DTS12 Series Temperature Sensors

Air Temperature Sensor DTS12A for meteorological temperature measurement

Features

- Platinum resistance element
- Accuracy: 1/4 EN 60751 Class B
- Weather-resistant design
- EMI shielding

DTS12 Series temperature sensors are specially designed for outdoor use, for example with weather stations. The watertight, weather-resistant design ensures reliable temperature measurements in extreme conditions.

DTS12 sensors can be used with equipment operating either with the resistor bridge principle (3-wire connection) or constant current principle (4-wire connection).

The housing of the platinum resistance (Pt100 sensor) sensing element is made of stainless steel, and it is located in the tip part of the assembly. The cable screen attached to the sensor housing provides a good shield against electromagnetic interference (EMI).

Air Temperature Sensor DTS12A

DTS12A is meant to be used in meteorological temperature measurement. Vaisala recommends using a radiation shield to ensure correct results.

Subsurface Temperature Sensor DTS12G

DTS12G is specially designed for automatic weather stations. It can be used to measure the temperature at a certain level beneath the surface.

In roads applications, DTS12G is typically used to measure road depth temperature information at 30 cm (11.81 in) below the surface. This information is used to produce a 24-hour road surface temperature forecast.

DTS12G for subsurface temperature measurement

Water Temperature Sensor DTS12W

DTS12W is dedicated for measuring water temperature in tanks. It is equipped with the standard M20 thread for fastening.

DTS12W for water temperature measurement

Technical data

DTS12A specifications

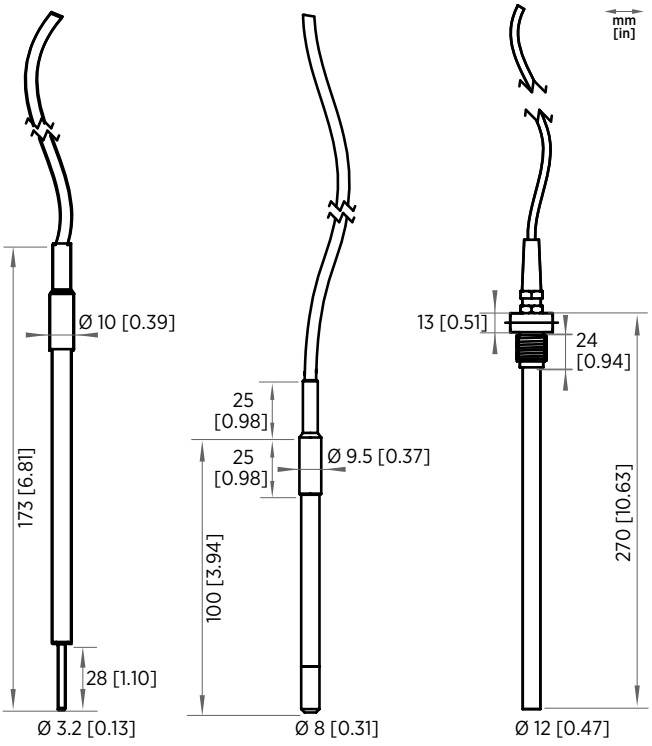
Sensor	Platinum resistance element (Pt100)
Accuracy	1/4 EN 60751 Class B ±0.08 °C at 0 °C (+32 °F)
Sensitivity	0.385 Ω/°C
Measurement range	−60 ... +80 °C (−76 ... +176 °F)
Housing material	Stainless steel AISI 316, PVC
Probe	Max. diameter: 10 mm (0.39 in) Length: 173 mm (6.81 in)
Cable	Screened multicore 4 × 0.22 mm and shield Length: 3.5 m (11 ft 6 in) Diameter: 5 mm (0.20 in)

DTS12G specifications

Sensor	Platinum resistance element (Pt100)
Accuracy	1/4 EN 60751 Class B ±0.08 °C at 0 °C (+32 °F)
Sensitivity	0.385 Ω/°C
Measurement range	−80 ... +80 °C (−112 ... +176 °F)
Housing material	Stainless steel AISI 316
Probe	Max. diameter: 9.5 mm (0.37 in) Length: 100 mm (3.94 in)
Cable	Screened multicore 4 × 0.22 mm (24 AWG) and shield Diameter: 5 mm (0.20 in)
Cable length options	10 m (32 ft 10 in) 20 m (65 ft 7 in) 30 m (98 ft 5 in) 50 m (164 ft 1 in) 100 m (328 ft 1 in) 120 m (393 ft 8 in) 150 m (492 ft 2 in) 200 m (656 ft 2 in)
Type V extension cable option	Maximum 1524 m (5000 ft)

DTS12W specifications

Sensing element	Platinum resistance element (Pt100)
Accuracy	1/4 EN 60751 Class B ±0.08 °C at 0 °C (+32 °F)
Sensitivity	0.385 Ω/°C
Measurement range	−80 ... +80 °C (−112 ... +176 °F)
Housing material	Stainless steel AISI 316
Probe	Max. diameter: 33 mm (1.30 in) Length: 270 mm (10.63 in) Tube: 12 mm (0.47 in) Thread: M20
Cable	Screened multicore 4 × 0.22 mm^2 and shield Length: 5 m (16 ft 5 in) Diameter: 5 mm (0.20 in)



Dimensions

VAISALA

www.vaisala.com

Published by Vaisala | B010193EN-E © Vaisala 2021