

iTHERM CompactLine TM311

Pt100 compact thermometer, with optional integrated IO-Link and 4–20 mA transmitter, programmable PC



from **€63.00**

Price as of 10.05.2021

More information and current pricing:

www.endress.com/TM311

Benefits:

- Fast installation and easy commissioning:
 - Small, compact design made entirely from stainless steel
 - M12 connection with IP69 for easy electrical connection
 - Pt100, 4-wire connection or universal output (IO-Link / 4–20 mA)
 - Preset measuring range
- Excellent metrological properties thanks to innovative sensor technology:
 - Extremely short response times
 - High level of measuring accuracy even with short immersion lengths
 - Improved measuring accuracy with transmitter-sensor matching
- Reliable operation ensured by approvals and certificates:
 - Device safety to EN610101-1 and CSA C/US
 - Electromagnetic compatibility to NAMUR NE21
 - Diagnostics information to NAMUR NE43
 - Hygiene-compliant design with 3-A marking
 - Marine approval

Specs at a glance

- **Accuracy** class A acc. to IEC 60751
- **Response time** $t_{50} = 1 \text{ s}$ $t_{90} = 2 \text{ s}$
- **Max. process pressure (static)** at 20 °C: 50 bar (725 psi)
- **Operating temperature range** PT 100: -50 °C ...200 °C (-58 °F ...392 °F)
- **Max. immersion length on request** up to 600,00 mm (23,62")

Field of application: The compact thermometer measures the process temperature using a Pt100 sensor element (Class A, 4-wire). An optional integrated transmitter converts the Pt100 input signal. In the version

with integrated electronics, the device automatically detects the connection variant (IO-Link or 4–20 mA).

Features and specifications

Thermometer

Measuring principle

Resistance Temperature Detector

Characteristic / Application

metric and imperial style

compact temperature probe

fast response time

high accuracy

standard and hygienic design

hygienic process connection

threaded process connection

Thermowell / protection tube

without

incl. thermowell

incl. T-/ellbow thermowell

Insert / probe

pipe version, isolated wires, not flexible

Outer diameter protection tube / Insert

3,0 mm (0,12")

6,0 mm (0,24")

Thermometer

Max. immersion length on request

up to 600,00 mm (23,62")

Material protection tube/ thermowell

1.4435 Delta-Ferrit < 1%

316L

Process connection

compression fitting

Thread

weld in adapter

clamp connections acc. to ISO2852

screwed pipe joint acc. to DIN 11851

aseptic screwed pipe joint acc. to DIN
11864-1

metallic sealing system

thread acc. to ISO 228 for liquid adaptor

Varivent

SMS 1147

T- and elbow pieces

Tip shape

straight

reduced

Thermometer**Surface roughness Ra**

0,76 µm (29,92 µin)

0,38 µm (14,96 µin)

0,38 µm (14,96 µin) electropolished

Operating temperature range

PT 100:

-50 °C ...200 °C

(-58 °F ...392 °F)

Max. process pressure (static)

at 20 °C: 50 bar (725 psi)

Accuracy

class A acc. to IEC 60751

Response time

t50 = 1 s

t90 = 2 s

Integration head transmitter

no (4...20mA Signal, IO-Link)

Thermometer

Certification

3A, EHEDG, ASME BPE, FDA, TSE

1935/2004, 2023/2006, 10/2011

DNVGL, BV

cCSAus

EAC

RCM

More information www.endress.com/TM311