

**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 rod sensor is available in lengths of 0.4...20 m and is delivered as standard with a mounting flange. Mounting clamps **MK-05-M** are available as optional accessories.

MWTM

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) $T_{\min} -30^\circ\text{C}$, $T_{\max} +80^\circ\text{C}$ with manual zero point correction (± 10K)
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 V4A (1.4571)
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, UV-stabilised, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!
Enclosure dimensions:	72 x 64 x 37.8 mm (Tyr 1 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
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



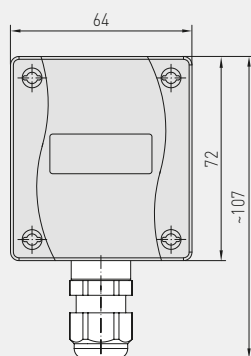
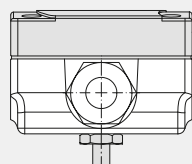
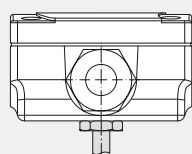
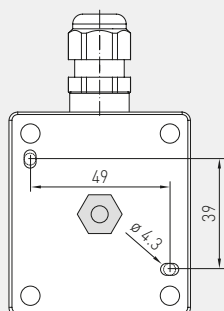
S+S REGELTECHNIK

THERMASGARD® MWTM

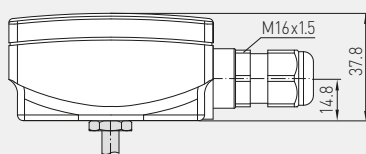
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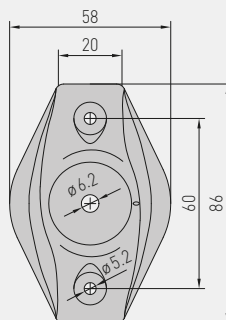
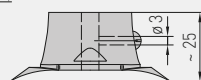
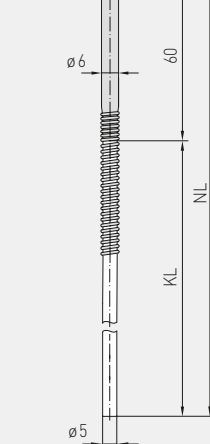
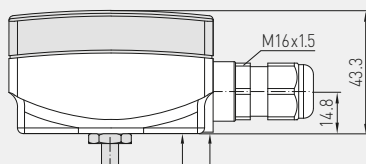
Dimensional drawing



without display



with display



MWTM



MWTM
with display

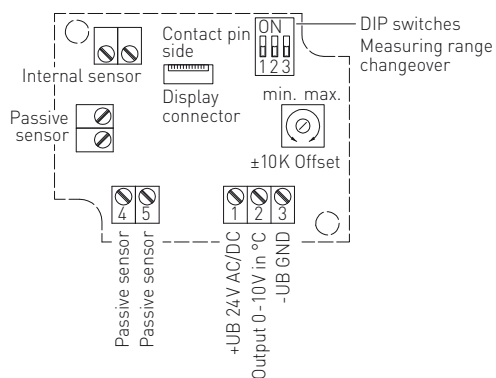
MF-06-K
Mounting flange,
plastic



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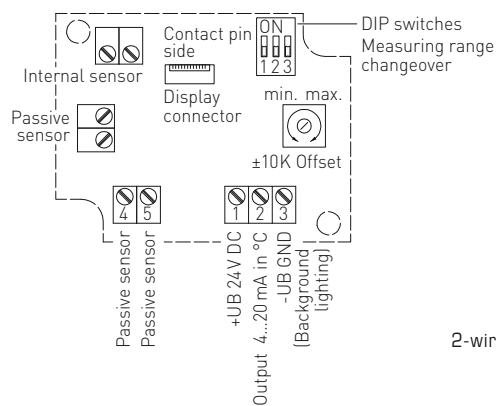
3-wire connection

MWTM-U



2- or 3-wire connection*

MWTM-I

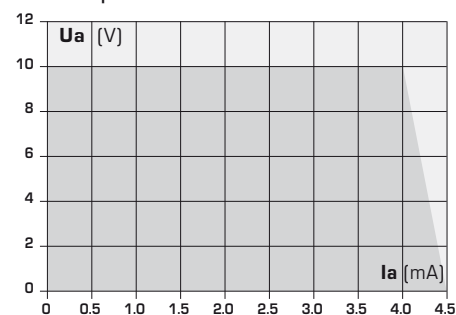


Connection*:

2-wire connection for devices
with / without display
(not illuminated)

3-wire connection for devices
with illuminated display

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



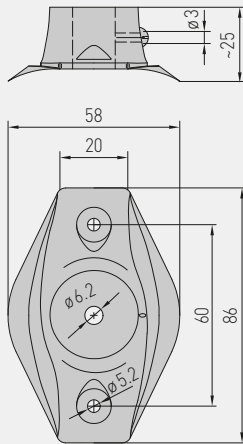
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Dimensional drawing **MF-06-K**

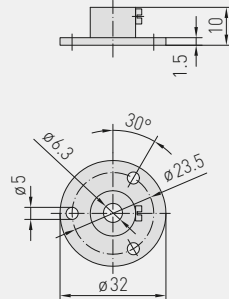


MF-06-K

Mounting flange,
plastic



Dimensional drawing **MF-06-M**

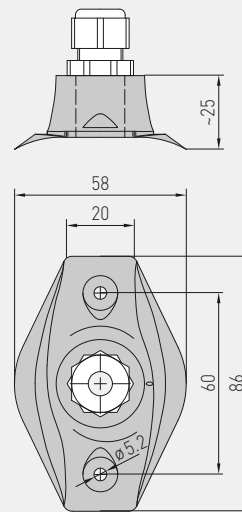


MF-06-M

Mounting flange,
metal



Dimensional drawing **KRD-04**

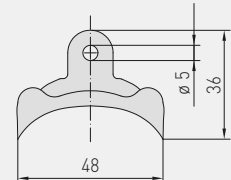


KRD-04

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
MWTM-I				IP65, I-Variante	
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 €
MWTM-U				IP65, U-Variante	
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)			on request

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!