

WDB7 Series

Lug Style Surface Temperature Sensor

APPLICATION

For use on any application where surface temperature monitoring is desired or required.

METHOD OF OPERATION

The WDB7 series is a lug style NTC thermistor or platinum RTD (PT100) type for continuous temperature monitoring. It is designed to bolt directly onto a bearing housing, motor, gearbox, or machine casing. The mounting hole is M8 which can be drilled out up to M10 diameter. The sensor can be connected to a PLC or to a hazard monitoring system, such as 4B's T500 Hotbus Elite, Watchdog Elite, or T400 Elite. The connections are not polarity sensitive therefore special connections requirements are eliminated. The WDB7 series is approved for use in hazardous locations.



WDB7 Series Bearing Sensor
(ATEX and IECEx Approved)

FEATURES

- ▶ Surface Mount Installation
- ▶ M8 Bolt Mounting Hole
- ▶ 1/2" NPT Conduit Entry
- ▶ NTC Version - Continuous Temperature
- ▶ PT100 Version - Platinum RTD
- ▶ PTC Version - Trip Points from 50°C to 90°C
- ▶ Continuous Temperature Monitoring
- ▶ ATEX, IECEx, EAC Ex, CCC Zone 20 Approved
- ▶ CSA Class II Div. 1 Approved



Part Number	Description	Thermistor Type	Mounting Hole	ATEX Zone	IECEx
WDB70V3CAI	Continuous Temperature Monitoring	NTC	M8	20	✓
WDB79V3CAI	Continuous Temperature Monitoring **	PT100	M8	20	✓
WDB72V3CAI	60°C Trip Point *	PTC	M8	20	✓
WDB73V3CAI	70°C Trip Point *	PTC	M8	20	✓
WDB74V3CAI	80°C Trip Point *	PTC	M8	20	✓
WDB75V3CAI	90°C Trip Point *	PTC	M8	20	✓

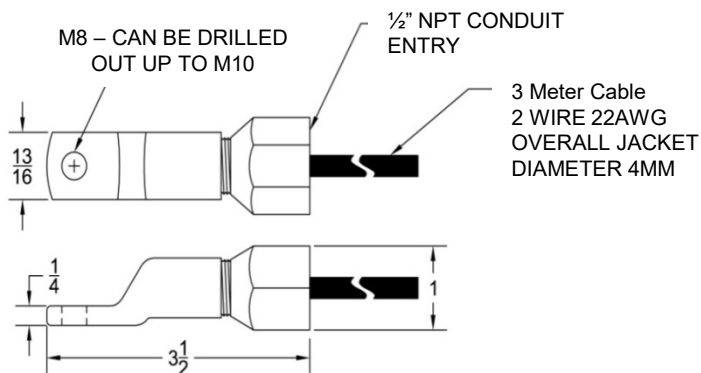
Note:

* 100°C, 110°C and 120°C Trip Point PTC sensors available on request. ATEX Zone 22; no IECEx

** /x denotes special fixing hole diameter WDB79V3CAI/B = 10.5mm DIA lug fixing hole

Surface Temperature Sensor

BETTER BY DESIGN



WDB70V3C Installed on Bearing Housing



Example of Bearing Failure

TECHNICAL SPECIFICATIONS

WDB7 Series Surface Temperature Sensor

NTC Sensors	
Resistance at 25°C:	10,000 Ohms
Resistance at 60°C:	2,487 Ohms
Resistance at 90°C:	916 Ohms
Sensing Voltage:	5 to 24 VDC
Current Draw:	1 mA

PTC Sensors	
Resistance at 60°C:	≤ 250 Ohms
Resistance at Trip Point:	≥ 2,000 Ohms
Sensing Voltage:	5 to 25 VDC
Current Draw:	20 mA

PT100 Sensors	
Resistance at 0°C:	100 Ohms
Resistance at 100°C:	138.4 Ohms
Sensing Voltage:	Via Transducer
Current Limit:	1 mA

Temperature Sensors can be used with the following 4B Hazard Monitoring Systems



T500 Hotbus Elite



Watchdog Elite



T400 Elite