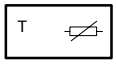
EGT 456: Cable-type temp. detector with platinum measuring element

For measuring the temperature in rooms and air ducts or on surfaces. The LW 7 protective tube (pocket) is used for pipes and containers, and the fixing kit (accessory) is required for use on surfaces. For direct connection in systems with short distances between controller and sensor.
Platinum thin-film sensor as per DIN IEC 751, cast in brass sleeve Ø 6 mm, 50 mm long, of which the active length is 15 mm; connecting cable Ø 5 mm with silicon coating, 1 m long, fixed to the sensor; supplied with holding spring. Wires 2 × 0.5 mm².

Type	Nominal value at 0°C	Measuring range [°C]	Weight [kg]
EGT 456 F011	100 Ω	–40...180	0.12
EGT 456 F101	1000 Ω	–40...180	0.12



Resistance values	DIN IEC 751, Class B		Degree of protection	IP 55 (EN 60529)
Tolerance at 0 °C	± 0.3 K			
Mean temp. coefficient	0.00385 K^{-1}		Wiring diagram	A01632
Self-warming	0.11 K/mW		Dimension drawing	M05322
Time characteristic:			Fitting instructions	MV 505423
clamped on pipe [1]	**Dead time**	**Time constant**		
water (0.4 m/s)	ca. 7 s	23 s		
with LW 7 pocket [2]	**Dead time**	**Time constant**		
water (0.4 m/s)	ca. 3 s	11 s		

Accessories

0364439 . . . LW 7 pockets,R½; brass; see page 39.01 or 39.001
0364244 . . . LW 15 pockets, R½, brass; see page 39.01 or 39.001
0364346 . . . LW 15 pockets, G½ A; brass; for up to 3 sensors Ø 6.5 mm; see 39.01/39.001
0364258 . . . LW 15 pockets, G½ A; stainless steel; for up to 3 sensors Ø 6.5 mm; see 39.01/39.001
0311835 000* Tension-relief piece for fitting the sensor into protective tube LW 7
0312520 000* Universal tension-relief piece for cable sensors and thermostats with capillary tube
0313214 001 Fixing kit for all applications (comprises holder, heat-conducting paste, metal strap)
0313220 001 Heat-conducting paste
0313300 . . . Special length for EGT 456 on request

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

1) As a clamp-on sensor with holder and heat-conducting paste
2) With heat-conducting paste

Operation

The resistance value of the Pt 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 (for platinum; DIN IEC 751) and characteristic. The elements are exchangeable (within the limits of the prescribed tolerances).

Engineering and fitting notes

The power cable of the EGT 456 is of dry-vulcanised silicon and, therefore, low on emissions, so the sensors can be used in painting shops.
The resistance values and tolerances apply only to the sensor elements. You should take the resistance of the cable into account if long leads are used. For the sensor cable (feed and return lines), the following applies: R = 0.08 [Ω/m].

As an immersion sensor:
For use in pipes and containers, the cable sensor must be fitted into either an LW 7 protective tube with tension-relief piece 0311835 or an LW 15 protective tube with tension-relief piece 0312520.
Using an LW 15 pocket, the sensor can be used with one or two sensor cartridges of 6.5 mm diameter (e.g. RAK).

As a clamp-on sensor:
The sensor can be fitted to pipes Ø 50 mm by means of a holder and a metal strap (fixing kit 0313214).
Do not use pipes of more than Ø 50 mm diameter, since layers of heat may arise; use stem or cable sensors with pocket.

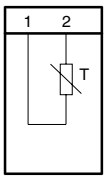
As a surface sensor:
The cable sensor can be fitted to surfaces by means of a holder (fixing kit 0313214) and screws. The time constant depends on the surface.

The pressure spring supplied with the unit opimises the heat transfer when an LW 7 pocket is used.
It serves as a spring element when the ficing kit (313214/001) is used.
It is generally advisable to use heat-conducting paste.

Additional technical data

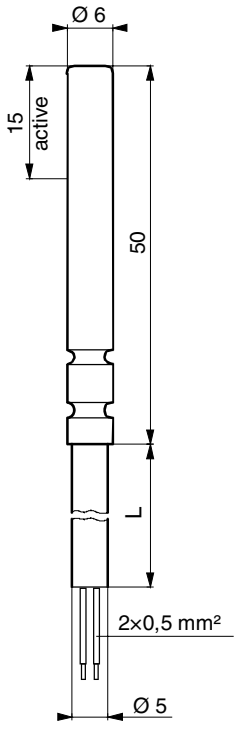
Complies with:-	
EMC directive 89/336/EEC	EN 61000-6-1/ EN 61000-6-2 EN 61000-6-3/ EN 61000-6-4

Wiring diagram



A01632

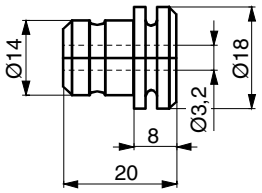
Dimension drawing



M05322a

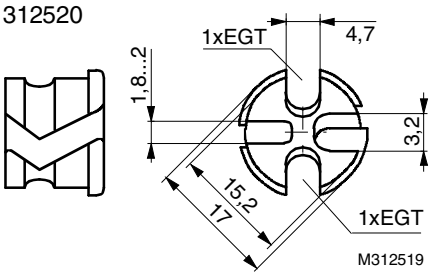
Accessories

311835



M01874

312520



M312519

Printed in Switzerland

7136126003 S4