

## DUAL MODE THERMOMETER

Reotemp's Dual Mode Thermometer (DMT) is a convenient, multi-purpose indicator for local and remote temperature monitoring. This rugged dual-sensor system puts TWO independent sensors in ONE THERMOWELL, and allows easy tie-in to process controls. Both sensors are NIST traceable. Special sensor encapsulation and optional liquid filling make the DMT the most rugged, durable instrument of its kind.



Fillable

Dials

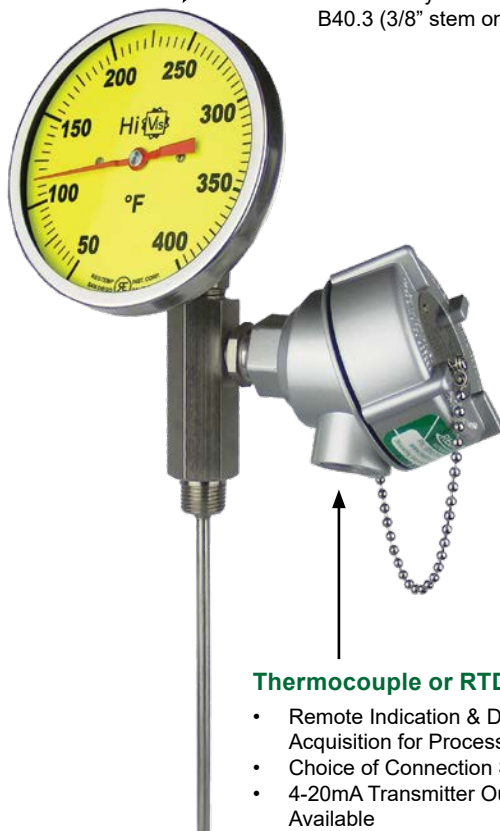
Accuracy

Custom Logo

Made in the USA

### Bimetal Thermometer

- Local Easy-to-Read Temperature Indication
- Self-Actuating, Dampened Bimetal Helix Sensor
- Hermetically sealed per ASME B40.3 (3/8" stem only)



### Thermocouple or RTD

- Remote Indication & Data Acquisition for Process Control
- Choice of Connection Styles
- 4-20mA Transmitter Output Available

## FEATURES / BENEFITS

- Increase Reliability with Independent Local and Remote Reading (Up to 1000°F) from One Thermowell
- Redundant Sensors for Simple, Effective Calibration or Spot Checking Without Removing the Instrument from the Thermowell
- Interchangeable with Existing Thermometer, RTD, or Thermocouple

## SPECIFICATIONS

<b>Case &amp; Bezel</b>	304SS (Standard), 316SS
<b>Case Style</b>	Back or Adjustable Angle Connection
<b>Dial Size</b>	3", 4", or 5"
<b>Process Connections</b>	1/2" NPT (Standard) or 1/2" NPT Union
<b>External Reset</b>	Slotted Hex Screw
<b>Lens</b>	Glass (Standard), Plastic or Tempered Glass
<b>Hermetic Seal</b>	Bimetal Thermometer per ASME B40.3 (3/8" Stem Only)
<b>Stem Material</b>	304SS (Standard) or 316SS (Optional)
<b>Stem Diameter</b>	3/8" or 1/4"
<b>Stem Length</b>	2-1/2" to 36"
<b>Bimetal Ranges</b>	Standard Ranges and Divisions up to 800°F (538°C). See Page 221 for Complete Range Code Guide
<b>Bimetal Over-range</b>	50% Over Range to 550°F, 1000°F Max
<b>Bimetal Accuracy</b>	± 1% of Full Scale
<b>TC/RTD Temperature Limits</b>	-100°F to 1000°F (Thermocouple), -100°F to 600°F (RTD - DM4 Model), -100°F to 900°F (RTD - DMT Model)
<b>Thermocouple</b>	Type K Grounded Junction (Standard), Types T, E, J, and Ungrounded
<b>Thermocouple Accuracy</b>	Type K ± 2.2°C or 0.75% (-200°C to 1260°C), Whichever is Greater, Others Available Upon Request
<b>RTD</b>	Pt/385/Class B 100Ω (Std.), Others Available
<b>RTD Accuracy</b>	0.12%°C (Standard), Others Available
<b>Head Orientation</b>	RTD or Thermocouple Head is Mounted to the Right of the Bimetal Thermometer
<b>Thermowell</b>	Model DMT Fits Any Standard 0.385" Bore Thermowell or Model DM4 Fits 0.260" Bore

Tri-Clamp® is a registered trademark of Alpha Laval Inc.

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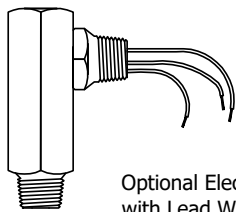
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- ✓ Generate a Custom Engineering Drawing

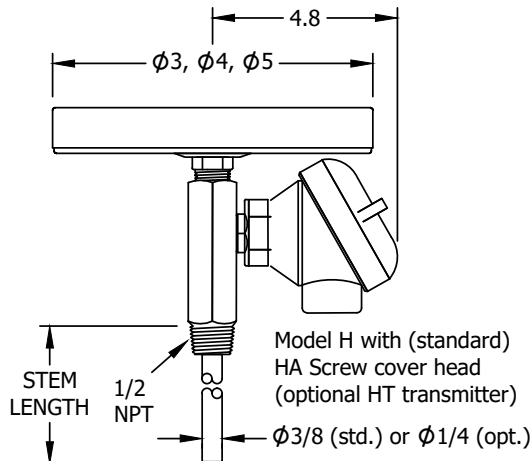
**HOW TO ORDER:** Choose options to build a part number. For example: **DMTA040F23TKAA-HV**

DM	TA	040	F23	TK	A	A	-HV
STYLE & STEM DIAMETER	STEM LENGTH	TEMPERATURE RANGE	SENSOR	HEADS/OUTPUT CONNECTIONS	ELECTRICAL CONNECTION	OPTIONS	
<p><i>3/8" Stem</i></p> <p><b>TA</b> = 3" Back Connect  <b>TC</b> = 4" Back Connect  <b>TB</b> = 5" Back Connect  <b>TL</b> = 3" Adjustable-Angle  <b>TM</b> = 4" Adjustable-Angle  <b>TJ</b> = 5" Adjustable-Angle</p> <p><i>1/4" Stem</i></p> <p><b>4A</b> = 3" Back Connect  <b>4C</b> = 4" Back Connect  <b>4B</b> = 5" Back Connect  <b>4L</b> = 3" Adjustable-Angle  <b>4M</b> = 4" Adjustable-Angle  <b>4J</b> = 5" Adjustable-Angle</p>	<p><b>025</b> = 2.5"  <b>040</b> = 4"  <b>060</b> = 6"  <b>090</b> = 9"  <b>120</b> = 12"  <b>150</b> = 15"  <b>180</b> = 18"  <b>240</b> = 24"  <b>300</b> = 30"  <b>360</b> = 36"</p> <p>*Only available on 3/8" stem diameter.</p> <p>Note: Intermediate stem lengths available up to 80".</p> <p><i>Millimeter Stem Lengths</i></p> <p><b>M????</b> = Use a code beginning in M to specify a mm stem length ex: 100mm = M0100</p>	<p><i>Fahrenheit Ranges</i></p> <p><b>F23</b> = -40°F to 160°F  <b>F55</b> = 25°F to 125°F*  <b>F43</b> = 0°F to 200°F  <b>F47</b> = 0°F to 250°F  <b>F53</b> = 20°F to 240°F  <b>F63</b> = 50°F to 300°F  <b>F69</b> = 50°F to 550°F</p> <p>*Not available in 2.5" stem.</p> <p><i>For Additional Ranges See Master Range Code Sheet on Page 221</i></p>	<p><i>Thermocouple (Single, Grounded)</i></p> <p><b>TK</b> = Type K  <b>TJ</b> = Type J  <b>TE</b> = Type E  <b>TT</b> = Type T</p> <p><i>Thermocouple (Single, Ungrounded)</i></p> <p><b>UK</b> = Type K  <b>UJ</b> = Type J  <b>UE</b> = Type E  <b>UT</b> = Type T</p> <p><i>Thermocouple (Dual, Grounded)</i></p> <p><b>TKK</b> = Type K  <b>TJJ</b> = Type J  <b>TEE</b> = Type E  <b>TTT</b> = Type T</p> <p><i>Thermocouple (Dual, Ungrounded)</i></p> <p><b>UKK</b> = Type K  <b>UJJ</b> = Type J  <b>UEE</b> = Type E  <b>UTT</b> = Type T</p>	<p><b>A</b> = Cast Iron Black  <b>C</b> = Poly Plastic Black  <b>E</b> = Explosion Proof Aluminum  <b>G</b> = 316SS  <b>H</b> = Cast Aluminum  <b>M</b> = Aluminum Flip Top  <b>I</b> = Blue Epoxy-Coated Aluminum  <b>J</b> = Explosion Proof 316SS  <b>S</b> = Poly Plastic White  <b>T</b> = ATEX Explosion Proof Aluminum  <b>Z</b> = Window Explosion Proof (Digital Display Required)  <b>EC</b> = 1/2" NPT Male Electrical Connection w/ Lead Wire (See Drawing &amp; Ignore Electrical Connection Section)</p>	<p><b>A</b> = Terminal Block  <b>N</b> = No Terminal Block, 6" Leads  <b>T</b> = 4-20mA Xmtr  <b>D</b> = 4-20mA Hart Xmtr  <b>B</b> = 4-20mA Xmtr w/ Display*  <b>H</b> = 4-20mA Hart Xmtr w/ Display*</p> <p>*Only available with Z Head</p>	<p><i>General Options</i></p> <p><b>-HV</b> = Hi-Vis™ Dial  <b>-UF</b> = Fixed Union  <b>-US</b> = Sliding Union  <b>-3H</b> = 316 SS Head and Bezel  <b>-SF</b> = Silicone Filled (Max 500°F)  <b>-SS</b> = 316 Stainless Stem  <b>-NL</b> = No Logo Dial  <b>-CL</b> = Custom Logo Dial</p> <p><i>Window Options (Standard is Glass)</i></p> <p><b>-MM</b> = Min-Max Pointer (Plastic Lens)  <b>-PC</b> = Acrylic Window  <b>-PY</b> = Polycarbonate Window  <b>-TG</b> = Tempered Glass Window</p> <p><i>Sanitary Connections</i></p> <p><b>-SC</b> = 1.5" or 1" Tri-Clamp  <b>-SL</b> = 2" Tri-Clamp  <b>-SA</b> = 2.5" Tri-Clamp  <b>-SP</b> = 3" Tri-Clamp</p> <p><i>Calibration Cert. Options</i></p> <p><b>-R1</b> = One Point Calibration Cert (Reotemp Chooses Points)  <b>-R3</b> = Three Point Calibration Cert (Reotemp Chooses Points)</p> <p><i>Tags and Accessories</i></p> <p><b>-TS</b> = Tag, Stainless  <b>-AS</b> = Adapts Bimet to 1-1/4-18 industrial socket  <b>-HT</b> = Heat Transfer Compound</p>	

**Note:** Thermowells should be used whenever the stem or bulb would be exposed to pressure, corrosion, velocity, abrasion or shear forces. Thermowells also make it possible to remove the thermometer without losing pressure or the contents of the process.



Optional Electrical Connection with Lead Wire (EC)



*RTD (Single)*

**RC** = RTD, Pt. 100 ohm, 3-wire (Max. 600°F - DM4) (Max. 900°F - DMT)

THERMOMETERS

For Additional Options See Page 220

For Thermowells See Pages 234-240

## BIMETAL OPTION CODES

Part #	Description	Industrial AA, RR, CC, CN, BB, SS, XR, XX, YY, YN, VR, VV, LL, MM, JJ	Small Dial OEM QQ, GG, HH	Digital DT, DTR, BT	Dual Mode Thermometer DMT
<b>CASE FILL OPTIONS</b>					
<b>-SF</b>	Silicone Filled Case	✓	N/A	N/A	✓
<b>LENS OPTIONS</b>					
<b>-PC</b>	Acrylic Window	✓	✓	N/A	✓
<b>-PY</b>	Polycarbonate Window	✓	✓	STD	✓
<b>-TG</b>	Tempered Safety Glass Lens	✓	N/A	N/A	✓
<b>-SG</b>	Laminated Safety Glass Lens	✓	N/A	N/A	✓
<b>-GL</b>	Plain Glass	STD	STD	✓	STD
<b>STEM OPTIONS</b>					
<b>-PS</b>	Pointed Tip	✓	✓	✓	N/A
<b>-SS</b>	316 Stainless Steel Stem	✓	✓	✓	✓
<b>-F5</b>	5/16" Diameter Stem (Not Available with 316SS Stem)	✓	✓	✓	N/A
<b>-S3</b>	3/8" Diameter Stem	✓	✓	✓	✓
<b>-TF</b>	Teflon Coating (Stem Only)	✓	✓	✓	✓
<b>DIAL OPTIONS</b>					
<b>-CL</b>	Custom Logo Dial	✓	✓	✓	✓
<b>-HV</b>	Hi-Vis Dial	✓	MQ	N/A	✓
<b>-CB</b>	Color Band	✓	MQ	N/A	✓
<b>-PI</b>	Color Pie	✓	MQ	N/A	✓
<b>-WD</b>	White Dial (Standard Ranges Only)	✓	✓	✓	✓
<b>-MM</b>	Min/Max Pointer	✓	N/A	N/A	✓
<b>NL</b>	No Logo	✓	✓	✓	✓
<b>TAG OPTION</b>					
<b>-TS</b>	Stainless Steel Tag (1-10 Characters)	✓	✓	✓	✓
<b>-TP</b>	Paper Tag	✓	✓	✓	✓
<b>CERTIFICATION OPTIONS</b>					
<b>-R1</b>	1pt. Calibration Certification (Reotemp Chooses the Point)	✓	✓	✓	✓
<b>-R3</b>	3 pt. Calibration Certification (Reotemp Chooses the Points)	✓	✓	✓	✓
<b>-C1</b>	1 pt. Calibration Certification (Customer Chooses the Point)	✓	✓	✓	✓
<b>-C3</b>	3 pt. Calibration Certification (Customer Chooses the Points)	✓	✓	✓	✓
<b>-CS</b>	NIST Calibration Sticker (No Logged Points)	✓	✓	✓	✓
<b>-CC</b>	Certificate of Conformance	✓	✓	✓	✓
<b>OTHER</b>					
<b>-3H</b>	316 Stainless Steel Head & Bezel	✓	N/A	STD	✓
<b>-HT</b>	Heat Transfer Compound	✓	✓	✓	✓
<b>-CH</b>	Spring Handle (T-27)	✓	✓	✓	N/A
<b>-AS</b>	Allows Bimet to Fit 1-1/4-18 xxowell	✓	✓	✓	✓

✓	Indicates that the option is available with the model.
STD	Indicates standard options with no additional cost.

N/A	Indicates the option is not available with this model.
MQ	Minimum order quantity applies.

## BIMETAL RANGE CODES

FAHRENHEIT RANGES		
Code	°F Range	Div.
F03	-100/100	2
F05	-100/200	2
F07	-80/120	2
F11	-70/150	2
F19	-50/300	5
F21 <sup>†</sup>	-40/120	2
F23	-40/160	2
F25	-40/180	2
F26	-40/200	2
F27 <sup>‡</sup>	-40/70	1
F31 <sup>†</sup>	-20/120	2
F33	-20/425	5
F35 <sup>‡</sup>	0/100	1
F37 <sup>†</sup>	0/140	2
F39 <sup>†</sup>	0/150	1
F43	0/200	2
F45	0/220	2
F47	0/250	2
F49	0/300	2
F50	0/500	5
F51	0/600	10
F53	20/240	2
F55 <sup>‡</sup>	25/125	1
F57 <sup>‡</sup>	30/130	1
F63	50/300	2
F65	50/400	5
F67	50/500	5
F69	50/550	5
F71	50/650	10
F73	50/750	10
F78	100/600	5
F79	100/800	10
F81	150/750	10
F82	200/700	20
F83	200/300	2
F84	100/900	5
F85	200/1000	10
F89	250/600	5
F91	300/400	2

CELSIUS RANGES		
Code	°C Range	Div.
C01	-80/220	2
C03	-70/70	2
C06	-70/30	1
C07	-50/50	1
C08	-60/120	2
C09 <sup>‡</sup>	-50/0	1
C15	-50/100	2
C17	-50/200	2
C19	-40/160	2
C20	-60/300	5
C23	-40/70	1
C24	-40/350	5
C27 <sup>‡</sup>	-30/30	1
C31 <sup>†</sup>	-20/40	1
C32	-20/60	
C33	-20/220	2
C34	-20/320	5
C35 <sup>‡</sup>	0/30	.5
C37 <sup>‡</sup>	0/60	1
C38 <sup>†</sup>	0/80	
C43	0/100	1
C47	-20/120	2
C53	-10/110	1
C55 <sup>‡</sup>	0/50	.5
C56	0/120	1
C59	0/150	1
C60	50/150	
C61	0/160	2
C63	10/150	2
C65	0/200	2
C67	0/250	2
C69	0/300	2
C71	0/300	5
C73	0/400	5
C74	0/450	5
C75	0/500	5
C79	50/450	5
C81	50/400	5
C85	100/500	5
C87	100/550	5

DUAL RANGES	
Code	°F & °C Range
D01	-150/400 & 100/200
D03	-100/100 & -70/40
D07	-80/120 & -60/50
D15	-50/210 & -50/100
D19	-50/300 & -40/160
D23	-40/160 & -40/70
D37 <sup>†</sup>	0/140 & -15/60
D39 <sup>†</sup>	0/150 & -20/65
D41 <sup>†</sup>	0/160 & -15/70
D43	0/200 & -10/90
D45	0/220 & -10/100
D47	0/250 & -20/120
D49	0/300 & -10/150
D53	20/240 & -10/115
D55 <sup>‡</sup>	25/125 & -5/50
D63	50/300 & 10/150
D65	50/400 & 10/200
D67	50/500 & 10/260
D69	50/550 & 10/290
D77	100/450 & 40/230
D79	100/800 & 40/400
D81	150/750 & 70/400
D85	200/1000 & 100/500
D87	200/1000 & 100/550

‡ Minimum stem length is 4".

† For 2.5" stem, all bottom connect and all-angle models require adapter P/N AD22S.