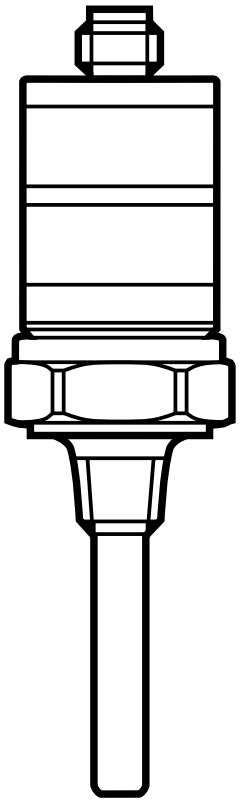
prosense™

by AUTOMATIONDIRECT.com

Operating instructions
Electronic temperature sensor

TSD25N-AP-0284-H



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1 Functions and features

The unit detects the system temperature in machines and installations.

2 Function

The unit generates 2 output signals: 2 x NO with separately adjustable switch points [SET1] and [SET2].

- With rising temperature OUT1 / OUT2 closes when the set value [SET1] / [SET2] is reached.
- With falling temperature OUT1 / OUT2 opens again, when the value [SET1] minus hysteresis / [SET2] minus hysteresis is reached.
- The hysteresis is fixed. It is 5 °C / 9 °F.

- Measuring range: -25...140°C / -13...284°F.
- Measuring element: Pt 1000 according to DIN EN 60751, class B

3 Installation

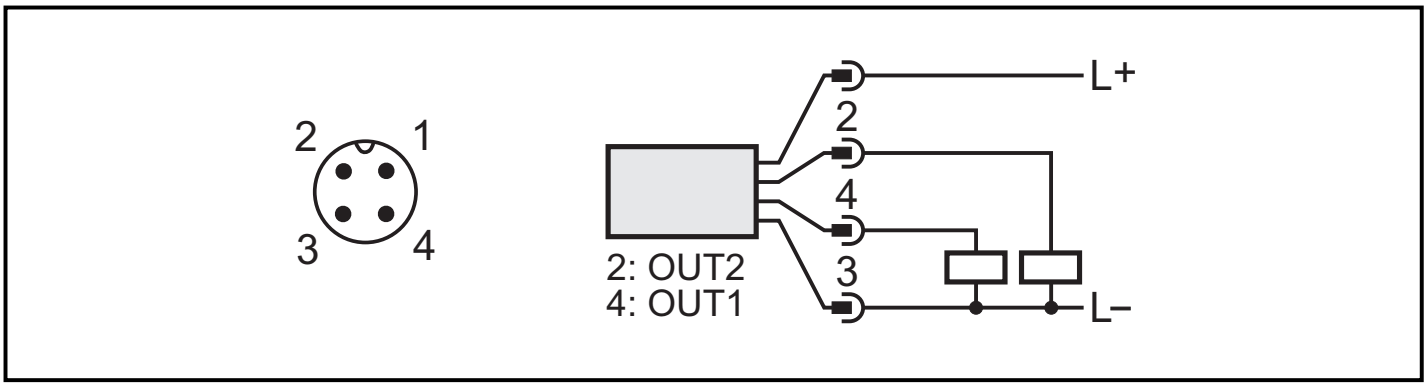
Before mounting and removing the unit: ensure that no medium can leak at the process connection.

▶ Insert the unit in a ¼“ NPT process connection.
▶ Tighten firmly. Tightening torque: max. 25 Nm (18 ft-lbs).

4 Electrical connection

The unit must be connected by a qualified electrician.
The national and international regulations for the installation of electrical equipment must be adhered to.
Operating voltage „supply class 2“ to cULus.

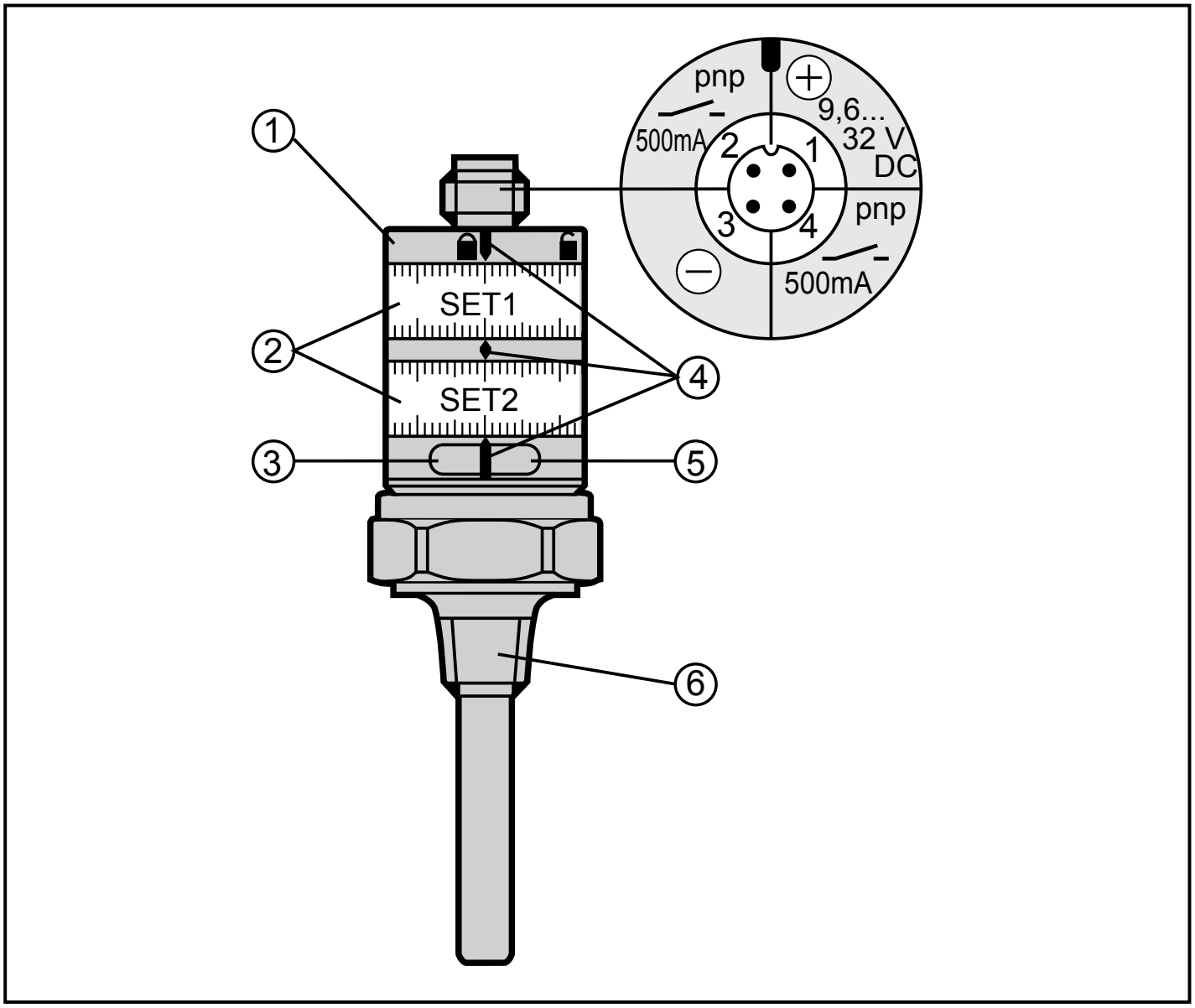
Disconnect power before connecting the unit as follows:



Cable Assembly Wiring Colors:
Pin 1 - Brown
Pin 2 - White
Pin 3 - Blue
Pin 4 - Black
Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.
Available cable assemblies:

- CD12L-0B-020-A0
- CD12L-0B-020-C0
- CD12M-0B-070-A1
- CD12M-0B-070-C1
- CDP12-0B-010-AA
- CDP12-0B-030-AA
- CDP12-0B-010-BB
- CDP12-0B-030-BB

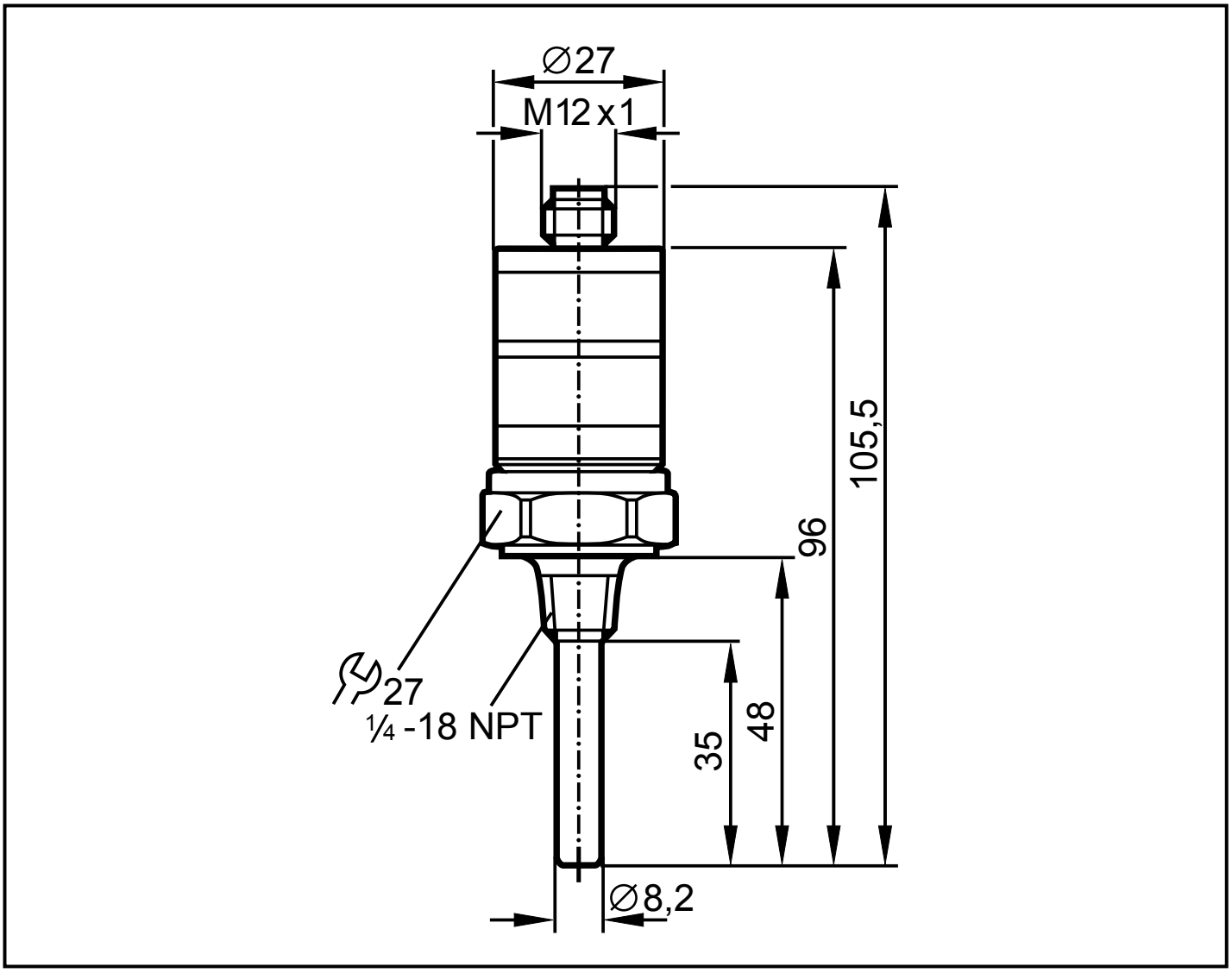
4 Setting



1: locking ring
2: setting rings (manually adjustable after unlocking)
3: LED yellow: lights if OUT1 = ON, temperature ≥ [SET1]
4: setting marks
5: LED yellow: lights if OUT2 = ON, temperature ≥ [SET2]
6: process connection ¼“ NPT
Pin 4 = OUT1 / Pin 2 = OUT2

To obtain the setting accuracy: Set both rings to the minimum value, then set the requested values.

5 Scale drawing



Dimensions are in millimeters (25.4 mm = 1 inch)

6 Technical data

Operating voltage [V]	9.6...32 DC
Current rating [mA]	500
Current consumption [mA]	< 30
Measuring range [°C / °F]	-25...140 / -13...284
Measuring element	1 x Pt1000 to DIN EN 60751, class B
Setting accuracy	± 3 °C / 5.4 °F
Repeatability	± 0.1 °C / 0.18 °F
Response dynamics (to DIN EN 60751) [s]	T05 = 1 / T09 = 3
Housing materials	stainless steel (316S12); PC (Makrolon); PBT, (Pocan); FPM (Viton)
Material (wetted parts)	stainless steel (316S12)
Ambient temperature [°C/°F]	-25...70/-13...158
Storage temperature [°C/°F]	-40..100/-40...212
Permissible overload pressure [bar]	300
Medium temperature [°C/°F]	-25...125 (145 max. 1 h)/ -13...257 (293 max. 1 h)
Protection rating	IP 67
Protection class	III
Insulation resistance [MΩ]	> 100 (500 V DC)
Shock resistance [g]	50 (DIN / IEC 68-2-27, 11 ms)
Vibration resistance [g]	20 (DIN / EN 68-2-6, 10 - 2000 Hz)
EMC	
EN 61000-4-2 ESD:	4 / 8 KV
EN 61000-4-3 HF radiated:	10 V/m
EN 61000-4-4 Burst:	2 KV
EN 61000-4-6 HF conducted:	10 V

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