

Datasheet

ANSI Mineral Insulated Thermocouples – 0.5mm Diameter for a Fast Response

Fast response Type 'K' Thermocouple with grounded hot junction, 310 stainless steel or Inconel® Alloy 600 sheath, threaded pot seal & tails



- Mineral insulated Type 'K' Thermocouple
- 0.5mm diameter
- Hot junction of thermocouple insulated or grounded to outer sheath for very fast response
- Choice of 310 stainless steel or Inconel® Alloy 600 sheath
- Highly flexible, sheath can be bent/formed to suit many applications and processes
- Probe temperature range -40°C to +750°C
- M8 x 1.0mm fine pitch threaded pot seal (200°C)
- M8 locknuts available as an option (see below)
- 100mm tails, PFA Teflon® twin twisted 7/0.2mm
- Conforms to ANSI MC96.1

Specifications

Sensor type:	Type 'K' Nickel Chromium/Nickel Aluminium to ANSI MC96.1
Construction:	Flexible mineral insulated probe with 310 stainless steel or Inconel® Alloy 600 sheath with M8 x 1.0mm fine pitch threaded pot seal & tails
Sheath composition:	310 stainless steel (25/20 chromium nickel steel) Inconel® Alloy 600 (Nickel, Chromium, Iron)
Element/hot junction:	Single element, hot junction insulated or grounded to sheath
Termination:	100mm PFA Teflon® twin twisted 7/0.2mm tails, +Yellow/-Red colour coded in accordance with ANSI MC96.1
Probe temperature range:	-40°C to +750°C
Pot seal rating:	200°C

310 stainless steel: Good corrosion & oxidation resistance to suit a wide range of processes, satisfactorily operates in sulphur bearing atmospheres

Typical applications include brick & cement kilns, glass industry, heat treatment & annealing furnaces, power stations, flues, heat exchangers etc.

Grounded

T/C Type	Probe Dia. (mm)	Probe Length (mm)	Sheath	T/couple junction	+Positive tail wire	-Negative tail wire	Allied code	RS order
K	0.5	150	310SS	Grounded	Yellow	Red	70658130	847-1078
K	0.5	250	310SS	Grounded	Yellow	Red	70658128	847-1071
K	0.5	500	310SS	Grounded	Yellow	Red	70658129	847-1075

Insulated

T/C Type	Probe Dia. (mm)	Probe Length (mm)	Sheath	T/couple junction	+Positive tail wire	-Negative tail wire	Allied code	RS order
K	0.5	150	310SS	Insulated	Yellow	Red	70658141	847-1113
K	0.5	250	310SS	Insulated	Yellow	Red	70658142	847-1116
K	0.5	500	310SS	Insulated	Yellow	Red	70658140	847-1110

Inconel® Alloy 600: Excellent oxidation resistance, not suitable for sulphur bearing atmospheres above 550°C
 Typical applications include heat treatment processes, annealing furnaces, chemical reactors, man -made fibre & synthetic material production, steam boilers, paper industry etc.

T/C Type	Probe Dia. (mm)	Probe Length (mm)	Sheath	T/couple junction	+Positive tail wire	-Negative tail wire	Allied code	RS order
K	0.5	500	Alloy 600	Grounded	Yellow	Red	70658127	847-1069
K	0.5	500	Alloy 600	Insulated	Yellow	Red	70658132	847-1084

Optional M8 x 1 fine pitch threaded Locknuts:

Thread	Allied code	RS order code
Brass M8 x 1mm	70651753	762-1162
S/Steel M8 x 1mm	70651761	762-1187



Stainless Steel Compression Glands – Parallel, Tapered & M16 Thread

(BSP, BSPT, M16)



(BSP parallel example - 381-7362, see below for other sizes)



(BSPT tapered example – 286-787, see below for other sizes)

- Thermocouple installation fittings
- To suit a wide range of mineral insulated and other probe type sensors offered by RS
- Male in-line stainless steel compression type with nut & olive
- 1/8", 1/4", & 1/2" BSP parallel or BSPT tapered threads available. 1/2" M16 thread also available.
- Suits 1.0mm, 1.5mm, 3.0mm, 4.0mm, 4.5mm, 6.0mm, 8.0mm, 1/8", 1/4" or 3/16" probe diameters
- Stainless steel locknuts also available (see below)

BSP Parallel:

Type	Thread Size	Thread Type	Suits Probe Ø	Allied code	RS order code
St/Steel	1/8"	BSP Parallel	1.0mm	70654828	804-7975
St/Steel	1/8"	BSP Parallel	1.5mm	70643728	381-7334
St/Steel	1/8"	BSP Parallel	3.0mm	70643729	381-7340
St/Steel	1/8"	BSP Parallel	4.0mm	70657784	839-9566
St/Steel	1/8"	BSP Parallel	4.5mm	70657785	839-9569
St/Steel	1/8"	BSP Parallel	6.0mm	70643730	381-7356
St/Steel	1/8"	BSP Parallel	1/4"		110-4476
St/Steel	1/8"	BSP Parallel	1/8"	70657782	839-9557
St/Steel	1/8"	BSP Parallel	3/16"	70657783	839-9563
St/Steel	1/4"	BSP Parallel	3.0mm	70643731	381-7362
St/Steel	1/4"	BSP Parallel	4.5mm	70657786	839-9572
St/Steel	1/4"	BSP Parallel	6.0mm	70643732	381-7378
St/Steel	1/4"	BSP Parallel	1/4"	70657787	839-9575
St/Steel	1/4"	BSP Parallel	3/16"	70657779	839-9547
St/Steel	1/2"	BSP Parallel	3.0mm	70657788	839-9579
St/Steel	1/2"	BSP Parallel	4.5mm	70657791	839-9588
St/Steel	1/2"	BSP Parallel	6.0mm	70643735	381-7407
St/Steel	1/2"	BSP Parallel	8.0mm	70657789	839-9581

BSPT Tapered:

Type	Thread Size	Thread Type	Suits Probe Ø	Allied code	RS order code
St/Steel	1/8"	BSPT Tapered	1.0mm	70654831	804-7984

St/Steel	1/8"	BSPT Tapered	1.5mm	70637825	286-743
St/Steel	1/8"	BSPT Tapered	3.0mm	70636461	158-610
St/Steel	1/8"	BSPT Tapered	4.5mm	70637826	286-759
St/Steel	1/8"	BSPT Tapered	6.0mm	70657792	839-9591
St/Steel	1/8"	BSPT Tapered	1/4"		110-4475
St/Steel	1/8"	BSPT Tapered	1/8"	70657793	839-9594
St/Steel	1/8"	BSPT Tapered	3/16"	70657794	839-9597
St/Steel	1/4"	BSPT Tapered	3.0mm	70643733	381-7384
St/Steel	1/4"	BSPT Tapered	4.5mm	70657796	839-9604
St/Steel	1/4"	BSPT Tapered	6.0mm	70643734	381-7390
St/Steel	1/4"	BSPT Tapered	1/4"	70657797	839-9608
St/Steel	1/4"	BSPT Tapered	1/8"	70657795	839-9601
St/Steel	1/4"	BSPT Tapered	3/16"	70657790	839-9585
St/Steel	1/2"	BSPT Tapered	3.0mm	70657777	839-9541
St/Steel	1/2"	BSPT Tapered	4.5mm	70637828	286-787
St/Steel	1/2"	BSPT Tapered	6.0mm	70637829	286-793
St/Steel	1/2"	BSPT Tapered	8.0mm	70657780	839-9550
M16					
St/Steel	1/2"	M16	3.0mm	70657800	839-9617
St/Steel	1/2"	M16	6.0mm	70657798	839-9610
St/Steel	1/2"	M16	8.0mm	70657799	839-9614

Stainless Steel locknuts also available:



Thread	Allied code	RS order code
S/Steel 1/8" BSPP	70651759	762-1180
S/Steel 1/4" BSPP	70651760	762-1184
S/Steel 1/2" BSPP	70651762	762-1193

Brass Compression Glands – Parallel, Tapered & NPT Thread

BSP, BSPT & NPT



- Thermocouple installation fittings
- To suit a wide range of mineral insulated and other probe type sensors offered by RS
- Male in-line brass compression type with nut & olive
- 1/8" & 1/4" BSP parallel thread to suit 1.5, 3.0, 4.0, 4.5 & 6.0mm. 3/16 also available.
- 1/2", 1/4" & 1/8" BSPT tapered thread to suit 1.5mm, 3.0mm, 4.5mm, 6.0mm, 1/8" & 3/16"
- Brass locknuts also available

BSPP Parallel:

Type	Thread Size	Thread Type	Suits Probe Ø	Allied code	RS order code
Brass	1/8"	BSP Parallel	1.5mm	70657765	839-9496
Brass	1/8"	BSP Parallel	3.0mm	70643725	381-7277
Brass	1/8"	BSP Parallel	4.0mm	70657764	839-9490
Brass	1/8"	BSP Parallel	4.5mm	70657766	839-9500
Brass	1/8"	BSP Parallel	6.0mm	70657768	839-9507
Brass	1/8"	BSP Parallel	3/16	70657767	839-9503
Brass	1/4"	BSP Parallel	3.0mm	70643727	381-7306
Brass	1/4"	BSP Parallel	4.5mm	70657770	839-9519
Brass	1/4"	BSP Parallel	3/16	70657769	839-9513

BSPT Tapered:

Brass	1/8"	BSPT Tapered	1.5mm	70637822	286-715
Brass	1/8"	BSPT Tapered	3.0mm	70637823	286-721
Brass	1/8"	BSPT Tapered	4.5mm	70637824	286-737
Brass	1/8"	BSPT Tapered	6.0mm	70657773	839-9529
Brass	1/8"	BSPT Tapered	1/8	70657771	839-9522
Brass	1/8"	BSPT Tapered	3/16	70657772	839-9525
Brass	1/4"	BSPT Tapered	3.0mm	70657774	839-9531
Brass	1/4"	BSPT Tapered	6.0mm	70657778	839-9544
Brass	1/4"	BSPT Tapered	1/4mm	70657776	839-9538
Brass	1/4"	BSPT Tapered	3/16	70657775	839-9535
Brass	1/2"	BSPT Tapered	6.0mm	70657781	286-771

NPT

Brass	1/8"	NPT	1.5mm	70657781	839-9553
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Brass locknuts also available:

Thread	Allied code	RS order code
Brass 1/8" BSPP	70651756	762-1171
Brass 1/4" BSPP	70651757	762-1174
Brass 1/2" BSPP	70651758	762-1178

