

**Surface-contact temperature measuring transducer / pipe surface-contact sensor  
incl. strap, with detached sensor head, calibratable,  
with W-Modbus (wireless)**

Calibratable surface-contact temperature measuring transducer (detached variant)  
**THERMASGARD® ALTM 2 -wModbus**, with W-Modbus (wireless), in an impact-resistant plastic housing with quick-locking screws, cable sensor with pipe feeder, incl. strap, optionally with/without display, measures temperature (-50...+150 °C). International system of units **SI** (default) can be changed to **imperial** (via Modbus). The W-Modbus (wireless) replaces the RTU cable, the BMS connection is wireless and is established via a W-Modbus gateway.

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.

**Innovative W-Modbus sensor** with DIP switch for setting the bus address in current-free state, internal LEDs for displaying the connection quality and telegram status, push-in terminal and large three-line display (illuminated, individually programmable in the 7-segment range and dot-matrix range). Uses **internal diagnostics** to detect sensor breakage or sensor short circuit as errors. The error messages can be retrieved via Modbus and are shown on the display. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

**ALTM 2 -wModbus**

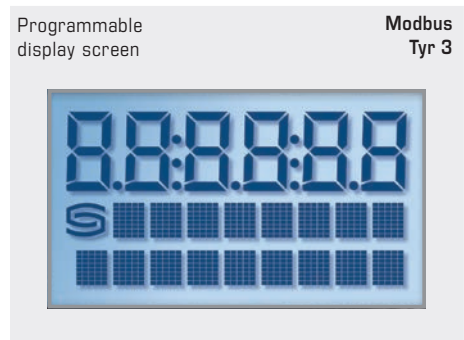
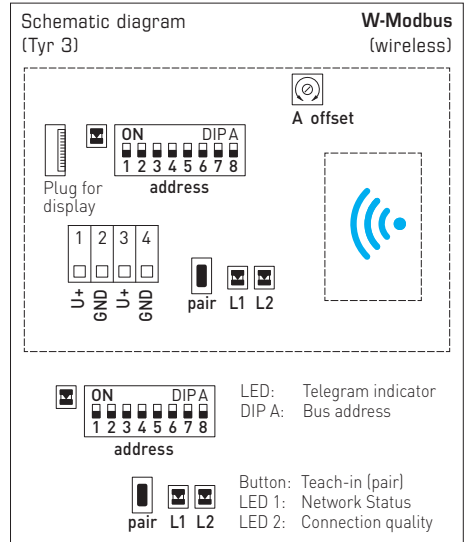


Device version with **M12 connector** (optional on request)



**TECHNICAL DATA**

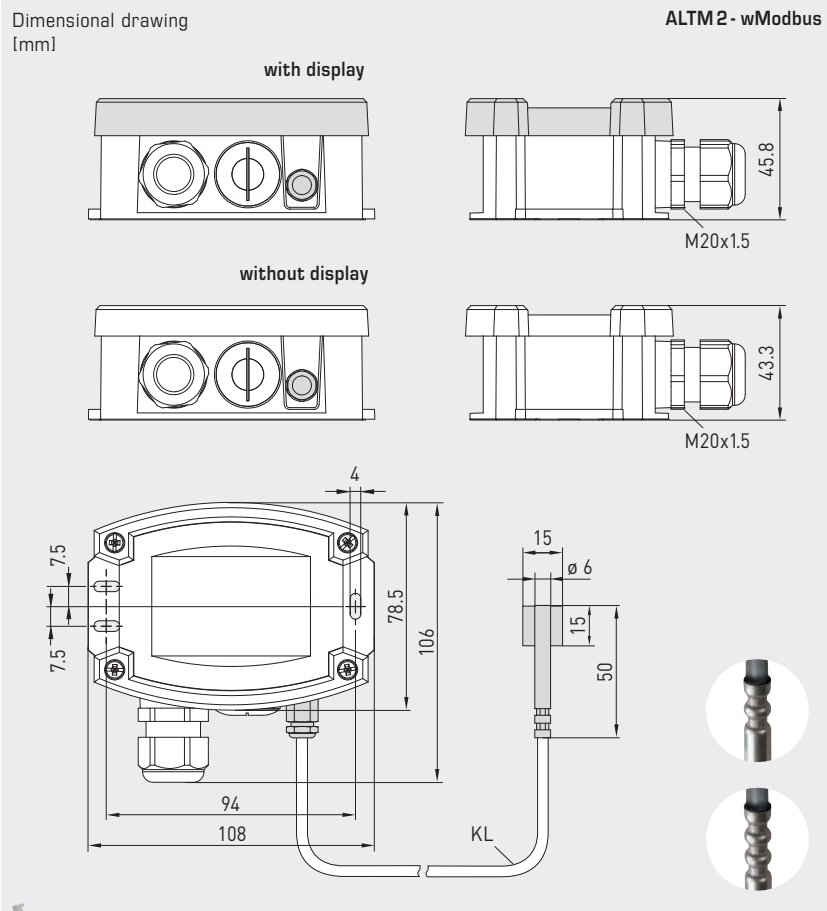
Voltage supply:	24 V AC (± 20%); 15...36 V DC
Power consumption:	< 1.2 W / 24 V DC; < 1.8 VA / 24 V AC
System of units:	<b>SI</b> (default) or <b>Imperial</b> (switchable via Modbus)
Data points:	Temperature [°C] [°F]
Sensor:	Pt1000, DIN EN 60751, class B <b>(Perfect Sensor Protection at IP68)</b>
Measuring range:	-50...+150 °C, <b>T<sub>max</sub> at +150 °C</b> (detached sensor variant)
Deviation, 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:	<b>W-Modbus</b> (Wireless Modbus with 2.4 GHz ISM)
Bus protocol:	Modbus (RTU mode), address range 0... <b>247</b> selectable
Signal filtering:	0.3 s / 1 s / 10 s
Sensor protection:	pipe feeder made of stainless steel <b>V4A</b> (1.4571), Ø = 6 mm, L = 50 mm
Sensor cable:	Silicone, SiHF, 2 x 0.25 mm <sup>2</sup> ; cable length (KL) = 1.5m (other lengths and jacket materials, e.g. PTFE or glass fibre with steel mesh, available on request)
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:	<b>cable gland</b> , plastic (M20 x 1,5; with strain relief, exchangeable, inner diameter 8 - 13 mm) <b>or M12 connector</b> according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.2 - 1.5 mm <sup>2</sup> , using push-in terminal
Process connection:	Endless strap with metal tightener (included in scope of delivery) Ø = 13 - 92 mm (¼ - 3"), L = 300 mm
Permissible air humidity:	< 95% RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type housing:	<b>IP65</b> (according to EN 60 529)
Protection type sensor:	<b>IP65</b> (according to EN 60 529) <b>sleeve</b> humidity-tight (standard) <b>IP68</b> (according to EN 60 529) <b>sleeve</b> water-tight (optional)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, according to EMC Directive 2014 / 30 / EU Radio Directive ETSI 300 328 V2.2.2
Features:	<b>Display with illumination</b> , 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:	<b>Error 1</b> at sensor breakage <b>Error 2</b> at sensor short circuit





**NEW**

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with W-Modbus (wireless)



**IP65** (standard)  
humidity-tight

**IP68** (optional)  
water-tight  
**Perfect Sensor Protection**

High-performance encapsulation against vibration, mechanical stress and humidity

**PS-PROTECTION**  
PERFECT SENSOR PROTECTION



**THERMASGARD® ALTM 2 -wModbus** Surface contact temperature / tube contact temperature measuring transducers

Type / WG01	Measuring Range Temperature	Output	Type	Display	Item No.	Price
<b>ALTM 2 -wModbus</b>						
ALTM2-wModbus	-50...+150 °C	W-Modbus (wireless)	Remote sensor		1101-62BF-0210-000	<b>224,63 €</b>
ALTM2-wModbus LCD	-50...+150 °C	W-Modbus (wireless)	Remote sensor	■	1101-62BF-4210-000	<b>280,57 €</b>
Extra charge:	Protection type <b>IP68</b> (sensor sleeve watertight compound-filled) per running metre of connecting lead (silicone / PTFE / glass fibre)				on request	<b>3,50 €</b>
	Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101				on request	
<b>Note:</b>	System of units <b>SI</b> (default) or <b>imperial</b> (can be changed via Modbus).					
<b>ACCESSORIES</b>						
<b>GW-wModbus</b>	Gateway with W-Modbus (wireless), for wireless connection to Modbus networks, with "Gateway" (master) and "Node" operating modes (max. 1 wired node)				1801-1211-1101-000	<b>229,00 €</b>
<b>GW-wModbus Pro</b>	"Node Pro" (max. 16 wired nodes)				1801-1211-1101-100	<b>310,00 €</b>
<b>WLP-1</b>	Heat-conductive paste, silicone-free				7100-0060-1000-000	<b>4,79 €</b>

For further information, see last chapter Accessories!