

TP-104A-N1/4-H1141-L005

Temperature Detection – Probe

Technical data

Type	TP-104A-N1/4-H1141-L005
ID	9910664
Temperature range	
Measuring range	-50...120 °C
	-58...248 °F
Accuracy	±0.15 K + 0.002 • t (-30...300 °C)
Measuring element	Pt100, DIN EN 60751, class A; connection mode: 4-wire connection
Self-heating	0.4 K/mW at 0 °C
Response time	t 0.5 = 3 s / t 0.9 = 10 s in water at 0.2 m/s
Immersion depth (L)	5 mm
Process Pressure	100 bar

Mechanical data

Housing material	Stainless steel, 1.4404 (AISI 316L)
Process connection	1/4" NPT
Electrical connection	Connector, M12 × 1
Protection class	IP67

Environmental conditions

Ambient temperature	-40...+120 °C
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Tests/approvals

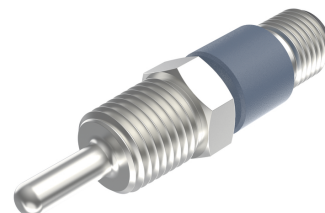
UL registration number	E345414
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Reference conditions acc. to IEC 61298-1

Temperature	15...+25 °C
Atmospheric pressure	860...1060 hPa abs.
Humidity	45...75 % rel.
Auxiliary power	24 VDC
MTTF	2283 years acc. to SN 29500 (Ed. 99) 20 °C

Technical data

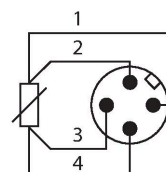
Type	TP-104A-N1/4-H1141-L005
ID	9910664
Temperature range	
Measuring range	-50...120 °C



Features

- Max. temperature connector: 120°C
- Connection mode: 4-wire connection
- Process connection 1/4" NPT male thread
- Electrical connection rotatable by 360°

Wiring diagram



Functional principle

Resistance thermometers are used for the detection and monitoring of temperatures to optimize and control a process. Typical applications are in machine and plant construction as well as in the process industry. The core element of the temperature probe is a temperature-dependent resistor.

Technical data

	-58...248 °F
Accuracy	$\pm 0.15 \text{ K} + 0.002 \cdot t $ (-30...300 °C)
Self-heating	0.4 K/mW at 0 °C
Measuring element	Pt100, DIN EN 60751, class A; connection mode: 4-wire connection
Response time	$t_{0.5} = 3 \text{ s} / t_{0.9} = 10 \text{ s}$ in water at 0.2 m/s
Immersion depth L	5 mm
Outer diameter	4 mm
Protection class	IP67
Environmental conditions	
Ambient temperature	-40...+120 °C
Mechanical data	
Housing material	Stainless steel, 1.4404 (AISI 316L)
Sensor material	Stainless steel, 1.4404 (AISI 316L)
Process connection	1/4" NPT
Process Pressure	100 bar
Electrical connection	Connector, M12 × 1
Core cross-section	4 mm ²
Reference conditions acc. to IEC 61298-1	
Temperature	15...+25 °C
Atmospheric pressure	860...1060 hPa abs.
Humidity	45...75 % rel.
Auxiliary power	24 VDC
Tests/approvals	
Approvals	cULus
UL registration number	E345414
MTTF	2283 years acc. to SN 29500 (Ed. 99) 20 °C