



RAND PV 1500V DC 400A SOLAR COMBINER BOX

GENERAL INFORMATION

<u>Parameter</u>	<u>Details</u>
Product Name	Solar PV Combiner Box (1500V DC, 400A)
Model Numbers	CBDC-2P-12L/1-30A CBDC-2P-14L/1-25A CBDC-2P-16L/1-25A CBDC-2P-18L/1-20A
Rated Voltage	1500 V DC
Rated Current	400 A (Output Busbar Current)
Input String Count	12/14/16/18 (customizable)
Output Circuit	1 (single output to inverter)
System Type	Floating/Negative Ground (custom option)
Installation Site	Outdoor / Indoor (IP66 rated)
Application	Utility-scale and Commercial Solar PV Systems

ELECTRICAL SPECIFICATIONS

<u>Parameter</u>	<u>Specification</u>
Max Input Voltage	1500 V DC
Nominal Input Voltage	1500 V DC
Input Current (per string)	20 A / 30 A (typical); customizable
Input Protection	Fuse protection per string (gPV, 1500V DC rated)
Output Current	400 A (max continuous output current)
Output Protection	MCCB/Isolator switch 400A DC (with arc chamber)
SPD (Surge Protection)	UL1449 5th Ed Type 1CA, MOV, replaceable cartridge
Monitoring (optional)	SPD Remote Contact, Disconnect Remote Contact
Diodes	Integrated blocking diodes (optional)
Grounding	Weld-On Ground Block, Permanent

MECHANICAL SPECIFICATIONS

<u>Parameter</u>	<u>Specification</u>
Enclosure Type	Powder-coated 3mm Aluminum / Polycarbonate
Ingress Protection	IP66 / NEMA 4X
Cable Entry	Optional Cable glands / MC4 / PG glands / Compression lugs
Mounting	Wall or Pole Mount (mounting eyelets integrated, 3/8" or M10 Bolt)
Dimensions (LxWxH)	30" x 24" x 10" (762 x 610 x 250 mm)
Weight	57-68 LBS (26-31 kg) (depends on config)
Color	(Light Grey, Metallic)

ENVIRONMENTAL SPECIFICATIONS

<u>Parameter</u>	<u>Specification</u>
Operating Temperature	-20°C to +40°C
Storage Temperature	-40°C to +80°C
Humidity	0% – 95% RH (non-condensing)
Altitude	≤ 2000 m
UV Protection	Yes (UV stabilized enclosure)
Fire Resistance	UL94-V0 (for plastic parts)

COMPLIANCE & CERTIFICATIONS

<u>Standard</u>	<u>Compliance</u>
Protection Grade	IEC 60529 (IP66)
Surge Protection	IEC 61643-31 / EN 50539-11
Combiner Box Safety	IEC 61439-2
Fuses	IEC 60269-6 / UL 2579
Isolation	IEC 60947-3 (DC switches)
EMC Compliance	EN 61000-6-1 / 6-3
RoHS Compliant	Yes
CE Marked	Yes
UL 1741 / UL 98B	Yes, UL 1741 E548170, UL 98B E516504

ORDERING INFORMATION

<u>Model</u>	<u>Description</u>
CBDC-2P-12L/1-30A	12 Input Strings, 400A Output, 1500V DC
CBDC-2P-14L/1-25A	14 Input Strings, 400A Output, 1500V DC
CBDC-2P-16L/1-25A	16 Input Strings, 400A Output, 1500V DC
CBDC-2P-18L/1-20A	18 Input Strings, 400A Output, 1500V DC

MANUFACTURER SUPPORT

<u>Standard</u>	<u>Compliance</u>
Technical Support	(847) 299-8884 / info@RANDPV.com / On-site (on request)
Warranty	5 Years (Enclosure 25 years)
Customization	Supported (branding, layout, string count)
Lead Time	8–10 weeks (standard), 10–14 weeks (custom)



UL 1741 Listed