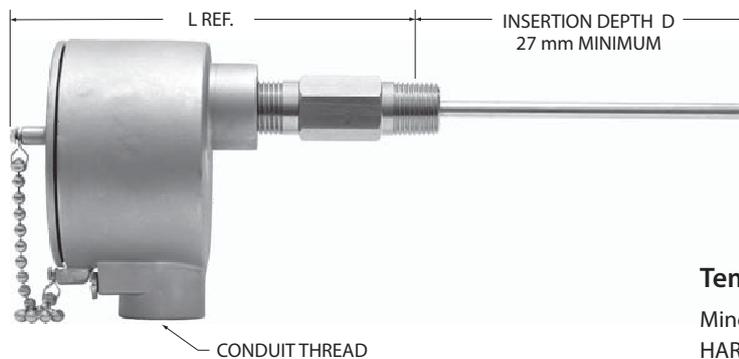


Explosionproof/Flameproof RTDs with Transmitters



Ex d IIC
AEx d IIC

Overview

- Tip sensitive, all stainless or MgO filled RTD probe
- Temptran™ transmitter for long signal path

Specifications

Temperature range: -50 to 260°C (-58 to 500°F).

Material:

Probe: Stainless steel (tip sensitive models have copper alloy tip).

Holder: Stainless steel.

Connection head:

Copper free aluminum alloy (CH104)

316L stainless steel (CH106).

Pressure rating: See table on next page.

Insulation resistance: 10 megohms min. at 100 VDC, leads to case.

Connection: Terminal block for wires to 14 AWG.

Time constant: Typical value in moving water.

Tip sensitive:

Single element 1.5 seconds.

Dual element 5 seconds.

All stainless and MgO filled: 10 seconds.

Explosionproof and flameproof ratings:

National and Canadian Electrical Code:

Class I, Divisions 1 and 2, Groups B, C, and D,

Class II, Groups E, F, and G,

T6 (Ta = 40°C),

T2 (Ta = 260°C). Ta limited to 160°C for CSA Class II locations.

National Electrical Code (Article 505):

Class I, Zones 1 and 2, AEx d IIC,

T6 (Ta = 40°C), T2 (Ta = 260°C).

Canadian Electrical Code (IEC 60079):

Zones 1 and 2, Ex d IIC,

T6 (Ta = 40°C), T2 (Ta = 260°C).

Temperature Transmitters

Minco's Temptran™ RTD transmitters provide a 4 to 20 mA or HART® Protocol signal that can be sent over long distances with a simple 2-wire system.

Leadwires:

2-lead RTD: TT211, TT520, TT521

3-lead RTD: TT176, TT520, TT521

4-lead RTD: TT520, TT521

Physical: Epoxy potted for moisture resistance.

See Section 5 for complete temperature transmitter specifications.

Hazardous area requirements

Refer to Minco's Application Aid #19 entitled "Specifying Temperature Sensors for Hazardous Areas" for more information on how to classify a hazardous area, methods of protection, and the various standards and agencies (including FM, CSA, CENELEC and ATEX). Application Aid #19 is available at www.minco.com/sensoraid/.

Specify and order products at:
www.minco.com/sensors_config

Specifications subject to change

Connection head and fitting options

CH104: Aluminum IP65, Type 3 and 4.

CH106: 316L stainless steel IP66, Type 3, 4, and 4X.

Fitting	Process thread	Pressure Rating	L REF.	Head	Code	Minimum Insertion Depth (mm)
Welded	1/2 - 14 NPT	200 psi (13.8 bar)	4.4" (112 mm)	CH104	0*	47
Welded	1/2 - 14 NPT	200 psi (13.8 bar)	4.2" (106 mm)	CH106	1*	47
Welded	G 1/2	200 psi (13.8 bar)	4.2" (107 mm)	CH104	2*	47
Welded	G 1/2	200 psi (13.8 bar)	4.0" (101 mm)	CH106	3*	47
Adjustable spring-loaded	1/2 - 14 NPT	50 psi (3.4 bar)	5.7" (144 mm)	CH104	4	27
Adjustable spring-loaded	1/2 - 14 NPT	50 psi (3.4 bar)	5.4" (138 mm)	CH106	5	27
Adjustable spring-loaded	G 1/2	50 psi (3.4 bar)	5.7" (144 mm)	CH104	6	27
Adjustable spring-loaded	G 1/2	50 psi (3.4 bar)	5.4" (138 mm)	CH106	7	27
Fixed spring-loaded	1/2 - 14 NPT	None	4.4" (112 mm)	CH104	8**	27
Fixed spring-loaded	1/2 - 14 NPT	None	4.2" (106 mm)	CH106	9**	27

* 0.250 diameter only for all stainless and MgO probes.
(not available in tip-sensitive, 0.215" diameter or 0.236" diameter probes)

** 0.236 and 0.250 diameters only for fixed spring-loaded fittings.

Note: Connection head dimensions are found on page 4-2.

Temperature transmitter range codes

Popular ranges below.

More range codes

starting on page 5-20 and at

www.minco.com/rangecode/

Code	Range	
EO	-50 to 100°C	-58 to 212°F
BC	-30 to 30°C	-22 to 86°F
S	-17.8 to 37.8°C	0 to 100°F
AC	-17.8 to 93.3°C	0 to 200°F
AN	-17.8 to 148.9°C	0 to 300°F
AG	-17.8 to 260°C	0 to 500°F
AP	-6.7 to 21.1°C	20 to 70°F
A	-6.7 to 48.9°C	20 to 120°F
N	0 to 50°C	32 to 122°F
C	0 to 100°C	32 to 212°F
J	0 to 150°C	32 to 302°F
K	0 to 200°C	32 to 392°F
V	10 to 65.6°C	50 to 150°F
P	37.8 to 179.4°C	100 to 355°F
BH	50 to 150°C	122 to 302°F

Assembly numbers

Probe diameters	0.215" (5.5 mm)	0.236" (6.0 mm)	0.250" (6.4 mm)
Tip-sensitive	AS760	AS700	AS720
All stainless	AS762	AS702	AS722
MgO filled		AS704	AS724

Sensing elements

Element		Code: Single
Platinum (0.00392 TCR)	100 Ω ±0.5% at 0°C	PA
Platinum (0.00385 TCR) (Meets EN60751, Class B)	100 Ω ±0.1% at 0°C	PD
Platinum (0.00385 TCR) (Meets EN60751, Class A)	100 Ω ±0.06% at 0°C	PM
Platinum (0.00385 TCR)	100 Ω ±0.5% at 0°C	PE
Platinum (0.00375 TCR)	1000 Ω ±0.12% at 0°C	PW
Copper (0.00427 TCR)	10 Ω ±0.2% at 25°C	CA
Nickel (0.00672 TCR)	120 Ω ±0.5% at 0°C	NA
Nickel (0.00618 TCR)	100 Ω ±0.22% at 0°C	NB

Specification and order options

AS720	Assembly number from table
4	Connection head/fitting from table
PD	Sensing element from table
100	Insertion depth D (mm): See table for minimums
X	Leads per sensing element: Y = 2 leads (n/a for copper) Z = 3 leads X = 4 leads (n/a for dual models)
3	Conduit thread: 3 = 1/2 - 14 NPT 4 = 3/4 - 14 NPT
TT176	Tempran™ model number: TT211: Fixed Range (2-lead RTDs) TT176: Fixed Range (3-lead RTDs) TT520: Programmable (2, 3, & 4-lead RTDs) TT521: HART Programmable (2, 3, & 4-lead RTDs)
N	Temperature range code from table
1	Calibration: 1 = Nominal calibration 2 = Match calibrated, 0.75% total system accuracy. For other calibration options, contact Minco
AS7204PD100X3TT176N1 = Sample part number	

Specifications subject to change

