

Resistance Thermometer for Harsh Conditions



measuring
•
monitoring
•
analyzing

TNK



- Measuring Range: -80...150 °C
- Sensor: Pt100, Pt1000, Ni100, NTC
- Accuracy: Class A or B
- Max. Pressure: 50 bar
- Max. Temperature: 150 °C
- Connection:
½" NPT, G ½, M18 x 1.5, Compression
- Material: Brass, Saltwater Resistant
Bronze or Stainless Steel



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Description

The KOBOLD TNK Series RTD Temperature Sensors are electrical temperature transmitters used in conjunction with appropriate analytical equipment for displaying and regulating temperature. They are designed for use in shipbuilding and mechanical engineering and offer ruggedness, reliability, impact resistance, shock and vibration resistance in accordance with specifications set by Germanischer Lloyd and German State Railways. They are ideally suited for temperature measurement in diesel engines. The sensor is made of brass, bronze, or stainless steel. The terminal head is made of salt-water resistant aluminum and is available with various cable entry points. Using a variety of fittings, the sensor can be mounted in a pipe or on the machine. The measuring resistances can be replaced without removing the mounting. With four terminals, it is easy to connect to three or four lead technology. The sensor is also available as a double measuring resistance.



Technical Details

Sensor:	Pt100, Ni100, Pt1000, Class A or B NTC (5 kΩ at 25 °C) 2-, 3-, or 4- Lead
Measuring Range:	-80...150 °C
Accuracy	
Pt:	Class A or B
Ni:	Class B
NTC:	Class B (± 0.2 °C in the Range of 0...70 °C)
Max. Temperature:	150 °C
Ambient Temperature:	-30...100 °C
Max. Pressure:	16 bar (Connection Codes: D5, G4, M5, N4) 50 bar (Compression Fitting)
Sensor Material:	Ni-Plated Brass, Salt-Water Resistant Bronze, or 316L Stainless Steel
Terminal Casing:	Salt-Water Resistant Aluminum
Compression Fittings:	Galvanized Steel, Stainless Steel

Double Nipple:	Ni-Plated Brass, Salt-Water Resistant Bronze, Stainless Steel
Mechanical Connection:	1/2" NPT, M18x1.5, G 1/2
Electrical Connection:	Screw Terminal In the Round Connection Head
Cable Input Point:	Cable Clamps for 5-10 mm Ø Cable; Cable Connection Terminal with 2 mm Rubber, 2-Wire Cable According to DIN 89280 with Inside Thread M18x1.5 for Cable with Shielding Ø 8-10.5, for Shipbuilding; As per VG 88812 with Inside Thread M18x1.5 for Cable with Shielding Ø 11.5-12.5, for Military Use
Thread for Cable Entry:	PG 11
Protection Type:	IP 65
Weight:	Approx. 350 g (50 mm Sensor)
Approval:	DNV-GL Certificate No: TAA00001U9

Order Details (Example: **TNK-1105 D5 12 P**)

Sensor Length	Material / Model			Mechanical Connection	Sensor Type / Class	Sensor Version	Cable Connection
	Ni-Plated Brass	Stainless Steel	Salt-Water Resistant Bronze				
50 mm	TNK-1105..	TNK-1405..	TNK-1705..	Rotating Thread ..D5.. = M18x1.5	Class B ..1.. = 1 x Pt100 ..2.. = 2 x Pt100	..2.. = 2-Lead	..P = For Cable Ø 5-10 mm ..3 ³⁾ = 2 m Rubber Cable
75 mm	TNK-1107..	TNK-1407..	TNK-1707..	Double Nipple ..M5.. = M18x1.5 ..G4.. = G 1/2 ..N4.. = 1/2" NPT	..5.. = 1 x Pt1000 ..6.. = 2 x Pt1000		
100 mm	TNK-1110..	TNK-1410..	TNK-1710..	Brass Compression, Galvanized ..S5.. ¹⁾ = M18x1.5 ..S4.. ¹⁾ = G 1/2 ..P4.. ¹⁾ = 1/2" NPT	..7.. = 1 x Ni100 ..N.. = 1 x NTC	..3.. ²⁾ = 3-Lead	..M = According to DIN 89280
150 mm	TNK-1115..	TNK-1415..	TNK-1715..	316L Stainless, Compression ..V5.. ¹⁾ = M18x1.5 ..V4.. ¹⁾ = G 1/2 ..Q4.. ¹⁾ = 1/2" NPT	Class A ..A.. = 1 x Pt100 ..B.. = 2 x Pt100	..4.. ²⁾ = 4-Lead	..V = According to VG 88812
Special ⁴⁾ (up to 300 mm)	---	TNK-14XX..	---		..C.. = 1 x Pt1000 ..D.. = 2 x Pt1000		

¹⁾ Compression Fitting not Available with Bronze Sensor

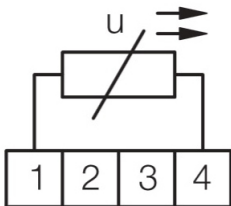
²⁾ 3- or 4-Lead Only Available with a Single Sensor

³⁾ Only for 1 x 2-Lead

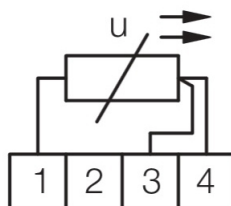
⁴⁾ On request for quantities > 50 units

Electrical Connections

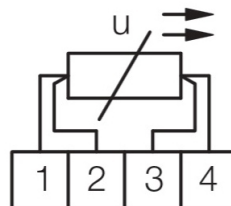
2-Lead



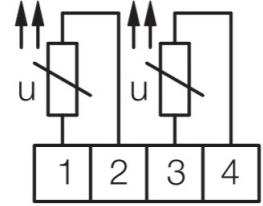
3-Lead



4-Lead

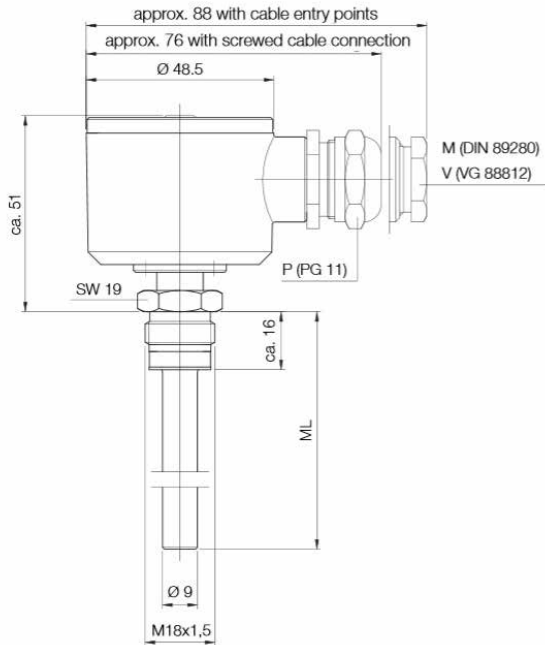


2 x 2-Lead

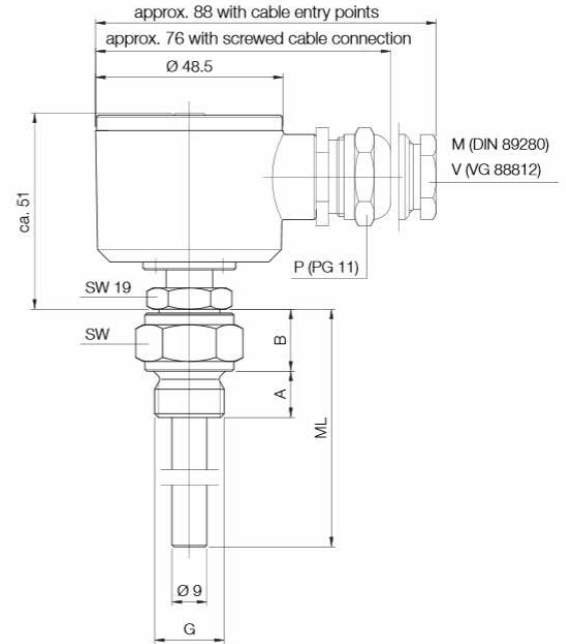


Dimensions (mm)

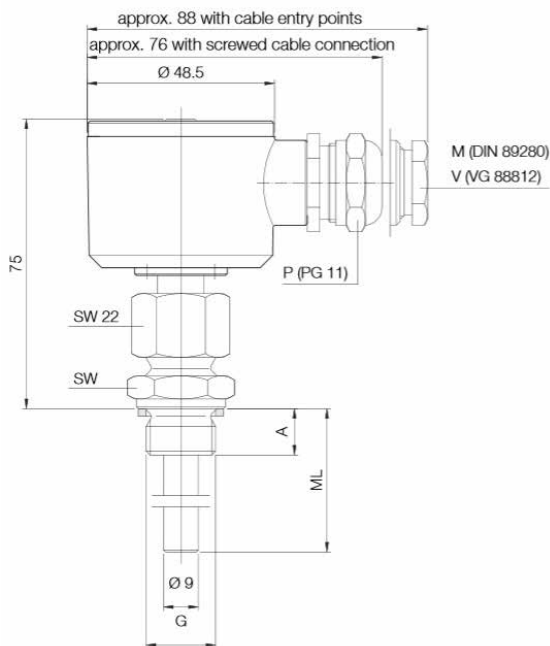
TNK with M18x1.5 (without Nipple)



TNK with Double Nipple



TNK with Compression Fitting



G	SW	A	B
M18x1.5	24	12	15
G 1/2	27	14	15
1/2" NPT	24	19	13

G	SW	A
M18x1.5	24	12
G 1/2	27	14
1/2" NPT	22	19.8