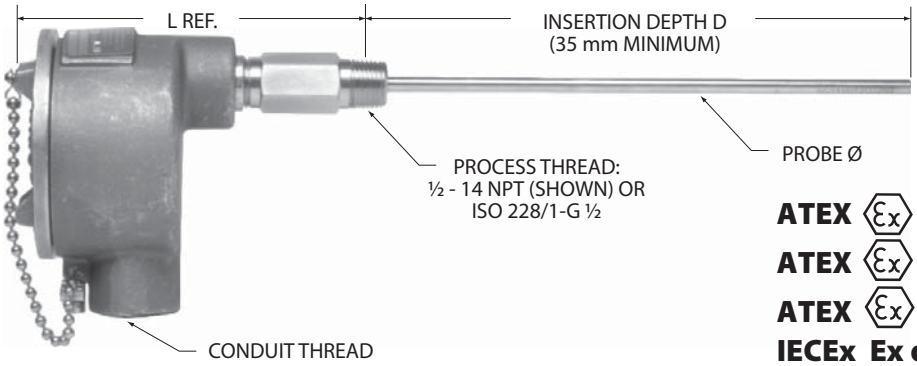
Flameproof, Increased Safety and Intrinsic Safety Thermocoupole Sensors – Per European and International Requirements



CE 0891

ATEX Ⓔx II 2 G Ex d IIC TX Gb
ATEX Ⓔx II 2 G Ex e IIC TX Gb
ATEX Ⓔx II 1 G Ex ia IIC TX Ga
IECEx Ex d IIC TX Gb
IECEx Ex e IIC TX Gb
IECEx Ex ia IIC TX Ga

Overview

Complies with European standards for electrical apparatus for potentially explosive atmospheres: ATEX Directive 94/9/EC and International IECEx certification schemes for explosive atmospheres.

- Flameproof assemblies can be used in Zones 1 or 2
- Increased safety assemblies can be used in Zones 1 or 2
- Intrinsic safety assemblies can be used in Zones 0, 1 or 2 when used with an appropriate barrier
- Features tip-sensitive or MgO filled thermocouple probe for fast response
- Spring-loaded holder ensures good probe contact
- U.S. or metric threads

Specifications

Temperature range:
-50 to 260°C (-58 to 500°F)
-50 to 600°C (-58 to 1112°F) for MgO Probes

Material:
Tip-sensitive probe: Stainless steel with copper alloy tip.
MgO filled thermocouple: Stainless steel.
Fittings: Stainless steel.
Connection head:
CH356: 316 stainless steel IP66, Type 3, 4, and 4X.
CH357: Aluminum alloy IP65, Type 3 and 4.
CH358: Epoxy coated aluminum alloy IP66, Type 3, 4, and 4X.

Pressure rating:
Spring-loaded holder: 50 psi (3.4 bar).
Fluid seal fitting: 100 psi (6.9 bar).

Insulation resistance: 100 megohms min. at 100 VDC, leads to probe case. Ungrounded junction models only on thermocouples.

Connection: Terminal block for wires up to AWG 14.

Time constant: Typical value in moving water.
Tip sensitive:
Single element 1.5 seconds.
Dual element 7 seconds.
All stainless and MgO filled: 10 seconds.

Temperature Transmitters

Minco's Temptran™ thermocouple transmitters provide a 4 to 20 mA signal or HART® Protocol that can be sent over long distances with a simple 2-wire system. See Section 4 for complete temperature transmitter specifications.

Contact Minco if transmitter is required.

Hazardous area requirements

For more information on how to classify a hazardous area, methods of protection, and the various standards and agencies (including FM, CSA, IECEx and ATEX), call Mod-Tronic at 1-800-794-5883.

▼= STANDARD OPTIONS
Specifications subject to change

Fitting options

Fitting	Process Thread	L REF.		Code	Pressure Rating
		CH356	CH357/CH358		
Fluid Seal	1/2 - 14 NPT		4.6" (116 mm)	0*	50psi (3..4 bar)
Fluid Seal	G 1/2		4.4" (111 mm)	1*	50psi (3..4 bar)
Set screw spring-loaded	1/2 - 14 NPT	5.3" (135 mm)	5.6" (143 mm)	2	50psi (3..4 bar)
Set screw spring-loaded	G 1/2	5.0" (128mm)	5.4" (136 mm)	3	50psi (3..4 bar)
Fixed spring-loaded	1/2 - 14 NPT	4.5" (115 mm)		4	None
Welded	1/2 - 14 NPT	4.2"(107 mm)	4.5" (115 mm)	6**	200psi (13.8 bar)
Welded	G 1/2	4.0" (101 mm)	4.3" (109 mm)	7**	200psi (13.8 bar)
Release knob spring-loaded	1/2- 14 NPT	5.4" (137 mm)	5.7" (145 mm)	8	50psi (3..4 bar)
Release knob spring-loaded	G 1/2	5.2" (132 mm)	5.5" (140 mm)	9	50psi (3..4 bar)

** Not available with CH356 stainless steel connection head.*
*** 0.250" (6.4mm) for MgO only (not available in tip-sensitive or 0.236" diameter models).*

Thermocouple Assembly Numbers

Probe Diameters	0.236" (6.0mm)		0.250" (6.4mm)	
Number of elements	Single	Dual	Single	Dual
Tip Sensitive	AS806	AS807	AS816	AS817
MgO	AS808	AS809	AS818	AS819

Notes:
CH356: 316 stainless steel IP66, Type 3, 4, and 4X.
CH357: Aluminum alloy IP65, Type 3 and 4.
CH358: Epoxy coated aluminum alloy IP66, Type 3, 4, and 4X.
Get more information on connection heads on pages 3-2 to 3-3.

Junction types

Thermocouple Junction	Code
Chromel-Constantan	E
Iron-Constantan	J
Chromel-Alumel	K
Copper-Constantan	T

Specification and order options

AS806	Assembly number from table
4	Fitting from table
E	Junction type from table
U	Junction Grounding: G = Grounded U = Ungrounded
450	Insertion depth D (in mm): (35-3000 mm)
P	
3	Conduit thread: 3 = 1/2 - 14 NPT 4 = 3/4 - 14 NPT 5 = M20 x 1.5
A	Connection head material: A = Aluminum S = 316 Stainless Steel E = Aluminum, Epoxy coated
0	Extension: 0 = No Extension 2 = 1/2 NPT Nipple (2")/Union (2.6" length adder) 3 = 1/2 NPT Nipple (3")/Union (3.6" length adder) 4 = 1/2 NPT Nipple (4")/Union (4.6" length adder) 6 = 1/2 NPT Nipple (6")/Union (6.6" length adder)
X0X	No Thermowell
AS8064EU450P3A0X0X= Sample part number	

▼= *STANDARD OPTIONS*
Specifications subject to change