domat
control system

RTF1   Temperature sensor

Summary

Application

The RTF1 temperature sensor is an analog room sensor for universal use.

- **HVAC systems – room temperature measuring**
- **room 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 -30 to +70 °C.

The sensors are intended for operating in a normal and chemically non-aggressive environment. They do not need any servicing or maintenance and can be mounted in any position.

The sensors are mounted with 4 screws on wall or on a flush-mounted junction box with 55 mm in diameter.

Technical data

Recommended measuring circuit	appr. 1 mA
Measuring range	max. -30 ÷ +70 °C
Protection class	IP30
Sensor accuracy	as in DIN EN 60751 class B
Terminals	screw terminals for wires 0,14 – 1,5 mm^2
Cover	ABS, RAL9010
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.
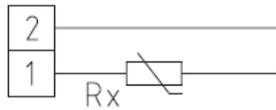For a 50 m cable and a Pt1000 sensor the error is as follows:
wires 0.50 mm2 ... measuring error 0.90 K
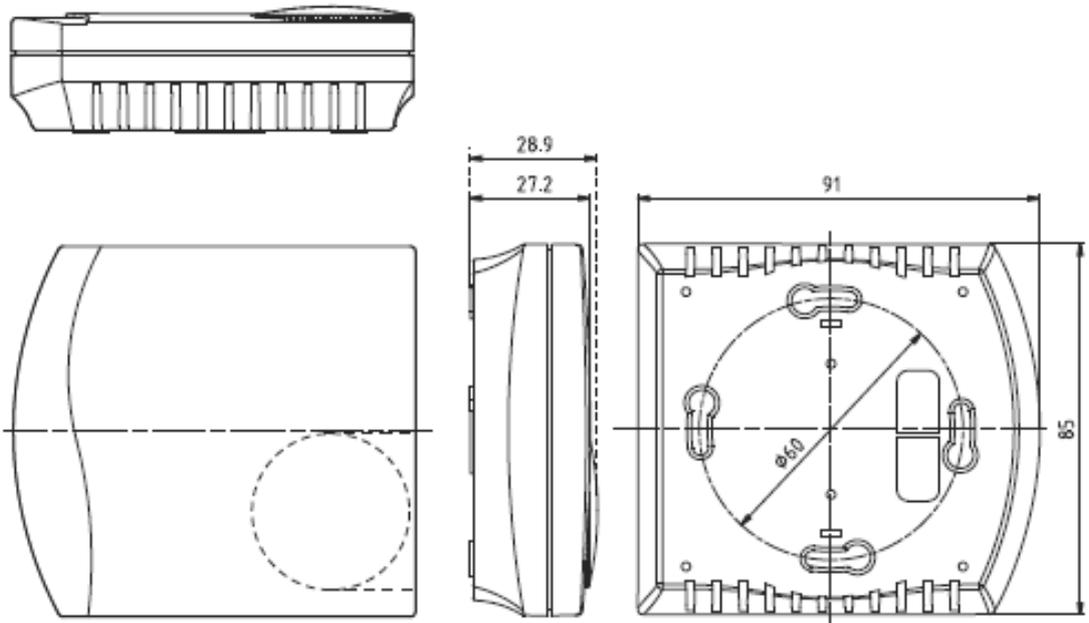wires 0.75 mm2 ... measuring error 0.60 K
wires 1.00 mm2 ... measuring error 0.44 K.
For other cable lengths, the errors are more or less linear.

Terminals

Dimensions

03/2015 Subject to technical changes. domat ALTF1

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