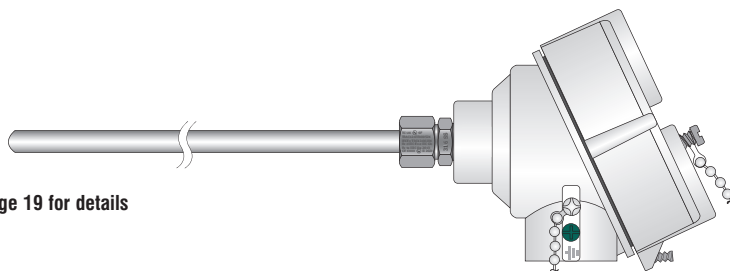


ATEX / IECEx Thermocouples with Terminal Head

Mineral Insulated Thermocouples 4.5mm to 8.0mm dia.

These semi rigid thermocouples are supplied with an IP68 terminal head and are ideal where a heavy duty connection with cable is to be made near the sensor. They can be used with service temperatures up to 1250°C (minimum stand-off lengths shown on page 20 must be observed).


- Approved to II 2 GD Ex d IIC Gb (Gas) and Ex tb IIIC Db (Dust)
- Also suitable for use in intrinsically safe areas to Ex II 1 G Ex ia IIC Ga, see page 19 for details
- Temperature classification T6-T1, see page 20 for stand-off requirements
- Available in thermocouple types K, T, J, N, E, R, S and B
- Sheath diameters from 4.5mm to 8.0mm in a wide choice of materials
- Insulated measuring junction gives a floating output with high insulation resistance
- Die cast alloy or stainless steel terminal heads available
- Simplex, duplex and triplex sensors available
- UKAS calibration available



SECTION 1	Thermocouple Type	Temperature Range (continuous)
K	Nickel Chromium vs Nickel Aluminium	0°C to +1100°C
T	Copper vs Constantan	-185°C to +400°C
J	Iron vs Constantan	+50°C to +800°C
N	Nicrosil vs Nisil	0°C to +1200°C
E	Nickel Chromium vs Constantan	0°C to +800°C
R	Platinum - 13% Rhodium vs Platinum	0°C to +1600°C
S	Platinum - 10% Rhodium vs Platinum	0°C to +1550°C
B	Platinum - 30% Rhodium vs Platinum - 6% Rhodium	+100°C to +1600°C

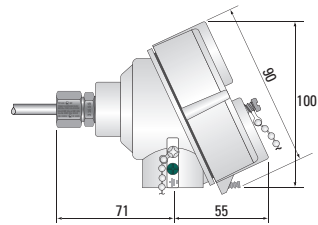
SECTION 2	Sheath Material	Maximum Temperature
321	321 Stainless Steel (Types K, J, T & E)	800°C
310	310 Stainless Steel (Type K)	1100°C
600	Inconel 600 (Types K, N, R, S & B)	1100°C
114	Nicrobell D (Types K & N)	1250°C
156	Hastelloy X (Type K)	1220°C
446	AISI 446 (Type K)	1150°C
800	Incoloy 800 (Type K)	1100°C

SECTION 3	Sheath Diameter (mm)	Sheath Diameter (inches)
Standard Sizes	4.5mm	0.177"
	6.0mm	0.236"
	8.0mm	0.315"

SECTION 4	Type of Sensing Junction	
2I		INSULATED The hot (measuring) junction is insulated from the sheath and this gives a floating output with a typical insulation resistance in excess of 100 megohms. Enter 2I for simplex, 2ID for duplex or 2IT if a triplex element is required.
2ID		
2IT		

SECTION 5 Type of Terminal Head (supplied with an M20 cable entry as standard. Other sizes are available - see page 15 for details)

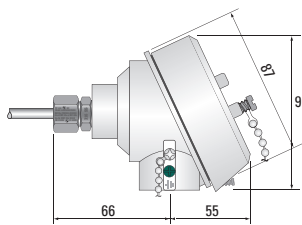
3P22



Also available in blue (order code 3P22B)

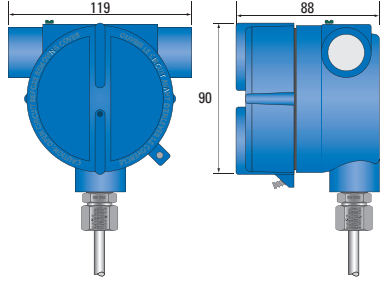
Standard Die Cast Alloy Head
Weatherproof and explosion proof die cast alloy terminal head with tube and cable entry at right angles to each other and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

3P23



Standard Stainless Steel Head
Weatherproof and explosion proof stainless steel terminal head with tube and cable entry at right angles to each other and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

3P27




Dual Cable Entry Die Cast Alloy Head
Weatherproof and explosion proof die cast alloy terminal head for large devices with two cable entries at right angles to the tube entry and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

SECTION 6	Optional Stainless Steel Adjustable Compression Fittings		
Dia.	1/8" BSPT	1/4" BSPT	1/2" BSPT
4.5mm	SFS18T45EX	SFS14T45EX	SFS12T45EX
6.0mm	SFS18T60EX	SFS14T60EX	SFS12T60EX
8.0mm	—	SFS14T80EX	SFS12T80EX

Other thread sizes are available - please see page 14 for details.

SECTION 7 Optional 4 to 20mA ATEX Approved Head Mounted Transmitter (please specify range in °C)

TXISO/ATEX



Fully Linearised

Microprocessor based head mounted transmitter ATEX rated to Ex ia IIC T6. Fully scalable and fully linearised for thermocouple input. The transmitter is pre-programmed to the required temperature range or, alternatively, it can be re-programmed easily by your PC using our software which should be ordered separately. Other types of transmitter are available on page 19.

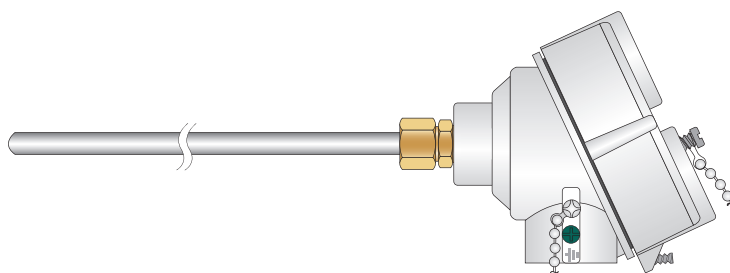
Order Code - Example									
Type N ^o	I.S. Version (Optional, please see page 19 for details)	Thermocouple Type (See section 1)	Sheath Length in mm	Sheath Material (See section 2)	Sheath Diameter (See section 3)	Sensing Junction (See section 4)	Termination (See section 5)	Compression Fitting (Optional, see section 6)	Transmitter (Optional, see section 7)
52	- IS	- K	- 750	- 321	- 6.0	- 2I	- 3P22	- SFS14T60EX	- TXISO/ATEX(0/100°C)

ATEX / IECEx Thermocouples with Terminal Head

Mineral Insulated Thermocouples 3.0mm to 8.0mm dia.

Our ATEX / IECEx mineral insulated thermocouple assemblies are manufactured from cable that conforms to IEC 61515 and their semi rigid construction allows them to be bent and formed to suit particular applications without impairing performance.


- Approved to II 3 GD Ex nA IIC Gc (Gas) and Ex tc IIIC Dc (Dust)
- High integrity construction suited to arduous operating conditions
- High accuracy and stability maintained throughout operating life
- Available in thermocouple types K, T, J, N, E, R, S and B
- Sheath diameters from 3.0mm to 8.0mm in a wide choice of materials
- Insulated measuring junction gives a floating output with high insulation resistance
- Die cast alloy or stainless steel IP68 terminal heads available
- Simplex, duplex and triplex sensors available
- UKAS calibration available



SECTION 1	Thermocouple Type	Temperature Range (continuous)
K	Nickel Chromium vs Nickel Aluminium	0°C to +1100°C
T	Copper vs Constantan	-185°C to +400°C
J	Iron vs Constantan	+50°C to +800°C
N	Nicrosil vs Nisil	0°C to +1200°C
E	Nickel Chromium vs Constantan	0°C to +800°C
R	Platinum - 13% Rhodium vs Platinum	0°C to +1600°C
S	Platinum - 10% Rhodium vs Platinum	0°C to +1550°C
B	Platinum - 30% Rhodium vs Platinum - 6% Rhodium	+100°C to +1600°C

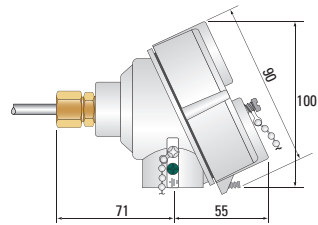
SECTION 2	Sheath Material	Maximum Temperature
321	321 Stainless Steel (Types K, J, T & E)	800°C
310	310 Stainless Steel (Type K)	1100°C
600	Inconel 600 (Types K, N, R, S & B)	1100°C
114	Nicrobell D (Types K & N)	1250°C
156	Hastelloy X (Type K)	1220°C
446	AISI 446 (Type K)	1150°C
800	Incoloy 800 (Type K)	1100°C

SECTION 3	Sheath Diameter (mm)	Sheath Diameter (inches)
Standard Sizes	3.0mm	0.118"
	4.5mm	0.177"
	6.0mm	0.236"
	8.0mm	0.315"

SECTION 4	Type of Sensing Junction	
2I		INSULATED The hot (measuring) junction is insulated from the sheath and this gives a floating output with a typical insulation resistance in excess of 100 megohms. Enter 2I for simplex, 2ID for duplex or 2IT if a triplex element is required.
2ID		
2IT		

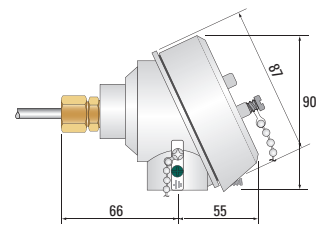
SECTION 5 Type of Terminal Head (supplied with an M20 cable entry as standard. Other sizes are available - please contact us for details)

3P22



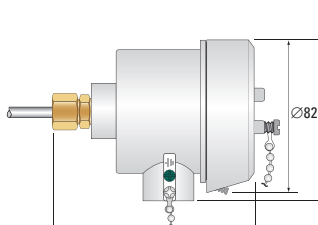
Standard Die Cast Alloy Head
Weatherproof and explosion proof die cast alloy terminal head with tube and cable entry at right angles to each other and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

3P23



Standard Stainless Steel Head
Weatherproof and explosion proof stainless steel terminal head with tube and cable entry at right angles to each other and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

3P24




Large Stainless Steel Head
Weatherproof and explosion proof stainless steel terminal head for large devices with tube and cable entry at right angles to each other and ceramic terminal block. Suitable for simplex, duplex and triplex assemblies.

SECTION 6	Optional Stainless Steel Adjustable Compression Fittings		
Dia.	1/8" BSPT	1/4" BSPT	1/2" BSPT
3.0mm	SFS18T30	SFS14T30	SFS12T30
4.5mm	SFS18T45	SFS14T45	SFS12T45
6.0mm	SFS18T60	SFS14T60	SFS12T60
8.0mm	—	SFS14T80	SFS12T80

Other thread sizes and materials available. Contact us for details.

SECTION 7 **Optional 4 to 20mA ATEX Approved Head Mounted Transmitter**
(please specify range in °C)



TXISO/ATEX

Microprocessor based head mounted transmitter ATEX rated to Ex ia IIC T6. Fully scalable and fully linearised for thermocouple input. The transmitter is pre-programmed to the required temperature range or, alternatively, it can be re-programmed easily by your PC using our software which should be ordered separately. Other types of transmitter are available on request.

Order Code - Example								
Type No	Thermocouple Type (See section 1)	Sheath Length in mm	Sheath Material (See section 2)	Sheath Dia. (See section 3)	Sensing Junc. (See section 4)	Termination (See section 5)	Compression Fitting (Optional, see section 6)	Transmitter (Optional, see section 7)
32	- K	- 750	- 321	- 6.0	- 2I	- 3P22	- SFS14T60	- TXISO/ATEX(0/100°C)