

PVN1M1I3SXFV2O0TXPX10**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

PV Next combiner boxes for inverters with 1 to 12 MPP trackers are used to protect the DC side of a photovoltaic system. The combiner boxes protect the inverter against overvoltages and thus comply with the European Directive EN 51543-32. In addition, these products offer the possibility to protect the system against reverse currents and the possibility to combine strings to save cables during installation.

General ordering data

Version	Photovoltaics, Combiner Box, 1000 V, 1 MPP, 3 Inputs / 3 Outputs per MPP, Surge protection II, Cable gland
Order No.	2683310000
Type	PVN1M1I3SXFV2O0TXPX10
GTIN (EAN)	4050118700039
Qty.	1 pc(s).
Delivery status	Discontinued
Available until	2023-03-31
Replacement parts	2530660000
Alternative product	2890560000

Creation date April 26, 2024 9:14:17 PM CEST

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Technical data
Dimensions and weights

Depth	175 mm	Depth (inches)	6.89 inch
Height	330 mm	Height (inches)	12.992 inch
Width	186 mm	Width (inches)	7.323 inch
Net weight	3,674 g		

Temperatures

Ambient temperature	-40 °C...+50 °C	Humidity	5 - 90 %, no condensation
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DC string monitoring

Monitoring function	Non monitored
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Approvals and norms

Approvals	EN 61439-2, IEC 61439-2
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Guarantee

Time interval	5 years
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Electrical characteristics

Current per Maximum Power Point, max. 30 A

Rated DC current per connection	Current per string, max.	30 A
Rated short-term current resistance	Rated current	37.5 A
Rated DC voltage	1,000 V	

Enclosure

Connection type string	Internal terminal (with cable gland feed-through)	Cover	with cover, removeable
Enclosure attachment	Via mounting foots	Impact resistance	IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262
Insulating material	Polyester glass-fibre reinforced, Polycarbonate	Switch disconnector execution	no switch
Type of mounting	Wall mounting, 4 screws		

General data

Installation location	Protected outdoor area (Land and Sea)	Protection degree	IP65
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Inputs

Amount of maximum power points	1 MPP		
DC Input + & -	Wire connection	Type of connection	PUSH IN
		Compatible cable crossection	EN 50618:2015, TÜV 2 Pfg 1169/08.07
		Wire cross-section, min.	2.5 mm ²
		Wire cross-section, max.	16 mm ²

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Functional earth connector	Cable entry	Number of cable entries	1
		Cable diameter, max.	10
		Cable glands	M 16
	Wire connection	Type of connection	Screw connection
		Flexible, max. H05(07) V-K	25 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm ²
Fuse type	Neither fuse cartridge nor holder		
Max. number of DC inputs	per Maximum Power Point 3 inputs connected in parallel		
Surge protection auxiliary contact	Cable entry	Number of cable entries	1
		Cable diameter, min.	5
		Cable diameter, max.	10
	Wire connection	Cable glands	M 16
		Type of connection	Tension clamp connection with actuator
		Flexible, max. H05(07) V-K	1.5 mm ²
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²

Outputs

DC Output + & -	Wire connection	Type of connection	PUSH IN
		Compatible cable cross-section	TÜV 2 Pfg 1169/08.07, EN 50618:2015
		Wire cross-section, min.	2.5 mm ²
		Wire cross-section, max.	16 mm ²
Max. number of DC outputs	per Maximum Power Point 3 outputs connected in parallel		

Surge protection DC side

Discharge current I_n (8/20 μ s)	20 kA	Discharge current, max. (8/20 μ s)	40 kA
Maximum continuous operating voltage DC UCPV mode +/-, -/PE, +/-PE	1,100 V	PV system voltage, max. U_{cpv}	1,100 V
Protection level U_p (+/-)	≤ 3.8 kV	Protection level U_p (+/PE)	≤ 3.8 kV
Protection level U_p (-/PE)	≤ 3.8 kV	Requirements class	Type II
Short-circuit current I_{SCP}	11,000 A	Standby power consumption P_C	< 0.2 W
Total discharge current I_{total} (8/20 μ s)	50 kA		

Classifications

ETIM 6.0	EC002928	ETIM 7.0	EC002928
ETIM 8.0	EC003857	ETIM 9.0	EC003857
ECLASS 9.0	22-57-92-03	ECLASS 9.1	22-57-02-90
ECLASS 10.0	22-57-02-90	ECLASS 11.0	22-57-02-92
ECLASS 12.0	22-57-02-92	ECLASS 13.0	22-57-02-92

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www.weidmueller.com**Technical data****Tender specification sheets**

Long specification

Combiner box for inverters
with 1 Mpp-tracker,
used to protect the DC
side. Max. String voltage
Uoc: 1000 V

MPPT1:

Up to 3 inputs, connection
via M25 cable gland with
3x7mm Ø cable entry (for
positive and negative one
each)

PUSH IN connection / 2.5
- 6mm² single-wire, mul-
ti-wire, with/without fer-
rule

Up to 3 outputs, connec-
tion via M25 cable gland
with 3x7mm Ø cable entry
(for positive and negative
one each)

PUSH IN connection / 2.5
- 6mm² single-wire, mul-
ti-wire, with/without fer-
rule

without DC switch
1 surge protection 1000 V
type II with remote contact

Connection of the signal
contact via cable glands
(8-12mmØ) max. cable
cross-section: 1.5mm²
Connection of function-
al earth via cable glands
(8-12mmØ) cable cross-
section: 16mm²

Protection class: IP65

Plastic enclosure

Dimensions HxWxD:

186x302x175 mm

According to standard,
Low-voltage switchgear as-
semblies -

Part 1: General specifica-
tions, (IEC 61439-1:2011),
BS EN 61439-2:2039

Approvals

Approvals



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Technical data

Downloads

Approval/Certificate/Document of Conformity

[EU Declaration of Conformity](#)

Engineering Data

[CAD data – PV Next Schematic Diagram](#)
[CAD data – STEP](#)

Technical Documentation

[customer drawing](#)

User Documentation

[Manual PV Next String Combiner Box](#)
[MANUAL PV NEXT IT/ES/FR](#)

White paper

[Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt](#)
[Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert](#)
[Fact Sheet DE PV CB Wann Sicherungen zu installieren sind](#)
[Fact Sheet DE CB PV NEXT](#)
[Fact Sheet EN PV CB When DC fuses are mandatory to install](#)
[Fact Sheet EN CB PV NEXT](#)
[Fact Sheet EN PV How to protect buildings against lightning strikes](#)
[Fact Sheet EN PV How to extend the life time of a Combiner Box](#)
[Fact Sheet DE CB PV Strings kombinieren](#)
[Fact Sheet DE PV CB Richtig verbinden](#)
[Fact Sheet EN CB Combining PV strings](#)
[Fact Sheet EN PV CB connection](#)
[Fact Sheet EN PV Combiner Box earthing](#)
[Fact Sheet DE PV Combiner Box Erdung](#)

Catalogues

[Catalogues in PDF-format](#)

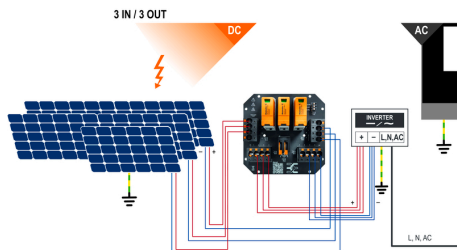
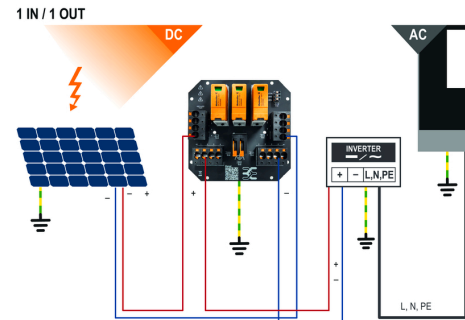
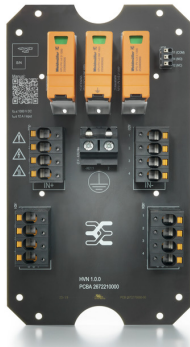
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Drawings

PCB design



PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10									
Series		Voltage		Powersupply		Monitoring		Output Type	
PVN = PV Next		10 = 1kV		x = n/a		x = n/a		0 = GG	
VPU = PV Protect		11 = 1.1kV						1 = VMAC	
		15 = 1.5kV						2 = MCA-Exp 2	
Level		Series		Inputs		Switch		SPD	
1 = DC trunk box (L1)		1 = 1 MPPT supported		1..12 inputs		x = n/a		0 = TYP II	
		2 = 2 MPPT supported				0 = manual switch		1 = TYP I+II	
		3 = 3 MPPT supported				1 = remote switch		X = No SPD	
		4 = 4 MPPT supported						Fuses	
		6 = 6 MPPT supported						x = n/a	
								3 = only fuse holders	

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www.weidmueller.com**Replacement parts****Spare Arrester****General ordering data**

Type	VPU PV II O 1000	Version
Order No.	2530660000	Surge voltage arrester, Low voltage, Accessories, Spare arrester
GTIN (EAN)	4050118540871	
Qty.	9 pc(s).	

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www.weidmueller.com**Accessories****PV Sun Covers****General ordering data**

Type	PV SUN COVER 30/19/18	Version
Order No.	8000086576	Photovoltaics
GTIN (EAN)	4064675845164	
Qty.	1 pc(s).	

Cutting tools

Cutting tools for conductors up to 8 mm, 12 mm, 14 mm and 22 mm outside diameter. The special blade geometry allows pinch-free cutting of copper and aluminium conductors with minimum physical effort. The cutting tools (KT 8 to KT 22) also come with VDE and GS-tested protective insulation up to 1,000 V in accordance with EN/IEC 60900.

General ordering data

Type	KT 14	Version
Order No.	1157820000	Cutting tools, Cutting tool for one-hand operation
GTIN (EAN)	4032248945344	
Qty.	1 pc(s).	

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www.weidmueller.com**Accessories****SL Set PV NEXT**

The **"SL SET PV NEXT"** allows the insertion of up to four cables through one cable gland whilst keeping a tight seal.

General ordering data

Type	SL SET PV NEXT	Version
Order No.	2729230000	Photovoltaics
GTIN (EAN)	4050118804508	
Qty.	1 pc(s).	

Tools

- For flexible and solid conductors with special insulating materials
- High-quality stripping for industrial applications (complies with aircraft industry requirements)
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length adjustable via end stop
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function

General ordering data

Type	MULTI-STRIPAX PV	Version
Order No.	1190490000	Photovoltaics, Plug-in connector
GTIN (EAN)	4032248973262	
Qty.	1 pc(s).	

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www.weidmueller.com**Accessories****Crosshead screwdriver Phillips**

VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

General ordering data

Type	SDIK PH3 X 150	Version
Order No.	2749910000	Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3
GTIN (EAN)	4050118897210	
Qty.	1 pc(s).	

Slotted screwdriver

VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

Type	SDIS 1.0X5.5X125	Version
Order No.	2749850000	Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm
GTIN (EAN)	4050118897050	
Qty.	1 pc(s).	
Type	SDIS 0.6X3.5X100	Version
Order No.	2749810000	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118897012	
Qty.	1 pc(s).	

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Accessories

External fixing lugs



The enclosures of the TBF series are made of extremely tough glass fibre-reinforced polyester. These enclosures are ideal for applications that call for low weight coupled with high shock resistance. The weather-resistant TBF enclosures are designed for a wide range of applications. Together with their comprehensive range of accessories, they provide universal solutions for accommodating built-in items such as regulators, measuring instruments, valves and other equipment.

Features:

- 9 sizes in 2 versions, with grey and transparent lids
- Cover with nylon screws
- Fixing holes outside the sealed area
- Thread for fitting to terminal rails and mounting plates
- Comprehensive accessories
- Weidmüller can manufacture and supply this enclosure to match customer specifications, fitted with all necessary terminals and cable glands.

General ordering data

Type	MF TBF	Version
Order No.	0360800000	TBF (polyester empty enclosure), Mounting foot, Fixing lugs, Height:
GTIN (EAN)	4008190108595	72.5 mm, Width: 24 mm, Depth: 12 mm, Material: Polyamide, Deep
Qty.	1 pc(s).	black

UV-resistant cable ties



UV-resistant polyamide 6.6 ensures long durability of our special cable ties even with strong UV radiation. Ideal for continuous outdoor use.

General ordering data

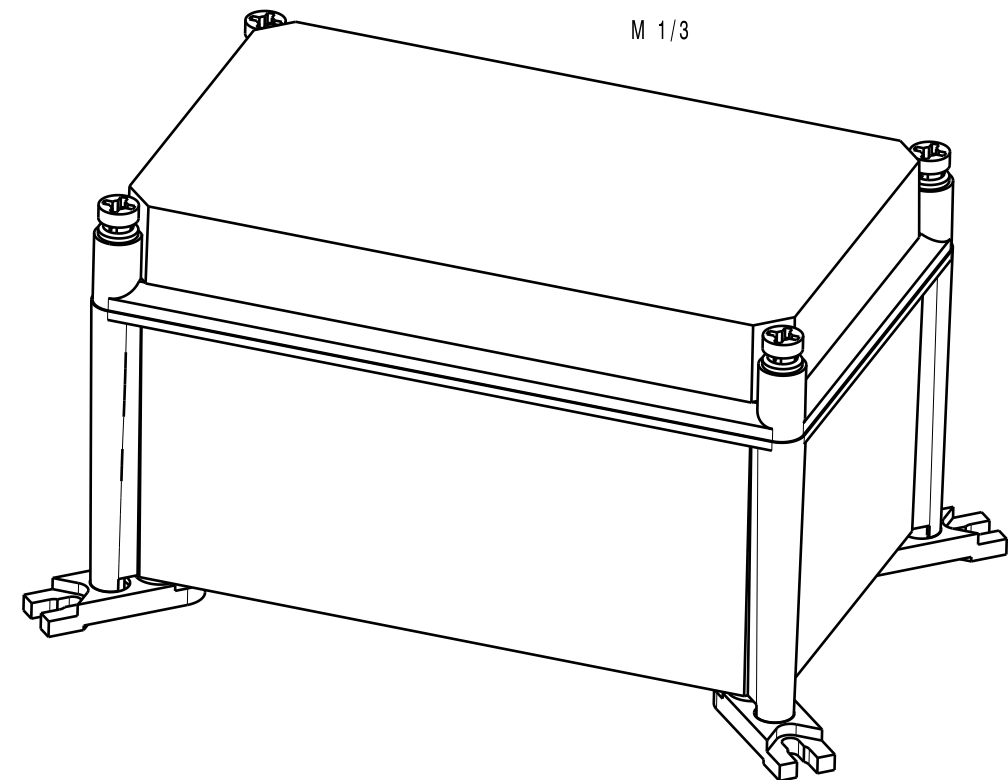
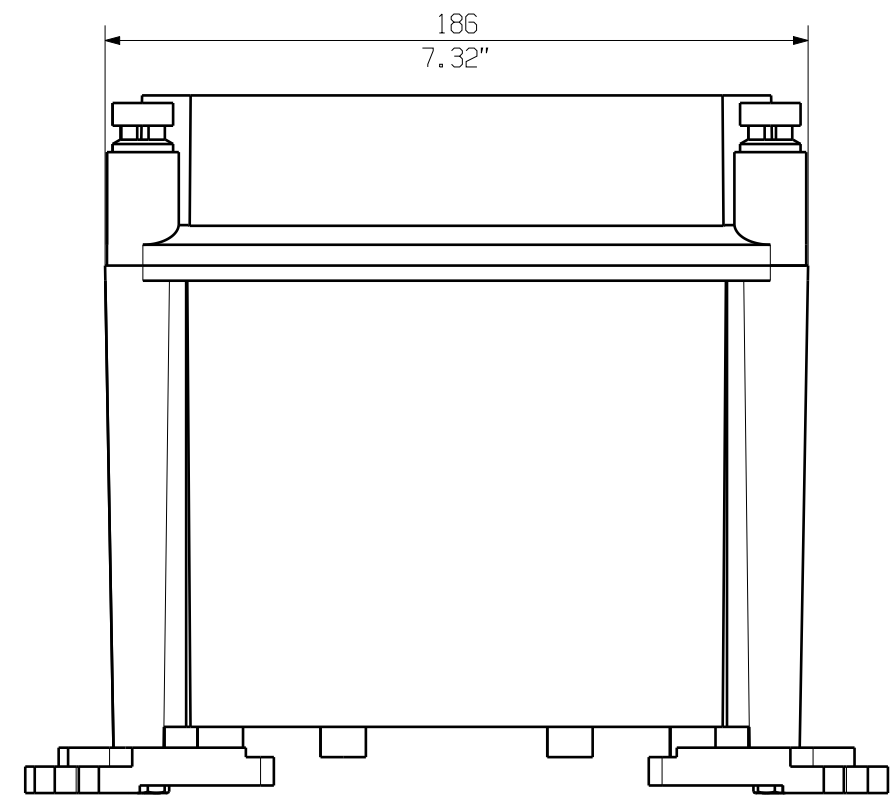
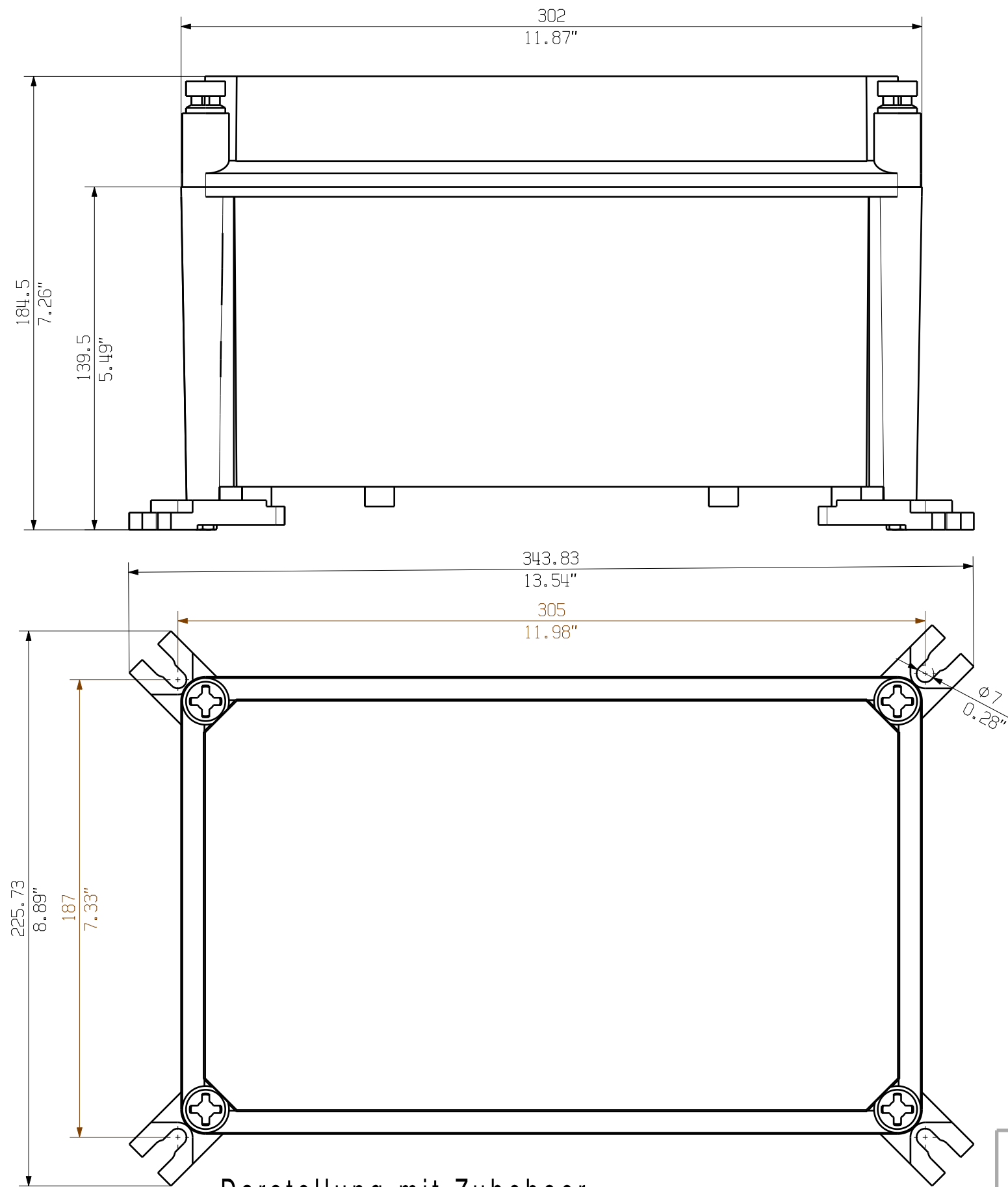
Type	CB-UVR 290/4,5 BK	Version
Order No.	2659350000	Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N
GTIN (EAN)	4050118682816	
Qty.	100 pc(s).	

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Dimensions without tolerances are no check dimensions

The English version is binding



Darstellung mit Zubehoer
Shown with accessory 0360800000 MF TBF

Nicht im Lieferumfang enthalten!
Not included in delivery!

				Prim PLM Part No.: 1215112		Prim ERP Part No.:	
First Issue Date		Max. nos.		Weidmüller 		71728	
29.01.2020		Modification				Drawing no. Issue no.	
						Sheet 01 of 01 sheets	
		Date		Name		PVN TBF 301918 COMBINERBOX RESIDENTIAL/COMMERCIAL COMBINERBOX RESIDENTIAL/COMMERCIAL	
		Drawn		29.01.2020 Brüntrup, Anna			
		Responsible		Wohlgemuth, Kl			
Scale: 1/2		Size: A3		Approved		31.01.2020 Püschner, Klau	
Drawings Customer				Product file:			