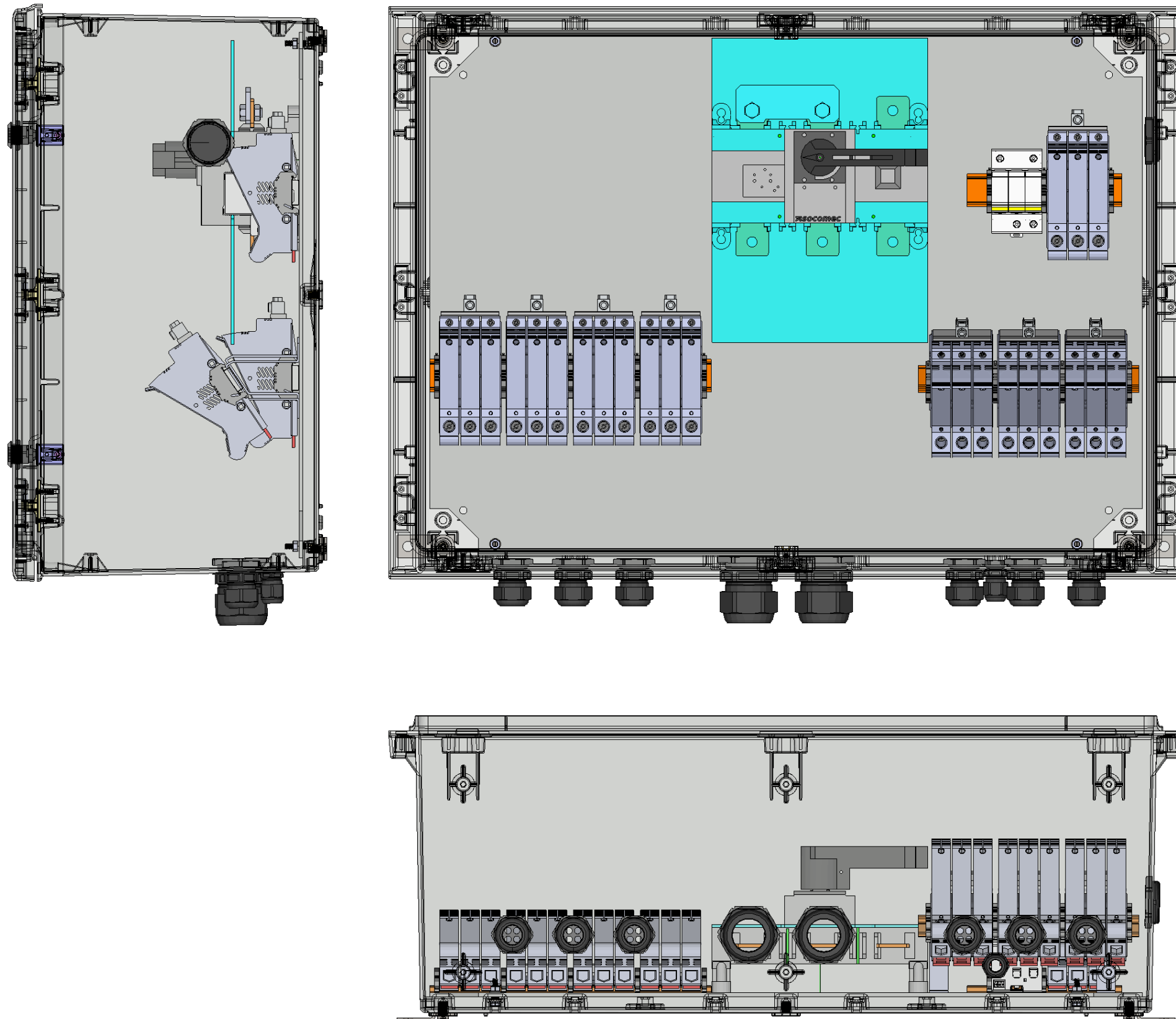


Article number HDC1500-04-12-FF-011-E005



HISbox DC Combiner 1500 V 12 Strings

Technical data

Load break switch 400 A 1500 V
 SPD Type 1+2 1500 V
 Fuse holder 10x85 mm 1500 V
 PV-Fuses 10x85 mm 1500 V DC not included
 Rated Impulse withstand Voltage: 6 kV
 Enclosure: Reinforced polyester, H615 x W847 x D330 mm,
 With door holder, Brackets included, Venting valve included

Input:

12 x directly on fuse holder upto 6mm² (+)
 12 x directly on fuse holder upto 6mm² (-)

Output:

M10 cable lug Al/Cu per pole max. width 35 mm
 Connection directly on load break switch
 (M10 Cable Lugs Al/Cu not included)
 PE - Connection directly to SPD max 25 mm²

Rated voltage (Un)	1500 V DC
Rated insulation voltage (Ui)	1500 V DC
Rated current (InA)	222 A
N° of Strings 12	N° of MPPT 1
String rated current (InC)	18.5 A
SPD YES	Switch-disconnector YES
Protection class II	IP Class 65

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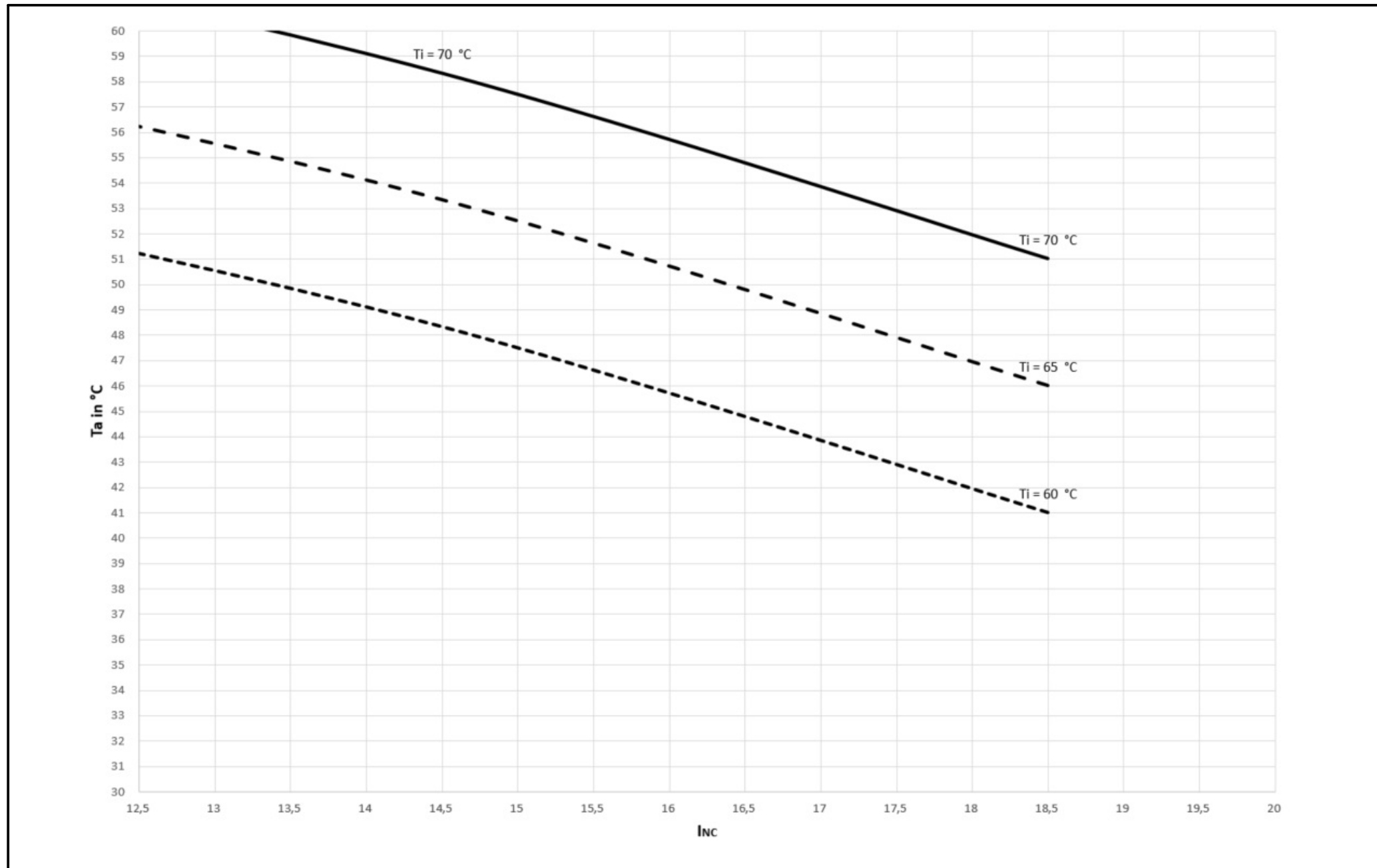
Project name			HDC1500-04-12-FF-011-E005			Article number			HDC1500-04-12-FF-011-E005			Cover sheet			=			&EAA																										
Modification			Date			Name			Creator			DINO.TOPOLOVIC			Standard			IEC 61439-1;-2			Approved by			Date			20/12/2022			Ed.			DINO.TOPOLOVIC			Page			1 from			9		
HISbox 1500 V DC Combiner																																												



Temperature Rating

The following diagram will allow you a proper Dimensioning in your PV-Project.

Ti... temperature inside the Combiner Box
 Ta...temperature outside the Combiner box
 Inc...Current per Input



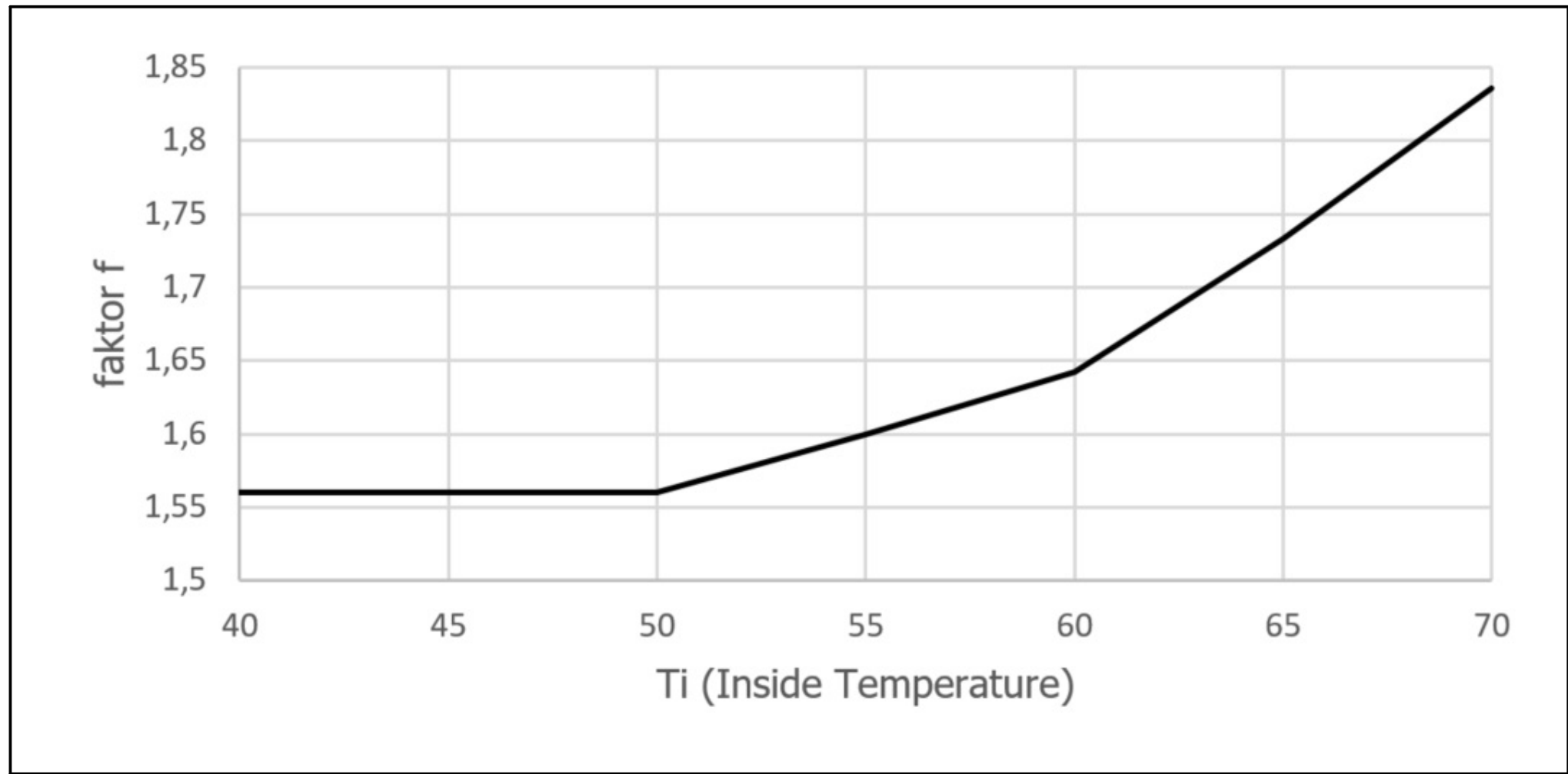
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			Project name	HDC1500-04-12-FF-011-E005	 <p>HIS we connect solar energy</p>	Rating Information		=	&EAA				
			HISbox 1500 V DC Combiner						Administrative documents				
			Standard IEC 61439-1;-2					+	Page 1.a				
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Fuse Rating

Voltage and Current ratings shall comply with IEC 60364-7-712 and IEC 60269-6. PV fuses underlie harsh conditions, such as high temperatures and current peaks. Therefore a dimensioning factor has to be applied dependent on the maximum expected ambient temperature in the combiner Box. The following graph gives support for a proper dimensioning:

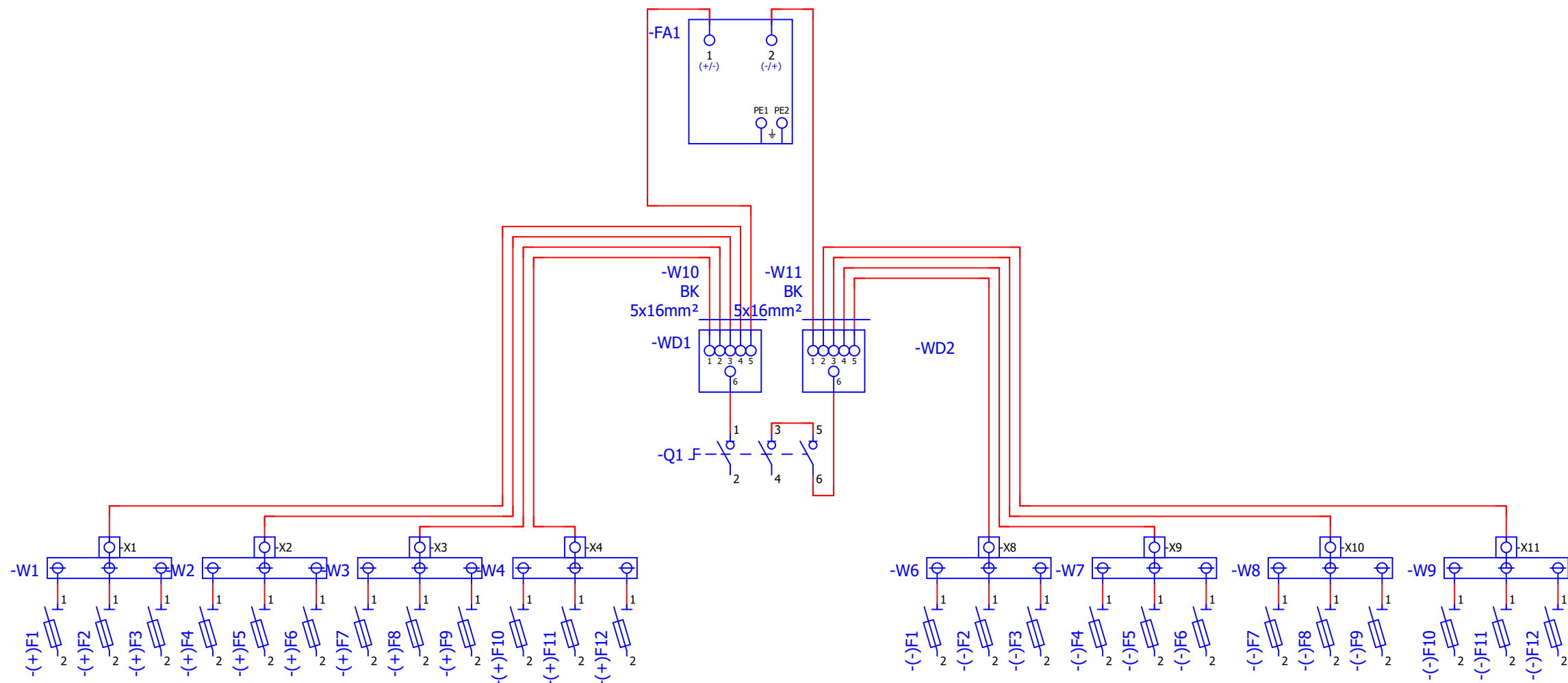
$$I_N \geq I_{SC, stc} \cdot f$$



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			Project name	HDC1500-04-12-FF-011-E005	Article number	HDC1500-04-12-FF-011-E005	 HIS we connect solar energy	Recommendation		=	&EAA		
			HISbox 1500 V DC Combiner		Standard	IEC 61439-1;-2					Administrative documents		
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1.b

3

			Project name HDC1500-04-12-FF-011-E005	Article number HDC1500-04-12-FF-011-E005		Single line diagram		=	&EAA	
			HISbox 1500 V DC Combiner	Standard IEC 61439-1;-2					Administrative documents	
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Parts list

Device tag	Quantity	Designation	Technical data
=+-(+)F1...=+-(+)F12;=+(-)F1...=+(-)F12	24	Fuse holder	1500 V , 32 A, 10 x 85 mm
=+-FA1	1	Surge protection device - without remote signaling	Typ 1+2, 1500 V DC
=+-Q1	1	Load break switch	400 A, 1500 V, 3-pole
+U1	1	Wall cabinet polyester	615 x 847 x 330 mm
+U32;+U33	2	Cable gland M50	Ø 21 - 35 mm, Color: Black
+U34	1	Cable gland M20	Ø 6 - 13 mm, Color: Black
+U37	1	Pressure compensation element M40	M40 x 1,5 mm
+U66;+U67	6	Cable gland M32	Ø 13 - 21 mm, Color: Black
=+-WD1;=+-WD2	2	Cable lug	M10 - 95 mm ² for internal wiring

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			Project name	HDC1500-04-12-FF-011-E005	Article number	HDC1500-04-12-FF-011-E005	 <p>HIS we connect solar energy</p>	Summarized parts list		=	&EAA	
			HISbox 1500 V DC Combiner		Standard	IEC 61439-1;-2						Administrative documents
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Fuse holder

Rated current: 32 A
 Rated voltage: 1500 V
 Fuse size: 10 x 85 mm
 Connection method: screw clamp
 Cross section: 2.5 - 25 mm²
 Connection Torque: 2.71 - 3.16 Nm

SPD

Type 1+2 1500 V
 Impulse currents I_{imp}/I_{total}: 6.25/12.5 kA
 Remote signaling: No
 Connection Torque: 2.5 Nm
 Cross section: 2.5 - 35 mm²
 Connection method: screw clamp

Cable glands:

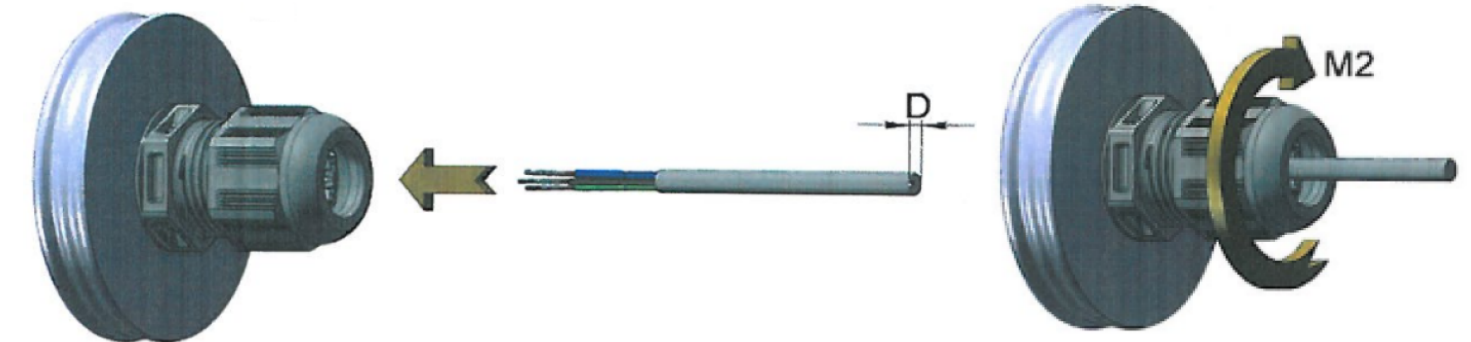
Cable glands mounted - clamping range:
 24 x Multiple sealing (Ø 5 - 7 mm) - Input
 02 x M50 cable gland (Ø 21 - 35 mm) - Output
 01 x M20 cable gland (Ø 6 - 13 mm) - PE

Beschreibung Description	Klemmbereich [mm] Clamping area [mm]	Drehmoment [Nm] Torque [Nm]		Blindstopfen (optional) Blind stopper (optional)
		M1	M2	
M16	4,5-10	3,5	1,5	BS9
M20	6-13	4,0	4,0	BS13
M25	9-17	10	4,0	BS17
M32	13-21	15	6,0	BS21
M40	16-28	20	20	BS28
M50	21-35	30	30	BS35
M63	34-48	30	30	BS48
M75 (Messing)	48-62	40	40	-



Instructions:

- Pass the cables according to overview through the cable glands
- Tighten cable glands to the required torque
- Unused cable glands or improper cable mounting can lead to the reduction of IP class and cosequently leakage of enclosure

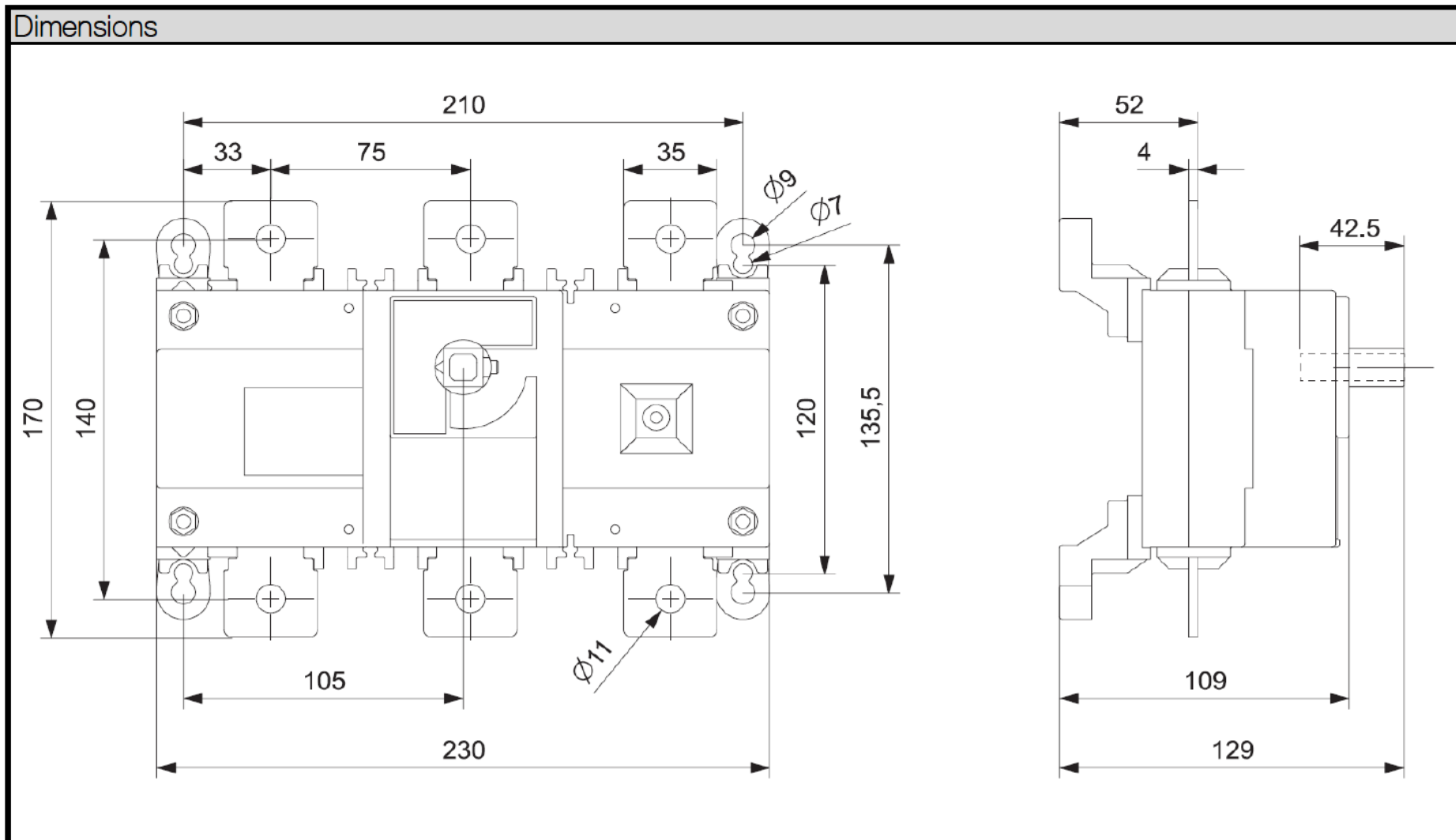


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Project name	HDC1500-04-12-FF-011-E005	Article number	HDC1500-04-12-FF-011-E005
	HISbox 1500 V DC Combiner	Standard	IEC 61439-1;-2
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Components description	=	&EAA
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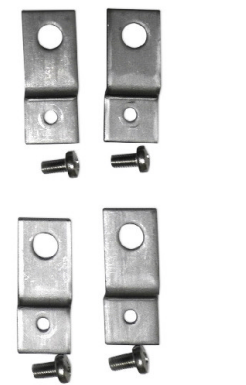
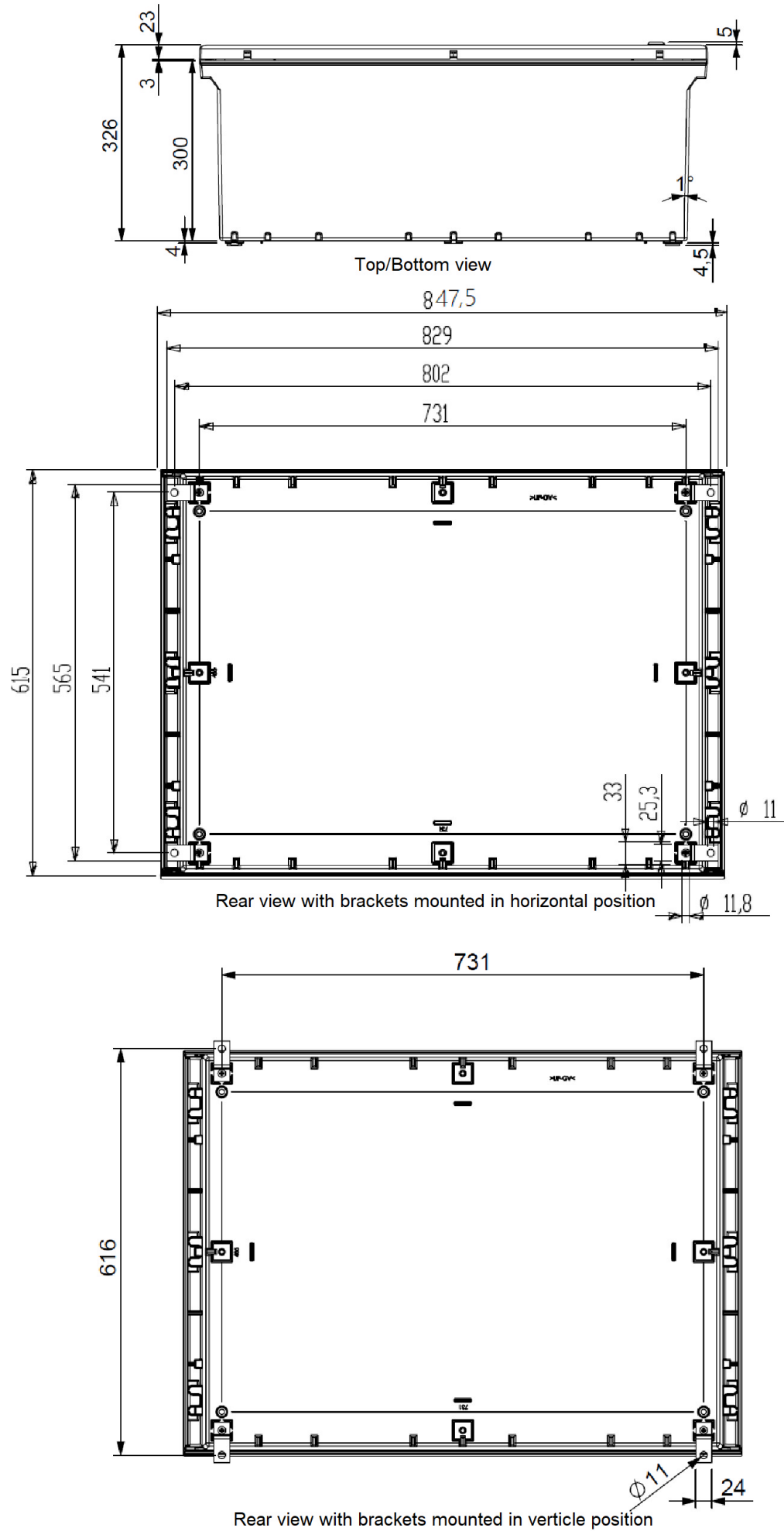
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Load break switch

Current: 400 A
 Voltage: 1500 V
 Connection: M10 max. cable lug width 35 mm
 Cross section: max. 400 mm²
 Tightening torque: 20 - 26 Nm

			Project name	HDC1500-04-12-FF-011-E005		Load break switch description		=	&EAA
			HISbox 1500 V DC Combiner						Administrative documents
			Standard IEC 61439-1;-2					+	Page 5
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Wall mounting brackets



Double bit lock

Enclosure:

Characteristics:

Glass-fibre reinforced polyester; Colour grey
 UV- and ozone resistant; lockable door; double bit
 8x Reinforced fixing points on the rear of the enclosure
 Wall mounting via a set of 4 galvanized steel brackets and screws

Installation:

Indoor and Outdoor, shaded
 (Protected from rain and direct sunlight)

Operating and ambient conditions:

Ambient temperatures:

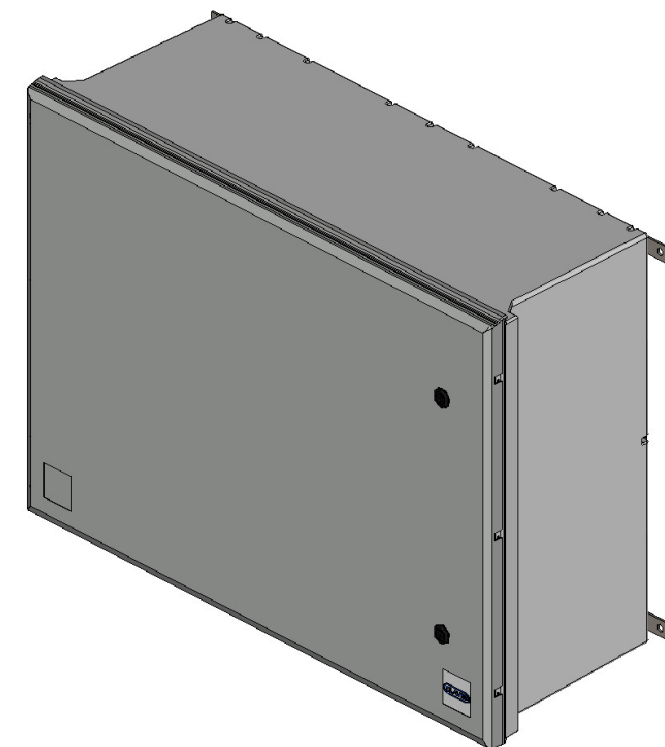
Indoor: - 5° C to max. + 40° C (+ 35° C 24h average)
 Outdoor: - 25° C to max. + 40° C (+ 35° C 24h average)

Relative humidity:

Indoor: Max. 50% at +40° C, max. 90% at +20° C (not condensating)
 Outdoor: Temporary 95% at +25° C (not condensating)

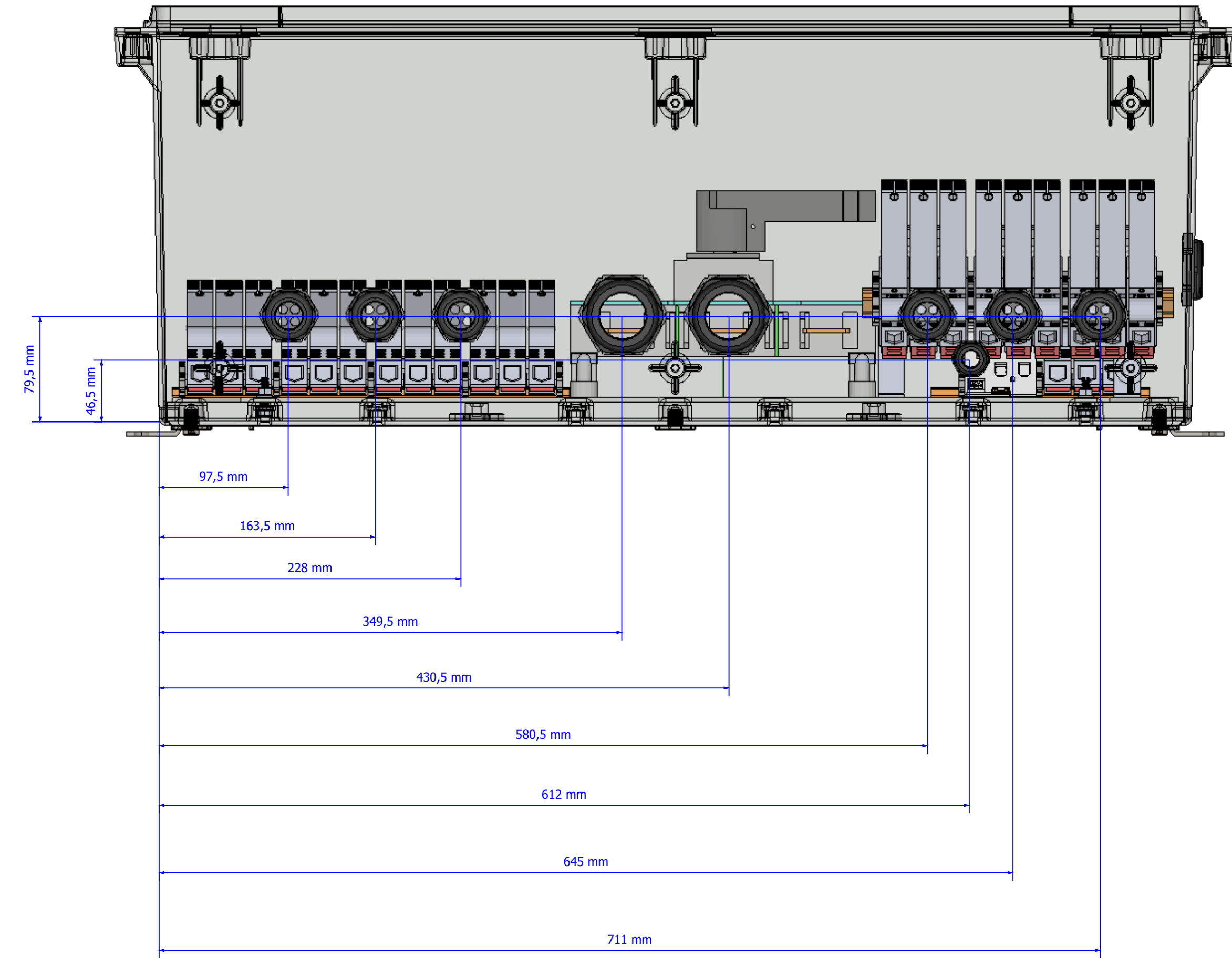
Altitude above sea level. Max. 2000m

Permanent permissible load: 70 kg vertical and horizontal position



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			Project name	HDC1500-04-12-FF-011-E005	Article number	HDC1500-04-12-FF-011-E005		Enclosure description		=	&EAA		
			HISbox 1500 V DC Combiner		Standard IEC 61439-1;-2						Administrative documents		
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			Project name HDC1500-04-12-FF-011-E005	Article number HDC1500-04-12-FF-011-E005		Bohrplan		=	&EAA
			HISbox 1500 V DC Combiner	Standard IEC 61439-1;-2					
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