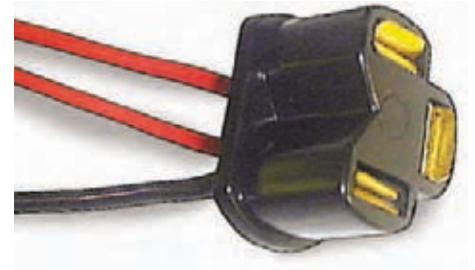
Description	Art #
Bulb Socket for 9006	155647005



UNIVERSAL BULB SOCKET

- For all cars using 3 prong sealed headlamp bulbs
- Also fits 2 & 3 prong flashers
- 3-18 gauge 8" wire leads
- Bulb Socket for 4002, 3, 5, 5040, 2, 5400, 2, 40, 421, 6006, 12 & 13

Description	Art #
Universal Bulb Socket	155648002



BULB SOCKET FOR SEALED BEAM

- 3-12" lead wires attached to a molded receptacle
- Used for all sealed low beams

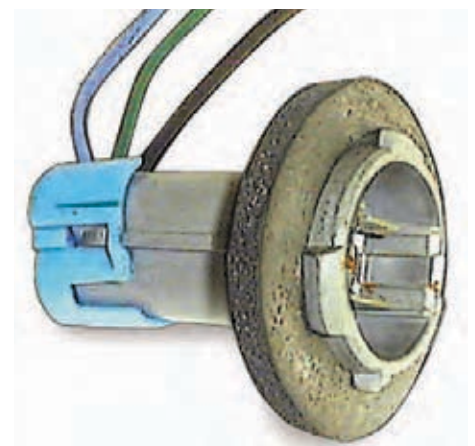
Description	Art #
Bulb Socket for Sealed Beam	155647001



BULB SOCKET FOR 3057

- Back up & marker wedge bulb
- Replaces 12083005
- 3 wire; 2-18 gauge, 1-16 gauge 8" wire leads
- For GM products '90 and up

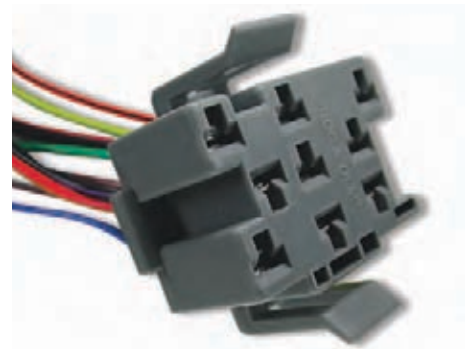
Description	Art #
Bulb Socket for 3057	155617001



DASH HEADLAMP SWITCH

- Not supplied by OEM
- Fits E7TZ-11654-C
- 9-8" wire leads; 3-20 gauge, 4-18 gauge, 1-16 gauge, 1-12 gauge
- For Ford "F" series products '87 and up

Description	Art #
Dash Headlamp Switch	155618016



ALTERNATOR REGULATOR

- Not supplied by OEM
- 1-16 gauge 8" GPT wire lead
- For Ford products '94 and up

Description	Art #
Alternator Regulator	155618045



VOLTAGE REGULATOR

- Internal voltage regulator plug
- 1-14 gauge, 2-20 gauge 10" wire leads
- For Ford Topaz, Tempo, Sable, Taurus, Escort '86 and up

Description	Art #
Voltage Regulator	155618001



POWER BRAKE PIGTAIL

- Not supplied by OEM
- 12" wire leads
- Eliminates removing & replacing entire harness
- For Ford products '65 and up

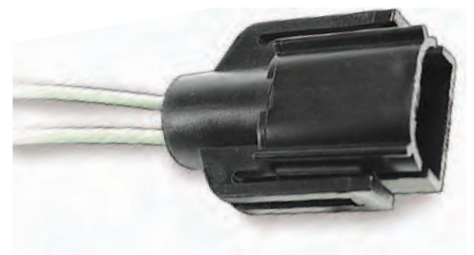
Description	Art #
Power Brake Pigtail	155618058



VEHICLE SPEED SCANNER

- Not supplied by OEM
- 2-18 gauge 8" GXL wireleads
- For Ford products '93 and up

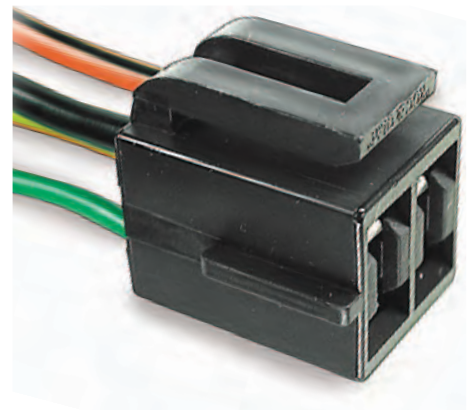
Description	Art #
Vehicle Speed Scanner	155618046



FAN SPEED SWITCH

- Not supplied by OEM
- Fits E6DZ-19986-A, E9SZ-A, F2DZ-A, F2UZ-A&B
- 4-8" GPT wire leads; 2-12 gauge, 1-14 gauge, 1-16 gauge
- For Ford Taurus & Sable '86-'93, T-Bird & Cougar '89-'93, E series '92 and up

Description	Art #
Fan Speed Switch	155618030



LIGHT BULB INDEX

Bulb #	Ref. #
24	17
24a	18
37	19
53	1
57	2
53	1
57	2
63	3
67	3
70	19
73	19
74	19
89	3
90	3
93	6
97	3
158	15
161	15
168	15
194	15
194A	16
211-2	28
212-2	28
464	15
880	38
881	39
882	36K
891	27
893	38
896	39
899	38
904	13
906	13
912	13
916	13
917	13
920	13
921	13
1003	4
1004	5
1034	8
1073	6
1076	6
1141	6
1154	8
1156	6

Bulb #	Ref. #
1156A	7
1157	8
1157A	10
SE1274	25
1445	1
1816	22
1891	22
1893	22
1895	2
2033	36
2040	35
2057	8
2057A	10
2332-1	19A
2351MFX6	36I
2352MFX6	36F
2357	8
2357A	10
2397	8
2431MFX6	36H
2452MFX6	36E
3473MFX6	36D
2721	19
2721MF8W	36J
221MF	36B
2721MF8	36B
2721MFX	36C
2722	19
2722MFX	36G
2821	15
2825	15
26736	32
DE3021	30
DE3022	30
3057	11
3057A	12
3155	11
3156	11
3157	11
3157A	12
DE3175	31
DE3423	32
DE3425	32
3457*	11
3457A*	12
3496	20

Bulb #	Ref. #
3497	21
3652	24
3894	23
3898	25
3966	26
H8 (64212)	43
H11 (64211)	43
H4656	48
H5006	49
H6024	49
H6054	48
6411	33
6413	33
6418	34
6428	33
6451	34
6461	34
6475	34
64111	37
64115	37
64136	37
64150	45
64151	46
64152	45
64153	46
64173	47
64193	40
64194	40
64210	41
64211 (H11)	43
64212 (H8)	43
7225	9
7440	14
7440A	14A
7443	14
7506	6
7507	9A
7527	6
7428	6
9003	40
9004	42
9005	43
9006	44
9007	42

LIGHT BULB REFERENCE

Ref. #	Bulb #	Volts	Watts	C*	Duratek Art. #	Base Mat'l	Osram Art. #	Base Mat'l	Firstec Art. #	Base Mat'l	Application.Remarks
1	53	12	1.72	SC	1720953	NI	1720053	BR			Instrument panel, Indicator
2	57	12	3.36	SC	1720957	NI	1720057	BR			Instrument panel, Indicator, Clearance
2	1895	12	3.78	SC	172091895	NI	172001895	BR			Instrument panel, Indicator, Clearance
3	63	12	7.54	SC	1720963	NI					Indicator
3	67	12	7.96	SC	1720967	NI	1720067	BR			Parking, Side marker, Dome, LP
3	89	12	7.54	SC	1720989	NI	1720089	BR			Parking, Side marker, Dome, LP
3	90	12	7.5	DC	1720990	NI	1720090	BR			Indicator
3	97	12	9.31	SC	1720997	NI	1720097	BR			Parking, Side marker, Dome, LP
4	1003	12	12	SC	172091003	NI	172001003	BR			Trunk, Under hood, Courtesy, Dome
4	5004	12	3	SC					07205004	NI	
4	5007	12	4.92	SC	172095007	NI			07201401	NI	Side marker, Tail, License plate
4	5008	12	9.96	SC	172095008	NI			07201411	NI	Side marker, Tail, License plate
5	1004	12	12	DC	172091004	NI	172001004	BR			Dome
6	93	12	13.3	SC			0720093	BR			Instrument
6	1073	12	12	SC			172001073	BR			Backup, Turn, Stop
6	1076	12	23	DC			172001076	BR			Instrument
6	1141	12	18.4	SC	172091141	NI	172001141	BR			Turn, Cornering, Backup, High Mount, Stop
6	1156	12	27	SC	172091156	NI	172001156	BR			Backup, Turn, Stop
6	1156	12	27	SC			07201156	NI			Backup, Turn, Stop
6	7506	12	21	SC	172097506	NI			07201321	NI	European, Stop, Turn, Indicator
6	7527	12	18	SC					07201311	NI	
6	7528	12	21/5	DC	172097528	NI	17207528	NI	07201341	NI	European, Stop, Turn, Indicator
7	1156A	12	27	SC	1720911561	NI	1720011561	BR			Amber coated glass
8	1034	12	23/8	DC			172001034	BR			Turn, Stop, Tail, Parking
8	1154	6	17/5	DC			172001154	BR			
8	1157	12	27/8	DC	172091157	NI	1720011572	NI			Turn, Stop, Tail, Park, Backup
8	1157	12	27/8	DC			172001157	BR			Turn, Stop, Tail, Park, Backup
8	2057	12	27/7	DC	172092057	NI	172002057	BR			Turn, Stop, Tail, Park, Side, Backup
8	2357	12	28/8	DC	172092357	NI	172002357	BR			Parking, Stop, Tail
9	7225	12	21/4	DC	172097225	NI	17207225	NI			European, Stop, Turn, Indicator
9a	7507	12	21	SC			172007507	NI			European, Amber, Stop, Turn

LIGHT BULB REFERENCE (CONTINUED)

Ref. #	Bulb #	Volts	Watts	C*	Duratek Art. #	Base Mat'l	Osram Art. #	Base Mat'l	Firstec Art. #	Base Mat'l	Application/Remarks
10	1157A	12	27/8	DC	1720911571	NI	1720011571	BR			Turn, Park, Side marker, Amber coated
10	2057A	12	27/7	DC	1720920571	NI	1720020571	BR			Turn, Park, Side, Amber coated
10	2357A	12	28/8	DC	1720923571	NI	1720023571	BR			Amber coated glass
11	3057	12	27/7	DC	172093057	WG	172003057	WG			Turn, Stop, Tail, Park
11	3155	12	18	SC			172003155	WG			High mount, Stop
11	3156	12	27	SC	172093156	WG	172003156	WG			Turn, Stop, Tail, Park
11	3157	12	27/8	DC	172093157	WG	172003157	WG			Turn, Stop, Tail, Park
11	3457*	12	28/8	DC			172003457	WG			Turn, Stop, Tail, Park, High heat base*
11	4157K	12	28/8	DC			07214157	WG			Daytime Running Lamp (GM)
12	3057A	12	27/7	DC	1720930571	WG	1720030571	WG			Turn, Park, Amber
12	3157A	12	27/8	DC	1720931571	WG	1720031571	WG			Turn, Park, Amber
12	3457A*	12	28/8	DC			1720034571	WG			Turn, Stop, Tail, Park, High heat base*, Amber
13	904	12	9.3	SC			17200904	WG			
13	906	12	9	SC	17209906	WG	17200906	WG			
13	912	12	13	SC	17209912	WG	17200912	WG			Dome, Courtesy, Map, High mount, Stop
13	916	12	7.2	SC	17209916	WG		WG			Indicator
13a	916	12	7.2	SC			17200916				Amber Indicator
13	917	12	15	SC			17200917	WG			Trunk
13	920	12	15	SC			17200920	WG			Indicator, Trunk
13	921	12	18	SC	17209921	WG	17200921	WG			Dome, Courtesy, Map, High mount, Stop
13	922	12	12	SC	17209922	WG					Indicator
14a	7440	12	18	SC			1720974401	WG			Amber
14	7440	12	21	SC	172097440		172007440	WG			High mount, Stop
14	7443	12	21/5	DC	172097443		172007443	WG			Tail light
15	158	12	3.3	SC			17200158	WG			Indicator, LP, Side, Clock, Radio
15	161	12	2.6	SC			17200161	WG			Instrument panel, Indicator
15	168	12	5	SC	17209168	WG	17200168	WG			Indicator, LP, Side, Clock, Radio
15	194	12	3.8	SC	17209194	WG	17200194	WG			Indicator, LP, Side, Clock, Radio
15	2821	12	3	SC	172092821	WG			07201611	WG	European, Dash bulb
15	2825	12	4.8	SC	172092825	WG			07201621	WG	European, Indicator
15	3652	12	5	SC			172003652	WG			Parking (2 pack)
16	194A	12	3.8	SC	172091941	WG	172001941	WG			Amber coated
17	24	12	3.36	SC	1720924		1720024	WG			
18	24A	12	3.36	SC			17200241	WG			Amber coated
19	37	12	1.2	SC			1720037	WG			
19	70	12	2	SC			1720070	WG			
19	73	12	1	SC			0720073	WG			

LIGHT BULB REFERENCE (CONTINUED)

Ref. #	Bulb #	Volts	Watts	C*	Duratek Art. #	Base Mat'l	Osram Art. #	Base Mat'l	Firstec Art. #	Base Mat'l	Application/Remarks
19	74	12	1.4	SC	1720974	WG	1720074	WG			
19	2721	12	1.2	SC					07201601	WG	European, Indicator
19	2722	12	2	SC					07201605	WG	European, Indicator
20	3496	12	14/8	DC	172093496	NI	172003496	BR			Tail, Stop (2 pack)
21	3497	12	27	SC	172093497	NI	172003497	BR			Turn (2 pack)
22	1816	12	4.2	SC			172001816	BR			
22	1891	12	3.3	SC	172091891	NI	172001891	BR			Instrument, Clearance, Indicator
22	1893	12	4.6	SC	172091893	NI	172001893	BR			Fleet service instrument, Clear, Indicator, ID
23	3893	12	3.9	SC	172093893	NI			07201501	NI	European, Parking, Indicator
24	3796	12	2	SC					07201511	BR	European, Parking, Indicator
24	3894	12	3	SC					07201521	BR	European, Parking, Indicator
25	3898	12	1.7	SC	172093898	NI			07201551	NI	European, Parking, Indicator
27	891	12	8				17200891				Halogen High mount, Stop
28	211-2	12	12.4	EC	172092112		172002112				Map, Dome, Courtesy, Trunk
28	212-2	12	10	EC			1720021221				
29	561	12	12.4	EC	17209561		17200561				Dome, Step, Courtesy, Map
30	DE3021	12	3.3	EC	172093021						
30	DE3022	12	4.9	EC	172093022						Foreign car dome, Map, Trunk
31	DE3175	12	10	EC	172093175		172003175				Foreign car dome, Map, Trunk
32	26736	12	10	EC					172026736		
32	DE3423	12	5	EC	172093423						
32	DE3425	12	10	EC	172093425						
33	6411	12	10	EC					07201731		
33	6413	12	5	EC					07201721		
34	6418	12	4.8	EC					07201711		
34	6418	12	4.8	EC					7201711		
34	6451	12	15	EC					7201741		
34	6461	12	10	EC			17206461				Dome
34	6475	12	18	EC					07201751		
35	2040	12	8	SC			172002040	WG			Halogen
36	2033	12	3	CS			172002033			orange	Instrument panel
36a	2721MF8	12	1.2	CS					07201671	black	Bx8.3D socket
36b	2721MF	12	1.2	CS					07201661	black	BX8.4D socket
36b	2721MFX	12	1.2	CS					072016522	black	Bx8.4D socket, BMW, Audi, MB, Porsche
36c	2721MFX	12	1.2	CS					0720165515	lt. blue	Bx8.5D socket, MB, Audi, Volvo
36d	2473MFX6	14	1.2	CS					0720165512	orange	Bx8.4D socket, Audi, VW
36e	2452MFX6	12	1.5	CS					0720165522	beige	Bx8.4D socket, BMW, Audi, MB, Porsche
36f	2352MFX6	12	2	CS					07020165523	lt. green	Bx8.4D socket, Audi, VW, BMW

LIGHT BULB REFERENCE (CONTINUED)

Ref. #	Bulb #	Volts	Watts	C*	Duratek Art. #	Base Mat'l	Osram Art. #	Base Mat'l	Firstec Art. #	Base Mat'l	Application/Remarks
36g	2722MFX	12	2	CS					0720165526	lt. green	Bx8.5D socket, MB
36h	2431MFX6	12	1.3	CS					0720165527	olive	Bx8.4D socket
36i	2351MFX6	12	1.2	CS					0720165532	lt. blue	Bx8.4D-12.5 socket, Porsche, MB
36J	272MF8W	12	1.2	CS					07201651	grey	BMW Dash
37	64136	12	21	CS			172064136			NI	Halogen Parking & Indicator, MB E Class
37	64115	12	20	SC					172064115	NI	Halogen Brake light
38	880	12	27				1720880				Halogen Fog light
38	893	12	37.5				17200893				Halogen Fog light
38	899	12	37				17200899				Halogen, High mount, Stop
39	881	12	27				17200881				Halogen, High mount, Stop
39	896	12	37				17200896				Halogen, High mount, Stop
40	9003	12	60/55				1720090039				H-4 Cool Blue (DOT approved)
40	9003	12	100/55		172091259				07201101		H-4 (64193) Halogen Off road
40	9003	12	60/55		172096413						H-4 (64193) Halogen Headlight
40	9003	12	100/80		1720964194		172064194				H-4 (64194) Halogen Off road
41	64210	12	55				1720064210				H7 Halogen
42	9004	12	65/45		172099004		172009004				Halogen Headlight
42	9004	12	100/80		1720990043						Halogen Off road
42	9004	12	65/45				1720090049				Halogen Cool Blue (DOT approved)
42	9007	12	65/55		172099007		172009007				Halogen Headlight
43	9005	12	65		172099005		172009005				Halogen Headlight
43	9005	12	65				1720090059				Halogen Cool Blue (DOT approved)
43	H-8(64212)	12	35				172064212				Halogen Headlight
43	H-11(64211)	12	55				172064211				Halogen Headlight
44	9006	12	55		172099006		172009006				Halogen Headlight
44	9006	12	55				1720090069				Halogen Cool Blue (DOT approved)
45	64152	12	100		1720964101						H1 Halogen Fog, Hi-beam
45	64150	12	55		1720964150				07201111		H1 Halogen Fog, Hi-beam
46	64151	12	55		172096411				07201121		H3 Halogen Fog lamp
46	64153	12	100		1720964153		172064153				H3 Halogen Fog lamp
47	64173	12	55						07201131	NI	H2 Halogen Fog lamp
48	H4656	12	35/35				172004656				Hi/low beam (3 contacts)
48	H6054	12	65/35				172006054				Hi/low beam (3 contacts)
49	H6024	12	65/35				172006024				Hi/low beam (3 contacts)

LIGHT BULBS


LIGHT BULBS (CONTINUED)



LIGHT BULBS (CONTINUED)

LIGHT BULBS (CONTINUED)

27



Halogen Bulb

29



30



31



36



32



33



34

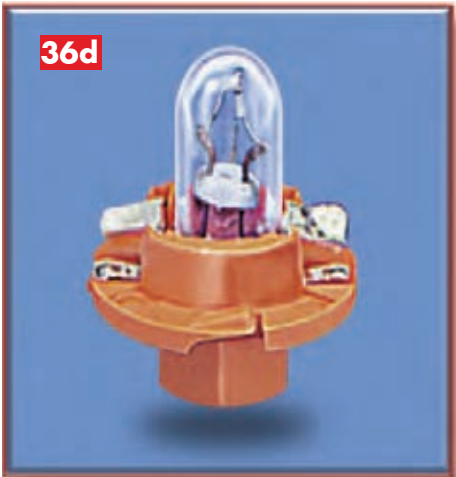


35



Halogen Bulb

LIGHT BULBS (CONTINUED)



LIGHT BULBS (CONTINUED)



LIGHT BULBS (CONTINUED)



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