THERMASGARD® HFTM-Modbus

Sleeve sensor with temperature measuring transducer, calibratable, with Modbus connection
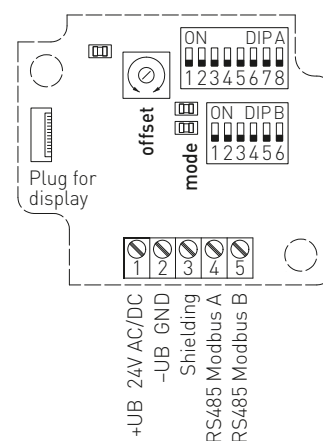
S+S REGELTECHNIK

Calibratable temperature measuring transducer with sleeve sensor **THERM**ASGARD® **HFTM-Modbus** with Modbus connection, enclosure made from impact-resistant plastic with quick-locking screws, with /without optional display for displaying the actual temperature.

The temperature transmitter with remote sensor is used for temperature detection in liquid and gaseous media e.g. by installation inside an immersion sleeve or as a duct sensor. The sensors are factory-calibrated. Adjustment / fine adjustment by the user is possible (zero point offset is adjustable).

HFTM-Modbus

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
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
Protective tube: (sensor sleeve)	stainless steel, **V4A** (1.4571), Ø = 6 mm, nominal length = 50 mm (other dimensions optional) cable entry stamped (optional rolled)
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)
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
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 watertight compound-filled*) **rolled** **IP 54** (optional **glass fibre** cable)
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)
THE-xx	**Immersion sleeve**, stainless steel V4A or nickel-plated brass, Ø = 9 mm, inner diameter of socket 5.2 mm, with **adjusting screw** M12 x1.5

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
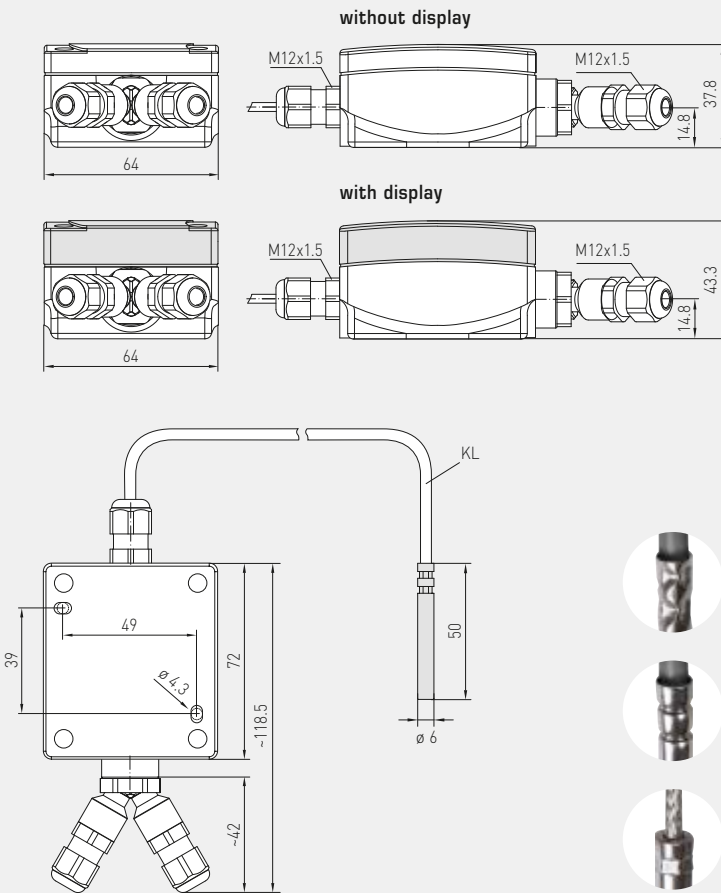
Plug for display contact is on the right side

Dimensional drawing   HFTM - Modbus

HFTM - Modbus
with display

without display

M12x1.5   M12x1.5

37.8
14.8
64

with display

M12x1.5   M12x1.5

43.3
14.8
64

49
39
ø 4.3
72
~118.5
~42

KL
50
ø 6

IP 65 (standard)
humidity-tight **stamped**

IP 68 (optional)
watertight compound-filled *,
rolled

IP 54 (optional)
with **glass fibre** cable

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

PS-PROTECTION
PERFECT SENSOR PROTECTION

THERMASGARD® **HFTM - Modbus** – Sleeve sensor with temperature measuring transducer

Type / WG01	Sensor	Output	Type	Display	Item No.	Price
HFTM - Modbus						
HFTM-MODBUS	Pt1000	Modbus	Remote sensor		1101-1256-0210-000	
HFTM-MODBUS DISPLAY	Pt1000	Modbus	Remote sensor	■	1101-1256-2210-000	
Extra charge:	Protection type **IP 68** (sensor sleeve watertight compound-filled)					
	per running metre of connecting lead (**silicone / PTFE / glass fibre**)					on request
	other protection sleeve lengths optional					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
THE-xx	**Immersion sleeve**, stainless steel V4A or nickel-plated brass, Ø = 9 mm For further information, see last chapter Accessories!	