THERMASGARD® ALTM 2 - Modbus

Surface contact temperature / tube contact temperature measuring transducers, incl. strap, with detached sensor head, calibratable, with Modbus connection

S+S REGELTECHNIK

Calibratable tube contact temperature measuring transducers with detached sensor head and strap **THERM**ASGARD® **ALTM 2 - Modbus** with Modbus connection, enclosure made from impact-resistant plastic with quick-locking screws, with / without optional display for displaying actual temperature.

The surface contact sensor is used for temperature detection on piping, tubes (e.g. cold- and hot-water) or on heating sections for heating system control. The tube sensors are factory-calibrated. Adjustment / fine adjustment by the user is possible (zero point offset is adjustable).

ALTM 2 - Modbus
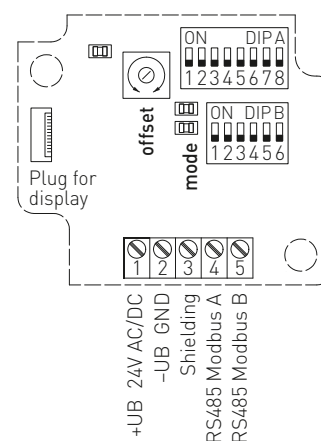(with detached sensor head)

TECHNICAL DATA

Voltage supply:	24 V AC (± 20 %) and 15…36 V DC
Power consumption:	< 1.0 VA / 24 V DC < 2.2 VA / 24 V AC
Sensor:	Pt1000, DIN EN 60751, class B (**Perfect Sensor Protection** with IP68)
Measuring range:	−50…+150 °C detached sensor variant: T_{max} **to +150 °C**
Temperature deviation:	± 0.2 K at +25 °C
Zero point offset:	± 10 °C
Ambient temperature:	Measuring transducer −30…+70 °C
Medium:	clean air and non-aggressive, non-combustible gases
Error detection:	sensor breakage, sensor short circuit
Bus protocol:	Modbus (RTU mode), address range 0…**247** selectable
Signal filtering:	0.3 s / 1 s / 10 s
Process connection:	endless metal strap and metal tightener (included in scope of delivery)
Strap dimensions:	Ø = 13 - 92 mm (¼ - 3"), L = 300 mm
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:	2x M 12 x 1.5 (Y-adapter); with strain relief, exchangeable, max. inner diameter 6 mm
Connection cable:	silicone, SiHF, 2 x 0.25 mm², cable length (KL) = 1.5 m (other lengths and range limits optional, e.g. PTFE leads up to + 250 °C or glass fibre with steel wire mesh up to + 350°C)
Permissible air humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	**IP 65** (according to EN 60 529) humidity-tight stamped **IP 68** (optional sensor sleeve watertight compound-filled*)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC Directive 2014 / 30 / EU
Optional:	two-line **display with illumination,** programmable, cutout approx. 36 x 15 mm (W x H), for displaying the actual temperature or an individually programmable display value (The Modbus interface allows the display to be individually configured in the 7-segment area and in the dot-matrix area.)
ACCESSORIES	see table
MODBUS - Y	**Y-adapter** for cable gland M16x1.5 (on 2x M12x1.5), plastic (included in the scope of delivery)

Schematic diagram **THERM**ASGARD® **MODBUS**

DIP A: Bus address
DIP B: Bus parameters (Baud rate, parity …)

Telegram indicator Reception (LED green) Error (LED red)

LED (internal status)

Offset correction temperature: ± 10°C
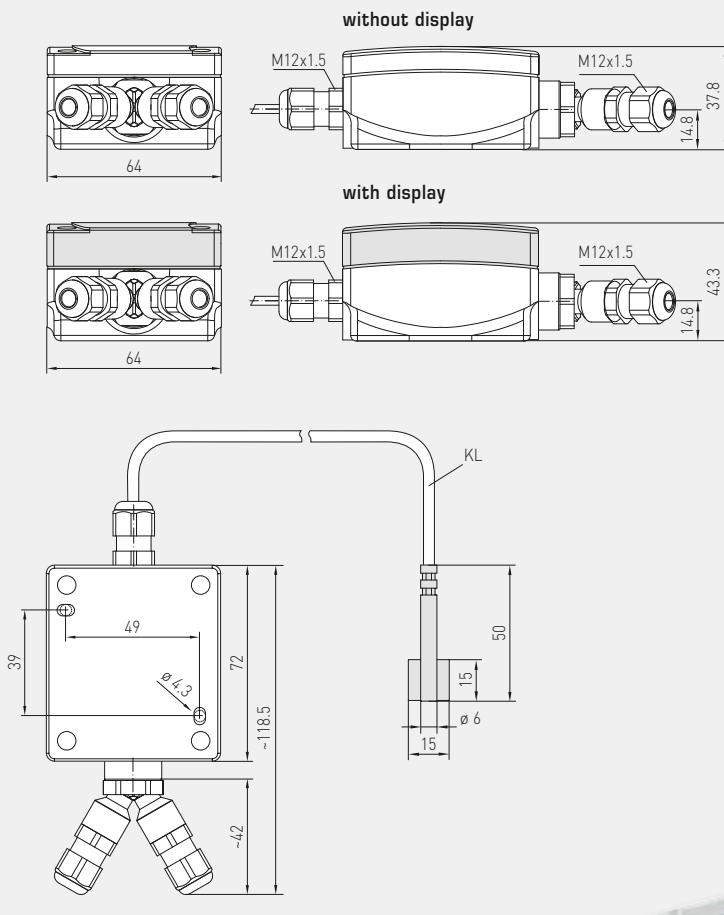
Plug for display contact is on the right side

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Dimensional drawing · ALTM 2 - Modbus

without display

with display

ALTM 2 - Modbus
with display
(with detached sensor head)

* High-performance encapsulation against vibration, mechanical stress and humidity

PS-PROTECTION
PERFECT SENSOR PROTECTION

THERMASGARD® ALTM 2 - Modbus – Surface contact temperature / tube contact temperature measuring transducers

Type / WG01	Sensor	Output	Type	Display	Item No.	Price
ALTM 2 - Modbus						
ALTM2-MODBUS	Pt1000	Modbus	Remote sensor		1101-1226-0210-000	
ALTM2-MODBUS DISPLAY	Pt1000	Modbus	Remote sensor	■	1101-1226-2210-000	
Extra charge:	Protection type **IP 68** (sensor sleeve watertight compound-filled) per running metre of connecting lead (**silicone / PTFE / glass fibre**)					on request

Accessories		
KA-2	**Modbus communication adapter** with USB/RS485 interface for system connection or/and as an active bus termination resistance	on request
WLP-1	**Heat-conductive paste,** set	7100-0060-1000-000
	For further information, see last chapter Accessories!	