

EGT 311, 411, 611: Clamp-on temperature sensor

How energy efficiency is improved

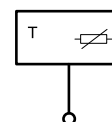
Precise measurement of room temperature for energy-efficient control of HVAC installations and monitoring energy consumption

Features

- Passive or active measuring element
- Extra protection against dust and humidity (IP65)
- Temperature measurement on pipes
- Including retaining strap for pipes of Ø 10...50 mm
- Heat-conducting paste (silicone-free) is included in the scope of delivery



EGT*11F***



Technical data

Parameters		
	Recommended measurement current	Typ. < 1 mA
Time characteristic with heat-conducting paste	Time constant	16 s
Ambient conditions		
	Storage and transport temperature	-35...70 °C
	Humidity (non-condensing)	85% rh
Construction		
	Housing	Yellow/black
	Housing material	Polyamide
	Connection terminals	Screw terminals 0.35...1.5 mm ² , for number of poles, see connection diagram
	Cable inlet	M16 for cable min. Ø 5 mm, max. Ø 8 mm
Standards and directives		
	Type of protection	IP65 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581
	EMC Directive 2014/30/EU	EGT311F031: EN 60730-1 (mode of operation 1, residential premises)

Resistance values / characteristics

i The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.

Measuring element	Standards	Nominal value	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω at 0 °C	±0.4 K
Ni1000 TK5000		1000 Ω at 0 °C	±0.4 K
Ni200	DIN 43760	200 Ω at 0 °C	±0.4 K
Pt1000	DIN EN 60751	1000 Ω at 0 °C	±0.3 K

Overview of types

Type	Description
EGT311F022	Clamp-on temperature sensor; Ni200
EGT311F102	Clamp-on temperature sensor; Ni1000
EGT411F102	Clamp-on temperature sensor; Pt1000
EGT611F102	Clamp-on temperature sensor; Ni1000 TK5000
EGT311F031	Clamp-on temperature transmitter; 0...10 V



Passive types

Type	Measuring element	Measuring range	Weight
EGT311F022	Ni200	-35...90 °C	80 g
EGT311F102	Ni1000	-35...90 °C	80 g
EGT411F102	Pt1000	-35...90 °C	80 g
EGT611F102	Ni1000 TK5000	-35...90 °C	80 g

Active types

Type	Measuring accuracy at 21 °C	Output signal	Supply voltage	Power consumption	Measuring range	Weight
EGT311F031	Typ. $\pm 1\%$ of measuring range ¹⁾²⁾	0...10 V, min. load impedance 5 k Ω	15...24 V= ($\pm 10\%$) 24 V~ ($\pm 10\%$)	Max. 0.42 W / 0.84 VA	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	120 g

Accessories

Type	Description
0300360002	Retaining strap 900 mm and heat-conducting paste
0300360004	Heat-conducting paste incl. gun with 2 g content

Description of operation

The resistance of the measuring element changes according to the temperature. The temperature coefficient is positive, which means the resistance increases along with the temperature. The elements can be exchanged within the specified tolerance ranges.

Areas of use

Clamp-on sensor for temperature measurement on pipes and curved surfaces. Designed for connection to control and display systems.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

All related product regulations must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

Electric connection

The devices are designed for operation with safety extra low voltage (SELV/PELV). The technical data for the devices applies when connecting them to the power supply.

The ambient temperature of the transducer electronics should be kept constant.

CAUTION!



Electrical devices may only be installed and fitted by a qualified electrician.

CAUTION!



Damage to device!

► Devices with a power connection may only be connected if the power cable is disconnected from the mains.

Fitting

The device is fitted using a retaining strap. The maximum tube diameter should not exceed 50 mm, because otherwise thermal stratification can occur. Spread heat-conducting paste on the brass sleeve and fasten the sensor to a clean part of the metal with the retaining strap (quick lock).

To prevent condensate from seeping in, mount the sensor on the top of the pipe if possible.

¹⁾ With offset adjustment ± 3 K

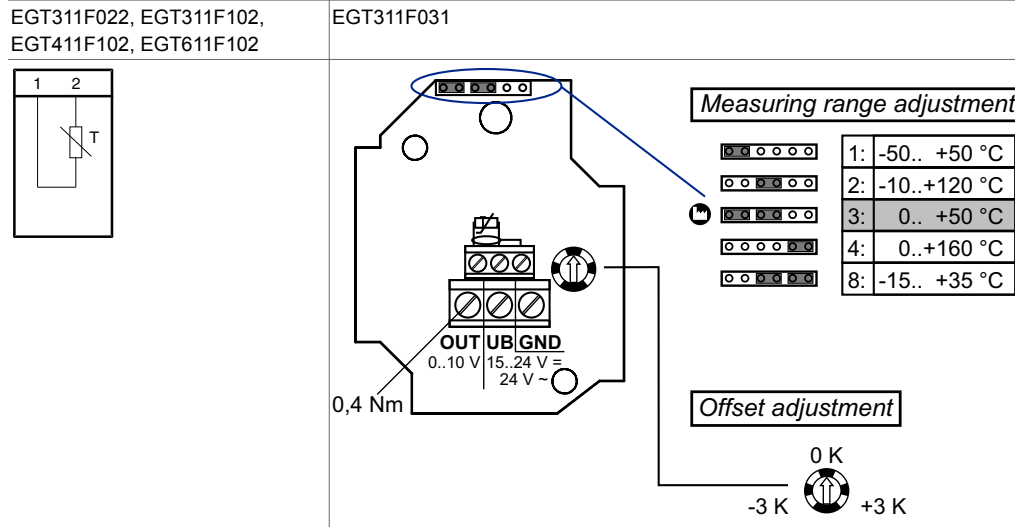
²⁾ The transducers must be operated at a constant operating voltage (± 0.2 V). Current/voltage peaks when switching the supply voltage on/off must be avoided by the customer.

Disposal

When disposing of the product, observe the currently applicable local laws.

More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagram



Dimension drawing

