



TC-HEAD

THERMOCOUPLE INPUT IN-HEAD TRANSMITTER

- Field Configurable for T/C Type & Range
- Optional Linearisation
- High Noise Immunity
- High Accuracy
- Low Cost



Description

The TC-HEAD is a low cost, high accuracy 4-20mA temperature transmitter mounted in a head mounting housing.

The unit can accept a wide range of thermocouple input types and these types and the corresponding ranges are user selectable using a push button mounted on the unit. No PC software is required.

The unit can be re-ranged again using the on-board push button. This allows setting of zero and span as well selecting which thermocouple type is connected.

Another useful feature is the provision of a large central hole in the unit which allows up to 4mm diameter thermocouples to be withdrawn and replaced without removing the transmitter or field wiring.

This hole is also large enough to accommodate a second thermocouple wire for sensor checking purposes when smaller diameter probes are used.

General Specifications

Input Types

The device can accept any of the following thermocouple types:

J, K, T, R, S, E, B, L and N.

Recommended Operating Conditions

Output Current	4-20mA
Output Resistance	0-750 Ω at 24V input

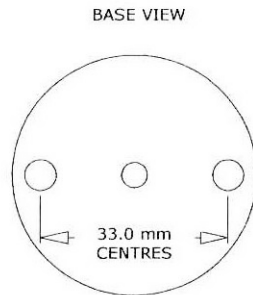
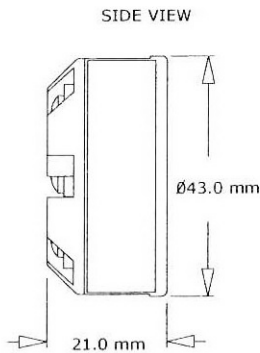
Environmental Conditions

Storage Temperature	-40 to 90 \equiv C
Operating Ambient	-20 to 70 \equiv C
Relative Humidity	0 to 95 % RH



Performance Characteristics

Parameter	Min	Typ	Max	Comments
Supply Voltage	8	24V	30V	
Output Current	3.8mA		22mA	Current Limited
Cold Junction Tracking		$\pm 0.02 \equiv C / \equiv C$		Over full operating temperature range
Accuracy		$\pm 0.04\%$		Or $0.5 \equiv C$ whichever is greater
Temp Coefficient			$\pm 100 \text{ppm} / \equiv C$	$0 < T_a < 40 \equiv C$
Sample Rate		500ms		
Operating Ambient	$-20 \equiv C$		$70 \equiv C$	
Relative Humidity	0%		95%	Non-condensing
Isolation Voltage	50V			
EMC	BS EN61326			
Notes	Absolute maximum ratings indicate sustained limits beyond which damage to the device may occur. Device is protected against reverse polarity connection.			



Installation Data

Mounting	In Head
Orientation	Any
Conductor size	0.5-4.0mm
Insulation Stripping	10mm
Weight	Approx 30g
Screw Terminal Torque	0.4Nm max

Connection Details

1. Output Channel +ve
2. Output Channel -ve
3. Input Channel -ve
- 4/5. Input Channel +ve

Ordering Information

Please supply:

Part Number:	TC-HEAD
No Isolation:	e.g. J,K,T,R,S,E,B,L,N
Thermocouple Type:	e.g. 0-500 $\equiv C$
Temperature Range:	Upscale or Downscale