ASHCROFT®
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S01 RTD & Thermocouple Inserts

TYPICAL USES

- For industrial applications used for probe replacements
- Special designs for intrisically safe and non-incendive application

DESCRIPTION

- Power Generation
- Reactors
- Storage Tanks
- Cooling Towers
- Industrial equipment Manufacture
- Industrial Ovens
- HVAC/R
- Food and Beverage
- Pharmaceutical and Biotech

Ceramic terminal block or transmitter:
Size DIN B
Ø 42 mm
Screw spring: 33 mm
Screw thread: M4 x 1.5
Spring travel: 8 to 10 mm

SPECIFICATIONS

Model:	S01
Stem Diameter:	3 mm, 4.5 mm, 6 mm, 8 mm, 1/8", 3/16", 1/4"
Stem Length:	min. 50 mm max. 3000 mm
Stem Material:	Stainless steel 316L (1.4401) Inconel 600 (2.4816)
Insulation Material:	Compacted pure MgO (Magnesium oxide)
Senore Types and max. Range: (single and dual)	RTD: Pt100 -200 up to 600 °C Pt1000 -40 up to 600 °C Thermocouples: Type J -40 up to 750 °C Type E -200 up to 800 °C Type K -200 up to 1000 °C Type N -200 up to 1000 °C
Wiring Configuration:	RTD (single or dual) as 2, 3 or 4 wire Thermocouple (single or dual) as 2 wire
Electrical Connection:	Ceramic terminal block Spring loaded with 8 to 10 mm travel
Insulation Resistance:	For RTD ≥100 MΩ with U = 250 VDC For TC ≥1 GΩ with U = 500 VDC
Sensitive Length of RTD: Thermocouple:	 7 to 40 mm < 5mm
Ambient Temperature:	-40 to 85 °C

ACCURACY CLASSES

Accuracy Classes: (RTD - IEC 60751)	Class A:	±(0,15 + 0,0020 * |t|)
	Class B:	±(0,30 + 0,0050 * |t|)
	1/2 Class B:	±(0,15 + 0,0025 * |t|)
	1/3 Class B:	±(0,10 + 0,0017 * |t|)

Accuracy Classes: (TC - ANSI MC 96.1)		Standard	Special
	Type J	±2,2 °C or ±0,0075 * |t|	±1,1 °C or ±0,0040 * |t|
	Type E	±1,7 °C or ±0,0050 * |t|	±1,0 °C or ±0,0075 * |t|
	Type K	±2,2 °C or ±0,0075 * |t|	±1,1 °C or ±0,0040 * |t|
	Type N	±2,2 °C or ±0,0040 * |t|	±1,1 °C or ±0,0040 * |t|

KEY BENEFITS

- **Manufactured to IEC 60751 or IEC 60584-2**
- **Available with and without transmitters**
- **Mineral insulated inserts**
- **Intrinsically safe designs available**

ACCURACY CLASSES

Accuracy Classes: (TC - IEC 60584-2)		Class 1	Class 2	Class 3
	Type J	±1,5 °C or ±0,0040 * |t|	±2,5 °C or ±0,0075 * |t|	N/A
	Type E	±1,5 °C or ±0,0040 * |t|	±2,5 °C or ±0,0075 * |t|	±2,5 °C or ±0,0150 * |t|
	Type K	±1,5 °C or ±0,0040 * |t|	±2,5 °C or ±0,0075 * |t|	±2,5 °C or ±0,0040 * |t|
	Type N	±1,5 °C or ±0,0040 * |t|	±2,5 °C or ±0,0040 * |t|	±2,5 °C or ±0,0150 * |t|

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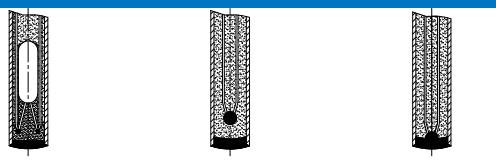
S10 Electrical Thermometer for RTD

APPROVALS

Available Approvals:	FM, ATEX, IECEx, SIL2, INMETRO, EAC, CCC, AMI, ExNEPSI
FM Intrinsically safe: Class I, Division 1, Groups A, B, C, D	T4 for -55 °C ≤ Ta ≤ +80 °C T5 for -55 °C ≤ Ta ≤ +55 °C T6 for -55 °C ≤ Ta ≤ +40 °C
FM Nonincedive: Class I, Division 2, Groups A, B, C, D	T4 for -55 °C ≤ Ta ≤ +80 °C T5 for -55 °C ≤ Ta ≤ +55 °C T6 for -55 °C ≤ Ta ≤ +40 °C
ATEX or IECEx:	II 1 G Ex ia IIC T6 Ga -50 °C to +60 °C II 2 G Ex ib IIC T6 Gb -50 °C to +60 °C II 2 G Ex e IIC T6 Gb -55 °C to +60 °C

SENSING ELEMENT TYPES

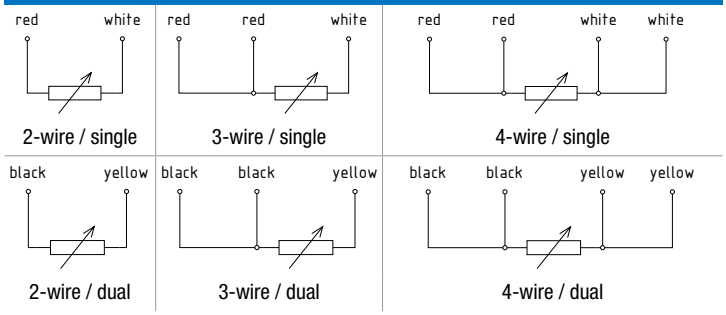


RTD | TC - ungrounded | TC - grounded

MINIMUM IMMERSION LENGTH

Type & Inserts Ø	in liquid	in gas/vapour
RTD Ø 3 mm	45 mm	55 mm
RTD Ø 6 mm	60 mm	75 mm
TC Ø 3 mm	15 mm	25 mm
TC Ø 6 mm	30 mm	50 mm

MEASUREMENT CIRCUITS - COLOR IDENTIFICATION FOR RTD



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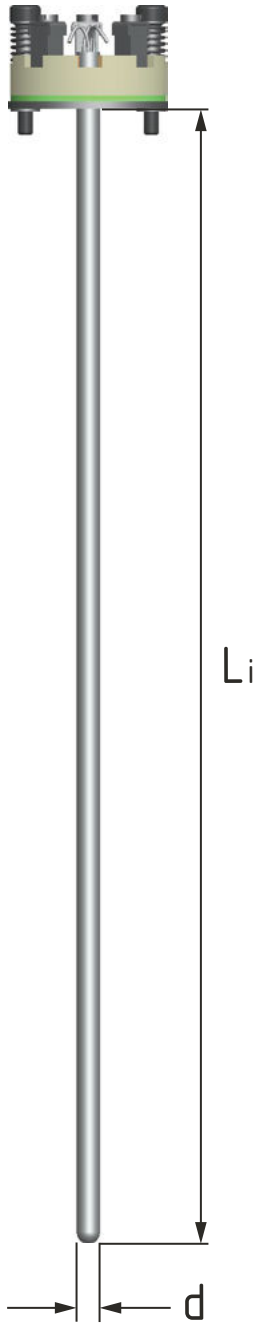
S10 Electrical Thermometer for RTD

DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings



HOW TO ORDER S01 TEMPERATURE PROBES:

- The ordering code is built by selecting the appropriate configuration for the various sections of the ordering code.
- The Insert nominal length Li is measured from base of the DIN mounting plate to the tip of the probe.

d = Stem diameter
Li = Insert Nominal Length

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