

Mean value / rod / duct temperature measuring transducer, including mounting flange, calibratable, with multi-range switching and active output

Calibratable mean value temperature measuring transducer **THERMASGARD® MWTM** (rod sensor) with eight switchable measuring ranges, continuous output, fully active flexible sensor rod for mean value measurement, plastic-coated copper protective tube (sturdy version), terminal box enclosure made of impact-resistant plastic and enclosure cover with quick-locking screws. This sensor is used for the detection of average temperatures (mean values) in gaseous media, e.g. in ventilation and air conditioning ducts over the entire cross section, or over a defined length. Laid along a meandering route, it uniformly detects the surrounding temperature as a duct sensor. The mean value sensors are factory-calibrated. Adjustment / fine adjustment by the user is possible (range and zero point are adjustable). The mean value sensor MWTM is available in lengths of 0.4...20m and is delivered as standard with a mounting flange. Mounting clamps MK-05-M are available as optional accessories.

MWTM



MWTM with display



TECHNICAL DATA	
Power supply:	24 V AC / DC (± 10 %) for U variant 15...36 V DC for I variant, depending on working resistance, residual ripple stabilised ± 0.3 V
Working resistance:	$R_a(\text{ohm}) = (U_b - 14 \text{ V}) / 0.02 \text{ A}$ for I variant
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	< 1.0 VA / 24 V DC; < 2.2 VA / 24 V AC
Sensor:	Pt1000, DIN EN 60751, class B
Measuring ranges:	multi-range switching with 8 switchable measuring ranges, see table (other ranges optional) $T_{\min} -30 \text{ °C}$, $T_{\max} +80 \text{ °C}$ with manual zero point correction (± 10 K)
Output:	0 - 10 V or 4...20 mA
Ambient temperature:	measuring transducer -30...+70 °C
Connection type:	2- or 3-wire connection
Sleeve:	stainless steel, 1.4571, V4A
Rod material:	copper sensor tube, plastic-coated with spring for buckling protection
Sensor and rod dimensions:	Ø = 5 mm, nominal length NL = 0.4 m / 3 m / 6 m (NL optional up to 20 m)
Active length:	active along the entire sensor length
Enclosure:	plastic, material polyamide, 30 % glass-globe-reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016)
Enclosure dimensions:	72 x 64 x 37.8 mm (Tyr 1)
Cable gland:	M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
Electrical connection:	0.14 - 1.5 mm ² via terminal screws on circuit board
Installation:	observe minimum bending radius of 35 mm and permissible vibration load ≤ ½ g
Process connection:	by mounting flange, plastic (galvanised steel optional, see accessories) and mounting clamps MK-05-M
Humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC directive 2014 / 30 / EU
Optional:	Two-line display with illumination , cutout approx. 36 x 15 mm (W x H), for displaying the ACTUAL temperature and the internal diagnostics (measuring range exceeded, measuring range not reached, sensor breakage, sensor short circuit)

Display and internal diagnostics
THERMASGARD®
Measuring transducer with display

	Standard
	Measuring range exceeded
	Measuring range not reached
	Sensor breakage
	Sensor short circuit



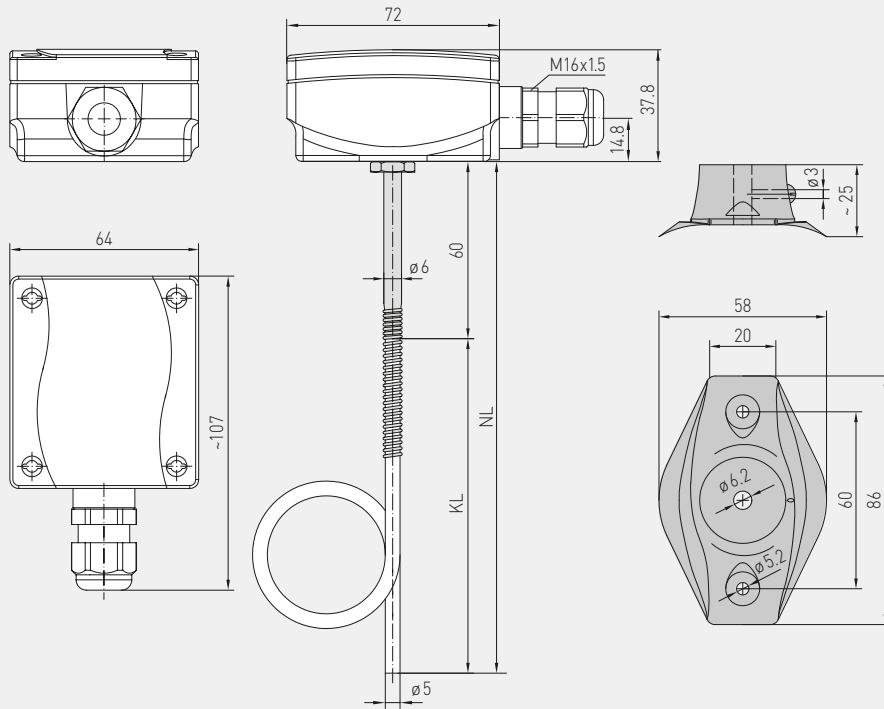
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MF-06-K

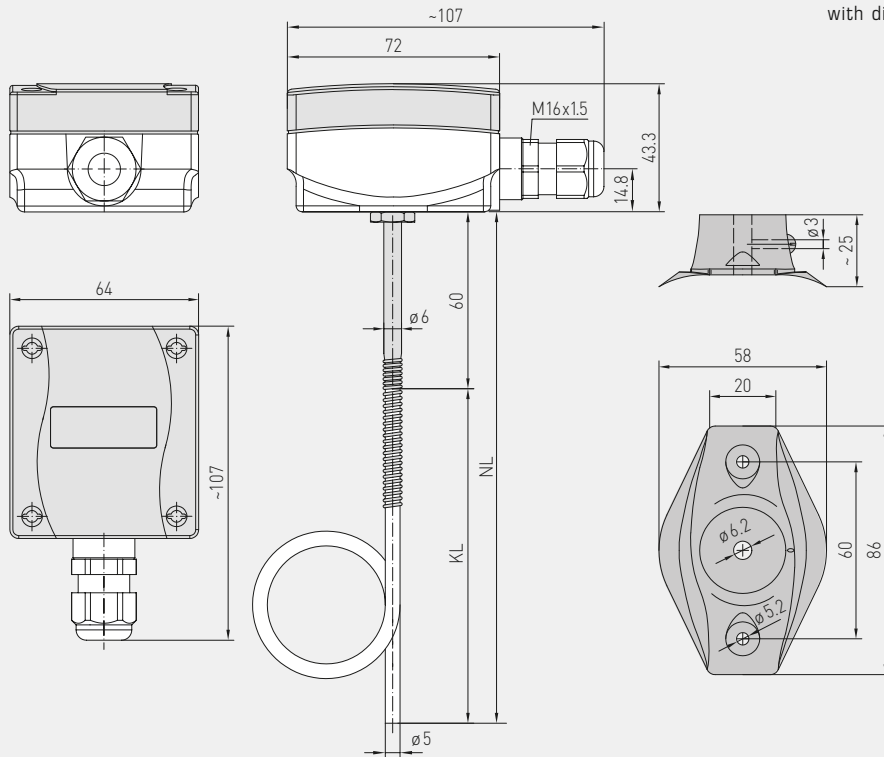
Dimensional drawing

MWTM

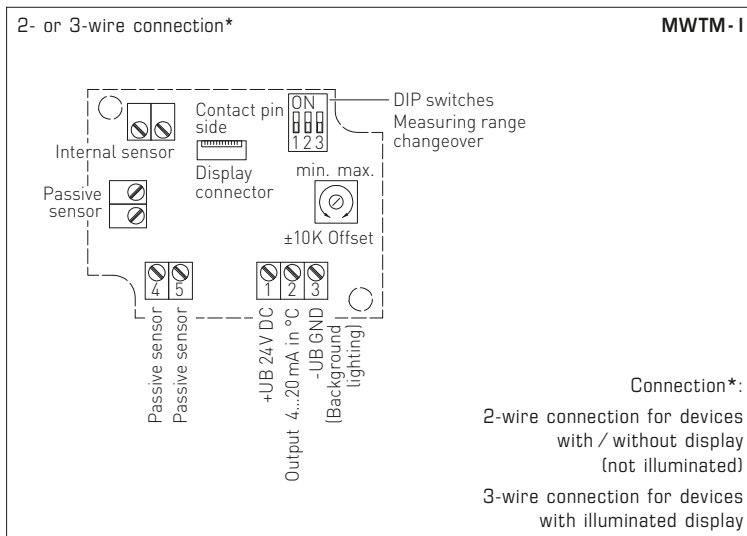
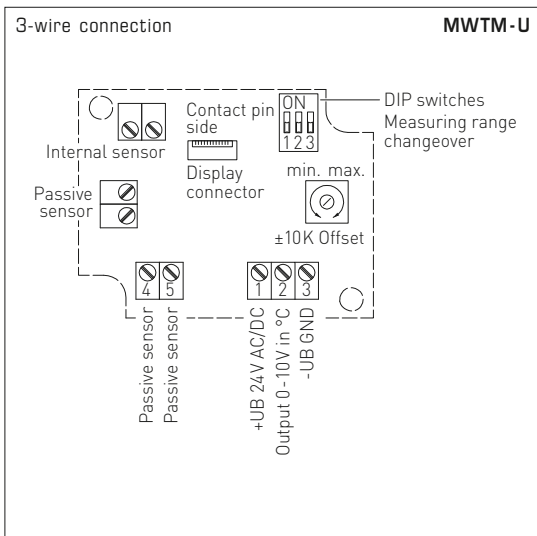


Dimensional drawing

MWTM with display

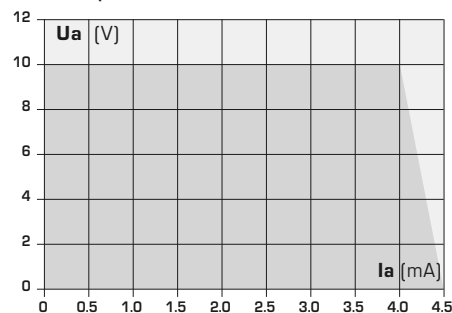


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Measuring ranges (adjustable)	DIP 1	DIP 2	DIP 3
-20...+150 °C	ON	ON	ON
-50... +50 °C	OFF	ON	ON
-20... +80 °C	ON	OFF	ON
-30... +60 °C	OFF	OFF	ON
0... +40 °C	ON	ON	OFF
0... +50 °C	OFF	ON	OFF
0...+100 °C	ON	OFF	OFF
0...+150 °C	OFF	OFF	OFF

Dependency of output voltage on output current



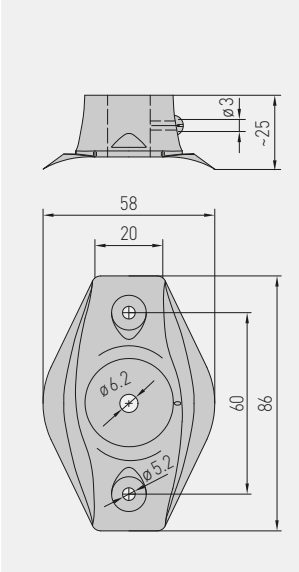


S+S REGELTECHNIK

THERMASGARD® MWTM

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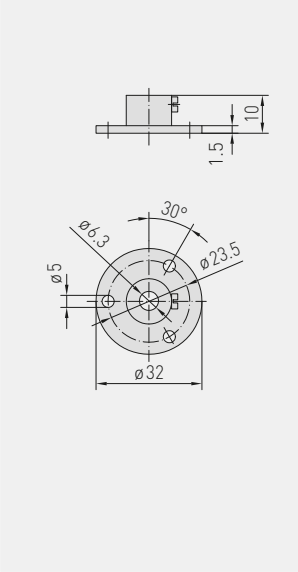
Dimensional drawing **MF-06-K**



MF-06-K
Mounting flange,
plastic



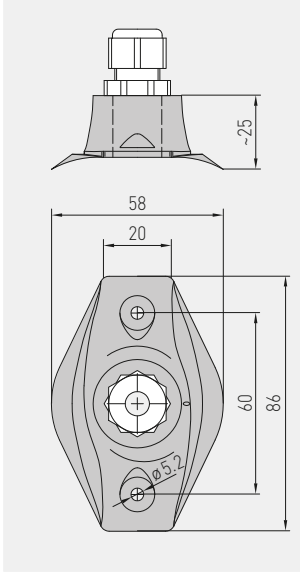
Dimensional drawing **MF-06-M**



MF-06-M
Mounting flange,
metal



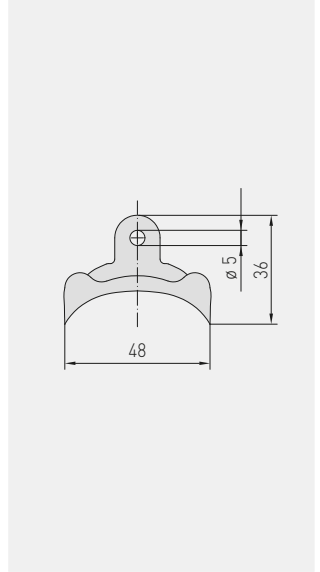
Dimensional drawing **KRD-04**



KRD-04
Capillary tube gland bracket,
plastic



Dimensional drawing **MK-05-M**



MK-05-M
Galvanised steel
mounting clamps



THERMASGARD® MWTM – Mean value / rod / duct temperature measuring transducer

Type / WG01	Sensor	Output	Rod Length	Item No.	Price
				IP65, I-Variante	
MWTM-I					
MWTM-I 0,4M	Pt1000	4...20 mA	0.4 m	1101-3132-0089-900	144,53 €
MWTM-I 3M	Pt1000	4...20 mA	3.0 m	1101-3132-0239-900	187,91 €
MWTM-I 6M	Pt1000	4...20 mA	6.0 m	1101-3132-0269-900	219,04 €
				IP65, U-Variante	
MWTM-U					
MWTM-U 0,4M	Pt1000	0 - 10 V	0.4 m	1101-3131-0089-900	144,53 €
MWTM-U 3M	Pt1000	0 - 10 V	3.0 m	1101-3131-0239-900	187,91 €
MWTM-U 6M	Pt1000	0 - 10 V	6.0 m	1101-3131-0269-900	219,04 €
Extra charge:	Other ranges optional				21,42 €
	Two-line display with illumination				42,02 €
	Per meter sensor cable (from 6 m to max. 20 m)				19,18 €

Accessories

MF-06-K	Mounting flange, plastic (included in the scope of delivery)	7100-0030-1000-000	5,16 €
MF-06-M	Mounting flange, metal (Galvanised steel), Ø 35 mm	7100-0030-5000-000	8,06 €
KRD-04	Capillary tube gland bracket, plastic	7100-0030-7000-000	7,52 €
MK-05-M	Mounting clamps, galvanised steel (6 pieces) (for NL = 3.0 m / 6.0 m included in the scope of delivery)	7100-0034-0000-000	8,33 €

For further information see last chapter!