

AZCO Temperature Probes

IECEX Approved



FEATURES :

- Zone 20, 21 & 22 Hazardous Area Approval
- Variety of RTDs & Thermocouples Available
- Replaceable Sensor Inserts
- EHEDG seals
- Suitable for In-head & Remote transmitters
- Wide range of options for easy installation

Overview and Specifications

Overview:

Azco Holdings manufacture Sanitary Stainless Steel Temperature Probes for the dairy and food industries, pharmaceutical, chemical and industrial process control. With a new robust tip and seal design, the probes are now rated for use in Hazardous areas.

Probes are available with RTD or Thermocouple sensors in a variety of stock lengths and can also be made to custom sizes to suit requirements. All probes can be supplied with any of the common process connections.

The probes have earned the reputation of being among the most reliable and accurate on the market. All of the designs feature a replaceable sensor insert so that should a sensor fail, the sensor can be replaced while the probe remains insitu.



Standard housing Probe



Extended Housing Probe



Standard housing w/ Triclover



Standard housing w/ rugged tip

Specifications

Housing	: 316 Stainless Steel
Protection	: Endorsed IP66/IP68 (Note 1)
Probe	: 316 Stainless Steel, Length as ordered
Sensor	: RTD, Type K or T Thermocouple, Alternative Thermocouple available : Replaceable insert type
RTD Configuration	: Pt100 (385), Class A, 2-wire, 3-wire & 4-wire
Range	: -10°C to +215°C (RTD) , -10°C to +260°C (Thermocouple)
Response	: < 3 seconds (Both RTD and Thermocouples)
(63.2% of ultimate value)	: < 1.5 seconds (Fast Response)
Transmitter	: In-Head Style or Din Rail Remote Mounted (ordered separately)

Note 1: To achieve full IP66/IP68 ingress protection

(A) Use two complete turns of thread seal tape on cable gland

(B) Tighten cap until seal touches housing and then add 25 degrees of rotation

Note 2: Tighten connector screws max 0.6 Nm

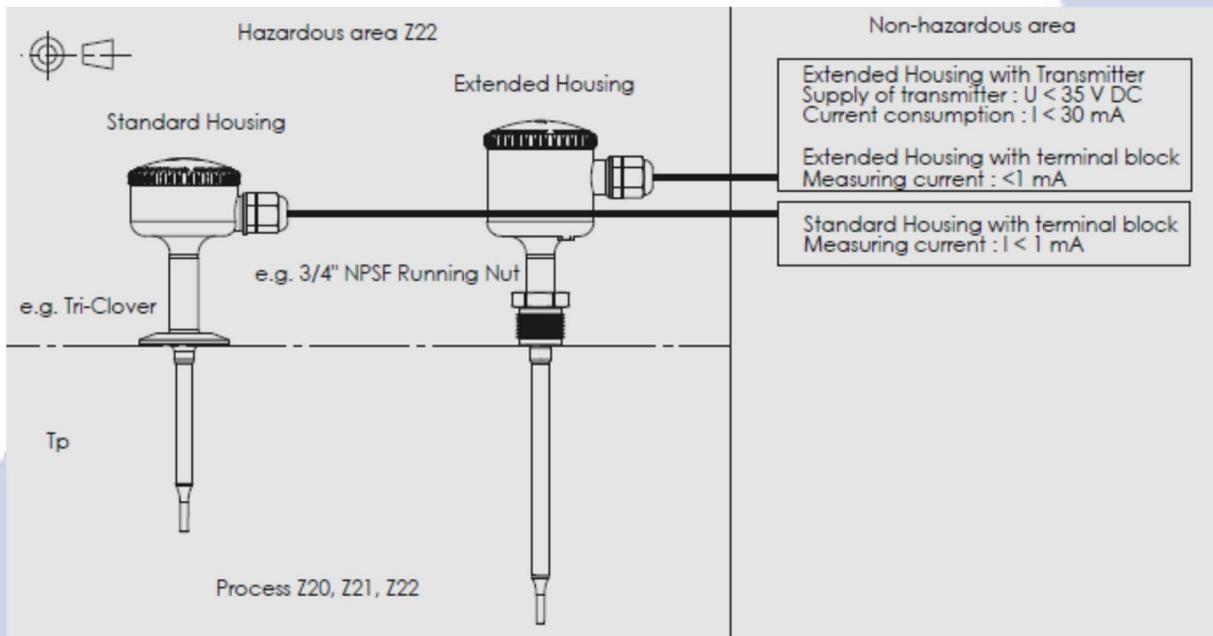
Note 3: Light Application of Heatsink paste to the sensor tip on replacement

Approvals and Installation Instructions



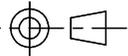
IECEx Certificate of Conformity

Type	Electrical Data	Type of protection	Process Temperature Tp
See ordering info. for part number designator			
.E....IEC Extended Housing with Transmitter Make M-System, Model 27HU-0 or equivalent	U < 35 V DC I < 30mA	IECEx SIM 15.xxxx.x IEC 60079.0 : 2011 IEC 60079.31: 2013	-20°C < Tp < 180°C
.TE....IEC Extended Housing with Terminal Block	Measuring Current < 1 mA		
.S....IEC Standard Housing with Terminal Block	Measuring Current < 1 mA	Ex ta/tb IIIC T96°C Da/Db	



Installation Instructions for Dust Ignition Protection:

- 1) All supply voltages are to be supplied from safety extra voltage supply only.
- 2) Use only separately certified Ex t cable glands fitted with gland seal at entry. Minimum ingress protection rating IP67.
- 3) For applications where the process connection cannot provide sufficient equipotential bonding use an appropriate metal cable gland (see point 2 above) and an earth clamp to attach an earth conductor.
- 4) For applications using an in-head transmitter where the process temperature is above 125°C the installer must take steps to ensure the internal housing temperature does not exceed the devices operating temperature rating. Consult Azco Holdings Ltd.



Ordering Information IECEx Certified Temperature Probes

Build an Azco Temperature Probe part number by combining the designators in one of the number sequences below, please note that not every combination of process connection and connection size is available

Thermocouples 1 2 3 4 5-6-7-8

1 Sensor Type	2 Options	3 Housing Type	4 Process Connection	5 Connection Size	6 Insertion Depth mm eg 100	7 Certification	8 Options
K = Type K Thermocouple T = Type T Thermocouple W = Alternative Thermocouple	Clear = none T = Terminal Block D = Duplex Sensor	E = Extended	Clear = Running Nut, EHEDG Seal -T = Triclover -R = RJT -B = BSP -N = NPT -M = Metric Coarse -A = Running Nut Teflon Seal -W = Wingate Seal	Clear = 3/4" NPSF 1 = 1/2" 2 = 5/8" 3 = 3/4" 4 = 1" 5 = 1 1/2" 6 = 2" 7 = 2 1/2" 8 = 3" 9 = 4" -M Option Min M16 Max M24	IEC = IECEx	clear = none STR = Strengthened TX1 = M-System Transmitter TXX = Approved Transmitter W = Other options covered by this certificate of conformity	

Ordering example : **KE-300-IEC-TX1**
 Description : Type K, Extended Housing, 3/4" NPSF Running nut, EHEDG Seal, 300mm insertion depth, IECEx Certification, M-System 27HU-0 Transmitter

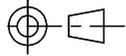
Resistance Temperature Devices 1 2 3 4 5-6-7-8-9

1 Sensor Type	2 Options	3 Housing Type	4 RTD Configuration	5 Process Connection	6 Connection Size	7 Insertion Depth mm eg 100	8 Certification	9 Options
R = PT100 W = Alternative RTD	Clear = none F = Fast Response R = Rugged D = Duplex Sensor	S = Standard if no option selected at block 2 E = Extended A = Averaging, (always uses extened housing)	Clear = Thermocouple -2 = 2 wire -3 = 3 wire -4 = 4 wire	Clear = Running Nut, EHEDG Seal -T = Triclover -R = RJT -B = BSP -N = NPT -M = Metric Coarse -A = Running Nut Teflon Seal -W = Wingate Seal	Clear = 3/4" NPSF 1 = 1/2" 2 = 5/8" 3 = 3/4" 4 = 1" 5 = 1 1/2" 6 = 2" 7 = 2 1/2" 8 = 3" 9 = 4" -M Option Min M16 Max M24	IEC = IECEx	clear = none STR = Strengthened TX1 = M-System Transmitter TXX = Approved Transmitter W = Other options covered by this certificate of conformity	

Ordering example : **RS-3-100-IEC**
 Description : PT100, Standard Housing, 3/4" NPSF Running nut, EHEDG Seal, 100mm insertion depth, IECEx Certification

3	Additional Options added	CMH	3/4/2020			© 2015 THE TECHNICAL DATA AND DESIGNS IN THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF AZCO HOLDINGS LTD AND/OR CONTAIN PROPRIETARY RIGHTS OF OTHERS AND ARE NOT TO BE USED OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN CONSENT OF AZCO HOLDINGS LTD	Part No.	Part Number Designators				
2	Additional Information Clarified	CMH	23/1/2018				Material Desc					
1	Flat Face Seal Added	CMH	20/7/2016				Material Grade					
0	Issued for approval	CMH	17/07/2015				Surface Finish					
REV	DESCRIPTION	DRAWN	DATE	APPVD	DATE		Treatment	SIZE	SCALE	DRAWING NO.	REV	SHEET
							A4	NTS	AZ300	3	2 OF 2	





Ordering Information Temperature Probes for Non Hazardous Area applications

Build an Azco Temperature Probe part number by combining the designators in one of the number sequences below, please note that not every combination of process connection and connection size is available

Thermocouples 1 2 3 4 5-6-7-8

1 Sensor Type	2 Options	3 Housing Type	4 Process Connection	5 Connection Size	6 Insertion Depth mm eg 100	7 Option	8 Options
K = Type K Thermocouple T = Type T Thermocouple W = Alternative Thermocouple	Clear = none T = Terminal Block D = Duplex Sensor	E = Extended	Clear = Running Nut -T = Triclover -R = RJT -B = BSP -N = NPT -M = Metric Coarse -W = Wingate Seal	Clear = 3/4" NPSF 1 = 1/2" 2 = 5/8" 3 = 3/4" 4 = 1" 5 = 1 1/2" 6 = 2" 7 = 2 1/2" 8 = 3" 9 = 4" -M Option Min M16 Max M24		EHEDG = Running Nut version Recessed Seal Groove, Brown FDA approved Elastomer 316 = All others not EHEDG Note - 316 Running Nut version has a Flat faced stem with a Solid White Teflon Seal	clear = none STR = Strengthened TX1 = M-System Transmitter TXX = Approved Transmitter W = Other options covered by this certificate of conformity

Ordering example : **KE-300-EHEDG-TX1**
 Description : Type K, Extended Housing, 3/4" NPSF Running nut, EHEDG Seal, 300mm insertion depth, M-System 27HU-0 Transmitter

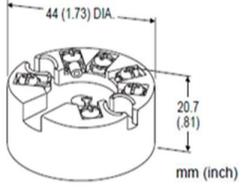
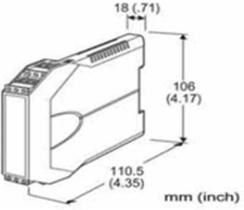
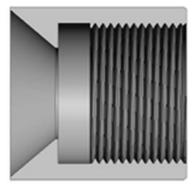
Resistance Temperature Devices 1 2 3 4 5-6-7-8-9

1 Sensor Type	2 Options	3 Housing Type	4 RTD Configuration	5 Process Connection	6 Connection Size	7 Insertion Depth mm eg 100	8 Option	9 Options
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Ordering example : **RS-3-100-EHEDG**
 Description : PT100, Standard Housing, 3/4" NPSF Running nut, EHEDG Seal, 100mm insertion depth

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								Material Desc		SIZE	SCALE	DRAWING NO.	REV	SHEET
								Material Grade		A4	NTS	AZ300	0	3 of 3
0	Issued for approval	CMH	28/04/20					Surface Finish						
REV	DESCRIPTION	DRAWN	DATE	APPVD	DATE			Treatment						

Accessories

Transmitters	
In-Head Universal Input	Part Number
	27HU-0
Remote Mounted	Part Number
	B3HU-0
Sensor Inserts	Part Number (Replace "X" with probe insertion length in mm)
	R-3-X
	RF-3-X
	RE-3-X
	K-X
	R-3-X-D
	RF-3-X-D
	KD-X
Sanitary Sockets	
Standard 27mm 3/4" socket	Part Number
	SAN - STD
Extended 80mm 3/4" socket	Part Number
	EX-SAN-STD

Accessories

Adaptors	
RJT to 3/4" sanitary socket	Part Number
	AN-SAN-R25 (1" RJT to 3/4" socket) AN-SAN-R50 (2" RJT to 3/4" socket) AN-SAN-R75 (3" RJT to 3/4" socket)
Male RJT to 3/4" sanitary socket	Part Number
	AN-SAN-M38 (1.5" Male RJT to 3/4" socket) AN-SAN-M50 (2" Male RJT to 3/4" socket)
Triclover to 3/4" sanitary socket	Part Number
	AN-SAN-T38 (1.5" Triclover to 3/4" socket) AN-SAN-T50 (2" Triclover to 3/4" socket)
Available Seals	
Flat face solid Teflon seal	Part Number
	AZ009
EHEDG sanitary seal	Part Number
	AZ011

Accessories

Plug for 3/4" sockets	Part Number
	A2-147
Laser Engraved Tags	Part Number
	AZ100 (engraved tag and clip)

*Custom probes and accessories can be provided to your specifications. Consult Applied Instruments

*Consult Applied Instruments regarding thermowells and calibration certificates



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