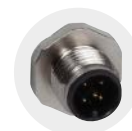


**Surface contact / tube contact temperature measuring transducers, including strap, compact variant, calibratable, with multi-range switching and active output**

Calibratable surface-contact temperature measuring transducer (compact variant) **THERMASGARD® ALTM 1** with eight switchable measuring ranges, continuous output, in an impact-resistant plastic housing with quick-locking screws, optionally with /without display, incl. strap.

The surface-contact sensor is used to detect the temperature on lines, pipes (e.g., cold and warm water) or on heating sections for heating control. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

ALTM 1

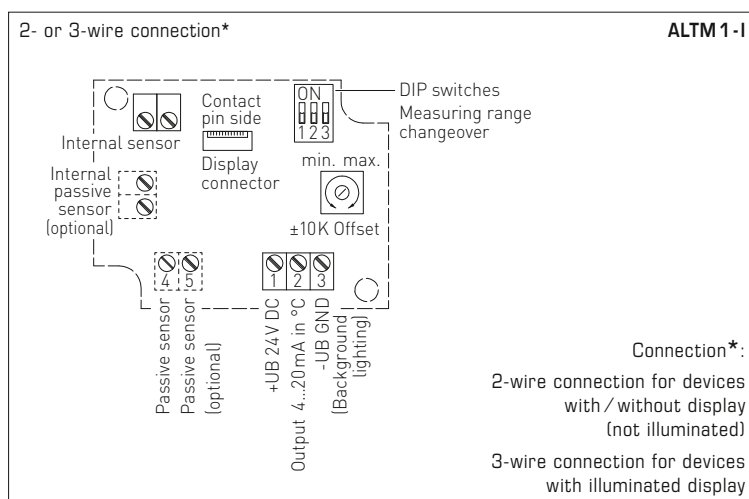
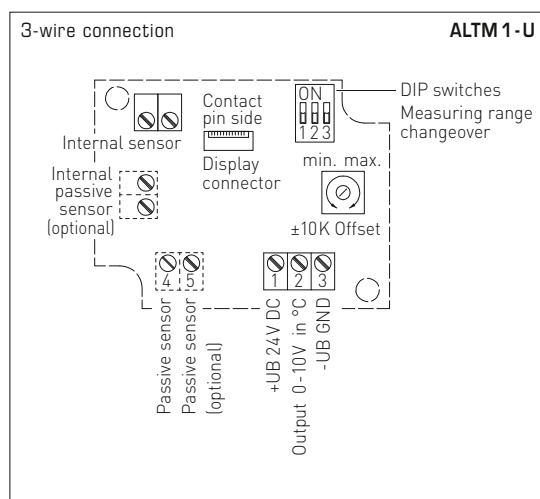
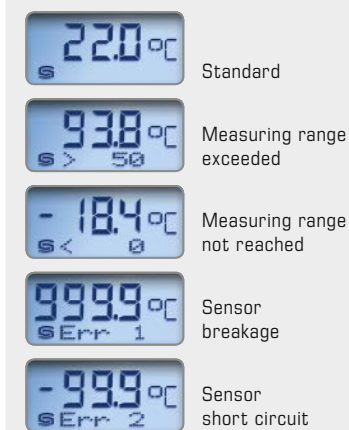


**M12 connector**  
(optional on request)

**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 ( <b>Perfect Sensor Protection</b> )
Measuring ranges:	<b>multi-range switching with 8 switchable measuring ranges, see table (other ranges optional)</b> compact variant: $T_{\text{max}}$ up to <b>+100 °C</b> , operating range $-50...+100 \text{ °C}$ with manual zero point correction ( $\pm 10 \text{ K}$ )
Deviation, temperature:	typically $\pm 0.2 \text{ K}$ at $+25 \text{ °C}$
Output:	0 - 10 V or 4...20 mA
Connection type:	2- or 3-wire connection
Housing:	plastic, UV-resistant, material polyamide, 30% glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), housing cover for display is transparent!
Housing dimensions:	72 x 64 x 37.8 mm (Tyr 1 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
Cable connection:	<b>cable gland</b> , plastic (M 16 x 1.5; with strain relief, exchangeable, inner diameter 10.4 mm) or <b>M12 connector</b> according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> via terminal screws
Process connection:	endless strap with metal tightener, (included in the scope of delivery) $\varnothing = 13 - 92 \text{ mm}$ (1/4 - 3"), length L = 300 mm
Insulating resistance:	$\geq 100 \text{ M}\Omega$ , at $+20 \text{ °C}$ (500 V DC)
Ambient temperature:	measuring transducer $-30...+70 \text{ °C}$
Humidity:	< 95% r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	<b>IP65</b> (according to EN 60 529) Housing tested, TÜV SÜD, Report No. 713139052 (Tyr 1)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC directive 2014 / 30 / EU
Optional:	Two-line <b>display with illumination</b> , cutout approx. 36 x 15 mm (W x H), for displaying the <b>ACTUAL temperature</b> and the <b>internal diagnostics</b> (measuring range exceeded, measuring range not reached, sensor breakage, sensor short circuit)

Display and internal diagnostics  
**THERMASGARD®**  
**Measuring transducer with display**





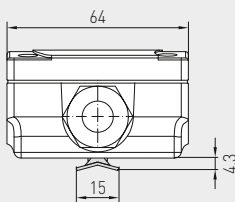
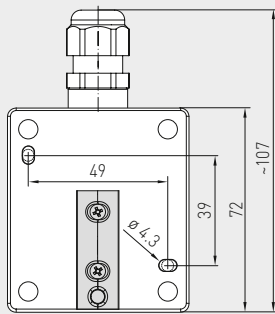
S+S REGELTECHNIK

THERMASGARD® ALTM 1

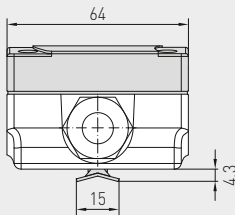
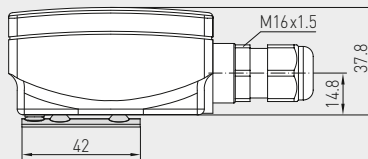
Surface contact / tube contact temperature measuring transducers, including strap, compact variant, calibratable, with multi-range switching and active output

Dimensional drawing

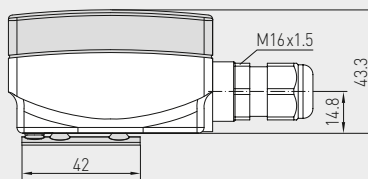
ALTM 1



without display



with display



ALTM 1  
with display

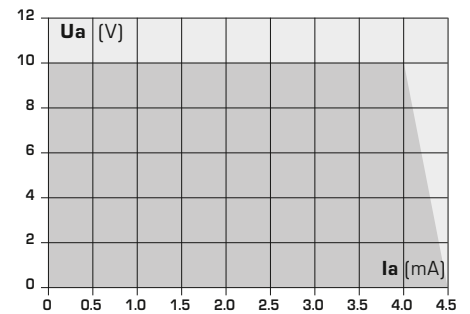


High-performance encapsulation against vibration, mechanical stress and humidity

**PS-PROTECTION**  
PERFECT SENSOR PROTECTION

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 (default)	OFF	ON	OFF
0... +100 °C	ON	OFF	OFF
0... +150 °C	OFF	OFF	OFF

Dependency of output voltage on output current



THERMASGARD® ALTM 1 Surface contact / tube contact temperature measuring transducers (compact)						
Type / WG01	Sensor	Output	Type	Display	Item No.	Price
<b>ALTM 1-I</b>					<b>IP65, I-variant</b>	
ALTM1-I	Pt1000	4...20 mA	Compact		1101-1112-0219-920	92,62 €
ALTM1-I LCD	Pt1000	4...20 mA	Compact	■	1101-1112-2219-920	137,53 €
<b>ALTM 1-U</b>					<b>IP65, U-variant</b>	
ALTM1-U	Pt1000	0-10 V	Compact		1101-1111-0219-920	92,62 €
ALTM1-U LCD	Pt1000	0-10 V	Compact	■	1101-1111-2219-920	137,53 €
Extra charge:	Other ranges optional					22,40 €
	Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101					on request

ACCESSORIES			
WLP-1	Heat-conductive paste, silicone-free	7100-0060-1000-000	2,98 €