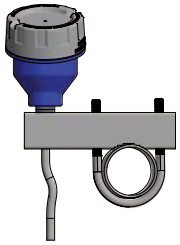
Z-TEMP EXPLOSION PROOF TRANSMITTER

The Reotemp Z-Temp is an explosion proof temperature transmitter with digital display. The Z-Temp is a cost effective alternative to increasingly complex smart transmitters. It is perfectly suited to applications where an explosion-proof temperature transmitter with local indication is required, but all of the extra features of a smart transmitter are not.



Pipe Mount Available

C US

APPROVED

Made in USA

FEATURES / BENEFITS

- Explosion Proof Enclosure is CSA and ATEX Approved
- Bright Red, Easy-to-read LED Display with 4 Digits
- Choose an RTD or Thermocouple
- Direct Stem Mount or Remote Mount Available
- 4-20 mA Output, HART Available

SPECIFICATIONS

Enclosure	IP66, NEMA 4X, CSA, Explosion Proof
Sensing Element	RTD or Thermocouple
Ambient Temperature	-40°F to 158°F (-40°C to 70°C)
Supply Voltage DC	13 to 30V
Voltage Drop	12VDC
Output	2-wire, 4-20 mA
Display	4 Digit Red LED
Temperature Range	RTD: -328/400°F or -328/1100°F Thermocouple: -328/2282°F
Accuracy	0.2% of Span (±1 Digit), Plus Sensor Accuracy
Temperature Coefficient	±0.02% of span/°C
Sensor Error Detection	Programmable upscale or downscale 23 mA or 3.5 mA
Supply Voltage Variation Effect	≤ 0.005% of span/VDC
EMC Immunity Influence	≤ ± 0.5% of span
Humidity	<95% RH (Non-condensing)
Increased Safety Approval	EN 50014, EN50018, EN 50281-1-1, EEx d HC, 1026 II2GD, Zone 1, Zone 2, Zone 21, Zone 22. EC-type certification no. FTZU 03, ATEX 0074 U.
Explosion Proof Approval	FM 3600, FM 3615, FM 3810, XP, XP/I/I/A,B,C,D/T6,DIP/II,III/1/E,F,G/T6,Type 4x, Class I, Div 1, Gr. A,B,C,D, Class II/III, Div1, Gr. E,F,G, NEMA 4x, EC-type certification: 3019264.

Z-TEMP TEMPERATURE TRANSMITTER (DIRECT MOUNT RTD)

BUILD YOUR Z-TEMP (DIRECT MOUNT): Choose options to build a part number. For example: ZHB1TPX1256X-TS

Z | H | B

HEAD STYLE				HEAD OPTIONS	TRANSMITTER WITH DISPLAY
	Z	Z-Temp™ Explosion Proof Aluminum with Window (1/2" Conduit) (Display Required)	FM, CSA, ATEX, NEMA 4X, IP66	H = 1/2" Conduit	B = 4-20mA 2-wire Transmitter Y = 4-20mA 2-wire HART Transmitter

1T | PX

THREADED CONNECTIONS

Use a spring loaded connection with a thermowell. Use a welded connection when the stem goes directly into the process medium. All threaded connections have 316 stainless steel fittings.

Threaded Connections
- 1T = Spring-loaded 316SS Hex Bushing
- 4T = 5" Nominal Spring Loaded Nipple-Union-Nipple 316SS
- 2T = 2.5" Spring Loaded Nipple 316SS
- 7T = Spring Loaded Explosion Proof Bushing 316SS
- 5T = Nipple-Union-Nipple Spring Loaded Explosion Proof Bushing, Explosion Proof Union

Welded Fittings
- 1F = Welded Hex Bushing 316SS
- 4F = Nipple-Union-Nipple Welded 316SS
- 6F = Stainless Steel Bushing, 1/2" NPT, No Process Threads

Welded Fittings with Compression Fitting Loose on Stem
- 6FT = SS Welded Bushing with 1/4" NPT Comp Fitting "Set Once" Loose On Stem
- 6FU = SS Welded Bushing with 1/2" NPT Comp Fitting "Set Once" Loose On Stem
- 6FV = SS Welded Bushing with 1/8" NPT Comp Fitting "Set Once" Loose On Stem

Other Nipple-Union-Nipple (N-U-N)
- 4T3 = 3" Nominal Spring Loaded N-U-N
- 4T4 = 4" Nominal Spring Loaded N-U-N
- 4T6 = 6" Nominal Spring Loaded N-U-N
- 4T7 = 7" Nominal Spring Loaded N-U-N

Nipples
- 2T3 = 3" Spring Loaded Nipple
- 2T4 = 4" Spring Loaded Nipple
- 2T5 = 5" Spring Loaded Nipple
- 2T6 = 6" Spring Loaded Nipple
- 2T7 = 7" Spring Loaded Nipple
- 2T8 = 8" Spring Loaded Nipple

Special Fittings
- 8T = Spring Loaded Terminal Block, No Fitting 1/2" NPT Female Head Opening

RTD SENSOR

Type	Code	Material/ Class	Ω at 0°C	Accuracy at 0°C(Ω)
Standard DIN B Platinum 100Ω	PX*	Pt/385/B	100Ω	± 0.12%
Platinum 100Ω with Other Accuracies	PA*	Pt/385/A	100Ω	± 0.06%
	PD*	Pt/385/A3	100Ω	± 0.03%
	PE*	Pt/385/A5	100Ω	± 0.01%

*Available in Reotemp Extended temperature RTDs.

1 | 25 | 6 | X | -TS

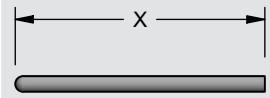
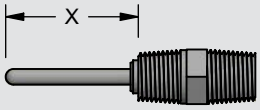
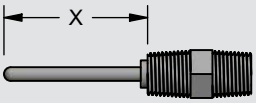
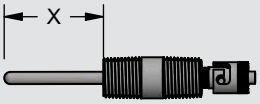
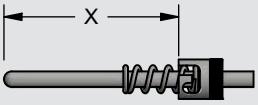
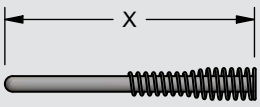
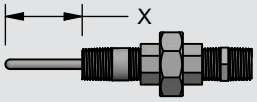
TEMPERATURE RANGE	STEM DIAMETER	STEM LENGTH	NUMBER OF RTDs/LEADS	OPTIONS
1 = -328°F/400°F (Standard) 2 = Extended Range -328°F/1100°F (Only Available on PX, PA, PD, or PE RTDs)	25 = 0.250" 12 = 0.125" 18 = 0.188" 37 = 0.375"	? = Stem Length in Inches	X = Single 3-wire XX = Duplex 3-wire Y = Single 4-wire YY = Duplex 4-wire W = Single 2-wire WW = Duplex 2-wire	-TS = Tag, Stainless -R1 = One Point Calibration Cert (Reotemp Chooses Points) -R3 = Three Point Calibration Cert (Reotemp Chooses Points) *Additional Options Available*

Z-TEMP TEMPERATURE TRANSMITTER (REMOTE MOUNT RTD)

BUILD YOUR Z-TEMP REMOTE MOUNT RTD: Choose options to build your part number. For example: APX1256X-LR3S36T2RHZHBA-TS

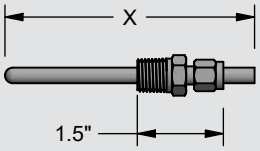
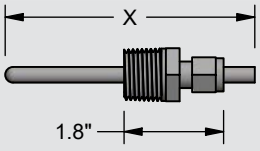
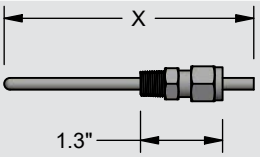
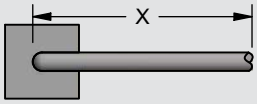
A | **[ ]**

STYLE

A	 Plain Stem (Lead Assembly)	H	 Spring Loaded Bushing
B	 Welded SS Bushing	P	 1/2" NPT Nipple w/ Bayonet
R	 Bayonet Cap w/ Spring	S	 Load Spring Only
4T	 5" Nominal Spring Loaded N-U-N 316SS		

STEM OPTIONS (OPTIONAL)

Leave blank for no stem option.

T	 1/4" NPT Sliding Compression Fitting Loose On Plain 316SS Stem, 1.5" Length	U	 1/2" NPT Sliding Compression Fitting Loose On Plain 316SS Stem, 1.8" Length
V	 1/8" Compression Fitting Loose on Plain 316SS Stem, 1.3" Length	W	 Weld Pad, 1"x1"x1/8"

Note: Compression fitting lengths will decrease overall stem length.

PX | **1** | **25** | **6** | **X**

RTD SENSOR

Type	Code	Material/Class	Ω at 0°C	Accuracy at 0°C(Ω)
Standard DIN B Platinum 100Ω	**PX***	Pt/385/B	100Ω	± 0.12%
Platinum 100Ω with Other Accuracies	**PA***	Pt/385/A	100Ω	± 0.06%
	PD*	Pt/385/A3	100Ω	± 0.03%
	PE*	Pt/385/A5	100Ω	± 0.01%

*Available in Reotemp Extended temperature RTDs.

TEMPERATURE RANGE

1 = -328°F/400°F (Standard)
2 = Extended Range -328°F/1100°F (Only Available on PX, PA, PD, or PE RTDs)

STEM DIAMETER

25 = 0.250"
12 = 0.125"
18 = 0.188"
37 = 0.375"

STEM LENGTH "X"

? = Stem Length in Inches

NUMBER OF RTDs/LEADS

X = Single 3-wire
XX = Duplex 3-wire
Y = Single 4-wire
YY = Duplex 4-wire
W = Single 2-wire
WW = Duplex 2-wire

REOTEMP INSTRUMENTS

Z-TEMP TEMPERATURE TRANSMITTER (REMOTE MOUNT RTD)

-L | **R** | **3** | **S** | **36**

LEAD WIRE

-L = Lead Wire

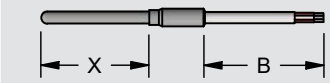
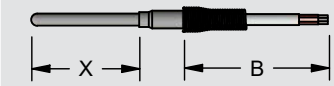
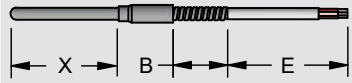
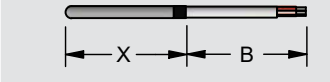
SENSOR TYPE

R = RTD

NUMBER OF LEADS

2 = 2-Wire RTD
3 = 3-Wire RTD
4 = 4-Wire RTD or Duplex 2-Wire RTD
6 = Duplex 3-Wire RTD
8 = Duplex 4-Wire RTD

TRANSITION TYPE

P		Plain (Standard)
S		Spring
A		Armor
L		Same Size

WIRE OR ARMOR LENGTH "B"

?? = "B" Length in Inches

T2 | **RHZH** | **B**

INSULATION & CONDUCTOR

T2 = Teflon with 24 AWG Stranded Wire
T3 = Teflon with 20 AWG Stranded Wire
A2 = Teflon with 24 AWG Stranded Wire, Mylar Shield & Drain
F2 = Fiberglass with 24 AWG Stranded Wire

WIRE TERMINATION

	**RHZH**	Z-Temp™ Explosion Proof Aluminum with Window (1/2" Conduit) (Display Required)	FM, CSA, ATEX, NEMA 4X, IP66

TRANSMITTER WITH DISPLAY

B = 4-20mA 2-wire Transmitter
Y = 4-20mA 2-wire HART Transmitter

A | **-TS**

WIRE PROTECTION (OPTIONAL)

= Leave Blank for No Armor Protection
A = Stainless Steel Armor
P = PVC Coated Stainless Steel Armor
T = Teflon Coated Stainless Steel Armor
O = Stainless Steel Overbraid

OPTIONS

-TS = Tag, Stainless
-R1 = One Point Calibration Cert (Reotemp Chooses Points)
-R3 = Three Point Calibration Cert (Reotemp Chooses Points)

Additional Options Available

Z-TEMP TEMPERATURE TRANSMITTER (DIRECT MOUNT THERMOCOUPLE)

BUILD YOUR Z-TEMP (DIRECT MOUNT THERMOCOUPLE): Choose options to build a part number. For example: ZHB1TM25K1SG6-TS

Z	H	B

HEAD STYLE

Z	Z-Temp™ Explosion Proof Aluminum with Window (1/2" Conduit) (Display Required)	FM, CSA, ATEX, NEMA 4X, IP66

HEAD OPTIONS

H = 1/2" Conduit

TRANSMITTER WITH DISPLAY

B = 4-20mA 2-wire Transmitter
Y = 4-20mA 2-wire HART Transmitter

1T	M	25	K

THREADED CONNECTIONS

Use a spring loaded connection with a thermowell. Use a welded connection when the stem goes directly into the process medium. All threaded connections have 316 stainless steel fittings.

Threaded Connections
1T = Spring-loaded 316SS Hex Bushing
4T = 5" Nominal Spring Loaded Nipple-Union-Nipple 316SS
2T = 2.5" Spring Loaded Nipple 316SS
7T = Spring Loaded Explosion Proof Bushing 316SS
5T = Nipple-Union-Nipple Spring Loaded Explosion Proof Bushing, Explosion Proof Union

Welded Fittings
1F = Welded Hex Bushing 316SS
4F = Nipple-Union-Nipple Welded 316SS
6F = Stainless Steel Bushing, 1/2" NPT, No Process Threads

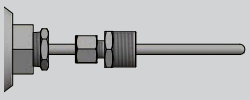
Welded Fittings with Compression Fitting Loose on Stem
6FT = SS Welded Bushing with 1/4" NPT Comp Fitting "Set Once" Loose On Stem
6FU = SS Welded Bushing with 1/2" NPT Comp Fitting "Set Once" Loose On Stem
6FV = SS Welded Bushing with 1/8" NPT Comp Fitting "Set Once" Loose On Stem

Other Nipple-Union-Nipple (N-U-N)
4T3 = 3" Nominal Spring Loaded N-U-N
4T4 = 4" Nominal Spring Loaded N-U-N
4T6 = 6" Nominal Spring Loaded N-U-N
4T7 = 7" Nominal Spring Loaded N-U-N

Nipples
2T3 = 3" Spring Loaded Nipple
2T4 = 4" Spring Loaded Nipple
2T5 = 5" Spring Loaded Nipple
2T6 = 6" Spring Loaded Nipple
2T7 = 7" Spring Loaded Nipple
2T8 = 8" Spring Loaded Nipple

Special Fittings
8T = Spring Loaded Terminal Block, No Fitting 1/2" NPT Female Head Opening

Connection Types

6FT, 6FU, 6FV	Compression Fitting	
6F	No Process Threads	

METAL SHEATH

M = Metal Sheathed Thermocouple

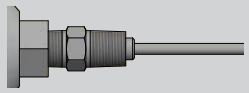
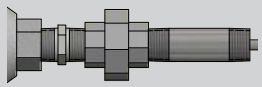
SHEATH DIAMETER

06 = 0.062 in
12 = 0.125 in
18 = 0.188 in
25 = 0.250 in
37 = 0.375 in

THERMOCOUPLE TYPE

J = Type J
K = Type K
E = Type E
T = Type T
JS = Type J Special Limits of Error
KS = Type K Special Limits of Error
ES = Type E Special Limits of Error
TS = Type T Special Limits of Error

Connection Types

1T, 7T, 1F	Hex Bushing	
2T	Pipe Nipple	
4T3, 4T, 5T, 4F, etc.	Nipple-Union-Nipple (N-U-N)	

1	S	G	6	-TS

SHEATH MATERIAL

1 = 316 Stainless Steel
2 = 310 Stainless Steel
3 = 304 Stainless Steel
5 = Inconel 600

NUMBER OF ELEMENTS

S = Single Element Assembly
D = Dual Element Assembly

TYPE OF JUNCTION

G = Grounded Elements
E = Exposed Elements
U = Ungrounded Elements
UU = Ungrounded Uncommon Elements

STEM LENGTH "X"

Stem length measured from bottom of threads to stem tip.
??? = Stem length in inches.

OPTIONS

-TS = Tag, Stainless
-R1 = One Point Calibration Cert (Reotemp Chooses Points)
-R3 = Three Point Calibration Cert (Reotemp Chooses Points)

Additional Options Available

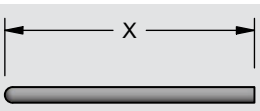
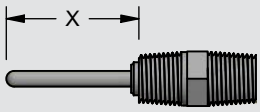
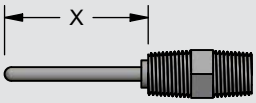
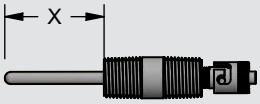
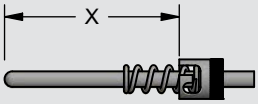
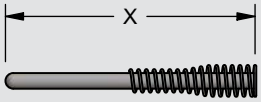
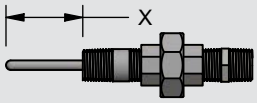
TRANSMITTERS

Z-TEMP TEMPERATURE TRANSMITTER (REMOTE MOUNT THERMOCOUPLE)

BUILD YOUR Z-TEMP REMOTE MOUNT THERMOCOUPLE: Choose options on to build your part number. For example: ATM12J1SG6-LJ2S36T1RHZHYA-TS

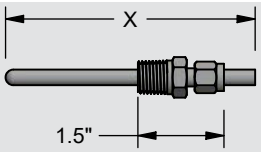
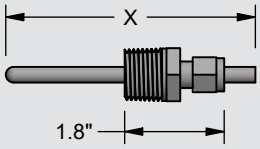
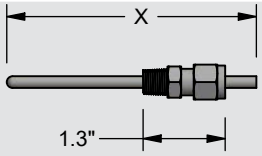
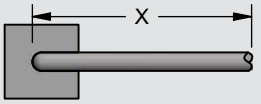
A | **T** |

STYLE

A	 Plain Stem (Lead Assembly)	**H**	 Spring Loaded Bushing
B	 Welded SS Bushing	**P**	 1/2" NPT Nipple w/ Bayonet
R	 Bayonet Cap w/ Spring	**S**	 Load Spring Only
4T	 5" Nominal Spring Loaded N-U-N 316SS		

STEM OPTIONS (OPTIONAL)

Leave blank for no stem option.

T	 1/4" NPT Sliding Compression Fitting Loose On Plain 316SS Stem, 1.5" Length	**U**	 1/2" NPT Sliding Compression Fitting Loose On Plain 316SS Stem, 1.8" Length
V	 1/8" Compression Fitting Loose on Plain 316SS Stem, 1.3" Length	**W**	 Weld Pad, 1"x1"x1/8"

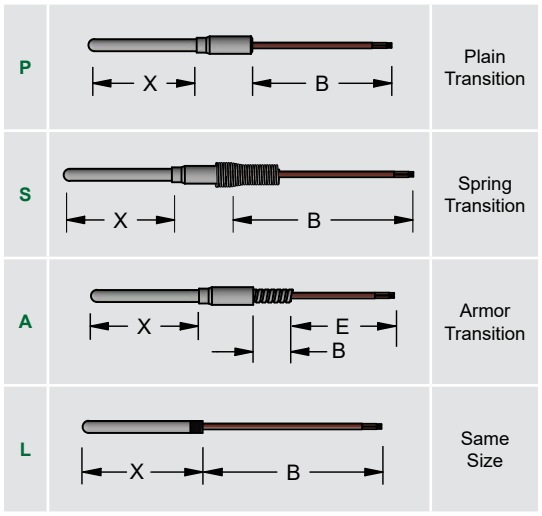
Note: Compression fitting lengths will decrease overall stem length.

M | **12** | **J** | **1** | **S** | **G** | **6** |

METAL SHEATH	SHEATH DIAMETER	THERMOCOUPLE TYPE	TYPE OF SHEATH MATERIAL	NUMBER OF ELEMENTS	TYPE OF JUNCTION	STEM LENGTH "X"
M = Metal Sheathed Thermocouple	**06** = 0.062 in **12** = 0.125 in **18** = 0.188 in **25** = 0.250 in **37** = 0.375 in	**J** = Type J **K** = Type K **E** = Type E **T** = Type T **JS** = Type J Special Limits of Error **KS** = Type K Special Limits of Error **ES** = Type E Special Limits of Error **TS** = Type T Special Limits of Error	**1** = 316 Stainless Steel **2** = 310 Stainless Steel **3** = 304 Stainless Steel **5** = Inconel 600	**S** = Single Element Assembly **D** = Dual Element Assembly	**G** = Grounded **U** = Ungrounded **E** = Exposed **UU** = Ungrounded Uncommon	**??** = Stem Length in Inches

Z-TEMP TEMPERATURE TRANSMITTER (REMOTE MOUNT THERMOCOUPLE)

-L	J	2	B	36
LEAD WIRE	THERMOCOUPLE TYPE	NUMBER OF LEADS	TRANSITION TYPE	WIRE OR ARMOR LENGTH "B"
-L = Lead Wire	J = Type J K = Type K E = Type E T = Type T	2 = Single 4 = Duplex	P = Plain Transition S = Spring Transition A = Armor Transition L = Same Size	?? = Insert "B" Length in Inches



T1	RHZH	B
INSULATION /CONDUCTOR	WIRE TERMINATION	TRANSMITTER WITH DISPLAY
T1 = Teflon, 20 AWG, Solid F1 = Fiberglass, 20 AWG, Solid T2 = Teflon, 20 AWG, Stranded F2 = Fiberglass, 20 AWG, Stranded (J&K Only) P1 = PVC, 20 AWG, Solid	RHZH — Z-Temp™ Explosion Proof Aluminum with Window (1/2" Conduit) (Display Required) — FM, CSA, ATEX, NEMA 4X, IP66	B = 4-20mA 2-wire Transmitter Y = 4-20mA 2-wire HART Transmitter

A	-TS
WIRE PROTECTION (OPTIONAL)	OPTIONS
= Leave Blank for No Armor Protection A = Stainless Steel Armor P = PVC Coated Stainless Steel Armor T = Teflon Coated Stainless Steel Armor O = Stainless Steel Overbraid	-TS = Tag, Stainless -R1 = One Point Calibration Cert (Reotemp Chooses Points) -R3 = Three Point Calibration Cert (Reotemp Chooses Points) *Additional Options Available*

THERMOCOUPLE & RTD OPTIONS

		Thermocouple	RTD	Digital Thermometers	Handheld Digital
CERTIFICATION OPTIONS					
-R1	1 Point Calibration Certification, Reotemp Chooses	✓	✓	✓	✓
-R3	3 Point Calibration Certification, Reotemp Chooses	✓	✓	✓	✓
-C1	1 Point Calibration Certification, Customer Chooses	✓	✓	✓	✓
-C3	3 Point Calibration Certification, Customer Chooses	✓	✓	✓	✓
-CC	Certificate of Conformance	✓	✓	✓	✓
-CS	NIST Calibration Sticker (No Logged Points)	✓	✓	✓	✓
OTHER OPTIONS					
-VB	Hi-Vibration	N/A	✓	✓	✓
-AC	Hi-Accuracy	N/A	✓	N/A	N/A
-PS	Pointed Stem	✓	✓	✓	✓
-TF	Teflon Coating	✓	✓	✓	✓
-SS	316 SS stem	N/A	STD	✓	✓
-NL	No Logo	✓	✓	✓	✓
-HT	Heat Transfer Compound (2 oz)	✓	✓	✓	N/A
-GL	Plain Glass Lens	N/A	N/A	✓	✓
-CL	Custom Logo Dial	N/A	N/A	✓	✓
-BP	Replacement Battery Pack	N/A	N/A	✓	✓
-WD	White Dial	N/A	N/A	✓	✓
-AS	Allows to Fit 1-1/4-18 Industrial Thermowell	✓	✓	✓	N/A
TAG OPTION					
-TS	Stainless Steel Tag (1-10 Characters)	✓			
-TM	Stainless Steel Tag (11-80 Characters)	✓			
-TP	Paper Tag	✓			

✓	Indicates that the option is available with this model.
N/A	Indicates the option is not available with this model.
STD	Indicates standard options with no additional cost.