THERMASGARD® ALTM1 - Modbus-SD

Surface-contact temperature measuring transducer / pipe surface-contact sensor, incl. strap, compact variant, calibratable, with Y-adapter, with Modbus connection (not galvanically isolated)

S+S REGELTECHNIK

Calibratable surface-contact temperature measuring transducer (compact variant) **THERM**ASGARD® **ALTM 1 - Modbus-SD**, with Modbus connection (Y-adapter), in an impact-resistant plastic housing with quick-locking screws, pipe feeder, incl. strap, optionally with / without display, measures temperature (– 50...+ 150 °C / – 58...+ 302 °F). International system of units **SI** (default) can be changed to **imperial** (via Modbus).

The pipe 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.

Modbus sensor SD with RS485 Modbus interface (not galvanically isolated), selectable bus termination resistance, DIP switch for setting the bus parameters and bus address in current-free state, internal LEDs for telegram status display (illuminated, with customised programming). Uses **internal diagnostics** to detect sensor breakage or sensor short circuit as errors. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

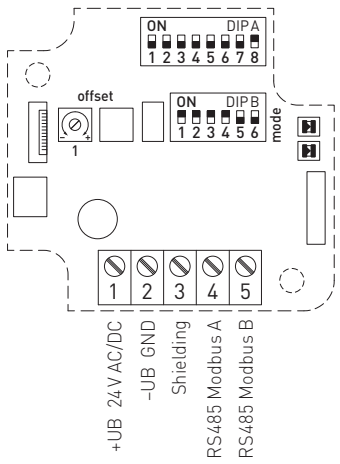
ALTM 1 - Modbus-SD
(compact)



TECHNICAL DATA

Voltage supply:	24 V AC (± 20 %) and 15...36 V DC (± 10 %)
Power consumption:	< 1.0 W / 24 V DC; < 2.2 VA / 24 V AC
System of units:	**SI** (default) or **Imperial** (switchable via Modbus)
Data points:	Temperature [°C] [°F]
Sensor:	Pt1000, DIN EN 60751, class B (**Perfect Sensor Protection**)
Measuring range:	– 50...+ 150 °C / – 58...+ 302 °F, Compact variant: T_{max} **up to +100 °C / +212 °C**
Accuracy temperature:	typical ± 0.2 K at +25 °C
Insulating resistance:	≥ 100 MΩ, at +20 °C (500 V DC)
Zero point offset:	± 10 K
Ambient temperature:	Measuring transducer –30...+70 °C
Medium:	clean air and non-aggressive, non-combustible gases
Error detection:	Sensor breakage, sensor short circuit
Bus interface:	RS 485, **not galvanically isolated**, bus termination activatable via DIP switches. Up to 32 devices possible in one segment. In case of a greater number of devices, RS485 repeaters must be used.
Bus protocol:	Modbus (RTU mode) address range 0...**247** selectable
Baud rate:	9600, 19200, 38400 Baud
Status display:	LED green = Telegram valid LED red = Telegram error
Signal filtering:	0.3 s / 1 s / 10 s
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 dimension:	72 x 64 x 37.8 mm (Tyr 1 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
Cable connection:	**Cable gland**, plastic 2x M 12 x 1.5 (Y-adapter); with strain relief, exchangeable, max. inner diameter 6 mm
Electrical connection:	0.14 - 1.5 mm², via terminal screws
Process connection:	Endless strap with metal tightener (included in the scope of delivery) Ø = 13 - 92 mm (¼ - 3"), length L = 300 mm
Permissible humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	**IP 65** (according to EN 60 529) Housing tested, TÜV SÜD, Report No. 713139052 (Tyr 1)
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU
Optional:	**Display with illumination,** two-line, programmable, cutout approx. 36 x 15 mm (W x H), for displaying the actual temperature, error message or an individually programmable display value
ACCESSORIES	see table

Schematic diagram **THERM**ASGARD **xx-Modbus-SD**



DIP A: Bus address

DIP B: Bus parameters (Baud rate, parity ...)

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

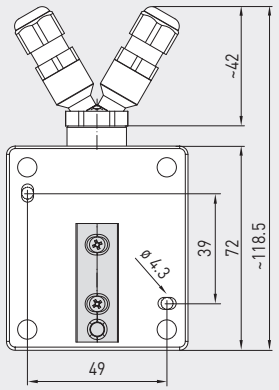
Plug for display (contact on right side)

Offset correction ca. ±10 K (temperature)

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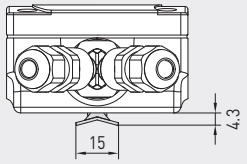
Dimensional drawing [mm]

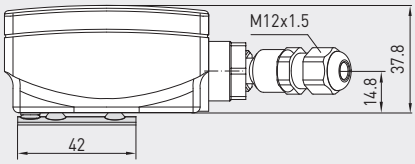
ALTM 1 - Modbus-SD



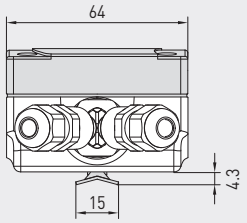


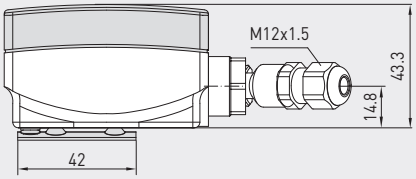
without display





with display





ALTM 1 - Modbus-SD
with display
(compact)



High-performance encapsulation against vibration, mechanical stress and humidity

PS-PROTECTION
PERFECT SENSOR PROTECTION

THERMASGARD® ALTM 1 - Modbus - SD	Surface-contact temperature measuring transducer / pipe surface-contact sensor with Modbus connection (not galvanically isolated)				
Type / WG01	**Output**	**Type**	**Display**	**Item No.**	**Price**
ALTM 1 - Modbus - SD					
ALTM1-Modbus-SD	Modbus	compact		1101-624H-0000-000	**142,56 €**
ALTM1-Modbus-SD LCD	Modbus	compact	■	1101-624H-2000-000	**200,09 €**
Note:	System of units **SI** (default) or **imperial** (can be changed via Modbus).				
ACCESSORIES					
KA2-Modbus	**Communication adapter** (USB/RS485) for system connection			1906-1200-0000-100	**236,11 €**
LA-Modbus	**Line termination device** (with terminating resistor) as an active bus termination			1906-1300-0000-100	**88,05 €**
WLP-1	**Heat-conductive paste**, silicone-free			7100-0060-1000-000	**5,13 €**
	For further information, see last chapter Accessories!				