RTD R50
Head Type RTD Assembly

BESTOBELL AQUATRONIX
SINCE / DEPUIS 1953
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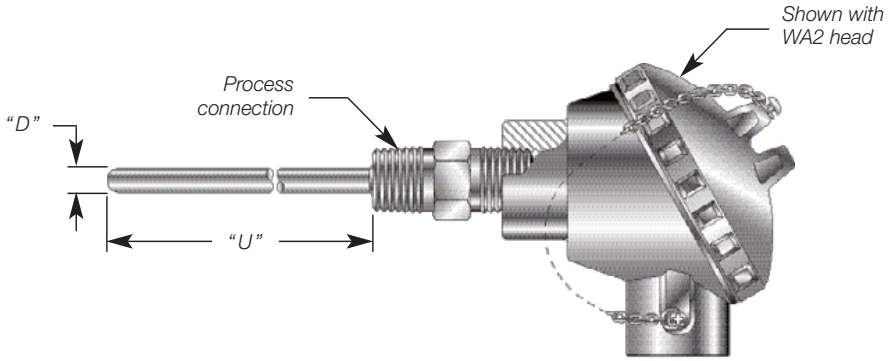

Custom Builder

MODEL	1	2	3	4	5	6	7	8
R_50 -	_ -	_ -	_ _ -	_ _ _ -	_ -	_ _ _ _ -	_ _ _ -	_ _ _

MODEL CODE	Temperature Range
L	Low temperature -50 to 200°C (-58/392°F)
M	Medium temperature -50 to 400°C (-58/752°F)
H	High temperature -200 to 600°C (-328/1112°F)

BOX1 CODE	Element Type
P	100Ω @ 0°C, α=0.00385 DIN EN 60751
T	1000Ω @ 0°C, α=0.00385 DIN EN 60751

Other elements available. Consult factory.

BOX2 CODE	Element Tolerance
1	±0.12% (±0.3°C) @ 0°C, Class B
2	±0.06% (±0.15°C) @ 0°C, Class A
3	±0.04% (±0.1°C) @ 0°C, Class AA

Other tolerances available. Consult factory.

BOX3 CODE	Output RTD Circuit Type
S2	Single, 2 wire
S3	Single, 3 wire
S4	Single, 4 wire
D2	Dual, 2 wire
D3	Dual, 3 wire

Note : 1. Dual RTD's require 0.187 O.D. min.
2. S3 industry standard circuit
3. S4 circuit most accurate

BOX3 CODE	Output Transmitter Type (Installed)
TA	Model RT810, 4-20mA
TB	Model RT820, 4-20mA
TX	Other, specify model type

*Note : ** Only available for element type 'P'*
*Note : ** Specify temp. range at the end of part number.*
Ex: RL50-P-1-TA...060, (0/100°C) Model RT810 transmitter, range 0/100°C

BOX4 CODE	Probe Diameter "D"
062	1/16"
125	1/8"
187	3/16"
250	1/4"
312	5/16"
375	3/8"
500	1/2"

BOX5 CODE	Probe Material
S	Stainless steel 316/316L
I	Inconel 600

BOX6 CODE	Fitting Type
D**S	Welded to tube

*Note : ** Specify fitting type. Some probe dia./ fitting size combinations may not be possilbe.*
***14**=1/4" NPT **38**=3/8" NPT*
***12**=1/2" NPT **34**=3/4" NPT*

BOX7 CODE	Head/Termination
0	No head, supplied with 6" single Teflon leads
WA*	Aluminum die cast screw cover, meets NEMA 4/IP65 requirements
PO*	White polypropylene screw cover, meets NEMA 4X/IP65 requirements
BA2	Bakelite screw cover, meets NEMA 4X/IP65 requirements
AM	Mini aluminum die cast screw cover 3/8" NPT conduit, meets NEMA 4X/IP65 requirements
AH*	Aluminum die cast flip cover, meets NEMA 4/IP65 requirements
EX*	Cast aluminum, explosion proof, CSA, FM Approval Class I, Div. 1, Gps. B,C & D Class II, Div. 1, Gps. E, F & G, NEMA 4X
CS*	Cast stainless steel 316 screw cover, meets NEMA 4X/IP66 requirements
CX*	Cast stainless steel, explosion proof, CSA, FM Approval Class I, Div. 1, Gps. B,C & D Class II, Div. 1, Gps. E, F & G, NEMA 4X

***2**=1/2" NPT Conduit **3**=3/4" NPT Conduit*

BOX8 CODE	Immersion Length "U"
_ _ _	In 0.1" increments Ex.: **065**=6.5" long

RT810
RTD Temperature Transmitter w/4-20 mA Output

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Product Features

- *High accuracy (±0.1 %)*
- *2-wire loop powered 4-20 mA output*
- *Linearized output to temperature*
- *Input RTD Pt100 with 3-wire compensation*
- *Analog design, potentiometer adjustable*
- *Factory calibrated for fixed range*
- *Metal housing*
- *Fits standard heads*

Description

The RT810 Series analog 2-wire, or loop powered, temperature transmitters offer the most effective price/performance ratio in the industry. Factory calibrated for fixed range, they provide a 4-20 mA output linearized to temperature for Pt100. The wide temperature range and stocked availability make the RT810 an excellent choice for temperature signal transmission.

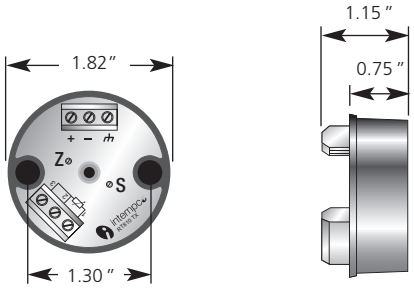
Precision 20-turn potentiometers allow fine adjustment of ZERO and SPAN. RT810 transmitters are of high quality, very accurate, completely linearized and fit into industry standard connection heads.

Specifications

@Vnom = 24 VDC, **T.ambient** = 25°C, **Span nom.** = 100 °C

Input :	Pt100, 3-wire, α = 0.00385, DIN EN 60751
Output :	4-20 mA loop powered, linear to temperature
Linearization :	±0.01 % FS
Power Supply :	12-32 VDC, polarity protected
Supply Effect :	0.02 % / V
Zero Drift :	±0.01 % FS / °C
Span Drift :	±0.01 % FS / °C
Long Term Drift :	±0.05 % FS / year
Excitation Current RTD :	0.8 mA
Sensor Lead Resistance RTD :	500 ohm max.
Accuracy :	0.1 % FS (includes effects of linearity, hysteresis and repeatability)
Span / Zero Adjustment :	20 turn potentiometer, ±10 % for zero and span
Maximum Loop Resistance :	Rmax. = [Vsupply – 9 VDC] / 20 mA
Open Circuit Detection :	Over-scale limit (27.0 mA) or Under-scale limit (2.2 mA)
Warmup :	30 seconds
Ambient Operating Temperature :	-40 °C.....80 °C (-40 °F....176 °F)
Storage Temperature :	-40 °C.....80 °C (-40 °F....176 °F)
Housing Material :	Die Cast Zinc, Enamel Painted
Housing Dimensions :	1.82" dia. x 1.15" H.

Dimensions



Temperature Standard Ranges		Input
°C	(°F)	Pt100 (P)
-50/+50	(-58/+122)	•
0/+50	(32/+122)	•
0/+100	(32/+212)	•
0/+200	(32/+392)	•
0/+300	(32/+572)	•
0/+400	(32/+752)	•
0/+600	(32/+1112)	•

For non-standard temperature ranges, specify range

Custom Builder

Model	Input Code	Range
RT810	P	(___ /___)

Ex.: **RT810 - P - (0/100 °C)**

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Since 1953, Quality Products to Sense, Measure & Control
Depuis 1953, Produits De Qualités Pour Détecter, Mesurer & Contrôler

Rev. A-2010

RT820
Programmable RTD Temperature Transmitter w/4-20 mA Output

Product Features

- *Micro-Processor based design*
- *Fully field re-programmable with module and PC based software*
- *Input RTD Pt100 with 3-wire compensation*
- *2-wire loop powered 4-20 mA output*
- *Factory calibrated or customer calibrated*

Description

The RT820 Series loop powered RTD temperature transmitters are Micro-processor based and are designed for highest accuracy, highest stability and highest resolution. Based on Intempco's patented MIST technology, they offer the highest performance for the most demanding temperature measurement applications.

The advanced programming, via the MIST PKIT, allows for one or two point calibration, re-scaling, filtering, and tagging. RT820 units are completely linearized and fit into industry standard small connection heads.

Specifications

@Vnom = 24 VDC, **T.ambient** = 25°C, **Span nom.** = 100 °C

Input :	Pt100, 3-wire, α = 0.00385, DIN EN 60751
Output :	4-20 mA loop powered, linear to temperature
Range :	Software re-scalable between -200 °C to 600 °C. (min. span of 50 °C)
Output Resolution :	0.0005 mA (15 bits)
Power Supply :	12-32 VDC, polarity protected
Supply Effect :	Less than 0.001 %/V
Long Term Drift :	≤ 0.1 % FS/Year
Excitation Current RTD :	0.2 mA
Sensor Lead Resistance RTD :	RTD resistance +2 times lead wire resistance must be less than 6000 ohms
Accuracy :	• ±(0.10 °C + 0.10 % of span) with one-point calibration[1]. • ±(0.05 °C + 0.05 % of calibrated span) with two-point calibration[2].
Span/Zero Adjustment :	By software
Maximum Loop Resistance :	Rmax. = [Vsupply – 7.5 VDC] * 40 ohms
Open Circuit Detection :	Upscale 24 mA (std.) or Downscale 2.5 mA
Warmup :	30 seconds
RFI Effect :	1 % of span or less
Temperature Effect :	± 0.002 °C/°C
Ambient Operating Temperature :	-40 °C.....80 °C (-40 °F....176 °F)
Storage Temperature :	-40 °C.....80 °C (-40 °F....176 °F)
Housing Material :	Die Cast Zinc, Enamel Painted
Housing Dimensions :	1.82" dia. x 1.15" H

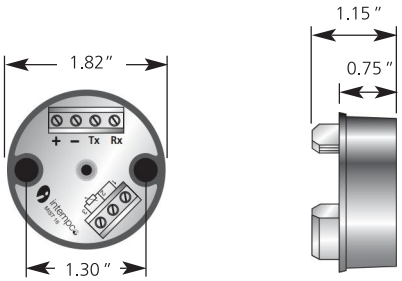
[1] *Max. error on complete span. Error at calibration point ≤ 0.1 °C.*
[2] *Max. error on complete calibrated span. Error at calibration points ≤ 0.1 °C.*

- *Information furnished by Intempco is believed to be accurate and reliable. However, no responsability is assumed by Intempco for its use.*
- *Specifications subject to change without notice.*

TX10.0

Rev. A-2010

Dimensions



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°C	(°F)	Pt100 (P)
-50/+50	(-58/+122)	•
0/+50	(32/+122)	•
0/+100	(32/+212)	•
0/+150	(32/+302)	•
0/+200	(32/+392)	•
0/+300	(32/+572)	•
0/+400	(32/+752)	•
0/+600	(32/+1112)	•

For non-standard temperature ranges, specify range

Custom Builder

Model	Input Code	Range
RT820	P	(___/___)

Ex.: **RT820 - P - (0/100 °C)**

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