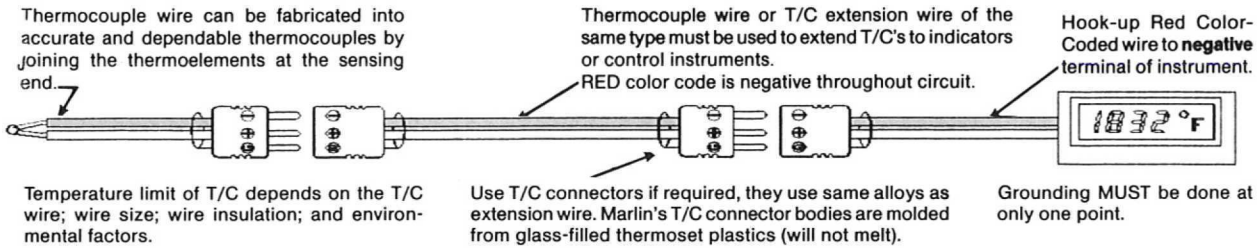


NOTICE:

Prices and availability are subject to change without notice.

Please contact Marlin Manufacturing before ordering for updated pricing.

THERMOCOUPLE CONNECTORS 3-POLE APPLICATION



A thermocouple is a pair of dissimilar wires so joined as to produce a thermally generated emf when its ends are at different temperatures. Several combinations of dissimilar pairs have become standardized and used in temperature instrumentation. T, J, E, K, N, R, S, B are letter codes designating some popular thermocouples that are readily available. Each combination has its own unique emf output and its own properties that make them more applicable for a particular use. Thermocouple theory allows the extension of the thermocouple without affecting its emf output when the extension wire and connectors have the same thermoelectric characteristics. For example, when a type "K" thermocouple is being used the wires and connectors used to extend it should be also type "K." The different types have color codes, for instance "K" type is yellow, assigned to them for easy identification so as to help prevent mismatching of extension wire connectors, and thermocouples. For example in the yellow color code of the type "K" circuit a blue type "T" connector would be an obvious improper component.

The generalized thermocouple system may be divided into five basic areas: Hot Zone/Gradient Area/Extension Region/Reference Junction/and Readout. The extension region is generally where thermocouple connectors are used to facilitate thermocouple-to-readout hook-up. In a simplistic and isolated system the thermocouple will perform to specifications. Unfortunately, these low voltage thermocouple signals can be interfered with from power lines, relays, motors, transformers and all other power associated appliances. This electrical noise can be reduced by the correct application of shields and grounding techniques.

3-pole thermocouple connectors provide a shield terminal that maintains the shield circuit from metal sheathed thermocouples to extension wires or from wire

to wire hook-ups. Grounding must be done at one point and only one point.

Thermocouple connectors and panels are polarized making them virtually impossible to mismatch. Marlin's connectors and panels are molded from glass filled thermoset compounds for high strength. They will not melt and are rated for continuous use to 400°F (205°C) continuous duty and 500°F (260°C) intermittently. They are color coded and letter coded for type and polarization identification. Current carrying metal parts are made of alloys matching the characteristics of the thermocouple type with which they are intended to be used. Contact springs are non-magnetic, non-corrosive, and are specially selected and processed to withstand the rated operating conditions.

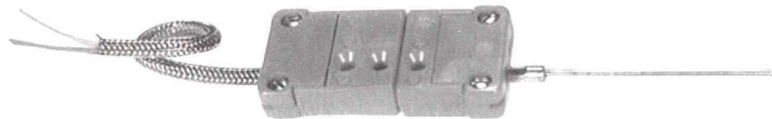
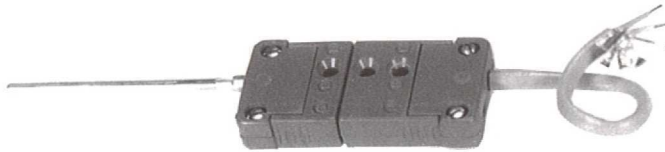
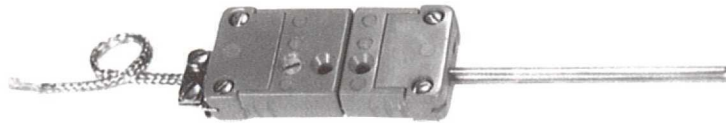
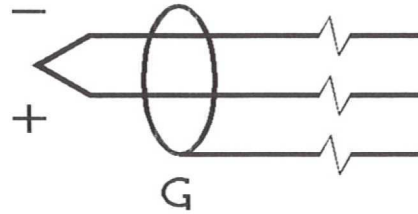
An exception to the color code is the red colored high temperature version of these connectors and panels which are rated for use to 800°F (425°C) continuous duty and 1000°F (540°C) intermittently. They are molded from a highly stable and inert silicone-based thermoset compound filled with glass fibers for strength. These high temperature units are colored red for all thermocouple types but do retain the letter and polarization identification. The premium materials of which Marlin's high-temperature products are made make them unusually suitable for harsh environments, even where extreme temperature tolerance may not be a factor. In particular, these high temperature units have proven durable in the presence of radiation, and their low-outgassing properties also make them highly satisfactory for use under vacuum. Marlin's high temperature connectors are fully compatible, mechanically and electrically, with normal-temperature connectors, and share the same accessories and hardware. Regular and high-temperature connectors of like kind will fully intermate.



Mini 3-Pole (Patent Pending)

Miniature Thermocouple Connectors for easy mating of small diameter sheathed thermocouple to extension wires where an electrical interference noise shield is required.

Featuring reliable, easy hook-up Jab-in® thermocouple terminals with built-in shield wire connection.



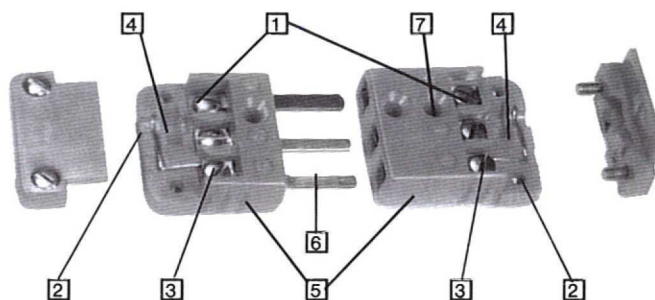
These 3-pole miniature thermocouple connectors are the most functional terminations available. Developed by temperature instrumentation experts in response to user requirements, these connectors achieve dependable connections between small diameter metal sheathed thermocouples and shield extension wires. Fine wires found in these units are easily handled and an automatically terminated shield wire circuit is provided.

The premium materials of which these connectors are made make them unusually suitable for harsh environments even where extreme temperature tolerance is a factor.

The real cost of a connector includes the time required for installation and reliability in service. The mini 3-pole connectors give you the best performance at the lowest cost.

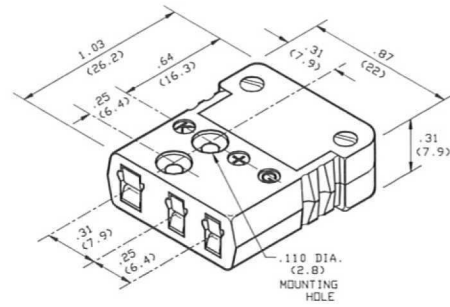
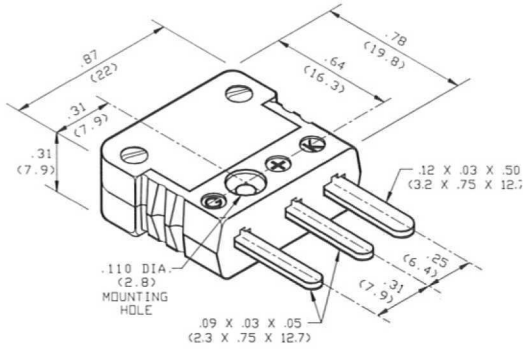


THERMOCOUPLE CONNECTORS MINI 3-POLE PLUGS AND JACKS



Feature/Function	Benefit
1. Jab-in® terminals/ Wire is sandwiched between contacts of alloy material without damage.	Even the very fine wires (.003") of .020" diameter sheathed thermocouples can be installed quickly and reliably without special tools or set-ups. Jab-in® terminals require only ¼" of insulation to be removed. Looped wire ends are eliminated.
2. Built-in Shield wire connection/ Shield circuit is connected to 3rd-pole of connector via ground link.	The need for a special shield circuit wire to connect the sheath or the extension wire is eliminated resulting in a dependable, time-saving installation.
3. Removable shield wire connection/ Built-in shield wire connection can be eliminated when not required.	After the built-in shield link is removed the shield from the extension wire or a 3-wire RTD can be easily and quickly installed using the Jab-in® terminal which accepts up to 24 gauge (.020") wire.
4. Offset hex entrance/ Accepts braze-on or crimp-on hex sheath adapters, external sheath adapters, and wire clamps.	The fine wires of the small diameter sheathed thermocouples are not strained. Technicians work with same-length wires for ease of installation.
5. Molded body/ Connector body and cap are molded of thermoset, glass-reinforced compounds that are color coded.	Thermoset molded connectors will withstand severe temperature environments without melting or deforming. Color codes allow easy thermocouple type identification which helps prevent mis-applications of connectors.
6. Polarized pins and double-wipe inserts/ Connectors are virtually impossible to mismatch. Inserts are spring loaded with funnel type entrances.	Elimination of mismatched connectors saves time in trouble-shooting instrumentation. Tight grip assures low signal loss. The entrance provides easy mating.
7. Mounting Hole/ Through hole provides clearance for #3 screw.	Surface mounting and stacking, if required can be made without special fixtures or secondary operations to the connector.

THERMOCOUPLE CONNECTORS MINI 3-POLE PLUGS AND JACKS



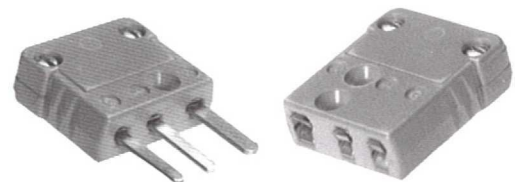
Specifications (Patent Pending):

- Mini 3-Pole Thermocouple Connector plugs and jacks provide rapid, dependable connections between small diameter sheathed thermocouples and extension wires with shield terminals an integral part of the system. In its all-copper version the 3-pole mini is ideal for 3-wire RTD applications.
- The thermocouple alloys of the prongs and inserts match ANSI standards to maintain thermocouple integrity. The thermocouple alloy-type letter code, polarity and shield terminal are identified by symbols that are molded into the connector body.

T/C Type Code	Connector Positive (+) T/C Alloy	Connector Negative (-) T/C Alloy	Shield Terminal Alloy	Body Color Code
T	Copper	Constantan	Copper	Blue
J	Iron	Constantan	Copper	Black
E	Chromel	Constantan	Copper	Violet
K	Chromel	Alumel	Copper	Yellow
N	Nicrosil	Nisil	Copper	Orange
R	Copper	#11 Alloy	Copper	Green
S	Copper	#11 Alloy	Copper	Green
U	Copper	Copper	Copper	White
C	#405 Alloy	#426 Alloy	Copper	Brown
1,2,3	Copper	Copper	Copper	White
ALL HI-TEMP CONNECTORS				Red

- Jab-In® terminals require only 1/4" of insulation to be removed. Wire is sandwiched between contacts of thermocouple alloy without damage.
- For use in corrosive environments, gold or nickel plated prongs and inserts are available. Caution — system errors can result from use of plated contacts if significant thermal gradients exist at the connector.
- Connector bodies are molded from glass-filled thermoset compounds (will not melt) for high strength and dependability. The color coded connector bodies will withstand ambient temperatures to 400°F (205°C) continuous duty and 500°F (260°C) intermittent use.
- High temperature connector bodies (All high temperature connector bodies are color coded RED) are made of a highly stable and inert silicone-based thermoset compound that will withstand ambient temperatures to 800°F (425°C) continuous duty and 1000°F (540°C) intermittent use. These units have proven durable in the presence of radiation, and their low-outgassing properties also make them highly satisfactory for use under vacuum.
- Surface mounting and stacking, if required, can be made by use of molded-in clearance holes.
- Shield terminals provide isolated connections of the shield circuit via the built-in sheath-to-shield link.

- Polarized pins are virtually impossible to mismatch.
- Large double-wipe jack inserts assure tight grip and low signal loss. With an isolated screw design, contact is all thermocouple alloy from wire entrance to wire exit.



THERMOCOUPLE CONNECTORS MINI 3-POLE PLUGS AND JACKS

Mini 3-Pole Plugs & Jacks

Code No.	\$/Each	Description	Discount Schedule
1261-*	3.80	Mini 3-pole Plug	A
1211-*	4.75	Mini 3-pole Jack	

*-Thermocouple Type Code
T,J,E,K,N,R,S,U,123

Please note accessory options

Hi-Temp Mini 3-Pole Plugs & Jacks

Code No.	\$/Each	Description	Discount Schedule
1361-*	6.50	H/T Mini 3-Pole Plug	B
1311-*	8.00	H/T Mini 3-Pole Jack	

*-Thermocouple Type Code
T,J,E,K,N,R,S,U,123

Please note accessory options

"C" Mini 3-Pole Plugs & Jacks (Tungsten 5% Re/Tungsten 26% Re)

Code No.	\$/Each	Description	Discount Schedule
1261-C	4.80	Mini 3-pole Plug	B
1211-C	5.75	Mini 3-pole Jack	

"C" Hi-Temp Mini 3-Pole Plugs & Jacks (Tungsten 5% Re/Tungsten 26% Re)

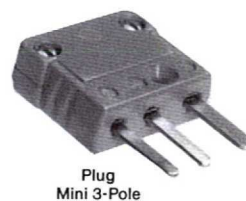
Code No.	\$/Each	Description	Discount Schedule
1361-C	7.50	H/T Mini 3-Pole Plug	B
1311-C	9.00	H/T Mini 3-Pole Jack	

Discount Schedule A	
Quantity	Factor
1-14	NET
15-49	.90
50-99	.85
100-249	.80
250-499	.75
500-999	.70
1000-1999	.65
2000+	.60

Discount Schedule B	
Quantity	Factor
1-14	NET
15-49	.90
50-99	.85
100-249	.80
250-499	.75

T/C Type Code	Connector Positive (+) T/C Alloy	Connector Negative (-) T/C Alloy	Shield Terminal Alloy	Body Color Code
T	Copper	Constantan	Copper	Blue
J	Iron	Constantan	Copper	Black
E	Chromel	Constantan	Copper	Violet
K	Chromel	Alumel	Copper	Yellow
N	Nicrosil	Nisil	Copper	Orange
R	Copper	#11 Alloy	Copper	Green
S	Copper	#11 Alloy	Copper	Green
U	Copper	Copper	Copper	White
C	#405 Alloy	#426 Alloy	Copper	Brown
1,2,3	Copper	Copper	Copper	White
ALL HI-TEMP CONNECTORS				Red

Gold plated contacts available at \$1.50 per circuit. Add to list price.
Use suffix "G" (i.e. 1261-K-G).



Plug
Mini 3-Pole



Jack
Mini 3-Pole



THERMOCOUPLE CONNECTORS MINI 3-POLE PLUG AND JACK ACCESSORIES

Accessory

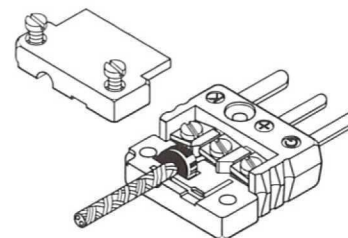
Grommet Wire Grip			
Part No.	Size	\$/Each	Discount Schedule
1279-030	.030"	0.15	A
1279-062	.062"	0.15	
1279-090	.090"	0.15	

Option 1: Grommet is furnished with each connector at no cost. Give part number of desired size otherwise 1279-062 is furnished as the standard package.

Description

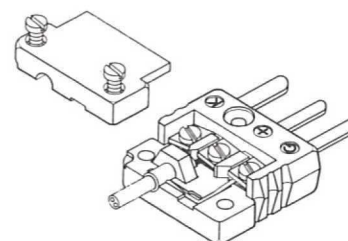
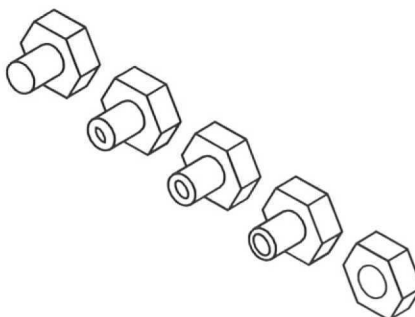


Typical Installation

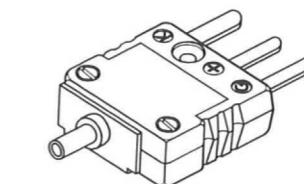
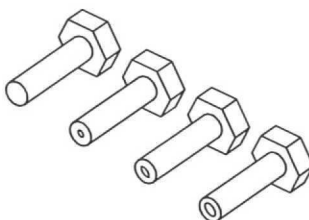


Mini Braze-on Adapter			
Part No.	Size	\$/Each	Discount Schedule
1277-000	blank	0.30	A
1277-040	.040"	0.30	
1277-062	.062"	0.30	
1277-090	.090"	0.30	
1277-125	.125"	0.30	

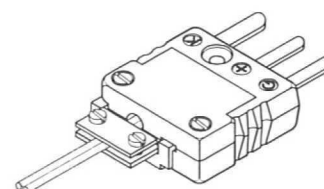
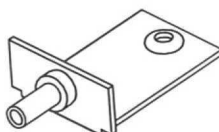
Option 2: Braze-on Adapter is furnished with each connector at no cost instead of grommets specified. Give part number of desired size.



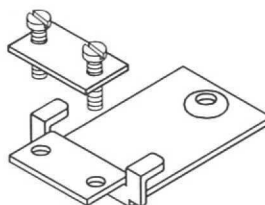
Mini Hex Crimp Adapter			
Part No.	Size	\$/Each	Discount Schedule
1275-000	blank	0.40	A
1275-020	.020"	1.30	
1275-040	.040"	0.40	
1275-062	.062"	0.40	



Mini 3-Pole Crimp Adapter			
Part No.	Size	\$/Each	Discount Schedule
1272-062	.062"	1.75	B
1272-125	.125"	1.75	



Mini 3-Pole Wire Clamp		
Part No.	\$/Each	Discount Schedule
1282	1.25	B



Replacement Shield Link			
Part No.	\$/Each	Notes	Discount Schedule
1261-006	0.50	for Plug	B
1211-006	0.50	for Jack	

Shield Links are supplied installed at no cost when a mini 3-pole plug or jack is ordered.

