

## TSH Mineral Insulated Thermocouple Sensor with Standard Head

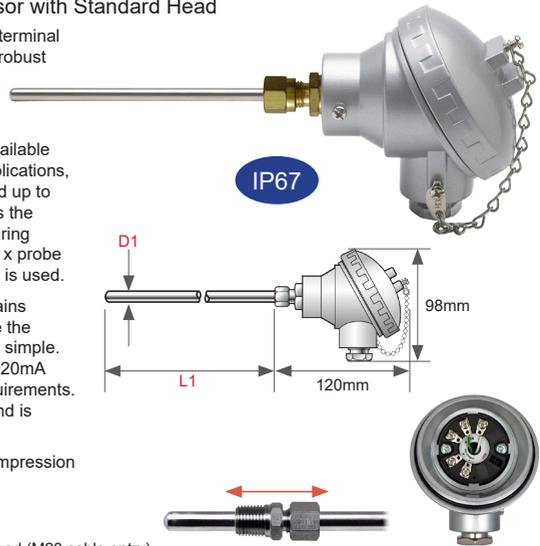
Supplied with a heavy duty IP67 rated die cast alloy terminal head, the TSH range of sensors provide a versatile, robust construction.

Available with 3.0mm, 4.5mm, 6.0mm and 8.0mm probe diameters, in lengths to suit your application requirements. Various probe sheath materials are available and the sensors can be used in a wide variety of applications, with temperatures ranging from as low as -100°C and up to +1300°C. The mineral insulated construction enables the sensors to be bent, twisted or flattened without impairing performance. The bending radius of the sheath is 10 x probe diameter; this can be reduced to 4 x, if a bending set is used.

The screw top lid has a robust chain ensuring it remains attached to the head. A ceramic terminal block inside the head makes connections to the extension cable very simple. The sensor can also be supplied with a linearised 4~20mA transmitter which can be pre-ranged to suit your requirements. The head has an M20 x 1.5mm cable entry thread and is supplied with a standard cable gland.

The head is attached to the sensor using a brass compression gland (stainless steel options available on request).

- 3.0mm, 4.5mm, 6.0mm or 8.0mm Ø probe
- Accuracy to IEC 60584.2 Class 1 or Class 2
- Terminated with IP67 rated heavy duty die cast alloy head (M20 cable entry)
- Colour coded terminals, IEC 60584.3 (BS EN 60584.3)
- Ex-stock options available



Note: Type K thermocouple shown for illustrative purposes only

1	sensor type			code
	Mineral Insulated Thermocouple Sensor with Standard Terminal Head			TSH
2	conductor/thermocouple type (IEC 60584.1)	conductor temperature range	code	
	Type K Nickel Chromium vs. Nickel Aluminium	0°C to +1100°C	K	
	Type J Iron vs. Constantan	-50°C to +750°C	J	
	Type T Copper vs. Constantan	-200°C to +350°C	T	
	Type N Nicrosil vs. Nisil	0°C to +1200°C	N	
	Type E Nickel Chromium vs. Constantan	-200°C to +900°C	E	
3	metal sheath material	available in thermocouple types	maximum temperature	code
	321 Stainless Steel	K, J, T, E	+800°C	321
	310 Stainless Steel	K	+1100°C	310
	Inconel 600	K, N	+1100°C	600
	Nicrosil D	K, N	+1300°C	200
	Also available: <b>Incoloy 800</b> (+1100°C), <b>253MA</b> (+1150°C), <b>Alloy C276</b> (+1100°C). Contact sales for further information.			
4	probe diameter (D1)	code	probe diameter (D1)	code
	3.0mm	3.0	6.0mm	6.0
	4.5mm	4.5	8.0mm	8.0

Imperial sizes also available.

5	sensing junction	simplex code	duplex code
	Insulated (isolated, ungrounded)	I	2I
	Grounded (non-isolated)	G	2G
6	probe length (mm) (L1)	code	
	As required to suit your application (stock sensors also available)	e.g. 250	
7	optional 316 stainless steel compression fitting (to suit probe diameter)	code	
		1/4" BSPT	1/2" BSPT
	3.0mm	CF30CS	CF30ES
	4.5mm	CF45CS	CF45ES
	6.0mm	CF60CS	CF60ES
	8.0mm	CF80CS	CF80ES

Brass adjustable compression fittings also available. See page 60 for our full range.

8	optional head mounting 4~20mA transmitter (replaces ceramic terminal block)	code
	Linearised, Head Mounting 4~20mA Transmitter, 24VDC Power Supply, Non-isolated (pre-ranged to suit your requirements)	TXHU (range) Example: TXHU (0/200°C)

See page 83 for a full specification of the TXHU transmitter. Isolated version also available.

ATEX versions also available

order code (example)	1	2	3	4	5	6	7	8
	TSH	- K	- 310	- 6.0	- I	- 300	- CF60CS	- TXHU (0/200°C)