



S+S REGELTECHNIK



W-Modbus

WIRELESS MODBUS REPLACES A CONVENTIONAL RTU CABLE -
FIELD BUS SOLUTIONS FOR SMART BUILDINGS



PRODUCT RANGE 2024



S+S REGELTECHNIK USA DIVISION



S+S REGELTECHNIK

NEW

W-MODBUS

Wireless Modbus

The **W-Modbus protocol** is based on the (2.4 GHz ISM radio band) and employs a patented frequency hopping technology to maximise reliability and resistance to interference. This means that reliable radio transmission can also be ensured in industrial environments.

In the **W-Modbus network** up to 100 nodes can communicate with each other over a long distance of up to 500 metres / 1640 ft (open field) using one gateway. A standardised W-Modbus module ensures compatibility with all W-Modbus units.

The **W-Modbus sensors** only need to be supplied with power. Only the slave address is configured manually, the transmission parameters (baud rate and parity) are set automatically. No terminating resistor is required. The sensor is then paired with a gateway.

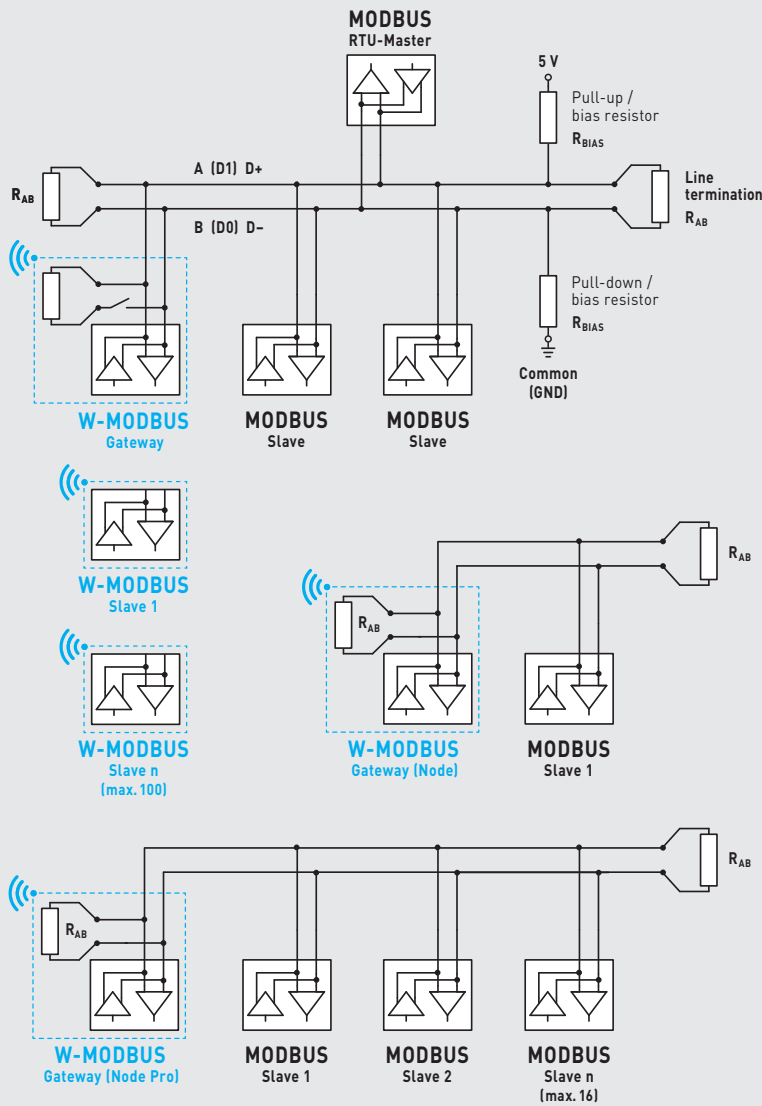
The **W-Modbus gateway** serves as a transition between wired Modbus and radio-based W-Modbus. Even mixed configurations of wired and radio-based Modbus units can be easily integrated into existing network topologies via the W-Modbus gateway.

HIGHLIGHTS

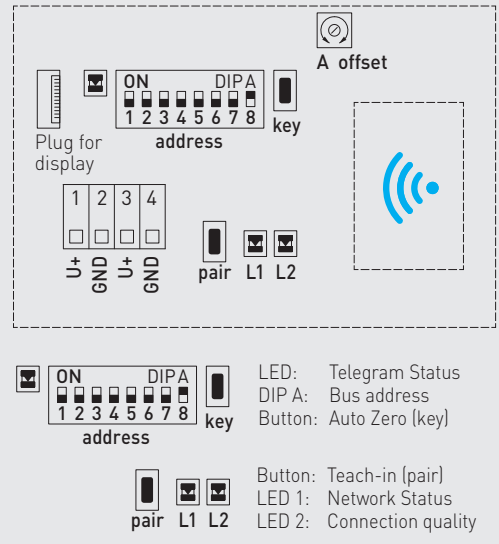
- Wireless Modbus RTU architecture for smart HVAC and building automation
- License-free ISM band at 2.4 GHz
- Up to 100 units (nodes) in a shared mesh topology
- Signal transmission at low latency
- Long range up to 500 m / 1640 ft (line of sight) by sending and forwarding data points (up to 8 hops)
- Ideal for refurbishment / retrofitting in the field and in rooms
- Reduced costs and time required for wiring (no data cable required), installation planning, troubleshooting
- Quick installation (push-in terminals) and easy mounting on in-wall flush box or on-wall
- Immediate commissioning in 3 steps (e.g. set address only, no further bus parameters necessary)
- Many standard languages for menu control (DE, EN, FR, ES, IT, RU, others upon request)

General bus topology structure with terminating and bias resistors

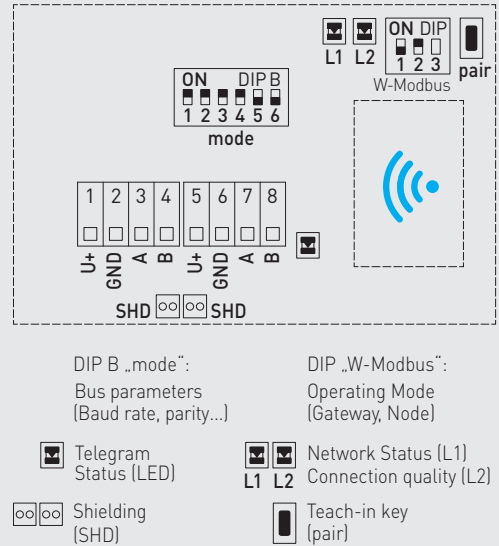
(Mixed configuration)



W-Modbus Sensors



W-Modbus Gateway



W-MODBUS GATEWAY

- **Gateway operation** for connection to an existing Modbus topology or directly to a DDC, serves as a base station for W-Modbus sensors (max. 100 radio nodes).
- **Node operation** enables the radio-based connection of a wired Modbus sensor to a W-Modbus network (max. 1 wired sensor).
- **Node Pro operation** (extended node operation at devicetype GatewayPro) serves for the radio-based connection of multiple wired Modbus sensors (max. 16 wired nodes).





**THERMASGARD®
ATM2-wModbus**
On-wall / outside
temperature sensor

\$240.02



**THERMASGARD®
TM65-wModbus LCD**
Immersion / duct
temperature sensor

\$302.70



**THERMASGARD®
MWTM-wModbus**
Mean value
temperature sensor

\$324.94



**THERMASGARD®
HFTM-wModbus LCD**
Sleeve
temperature sensor

\$307.96

THERMASGARD®
Temperature sensors with **W-Modbus-Modul (Wireless)**



Type / WG01	Measuring Range / Readout* Temperature	Protective tube / Sensor protection	Display	Item no.	Price USD
ATM2-wModbus Outside / wet room temperature sensor					
ATM2-wModbus	-58...+302 °F	Ø 0.31 in, nominal length = 1 in		1101-12CF-0000-000	\$240.02
ATM2-wModbus LCD			■	1101-12CF-4000-000	\$303.12
TM65-wModbus Duct / immersion / screw-in temperature sensor (basic device)					
TM65-wModbus 50mm	-58...+302 °F	Ø 0.24 in, inserted length = 2 in		1101-723F-0010-000	\$239.62
TM65-wModbus 50mm LCD			■	1101-723F-4010-000	\$302.70
TM65-wModbus 100mm	-58...+302 °F	Ø 0.24 in, inserted length = 4 in		1101-723F-0020-000	\$239.96
TM65-wModbus 100mm LCD			■	1101-723F-4020-000	\$303.03
TM65-wModbus 150mm	-58...+302 °F	Ø 0.24 in, inserted length = 6 in		1101-723F-0030-000	\$240.22
TM65-wModbus 150mm LCD			■	1101-723F-4030-000	\$303.33
TM65-wModbus 200mm	-58...+302 °F	Ø 0.24 in, inserted length = 8 in		1101-723F-0040-000	\$240.48
TM65-wModbus 200mm LCD			■	1101-723F-4040-000	\$303.56
TM65-wModbus 250mm	-58...+302 °F	Ø 0.24 in, inserted length = 10 in		1101-723F-0050-000	\$240.84
TM65-wModbus 250mm LCD			■	1101-723F-4050-000	\$303.96
TM65-wModbus 300mm	-58...+302 °F	Ø 0.24 in, inserted length = 12 in		1101-723F-0060-000	\$241.77
TM65-wModbus 300mm LCD			■	1101-723F-4060-000	\$304.84
TM65-wModbus 350mm	-58...+302 °F	Ø 0.24 in, inserted length = 14 in		1101-723F-0070-000	\$242.98
TM65-wModbus 350mm LCD			■	1101-723F-4070-000	\$306.11
TM65-wModbus 400mm	-58...+302 °F	Ø 0.24 in, inserted length = 16 in		1101-723F-0080-000	\$244.22
TM65-wModbus 400mm LCD			■	1101-723F-4080-000	\$307.36
Basic device can be used as an immersion, screw-in or duct sensor in combination with S+S accessories.					
MWTM-wModbus Mean value temperature sensor / rod sensor, incl. mounting flange					
MWTM-wModbus 0.4m	-58...+302 °F	Ø 0.2 in, rod length = 1.3 ft		1101-326F-0080-000	\$324.94
MWTM-wModbus 0.4m LCD			■	1101-326F-4080-000	\$387.51
MWTM-wModbus 3.0m	-58...+302 °F	Ø 0.2 in, rod length = 9.8 ft		1101-326F-0230-000	\$386.60
MWTM-wModbus 3.0m LCD			■	1101-326F-4230-000	\$449.79
MWTM-wModbus 6.0m	-58...+302 °F	Ø 0.2 in, rod length = 19.7 ft		1101-326F-0260-000	\$430.86
MWTM-wModbus 6.0m LCD			■	1101-326F-4260-000	\$494.44
Rod sensor made from copper, plastic-coated, nominal length (NL) optional up to max. 65.6 ft					
HFTM-wModbus Sleeve sensor with temperature sensor					
HFTM-wModbus	-58...+302 °F	Ø 0.24 in, inserted length = 2 in		1101-62AF-0210-000	\$244.81
HFTM-wModbus LCD			■	1101-62AF-4210-000	\$307.96

Sleeve made from stainless steel V4A (1.4571), nominal length (NL) optional 1.2...16in,
Sensor made from silicone, SiHF, 2x24 AWG; cable length (KL) = approx. 5 ft (other lengths optional)

*Data points / Readout: temperature [°C] [°F] – International system of units SI (default) can be switched to Imperial (via Modbus).



**THERMASGARD®
ALTM2-wModbus**
Pipe surface-contact sensor
for temperature

\$253.83



**THERMASGARD®
ALTM1-wModbus LCD**
Pipe surface-contact sensor
for temperature

\$310.05

**THERMASGARD®
ALTM1-wModbus**
(without display)
Pipe surface-contact sensor
for temperature

\$245.42



**THERMASGARD®
RPTM1-wModbus**
Pendulum room
temperature sensor

\$295.04



**THERMASGARD®
RPTM2-wModbus**
Pendulum room
temperature sensor
(with globe)

\$302.65

THERMASGARD®
Temperature sensors with **W-Modbus-Modul** (Wireless)



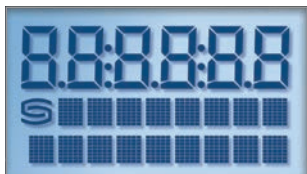
Type / WG01	Measuring Range / Readout* Temperature	Protective tube / Sensor protection	Display	Item no.	Price USD
ALTM1-wModbus	Surface-contact temperature sensor / pipe surface-contact sensor, incl. strap				
ALTM1-wModbus	-58...+302 °F	-		1101-12BF-0000-000	\$245.42
ALTM1-wModbus LCD			■	1101-12BF-4000-000	\$310.05
Compact variant with internal sensor for direct pipe mounting.					
ALTM2-wModbus	Surface-contact temperature sensor / pipe surface-contact sensor, incl. strap				
ALTM2-wModbus	-58...+302 °F	Ø 0.24 in, nominal length = 2 in		1101-62BF-0210-000	\$253.83
ALTM2-wModbus LCD			■	1101-62BF-4210-000	\$317.04
Detached variant with external sensor for mounting on pipes, sensor cable made of silicone, SIHF, 2 x 24 AWG; cable length (KL) = 6 in (other lengths optional)					
RPTM1-wModbus	Pendulum room temperature sensor (with stainless steel sleeve)				
RPTM1-wModbus	-58...+302 °F	Ø 0.63 in, nominal length = 5.6 in		1101-628F-0210-000	\$295.04
RPTM1-wModbus LCD			■	1101-628F-4210-000	\$358.79
Sensor cable made of PVC, H03VV-F, 2 x 21 AWG; cable length (KL) = 6 in (other lengths optional)					
RPTM2-wModbus	Pendulum room temperature sensor (with globe)				
RPTM2-wModbus	-58...+302 °F	Ø 1.97 in		1101-629F-0210-000	\$302.65
RPTM2-wModbus LCD			■	1101-629F-4210-000	\$366.50
Sensor cable made of PVC, H03VV-F, 2 x 21 AWG; cable length (KL) = 6 in (other lengths optional)					

*Data points / Readout: temperature [°C] [°F] – International system of units SI (default) can be switched to Imperial (via Modbus).

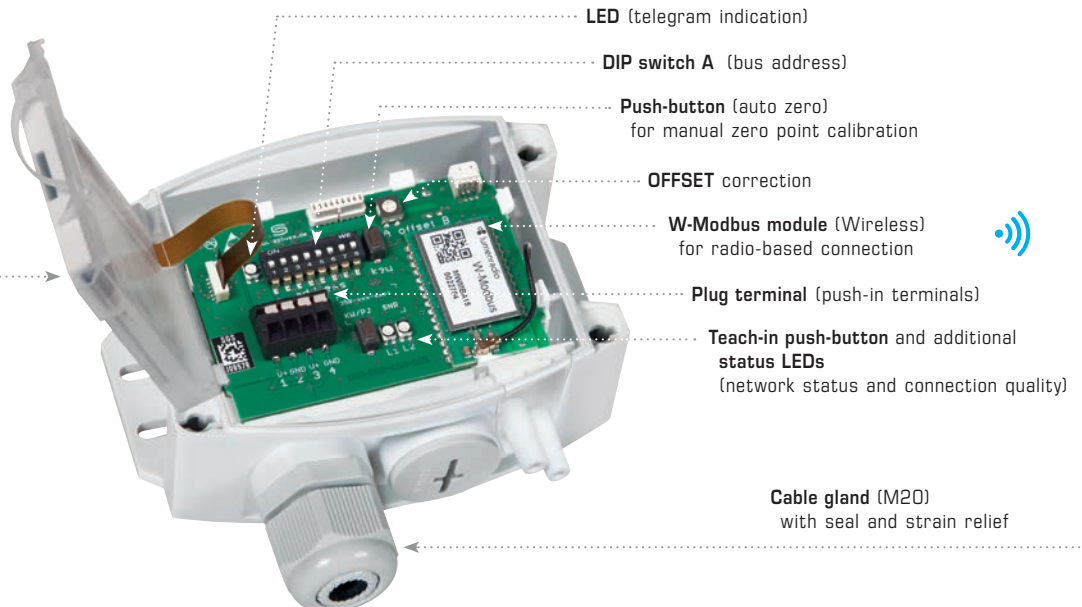


International system of
units **SI** (default)
can be switched to **Imperial**

Foldable **display** (optional),
individually programmable display



Display (Tyr 3), three-line,
cut-out approx. 2.0 x 1.1 in,
with backlighting



LED (telegram indication)

DIP switch A (bus address)

Push-button (auto zero)
for manual zero point calibration

OFFSET correction

W-Modbus module (Wireless)
for radio-based connection



Plug terminal (push-in terminals)

Teach-in push-button and additional
status LEDs
(network status and connection quality)

Cable gland (M20)
with seal and strain relief



**HYGRASGARD®
AFTF-wModbus**
On-wall temperature
and humidity sensors

\$290.90



**HYGRASGARD®
KFTF-wModbus LCD**
Duct temperature
and humidity sensors

\$352.63



\$390.09

**HYGRASGARD®
RPFTF-wModbus**
Pendulum room
temperature and
humidity sensors



\$742.09

**HYGRASGARD®
VFTF-wModbus LCD**
Showcase humidity and
temperature sensor

HYGRASGARD®
Temperature and humidity sensors with **W-Modbus-Modul (Wireless)**



Type / WGO1	Measuring Range / Readout*	Temperature	Protective tube / Sensor protection	Display	Item no.	Price USD
AFTF-wModbus On-wall-humidity and temperature sensors ($\pm 2.0\%$ RH)						
AFTF-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.51 in, nominal length = 1.81 in		1201-12CF-1000-000	\$290.90
AFTF-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)			■	1201-12CF-1400-000	\$354.92
KFTF-wModbus Duct humidity and temperature sensors ($\pm 2.0\%$ RH), incl. mounting flange						
KFTF-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.79 in, nominal length = 9.25 in (optional 3.94 in)		1201-32CF-1000-029	\$288.61
KFTF-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)			■	1201-32CF-1400-029	\$352.63
KFTF-20-wModbus Duct humidity and temperature sensors ($\pm 1.8\%$ RH), incl. mounting flange						
KFTF-20-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.79 in, nominal length = 9.25 in (optional 3.94 in)		1201-32CF-1000-030	\$363.40
KFTF-20-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)			■	1201-32CF-1400-030	\$524.59
RPFTF-wModbus Pendulum room humidity and temperature sensors ($\pm 2.0\%$ RH)						
RPFTF-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.63 in, nominal length = 5.6 in		1201-624F-1000-000	\$390.09
RPFTF-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)			■	1201-624F-1400-000	\$489.06
Sensor cable made of PVC, LiYY, 6x26 AWG; cable length (KL) = approx. 6.5 ft (other lengths optional)						
RPFTF-20-wModbus Pendulum room humidity and temperature sensors ($\pm 1.8\%$ RH)						
RPFTF-20-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.63 in, nominal length = 5.6 in		1201-624F-1000-001	\$494.24
RPFTF-20-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)			■	1201-624F-1400-001	\$558.56
Sensor cable made of PVC, LiYY, 6x26 AWG; cable length (KL) = approx. 6.5 ft (other lengths optional)						
VFTF-wModbus Showcase humidity and temperature sensor ($\pm 2.0\%$ RH)						
VFTF-wModbus	0 ... 100% RH (default)	-31...+176 °F	\emptyset 0.39 in, nominal length = 1.0 in		1201-625F-1000-000	\$674.21
VFTF-wModbus LCD	0 ... 560 gr/lb (MV) 0 ... 34.9 gr/ft ³ (AH) 0 ... 36.0 Btu/lb (ENT.) +32 ... +122 °F (DP)		Sensor head: \emptyset 0.67in, H = 0.1 in	■	1201-625F-1400-000	\$742.09
Sensor cable made of PVC, LiYY, 4x26 AWG; cable length (KL) = approx. 6.5 ft (other lengths optional)						

A long-term stable, digital humidity and temperature sensor guarantees exact measurement results. Further parameters are calculated internally from these measured variables.

*Data points / Readout: temperature [°C] [°F], relative humidity [%RH], dew point [°C] [°F], absolute humidity [g/m³] [gr/ft³], mixture ratio [g/kg] [gr/lb], enthalpy [kJ/kg] [Btu/lb]
International system of units SI (default) can be switched to Imperial (via Modbus).



**HYGRASGARD®
TW-wModbus**
Dew point control switches
(compact variant)

\$266.87



**HYGRASGARD®
TW-wModbus
external**
Dew point control switches
(with detached sensor head)

\$287.73



**PREMASGARD®
232x-wModbus LCD**
(with display)
Differential pressure sensor

\$342.27

**PREMASGARD®
232x-wModbus**
(without display)
Differential pressure sensor

\$281.32



**KYMASGARD®
GW-wModbus**
Gateway

\$258.77

HYGRASGARD®
Temperature and humidity sensors with **W-Modbus-Modul (Wireless)**



Type / WG02	Measuring Range / Readout*	Temperature	Protective tube / Sensor protection	Display	Item no.	Price USD
TW-wModbus	Dew point control switches, incl. strap ($\pm 2.0\%$ RH)					
TW-wModbus	0...100% RH (default)	-31...+176 °F	-		1201-1281-F001-020	\$266.87
TW-wModbus LCD	0...560 gr/lb (MV) 0...34.9 gr/ft ³ (AH) 0...36.0 Btu/lb (ENT.) +32...+122 °F (DP)			■	1201-1281-F401-020	\$330.65
Compact variant with patented measuring method, the pro-dynamic cross-convection (no conductivity measuring) for direct mounting on pipes or for direct mounting on flat surfaces (e.g. walls, ceilings).						
TW-wModbus external	Dew point control switches, with detached sensor head ($\pm 2.0\%$ RH)					
TW-wModbus extern	0...100% RH (default)	-31...+176 °F	approx 1.4x0.6 in		1201-1281-F001-030	\$287.73
TW-wModbus extern LCD	0...560 gr/lb (MV) 0...34.9 gr/ft ³ (AH) 0...36.0 Btu/lb (ENT.) +32...+122 °F (DP)			■	1201-1281-F401-030	\$335.04

Type variant with detached sensor head (cable length KL=approx. 6.5ft) for mounting on pipes.

A long-term stable, digital humidity and temperature sensor guarantees exact measurement results. Further parameters are calculated internally from these measured variables.

*Data points / Readout: temperature [°C] [°F], relative humidity [% RH], dew point [°C] [°F], absolute humidity [g/m³] [gr/ft³], mixture ratio [g/kg] [gr/lb], enthalpy [kJ/kg] [Btu/lb]
International system of units SI (default) can be switched to Imperial (via Modbus).

PREMASGARD®
Pressure sensor with **W-Modbus-Modul (Wireless)**



Type / WG02	Measuring Range / Readout*	Display	Item no.	Price USD
232x-wModbus	Differential pressure measuring transducers, incl. connection set			
PREMASGARD 2328-wModbus	- 2 ... +2 inWC		1301-12CF-0910-200	\$281.32
PREMASGARD 2328-wModbus LCD		■	1301-12CF-4910-200	\$342.27
PREMASGARD 2327-wModbus	- 28 ... +28 inWC		1301-12CF-0950-200	\$281.32
PREMASGARD 2327-wModbus LCD		■	1301-12CF-4950-200	\$342.27

*Data points / Readout: differential pressure [Pa] [inWC] - International system of units SI (default) can be switched to Imperial (via Modbus).

KYMASGARD®
Gateway with **W-Modbus-Modul (Wireless)**



Type / WG02	Communication	Operating modes	Item no.	Price USD
GW-wModbus	Gateway for radio-based connection to Modbus networks			
GW-wModbus	Modbus RTU / W-Modbus (Wireless)	Gateway + Node	1801-1211-1101-000	\$258.77
GW-wModbus Pro	Modbus RTU / W-Modbus (Wireless)	Gateway + Node Pro	1801-1211-1101-100	\$350.30

Pro extends node operation to a maximum of 16 wired nodes.



S+S REGELTECHNIK



The new S+S company headquarters on a total area of 14,000 m² in Nordostpark on the outskirts of Nuremberg offers a seamlessly integrated production and development environment with excellent air and road links.

S+S stands for a fully integral value chain. All products are designed, developed, manufactured and programmed in-house.

Development, manufacturing and sales in Nuremberg are certified by TÜV Thüringen according to DIN EN ISO 9001:2015 (quality management) and DIN EN ISO 14001:2015 (environmental management).

All devices are function tested as well as calibrated in-house prior to shipment and meet strict safety, quality and sustainability standards.



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