

EGT 346...348: Stem-type temperature sensor

How energy efficiency is improved

Accurate detection of duct temperature for energy-efficient control of HVAC systems and monitoring energy consumption.

Areas of application

Temperature measurement of liquids and gases in ventilation systems, water networks and air ducting.

Features

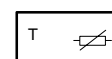
- Passive measured value acquisition
- Can be used in pipes and tanks with optional LW7 protective tubes (pockets)
- Cable entry with cord grip

Technical description

- Measurement is effected with a nickel thin-film sensor as per DIN 43760
- Housing made of yellow and black flame-retardant thermoplastic (RAL 9010)
- Cable clamping sleeve Pg 11
- Screw terminals for wires up to 1,5 mm²
- Immersion stem made of 6.5 mm \varnothing copper (without protective tube)
- Active length 25 mm



T09124



Y01875

Type	Stem mm	Nominal value at 0°C	Measuring range °C	Weight kg
EGT 346 F021	120	200 Ω	-30...130	0,07
EGT 346 F101	120	1000 Ω	-30...130	0,07
EGT 347 F021	225	200 Ω	-30...130	0,08
EGT 347 F101	225	1000 Ω	-30...130	0,08
EGT 348 F021	450	200 Ω	-30...130	0,10
EGT 348 F101	450	1000 Ω	-30...130	0,10

Resistance values as per Tolerance at 0 °C	DIN 43760 $\pm 0,4$ K	Max. temp. at head	80 °C
Mean temp. coefficient	0,00618 K ⁻¹	Type of protection	IP 42 (EN 60529)
Self-warming (in air)	0,25 K/mW	Wiring diagram	A01632
Time characteristic:		Dimension drawing	M08527
in air, without prot. Tube	Dead time Time const.	Fitting instructions	MV 505497
still	18 s 330 s		
moving (3 m/s)	9 s 60 s		
in water, with prot. tube ¹⁾	Dead time Time const.		
still	7 s 28 s		
moving (0,4 m/s)	6 s 27 s		

Accessories

- 0364439** . . . Protective tube LW 7, brass, R $\frac{1}{2}$ thread, see chapter 39
- 0364345** . . . Protective tube LW 7, brass, G $\frac{1}{2}$ thread A, see chapter 39
- 0226811** . . . Protective tube LW 7, inox; G $\frac{1}{2}$ A thread, see chapter 39
- 0368840 000*** Holder for fitting stem on wall
- 0368839 000*** Holder for fitting stem in air duct
- 0313220 001** Heat-conducting paste, in a tube of 20 g
- 0313282 001** Clamp D = 15 mm / 7 mm, for fitting sensor into protective tube; separate delivery
- 0313346 001*** Module 0...10 V for Ni1000; R>5 k Ω ; 24 V= $\pm 20\%$;
MV 505513; A08091; IP 00 (IP 42 when fitted in housing);
4 temp. ranges: -50...0 °C; -50...50 °C; 0...50 °C; 0...100 °C
- 0313346 901*** Module 0...10 V for Ni1000; R>5 k Ω ; 24 V= $\pm 20\%$;
MV 505786; A08091; IP 00 (IP 42 when fitted in housing);
4 temp. ranges: -50...0 °C; -50...50 °C; 0...50 °C; 0...100 °C

*) Dimension drawing or wiring diagram are available under the same number

1) With heat-conducting paste

Operation

The resistance value of the Ni measuring resistor changes with respect to temperature. The temperature coefficient is always positive, i.e. the resistance value increases as the temperature rises. See table of values (DIN 43760) and curve. The elements are exchangeable (within the limits of the prescribed tolerances)

Further details on the accessories

The module evaluates the signal of an Ni1000 measuring resistor and converts it into an output signal of 0...10 V. The module is fitted in the sensor housing.

Input	temperature sensor Ni1000	Output	0...10 V, load > 5 k Ω
Measuring range can be changed	-50...0 °C	Ambient temperature	-30...80 °C
	-50...50 °C	Degree of protection	IP 00 (IP 42 fitted in housing)
	0...50 °C (factory setting)	Auxiliary supply	24 V~ \pm 20%
	0...100 °C		
Error	max. 1 °C zero-point error		
	max. 1 °C span error		

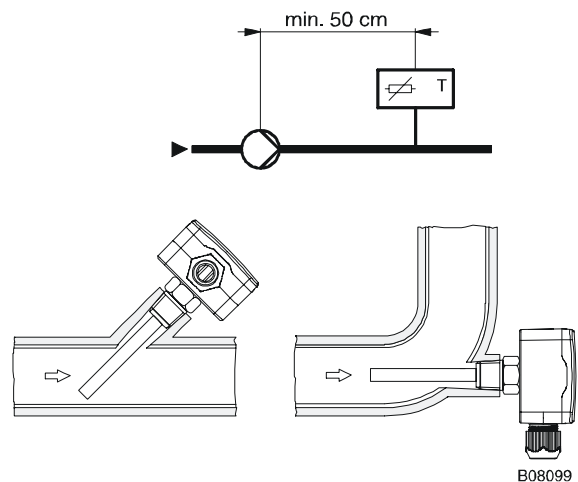
Additional technical data

Complies with:-	
EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2 EN 61000-6-3/ EN 61000-6-4

Engineering and fitting note

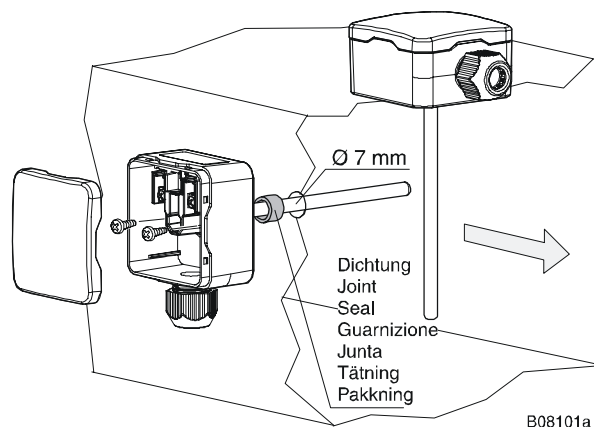
In water:

For use in pipes and containers, the detector must be fitted into a protective tube (LW 7) using the holder. The detector can be adjusted so as to account for different thicknesses of pipe insulation. It should be fitted against the direction of flow.

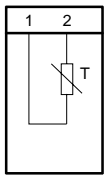


In air ducts:

The detector is fitted directly onto the insulation or onto the wall of the air duct. Using the stem holder (accessory no. 0368839) and the clamping ring (accessory no. 0313282) the insertion depth can be adjusted.

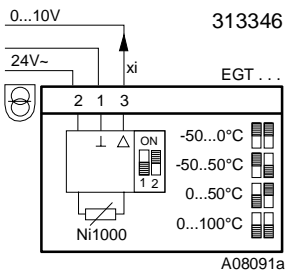


Wiring diagram



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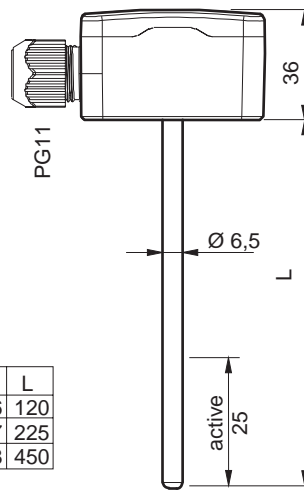
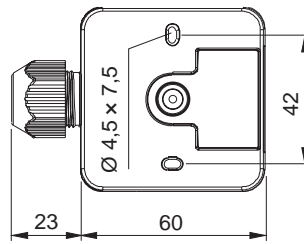
Accessories



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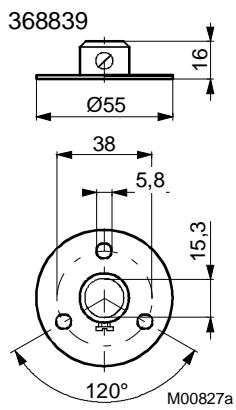
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Dimension drawing

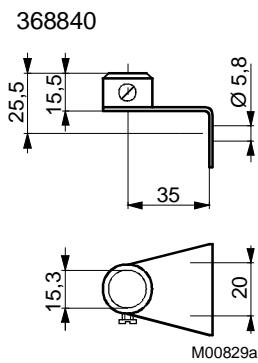


M08527b

Typ	L
EGT . 46	120
EGT . 47	225
EGT . 48	450



M00827a



M00829a