

ATF1

Outdoor temperature sensor



Summary

The ATF1 temperature sensor is an analog outdoor sensor for universal use.

Application

- HVAC systems – air temperature measuring
- outdoor or indoor air temperature monitoring and logging

Function

The sensor uses a sensing element, the signal of which is available at the screw terminals. Typical sensor provided is Pt1000 for domat I/O modules, other sensor types see table below. Temperature range is -50 to +90 °C.

The sensors are intended for operating in an outdoor or industry environment. They do not need any servicing or maintenance and can be mounted in any position.

The sensors are mounted with screws on a flat surface.

Technical data

Recommended measuring circuit	appr. 1 mA
Measuring range	max. -50 ÷ +90 °C
Protection class	IP65
Sensor accuracy	see table below
Terminals	screw terminals for wires 0,14 – 1,5 mm ²
Cover	polyamide, 30% glass-globe-reinforced
Insulation resistance	> 100 MOhm at 20°C, 500 VDC
Weight	< 0,1 kg
Dimensions	see below

Sensor types

Type	Ordering	Accuracy
Pt100	on request	DIN EN 60751 class B
Pt1000	default sensor type	DIN EN 60751 class B
Ni1000-6180 (Sauter)	on request	DIN EN 43760 class B
Ni1000-5000 (L&G)	on request	
NTC 1,8 kOhm	on request	DIN EN 44070

When designing sensor cabling, please note that the cable resistance will cause measuring error. For a 50 m cable and a Pt1000 sensor the error is as follows:

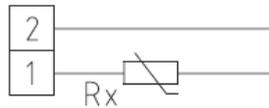
wires 0.50 mm² ... measuring error 0.90 K

wires 0.75 mm² ... measuring error 0.60 K

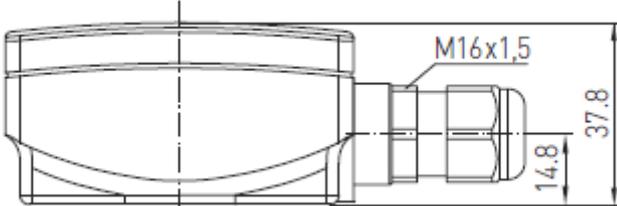
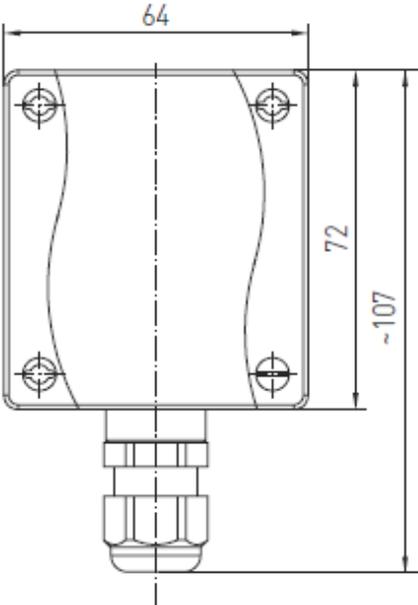
wires 1.00 mm² ... measuring error 0.44 K.

For other cable lengths, the errors are more or less linear.

Terminals



Dimensions



**Changes in
versions**

03/2015 — Modifying of sensor accuracy table, change in accuracy class and measuring error