TSA06

Temperature sensor with switch and analog outputs

- easy to install
- stainless steel housing
- with 2 PNP switched outputs or 1 switched output and 1 analog output 4 - 20 mA
- measuring range: -328 °F to 1112 °F / -200 °C to +600 °C
- programmable switching points

Description:

Series TSA06 temperature sensors indicate measured temperatures and provide control signals and analog output signals. Temperature switching points and reset values for the switching functions – which can be separately programmed – along with a wide measuring range yield very wide device working ranges. Installation data such as process connection, length and diameter of shaft protection tube can be adapted to suit the prevailing service conditions.

Typical Applications:

The TSA06 temperature probe is very versatile and can be deployed in a whole raft of applications such as cooling and heating circuits, installations and plants, compressors and engines.

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Models:

TSA06.A: temperature probe with 2 x PNP switched output

TSA06.B: temperature probe with 1 x PNP switched output and analog output (4 - 20 mA)

Technical Specifications:

Measuring range: -58 °F to 392 °F / -50 °C to 200 °C (without neck extension)
-58 °F to 752 °F / -50 °C to 400 °C (with 50 mm neck extension)
-58 °F to 1112 °F / -50 °C to 600 °C (with 50 mm neck extension)
-328 °F to 1112 °F / -200 °C to 600 °C (with 50 mm neck extension)

Process connection: 1/2" NPT / G1/2" A (other connections on request)

Thermowell:
Diameter and length: 0.12"/0.24"/0.31" x 1.97"/3.94"/6.30"/7.87" 3/6/8 x 50/100/160/200 mm

Ambient temperature: -13 °F to 158 °F / -25 °C to 70 °C

Storage temperature: -22 °F to 176 °F / -30 °C to 80 °C

Materials:

Housing: plastic / stainless steel AISI 316 Ti / 1.4571

process connection: stainless steel AISI 316 Ti / 1.4571

Thermowell: stainless steel AISI 316 Ti / 1.4571

Electrical Specifications:

Power supply: 12 - 30 VDC

Connection: M12 x 1, 4-pole plug with gold-plated contacts

Output signal: 4 - 20 mA (700 ohm at 24 VDC)
0 - 10 V DC (5 k ohm), DC NPN, DC PNP

Switching function: NO contact / NC contact programmable

Current carrying capacity: 100 mA (250 mA upon request)

Display: 4-digit, 8-segment LED display, red, height 0.3" / 7.6 mm, protected with foil

Polarized / overload proof: yes

Power consumption: < 65 mA

Setting range: in 0.1 ° steps for ranges up to 392 °F / 200 °C
in 1° steps for Ranges > 392 °F / 200 °C

Switching point: -57 °F to 1112 °F / -49 °C to 600 °C

Reset point: -58 °F to 1110 °F / -50 °C to 599 °C

Units: °C oder °F

Accuracy:

switched output: ± (PT100 accuracy as per IEC 751, Class B) + 0.2 K

analog output: ± (PT100 accuracy as per IEC 751, Class B) + 0.2 K + 0.2 % of full scale

display: ± (PT100 accuracy as per IEC 751, Class B) + 1/2 digit

Resolution

switched output: 0.1 ° (1° for ranges above 312 °F / 200 °C)

analog output: 0.1 °C (1° for ranges above 312 °F / 200 °C)

display: 0.1 °C (1° for ranges above 312 °F / 200 °C)

Temperature effect: 0.1 K per 10 K

Measuring/display cycle: 1 / sec

Sensor: 1x PT100 / 2-wire, Class B as per IEC 751 (standard), PT100 or PT100 in 2-/3- or 4-wire Class B or A as per IEC 751 (available on request)

Resistance of insulation: >100 Mohm / 500 V DC

Protection type: IP65

EMC: EMC as per IEC / EN 61326

Ordering Code:

Order Number:	TSA06.	A.	1.	1.	6.	0

Temperature probes with switched and analog outputs

Output signal:
A = 2 x PNP switched output
B = 1 x PNP switched output and 1 x analog output (4 - 20 mA)

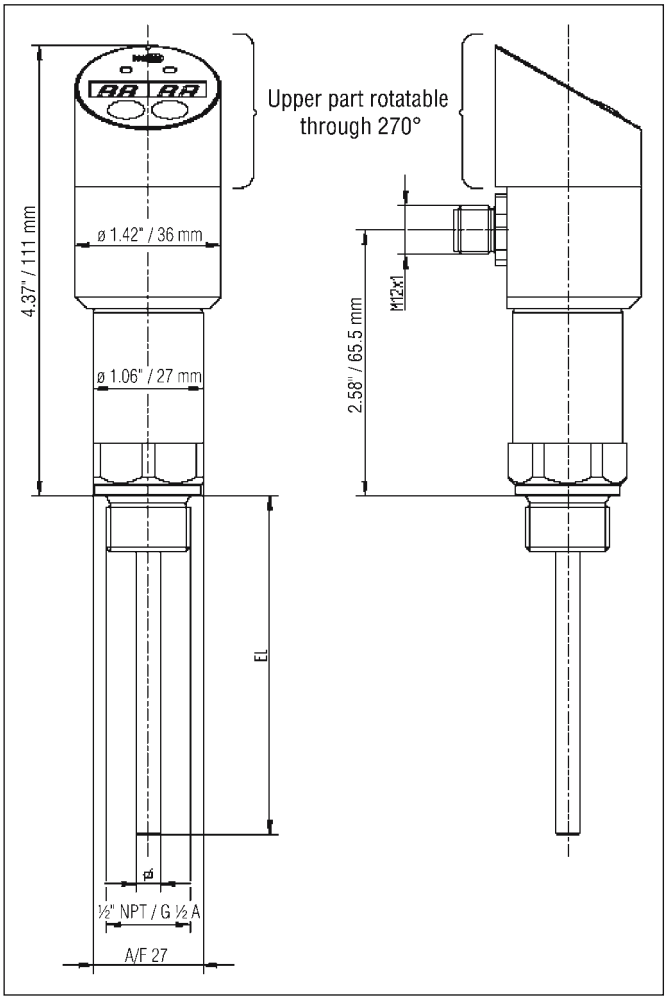
Measuring range:
1 = -58 °F to 392 °F / -50 °C to 200 °
2 = -58 °F to 752 °F / -50 °C to 400 °C
3 = -58 °F to 1112 °F / -50 °C to 600 °C
4 = -328 °F to 1112 °F / -200 °C to 600 °C

Installation length:
1 = 1.97" / 50 mm
2 = 3.94" / 100 mm
3 = 6.30" / 160 mm
4 = 7.87" / 200 mm
S = special-order lengths available on request

Diameter of protective tube:
3 = 0.12" / 3 mm tapered tip (Pmax = 12 bar)
6 = 0.24" / 6 mm standard (Pmax= 40 bar)
8 = 0.31" / 8 mm (Pmax= 100 bar)

Options:
0 = None
1 = Please specify in writing

Dimensions:



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