

EE441

Strap-on Temperature Sensor

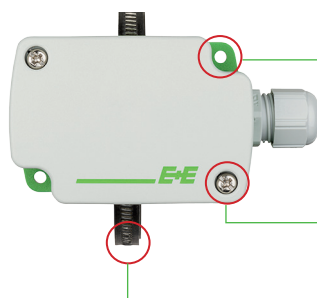
EE441 strap-on sensors are used for temperature measurement on round ducts and pipes.

Typical applications are heating systems (warm and cold water pipes) and solar collectors. In addition to active outputs 0-10 V or 4-20 mA various types of sensing elements such as Pt1000, NTC10k or Ni1000 are available for passive temperature measurement.

The innovative IP65 housing and the mounting concept allow for fast and easy installation.



Features



External mounting holes

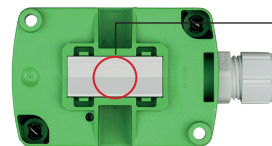
- » Mounting with closed cover
- » Mounting on plane surfaces
- » Protection against construction site pollution

Bayonet screws

- » Open/closed with a ¼ rotation

Hose clamp

- » Installation on pipes



Aluminium contact surface

- » Very good thermal transfer
- » Fast response time



Technical Data

Active output

Operating temperature	-40 °C...+70 °C (-40 °F...+158 °F)
Sensing element	Pt1000 (class A, DIN EN60751)
Output	0-10 V $-1 \text{ mA} < I_L < 1 \text{ mA}$ 4-20 mA (two-wire) $R_L < 500 \Omega$
Accuracy	$\pm 0.3 \text{ °C}$ ($\pm 0.54 \text{ °F}$) at 20 °C (68 °F)
Supply voltage (Class III) 	15-35 V DC or 24 V AC $\pm 20\%$ 10 V DC + $R_L \times 20 \text{ mA} < V+ < 35 \text{ V DC}$
Current demand	DC: typ. 5 mA AC: typ. 12 mA _{eff}
Electromagnetic compatibility	EN61326-1, EN61326-2-3 industrial environment

Passive output

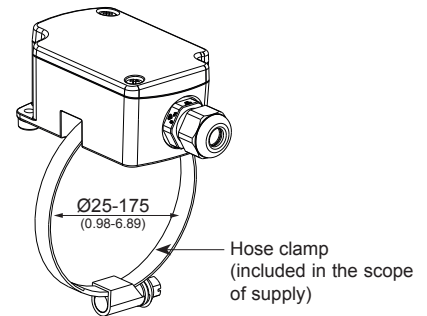
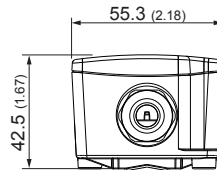
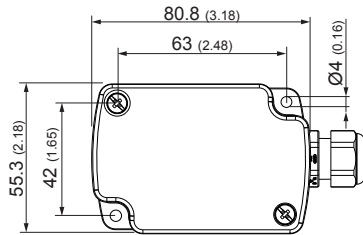
Operating temperature (contact area)	-40 °C...+110 °C (-40 °F...+230 °F)
Sensing element types	see ordering guide
Measurement current	typ. $< 1 \text{ mA}^{1)}$
T-Sensor connection	two-wire
Electrical connection	screw terminal, 2x max. 2.5 mm ² (0.004 in ²)

General

Insulation resistance	$> 100 \text{ M}\Omega$ at 20 °C (68 °F)
Response time τ_{63}	$< 1 \text{ min}$
Enclosure material	polycarbonate, UL94-V0 approved, T-range: -40 °C...+110 °C (-40 °F...+230 °F)
Protection class	IP65 / NEMA 4
Cable gland	M16x1.5, UL94-V2
Hose clamp material	stainless steel (corr. 1.4301 / 304)
Storage temperature	-30 °C...+70 °C (-22 °F...+158 °F)
Working and storage humidity range	5 % rh...95 % rh, no condensation

1) according technical data of the specific T-sensors

Dimensions in mm (inch)

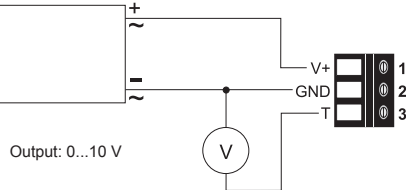


Connection Diagram

Active output

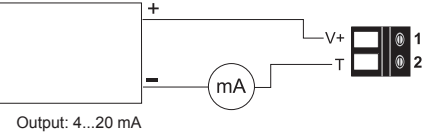
EE441-T3xx

power supply
15...35 V DC
24 V AC $\pm 20\%$



EE441-T6xx

power supply
20...35 V DC $R_L < 500 \Omega$
11...35 V DC $R_L < 50 \Omega$



Passive output

EE441-Txx



Ordering Guide

MODEL		ANALOGUE OUTPUT	T-SENSOR PASSIVE ¹⁾	HOUSING	DESIGN
Temperature	(T)	0-10 V (3x) 4-20 mA (6x) none (xx)	Pt100 DIN B (B) Pt1000 DIN B (D) NTC10k (L) NTC1.8k (G) Ni1000 TK6180 DIN B (J) Ni1000 TK5000 DIN B (T) Active output (x)	Standard (P)	Standard (O)
EE441-					

1) not relevant for active (analogue) output

Setup analogue outputs

SCALING ²⁾	UNIT
-40...60 (002)	metric (M)
-20...80 (024)	non-metric (N)
0...50 (004)	
0...100 (005)	
32...212 (075)	
-40...140 (083)	

2) other scaling upon request

Order Example

Passive Output

EE441-TxxDPO

Model: Temperature
T-Sensor passive: Pt1000 DIN B
Housing: Standard
Design: Standard

Active Output

EE441-T3xxPO/024M

Model: Temperature
Analogue Output: 0-10 V
Housing: Standard
Design: Standard
Scaling: -20...80 °C
Unit: metric

Accessories

Product configuration adapter
Product configuration software
Power supply adapter
Conduit adapter, M16x1.5 to 1/2"

see data sheet EE-PCA
EE-PCS (free download: www.epluse.com/configurator)
V03 (see data sheet Accessories)
HA011110