



Solutions. Technology. Simple.

## string.CB 08 / 16 / 24 Generator Connector Box

**Gantner**  
instruments



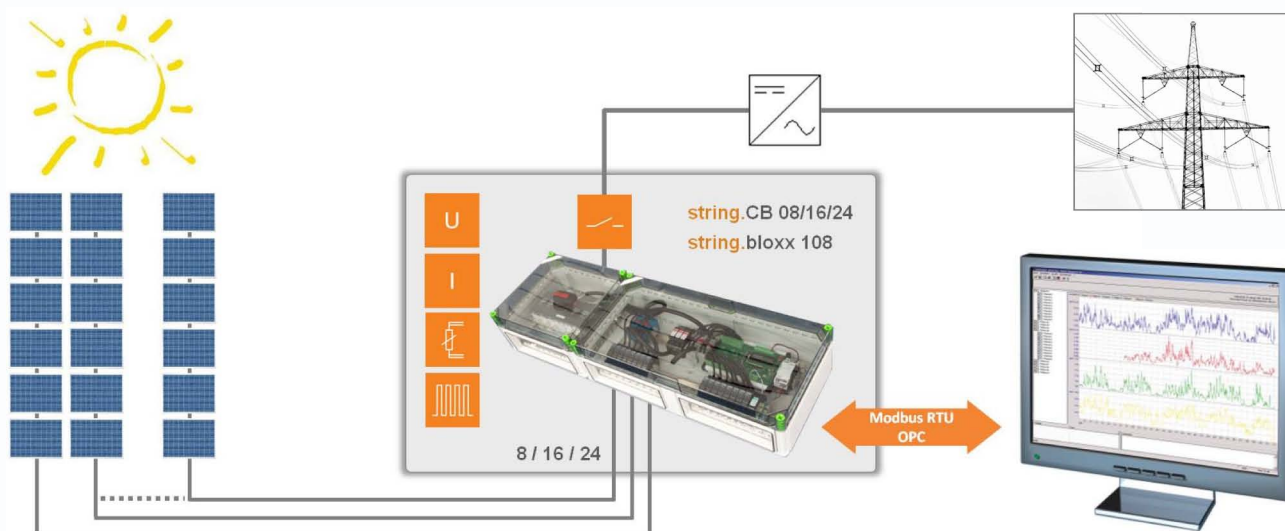
### Most important features:

- **8, 16 or 24 PV strings** can be connected  
other versions available on request
- **Current, voltage and temperature measurement**
- **Overvoltage protection**  
1000 VDC and communication
- **Signal contact monitoring**  
Circuit breakers and protective devices
- **Actuation Remote control Power switch**
- **Signal conditioning**  
calculated DC Power, linearisation, mean value, scaling, Min/Max storage, alarm
- **Integrated LC display**  
Display of all readings, including current and DC power for each string, configuration
- **RS485 fieldbus interface**  
up to 115,2 kbps: Modbus-RTU, ASCII (optional OEM protocols)
- **Can be connected to test controller and data logger**  
e. g. Q.reader
- **Lever type switch fuse holder in positive and negative pole**  
with contact protection
- **DC load break switch**
- **Consistent 1000 VDC layout**
- **String connection terminals**  
1.5 - 10 mm<sup>2</sup> (optional MC3, MC4)
- **Housing**  
Heavy duty industrial quality material and workmanship, IP65, UV and weather resistant, -35°C to +80°C

In large solar systems monitoring and troubleshooting becomes more complex. Each operator is interested in finding errors in a module, string, or a group quickly because they can reduce the amount of energy produced and the life of the system greatly.

With the help of the Generator Connection Box string.CB the individual solar module strands of a photovoltaic system can be connected in parallel and connected to larger wire cross sections to the inverter. Thus, defects, contamination, theft or misinterpretation of individual strings are detected and corrected promptly and accurately.

With the integrated string.bloxx it is possible to monitor and to control, inverter-independent precisely the DC side of photovoltaic systems. The data exchange between a string bloxx and superior management system can be direct, for example, the data logger Q.reader or the Controller Q.pac directly via the open standard Modbus RTU BUs. Thus, for example, a SCADA integration via OPC server without problems.



# Specifications

Design	string.CB 08	string.CB 16	string.CB 24
<b>DC Input</b>			
Number Inputs	8	16	24
Connection	Screwed connection 1.5-10 mm <sup>2</sup>		
Max. accepted DC input voltage	1000 VDC		
Max. accepted DC input voltage	±20 A		
Accuracy	0.25 %		
Max. accepted total current	125 A	200 A	315 A
Voltage measurement	0-1000 VDC		
Accuracy	0.2 %		
Fuses	Lever release fuses in the plus and minus line		
Current string fuses	2-20 A (optional)		
Fuse dimensions	10 x 38 mm		
Earth terminal	35 mm <sup>2</sup>		
External diameter of the earth cable	Cable Screw Connection M40 16-28mm		
<b>DC Output</b>			
Maximum permitted total current	125 A	200 A	315 A
Maximum output voltage	1000 VDC		
Output terminal, Copper plate with hole diameter	11 mm	11 mm	11 mm
Maximum connectable tube lug	M10 unisulated	M10 unisulated	M10 unisulated
Maximum recommended cable	50 mm <sup>2</sup>	95 mm <sup>2</sup>	185 mm <sup>2</sup>
Maximum permissible total current	125 A	200 A	315 A
<b>Temperature measurement</b>			
Number	2	4	6
Type	Pt1000 in 2 wire connection		
Measuring range	-40 up to +160°C		
Connection	0.25 mm <sup>2</sup> - 1.5 mm <sup>2</sup> push-in spring-cage connection		
<b>Digital Input</b>			
Use	Monitoring circuit breaker, DC and RS485 ÜSS		
Number used/free	3/0	3/3	3/6
<b>Digital Output</b>			
Number	1	2	3
Output	State, alarm		
Contact	Relay change over contact		
Load capacity	30 VDC/1 A (ohmic load)		
Connection	0.25 mm <sup>2</sup> - 1.5 mm <sup>2</sup> push-in spring-cage connection		
<b>Auxiliary voltage</b>			
Input voltage range	85 up to 264 VAC 95 up to 250 VDC Direct connection 10 up to 60 VDC		
Frequency range AC	45 Hz ... 65 Hz		
Miniature fuses	Dimension 5 x 20 mm, AC 250 V Fuse rating 2 A M (medium)		
Outside diameter of the connecting cable	Gland M20 6 up to 13 mm (M25 9 up to 17 mm Option)		
Connection	Tension, cross section: 0.08 mm <sup>2</sup> up to 1.5 mm <sup>2</sup>		

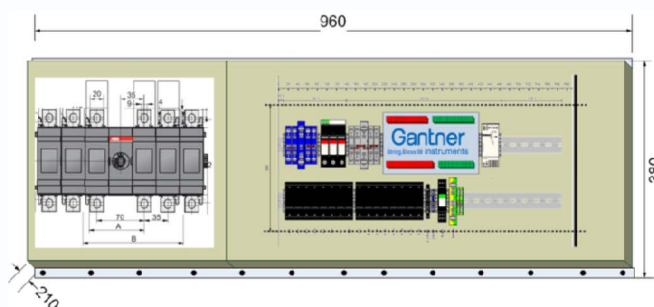
## Communication

Standard	RS-485, 2 wire
Data format	8e1
Protocol	Modbus-RTU, ASCII: 19.200 bps up to 115.200 bps
Number of the devices on the bus	maximum 250
Connection	0.25 mm <sup>2</sup> - 1.5 mm <sup>2</sup> Push-In-spring-Connection
Outside diameter of the connecting cable	Gland M20 6-13 mm (M16 4-10 mm Option)
Maximum cable length	1200 m over active repeater expandable

## General

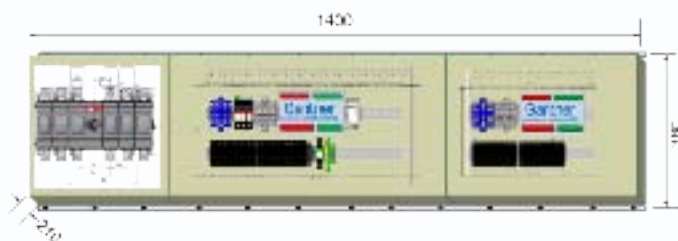
Width incl. bracket	960 mm	1400 mm	1960 mm
Height incl. bracket	380 mm	380 mm	380 mm
Depth incl. bracket	210 mm	210 mm	210 mm
Weight	18 kg	24 kg	39 kg
Housing	UV and weather resistant, glass fiber reinforced Polycarbonate, RAL 7035 (light grey)		
Protection according to EN 60529	IP65		
Class according to EN 61140	2		
Overvoltage protection	DC Side: Class II Communication Cat. 3		
Operating temperature	-25°C up to +60°C		
Storage temperature	-40°C up to +85°C		

## System design



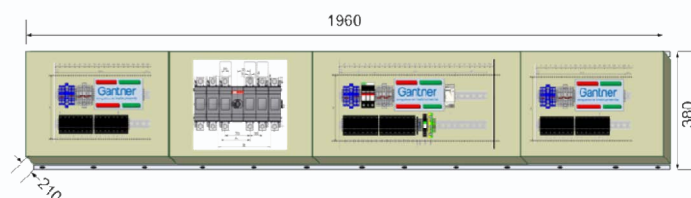
### string.CB 08

comprising of main module of 8 and main switch module 200A/1000VDC



### string.CB 16

comprising of main module of 8, Extension module of 8 and main switch module 200A/1000VDC



### string.CB 24

comprising of main module of 8, 2 x Extension module of 8 and main switch module 200A/1000VDC

## Warm Up Time

All declarations are valid after a warm up time of 45 minutes.

Valid from March 2011. Specification subject to change without notice