

## Matching Metal Alloy Construction Ensures Consistent Temperature

Many varieties of thermocouple connectors are available from Watlow®. Watlow's broad offering includes benefits such as high impact strength, fast installation and high temperature capabilities.

Listed below are the various connectors and systems from which to choose:

- Standard thermocouple connectors
- Quick-attach thermocouple connectors
- High temperature connectors
- Three-pole connectors for RTD applications
- Miniature thermocouple connectors

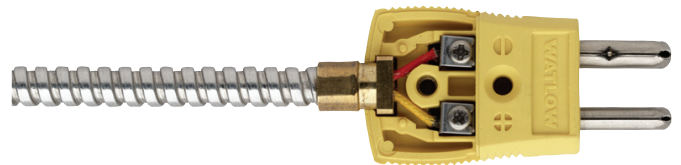
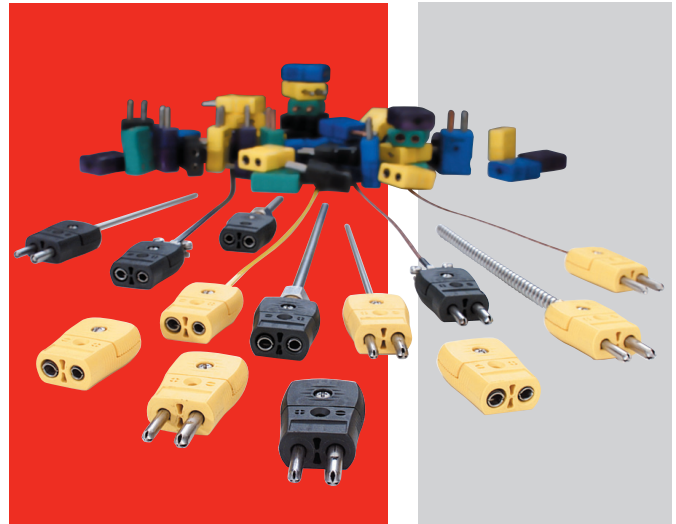
Watlow's standard line of connectors are lightweight, rugged and accurate and feature a clamping mechanism that is unique in the industry.

This easy-to-use clamping connection will replace traditional screw and wire wrap. This device allows a straight-in application, which squeezes the wire and forms a tight connection assuring a clean, strong signal.

### Applications and Technical Data

To eliminate measuring errors, all Watlow connectors are made exclusively of matching metal alloys. If the connector material has different thermal electromagnetic field (EMF) characteristics from the thermocouple or lead wire, a uniform temperature must be maintained across the connector, which is not always easily achievable or practical.

If a temperature gradient exists across the connector made with a third metal, unwanted EMFs generate between the thermoelectric materials and the connector extremities causing an error to occur at the thermocouple output. The larger the gradient, the larger the error. In some instances, depending on the calibration, net errors may occur that are even larger than the gradient.



### Features and Benefits

#### ASTM color coded

- Ensures easy identification

#### Compensated alloys

- Provides accuracy in readings

#### Glass-filled thermoplastic

- Provides high impact strength

#### Captive cap screws

- Ensures a secure connection

#### Connection hardware

- Eliminates several components

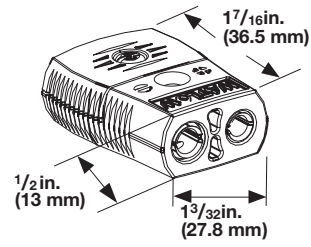
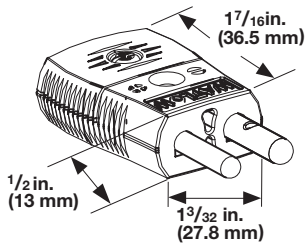
#### Meets requirements for ASTM E1129

- Ensures adequate pin spacing, dimensions and contact resistance

#### Rated to 425°F (215°C)

- Fits high-temperature applications

## "S" SERIES Standard Connectors 425°F (215°C)



### Ordering Information

#### Part Number

① ②	③	④	⑤	⑥ ⑦	
		Style	Calibration	Name Plate	Color Code
SC					

③ Style	
M =	Male (plug)
F =	Female (jack)

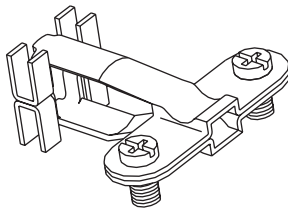
④ Calibration	
E =	Type E
J =	Type J
K =	Type K
S =	Type S / Type R
T =	Type T
U =	Uncompensated

⑤ Name Plate	
W =	With Watlow name
N =	Without name label (For J and K calibration only)

⑥ ⑦ Color Code	
AT =	ASTM E 230 color code

### Cable Clamp Style for Male or Female

Part Number: SAC-220

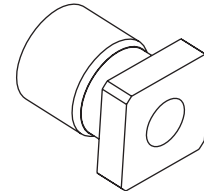


### Crimp/Brass Style

#### Ordering Information

##### Part Number

① ② ③	④ ⑤ ⑥
Style	
SAB	



④ ⑤ ⑥ Style		
040 =	0.040 in.	
063 =	0.063 in.	
090 =	0.090 in.	
125 =	0.125 in.	
188 =	0.188 in.	
250 =	0.250 in.	
30M =	3.0 mm	
60M =	6.0 mm	

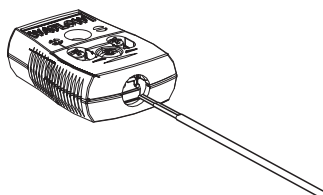
## Quick Attach Thermocouple Connectors, 425°F (215°C)

Watlow's time-saving thermocouple connectors are quick and convenient to use because there are no loose parts and there is no need to remove caps or wrap wires around terminal screws. Stripped wire ends are simply inserted into a plug or jack then tightened with two terminal screws.

Thermocouple connectors accept solid or stranded wires up to 16 gauge, are available in Type J, K and T calibrations and are ASTM E 230 color-coded. The connector is made with high-impact strength, 425°F (215°C) rated glass filled thermoplastic with matching thermocouple materials. Other features and specifications are identical to standard Watlow "S" SERIES quick-disconnect connectors.

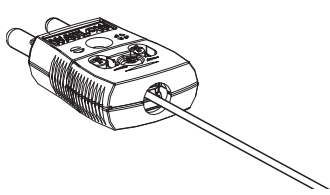
### Step 1.

Simply insert stripped wires into connector.



### Step 2.

Tighten two terminal screws.



## Ordering Information

### Part Number

① ②	③	④	⑤	⑥ ⑦	⑧ ⑨ ⑩ ⑪
SK	Style	Calibration	Name Plate	Color Code	Assembly
			W	AT	ASSY

③ Style	
M =	Male (plug)
F =	Female (jack)

④ Calibration	
J =	Type J
K =	Type K
T =	Type T

⑤ Name Plate	
W =	With Watlow name

⑥ ⑦ Color Code	
AT =	ASTM E 230 color code

⑧ ⑨ ⑩ ⑪ Assembly	
ASSY =	Comes with cap assembly on body

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