

Bimetal Plus

Integrated Thermocouple or RTD

BIMETAL THERMOMETERS



MODEL B85B06

- ▶ 3", 5" Dial Sizes
- ▶ ± 1.0% Full Scale Accuracy
- ▶ Local Indication/Remote Data Acquisition
- ▶ Thermocouple or RTD Sensors available

The Trerice **Bimetal Plus** has all the standard features of the Trerice Bimetal Thermometer, but with a "Plus." The "Plus" being an internally mounted thermocouple or RTD. This allows for remote temperature monitoring while still providing local indication. This dual sensor design eliminates the need for additional instrumentation or connections when designing a system to include both mechanical and electronic temperature sensing.

- Optional features available: Please consult the Options & Accessories Section for details.

Thermowell

- For corrosive or pressure applications, use of a thermowell is recommended to prevent damage to the thermometer and facilitate its removal from the process (refer to pages 155-161). For correct use and application of all Bimetallic thermometers, please refer to the Bimetallic Actuated Thermometer Standard ASME B40.3.

Specifications

Models	Dial Sizes/Stem Styles
B836 B856	3" 5" } Adjustable Angle
B832 B852	3" 5" } Rear Connection
Case	300 stainless steel, hermetically sealed
Stem	300 stainless steel, 1/4" diameter
Coil	Bimetallic, silicone dampened on ranges to 300°F (148°C), above 300°F not dampened
Process Connection	Adjustable or rear, 1/2 NPT
Electrical Connection	T/C: Miniature plug RTD: Plug with molded cordset
Window	Double strength glass
Pointer	Balanced, black finished
Dial Face	Aluminum, white background with black and blue graduations and markings
External Reset	Yes
Accuracy	±1.0 % Full Scale ASME B40.3 Grade A
Approximate Shipping Weight	
	B832: 0.9 lbs [0.41 kg] B852: 1.4 lbs [0.64 kg] B836: 1.3 lbs [0.29 kg] B856: 1.7 lbs [0.77 kg]

HOW TO ORDER

Sample Order Number: **B856 06 05 TCJ**

Model	Stem Length*	Range Code	Sensor Type
B836	04 4" Stem	See Standard Ranges	TCE Type E Thermocouple
B856	06 6" Stem		TCJ Type J Thermocouple
B832	09 9" Stem		TCK Type K Thermocouple
B852	12 12" Stem		TCT Type T Thermocouple
	15 15" Stem		RTC 100Ω RTD
	18 18" Stem		
	24 24" Stem		

Other lengths available: Specify in inches (48" maximum).

* Minimum insertion length is 3 1/2".

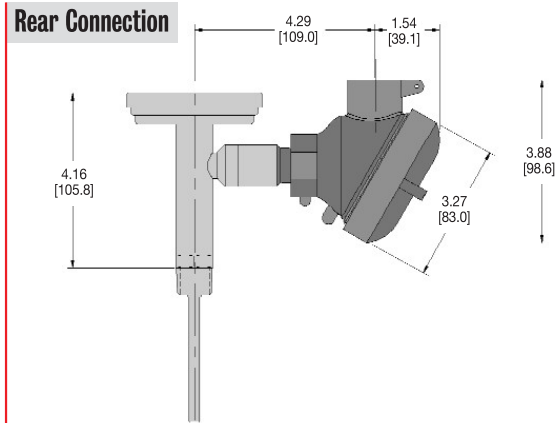
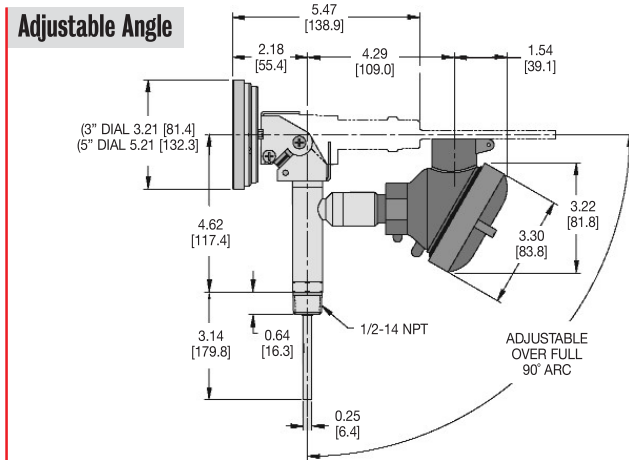
Bimetal Plus

Options & Accessories

BIMETAL THERMOMETERS

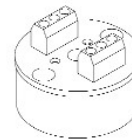
Connection Head with Terminal Block or Transmitter

The connection head is designed to provide a weatherproof, yet accessible conduit connection, and is used to house a terminal connection block or Terrice TRT30 Temperature Transmitter. The head is available with a screw cover (cast aluminum or stainless steel) or a flip cover (polypropylene), and includes a 3/4 NPT conduit connection.

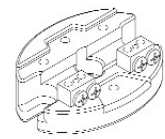


The terminal block provides an electrical hook-up point within the connection head, allowing for quick and easy attachment of extension wiring. The Terminal Block is available with either a 2-wire (thermocouple) or 3-wire (RTD) connection. The Terrice TRT30 Series Temperature Transmitter will convert a thermocouple or output signal to a 2-wire 4-20 mA signal, thus eliminating electrical interference and allowing the signal to be transmitted over long distances. These units are specifically designed for installation into the connection head.

Transmitter



Terminal Block



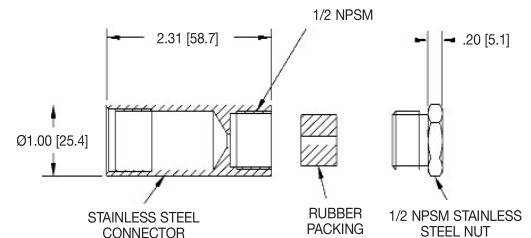
Specifications					
Model	Input	Accuracy	Adjustment Range	Maximum Output Load	Output Signal
TRT30	Type J, K or T Thermocouple or 100Ω Platinum RTD	±0.1% of input span	±35% for both zero and span	Thermocouple: R max=(V supply-12V)/20 mA RTD: R max=(V supply-10V)/20 mA	4-20 mA

Ordering Codes

Connection Head	Terminal Block		Transmitter	
	Thermocouple	RTD	Thermocouple	RTD
Aluminum screw cover	ABT	ABR	ATT	ATR
Polypropylene flip cover	PBT	PBR	PTT	PTR
Stainless steel screw cover	SBT	SBR	STT	STR

Weatherproofed Conduit Connection (WCC)

The conduit connection allows the Terrice Bimetal Plus Thermometer to be mounted directly to conduit piping, or used in applications where sprays and washes may come in contact with the electrical connection. This option consists of a stainless steel conduit connection tube, a packing grommet and a stainless steel connection fitting. Note: The Bimetal Plus with RTD Sensor does not require this option for weatherproof protection, as the RTD connection and cable are sealed for outdoor use. Please order using Option Code **WCC** (weatherproofed conduit connection).



How to Order

Specify the Optional Feature Code at the end of the Instrument Ordering Code. Sample Order Number: **B856 06 05 TJC WCC**



Electronic Temperature Sensor

Connection Head Type • RTD or Thermocouple Element

ELECTRONIC TEMPERATURE SENSORS



TJDZ04UWA shown

- ▶ Thermocouple or RTD
- ▶ Cast Aluminum, Polypropylene or Stainless Steel Head
- ▶ Weather Proof
- ▶ Welded or Spring Loaded Stem

Specifications

Models	Sensor Type
TJD	Type J T/C
TKD	Type K T/C
TDD	100Ω RTD
TMD	1000Ω RTD
Hot Junction: T/C: Ungrounded RTD: Platinum, 3-wire	
Stem	316 stainless steel 1/4" diameter
Insulation	Ceramic
Head	Cast aluminum, polypropylene or stainless steel
Process Connection	1/2 NPT welded or spring loaded
Conduit Connection	3/4 NPT female

Approximate Shipping Weight

1.1 lbs [0.50 kg]

The Trerice **Connection Head** is available with both Type J and Type K Thermocouples, as well as RTD sensors. The weatherproofed head provides a conduit connection and is available in cast aluminum (screw cover), polypropylene (flip cover) and stainless steel (screw cover). The stem is either welded directly to the 1/2 NPT threaded connection, or is spring loaded to provide maximum sensitivity. The spring loaded stem must always be installed in a thermowell.

- Extension wire and transmitter accessories are also available. Please consult the Temperature Sensor Accessories Section for details.
- For applications where the process media may be corrosive or contained under pressure, the use of a thermowell is required to prevent damage to the sensor and facilitate its removal from the process. To prevent leakage of the process media, spring loaded sensors must always be installed in a thermowell. (Refer to pages 155-161)

HOW TO ORDER

Sample Order Number: **TJD Z 04 U W A**

Model	Stem Style	Stem Length	Hot Junction	Connection	Head Material
TJD Type J T/C	Z 316SS, 1/4 O.D.	02 2 1/2" Stem	U Ungrounded (T/C)	S Spring Loaded, 1/2 NPT	A Aluminum
TKD Type K T/C		04 4" Stem			
TDD 100Ω RTD		06 6" Stem	W Welded, 1/2 NPT		
TMD 1000Ω RTD		09 9" Stem			
		12 12" Stem			

Other stem lengths available: Specify in inches (24" maximum).

Electronic Temperature Sensor

Integral Leadwire • RTD or Thermocouple Element

ELECTRONIC TEMPERATURE SENSORS



- ▶ Thermocouple or RTD
- ▶ Self-Contained Design
- ▶ Plain or Teflon Covered Stem

TJD.Z06UR120 shown

Trerice **Integral Leadwire Sensors** are available with an RTD, or a Type J or K Thermocouple. The stem transition includes a spring relief to prevent damage to the leadwire. A Teflon covered sensor and leadwire is offered for use with open tanks or corrosive process media (the Teflon covered sensor does not include a spring relief).

For applications where the process media may be corrosive or contained under pressure, the use of a thermowell is required to prevent damage to the sensor and facilitate its removal from the process. (Refer to pages 155-161)

Specifications

Models	Sensor Type
TJD	Type J T/C
TKD	Type K T/C
TDD	100Ω RTD
TMD	1000Ω RTD

Hot Junction: T/C: Ungrounded
RTD: Platinum, 3-wire

Stem 316 stainless steel
1/4" diameter

Insulation Ceramic

Termination Integral leadwire with spring relief or Teflon sheath (450°F / 230°C maximum)

Leadwire Jacketing T/C: Fiberglass
RTD: Teflon

Approximate Shipping Weight

0.5 lbs [0.23 kg]

HOW TO ORDER

Sample Order Number: **TDD Z 06 D T 024**

Model	Stem Style	Stem Length	Hot Junction	Connection Style	Leadwire Length
TJD Type J T/C TKD Type K T/C TDD 100Ω RTD TMD 1000Ω RTD	Z 316SS, 1/4 O.D.	02 2 1/2" Stem 04 4" Stem 06 6" Stem 09 9" Stem 12 12" Stem	U Ungrounded (T/C) D 3 Wire (RTD)	R Integral Leadwire with Relief Spring T Integral Leadwire with Teflon Sheath	Specify Length in inches (i.e., 10 feet=120)

Other stem lengths available: Specify in inches (24" maximum).

Digital Temperature Indicator TRD16

ELECTRONIC TEMPERATURE SENSORS

- ▶ 96 mm x 48 mm (1/8 DIN)
- ▶ Multi-inputs and Multi-Ranges
- ▶ Large 20mm Red LED Display
- ▶ 2 Times per Second Sampling Code



The Trerice **TRD16 Digital Indicator** is a superb choice when remote digital indication is required. The 2 times per second sampling cycle provides accurate, reliable monitoring, and the large LED display provides easy readability. The TRD16 can be used with any Trerice RTD or Thermocouple. Size is 96 mm x 48 mm (1/8 DIN).

The TRD16 Digital Indicator is specifically designed to interface with the TRS16 Selector Switch by means of an included snap bracket.

Specifications

Model

TRD16

Display 4 digit, 20 mm red LED
Sampling Cycle: 2x/second

Input **Multi** (switchable between)
Thermocouple: B, R, S, K, E, J, T, N;
or RTD: Platinum, 100Ω, 3-wire
Voltage (mV, V): 0-10 mVDC,
0-5 VDC, 0-10 VDC, 1-5 VDC

Current: 4-20 mA

Power Requirements

Supply Voltage:
100-240 VAC/50/60 Hz,
24 VAC/VDC (option)

Consumption:
11 VA (AC) Max
7 W (DC) Max

Accuracy ±0.3% + 1 digit of measuring range

Ambient Temperature

Maximum: 122°F (50°C)
Minimum: 14°F (-10°C)

Humidity Maximum: 90% RH
Non-condensing

Approximate Shipping Weight

0.6 lbs [0.27 kg]

HOW TO ORDER

Sample Order Number: **TRD16 8 90 0 4 0**

Model	Input	Power Supply	Alarm	Analog Output	Communication Function
TRD16	8 Multi (T/C, RTD mV, V) 4 mA	90 100-240 VAC 50/60 Hz	0 None	0 None	0 None
		08 24 VAC or 24 VDC 50/60 Hz	1 High/Low	3 0 to 10 mVDC	5 RS485
				4 4 to 20 mA	7 RS232C
				6 0 to 10 VDC	