Copyright 2022 - All rights reserved

RINGWAY
2-WIRE TECHNOLOGIES

Head Office
Ringway Control & Automation
ABN 47 087 315 179
4 Lady Penrhyn Dr,
Unanderra, NSW 2526
products@ringway.com.au
Ph 02 4255 4300 Fax 02 42718990

Mackay Office
Ringway Materials Handling
Unit 10 Woodman Pde,
Mackay, QLD 4740
products@ringway.com.au
Ph 07 49524001 Fax 07 49522216

TEMPERATURE SENSORS

P/N's – Multiple Options (see part builder on page 2)

Ex ia: IECEx TSA 08.0031X

RINGLINE ANALOG TRANSMITTER TEMPERATURE SENSORS

DESCRIPTION:

Ringline 1/2/3x Analog Transmitters have been designed to work with solid state type temperature sensors. For convenience Ringway offer a range of temperature sensors, available in most popular configurations. If none of the existing parts fulfil your requirements other configurations are often possible on request. Temperature Sensor housings are made from either stainless steel or plated copper to provide a good balance of thermal conductivity, strength and process compatibility.

Ringline temperature sensors, except for the FRAS version, feature a section of cable from the head that is armoured in stainless steel for mechanical protection making them suitable for use in harsh environments. A length of unarmoured lead is provided for easy laying in ducting and termination to the desired length. Sensors with the hose barb for FRAS protection provide an economical alternative to armoured cable variants as the flying lead may be easily cut to size during installation, eliminating the need for multiple spares of different length cables.

Sensors are typically supplied with flying leads, however Ringway also offer termination with an IEC 61076-2-104 compliant M8 circular connector to avoid excess time in skilled labour to rerun long cables if the sensor requires replacement. The M8C option supports a detachable lead (RLTSC_x/M8C) that is protected by a Polyamide braid that provides a good balance of mechanical protection and ability to trim with standard cutters.

'FR' FRAS hose type sensor with integral hose barb

FEATURES:

- **Simple**, **robust** and **functional**.
- Ultra-low power consumption. No external power supply required (Ringline powered).
- Stainless Steel housing and flexible armoring options for superior mechanical protection.
- FRAS hose connection option for economical mechanical protection.
- Quick disconnect/extension option with M8 circular connector option
- IECEx certified for use with Ringline in hazardous areas (Ex ia).
- Overall sensing range 0-110 degrees Celsius.

APPLICATIONS:

The sensors have been designed for monitoring the temperature of bearings and other mechanical devices. When used in conjunction with a control system incorporating Ringline, these sensors can protect against mechanical destruction and/or fire. Most lubricants break down above 90°C, continuously monitoring and trending temperature values allows problems to be detected before there is a mechanical failure. The user should always check the actual operating temperature range of their lubricants from their lubricant manufacturer.

Various sensor heads are available: Lug style, typically placed on the outside case for rotating shaft bearings or gearboxes for monitoring surface temperature; Probe type, typically installed in a drilled hole for fixed shaft style bearings and the temperature sensor located right at the tip of the probe to allow monitoring at the hottest part of the shaft.

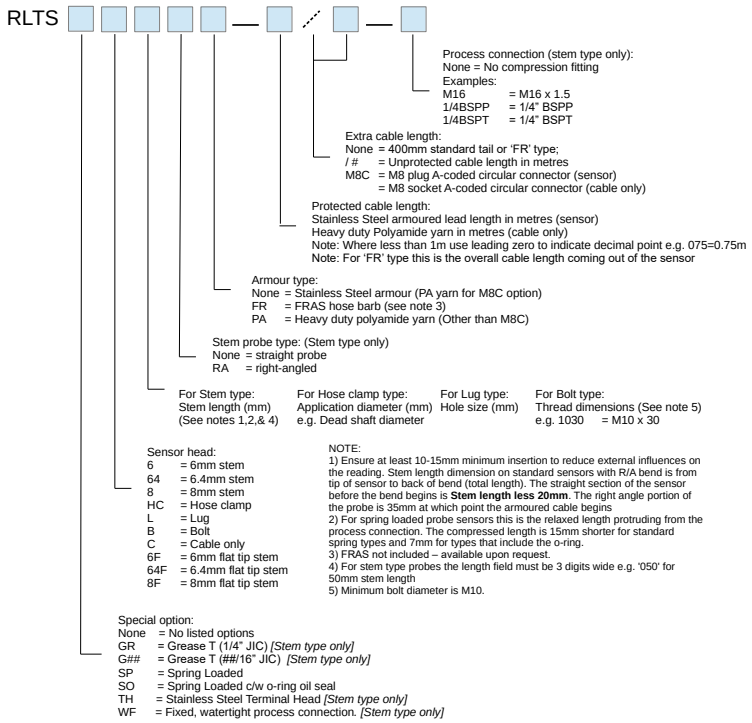
Grease-T fittings are available for bearing applications which enable the probe sensor shaft to double as a grease line.

When installed and maintained correctly these sensors have sufficient water sealing and internal isolation to meet the intrinsic safety requirements of an I.S. Ringline system.

SPECIFICATIONS:

Power Supply:	5V (supplied by the Ringline Analog transmitter.)
Current Draw:	114 µA max. (~60µA typical).
Bus Isolation to Earth:	Exceeds 750V DC.
Measurement Range:	0°C to 110°C.
Signal Out:	10 mV/°C
Typical Core Colours (STD-PVC):	Supply +: Red Sig: White Supply -: Black Shield: Green (See RLTX#AN_PTS for non std cable)

PART NUMBERS:



*Other configurations are possible on request.

TEMPERATURE SWITCHES:

A range of **temperature switch sensors** are available which are suitable for switching inputs of **digital** Ringline transmitters to indicate high temperature. These are not Ringline specific and may be used on any application where a temperature switch is required.