

THERMASGARD® ATM 2 - Modbus - T3

THERMASGARD® ATM 2 - wModbus



S+S REGELTECHNIK

Outside temperature / wet room
temperature measuring transducers, calibratable,
with Modbus connection or W-Modbus (wireless)

Calibratable outside temperature measurement transducer **THERMASGARD® ATM2-Modbus-T3**, with Modbus connection, in an impact-resistant plastic housing with quick-locking screws, optionally with /without display, measures temperature (-50...+150 °C). International system of units **SI** (default) can be changed to **imperial** (via Modbus). With **wModbus** device version, the W-Modbus (Wireless) replaces the RTU cable; the BMS connection is radio-based using a W-Modbus gateway.

The on-wall sensor is used to detect the temperature in gaseous media. It is used outside or in wet rooms, in cold storage buildings and greenhouses, in the industrial sector and in agriculture. Installation on outside walls is preferably performed on the north side or in a protected place. In case of direct solar irradiation, we recommend using our sun and ball-impact protection hood **WS01** or **WS04** (accessories).

Innovative Modbus sensor with galvanically isolated RS485 Modbus interface, switchable bus terminating resistor, DIP switch for setting in current-free state, internal LEDs for telegram status display, push-in terminals and large three-line display (illuminated, individually programmable). 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.

ATM 2-Modbus-T3
without display
(RTU cable)



TECHNICAL DATA

Power supply:	24 V AC (± 20%); 15...36 V DC
Power consumption:	< 1.2 W / 24 V DC; < 1.8 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
Measuring range:	-50...+150 °C
Accuracy, temperature:	typically ± 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
Communication:	Modbus (RTU cable), Bus interface RS 485, galvanically isolated , Baud rate 9600, 19200, 38400 baud or W-Modbus (Wireless Modbus, AES-128 encrypted) Frequency 2.4 GHz ISM, Transmission power 100 mW , Range max. 500 m (open field) / approx. 50-70 m (inside buildings)
Bus protocol:	Modbus (RTU mode), address range 0... 247 adjustable
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 dimensions:	108 x 78.5 x 43.3 mm (Tyr 3 without display) 108 x 78.5 x 45,8 mm (Tyr 3 with display)
Cable connection:	Cable gland , plastic (M20 x 1.5; with strain relief, exchangeable, inner diameter 8 - 13 mm) or M12 connector according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.2 - 1.5 mm², using push-in terminals
Process connection:	by screws
Permissible air humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529)
Standards (Modbus):	CE conformity according to EMC Directive 2014 / 30 / EU
Standards (W-Modbus):	CE conformity according to Radio Directive 2014 / 53 / EU
Features:	Display with illumination , three-line, programmable, cutout approx. 51 x 29 mm (W x H), for displaying the actual temperature, error message or an individually programmable display value
Internal diagnostics:	Error 1 at sensor breakage Error 2 at sensor short circuit

ATM 2-wModbus
without display
(wireless)



Programmable display screen **Tyr 3**





NEW

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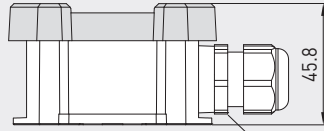
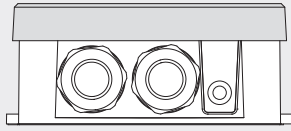
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Dimensional drawing
(mm)

ATM 2 - xx

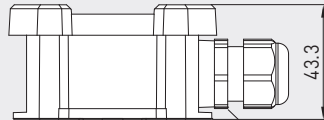
with display



45.8

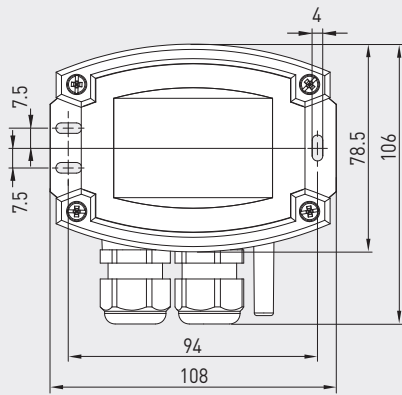
M20x1.5

without display

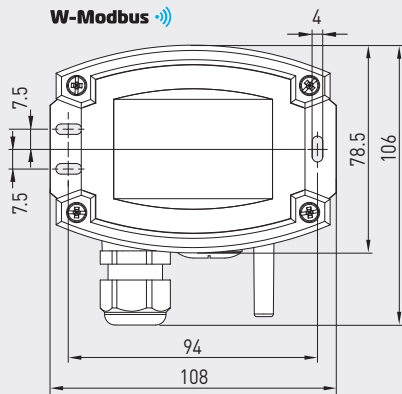


43.3

M20x1.5



W-Modbus



ATM 2 - Modbus - T3
with display
(RTU cable)



ATM 2 - wModbus
with display
(wireless)



Device version
with **M12 connector**
(optional on request)



THERMASGARD® ATM 2 - Modbus -T3

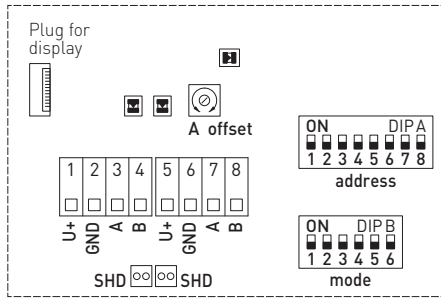
THERMASGARD® ATM 2 - wModbus



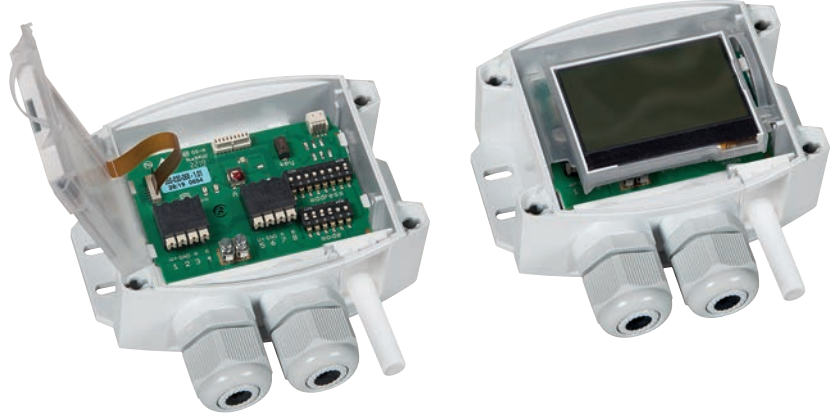
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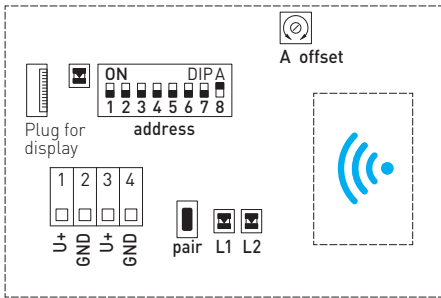
Schematic diagram (Tyr3) Modbus (RTU cable)



- DIP A: Bus address
- DIP B: Bus parameters (Baud rate, parity...)
- Telegram indicator Reception (LED green) Error (LED red)
- LED (internal status)
- Offset correction
- Shielding



Schematic diagram (Tyr3) W-Modbus (wireless)



- DIP A: address
- pair L1 L2
- LED: Telegram Status
- DIP A: Bus address
- Button: Teach-in (pair)
- LED 1: Network Status
- LED 2: Connection quality



GW-wModbus (Pro)

Gateway with W-Modbus module,
for radio-based connection to Modbus networks





NEW

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ATM 2 - wModbus
 with / without display
 (wireless)

ATM 2 - Modbus - T3
 with / without display
 (RTU cable)



THERMASGARD®
 ATM 2 - Modbus - T3
 ATM 2 - wModbus

On-wall temperature transmitter
 with Modbus connection (RTU cable) or
 with W-Modbus (wireless)



Type / WG01	Output	Display	Item No.	Price
ATM 2 - xx				
ATM2-Modbus-T3	Modbus (RTU cable)		1101-12C6-0000-000	184,69 €
ATM2-Modbus-T3 LCD	Modbus (RTU cable)	■	1101-12C6-4000-000	244,50 €
ATM2-wModbus	W-Modbus (wireless)		1101-12CF-0000-000	227,54 €
ATM2-wModbus LCD	W-Modbus (wireless)	■	1101-12CF-4000-000	287,35 €
Extra charge:	Cable connection with M12 connector according to DIN EN 61076-2-101			on request
Note:	System of units SI (default) or imperial (can be changed via Modbus).			

MODBUS ACCESSORIES

GW-wModbus	Gateway with W-Modbus (Wireless) for radio-based connection to Modbus networks, operating modes ' Gateway ' (basic function as a base station) and ' Node ' (adapter function for max. 1 wired sensor)	1801-1211-1101-000	245,30 €
GW-wModbus Pro	and ' Node Pro ' (adapter function for max. 16 wired sensors)	1801-1211-1101-100	332,07 €
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 €
For further information see the end of the chapter!			

ACCESSORIES

WS-01	Sun and ball-impact protection hood , 184 x 180 x 80 mm, stainless steel V2A (1.4301)	7100-0040-2000-000	35,05 €
WS-04	Weather and sun protection hood , 130 x 180 x 135 mm, stainless steel V2A (1.4301)	7100-0040-7000-000	41,35 €
For further information, see last chapter Accessories!			