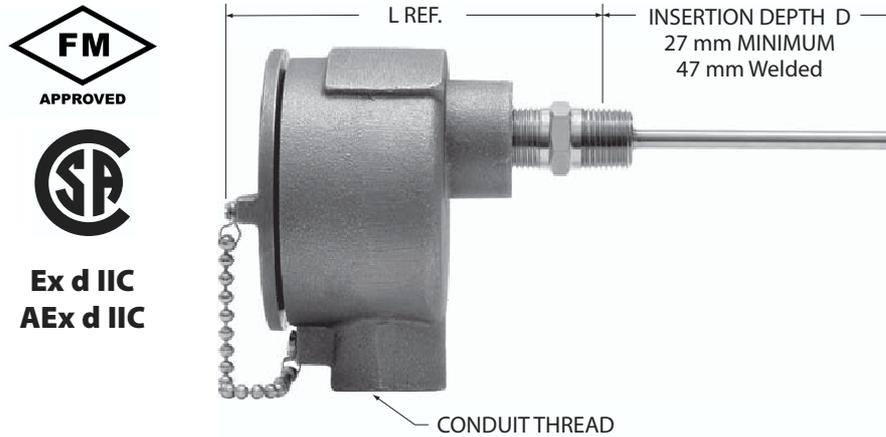


# Explosionproof/Flameproof RTD Sensors



Ex d IIC  
AEx d IIC

## Overview

Explosionproof and flameproof rating for hazardous areas where accurate temperature sensing is critical.

- Tip sensitive, all stainless or MgO filled probes available
- Hazardous area rated
- High temp process temperature options (600°C) available. Contact Minco for more information.

## 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).

## 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/](http://www.minco.com/sensoraid/).

## Specify and order products at:

[www.minco.com/sensors\\_config](http://www.minco.com/sensors_config)

*Specifications subject to change*

### Assembly numbers

Probe diameters	0.215" (5.5 mm)		0.236" (6.0 mm)		0.250" (6.4 mm)	
	Single	Dual	Single	Dual	Single	Dual
Tip-sensitive	AS760	AS761	AS700	AS701	AS720	AS721
All stainless	AS762	AS763	AS702	AS703	AS722	AS723
MgO filled (platinum only)			AS704		AS724	AS725

### 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 pages 4-2 to 4-3.

### Sensing elements

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

### 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
AS7204PD100X3 = Sample part number	

Specifications subject to change

