

EGT 636, 638: Room-temperature sensor with NTC measuring element

How energy efficiency is improved

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

Features

- Passive room temperature measurement
- NTC sensor (negative temperature coefficient thermistor)
- Room-temperature sensor with a wide range of different functions, designs and colours
- Device insert with transparent front, fits into frame with 55 x 55 mm aperture
- Frame can be ordered as an accessory
- For temperature measurement and room setpoint adjustment in dry rooms, e.g. in residential properties, offices and business premises

Technical data

Parameters		
	Nominal value at 25 °C	10 kΩ
	Measuring range	-20...60 °C
	Resistance values	R25 = 10 kΩ, B _{25/85} , 3977 K, ±0.75%
	Tolerance at 0 °C	±1%
	Self-heating	0.45 K/mW
Time characteristic		
	Time constant in still air	12 min
	Dead time in still air	50 s

Construction		
	Dimensions W x H x D	60 × 60 × 25 mm
	Weight	0.1 kg
	Housing material	Fire-retardant thermoplastic
	Connection terminals	Pluggable; for wire of 0.12...0.5 mm ² (Ø 0.4...0.8 mm)
	Cable inlet	At rear

Standards and directives		
	Type of protection	IP 30 (EN 60529)

Overview of types		
Type	Additional feature	Adjuster
EGT636F101	-	-
EGT638F101	For ecos 3	1.3...8 kΩ

Accessories	
Type	Description
0940240***	For frames, mounting plates and adaptors for third-party frames: see product data sheet PDS 94.055
0940240301	Baseplate, single (for wall mounting), 10 pcs.

Description of operation

The resistance of the NTC resistor changes according to the temperature. The temperature coefficient is negative, which means the resistance decreases as the temperature increases. The NTC characteristic is described below. The elements can be exchanged within the specified tolerance ranges.

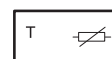
Temperature (°C)	-20	-10	0	10	20	25	30	40	50	60
Resistance (kΩ)	96.97	55.30	32.65	19.90	12.49	10.00	8.06	5.32	3.60	2.49

EGT638F101:

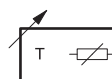
A 1.3...8 kOhm potentiometer is installed in addition to the shunt. In combination with ecos3, the setpoint can be universally parameterised.



EGT636F101



EGT638F101



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 documents must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

The temperature sensor may not be exposed to direct heat sources, irradiation or draughts. At a temperature difference of 5 K between the wall and the air at a distance of approximately 1 m, the resulting measurement error is 1 K.

Setpoint adjustment

Fixed setpoint

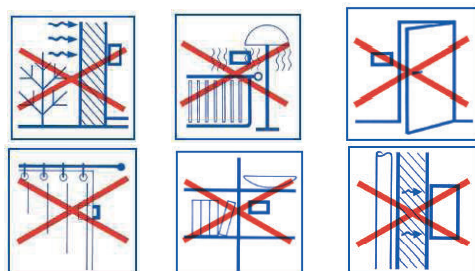
In various applications, the individual room setpoint must be fixed. Once this has been done using the setpoint adjustment knob, the knob is removed.

The transparent cover of the EGT 638 (with an opening for the setpoint knob) is replaced with a closed transparent cover (accessory).

Fitting

The EGT 63* sensor is suitable for various fitting methods. Product data sheet PDS 94.055 shows the fitting options and the accessory material required.

Incorrect fitting can result in incorrect measuring results. Always observe the fitting guidelines. The place of installation must also be chosen carefully to ensure reliable measurement of the room temperature. Cold outer walls, fitting above heat sources (radiators, for example) and fitting directly beside a door with a draught must be avoided, along with direct sunlight. Furnishings, such as curtains, cabinets or shelves, can hinder the flow of room air to the sensor and thereby cause discrepancies in the measurements. Heating pipes inside walls can also affect the temperature measurement. With recessed mounting, the installation pipes must be sealed in order to prevent air draughts in the pipes affecting the measurements. For more information see the sensor fitting guidelines.



Additional information

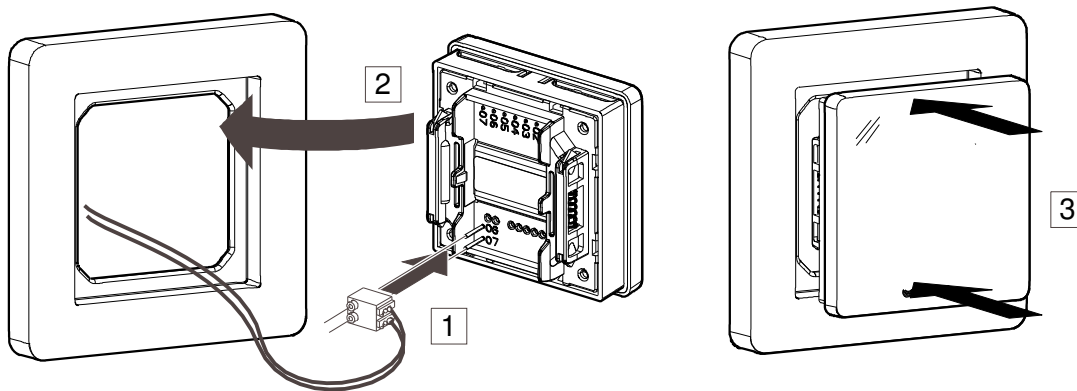
Fitting instructions	P100001967 P100013702
Declaration on materials and the environment	MD 36.180

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.

Example: EGT with single frame (frame dimensions 85 × 85 mm)



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Connection diagram

EGT636F101	EGT638F101
	<p>Max. 10 V ⊥</p>

Dimension drawing

EGT636F101	EGT638F101