



S+S REGELTECHNIK



W-Modbus

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



PRODUCT RANGE 2024



FÜHLBARE PRÄZISION



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 (open field) using one gateway. A standardised W-Modbus module ensures compatibility with all W-Modbus units.

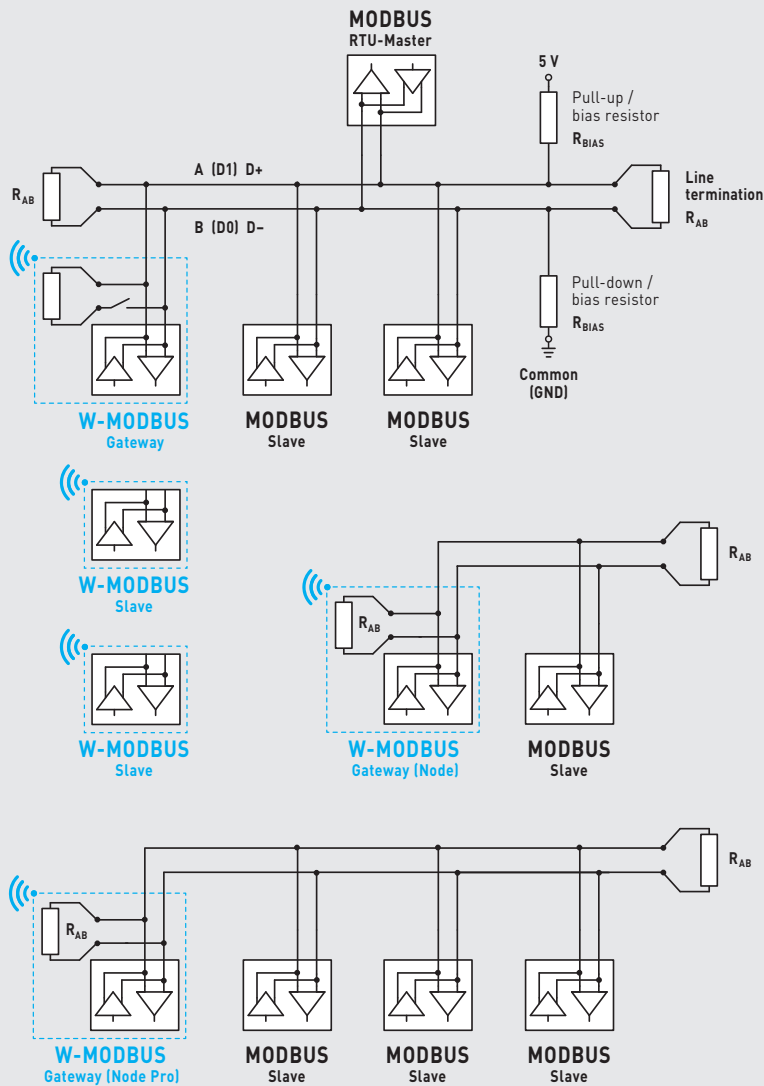
The **W-Modbus sensors** only need to be supplied with power. Only the slave address is configured manually, the transmission parameters (baud rate and parity) are set automatically. No terminating resistor is required. The sensor is then paired with a gateway.

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.

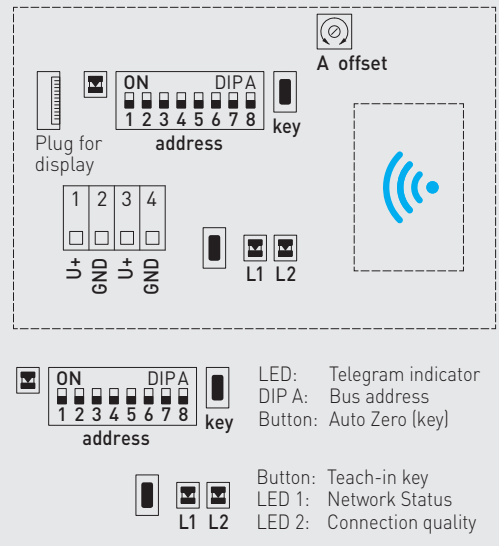
HIGHLIGHTS

- Wireless Modbus RTU architecture for smart HVAC and building automation
- Licence-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 (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)

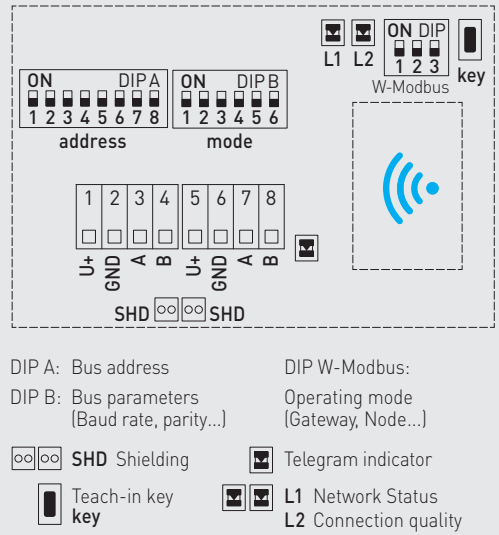
General bus topology structure with terminating and bias resistors
(Mixed configuration)



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) serves for the radio-based connection of multiple wired Modbus sensors (max. 16 wired nodes).





S+S REGELTECHNIK

W-Modbus

NEW



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

212,41 €



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

267,88 €



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

287,56 €



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

272,53 €

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



Type / WG01	Measuring Range / Readout Temperature	Protective tube / Sensor protection	Display	Item no.	Price
ATM2-wModbus Outside / wet room temperature sensor					
ATM2-wModbus	-50...+150 °C	Ø 8 mm, ca. NL = 25 mm		1101-12CF-0000-000	212,41 €
ATM2-wModbus LCD			■	1101-12CF-4000-000	268,25 €
TM65-wModbus Duct / immersion / screw-in temperature sensor (basic device)					
TM65-wModbus 50mm	-50...+150 °C	Ø 6 mm, EL = 50 mm		1101-723F-0010-000	212,05 €
TM65-wModbus 50mm LCD			■	1101-723F-4010-000	267,88 €
TM65-wModbus 100mm	-50...+150 °C	Ø 6 mm, EL = 100 mm		1101-723F-0020-000	212,35 €
TM65-wModbus 100mm LCD			■	1101-723F-4020-000	268,17 €
TM65-wModbus 150mm	-50...+150 °C	Ø 6 mm, EL = 150 mm		1101-723F-0030-000	212,58 €
TM65-wModbus 150mm LCD			■	1101-723F-4030-000	268,43 €
TM65-wModbus 200mm	-50...+150 °C	Ø 6 mm, EL = 200 mm		1101-723F-0040-000	212,81 €
TM65-wModbus 200mm LCD			■	1101-723F-4040-000	268,64 €
TM65-wModbus 250mm	-50...+150 °C	Ø 6 mm, EL = 250 mm		1101-723F-0050-000	213,13 €
TM65-wModbus 250mm LCD			■	1101-723F-4050-000	268,99 €
TM65-wModbus 300mm	-50...+150 °C	Ø 6 mm, EL = 300 mm		1101-723F-0060-000	213,96 €
TM65-wModbus 300mm LCD			■	1101-723F-4060-000	269,77 €
TM65-wModbus 350mm	-50...+150 °C	Ø 6 mm, EL = 350 mm		1101-723F-0070-000	215,03 €
TM65-wModbus 350mm LCD			■	1101-723F-4070-000	230,79 €
TM65-wModbus 400mm	-50...+150 °C	Ø 6 mm, EL = 300 mm		1101-723F-0080-000	216,12 €
TM65-wModbus 400mm LCD			■	1101-723F-4080-000	272,00 €
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	-50...+150 °C	Ø 5 mm, NL = 0,4 m		1101-326F-0080-000	287,56 €
MWTM-wModbus 0,4m LCD			■	1101-326F-4080-000	342,93 €
MWTM-wModbus 3,0m	-50...+150 °C	Ø 5 mm, NL = 3,0 m		1101-326F-0230-000	342,12 €
MWTM-wModbus 3,0m LCD			■	1101-326F-4230-000	398,04 €
MWTM-wModbus 6,0m	-50...+150 °C	Ø 5 mm, NL = 6,0 m		1101-326F-0260-000	381,29 €
MWTM-wModbus 6,0m LCD			■	1101-326F-4260-000	437,56 €
Rod sensor made from copper, plastic-coated, nominal length (NL) optional up to max. 20 m					
HFTM-wModbus Sleeve sensor with temperature sensor					
HFTM-wModbus	-50...+150 °C	Ø 6 mm, NL = 50 mm		1101-62AF-0210-000	216,65 €
HFTM-wModbus LCD			■	1101-62AF-4210-000	272,53 €
Sleeve made from stainless steel V4A (1.4571), nominal length (NL) optional 30...400 mm, Sensor made from silicone, SiHF, 2 x 0.25 mm²; cable length (KL) = 1.5 m (other lengths optional)					



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

224,63 €



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

274,38 €

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

217,19 €



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

261,10 €



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

267,83 €

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

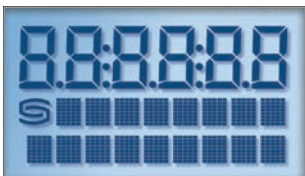


Type / WG01	Measuring Range / Readout Temperature	Protective tube / Sensor protection	Display	Item no.	Price
ALTM1-wModbus	Surface-contact temperature sensor / pipe surface-contact sensor, incl. strap				
ALTM1-wModbus	-50...+150 °C	-		1101-12BF-0000-000	217,19 €
ALTM1-wModbus LCD			■	1101-12BF-4000-000	274,38 €
Compact variant with internal sensor for direct pipe mounting.					
ALTM2-wModbus	Surface-contact temperature sensor / pipe surface-contact sensor, incl. strap				
ALTM2-wModbus	-50...+150 °C	Ø 6 mm, NL = 50 mm		1101-62BF-0210-000	224,63 €
ALTM2-wModbus LCD			■	1101-62BF-4210-000	280,57 €
Detached variant with external sensor for mounting on pipes, sensor cable made of silicone, SiHF, 2 x 0.25 mm ² ; cable length (KL) = 1.5 m (other lengths optional)					
RPTM1-wModbus	Pendulum room temperature sensor (with stainless steel sleeve)				
RPTM1-wModbus	-50...+150 °C	Ø 16 mm, NL = 142 mm		1101-628F-0210-000	261,10 €
RPTM1-wModbus LCD			■	1101-628F-4210-000	317,51 €
Sensor cable made of PVC, H03VV-F, 2 x 0.5 mm ² ; cable length (KL) = 1.5 m (other lengths optional)					
RPTM2-wModbus	Pendulum room temperature sensor (with globe)				
RPTM2-wModbus	-50...+150 °C	Ø 50 mm		1101-629F-0210-000	267,83 €
RPTM2-wModbus LCD			■	1101-629F-4210-000	324,34 €
Sensor cable made of PVC, H03VV-F, 2 x 0.5 mm ² ; cable length (KL) = 1.5 m (other lengths optional)					

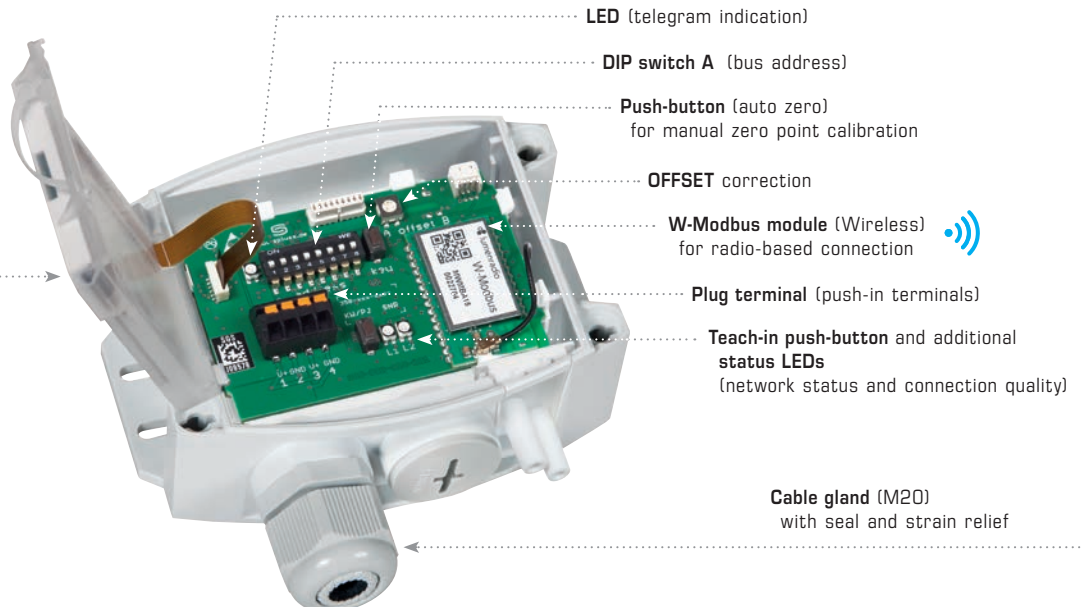


International system of
units **SI** (default)
can be switched to **Imperial**

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



Display (Tyr 3), three-line,
cut-out approx. 51 x 29 mm,
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

257,43 €



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

312,06 €



345,21 €

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



656,72 €

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

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



Type / WG01	Measuring Range / Readout Humidity (switchable)	Temperature	Protective tube / Sensor protection	Display	Item no.	Price
AFTF-wModbus On-wall-humidity and temperature sensors ($\pm 2,0\%$ RH)						
AFTF-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 13 mm, NL = 46 mm		1201-12CF-1000-000	257,43 €
AFTF-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)			■	1201-12CF-1400-000	314,09 €
KFTF-wModbus Duct humidity and temperature sensors ($\pm 2,0\%$ RH), incl. mounting flange						
KFTF-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 20 mm, NL = 235 mm		1201-32CF-1000-029	255,41 €
KFTF-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)		(NL = 100 mm optional)	■	1201-32CF-1400-029	312,06 €
KFTF-20-wModbus Duct humidity and temperature sensors ($\pm 1,8\%$ RH), incl. mounting flange						
KFTF-20-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 20 mm, NL = 235 mm		1201-32CF-1000-030	321,59 €
KFTF-20-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)		(NL = 100 mm optional)	■	1201-32CF-1400-030	464,24 €
RPFTF-wModbus Pendulum room humidity and temperature sensors ($\pm 2,0\%$ RH)						
RPFTF-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 16 mm, NL = 142 mm		1201-624F-1000-000	345,21 €
RPFTF-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)			■	1201-624F-1400-000	432,80 €
<small>Sensor cable made of PVC, LiYY, 6 x 0.14 mm²; cable length (KL) = approx. 2 m (other lengths optional)</small>						
RPFTF-20-wModbus Pendulum room humidity and temperature sensors ($\pm 1,8\%$ RH)						
RPFTF-20-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 16 mm, NL = 142 mm		1201-624F-1000-001	437,38 €
RPFTF-20-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)			■	1201-624F-1400-001	494,30 €
<small>Sensor cable made of PVC, LiYY, 6 x 0.14 mm²; cable length (KL) = approx. 2 m (other lengths optional)</small>						
VFTF-wModbus Showcase humidity and temperature sensor ($\pm 2,0\%$ RH)						
VFTF-wModbus	0...100% RH (default)	-35...+80 °C	\emptyset 10 mm, NL = 25 mm		1201-625F-1000-000	596,65 €
VFTF-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)		Sensor head: \emptyset 17 mm, H = 2.5 mm	■	1201-625F-1400-000	656,72 €

Sensor cable made of PVC, LiYY, 4 x 0.14 mm²; cable length (KL) = approx. 2 m (other lengths optional)

A long-term stable, digital humidity and temperature sensor guarantee exact measurement results. Further parameters are calculated internally from these measured variables. International system of units SI (default) can be switched to Imperial (via Modbus).

Data points: 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]



**HYGRASGARD®
TW-wModbus**
Dew point control switches
(compact variant)
236,17 €



**HYGRASGARD®
TW-wModbus
external**
Dew point control switches
(with detached sensor head)
254,63 €



**PREMASGARD®
232x-wModbus LCD**
(with display)
Differential pressure sensor
302,89 €

**PREMASGARD®
232x-wModbus**
(without display)
Differential pressure sensor
248,96 €



**KYMASGARD®
GW-wModbus**
Gateway
229,00 €

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



Type / WG02	Measuring Range / Readout	Temperature	Protective tube / Sensor protection	Display	Item no.	Price
TW-wModbus		Dew point control switches, incl. strap ($\pm 2,0\%$ RH)				
TW-wModbus	0...100% RH (default)	-35...+80 °C	-		1201-1281-F001-020	236,17 €
TW-wModbus LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)			■	1201-1281-F401-020	292,61 €
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)	-35...+80 °C	ca. 35 x 15 mm		1201-1281-F001-030	254,63 €
TW-wModbus extern LCD	0...80 g/kg (MV) 0...80 g/m ³ (a.F.) 0...85 kJ/kg (ENT.) -20...+80 °C (TP)			■	1201-1281-F401-030	296,50 €

Type variant with detached sensor head (cable length KL = 1,5 m) for mounting on pipes.

A long-term stable, digital humidity and temperature sensor guarantee exact measurement results. Further parameters are calculated internally from these measured variables. International system of units SI (default) can be switched to Imperial (via Modbus).

Data points: 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]

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



Type / WG02	Measuring Range / Readout	Display	Item no.	Price
232x-wModbus		Differential pressure measuring transducers, incl. connection set		
PREMASGARD 2328-wModbus	- 500... +500 Pa		1301-12CF-0910-200	248,96 €
PREMASGARD 2328-wModbus LCD		■	1301-12CF-4910-200	302,89 €
PREMASGARD 2327-wModbus	- 7000...+7000 Pa		1301-12CF-0950-200	248,96 €
PREMASGARD 2327-wModbus LCD		■	1301-12CF-4950-200	302,89 €

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



Type / WG02	Communication	Operating modes	Item no.	Price
GW-wModbus Gateway for radio-based connection to Modbus networks				
GW-wModbus	Modbus RTU / W-Modbus (Wireless)	Gateway + Node	1801-1211-1101-000	229,00 €
GW-wModbus Pro	Modbus RTU / W-Modbus (Wireless)	Gateway + Node Pro	1801-1211-1101-100	310,00 €

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 14,000m² 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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