domat
control system

ESTF Screw-in temperature sensor

Summary **ESTF are a low-cost duct temperature sensors for universal use.**
Application
- **HVAC systems – air and liquid temperature measuring**

Function   The sensor uses a sensing element, the signal of which is available at the screw terminals. Default sensor type provided is Pt1000, other sensor types see table below. Temperature range is

-35 to +105 °C for PVC cable
-50 to +180 °C for SiHF silicone cable

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

Cable ends are protected by aluminium endings for installation into terminals. Standard cable length is 1,5 m, other lengths available on request.

Technical data

Recommended measuring current	about 1 mA
Measuring range	see above
Protection type	standard IP65, on request IP68 (according to EN 60529)
Protection class	III (according to EN 60730)
Connection	2 wires, optionally 4 wires
Pocket	stainless steel 1.4571, V4A, G ½" , Ø8x mm, max. p= 40 bar
Insulating resistance	> 100 MOhm at 20°C, 500 V DC
Dimensions	Ø8x50 mm(EL) or Ø8x100 mm(EL)
	standard cable length 1,5 m

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.

When ordering, please state:
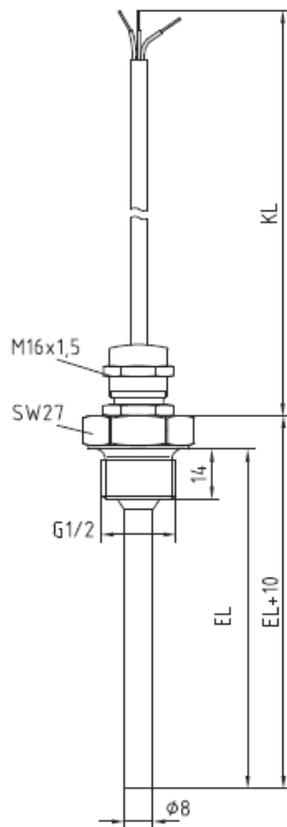sensor length – ESTF-50 mm, ESTF-100 mm
sensor type – see above, default type is Pt1000
electrical connection – 2-wire (default), optional 4-wire
cable type – PVC (default), Silicone
cable length – default is 1,5 m.

Dimensions

Changes in versions

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