PVI-STRINGCOMB

AURORA®
Photovoltaic Inverter

General Specification
PVI-STRINGCOMB
PVI-STRINGCOMB-S

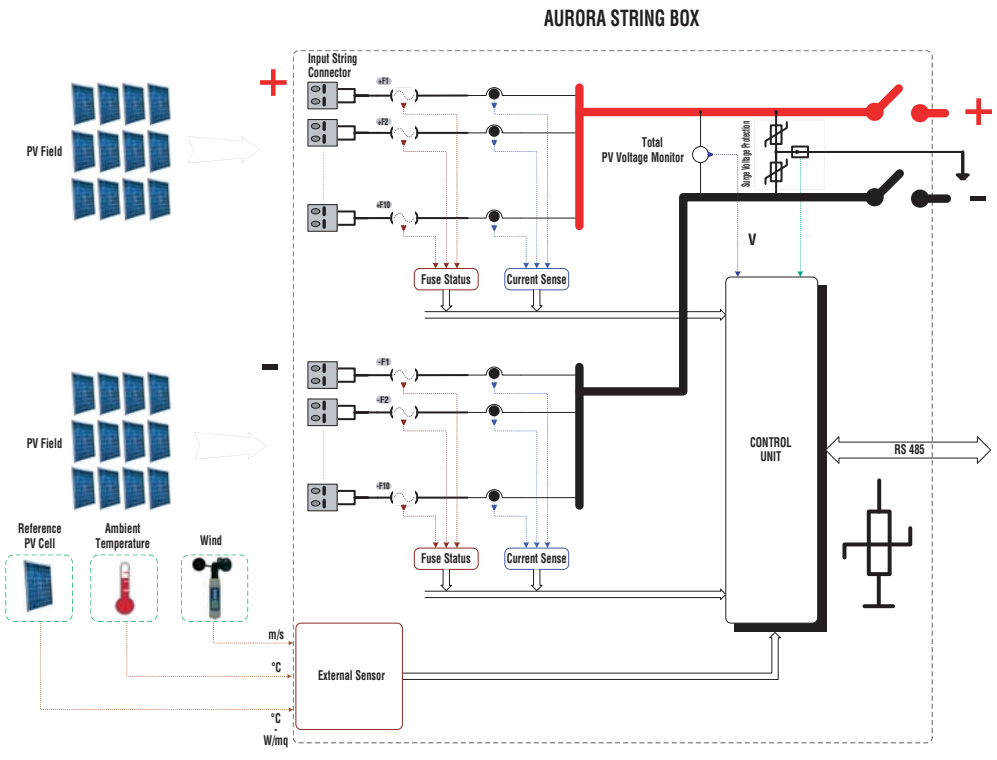
AURORA BENEFITS

- The string combiner box for the protection and monitoring of the array in centralized PV systems
- Up to 20 inputs (possibility to connect up to 20 strings) managed by 10 channels for current measurement and with protection fuses, which allow an accurate monitoring and early fault detection of each string.
- Available fuse size: 10A, 12A, 16A, 20A.
- Fuse status monitoring ensures prompt fault detection and alarm
- Up to 20 strings can be connected and paralleled on the same box, with protection fuse mounted on removeable DIN rail fuse holders on both the positive and negative pole (2 parallel strings for each fuse)
- String cable connection via Multi-Contact or cable glands and terminal blocks
- Overvoltage protection with replaceable varistor cartridge on both DC power and signal lines
- Available with integrated output DC switch (STRINGCOMB-S version) on optionally with remote disconnect
- IP65 plastic enclosure for outdoor installation
- Integrated RS-485 serial port for remote communication with the inverter
- 3+1 optional analog inputs for connection to external sensors (irradiance, temperature, wind speed, etc...)
- 1+1 digital inputs
- internal auxiliary power supply
- optional electronic antitheft
- auxiliary input for external battery back-up voltage

HIGH PERFORMANCE REDEFINED

The string combiner box PVI-STRINGCOMB is an ideal complement to the Aurora PVI-CENTRAL family of inverters that ensures the same control and monitoring accuracy of the PV generator Typically achieved with string inverters. The individual string currents are accurately measured with hall effect sensors and any mismatch is promptly detected by the system supervisor to allow for quick identification of any fault of the solar panels. All string combiner boxes include surge protection with removable elements as well as fuse protection for each couple of string channel.

Block Diagram



CHARACTERISTICS	PVI-STRINGCOMB	PVI-STRINGCOMB-S
INPUT		
Input Voltage Range [Vdc]	250 - 850	250 - 850
Absolute maximum input voltage [Vdc]	1000	1000
Measurement channels	10	10
Max. Idc current for each channel [A]	20	20
Max. combined imput current [A]	160	125
DC fuses	10+10	10+10
Number of strings per fuse	2	2
String cable cross section [mm²]	up to 6	up to 6
Maximum number of strings (parallel)	20 (2 on each fuse)	20 (2 on each fuse)
DC overvoltage protection	Yes (with replaceable cartridge)	Yes (with replaceable cartridge)
OUTPUT		
Max. output current rating [A]	160	125
Output DC cable connection	M10 (max 120mmq)	M10 (max 120mmq)
Grounding connection cable	M8 (max 35 mmq)	M8 (max 35 mmq)
Output DC switch rating	-	125A/1000V
MECHANICAL AND ENVIRONMENTAL DATA		
Size (height x width x depth) [mm]	559 x 757 x 250	559 x 757 x 250
Weight [kg]	23	25
Protection degree	IP65	IP65
Operating ambient temperature range [°C]	-25 to +55	-25 to +55
Relative humidity (*)	0 to 95%	0 to 95%
COMMUNICATION	via RS485	via RS485
AVAILABLE DATA	String currents, strings fuse status, internal temperature, ambient parameters acquired from attached sensors, OVR status.	

(*) pressure equalizing valve to avoid condensing

MODEL SUMMARY

MODEL NUMBER	CONFIGURATION
PVI-STRINGCOMB	20x10A (or 10x20A) string combiner with current measurement and string protection fuses
PVI-STRINGCOMB-MC	20x10A (or 10x20A) string combiner with current measurement and string protection fuses with MULTICONTACT MC4
PVI-STRINGCOMB-S	20x10A (or 10x20A) string combiner with current measurement, string protection fuses and DC output switch
PVI-STRINGCOMB-S-MC	20x10A (or 10x20A) string combiner with current measurement, string protection fuses and DC output switch with MULTICONTACT MC4

STANDARDS AND CODES

Aurora inverters comply with standards set for grid-tied operation, safety and electromagnetic compatibility including: UL 1741, VDE0126, CEI 11-20, DK5940, CEI 64-8, IEC 61683, IEC 61727, EN50081, EN50082, EN61000, CE certification.