

Selection chart for DC combiner boxes

Technical data

Order No.	Combiner box variant / type	Number of strings*	Single-string monitoring with Transclinc xi+ with PRO-M power supply 230 V AC / 24 V DC	Surge protection	Outer dimensions W / H / D [mm]	System voltage	max. output current	max. string current	max. nominal current of fuse	Fuse holder in positive and negative pole, protection	Switch-disconnectors	Type of connection, input	Type of connection, output	permitted ambient temperature	max. installation height	Degree of protection, housing	Type of housing	Type of mounting	Attachment method	Standards
8000009555	PV GAK 8 LSTT	8	-	-	720/350/201	80 V DC	80 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009556	PV GAK 8 OVP LSTT with surge protection	8	-	-	720/350/201	80 V DC	80 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009557	PV GAK 8i+ OVP LSTT with surge protection with Transclinc xi+	8	-	-	720/540/201	1,000 V DC	140 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000011328	PV GAK8i+ 230V OVP LST with surge protection with Transclinc xi+ with PRO-M power supply 230 V AC / 24 V DC	8	-	-	720/540/201	1,000 V DC	140 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009558	PV GAK 14 LSTT	14	-	-	720/540/201	1,000 V DC	140 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009559	PV GAK 14 OVP LSTT with surge protection	14	-	-	720/540/201	1,000 V DC	140 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009560	PV GAK 14i+ OVP LSTT with surge protection with Transclinc xi+	14	-	-	750/750/320	1,000 V DC	220 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000011320	PV GAK14i+ 230V OVP LST with surge protection with Transclinc xi+ with PRO-M power supply 230 V AC / 24 V DC	14	-	-	750/750/320	1,000 V DC	220 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009561	PV GAK 16 LSTT	16	-	-	1000/750/320	1,000 V DC	180 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009562	PV GAK 16 OVP LSTT with surge protection	16	-	-	1000/750/320	1,000 V DC	180 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009563	PV GAK 16i+ OVP LSTT with surge protection with Transclinc xi+	16	-	-	1000/750/320	1,000 V DC	180 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000011329	PV GAK16i+ 230V OVP LST with surge protection with Transclinc xi+ with PRO-M power supply 230 V AC / 24 V DC	16	-	-	1000/750/320	1,000 V DC	180 A	10 A	16 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009565	PV GAK 22 LSTT	22	-	-	750/750/320	1,000 V DC	220 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009566	PV GAK 22i+ OVP LSTT with surge protection with Transclinc xi+	22	-	-	1000/750/320	1,000 V DC	220 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000011330	PV GAK22i+ 230V OVP LST with surge protection with Transclinc xi+ with PRO-M power supply 230 V AC / 24 V DC	22	-	-	1000/750/320	1,000 V DC	220 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439
8000009580	PV G4 (for two-level combiner box systems)	4	-	-	750/750/320	1,000 V DC	440 A	110 A	160 A	-	-	-	-	-20 °C to +40 °C	2,000 in MN	IP54	Fibre-glass reinforced polyester	suspended	mounting lugs	DIN VDE 0100-712 / DIN EN 61 439

* Number of DC inputs (plus and minus = one input)

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Combiner boxes For bundling and monitoring strings of photovoltaic systems

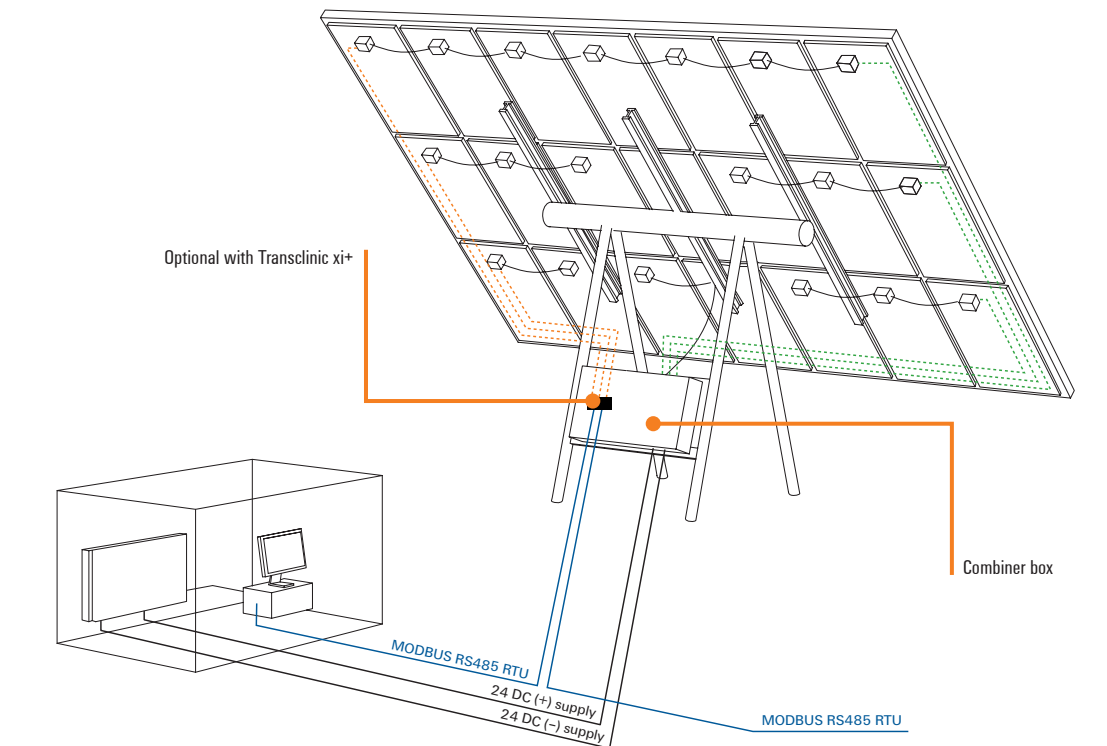


Weidmüller

The perfect partnership Siemens SINVERT PVS central inverters and Weidmüller DC combiner boxes

Perfectly suited and compatible

Ready-for-use combiner box for bundling and monitoring PV strings of your photovoltaic systems. If desired, the combiner box can include the Transclinc xi+ monitoring system for permanent performance monitoring of photovoltaic systems.



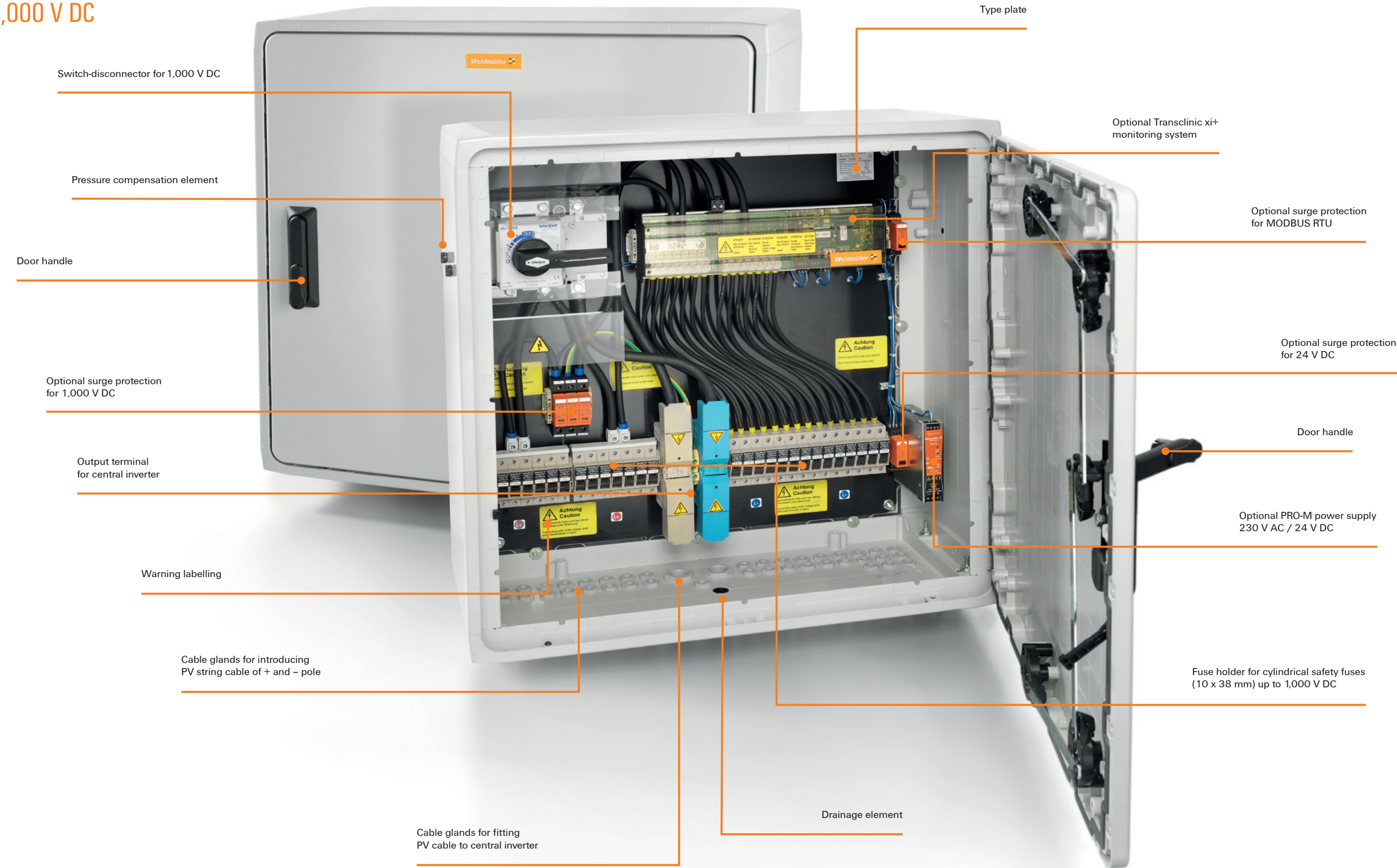
Standard equipment

- For 1,000 V DC
- Switch-disconnector for 1,000 V DC
- Fuse holder in + and - pole

Optional equipment

- Surge protection
- 1,000 V DC
- 24 V DC
- MODBUS RTU
- Transclinc xi+
- PRO-M power supply 230 V AC / 24 V DC

DC combiner box For 1,000 V DC



Switch-disconnector for 1,000 V DC

Pressure compensation element

Door handle

Optional surge protection for 1,000 V DC

Output terminal for central inverter

Warning labelling

Cable glands for introducing PV string cable of + and - pole

Cable glands for fitting PV cable to central inverter

Type plate

Optional Transclenic xi+ monitoring system

Optional surge protection for MODBUS RTU

Optional surge protection for 24 V DC

Door handle

Optional PRO-M power supply 230 V AC / 24 V DC

Fuse holder for cylindrical safety fuses (10 x 38 mm) up to 1,000 V DC

Drainage element

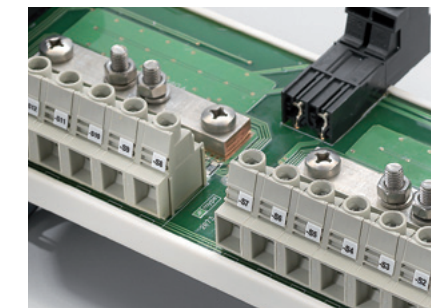
String monitoring Transclenic xi+

System monitoring using Transclenic xi+

The unlimited functionality of a photovoltaic plant is crucial for its efficiency. The Transclenic xi+ device series continuously calculates/determines the current coming from individual strings or string groups as well as the voltage in a photovoltaic plant thus allowing very detailed monitoring. In this way, disturbances that might cause a decrease in output can be identified and eliminated without delay.

Current measurement

The measuring of the string current is achieved through precise shunt resistances in order to attain high linearity.



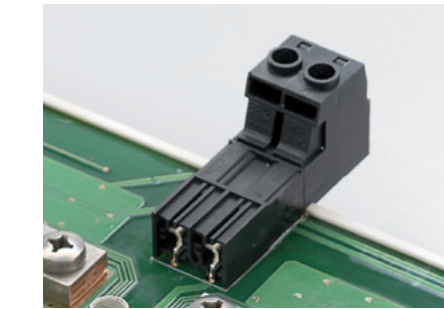
String monitoring Transclenic xi+



Technical data	Transclenic 8i+	Transclenic 14i+
Maximum number of strings	8	14
Maximum current per string	30 A	20 A
Maximum voltage	1,000 V DC	1,000 V DC
Supply of modules	19 - 36 V DC	19 - 36 V DC
Temperature range	-20...+70 °C	-20...+70 °C
Communication	MODBUS RS485 RTU	MODBUS RS485 RTU
Analogue input	0...+10 V or 0...20 mA	0...+10 V or 0...20 mA
Number of analogue inputs	2	2
Digital input	0.5 V low, 15...24 V high	0.5 V low, 15...24 V high
Number of digital inputs	2	2
Digital output	Max. 30 V DC/AC / 50 mA	Max. 30 V DC / AC/ 50 mA
Number of digital outputs	1	1
Maximum reading error	±1 %	±1 %
Dimensions (length/width/height)	295 x 109,5 x 92,2 mm	370 x 109,5 x 92,2 mm

Voltage measurement

Transclenic xi+ enables voltage measurements up to 1,000 V DC. In combination with the string currents, this enables the calculation of the generated output of a photovoltaic plant.



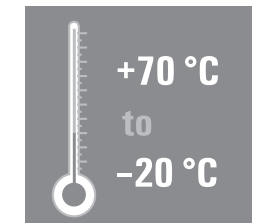
Modbus RTU

Depending on model, Transclenic xi+ has 8 inputs (max. 30 A per string) or 14 inputs (max. 20 A per string). Thanks to precise shunt resistors, the current measurement is very reliable. The current and voltage data measured is transferred via the RS 485 interface as MODBUS RTU protocols.

MODBUS
RTU

Temperature monitoring

Transclenic xi+ is suitable for a large range of temperatures, enabling safe operation in the string boxes. In addition, it determines the current temperature of the PCB.



Digital output

Digital output can be operated remotely.



Analogue and digital inputs

In addition to the analogue values of voltage, current and PCB temperature it is possible to utilise the analogue and digital signals even further. So, for instance, it is possible to monitor the status of the surge protection or to connect wind and irradiance sensors.

