



SEALED CRIMP CONNECTORS • SEALED SOLDER CONNECTORS • SEALED CRIMP & SOLDER CONNECTORS

SEALED MULTIPLE WIRE CONNECTORS • SEALED STEP-DOWN BUTT CONNECTORS

SEALED HEAT SHRINK TUBING • SEALED SOLDER SYSTEM FOR BATTERY TERMINALS

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1999

Introduced & issued patent on Sealed Crimp & Solder Butt Connector (24AWG - 10 AWG)



2001

Introduced & issued patent on Sealed Crimp & Solder Terminals - Rings, Spades, Spring Spades, Slip-Ons (24 AWG - 10AWG)



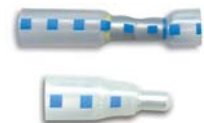
2005

Introduced innovative Step Down Butt Connector



2007

Introduced & issued patent on Sealed Connectors for Multiple Wires





PRODUCT SPECIFICATIONS

SEALED CONNECTORS

	Sealed Crimp Connectors	Sealed Solder Connectors	Sealed Crimp and Solder Connectors	Sealed Multiple Wire Connectors	Sealed Nylon Crimp Connectors	Sealed Solder System for Battery Terminals
TERMINAL HEAT SHRINK TUBING						
Material	Polyolefin	Polyolefin	Polyolefin	Polyolefin	Nylon-12	Polyolefin
Shrink Ratio	3 to 1	3 to 1	3 to 1	4 to 1	3 to 1	3 to 1
Recover Temperature	135°C	135°C	135°C	121°C	180°C	121°C
Continuous Operating Temp	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 125°C	-55° to 110°C
Flammability	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant
Temperature Rating	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 125°C	-55° to 110°C
Tensile Strength	2200 PSI	2200 PSI	2200 PSI	2450 PSI	2200 PSI	2100 PSI
Longitudinal Change	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%
Dielectric Strength	900 Volts/Mil	900 Volts/Mil	900 Volts/Mil	500 Volts/Mil	900 Volts/Mil	500 Volts/Mil
UL Voltage Rating	600 Volts	600 Volts	600 Volts	-	600 Volts	600 Volts
Corrosion Resistance	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive
Fungus Resistance	Non-Nutrient	Non-Nutrient	Non-Nutrient	-	Non-Nutrient	Non-Nutrient
Water Absorption	<0.1%	<0.1%	<0.1%	-	<0.25%	<0.1%
UL	E157227	E157227	E157227	-	E-157227	486D
CSA	-	-	-	-	-	C22.2
Mil Specs	MIL-DTL-23053/4	MIL-DTL-23053/4	MIL-DTL-23053/4	-	MIL-I-23053/4, Class 1	MIL-DTL-23053/15, Class 2
Other Specs	AMS 3534	AMS 3534	AMS 3534	Chrysler MS-DB56 CAN 3686 Ford ESB-M97D56A1	AMS 3634	AMS 3634
SOLDER						
Contains Solder Alloy †	No	Yes	Yes	No	No	Yes
Applicable Specifications	N/A	J-STD-006	J-STD-006	N/A	N/A	J-STD-006
FLUX						
Applicable Specifications	N/A	J-STD-004	J-STD-004	N/A	N/A	J-STD-004






† - Solder used contains any or all of the following: Antimony, Cadmium, Copper, Indium, Silver, Iron, Aluminum, Nickel, Arsenic, Zinc, Bismuth, Gold, Tin, Lead

HEAT SHRINK TUBING

	HST100 Series	HST200 Series	HST300 Series	HST400 Series	HST500 Series
	Thin Wall	Flexibe Adhesive-Lined	Tinted Adhesive-Lined	Semi-Rigid Adhesive-Lined	High Adhesive Flow
Material	Polyolefin Polyolefin	Polyolefin	Polyolefin	Polyolefin	
Shrink Ratio	2 to 1	3 to 1	3 to 1	2.5 to 1	4 to 1
Recover Temperature	121°C	121°C	135°C	135°C	121°C
Continuous Operating Temp	-55° to 135°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C
Flammability	Self-extinguish UL224 *	Self-extinguish UL224 *	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant
UL	E35586 *	E157227	E157227	E157227	-
CSA	LR31929 *	-	-	-	-
Mil Specs	MIL-DTL-23053/5, Class 1 *	MIL-DTL-23053/4, Class 3	MIL-DTL-23053/4	MIL-DTL-23053/4	Chrysler MS-DB56 CAN 3686Ford ESB-M97D56A1
Other Specs	-	-	-	-	-
	HST600 Series	HST700 Series	HST800 Series	HST850 Series	
	High Ratio Adhesive-Lined	Medium Duty Adhesive-Lined	Heavy Wall, Adhesive-Lined	Heavy Wall, Adhesive Lined for Battery Terminals	
Material	Polyolefin	Polyolefin	Polyolefin	Polyolefin	
Shrink Ratio	5 to 1	3 to 1	3 to 1	3 to 1	
Recover Temperature	120°C	121°C	121°C	121°C	
Continuous Operating Temp	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	
Flammability	Meets UL-94, V-0 Flame rating	Flame Retardant	Flame Retardant	Non-Flame Retardant	
UL	-	-	486D	486D	
CSA	-	-	-	C22.2	
Mil Specs	MIL-DTL-23053/15, Class 1	MIL-DTL-23053/15, Class 2	MIL-DTL-23053/15, Class 2	MIL-DTL-23053/15, Class 2	

* Does Not include clear tubing

NSPA TIMELINE OF SIGNIFICANT EVENTS

1980	1982	1989	1990	1991
NSPA provides maintenance trays and packaged fasteners for distributors calling on maintenance and repair facilities	Began assembly of Sealed Crimp Connectors (24 AWG - 8 AWG)	Issued patent on Sealed Solder Butt Connector (24 AWG - 10 AWG)	Introduced Sealed Solder System for Battery Terminals (6 AWG - 4/0)	Issued patent on Sealed Solder Terminals - Rings, Spades, Slip-Ons (24 AWG - 10AWG)
				

SEAL YOUR CONNECTIONS.



The past few years have seen the advent of sweeping technological advances in the automotive, fleet, and marine industries. Many of these advances involve improved electrical systems, controlled by miniature onboard computers. Consequently, small variations in voltage can significantly affect vehicle performance.

It's a Question of Integrity®

To combat this problem, the major manufacturers in these industries are using completely sealed electrical systems. Unfortunately, the repair and maintenance industry is lagging behind. The integrity of sealed electrical harnesses is often breached when repairs are made with inferior, unsealed electrical connectors.

The heat shrink connector is the innovative solution that allows the aftermarket to keep pace with changing technology. Each repair made with a heat shrink connector is individually protected from corrosion, contaminants, and current leakage. This ensures that the original integrity of the wiring harness is maintained.

HOW STRONG ARE YOUR ELECTRICAL CONNECTIONS?

PULL TEST ANALYSIS

	Vinyl	Nylon	Sealed Crimp	Sealed Solder	Sealed Crimp and Solder
Tensile Strength*	57 lbs	70 lbs	89 lbs	102 lbs	103 lbs
Tensile Strength (+/-) over Vinyl	-	23%	56%	79%	81%
Tensile Strength (+/-) over Nylon	-19%	-	27%	46%	47%
Tensile Strength (+/-) over Sealed Crimp	-36%	-21%	-	15%	16%

All terminals were installed on SAE 14 AWG SXL copper stranded wire. All terminals were installed using the T-R-15 multi-purpose crimping tool.
*The pull test data was based on the average of the sample size.

DO IT ONCE. DO IT RIGHT!

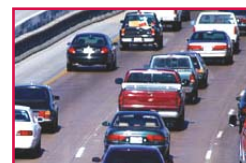
MAKE PERMANENT REPAIRS

Prevent wire corrosion • Eliminate wire pull out • Keep equipment up and running

WITH THE SEALED ELECTRICAL SYSTEM™

WHO USES HEAT SHRINK TERMINALS?

HEAVY DUTY TRUCKING • MARINE • AUTOMOTIVE AFTERMARKET • OEM • HEAVY DUTY EQUIPMENT



RV • OIL FIELDS • MUNICIPALITIES • MILITARY BASES • PLANT MAINTENANCE DEPARTMENTS • MINING



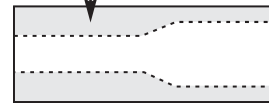
THE IN-LINE BUTT CONNECTOR COMPONENTS

THE MULTIPLE WIRE CONNECTOR

OTHER'S STEP DOWN CONNECTOR

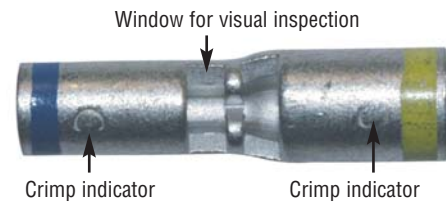


Thick copper wall - Difficult to crimp

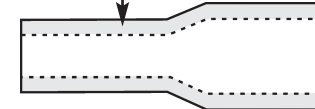


The outside diameter of the butt connector is the same on both ends and only the inside diameter is adjusted for the different wire gauge. This means that the side for the smaller wire has a much thicker wall than normal and is extremely difficult to crimp. **ALMOST IMPOSSIBLE TO CRIMP PROPERLY & WIRE CAN EASILY PULL OUT!!**

OUR VERSION



Uniform copper wall - EASY to crimp



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.

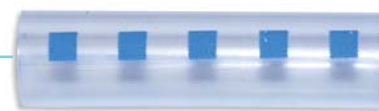
EASY TO CRIMP & PROVIDES STRONG CRIMP TERMINATION!

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

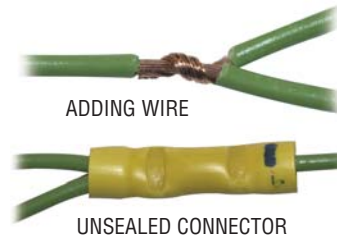


PROBLEMS:

EXISTING METHODS:



QUICK-TAP



ADDING WIRE

UNSEALED CONNECTOR

SOLUTION:

SEALED MULTIPLE WIRE CONNECTORS:



IN-LINE CONNECTOR

PROBLEMS:

EXISTING METHODS:



WIRE NUT



END-CAP

SOLUTION:

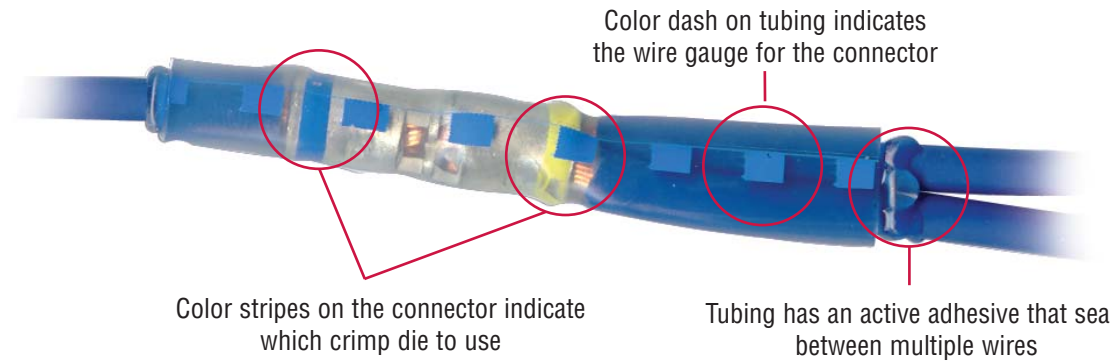
SEALED MULTIPLE WIRE CONNECTORS:



CLOSED-END CONNECTOR

IN-LINE BUTT CONNECTORS

JOIN TWO WIRES TO ONE WIRE ...



HL57-20



HL57-16



HL57-14



HL57-10

BUTT CONNECTORS

Part #	Wire Gauge	Tubing Color	Color Stripe On Connector	Wire	Crimp Die (Insulated)
HL57-20	24-22 AWG	Clear / White Dashes	Side 1: White Side 2: Red	One 24-22 AWG Two 24-22 AWG	White (24-22 AWG) Red (20-18 AWG)
HL57-16	20-18 AWG	Clear / Red Dashes	Side 1: Red Side 2: Blue	One 20-18 AWG Two 20-18 AWG	Red (20-18 AWG) Blue (16-14 AWG)
HL57-14	16-14 AWG	Clear / Blue Dashes	Side 1: Blue Side 2: Yellow	One 16-14 AWG Two 16-14 AWG	Blue (16-14 AWG) Yellow (12-10 AWG)
HL57-10	12-10 AWG	Clear / Yellow Dashes	Side 1: Yellow Side 2: Red	One 12-10 AWG Two 12-10 AWG	Yellow (12-10 AWG) Red (8 AWG)

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 and other similar connectors.

Tubing has an active adhesive that seals multiple wires and eliminates wire pull-out

CLOSED END CONNECTORS

Part #	Connector Wire Range	Tubing Color
HL8-22-14	22-14 AWG	Clear / Blue Dashes
HL8-18-10	18-10 AWG	Clear / Yellow Dashes



HL8-22-14



HL8-18-10

SEALED MULTIPLE WIRE ASSORTMENTS

MINI ASSORTMENT



NSPA-9216
6 ITEMS • 28 PIECES

STARTER ASSORTMENT



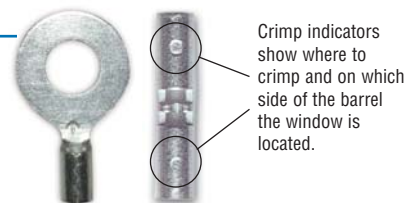
NSPA-5216
6 ITEMS • 55 PIECES

Sealed Crimp & Solder Connectors are crimped for mechanical reliability, soldered for superior strength and conductivity, and sealed for maximum durability. When there is no margin for error, choose **SEALED CRIMP & SOLDER CONNECTORS...THE ULTIMATE CONNECTOR.**

THE COMPONENTS

THE CRIMP CONNECTOR

- Seamless butt connectors for superior crimp performance
- Window in butt connectors allows for solder to flow
- Butt connectors have crimp indicators where the installation tool should be positioned to crimp the connector
- Wire-stop in butt connector prevents over-insertion of wire
- Where possible, terminals have brazed seams to deliver a superior mechanical termination



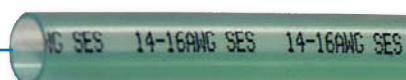
THE SOLDER

- Flux coating to clean metal surfaces
- Pre-measured solder to provide the right amount of solder to ensure a solid termination
- Low-temp solder alloy for ease of installation

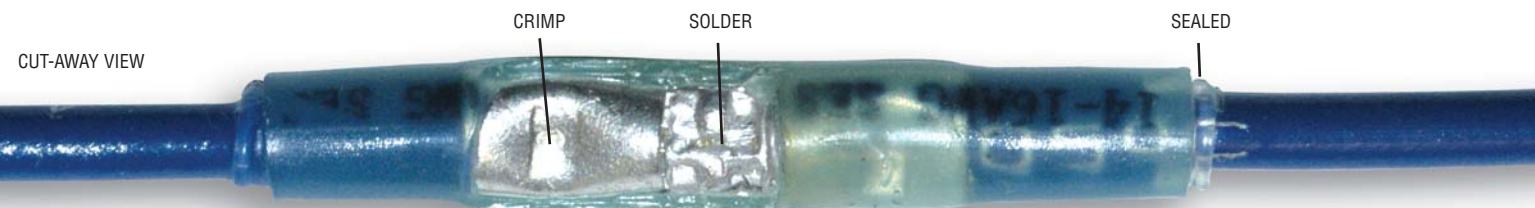


THE HEAT SHRINK TUBING

- Adhesive-lined polyolefin to seal the connection
- Color-coded with wire gauge imprint for easy wire size identification
- Translucent tubing to allow for visual inspection



THE ULTIMATE ELECTRICAL CONNECTION!



FEATURES & BENEFITS

- Crimped for mechanical reliability
- Soldered for superior strength & conductivity
- Sealed for maximum durability
- Sealed Crimp & Solder Connectors meet or exceed the most stringent OEM standards.

INSTALLATION



PART #	GAUGE	COLOR	TYPE	SEAM
BUTT CONNECTORS				
ML5-20	22-24 AWG	Clear	Standard	Butted
ML5-16	18-20 AWG	Red	Standard	Seamless
ML5-14	14-16 AWG	Blue	Standard	Seamless
ML5-10	10-12 AWG	Yellow	Standard	Seamless
STEP-DOWN BUTT CONNECTORS				
ML56-20	22-24 AWG to 18-20 AWG	Red	Step-Down	Butted
ML56-16	18-20 AWG to 14-16 AWG	Blue	Step-Down	Seamless
ML56-14	14-16 AWG to 10-12 AWG	Yellow	Step-Down	Seamless
ML56-10	10-12 AWG to 8 AWG	Pink	Step-Down	Seamless

PART #	GAUGE	COLOR	DESCRIPTION	TYPE	SEAM
RING TERMINALS					
ML116-06	18-20 AWG	Red	#6 stud	Standard	Brazed
ML116-08	18-20 AWG	Red	#8 stud	Standard	Brazed
ML116-10	18-20 AWG	Red	#10 stud	Standard	Brazed
ML116-14	18-20 AWG	Red	1/4" stud	Standard	Brazed
ML116-516	18-20 AWG	Red	5/16" stud	Standard	Brazed
ML116-38	18-20 AWG	Red	3/8" stud	Standard	Brazed
ML114-06	14-16 AWG	Blue	#6 stud	Standard	Brazed
ML114-08	14-16 AWG	Blue	#8 stud	Standard	Brazed
ML114-10	14-16 AWG	Blue	#10 stud	Standard	Brazed
ML114-14	14-16 AWG	Blue	1/4" stud	Standard	Brazed
ML114-516	14-16 AWG	Blue	5/16" stud	Standard	Brazed
ML114-38	14-16 AWG	Blue	3/8" stud	Standard	Brazed
ML110-06	10-12 AWG	Yellow	#6 stud	Standard	Brazed
ML110-08	10-12 AWG	Yellow	#8 stud	Standard	Brazed
ML110-10	10-12 AWG	Yellow	#10 stud	Standard	Brazed
ML110-14	10-12 AWG	Yellow	1/4" stud	Standard	Brazed
ML110-516	10-12 AWG	Yellow	5/16" stud	Standard	Brazed
ML110-38	10-12 AWG	Yellow	3/8" stud	Standard	Brazed
ML110-12	10-12 AWG	Yellow	1/2" stud	Standard	Brazed
SPADE TERMINALS					
ML216-06	18-20 AWG	Red	#6 stud	Standard	Brazed
ML216-08	18-20 AWG	Red	#8 stud	Standard	Brazed
ML216-10	18-20 AWG	Red	#10 stud	Standard	Brazed
ML214-06	14-16 AWG	Blue	#6 stud	Standard	Brazed
ML214-08	14-16 AWG	Blue	#8 stud	Standard	Brazed
ML214-10	14-16 AWG	Blue	#10 stud	Standard	Brazed
ML210-06	10-12 AWG	Yellow	#6 stud	Standard	Brazed
ML210-08	10-12 AWG	Yellow	#8 stud	Standard	Brazed
ML210-10	10-12 AWG	Yellow	#10 stud	Standard	Brazed
ML316S-06	18-20 AWG	Red	#6 stud	Spring Spade	Butted
ML316S-08	18-20 AWG	Red	#8 stud	Spring Spade	Butted
ML316S-10	18-20 AWG	Red	#10 stud	Spring Spade	Butted
ML314S-06	14-16 AWG	Blue	#6 stud	Spring Spade	Butted
ML314S-08	14-16 AWG	Blue	#8 stud	Spring Spade	Butted
ML314S-10	14-16 AWG	Blue	#10 stud	Spring Spade	Butted
ML310S-06	10-12 AWG	Yellow	#6 stud	Spring Spade	Butted
ML310S-08	10-12 AWG	Yellow	#8 stud	Spring Spade	Butted
ML310S-10	10-12 AWG	Yellow	#10 stud	Spring Spade	Butted
SLIP-ON CONNECTORS					
ML6-18-250F	18-20 AWG	Red	Female .250" tab	Standard	Butted
ML6-18-250FF	18-20 AWG	Red	Female .250" tab	Fully Insulated	Butted
ML6-18-250M	18-20 AWG	Red	Male .250" tab	Standard	Butted
ML6-14-250F	14-16 AWG	Blue	Female .250" tab	Standard	Butted
ML6-14-250FF	14-16 AWG	Blue	Female .250" tab	Fully Insulated	Butted
ML6-14-250M	14-16 AWG	Blue	Male .250" tab	Standard	Butted
ML6-10-250F	10-12 AWG	Yellow	Female .250" tab	Standard	Butted
ML6-10-250FF	10-12 AWG	Yellow	Female .250" tab	Fully Insulated	Butted
ML6-10-250M	10-12 AWG	Yellow	Male .250" tab	Standard	Butted



STANDARD SPADE



SPRING SPADE



SEALED CRIMP & SOLDER ASSORTMENTS

MINI ASSORTMENTS



NSPA-9117
3 Items • 60 Pieces



NSPA-5117
4 Items • 61 Pieces



NSPA-5117-T
5 Items • 62 Pieces



NSPA-5203
20 Items • 120 Pieces



NSPA-5204
14 Items • 90 Pieces



NSPA-5204-T
15 Items • 91 Pieces

MAINTENANCE ASSORTMENTS



NSPA-1203 • 24 Items • 285 Pieces



NSPA-1204 • 28 Items • 284 Pieces



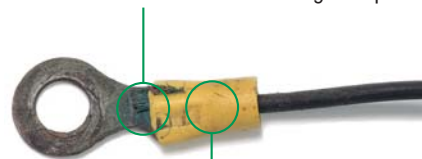
NSPA-1204-T • 29 Items • 285 Pieces

Sealed Solder Connectors are the clear choice of professionals who demand a superior electrical connection. Sealed Solder Connectors provide a high quality, sealed solder connection that takes the guesswork out of soldering. **DON'T SETTLE FOR THE AVERAGE CONNECTOR...SEALED SOLDER CONNECTORS ARE THE BEST SOLDER CONNECTORS AVAILABLE!**

REDUCE RECURRING ELECTRICAL PROBLEMS

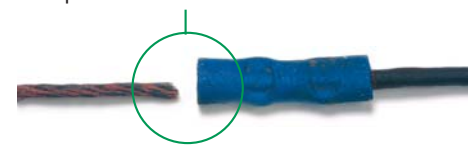
PROBLEMS:

Corrosion on wire causes voltage drop.



Cannot see whether terminal is properly installed.

Wire pulled loose due to strain or vibration.



Standard terminal thickness (Red & Blue)



.032" thickness

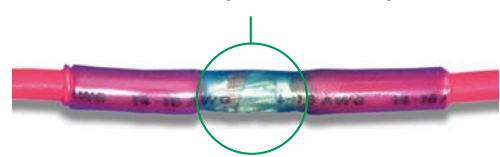
SOLUTIONS:

Adhesive-lined tubing prevents corrosion on the wire.



Translucent tubing allows visual inspection of installation.

Solder termination provides maximum tensile strength & conductivity

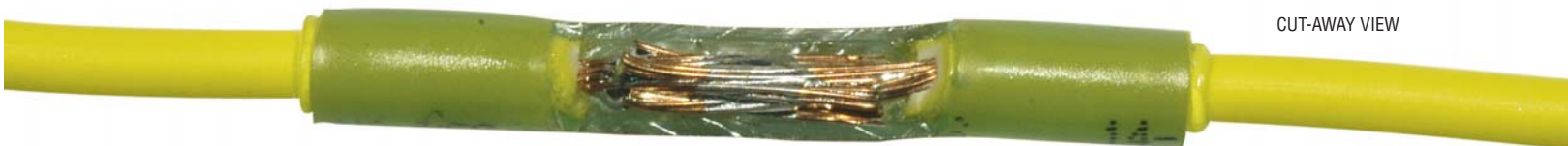


Greater material thickness of terminal bare part - 25% more copper



.040" thickness

THE CLEAR CHOICE OF PROFESSIONALS THAT DEMAND A SUPERIOR ELECTRICAL CONNECTION!



CUT-AWAY VIEW

FEATURES AND BENEFITS

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents wire 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.

INSTALLATION



UL RECOGNIZED PARTS



CSA CERTIFIED PARTS



Ask us for a complete list of applicable part numbers.

PART #	GAUGE	COLOR	DESCRIPTION	TYPE
BUTT CONNECTORS				
ELA5-20	22-24 AWG	Clear		Standard
ELA5-16	18-20 AWG	Red		Standard
ELA5-14	14-16 AWG	Blue		Standard
ELA5-10	10-12 AWG	Yellow		Standard
RING TERMINALS				
ELA120-02X	22-24 AWG	Clear	#2 Stud	Standard
ELA120-04X	22-24 AWG	Clear	#4 Stud	Standard
ELA120-06X	22-24 AWG	Clear	#6 Stud	Standard
ELA116-06X	18-20 AWG	Red	#6 Stud	Standard
ELA116-08X	18-20 AWG	Red	#8 Stud	Standard
ELA116-10X	18-20 AWG	Red	#10 Stud	Standard
ELA116-14X	18-20 AWG	Red	1/4" Stud	Standard
ELA116-516X	18-20 AWG	Red	5/16" Stud	Standard
ELA116-38X	18-20 AWG	Red	3/8" Stud	Standard
ELA114-06X	14-16 AWG	Blue	#6 Stud	Standard
ELA114-08X	14-16 AWG	Blue	#8 Stud	Standard
ELA114-10X	14-16 AWG	Blue	#10 Stud	Standard
ELA114-14X	14-16 AWG	Blue	1/4" Stud	Standard
ELA114-516X	14-16 AWG	Blue	5/16" Stud	Standard
ELA114-38X	14-16 AWG	Blue	3/8" Stud	Standard
ELA110-10X	10-12 AWG	Yellow	#10 Stud	Standard
ELA110-14X	10-12 AWG	Yellow	1/4" Stud	Standard
ELA110-516X	10-12 AWG	Yellow	5/16" Stud	Standard
ELA110-38X	10-12 AWG	Yellow	3/8" Stud	Standard
ELA110-12X	10-12 AWG	Yellow	1/2" Stud	Standard
SPADE TERMINALS				
ELA220-02X	22-24 AWG	Clear	#2 Stud	Standard
ELA220-04X	22-24 AWG	Clear	#4 Stud	Standard
ELA220-06X	22-24 AWG	Clear	#6 Stud	Standard
ELA216-10X	18-20 AWG	Red	#10 Stud	Standard
ELA214-10X	14-16 AWG	Blue	#10 Stud	Standard
ELA210-10X	10-12 AWG	Yellow	#10 Stud	Standard
SLIP-ON CONNECTORS				
ELA6-18F	18-20 AWG	Red	.250" Female	Standard
ELA6-18M	18-20 AWG	Red	.250" Male	Standard
ELA6-14F	14-16 AWG	Blue	.250" Female	Standard
ELA6-14M	14-16 AWG	Blue	.250" Male	Standard
ELA6-10F	10-12 AWG	Yellow	.250" Female	Standard
ELA6-10M	10-12 AWG	Yellow	.250" Male	Standard
FULLY INSULATED SLIP-ON CONNECTORS				
ELA6-18FF	18-20 AWG	Red	.250" Female	Fully Insulated
ELA6-14FF	14-16 AWG	Blue	.250" Female	Fully Insulated
ELA6-10FF	10-12 AWG	Yellow	.250" Female	Fully Insulated



SEALED SOLDER ASSORTMENTS

MINI ASSORTMENTS



NSPA-9112
4 Items • 65 Pieces



NSPA-9113
8 Items • 48 Pieces

STARTER ASSORTMENTS



NSPA-5112
25 Items • 135 Pieces



NSPA-5114
13 Items • 121 Pieces

MAINTENANCE ASSORTMENTS



NSPA-1112-S
30 Items • 259 Pieces



NSPA-1112-ST
31 Items • 260 Pieces



NSPA-1112-L
30 Items • 379 Pieces



NSPA-1112-LT
31 Items • 380 Pieces

Our Sealed Crimp Connector product line is the finest line of “crimp-and-seal” connectors on the market today. New design features, the use of only the finest components, and an expanded product selection place Sealed Crimp Connectors squarely at the top of the class. **IN SHORT...THE BEST JUST GOT BETTER!**

DIFFERENCES BETWEEN BUTTED, BRAZED & SEAMLESS CONNECTORS

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.

BRAZED SEAM CONNECTORS

Formed much like a butted seam, except the seam is brazed together with a solder alloy. May be used with solid or stranded 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 problem of the barrel opening. May be used with solid or stranded wire.

BRAZED SEAM & SEAMLESS CONNECTOR ADVANTAGES

- Better wire contact
- Superior tensile strength
- Less voltage drop
- Prevents wiring failures
- Increases current flow
- Reduces equipment downtime

COMPARISONS

	OURS	THEIRS
	UNIFORM ADHESIVE FLOW Adhesive will not impede contact of terminal	
	TUBING DOES NOT SHRINK IN LENGTH Additional insulation support Additional strain relief	
	WIRE GAUGE IMPRINT Easy identification	

FEATURES & BENEFITS

- Translucent, adhesive-lined polyolefin tubing allows visual inspection, prevents wire 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.
- A selection of over 140 sizes of connectors ensures the right part for every application.



Ask us for a complete list of applicable part numbers.

OURS



BRAZED SEAM

THEIRS



BUTTED SEAM

PART #	GAUGE	COLOR	DESCRIPTION	TYPE	SEAM
BUTT CONNECTORS					
KS5-20	22-24 AWG	Clear	Standard	Standard	Butted
KS5-16	18-20 AWG	Red	Standard	Standard	Seamless
KS5-14	14-16 AWG	Blue	Standard	Standard	Seamless
KS5-10	10-12 AWG	Yellow	Standard	Standard	Seamless
KS5-08	8 AWG	Pink	Standard	Standard	Brazed
“OLD SCHOOL” BUTT CONNECTORS					
KS5-16-CLN	18-22 AWG	Red	Nylon Insulated w/clear adhesive tubing		Seamless
KS5-14-CLN	14-16 AWG	Blue	Nylon Insulated w/clear adhesive tubing		Seamless
KS5-10-CLN	10-12 AWG	Yellow	Nylon Insulated w/clear adhesive tubing		Seamless
WINDOW BUTT CONNECTORS					
KS55-16	18-20 AWG	Red		Window	Seamless
KS55-14	14-16 AWG	Blue		Window	Seamless
KS55-10	10-12 AWG	Yellow		Window	Seamless
STEP-DOWN BUTT CONNECTORS					
KS56-20	22-24 to 18-20 AWG	Clear	Tapered	Step-down	Seamless
KS56-16	18-20 to 14-16 AWG	Blue	Tapered	Step-down	Seamless
KS56-14	14-16 to 10-12 AWG	Yellow	Tapered	Step-down	Seamless
KS56-10	10-12 to 8 AWG	Pink	Tapered	Step-down	Seamless
RING TERMINALS					
KS120-04	22-24 AWG	Clear	#4 stud	Standard	Butted
KS120-06	22-24 AWG	Clear	#6 stud	Standard	Butted
KS116-06	18-20 AWG	Red	#6 stud	Standard	Brazed
KS116-08	18-20 AWG	Red	#8 stud	Standard	Brazed
KS116-10	18-20 AWG	Red	#10 stud	Standard	Brazed
KS116-14	18-20 AWG	Red	1/4" stud	Standard	Brazed
KS116-516	18-20 AWG	Red	5/16" stud	Standard	Brazed
KS116-38	18-20 AWG	Red	3/8" stud	Standard	Brazed
KS114-06	14-16 AWG	Blue	#6 stud	Standard	Brazed
KS114-08	14-16 AWG	Blue	#8 stud	Standard	Brazed
KS114-10	14-16 AWG	Blue	#10 stud	Standard	Brazed
KS114-14	14-16 AWG	Blue	1/4" stud	Standard	Brazed
KS114-516	14-16 AWG	Blue	5/16" stud	Standard	Brazed
KS114-38	14-16 AWG	Blue	3/8" stud	Standard	Brazed
KS110-06	10-12 AWG	Yellow	#6 stud	Standard	Brazed
KS110-08	10-12 AWG	Yellow	#8 stud	Standard	Brazed
KS110-10	10-12 AWG	Yellow	#10 stud	Standard	Brazed
KS110-14	10-12 AWG	Yellow	1/4" stud	Standard	Brazed
KS110-516	10-12 AWG	Yellow	5/16" stud	Standard	Brazed
KS110-38	10-12 AWG	Yellow	3/8" stud	Standard	Brazed
KS110-12	10-12 AWG	Yellow	1/2" stud	Standard	Brazed
KS108-10	8 AWG	Pink	#10 stud	Standard	Brazed
KS108-14	8 AWG	Pink	1/4" stud	Standard	Brazed
KS108-516	8 AWG	Pink	5/16" stud	Standard	Brazed
KS108-38	8 AWG	Pink	3/8" stud	Standard	Brazed
KS108-12	8 AWG	Pink	1/2" stud	Standard	Brazed
KS108L-10	8 AWG	Pink	#10 stud	Lug Style	Seamless
KS108L-14	8 AWG	Pink	1/4" stud	Lug Style	Seamless
KS108L-516	8 AWG	Pink	5/16" stud	Lug Style	Seamless
KS108L-38	8 AWG	Pink	3/8" stud	Lug Style	Seamless
KS108L-12	8 AWG	Pink	1/2" stud	Lug Style	Seamless
3-WAY BUTT CONNECTORS & 4-WAY BUTT CONNECTORS					
KS53-16	18-20 AWG	Red	Standard	Three-way	Brazed
KS53-14	14-16 AWG	Blue	Standard	Three-way	Brazed
KS53-10	10-12 AWG	Yellow	Standard	Three-way	Brazed
KS54-16	18-20 AWG	Red	Standard	Four-way	Brazed
KS54-14	14-16 AWG	Blue	Standard	Four-way	Brazed
KS54-10	10-12 AWG	Yellow	Standard	Four-way	Brazed
MULTI-STUD TERMINALS					
KS116-MS	18-20 AWG	Red	#6, 8, & 10 stud	Standard	Brazed
KS114-MS	14-16 AWG	Blue	#6, 8, & 10 stud	Standard	Brazed
HOOK TERMINALS					
KS414-10	14-16 AWG	Blue	#10 stud	Standard	Brazed



LUG STYLE





FLANGED SPADE



SPRING SPADE

PART #	GAUGE	COLOR	DESCRIPTION	TYPE	SEAM
SPADE TERMINALS					
KS220-04	22-24 AWG	Clear	#4 stud	Standard	Butted
KS220-06	22-24 AWG	Clear	#6 stud	Standard	Butted
KS216-06	18-20 AWG	Red	#6 stud	Standard	Brazed
KS216-08	18-20 AWG	Red	#8 stud	Standard	Brazed
KS216-10	18-20 AWG	Red	#10 stud	Standard	Brazed
KS214-06	14-16 AWG	Blue	#6 stud	Standard	Brazed
KS214-08	14-16 AWG	Blue	#8 stud	Standard	Brazed
KS214-10	14-16 AWG	Blue	#10 stud	Standard	Brazed
KS210-06	10-12 AWG	Yellow	#6 stud	Standard	Brazed
KS210-08	10-12 AWG	Yellow	#8 stud	Standard	Brazed
KS210-10	10-12 AWG	Yellow	#10 stud	Standard	Brazed
KS210-14	10-12 AWG	Yellow	1/4" stud	Standard	Brazed
KS316-06	18-20 AWG	Red	#6 stud	Flanged Spade	Brazed
KS316-08	18-20 AWG	Red	#8 stud	Flanged Spade	Brazed
KS316-10	18-20 AWG	Red	#10 stud	Flanged Spade	Brazed
KS314-06	14-16 AWG	Blue	#6 stud	Flanged Spade	Brazed
KS314-08	14-16 AWG	Blue	#8 stud	Flanged Spade	Brazed
KS314-10	14-16 AWG	Blue	#10 stud	Flanged Spade	Brazed
KS310-06	10-12 AWG	Yellow	#6 stud	Flanged Spade	Brazed
KS310-08	10-12 AWG	Yellow	#8 stud	Flanged Spade	Brazed
KS310-10	10-12 AWG	Yellow	#10 stud	Flanged Spade	Brazed
KS316S-06	18-20 AWG	Red	#6 stud	Spring Spade	Butted
KS316S-08	18-20 AWG	Red	#8 stud	Spring Spade	Butted
KS316S-10	18-20 AWG	Red	#10 stud	Spring Spade	Butted
KS314S-06	14-16 AWG	Blue	#6 stud	Spring Spade	Butted
KS314S-08	14-16 AWG	Blue	#8 stud	Spring Spade	Butted
KS314S-10	14-16 AWG	Blue	#10 stud	Spring Spade	Butted
KS310S-06	10-12 AWG	Yellow	#6 stud	Spring Spade	Butted
KS310S-08	10-12 AWG	Yellow	#8 stud	Spring Spade	Butted
KS310S-10	10-12 AWG	Yellow	#10 stud	Spring Spade	Butted

SLIP-ON CONNECTORS

KS6-18-110F	18-20 AWG	Red	female .110" tab	Standard	Butted
KS6-18-110M	18-20 AWG	Red	male .110" tab	Standard	Butted
KS6-18-187F	18-20 AWG	Red	female .187" tab	Standard	Butted
KS6-18-187M	18-20 AWG	Red	male .187" tab	Standard	Butted
KS6-18-250F	18-20 AWG	Red	female .250" tab	Standard	Butted
KS6-18-250M	18-20 AWG	Red	male .250" tab	Standard	Butted
KS6-14-110F	14-16 AWG	Blue	female .110" tab	Standard	Butted
KS6-14-110M	14-16 AWG	Blue	male .110" tab	Standard	Butted
KS6-14-187F	14-16 AWG	Blue	female .187" tab	Standard	Butted
KS6-14-187M	14-16 AWG	Blue	male .187" tab	Standard	Butted
KS6-14-250F	14-16 AWG	Blue	female .250" tab	Standard	Butted
KS6-14-250M	14-16 AWG	Blue	male .250" tab	Standard	Butted
KS6-10-250F	10-12 AWG	Yellow	female .250" tab	Standard	Butted
KS6-10-250M	10-12 AWG	Yellow	male .250" tab	Standard	Butted

FULLY-INSULATED SLIP-ON CONNECTORS

KS66-18-110F	18-20 AWG	Red	female .110" tab	2 Hump	Butted
KS66-18-187F	18-20 AWG	Red	female .187" tab	1 Hump	Butted
KS66-18-187M	18-20 AWG	Red	male .187" tab	1 Hump	Butted
KS66-18-250F	18-20 AWG	Red	female .250" tab	2 Hump	Butted
KS66-18-250M	18-20 AWG	Red	male .250" tab	2 Hump	Butted
KS66-14-110F	14-16 AWG	Blue	female .110" tab	2 Hump	Butted
KS66-14-187F	14-16 AWG	Blue	female .187" tab	1 Hump	Butted
KS66-14-187M	14-16 AWG	Blue	male .187" tab	1 Hump	Butted
KS66-14-250F	14-16 AWG	Blue	female .250" tab	2 Hump	Butted
KS66-14-250M	14-16 AWG	Blue	male .250" tab	2 Hump	Butted
KS66-10-250F	10-12 AWG	Yellow	female .250" tab	2 Hump	Butted
KS66-10-250M	10-12 AWG	Yellow	male .250" tab	2 Hump	Butted
KS67-18-250F	18-20 AWG	Red	female .250" tab	3M Style	Butted
KS67-18-250M	18-20 AWG	Red	male .250" tab	3M Style	Butted
KS67-14-250F	14-16 AWG	Blue	female .250" tab	3M Style	Butted
KS67-14-250M	14-16 AWG	Blue	male .250" tab	3M Style	Butted
KS67-10-250F	10-12 AWG	Yellow	female .250" tab	3M Style	Butted
KS67-10-250M	10-12 AWG	Yellow	male .250" tab	3M Style	Butted



2 HUMP STYLE



3M STYLE



PART #	GAUGE	COLOR	DESCRIPTION	TYPE	SEAM
FULLY-INSULATED SLIP-ON CONNECTORS (cont.)					
KS60-18-250F	18-20 AWG	Red	female .250" tab	Molex Style	Butted
KS60-18-250M	18-20 AWG	Red	male .250" tab	Molex Style	Butted
KS60-14-250F	14-16 AWG	Blue	female .250" tab	Molex Style	Butted
KS60-14-250M	14-16 AWG	Blue	male .250" tab	Molex Style	Butted
KS60-10-250F	10-12 AWG	Yellow	female .250" tab	Molex Style	Butted
KS60-10-250M	10-12 AWG	Yellow	male .250" tab	Molex Style	Butted
KS61-18-250F	18-20 AWG	Red	female .250" tab	Sure Crimp Style	Butted
KS61-18-250M	18-20 AWG	Red	male .250" tab	Sure Crimp Style	Butted
KS61-14-250F	14-16 AWG	Blue	female .250" tab	Sure Crimp Style	Butted
KS61-14-250M	14-16 AWG	Blue	male .250" tab	Sure Crimp Style	Butted
KS61-10-250F	10-12 AWG	Yellow	female .250" tab	Sure Crimp Style	Butted
KS61-10-250M	10-12 AWG	Yellow	male .250" tab	Sure Crimp Style	Butted
BULLET PLUGS					
KS7-18-15M	18-20 AWG	Red	.157" plug	Standard	Butted
KS7-18-17M	18-20 AWG	Red	.176" plug	Standard	Butted
KS7-18-18M	18-20 AWG	Red	.180" plug	Standard	Butted
KS7-14-15M	14-16 AWG	Blue	.157" plug	Standard	Butted
KS7-14-17M	14-16 AWG	Blue	.176" plug	Standard	Butted
KS7-14-18M	14-16 AWG	Blue	.180" plug	Standard	Butted
BULLET RECEPTACLES					
KS7-18-15F	18-20 AWG	Red	.157" receptacle	Standard	Butted
KS7-18-17F	18-20 AWG	Red	.176" receptacle	Standard	Butted
KS7-18-18F	18-20 AWG	Red	.180" receptacle	Standard	Butted
KS7-14-15F	14-16 AWG	Blue	.157" receptacle	Standard	Butted
KS7-14-17F	14-16 AWG	Blue	.176" receptacle	Standard	Butted



MOLEX STYLE



SURE CRIMP STYLE



SEALED CRIMP ASSORTMENTS

MINI ASSORTMENTS

STARTER ASSORTMENTS



NSPA-9002
3 Items • 60 Pieces



NSPA-5002
20 Items • 115 Pieces



NSPA-5003
13 Items • 121 Pieces



NSPA-5003-T
14 Items • 122 Pieces



NSPA-5003-UL
14 Items • 122 Pieces

MAINTENANCE ASSORTMENTS



NSPA-1002
31 Items • 320 Pieces



NSPA-1003
29 Items • 286 Pieces



NSPA-1003-T
30 Items • 287 Pieces



NSPA-1003-UL
30 Items • 287 Pieces



NSPA-1130
17 Items • 306 Pieces



NSPA-1184
37 Items • 418 Pieces



NSPA-1185
70 Items • 656 Pieces



NSPA-1185
Tray 2

Our Sealed Nylon Crimp Connectors are insulated with nylon heat shrink tubing.

FEATURES & BENEFITS

- Seamless butt connectors - Prevent opening of connector barrel
- Fractional stud sizes & American Wire Gauge (AWG) wire sizes, Easy match to standard U.S. parts
- Ultra abrasion resistant tubing; assures durable protection in the toughest environments
- Conforms to automotive manufacturers' specifications for wiring repairs - necessary for maintaining electrical warranties

INSTALLATION



PART #	GAUGE	COLOR	DESCRIPTION	TYPE
BUTT CONNECTORS				
NS5-16	18-22 AWG	Red	Standard	Standard
NS5-14	14-16 AWG	Blue	Standard	Standard
NS5-10	10-12 AWG	Yellow	Standard	Standard
NS5-08	8 AWG	Yellow	Standard	Standard
STEP-DOWN BUTT CONNECTORS				
NS56-16	18-22 to 14-16 AWG	Blue	Standard	Step-down
NS56-14	14-16 to 10-12 AWG	Yellow	Standard	Step-down
RING TERMINALS				
NS116-06	18-22 AWG	Red	#6 Stud	Standard
NS116-08	18-22 AWG	Red	#8 Stud	Standard
NS116-10	18-22 AWG	Red	#10 Stud	Standard
NS116-14	18-22 AWG	Red	1/4" Stud	Standard
NS116-38	18-22 AWG	Red	3/8" Stud	Standard
NS114-06	14-16 AWG	Blue	#6 Stud	Standard
NS114-08	14-16 AWG	Blue	#8 Stud	Standard
NS114-10	14-16 AWG	Blue	#10 Stud	Standard
NS114-14	14-16 AWG	Blue	1/4" Stud	Standard
NS114-516	14-16 AWG	Blue	5/16" Stud	Standard
NS114-38	14-16 AWG	Blue	3/8" Stud	Standard
NS110-06	10-12 AWG	Yellow	#6 Stud	Standard
NS110-08	10-12 AWG	Yellow	#8 Stud	Standard
NS110-10N	10-12 AWG	Yellow	#10 Stud	Narrow
NS110-10	10-12 AWG	Yellow	#10 Stud	Standard
NS110-14	10-12 AWG	Yellow	1/4" Stud	Standard
NS110-516	10-12 AWG	Yellow	5/16" Stud	Standard
NS110-38	10-12 AWG	Yellow	3/8" Stud	Standard
NS110-12	10-12 AWG	Yellow	1/2" Stud	Standard
NS108L-10	8 AWG	Yellow	#10 Stud	Lug Style
NS108L-14	8 AWG	Yellow	1/4" Stud	Lug Style
NS108L-516	8 AWG	Yellow	5/16" Stud	Lug Style
NS108L-38	8 AWG	Yellow	3/8" Stud	Lug Style
NS108L-12	8 AWG	Yellow	1/2" Stud	Lug Style
SPADE TERMINALS				
NS216-06	18-22 AWG	Red	#6 Stud	Standard
NS216-08	18-22 AWG	Red	#8 Stud	Standard
NS216-10	18-22 AWG	Red	#10 Stud	Standard
NS214-06	14-16 AWG	Blue	#6 Stud	Standard
NS214-08	14-16 AWG	Blue	#8 Stud	Standard
NS214-10	14-16 AWG	Blue	#10 Stud	Standard
NS210-06	10-12 AWG	Yellow	#6 Stud	Standard
NS210-08	10-12 AWG	Yellow	#8 Stud	Standard
NS210-10	10-12 AWG	Yellow	#10 Stud	Standard
NS210-14	10-12 AWG	Yellow	1/4" Stud	Standard

PART #	GAUGE	COLOR	DESCRIPTION	TYPE
HOOK TERMINALS				
NS414-10	14-16 AWG	Blue	#10 Stud	Standard
THREE-WAY BUTT CONNECTORS				
NS53-16	18-20 AWG	Red	Standard	Three-Way
NS53-14	14-16 AWG	Blue	Standard	Three-Way
NS53-10	10-12 AWG	Yellow	Standard	Three-Way
SLIP-ON CONNECTORS				
NS6-18-250F	18-22 AWG	Red	.250 Female	Standard
NS6-14-250F	14-16 AWG	Blue	.250 Female	Standard
NS6-10-250F	10-12 AWG	Yellow	.250 Female	Standard
FULLY INSULATED SLIP-ON CONNECTORS				
NS60-18-250F	18-22 AWG	Red	.250 Female	Molex Style
NS60-18-250M	18-22 AWG	Red	.250 Male	Molex Style
NS60-14-250F	14-16 AWG	Blue	.250 Female	Molex Style
NS60-14-250M	14-16 AWG	Blue	.250 Male	Molex Style
NS60-10-250F	10-12 AWG	Yellow	.250 Female	Molex Style
NS60-10-250M	10-12 AWG	Yellow	.250 Male	Molex Style
BULLET PLUGS				
NS7-18-15M	18-22 AWG	Red	.157 Diameter	Standard
NS7-18-18M	18-22 AWG	Red	.180 Diameter	Standard
NS7-14-15M	14-16 AWG	Blue	.157 Diameter	Standard
NS7-14-18M	14-16 AWG	Blue	.180 Diameter	Standard
BULLET PLUG RECEPTACLES				
NS7-18-15F	18-22 AWG	Red	.157 Diameter	Standard
NS7-18-18F	18-22 AWG	Red	.180 Diameter	Standard
NS7-14-15F	14-16 AWG	Blue	.157 Diameter	Standard
NS7-14-18F	14-16 AWG	Blue	.180 Diameter	Standard



SEALED NYLON CRIMP ASSORTMENTS

MINI ASSORTMENTS



NSPA-9220
3 Items • 60 Total Pieces

STARTER ASSORTMENTS



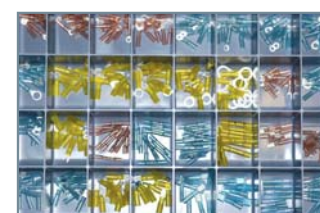
NSPA-5220
20 Items • 115 Total Pieces



NSPA-5221
13 Items • 121 Total Pieces

NSPA-5221-T
is supplied with T-R-15
14 Items • 122 Total Pieces

MAINTENANCE ASSORTMENTS



NSPA-1220
31 Items • 320 Total Pieces



NSPA-1221
29 Items • 286 Total Pieces

NSPA-1221-T
is supplied with T-R-15
30 Items • 287 Total Pieces

12 AWG Wire 14 AWG Wire



Has two stripes - one on each end - to indicate which wire size to insert, and which crimp die to use

WHY IS OURS SO MUCH BETTER?

THEIRS:



The outside diameter of the butt connector is the same on both ends and only the inside diameter is adjusted for the different wire gauge. This means that the side for the smaller wire has a much thicker wall than normal and is extremely difficult to crimp.

ALMOST IMPOSSIBLE TO CRIMP PROPERLY & WIRE CAN EASILY PULL OUT!!

THEIRS:



Has a color stripe to indicate where the smaller size of wire is inserted. However, it must be crimped in the larger crimp die. For example, on their connector for 14-16 to 10-12 AWG, the BLUE stripe indicates the side where a 14-16 AWG wire is to be inserted. However, it must be crimped in the YELLOW crimp die.

CONFUSING!

OURS!



We vary the inside AND the outside diameter of the connector which means that both sides will make a sound mechanical crimp. Also, has a window which allows for visual inspection

EASY TO CRIMP & PROVIDES STRONG CRIMP TERMINATION!

OURS!



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 AWG or 16 AWG wire is to be inserted, and it will be crimped in the blue crimp die.

MAKES SENSE!

SEALED CRIMP CONNECTORS



PART #	DESCRIPTION	Color
KS56-20	24 to 18-22 AWG	Red
KS56-16	18-22 to 14-16 AWG	Blue
KS56-14	14-16 to 10-12 AWG	Yellow
KS56-10	10-12 to 8 AWG	Pink

VINYL CONNECTORS



PART #	DESCRIPTION	Color
WTV-56-20	24-26 AWG to 18-22 AWG	Red
WTV-56-16	18-22 AWG to 14-16 AWG	Blue
WTV-56-14	14-16 AWG to 10-12 AWG	Yellow
WTV-56-10	10-12 AWG to 8 AWG	Pink

SEALED CRIMP & SOLDER CONNECTORS



PART #	DESCRIPTION	Color
ML56-20	24 AWG to 18-22 AWG	Red
ML56-16	18-22 AWG to 14-16 AWG	Blue
ML56-14	14-16 AWG to 10-12 AWG	Yellow
ML56-10	10-12 AWG to 8 AWG	Pink

NON-INSULATED CONNECTORS



PART #	DESCRIPTION	Color
ML56-20-BP	24-26 AWG to 18-22 AWG	Red
ML56-16-BP	18-22 AWG to 14-16 AWG	Blue
ML56-14-BP	14-16 AWG to 10-12 AWG	Yellow
ML56-10-BP	10-12 AWG to 8 AWG	Pink

THIN WALL



HST100 SERIES

Shrink Ratio: 2 to 1
A flexible, general purpose tubing for use where an adhesive seal is not needed. Conforms well to irregular shapes.

- Insulation and strain relief for wire terminals
- Color-coding of electrical harnesses
- Wire bundling
- Self-extinguish (except clear)

Stocked Colors: Black, Clear, Red, Blue, Green, Yellow & White
Standard Cut Lengths: Bulk, 100', 25', 8', 4', 12", 6"
Pre-Shrink ID: 3/64", 1/16", 3/32", 1/8", 3/16", 1/4", 3/8" 1/2", 3/4", 1", 1 1/2", 2", 3", 4"

FLEXIBLE ADHESIVE-LINED



HST200 SERIES

Shrink Ratio: 3 to 1
A flame-retardant tubing (except clear) with an internal layer of thermo-plastic adhesive which provides a barrier against contaminants. Still highly flexible for conforming to irregular shapes.

- Environmental protection for electronic components
- Protection of automobile, marine and truck wire splices and harness breakouts
- Adhesive-lining provides a seal against corrosion.

Stocked Colors: Black, Clear, Red
Standard Cut Lengths: 48", 12", 6"
Pre-Shrink ID: 1/8", 3/16", 1/4", 3/8", 1/2", 3/4", 1"

TINTED ADHESIVE-LINED



HST300 SERIES

Shrink Ratio: Exceeds 3 to 1
Our tinted, semi-rigid adhesive-lined heat shrink tubing is the clear choice for insulating and color-coding small gauge wire connections. This tubing offers several distinct advantages:

- Tubing is tinted for color-coding, but is also translucent to allow the installer to view the underlying material.
- Wire gauge imprint for ease of wire identification both before and after installation.
- Adhesive-lining provides a barrier against contaminants.

Stocked Colors: Clear, Red, Blue, Yellow
Standard Cut Lengths: 48", 12", 6"
Pre-Shrink ID: .115", .245", .360"

SEMI-RIGID ADHESIVE-LINED



HST400 SERIES

Shrink Ratio: Exceeds 2 1/2 to 1
A semi-rigid tubing with a co-extruded integral adhesive lining. Provides a tough protective and insulating barrier, highly resistant to penetration by moisture and the attack of chemicals and solvents.

- Easy to remove once installed
- Electrical wire splices, breakouts, connections and solder joints
- End-sealing of electrical cables and rigid tubings

Stocked Colors: Black, Red, Blue, Brown, Gray, Yellow & White
Standard Cut Lengths: 48", 12", 6"
Pre-Shrink ID: 1/8", 3/16", 1/4", 3/8" 1/2", 3/4", 1"

SPECIALTY TUBING & ADHESIVE-LINED



HST500 SERIES



HST600 SERIES

HST500 SERIES

Shrink Ratio: 4 to 1
Both series are made of all weather, polyolefin tubing with a very active adhesive lining.

- Excellent for sealing multiple wires
- Puncture resistant and provides superior strain relief

Stocked Colors: Clear
Standard Cut Lengths: 48", 12", 6"
Pre-Shrink ID: .220", .30", .35", .45", .70"

HST600 SERIES

Shrink Ratio: 6 to 1
Stocked Colors: Black
Standard Cut Lengths: 48", 12", 6"
Pre-Shrink ID: .75", 1.3", 1.75", 2.0", 2.75", 3.5", 4.7"

HEAVY WALL



HST700, 800 & 850 SERIES

Shrink Ratio: 3 to 1
A sturdy, heavy wall tubing with excellent insulating, abrasion-resisting, and strain-relieving properties. The thermo-plastic adhesive provides superior environmental protection.

- Battery splices and terminals
- **DIRECT BURIAL, UNDERWATER ENVIRONMENTS**
- Meets UL486D
- Any connection in harsh conditions
- Adhesive-lining provides a barrier against contaminants

Stocked Colors: Black, Red
Standard Cut Lengths: 48", 12", 6", 2", 1 1/2"
Pre-Shrink ID: .30", .40", .50", .75", .80", 1.1", 1.5", 2.0", 3.0", 4.5", 6.0", 7.0"

Our Sealed Solder System for Battery Terminals product line is the innovative solution for soldering cable terminations. Pre-measured solder pellets and adhesive-lined heat shrink tubing combine to provide maximum conductivity and a corrosion-proof seal. The result is a high quality termination without the need for expensive crimping tools.

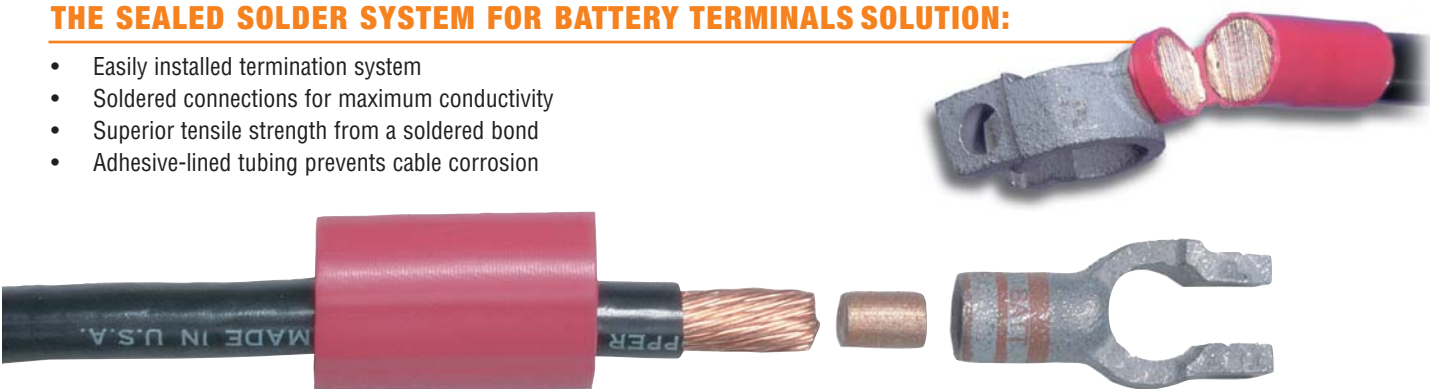
FREQUENT PROBLEMS IN BATTERY CABLE CONNECTIONS:

- Improperly installed connectors
- Voltage drop
- Vibration damage
- Corrosion in cable



THE SEALED SOLDER SYSTEM FOR BATTERY TERMINALS SOLUTION:

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



FEATURES AND BENEFITS:

- 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 "No-Clean" liquid flux prevent dirt and contaminants from hindering the soldering process.
- Color-coded, pre-cut lengths of heat shrink tubing provide positive designation of polarity and make installation easy.
- Installation requires only standard shop tools which eliminates the need for an expensive crimping tool.

NO EXPENSIVE TOOLS NEEDED

- Can be installed using only a standard propane shop torch and a utility knife
- No need to purchase an expensive crimping tool



REQUIRES NO SPECIAL CONNECTORS

- Works with any brand of closed-end battery terminals or starter lugs
- Use with your current inventory - no need to purchase special "Solder-Only" connectors
- The least expensive method of obtaining a high quality soldered and sealed connection

SOLDER PELLETS

- Pre-measured to assure the right amount of solder
- Color-coded to industry standards to ensure correct product identification
- Flux core prevents dirt and contaminants from hindering the soldering process



HEAVY WALL ADHESIVE-LINED HEAT SHRINK TUBING

- Color-coded for positive identification of polarity
- Pre-cut to the proper length for ease of installation
- Adhesive-lined to provide a permanent seal against corrosion



PART #	GAUGE	COLOR	DESCRIPTION	
SOLDER PELLETS				
CL-6	6 AWG	Grey		
CL-4	4 AWG	Grey		
CL-2	2 AWG	Green		
CL-1	1 AWG	Pink		
CL-1-0	1/0 AWG	Black		
CL-2-0	2/0 AWG	Orange		
CL-3-0	3/0 AWG	Purple		
CL-4-0	4/0 AWG	Yellow		
HEAVY WALL ADHESIVE-LINED HEAT SHRINK TUBING				
HST857B-1.5	6 AWG	Black	1-1/2" Length	.50" ID
HST857R-1.5	6 AWG	Red	1-1/2" Length	.50" ID
HST858B-1.5	4-1/0 AWG	Black	1-1/2" Length	.75" ID
HST858R-1.5	4-1/0 AWG	Red	1-1/2" Length	.75" ID
HST859B-2	2/0-4/0 AWG	Black	2" Length	1.10" ID
HST859R-2	2/0-4/0 AWG	Red	2" Length	1.10" ID
LIQUID FLUX				
CL-FLUX	"No-Clean" Liquid Flux		2 oz. bottle	



INSTALLATION



SEALED SOLDER SYSTEM FOR BATTERY TERMINALS ASSORTMENTS

MINI ASSORTMENTS



NSPA-5111
15 Items • 53 Pieces

MAINTENANCE ASSORTMENTS



NSPA-1111 • 16 Items • 127 Pieces



NSPA-1204-T • 29 Items • 285 Pieces

SELF-IGNITING MICRO BLASTER TORCH

T-MT-4E

- Butane powered micro torch
- Includes a refillable gas lighter
- Produces flame temperatures up to 2400°F
- Hundreds of uses ranging from heat shrinking to soldering
- A must for every tool kit
- Self-igniting mechanism with a “lock-on” feature



SELF-IGNITING SUPER BLASTER TORCH

T-MTC-51*

- Plastic canister torch
- Self-Igniting, Piezo Electronic Ignition System
- 2500°F/1300°C
- 120 minutes of continuous use
- Refillable
- Windproof flame
- Hand held or table top

*Butane not included

T-MTC-51B*

*Includes butane



SELF-IGNITING PROFESSIONAL TORCH

T-MTC-55

- Brass canister torch
- Self-Igniting, Piezo Electronic Ignition System
- 2500°F/1300 °C
- 220 minutes of continuous use
- Refillable
- Windproof flame
- Removable base - hand held or table top



SELF-IGNITING HEAVY DUTY TORCH

T-MTC-58

- Large flame, similar to propane torch
- Self-Igniting, Piezo Electronic Ignition System
- 2600°F/1350 °C
- 120 minutes of continuous use
- Refillable
- Windproof flame
- Hand held or table top



MULTI-PURPOSE HAND TOOL

T-R-15

- Crimping, cutting, stripping and rethreading tool
- Heat treated steel with padded vinyl handles
- Wire cutter is located at tip for easy access
- Wire stripper makes a complete cut of wire insulation with one stroke
- Cuts, crimps and strips 26 to 10 gauge wire and crimps ignition terminals
- Cuts and rethreads 4-40, 6-32, 8-32, 10-24 and 10-32 machine screws



RATCHET TOOL

T-R-50

- 4 crimp nests - 8, 10-12, 14-16, 18-22
- Ensures uniform crimp termination regardless of user
- Release switch if terminal or wire is inserted improperly
- High quality, economical tool
- Alignment guide to ensure dies won't slip during crimping
- Designed for insulated connectors



PRODUCT SPECIFICATIONS

SEALED CONNECTORS

	Sealed Crimp Connectors	Sealed Solder Connectors	Sealed Crimp and Solder Connectors	Sealed Multiple Wire Connectors	Sealed Nylon Crimp Connectors	Sealed Solder System for Battery Terminals
TERMINAL HEAT SHRINK TUBING						
Material	Polyolefin	Polyolefin	Polyolefin	Polyolefin	Nylon-12	Polyolefin
Shrink Ratio	3 to 1	3 to 1	3 to 1	4 to 1	3 to 1	3 to 1
Recover Temperature	135°C	135°C	135°C	121°C	180°C	121°C
Continuous Operating Temp	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 125°C	-55° to 110°C
Flammability	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant
Temperature Rating	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 125°C	-55° to 110°C
Tensile Strength	2200 PSI	2200 PSI	2200 PSI	2450 PSI	2200 PSI	2100 PSI
Longitudinal Change	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%	+1% to -10%
Dielectric Strength	900 Volts/Mil	900 Volts/Mil	900 Volts/Mil	500 Volts/Mil	900 Volts/Mil	500 Volts/Mil
UL Voltage Rating	600 Volts	600 Volts	600 Volts	-	600 Volts	600 Volts
Corrosion Resistance	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive	Non-Corrosive
Fungus Resistance	Non-Nutrient	Non-Nutrient	Non-Nutrient	-	Non-Nutrient	Non-Nutrient
Water Absorption	<0.1%	<0.1%	<0.1%	-	<0.25%	<0.1%
UL	E157227	E157227	E157227	-	E-157227	486D
CSA	-	-	-	-	-	C22.2
Mil Specs	MIL-DTL-23053/4	MIL-DTL-23053/4	MIL-DTL-23053/4	-	MIL-I-23053/4, Class 1	MIL-DTL-23053/15, Class 2
Other Specs	AMS 3534	AMS 3534	AMS 3534	Chrysler MS-DB56 CAN 3686 Ford ESB-M97D56A1	AMS 3634	AMS 3634
SOLDER						
Contains Solder Alloy †	No	Yes	Yes	No	No	Yes
Applicable Specifications	N/A	J-STD-006	J-STD-006	N/A	N/A	J-STD-006
FLUX						
Applicable Specifications	N/A	J-STD-004	J-STD-004	N/A	N/A	J-STD-004

† - Solder used contains any or all of the following: Antimony, Cadmium, Copper, Indium, Silver, Iron, Aluminum, Nickel, Arsenic, Zinc, Bismuth, Gold, Tin, Lead

HEAT SHRINK TUBING

	HST100 Series	HST200 Series	HST300 Series	HST400 Series	HST500 Series
	Thin Wall	Flexibe Adhesive-Lined	Tinted Adhesive-Lined	Semi-Rigid Adhesive-Lined	High Adhesive Flow
Material	Polyolefin Polyolefin	Polyolefin	Polyolefin	Polyolefin	
Shrink Ratio	2 to 1	3 to 1	3 to 1	2.5 to 1	4 to 1
Recover Temperature	121°C	121°C	135°C	135°C	121°C
Continuous Operating Temp	-55° to 135°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C
Flammability	Self-extinguish UL224 *	Self-extinguish UL224 *	Non-Flame Retardant	Non-Flame Retardant	Non-Flame Retardant
UL	E35586 *	E157227	E157227	E157227	-
CSA	LR31929 *	-	-	-	-
Mil Specs	MIL-DTL-23053/5, Class 1 *	MIL-DTL-23053/4, Class 3	MIL-DTL-23053/4	MIL-DTL-23053/4	Chrysler MS-DB56 CAN
Other Specs	-	-	-	-	3686Ford ESB-M97D56A1
	HST600 Series	HST700 Series	HST800 Series	HST850 Series	
	High Ratio Adhesive-Lined	Medium Duty Adhesive-Lined	Heavy Wall, Adhesive-Lined	Heavy Wall, Adhesive Lined for Battery Terminals	
Material	Polyolefin	Polyolefin	Polyolefin	Polyolefin	
Shrink Ratio	5 to 1	3 to 1	3 to 1	3 to 1	
Recover Temperature	120°C	121°C	121°C	121°C	
Continuous Operating Temp	-55° to 110°C	-55° to 110°C	-55° to 110°C	-55° to 110°C	
Flammability	Meets UL-94, V-0 Flame rating	Flame Retardant	Flame Retardant	Non-Flame Retardant	
UL	-	-	486D	486D	
CSA	-	-	-	C22.2	
Mil Specs	MIL-DTL-23053/15, Class 1	MIL-DTL-23053/15, Class 2	MIL-DTL-23053/15, Class 2	MIL-DTL-23053/15, Class 2	

* Does Not include clear tubing

**STOP WIRE
CORROSION**



**MAKE PERMANENT
REPAIRS**

DO IT ONCE. DO IT RIGHT!



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