



Key features:

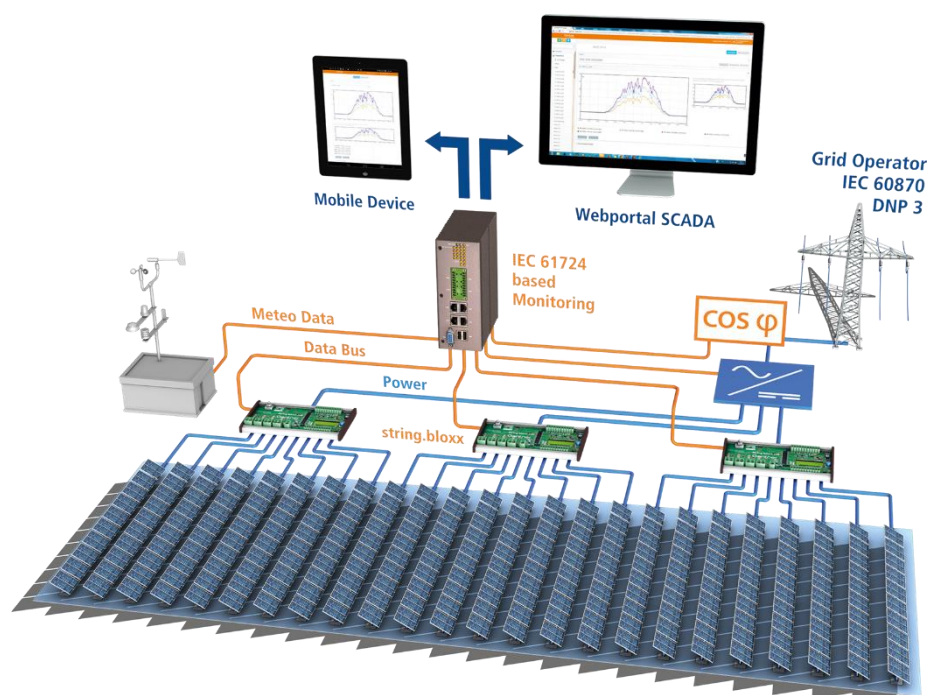
- **2 RTD (Pt100/1000) 4 wire**
- **2 Digital Inputs**
- **1 Digital Counter Input (S0) up to 1kHz**
- **RS485 fieldbus interface**
up to 115,2 kbps: Modbus-RTU, (optional OEM protocols)
- **Connectivity**
Data logger (e. g. Q.reader) and www.gantner-webportal.com
for worldwide access or other 3rd party applications
- **Electromagnetic Compatibility**
according to EN 61000-4 and EN 55011
- **Power Supply 10 .. 36 VDC**
- **DIN rail or wall mounting according to DIN 50022**

Effective PV Monitoring requires constant, solid and traceable PV Plant monitoring data to determine actual performance and fulfill owner/investor expectations.

Operators are interested to identify errors and losses in a reliable way to trigger appropriate actions for maximizing energy harvest during the total system lifetime.

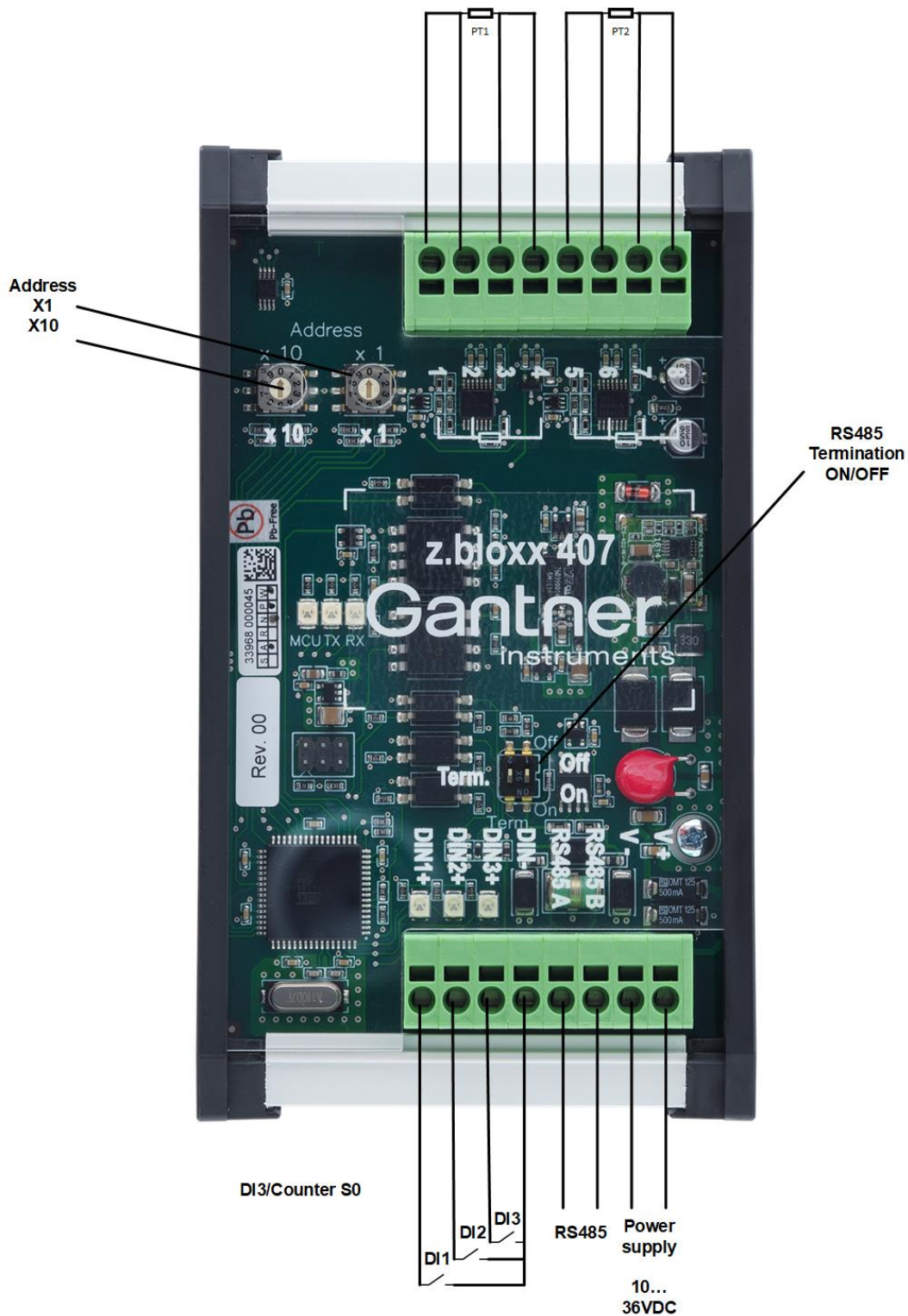
With the monitoring and control of digital inputs and outputs operators are able to see e.g UPS state, CB state, ... and also control functions are easy to implement by using the relay outputs.

The z.bloxx communication uses industry standard Modbus protocols for easy and fast integration and reliable data exchange with the data logger.



RTD Input	
Number	2
Type	Pt100, Pt1000, or resistance 4- wire technique
Connection	0.25 mm ² - 1.5 mm ² push-in spring-cage connection
Digital Input	
Number	2 (DIN1+, DIN2+)
Input	Status
Connection	0.25 mm ² - 1.5 mm ² push-in spring-cage connection
Digital Counter	
Number	1 (DIN3+)
Input	Counter/S0 up to 1 kHz
Connection	0.25 mm ² - 1.5 mm ² push-in spring-cage connection
Power Supply	
Power supply	10 up to 36 VDC, overvoltage and overload protection
Power consumption	approx. 0.5 W
Connection	0.25 mm ² - 1.5 mm ² push-in spring-cage connection
Communication Interface	
Standard	RS-485, 2-wire
Data format	8n1 Default, 8e1
Protocols	Modbus-RTU, 19k2 bps up to 115k2 bps
Number of devices on the bus	max. 32
Connection	0.25 mm ² - 1.5 mm ² push-in spring-cage connection
Environmental	
Storage temperature	-40°C up to +85°C
Relative humidity	5 % up to 95 % at 50°C, non-condensing
Electromagnetic Compatibility	according to EN 61000-4 and EN 55011
Maximum operating altitude	6000 m
Mechanical	
Case	Polycarbonate / PA
Dimensions (W x H x D)	(80 x 145 x 46) mm
Weight	approx. 150 g
Mounting	DIN EN-rail or wall mounting

Connection diagram:



Modbus RTU:

Protokoll: Modbus RTU

Geschwindigkeit: 1200 -115.2K Baud (siehe Register 30210)

Format: 8n1, 8e1, 8o1 (siehe Register 30211)

Byte Ordering: MSB, Word Ordering:LSB, Maximum Frame Length: 128 Bytes

Register	Datentyp	Kanal (Beschreibung)	Werte	Einheit	R/W
30001	Unit16	Digital Eingang 01	0,1 (OFF,ON)		R
30002	Unit16	Digital Eingang 02	0,1 (OFF,ON)		R
30003	Unit16	Digital Eingang 03	Zählerwert		R
30008	Unit16	Digital Eingang 03	Frequenz [Hz]		R
30041, 30042	Float32	Temperatur intern	-40,0 +160,0	°C	R
30043, 30043	Float32	Temperatur 1	-40,0 +160,0	°C	R
30045, 30046	Float32	Temperatur 1	-40,0 +160,0	°C	R
30051, 30052	UINT32	Firmware Datum	0xDDMMYYYY Beispiel: 0x0405.07DB 04.05.2011		R
30053, 30054	UINT32	Software Version	0xBMMNN Beispiel: 0x1251.0100 V100.1251		R
30201	Unit16	Geräte Kennung	Stringbloxx z.bloxx 407: 2017		R
30203	Unit16	Seriennummer Low	34		R
30204	Unit16	Seriennummer High	1		R
30206	Unit16	Modbus Adresse	1-254 (0 Broadcast Adresse)		R/W
30209	Unit16	Antwortverzögerung, [ms]	0 – 250ms		R/W
30210	Unit16	Parity / Baudrate, [bps]	Werte dezimal: 0 – 5 -> 8n1 100 – 105 -> 8e1 200 – 205 -> 8o1 Baudraten 0 100 200 = 1200, 1 101 201 = 2400, 2 102 202 = 4800, 3 103 203 = 9600, 4 104 204 = 19.2k, 5 105 205 = 38.4k, 6 106 206 = 57k, 7 107 207 = 115.2k, 4 = default		R/W
30220	Unit16	Gain Control	PT1/PT2 0x0000 PT100/PT100 0x0001 PT100/PT1000 0x0002 PT1000/PT100 0x0003 PT1000/PT1000		R/W

Unterstützte Funktionscodes

- 03: Inhalt der Register lesen (Single/Multiple Access)
- 04: Inhalt der Register lesen (Single/Multiple Access)
- 06: Inhalt der R/W Register schreiben (Single Register Access)
- 16: Inhalt der Abgleichregister schreiben (Multiple Register Access), ab 30304

Registerzugriff: R = nur lesen, R/W = lesen + schreiben,
R/W+P = lesen + schreiben + permanente Speicherung