

Datasheet PV Combiner Box

The nLightPower PV Combiner Box is built to simplify and secure string-level DC protection in solar energy systems. It combines the input from two independent PV strings and delivers it safely to dual MPPT inverters, incorporating MCCBs, surge protection, and DC fuses in one pre-wired, high-integrity enclosure.

Technical Specifications

Parameter	Specification
Application	DC PV Combiner Box for 2/3 MPPT Inputs
System Voltage	1000 VDC
Rated Current (per string)	32 A
Input Strings	2/3 (PV+ and PV- per string)
Enclosure Type	Metal or Polycarbonate (IP-rated 65)
Mounting	DIN Rail
Cable Entry	Glanded ports for 2/3 input + 1 output

Protection Components

Component Details

MCCBs 2/3× GOL VC-63DC, 4P, 32A, 1000VDC, Curve C, 6000A breaking capacity

SPD (Type 2) 2/3× GOL GL-PV1000, 1000VDC, In: 20kA, I_{max}: 40kA, U_p ≤ 3.8kV, IP20

DC Fuses GOL GGR-PV-30 holders with 10×38mm 30A fuses, 1000VDC rating

Key Features

- Dual input (2/3-string) configuration for 2/3 MPPT inverters
- Integrated overcurrent and surge protection
- Type 2/3 SPD compliant with IEC 61643
- Pre-wired with busbars for fast installation
- Compact, DIN-rail layout with maintenance access
- Suitable for rooftop or commercial PV installations

Typical Applications

- Rooftop solar systems
 - Commercial PV arrays
 - Dual-MPPT inverter integration
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