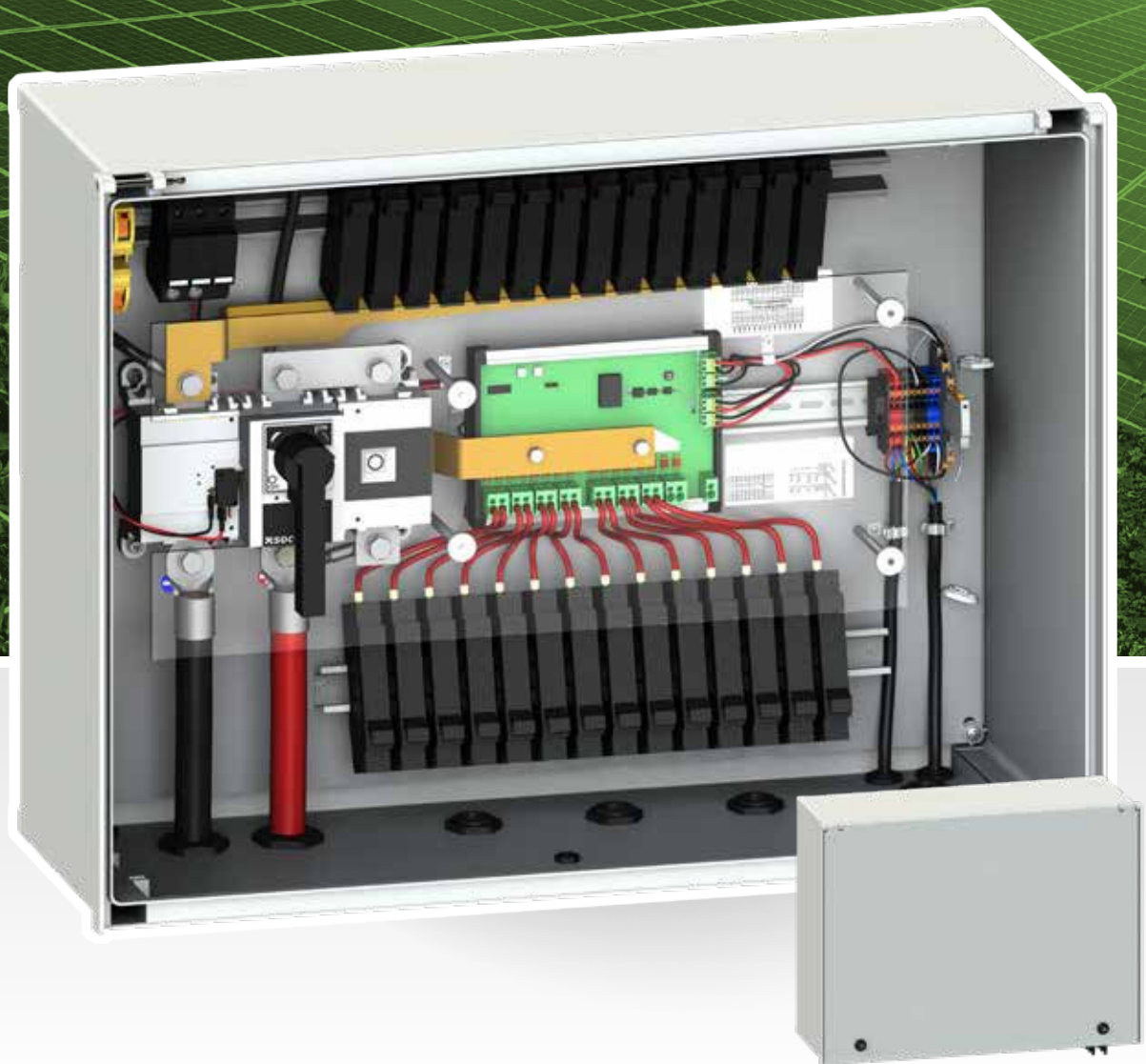


DC-Combiner Boxes Series MSB



PCE  MERZ

switch to Quality!

BENEFITS



DC combiner box for photovoltaic applications



High-quality glass fiber reinforced plastic enclosures for rooftop and ground-mounted systems UV and weather resistant - optionally in metal housing



Standard versions from 5 to 24 strings, optionally with monitoring .



Overvoltage protection devices SPD Type 2, or type 1/2



Project-specific solutions, here using the example of 14 strings, further solutions available on request at any time.



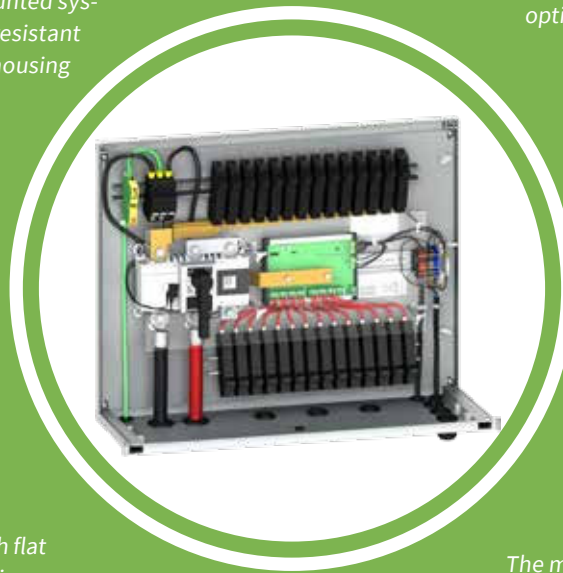
Up to 3 tinned busbars with flat connection without settling movement for heat reduction.



The maintenance-free 400A DC switch-disconnector has a high thermal reserve.



Easy to connect, all connections in the cable run guarantee optimal connections, UV-resistant black screw connections



COMPONENTS



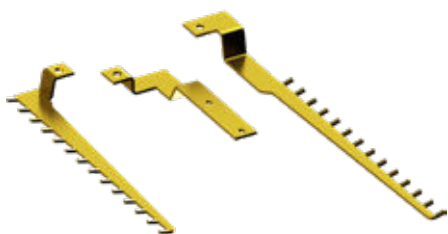
Glass fiber reinforced polyester housing
double lockable



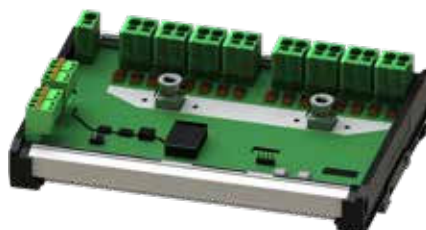
Switch-disconnector
400A



Inclined PV fuse holders enable a
simplified connection



Copper rails



Monitoring - Current control



Contact protection with wing nuts and
spacers



MC4 EVO 2 plug / socket
UV-resistant black



Sunclix plug / socket
UV-resistant black



Single / multiple screw connections
UV-resistant black



Pressure equalization membrane
UV-resistant black



SPD Type 2 / 1-2 surge protection



SPD for monitoring + terminal block

SPECIFICATIONS

- The MERZ DC combiner boxes have been developed for use with rooftop and ground-mounted systems and are designed for use between PV modules and inverters.
- Equipped with load-break switches, fuse holders, fuse inserts, overvoltage protection and monitoring, they offer the option of connecting 5 to 24 strings.
- The individual strings are brought together at the string fuse outlets via busbars and connected in parallel via a DC load-break switch in parallel.
- Particularly suitable for outdoor use for systems up to max. 1500V DC.

		from	to
Electrical data			
Number of strings (+/-)		5	24
Rated operating voltage U_e	Vdc	1500	1500
Max. Operating current per line and version (input / output)	A	10,0	20,4
Overvoltage protection device (SPD) type 2 (optional type 1/2)			
SPD according to EN 50539-11 2013		Typ 2	
Protection level U_p	kA	≤ 5	
Total leakage impulse current (8/20 μs) (I_{total})	kA	30	
DC switch-disconnector			
Model		DC switch-disconnector(400A)	
Rated operational voltage U_e	V	1500	
Rated operational current I_e	A	400	
Connection data			
Input / output variant MC4 EVO 2		Stäubli MC4-EVO 2 / 2,5 - 6 mm ²	
Input / output variant Sunclix		Sunclix / 2,5 - 6 mm ²	
Input / output variant Single / multiple screw connections		MFD 5-7 mm / 4-6 mm ²	
Abisolierlänge	mm		14
Grounding		PE conductor terminal block	
Stripping length	mm		25
Cable glands	M25 / Clamping range mm	9	16
Fuse			
Fuses on the plus and minus side		15A / 20A / 25A / 32A	
Rated fuse current I_n		>1,5 x I_{sc_MOD} and (IEC 60364-7-712)	
Enclosure			
Material		lass fiber reinforced plastic enclosures	
Degree of protection		IP 66	
Impact resistance		IK 10	
Protection class		II	
Operating conditions			
Installation sites		Rooftop and ground-mounted systems	
Ambient temperature		-25°C - +55°C	
Norms			
Norm		61439-2	

GENERATOR COMBINER BOX DESIGN WITH / WITHOUT MONITORING

Generator combiner boxes, ready for connection using the example of 14 strings



MSB-1141-20-1500-
VFD-01-E-HI
Single screw connections

MSB-1141-20-1500-
WFD-01-E-HI
Multiple screw connections

MSB-1141-20-1500-
MFD-01-E-HI
MC4 EVO2

MSB-1141-20-1500-
SFD-01-E-HI
Sunclix



MSB-1141-20-1500-
VFD-01
Single screw connections

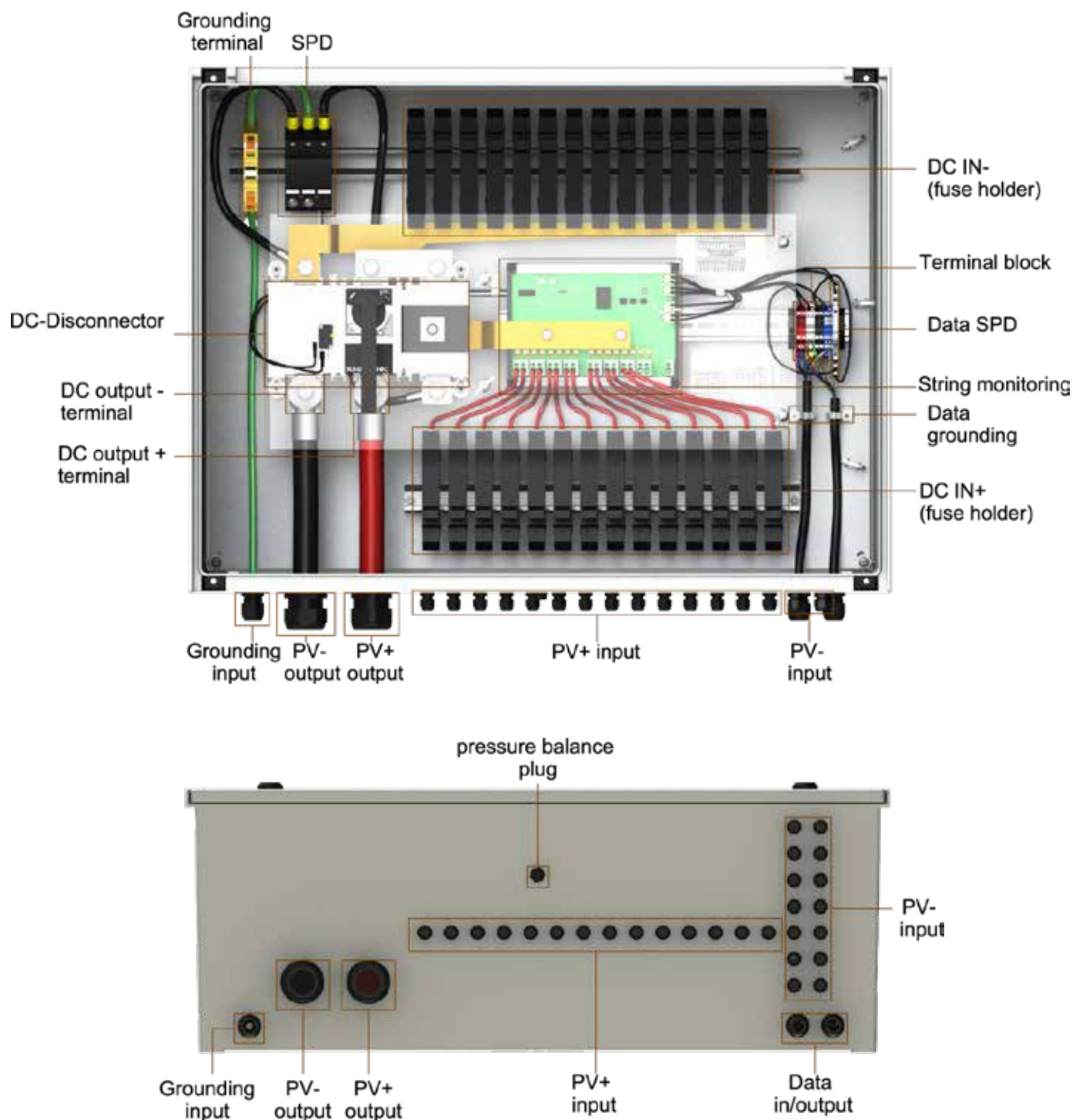
MSB-1141-20-1500-
WFD-01
Multiple screw connections

MSB-1141-20-1500-
MFD-01
MC4 EVO2

MSB-1141-20-1500-
SFD-01
Sunclix

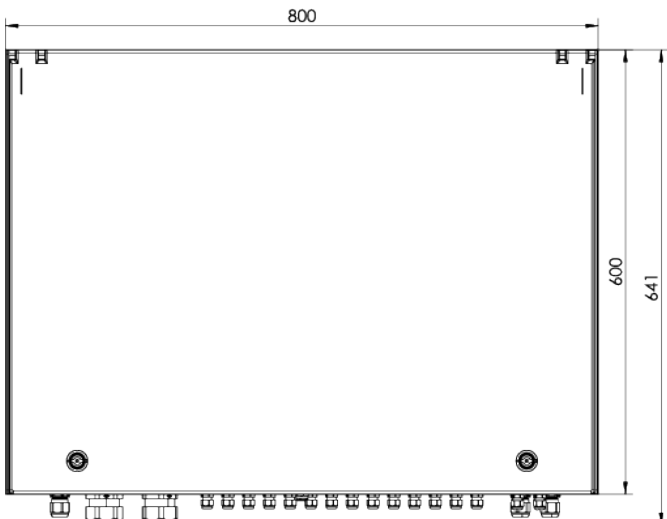
MSB-1141-20-1500-VFD-01-E-HI

Ready-to-connect combiner box for PV systems - 14 strings, 1500 VDC
incl. DC load-break switch (400A), overvoltage protection (SPD type 2), monitoring,
single screw connections, PV fuses and remote signaling contact (HI).

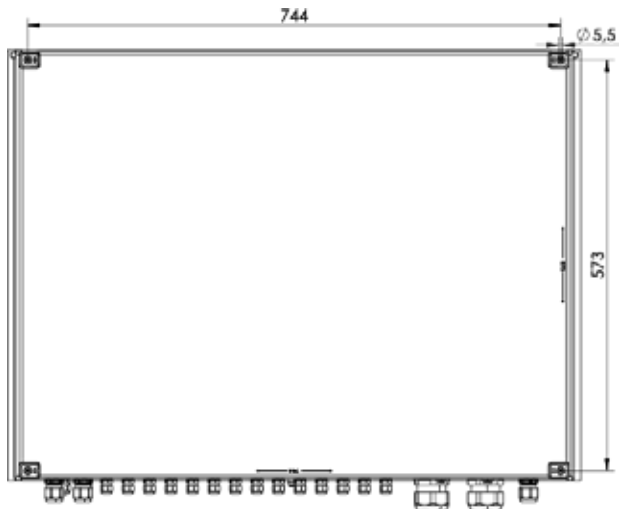


DIMENSIONS

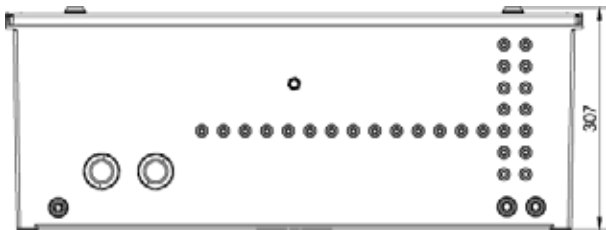
Front view



Rear view



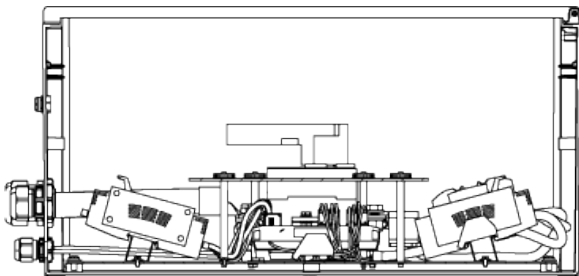
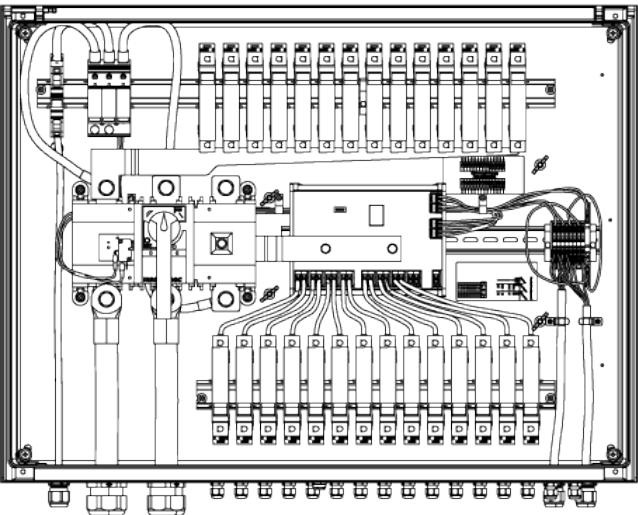
Connections



Side view

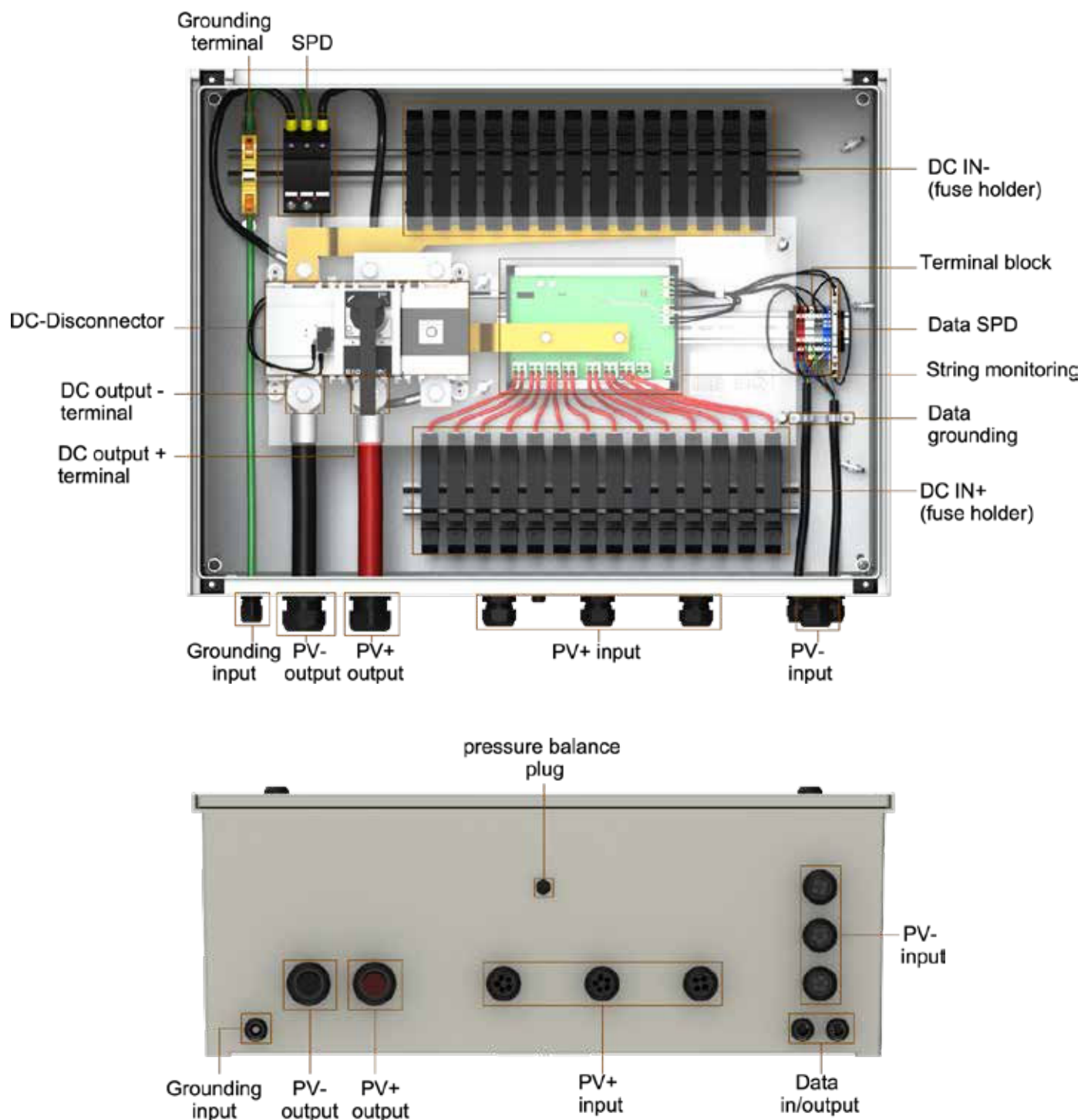


Wiring



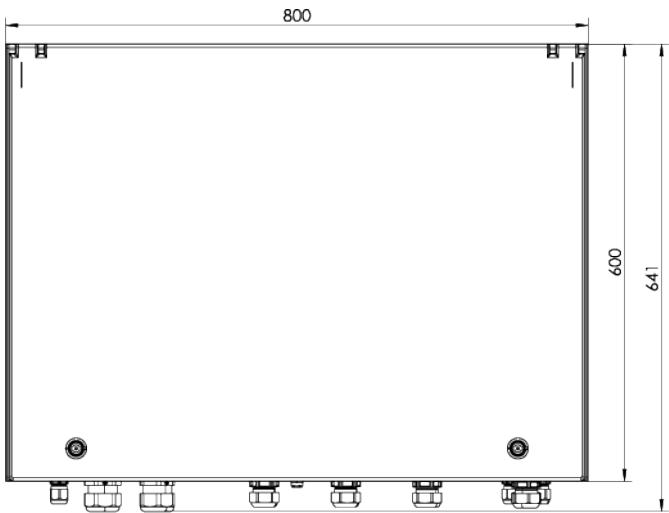
MSB-1141-20-1500-WFD-01-E-HI

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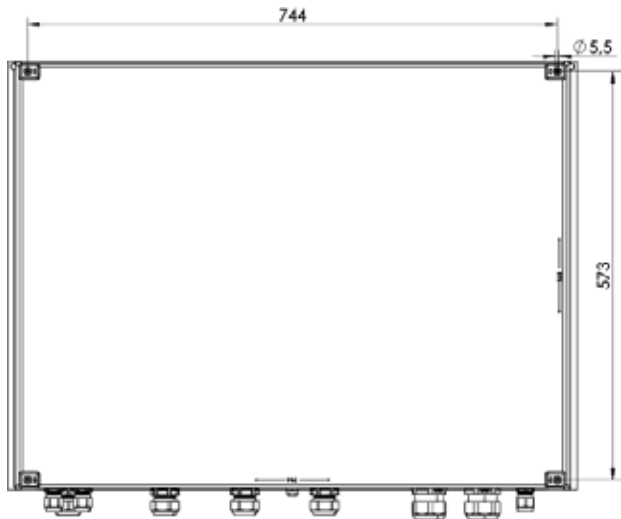


DIMENSIONS

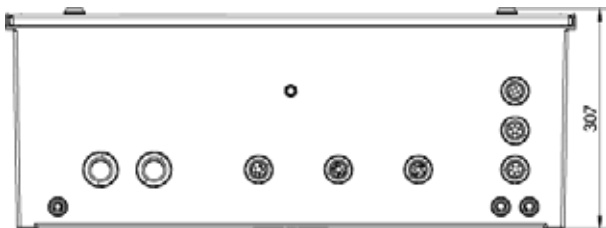
Front view



Rear view



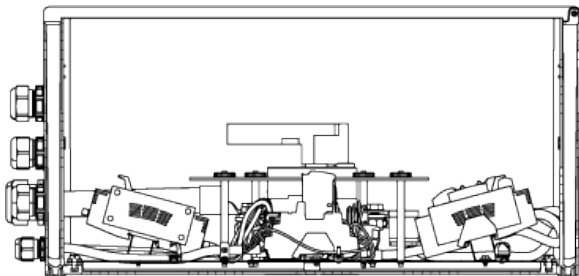
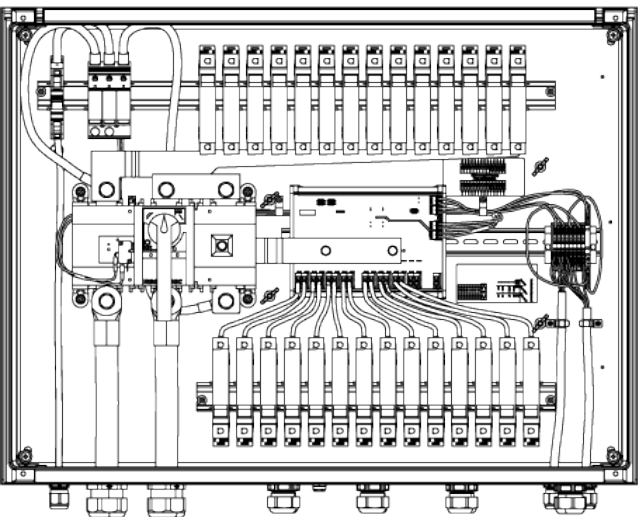
Connections



Side view

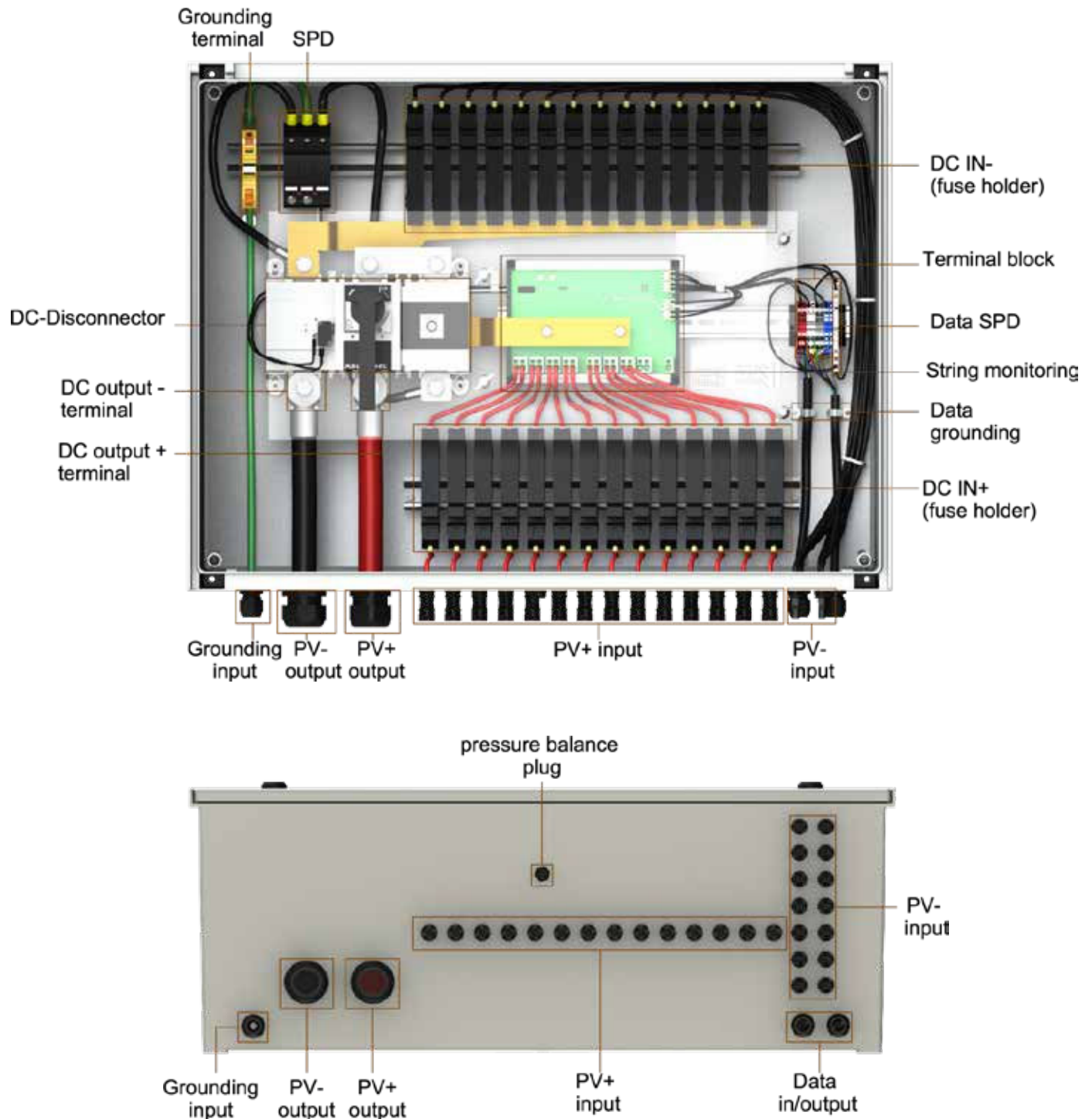


Wiring



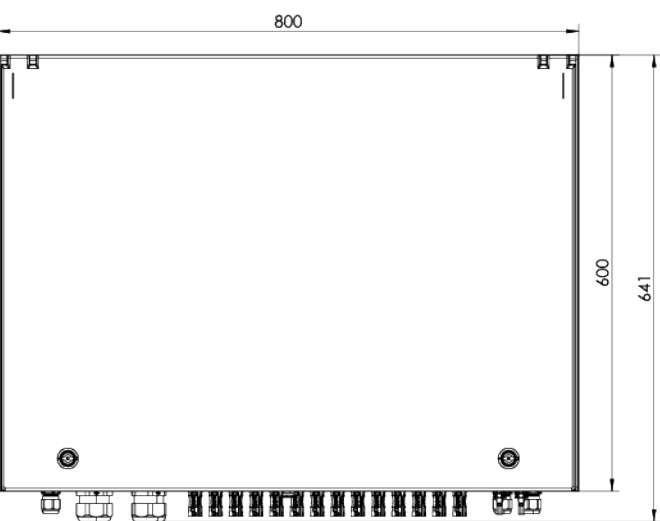
MSB-1141-20-1500-MFD-01-E-HI

Ready-to-connect combiner box for PV systems - 14 strings, 1500 VDC
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MC4 EVO2-plugs, PV fuses and remote signaling contact (HI).

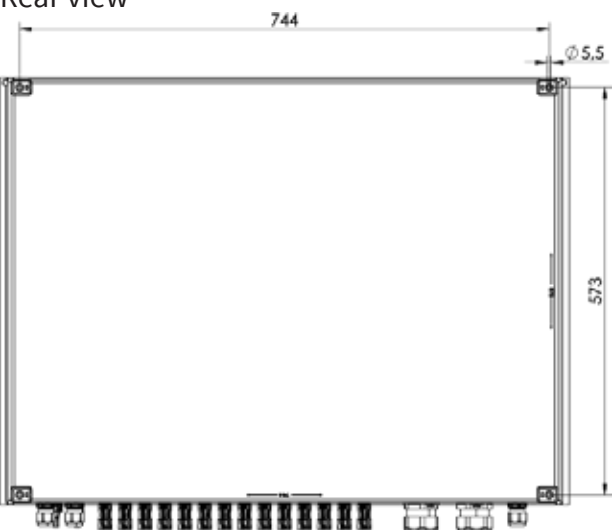


DIMENSIONS

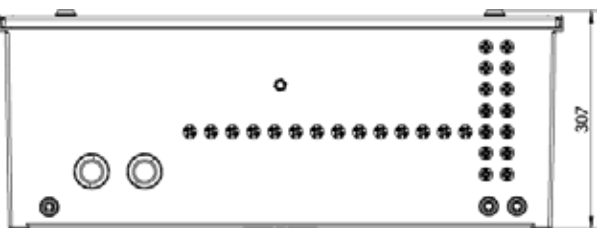
Front view



Rear view



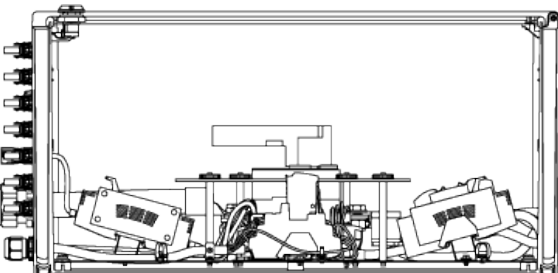
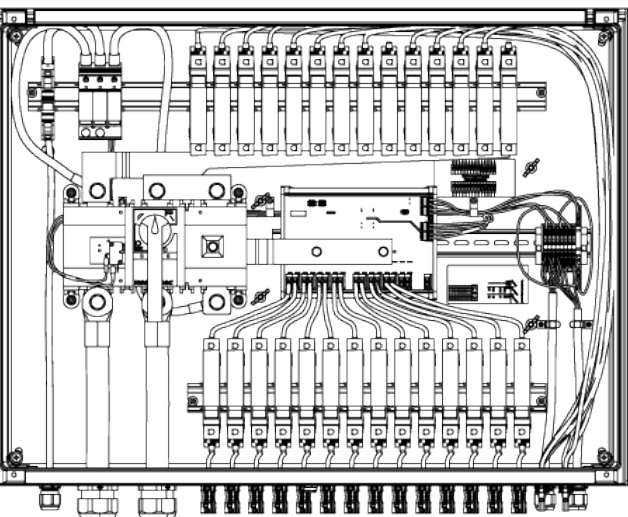
Connections



Side view

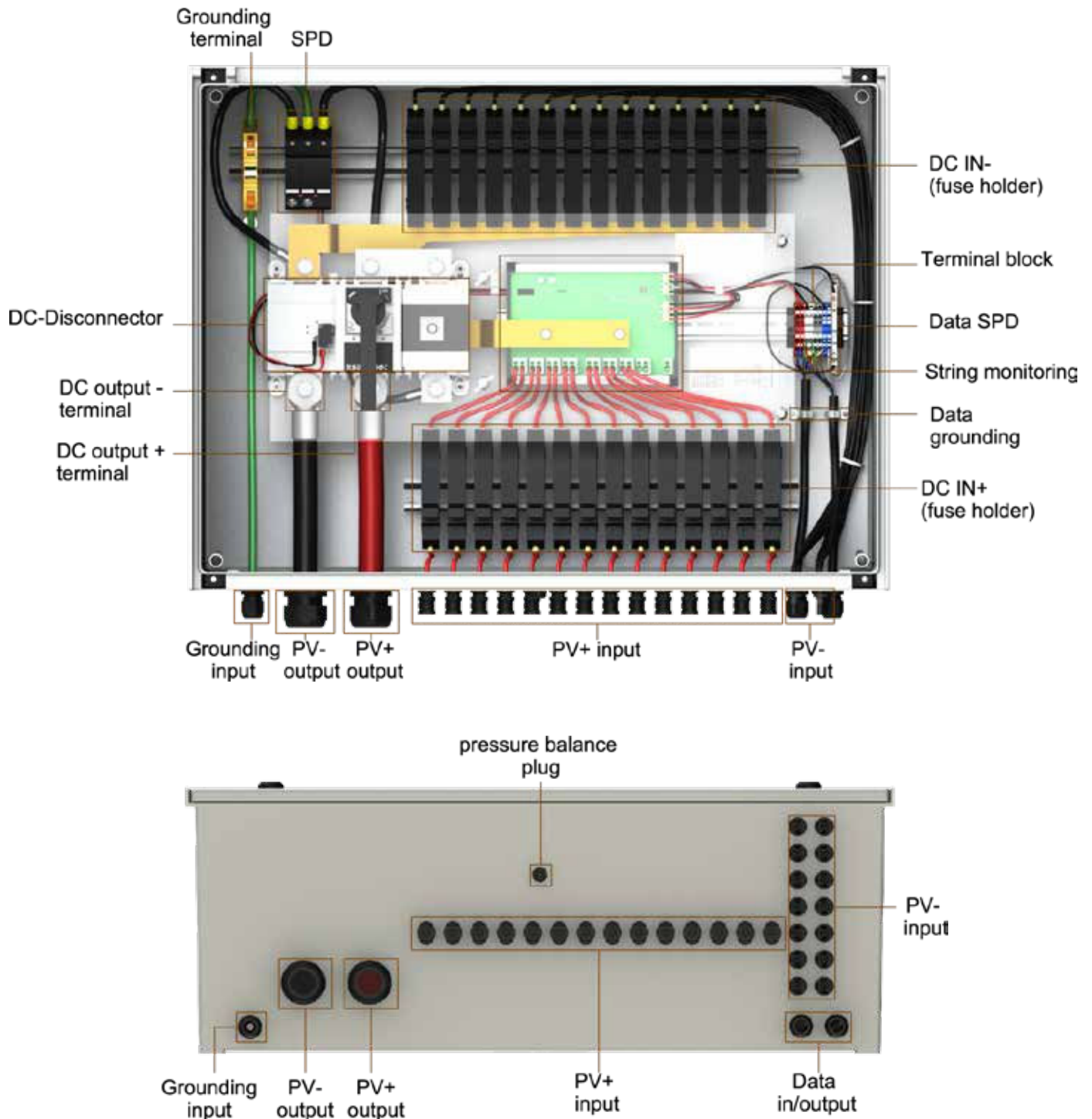


Wiring



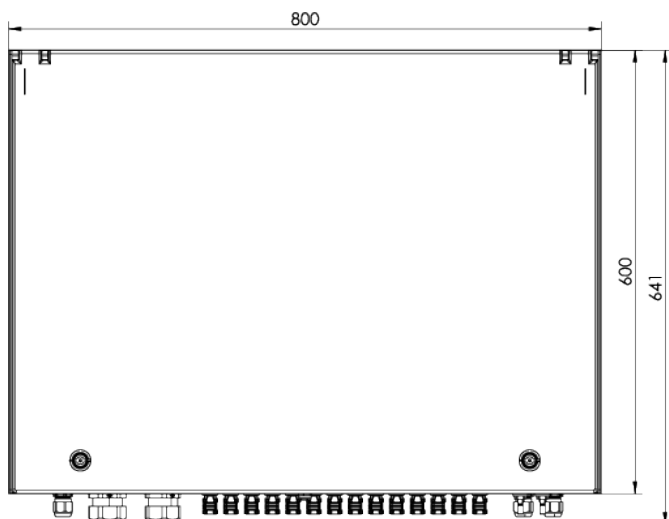
MSB-1141-20-1500-SFD-01-E-HI

Ready-to-connect combiner box for PV systems - 14 strings, 1500 VDC
incl. DC load-break switch (400A), overvoltage protection (SPD type 2), monitoring,
Sunclix-plugs, PV fuses and remote signaling contact (HI).

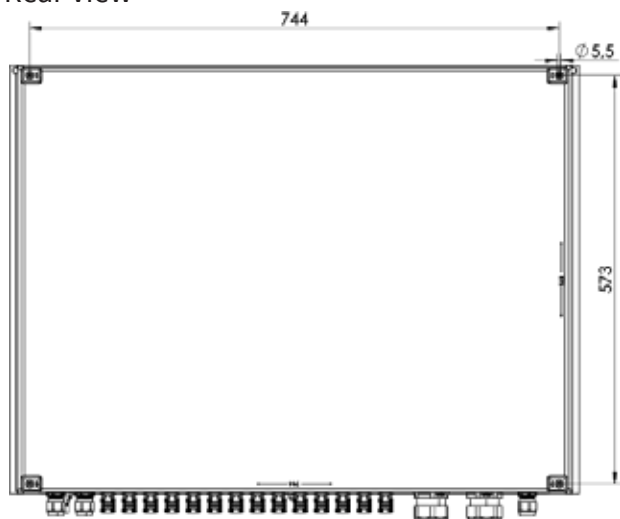


DIMENSIONS

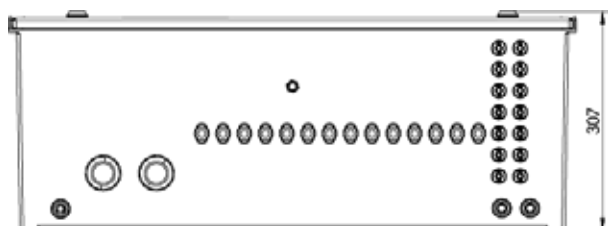
Front view



Rear view



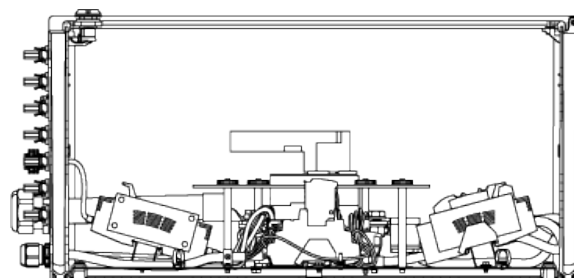
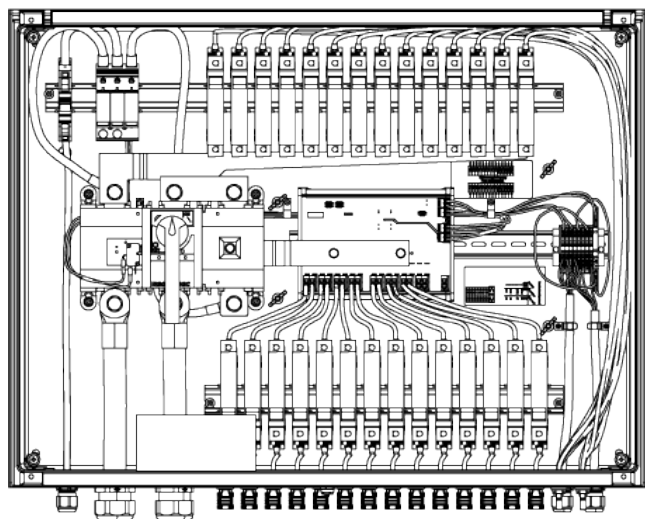
Connections



Side view

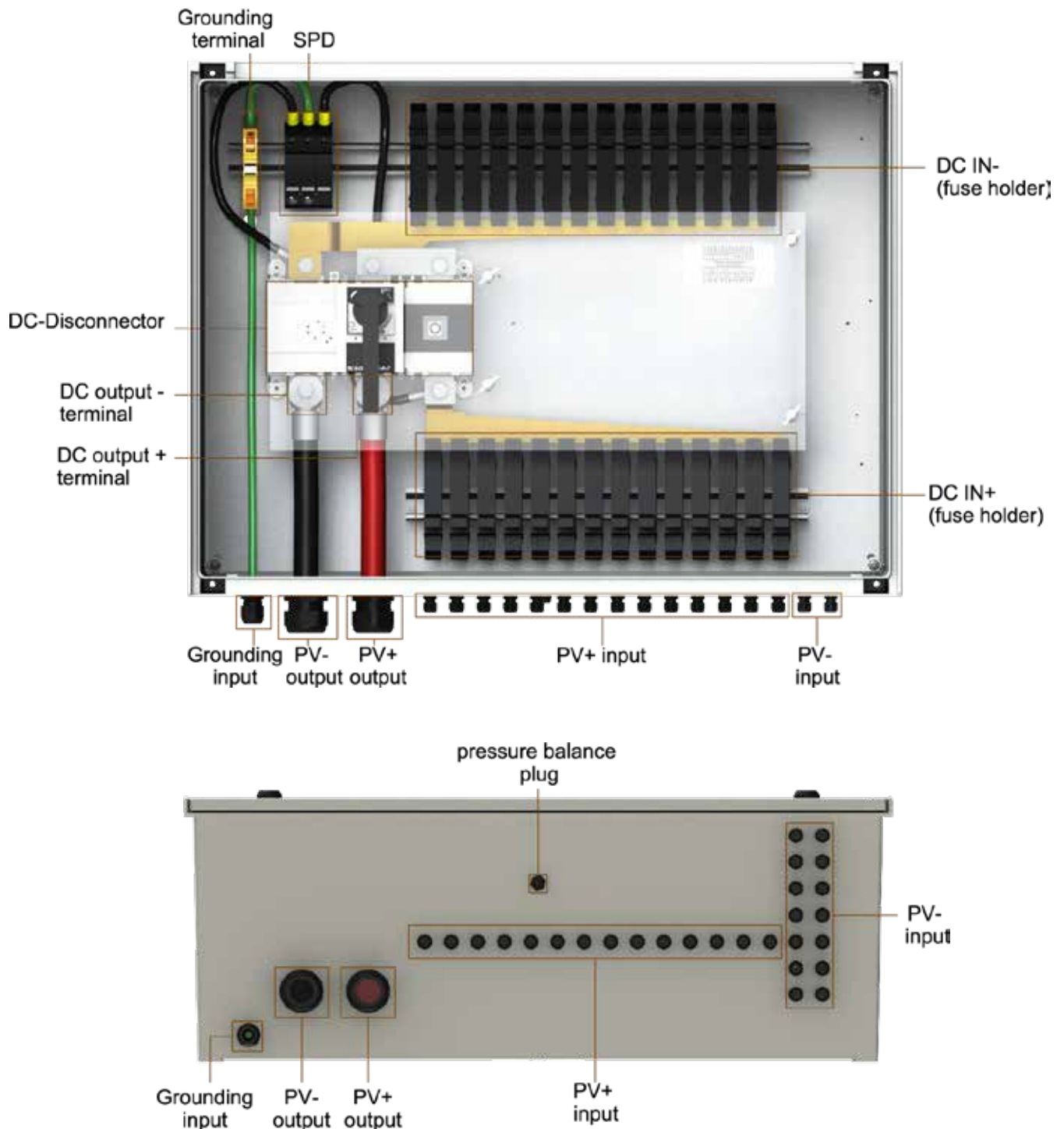


Wiring



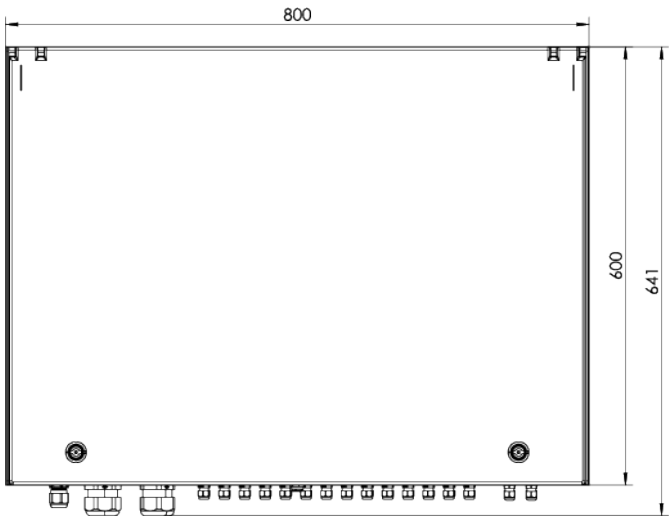
MSB-1141-20-1500-VFD-01

Ready-to-connect combiner box for PV systems - 14 strings, 1500 VDC
incl. DC load-break switch (400A), overvoltage protection (SPD type 2),
single screw connections, PV fuses.

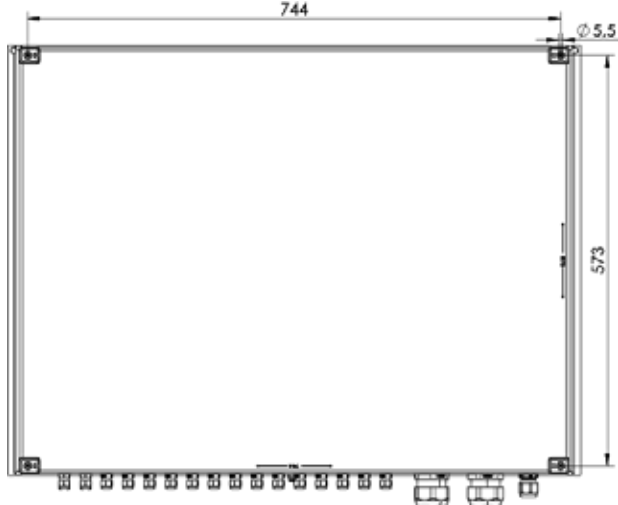


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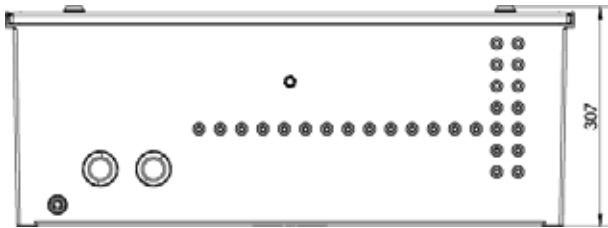
Front view



Rear view



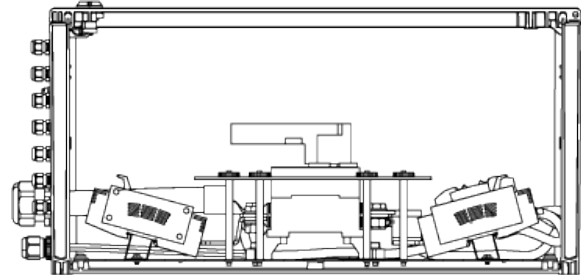
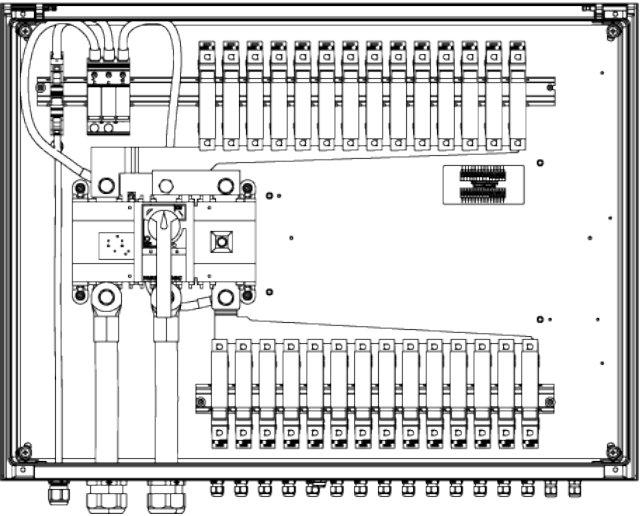
Connections



Side view

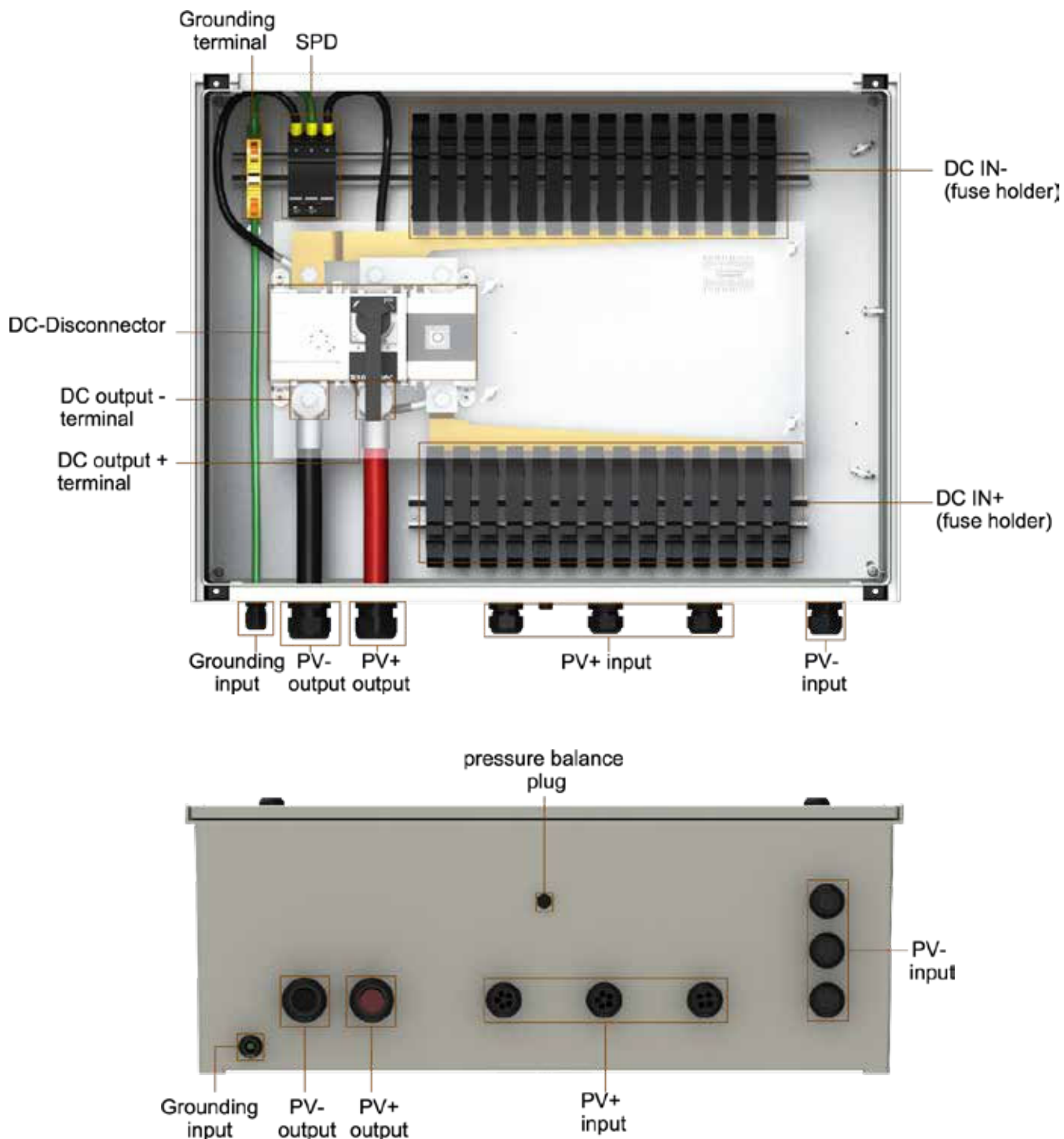


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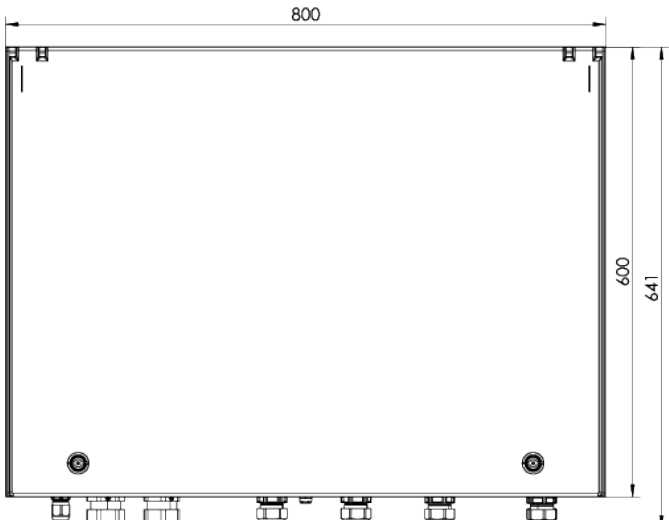
MSB-1141-20-1500-WFD-01

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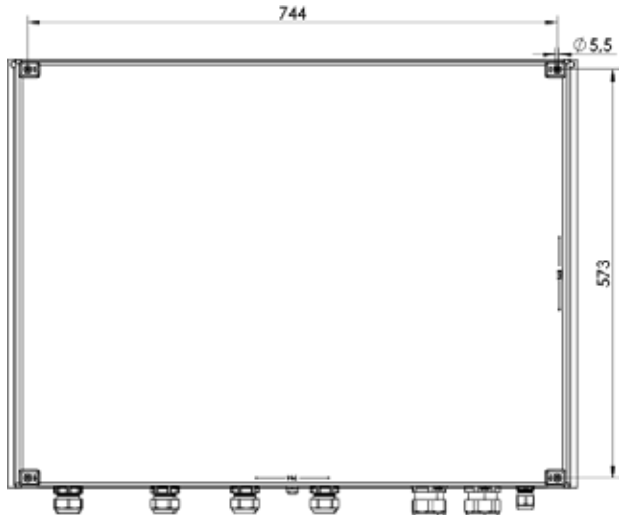


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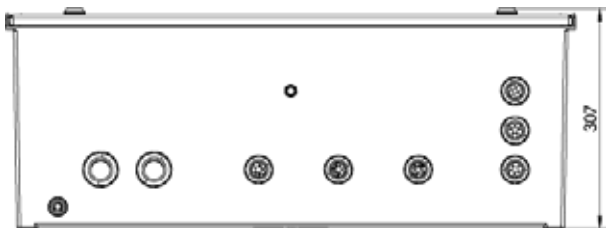
Front view



Rear view



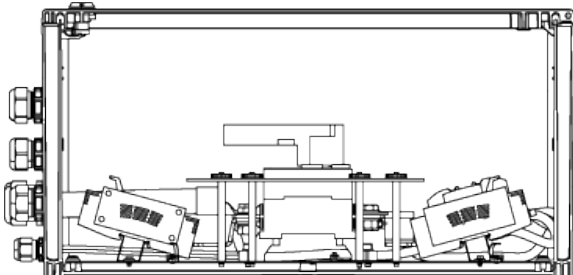
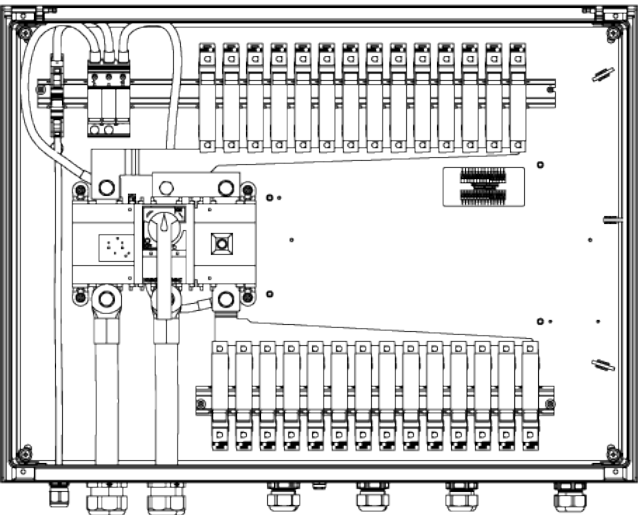
Connections



Side view

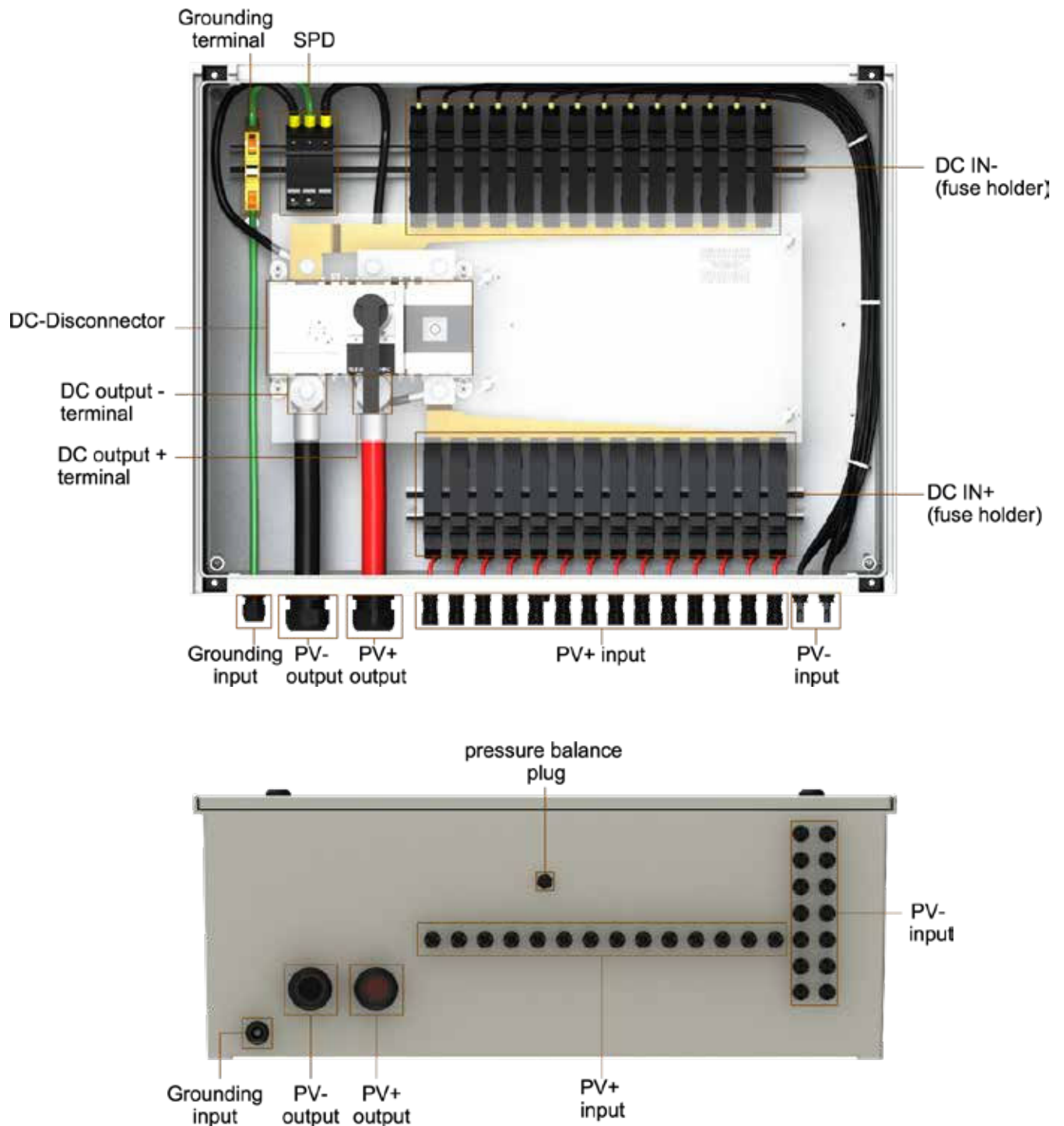


Wiring



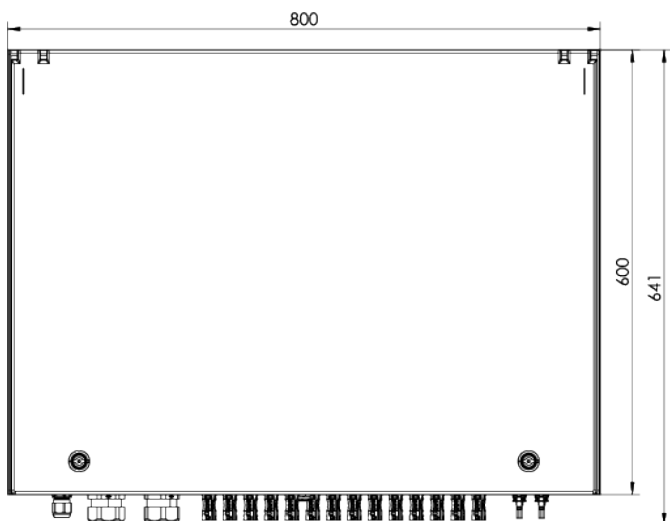
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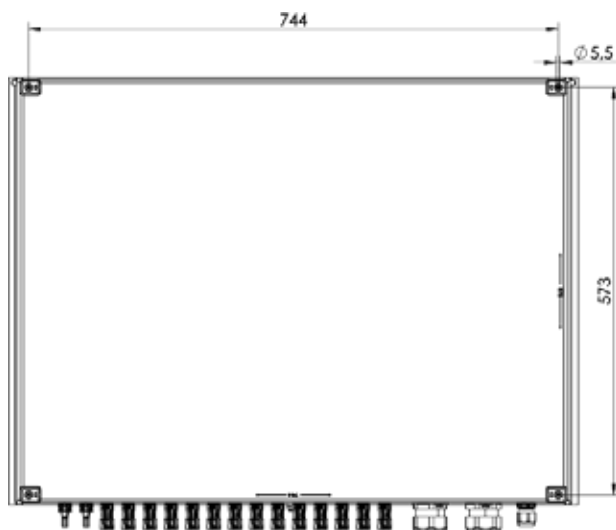


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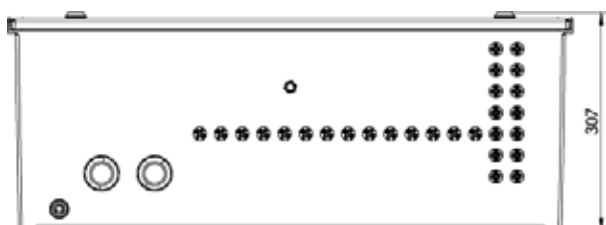
Front view



Rear view



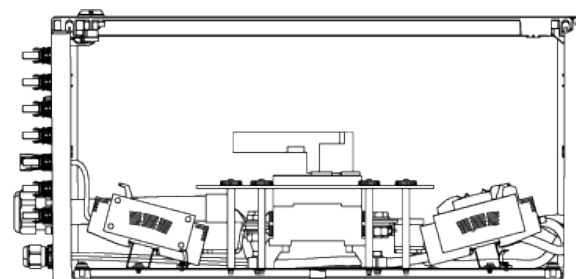
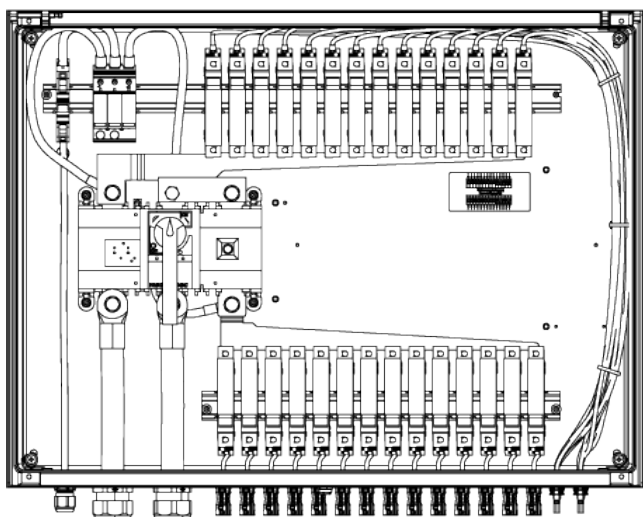
Connections



Side view

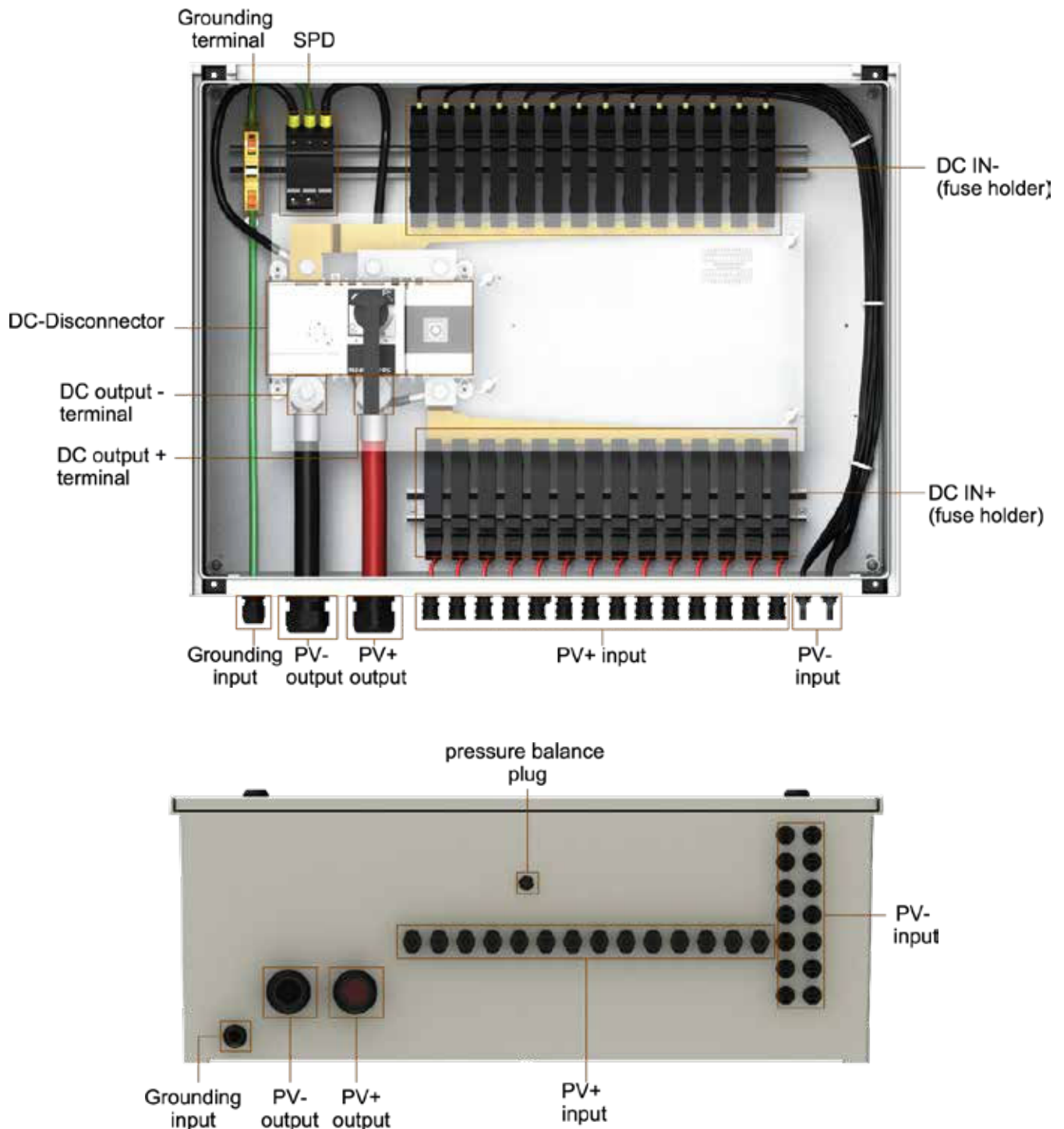


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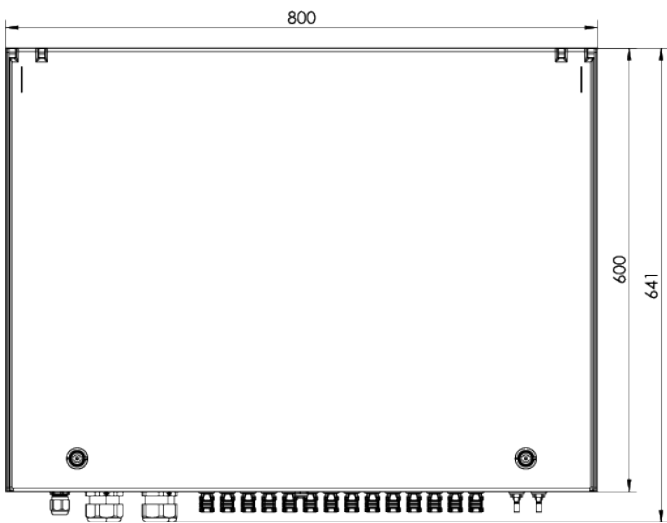
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Ready-to-connect combiner box for PV systems - 14 strings, 1500 VDC
incl. DC load-break switch (400A), overvoltage protection (SPD type 2),
Sunclix plugs, PV fuses.

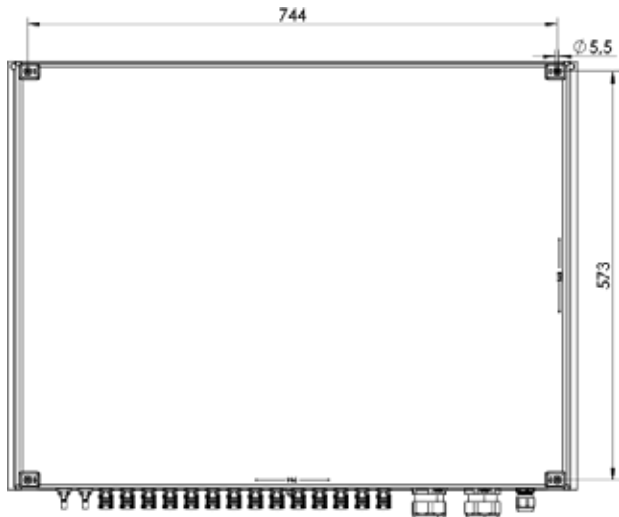


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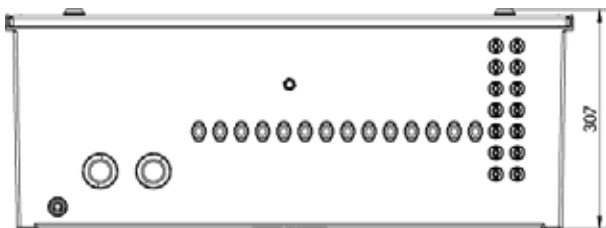
Front view



Rear view



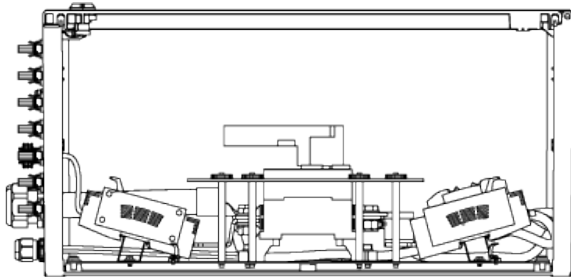
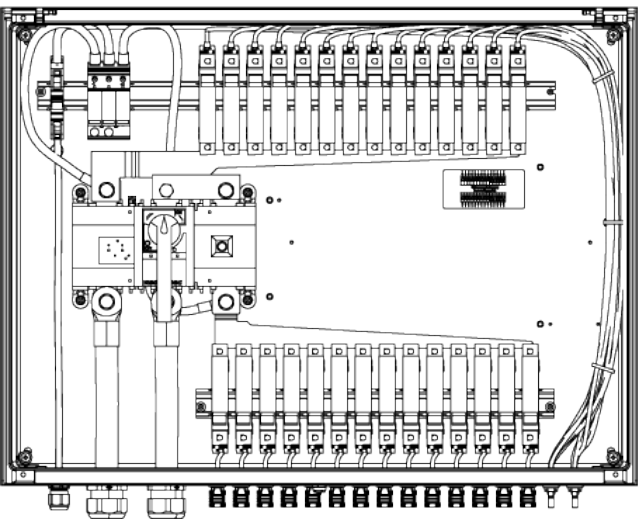
Connections



Side view



Wiring



CHECKLIST

Number of strings

<input type="checkbox"/>	5 strings	<input type="checkbox"/>	16 strings
<input type="checkbox"/>	8 strings	<input type="checkbox"/>	18 strings
<input type="checkbox"/>	10 strings	<input type="checkbox"/>	20 strings
<input type="checkbox"/>	12 strings	<input type="checkbox"/>	24 strings
<input type="checkbox"/>	14 strings	<input type="checkbox"/>	<input type="text"/> strings

Surge protection SPD

<input type="checkbox"/>	Type 2
<input type="checkbox"/>	Type 1 + 2
<input type="checkbox"/>	without

Fuses

<input type="checkbox"/>	Only plus
<input type="checkbox"/>	plus and minus
<input type="checkbox"/>	without

Current control Monitoring

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

Fuse value

<input type="checkbox"/>	15A
<input type="checkbox"/>	20A
<input type="checkbox"/>	25A
<input type="checkbox"/>	30A
<input type="checkbox"/>	32A
<input type="checkbox"/>	<input type="text"/> A

Connection technology on the input side

<input type="checkbox"/>	Single screw connection
<input type="checkbox"/>	Multiple screw connection
<input type="checkbox"/>	Stäubli MDC4-EVO2 PV connector
<input type="checkbox"/>	Sunclix PV connectors
<input type="checkbox"/>	<input type="text"/>

DC-Switch

<input type="checkbox"/>	without
<input type="checkbox"/>	1.500 Vdc - 400A (Standard)
<input type="checkbox"/>	<input type="text"/> Vdc <input type="text"/> A

Connection of aluminum conductors

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

OUR COMPANY



Merz Schaltgeräte GmbH + CO KG operates as a 100 % subsidiary of the Merz GmbH, member of the globally successful and expansive PCE Group. Merz Schaltgeräte GmbH + CO KG draws on the 70-year switch know-how of Merz GmbH.

PRODUCTION



LABORATORY



APPLICATIONS



WHAT ELSE WE OFFER:

Further product brochures on the following switch categories:

Repair and maintenance Switches



Compact Switches



Cam Switches



UVR Switches



Industry-specific Solutions



Any questions?

We also find for your project the right switch. Contact us.

Our contact partners will be pleased to advise you.

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www.merz-schaltgeraete.de

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switch to Quality!