For the attention of:



ATEX Tip Sensitive Bearing Sensors Hazardous Area Zone 2 Non-Sparking

REARING TITLE

ATEX Tip Sensitive Thermocouple and RTD Ptl00 Bearing/Embedment Sensors Certified Non-Sparking Ex nA for Zone 2 Hazardous Areas

ATEX Bearing Thermocouple Assemblies

Bearing Thermocouples 3.0mm to 6.35mm dia.

Our ATEX bearing thermocouples are designed for use in bearing shoes and will give reliable indication as to the bearing condition. This may provide an early warning of film breakdown and allow machine shutdown and avoid unnecessary damage. An oil seal barrier is also available to seal the assembly as it passes through a vessel casing.

- Approved to II 3 GD Ex nA IIC (Gas) and Ex tc IIIC (Dust)
- High integrity construction suited to arduous operating conditions
- High accuracy and stability maintained throughout operating life •
- Available in thermocouple types K, T and J •
- Sheath diameters from 3.0mm to 6.35mm in a standard or 'top hat' style •
- Insulated measuring junction gives a floating output with high insulation resistance •
- Choice of extension cables available
- UKAS calibration available •

Accessories for use wi

1

K

Т

J



Model shown is fitted with an oil seal barrier

The above sensor must be terminated in a suitable ATEX approved enclosure or box



Therm	ocouple Type	Temperature Range (continuous)	SECTION	Tip Styles, Standard Lengths			and Material		
Nickel Chromium vs Nickel Aluminium -25°C to +225°C				Diameter	Standard	Top Hat Style (36TH)			
Copper vs Constantan		-25°C to +225°C							
Iron vs Constantan -25°		-25°C to +225°C		d1		*****			
sories for use with Top Hat Style Sensors			rd Size:	Tip Diameter Tip Material and Length 'L1'		Tip Material and Length 'L1'			
Retaining Clip (Locking Washer)			Standa	'd1'	Stainless Steel SS	Phosphor Bronze PB	Stainless Steel SS	Phosphor Bronze PB	
	Part Code: X10	062		3.0mm	8.0mm	—	—	—	
				3.2mm (1/8")	8.0mm	9.0mm	—	—	
n n m	Spring (6mm co	mpressed length)		4.0mm	10.0mm	10.0mm	_	_	
W	Part Code: X10)65		6.0mm	8.0mm	—	6.0mm	—	
				6.35mm (1/4")	8.0mm	8.0mm	6.0mm	_	

SECTION	Extension Cable								
	Part Code	Junction	Description						
Standard Cables	B53	Simplex	7/0.15mm conductors, extruded PFA insulated, twisted.						
	B53/SSB	Simplex	7/0.15mm conductors, extruded PFA insulated, twisted with overall stainless steel braid.						
	BM0702/SPEC	Duplex	2 pairs 7/0.2mm conductors, extruded PFA insulated, twisted and extruded PFA sheathed.						
	BM0702/SSB/SPEC	Duplex	2 pairs 7/0.2mm conductors, extruded PFA insulated, twisted and extruded PFA sheathed with overall stainless steel braid.						

NOILJSS	Oil Seal Barrier (optional) Diameter & Cable Compatibility								
Dia.	Simplex	Duplex							
3.0mm	B53 & B53/SSB								
3.2mm	B53 & B53/SSB	—							
4.76mm	B53 & B53/SSB	BM0702/SPEC & BM0702/SSB/SPEC							
5.5mm	B53 & B53/SSB	BM0702/SPEC & BM0702/SSB/SPEC							
6.0mm	B53 & B53/SSB	BM0702/SPEC & BM0702/SSB/SPEC							
6.35mm	B53 & B53/SSB	BM0702/SPEC & BM0702/SSB/SPEC							



Model shown without an optional oil seal barrier

Model shown fitted with an optional oil seal barrier

Order Code - Example									
Type Nº	Thermocouple Type (See section 1)	Simplex or Duplex	Tip Ø (d1)	Tip Material	Tip Length	Cable Length L2 (mm)	Cable Type	Oil Seal Barrier (optional) OD x length (d2 x L3)	Cable Length (L4) (mm)
36T	- K	- 1 -	3.2	- PB -	9.0	- 1500 -	B53KX/SSB	- OSB 5.5 X 60 -	1500

ATEX RTD Pt100 Bearing Sensors

Bearing RTD Pt100 Sensors 3.0mm to 6.35mm dia.

Our ATEX bearing RTDs are designed for use in bearing shoes and will give reliable indication as to the bearing condition. This may provide an early warning of film breakdown and allow machine shutdown and avoid unnecessary damage. An oil seal barrier is also available to seal the assembly as it passes through a vessel casing.

- Approved to II 3 GD Ex nA IIC (Gas) and Ex tc IIIC (Dust)
- Pt100 element conforming to BS EN 60751 / IEC 60751
- Available in B and A grade accuracies
- Fast response and high insulation resistance
- Sheath diameters from 3.0mm to 6.35mm in a standard or 'top hat' style
- Simplex and duplex sensors available
- · Choice of extension cables available temperature rated up to 225°C
- UKAS calibration available



Model shown is fitted with an oil seal barrier

The above sensor must be terminated in a suitable ATEX approved enclosure or box



SECTION	N° of Elements			Tip Styles, Standard Lengths and Material					
1	Simplex			Diameter	Standard	Tip (36P)	Top Hat Style (36PH)		
2	Duplex								
SECTION	№ of Wires			d1					
3	3 wire		izes	Tip Diameter	Tip Material a	nd Length 'L1'	Tip Material a	ind Length 'L1'	
4	4 wire		dard S	ʻd1'	Stainless Steel	Phosphor Bronze	Stainless Steel	Phosphor Bronze	
	Tolerance of Element		Stan	3.0mm	8.0mm	_	_	_	
Grade	Accuracy @ 0°C	Accuracy @ 100°C		3.2mm (1/8")	8.0mm	9.0mm	—	_	
R	+0.30°C	+0.80°C		4.0mm	10.0mm	10.0mm		_	
5	±0.00 0	±0.00 C		6.0mm	8.0mm	_	6.0mm	_	
A	±0.15°C	±0.35°C		6.35mm (1/4")	8.0mm	8.0mm	6.0mm	_	

SECTION	Extension Cable								
	Part Code	N° of cores	Description						
	RT32/SSB	3	3-cores of PFA insulated conductors. Cores bunched together with stainless steel wire braid overall.						
es	RT32/SSB/TEF	3	As above but with a PFA overall sheath.						
Cabl	RT42/SSB	4	4-cores of PFA insulated conductors. Cores twisted together with stainless steel wire braid overall.						
ndard	RT42/SSB/TEF	4	As above but with a PFA overall sheath.						
Sta	RT62/SSB	6	6-cores of PFA insulated conductors. Cores twisted together with stainless steel wire braid overall.						
	RT62/SSB/TEF	6	As above but with a PFA overall sheath.						
	RT82	8	8-cores of PFA insulated conductors. Cores twisted together with silver plated copper wire braid and PFA overall sheath.						

SECTION	Oil Seal Barrier (optional) Diameter & Cable Compatibility										
Dia	Simplex		Duplex								
Dia.	3-wire	4-wire	3-wire	4-wire							
3.2mm	RT32/SSB	RT42/SSB	_	-							
4.76mm	RT32/SSB or RT32/SSB/TEF	RT42/SSB or RT42/SSB/TEF	RT62/SSB or RT62/SSB/TEF	RT82							
5.5mm	RT32/SSB or RT32/SSB/TEF	RT42/SSB or RT42/SSB/TEF	RT62/SSB or RT62/SSB/TEF	RT82							
6.0mm	RT32/SSB or RT32/SSB/TEF	RT42/SSB or RT42/SSB/TEF	RT62/SSB or RT62/SSB/TEF	RT82							
6.35mm	RT32/SSB or RT32/SSB/TEF	RT42/SSB or RT42/SSB/TEF	RT62/SSB or RT62/SSB/TEF	RT82							



Model shown without an optional oil seal barrier

Model shown fitted with an optional oil seal barrier

Order Co	de - Example									
Type №	Simplex or Duplex (See section 1)	N° of wires	Grade of Element	Tip Ø (d1)	Tip Material	Tip Length	Cable Length L2 (mm)	Cable Type	Oil Seal Barrier (optional) OD x length (d2 x L3)	Cable Length (L4) (mm)
36P	- 1 -	3	- B	- 3.2	- SS	- 8.0	- 1500 -	RT32/SSB	- OSB 4.76 X 60	- 2000

ATEX / IECEx Sealed Feedthroughs

ATEX / IECEx Pressure and Vacuum Sealed Feedthroughs

ATEX / IECEx approved Spectite[®] sealed feedthroughs from TC Ltd. are essential when probes, sensors, electrodes, wires and other types of static elements need to be sealed as they pass through a pressure or environmental boundary.

- Approved to Ex II 2 GD, Ex d IIC Gb / Ex e IIC Gb, Ex ta IIIC Da
- Inhibit the leakage of gas or other media
- · Restrain the elements from moving in the assembly
- · Versions available to seal on both single and multiple elements



SECTION	Spectite® Sealed Feedthroughs									
Series	Illustration	Features	Notes							
PF	Feedthroughs for single elements	 Seals on probes, sensors, small-bore tubes and other similar elements Immersion length of the element can be easily adjusted Vacuum to 700 bar 	These feedthroughs are designed for sealing single elements, usually sensors, probes or tubes, where they penetrate a pressure or environmental boundary.							
MF	Feedthroughs for multiple elements	 Saves time and costs as multiple sensors pass through one feedthrough Immersion length of the element can be easily adjusted Vacuum to 700 bar 	A single access port into an enclosure or process vessel is all that is needed to allow multiple probes, sensors, etc., to pass through an environmental or pressure boundary using a single feedthrough assembly.							

Our ATEX / IECEx Approval Explained





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Other ATEX / IECEx literature available from TC Ltd.



Zone 0, 1 and 2 Sensors

nA Zone 2 Sensors

Fittings



Sealed Feedthroughs