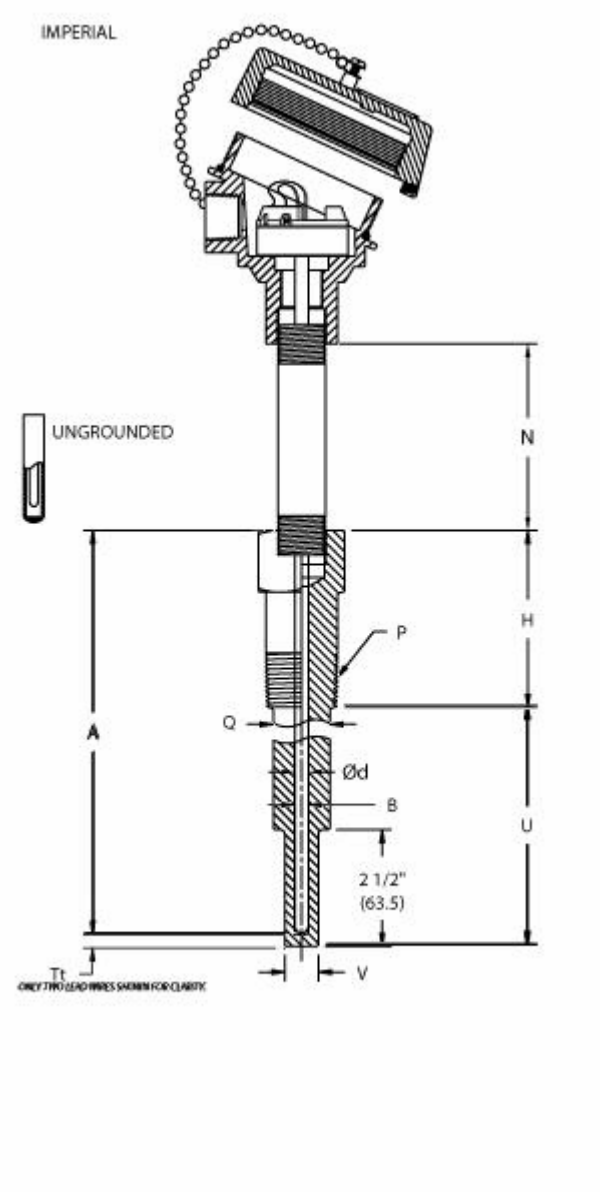
TC10-2 Internal spring loaded TC assembly

Modelcode type: **TC10-2**

Item number: **52978537**

TC10-2 Internal spring loaded TC assembly	
Assembly description	Industrial assembly configured
Unit of Measure	Imperial (inch)
Spring design	Spring loaded plate (removable insert)
Electrical approval	Without
Connection head	1/4000 F (Aluminum) w/o Flame Path
Instrument x Conduit entry	1/2 NPT x 1/2 NPT
Terminal block/Transmitter	T16, Digital-transmitter, 4…20 mA, universal programmable
Neck extension	Nipple - Galvanized steel
N-Dimension	3.0 inch (76 mm)
Thermocouple sensor	Type J (Fe-CuNi) / 0...+760 °C
Thermocouple junction	Single Ungrounded (Isolated)
Sensor diameter	1/4 inch / 0.250 inch (6.35 mm)
Sheath material	Stainless steel 316 / 316 L (1.4401 / 1.4435)
A-Dimension	9" (229 mm)
Certificates	Without
Approval tags	Without
Tagging	No tag
Threaded Thermowell TW15, solid machined	
Head Design	Round with hexagon
Thermowell Style	Stepped
Unit of Measure	Imperial (inch)
Process thread [P or E]	1/2" NPT
Instrument connection [N]	1/2 NPT female
Insertion length [U]	7.5 inch



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Head Length	1.75"
Bar Material	Stainless steel 316/316L
Bore size [B or d1]	0.260 inch (6.6 mm)
Root diameter [Q]	0.625 inch
Tip diameter [V or F3]	0.500 inch
RTD / TC / Thermometer Assembly	TC10-2 Internal spring loaded TC Assembly
Bore depth / stem length (US)	9.000
Tip thickness [Tt]	0.250 inch (6.4 mm)
Design	Head
Housing	
Material	Plastic PBT, glass-fibre reinforced
Weight	50 g
Ingress Protection	IP00 (Electronics completely potted)
Connection terminals	Captive screws
Wire cross-section	Solid wire 0.14 ... 2.5 mm² (AWG 24 ... 14)
Wire cross-section	Wire with end splice 0.14 ... 1.5 mm² (AWG 24 ... 16)
Screwdriver	Cross head (Pozidrive tip), size 2 (ISO 8764)
Tightening torque	0,5 Nm
Ambient conditions	
Permissible ambient temperature Transmitter	Standard -40...85°C
Climate class per IEC 654-1:1993	Cx (-40 ... +85 °C, 5 ... 95 % r. F.)
Vibration resistance per IEC 60068-2-6:2008	Test Fc: 10 ... 2,000 Hz; 10 g, amplitude 0.75 mm
Shock resistance per IEC 68-2-27:2009	Acceleration / shock width
Shock resistance per IEC 68-2-27:2009	100 g / 6 ms
Salt fog	Acc. IEC 68-2-52:1996, IEC 60068-2-52:1996
Condensation	Acceptable
Free fall - in line with IEC 60721-3-2:1997, DIN EN 60721-3-2:1998	Drop height 1.5 m
Electromagnetic compatibility (EMC)	Acc. DIN EN 55011:2010, DIN EN 61326-2-3:2013 NAMUR NE21:2012, GL 2012 VI Part 7 Emission (group 1, class B) and interference immunity (industrial application) [HF field, HF cable, ESD, Burst, Surge]
Temperature transmitter input	
Configuration sensor	Thermocouple Type J
Standard	Per IEC 60584-1
Input configuration	Thermocouple (CJC internal)
Unit	°F
Measuring range start value - sign	Plus (incl. 0)
Measuring range start value	0
Measuring range end value - sign	Plus (incl. 0)
Measuring range end value	250
Time response	

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Switch-on time (time to get the first measured value)	Max. 4 s
Warm-up time	After a max. 45 minutes the accuracy specifications are reached (due to the internal cold junction)
Response time	< 0,9 s (typ. 0,6 s)
Typical measuring rate	Measured value update approx. 8/s
Monitoring	
Transmitter Signalling of error	Up scale > 21,0 mA
Measuring range monitoring	Deactivated (Monitoring of the set measuring range for upper/lower deviations configurable)
Drag pointer (internal temperature of the electronics)	Stores the maximum ambient temperature (no reset possible)
Specifications	
Output signal	4...20mA
Reference conditions	Calibration temperature Tref = 23 °C ±3 K Power supply Ui_ref = 24 V Atmospheric pressure = 860 ... 1,060 hPa All accuracy specifications refer to the reference conditions.
Accuracy specifications	
Configuration sensor	Thermocouple Type J
Measuring deviation per DIN EN 60770, NE145	≥ 0 °C: 0,45 K + 0,045 % MW
Measuring deviation per DIN EN 60770, NE145	≤ 0 °C: 0,45 K + 0,3 % |MW|
Mean temperature coefficient (TC) every 10 K ambient temperature deviation from Tref	±2,0 K
Long-term drift in line with IEC 61298-2 per year	40 µV / 0.1 % MV (greater value applies)
Cold junction	≤ ±1,5 K
Cold junction TC	≤ 0,2 K
Cold junction Long-term drift	≤ 0,4 K
Output measuring deviation (DA converter)	0,045 % of the MS
Output measuring deviation (DA converter) (TC)	0,06% of the MS
Output measuring deviation (DA converter) - Long-therm drift	0,1 % of the MS
Influence of power supply every 1 V voltage change from Ui_ref	±0,005 % of MS
Approvals / certificates	
Explosion protection	Without
Power supply	
Power supply UB	UB DC 10 ... 35 V
Load RA	RA ≤ (UB - 10 V) / 0,0215 A with RA in Ω und UB in V
Certificates	
Certificates	Without

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