

**PVN DC 2I 1O 1MPP SPD1R CG 11****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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 CLC/TS 51643-32. 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, PV Next, 1100 V, 1 MPP, 2 Inputs / 1 Output per MPP, Surge protection I / II, Cable gland
Order No.	<a href="#">2791930000</a>
Type	PVN DC 2I 1O 1MPP SPD1R CG 11
GTIN (EAN)	4064675072973
Qty.	1 pc(s).
Replacement parts	<a href="#">2530530000</a>

**PVN DC 2I 10 1MPP SPD1R CG 11**
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**Technical data**
**Dimensions and weights**

Depth	132 mm	Depth (inches)	5.197 inch
Height	228 mm	Height (inches)	8.976 inch
Width	200 mm	Width (inches)	7.874 inch
Net weight	1,541 g		

**Temperatures**

Ambient temperature	-40 °C...50 °C	Humidity	5...95 %, no condensation
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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 voltage	1,100 V
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Rated short-term current resistance	Rated current	37.5 A
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**Enclosure**

Connection type string	Internal terminal (with cable gland feed-through)	Enclosure attachment	Via mounting feet
Impact resistance	IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262	Insulating material	Polycarbonate, Polyester glass-fibre reinforced, Polycarbonate
Protection class	II	Type of mounting	Wall mounting, 4 screws

**General data**

Installation location	Protected outdoor area (Land and Sea)	Protection degree	IP65
Standards	EN 61643-31		

**Inputs**

Amount of maximum power points (MPP)	1
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DC Input + & -	Wire connection	Type of connection	PUSH IN
		Compatible cable cross-section	EN 50618:2015
		Wire cross-section, min.	2.5 mm <sup>2</sup>
		Wire cross-section, max.	16 mm <sup>2</sup>
	Cable entry	Number of cable entries	2

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## Technical data

Functional earth connector	Cable entry	Number of cable entries	1
	Wire connection	Type of connection	Tension clamp connection with actuator
		Flexible, max. H05(07) V-K	25 mm <sup>2</sup>
		w. wire end ferrule, DIN 46228 pt 1, max.	16 mm <sup>2</sup>
Fuse type	Neither fuse cartridge nor holder		
Fuses	No		
Max. number of DC inputs	per Maximum Power Point 2 inputs connected in parallel		
Number of conduit inlets	2		
Number of string inputs per MPP	≤ 2		
Surge protection auxiliary contact	Wire connection	Type of connection	Tension clamp connection with actuator
		Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>
		w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm <sup>2</sup>
	Cable entry	Number of cable entries	1
Number of inputs	2		

## Outputs

DC Output + & -	Wire connection	Type of connection	PUSH IN
		Compatible cable cross-section	TÜV 2 Pfg 1169/08.07
		Wire cross-section, min.	2.5 mm <sup>2</sup>
		Wire cross-section, max.	16 mm <sup>2</sup>
Max. number of DC outputs	per Maximum Power Point 1 output		

## Surge protection DC side

Discharge current $I_n$ (8/20 $\mu$ s)	20 kA	Discharge current, max. (8/20 $\mu$ 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 I/II
Short-circuit current $I_{SCPv}$	11,000 A	Standards	EN 61643-31
Total discharge current $I_{total}$ (8/20 $\mu$ s)	50 kA		

## DC load break switch

Switch disconnector execution	no switch	Voltage type	DC
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## Classifications

ETIM 6.0	EC002928	ETIM 7.0	EC002928
ETIM 8.0	EC003857	ETIM 9.0	EC003857
ETIM 10.0	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	ECLASS 14.0	22-57-02-92
ECLASS 15.0	22-57-02-92		

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**Technical data**
**Tender specification sheets**

## Long specification

Combiner box for inverters with 1 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32.

**MPP1:**

2 inputs, connection via M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5 - 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.

1 output, connection via M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5 - 6mm<sup>2</sup> single-wire, multi-wire, with/without ferrule.

Max. string voltage Uoc: 1100V

1 class/type I + II combined arrester with signal contact

Connection of the signal contact via cable glands (8-12mmØ) max. conductor cross-section: 1.5mm<sup>2</sup>

Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm<sup>2</sup>

Protection class: IP65

All built into a glass fibre reinforced polyester housing. Dimensions HxWxD: 228x200x132 mm

Approval according to low voltage switchgear and controlgear IEC 61439-1:2011 and EN 61439-2:2011

**Approvals**

## Approvals



Approvals MAMID

[https://mdcop.weidmueller.com/mediadelivery/rendition/900\\_319222/-T1z1mm-S800/](https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/)

ROHS

Conform

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**Technical data**
**Environmental Product Compliance**

RoHS Compliance Status	Compliant
REACH SVHC	Lead 7439-92-1
SCIP	bdab5698-6a20-4370-8e28-8810d882d01a

**Important note**

Product information	<p>The SCIP number was assigned due to a lead content of more than 0.1 % of the net weight.</p> <p>Safe use instruction according to ECHA:</p> <p>The identification of the hazardous substance is sufficient to allow safe use of the article throughout its life cycle, including the service life, disassembly and waste/recycling phase</p>
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**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">PV Next Mini EU Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a> <a href="#">Application notes – Schematic Diagram for PV Next Mini</a>
Technical Documentation	<a href="#">Customer drawing</a> <a href="#">2932700000_00_03-2023_DRILL-TEMP_PV-Next_20-20</a>
User Documentation	<a href="#">Manual PV Next String Combiner Box</a> <a href="#">MANUAL PV NEXT IT/ES/FR</a> <a href="#">Manual PV Next Mini</a>
White paper	<a href="#">Fact Sheet DE PV CB Wie man Gebäude gegen Blitzeinschläge schützt</a> <a href="#">Fact Sheet DE PV Wie man die Lebensdauer eines GAK verlängert</a> <a href="#">Fact Sheet DE PV CB Wann Sicherungen zu installieren sind</a> <a href="#">Fact Sheet DE CB PV NEXT</a> <a href="#">Fact Sheet EN PV CB When DC fuses are mandatory to install</a> <a href="#">Fact Sheet EN CB PV NEXT</a> <a href="#">Fact Sheet EN PV How to protect buildings against lightning strikes</a> <a href="#">Fact Sheet EN PV How to extend the life time of a Combiner Box</a> <a href="#">Fact Sheet DE CB PV Strings kombinieren</a> <a href="#">Fact Sheet EN CB Combining PV strings</a> <a href="#">Fact Sheet EN PV Combiner Box earthing</a> <a href="#">Fact Sheet DE PV Combiner Box Erdung</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

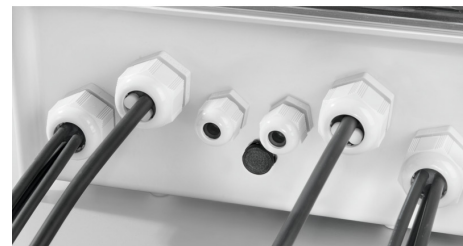
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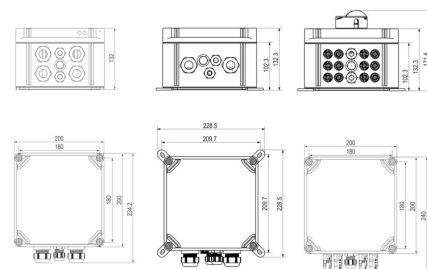
[www.weidmueller.com](http://www.weidmueller.com)

## Drawings

### PCB design



PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10									
<b>Series</b>		<b>Voltage</b>		<b>Power supply</b>		<b>Monitoring</b>		<b>Output Type</b>	
PVN = PV Next		10 ~ 1kV		x = n/a		x = n/a		0 = GG	
VPU = PV Protect		11 ~ 1.1kV		x = n/a		1 = VMAAC		1 = TYP I-II	
<b>Level</b>		<b>SPD</b>		<b>Fuses</b>		<b>Inputs</b>		<b>Switch</b>	
1 = DC trunk box (L1)		2 = MCA5-p 2		3 = only fuse holders		1...12 inputs		x = n/a	
<b>Series</b>		<b>SPD</b>		<b>Inputs</b>		<b>Switch</b>		<b>Switch</b>	
1 = 1 MPP supported		0 = TYP II		1 = TYP I-II		0 = manual switch		1 = remote switch	
2 = 2 MPP supported		1 = VMAAC		X = No SPD		1 = manual switch			
3 = 3 MPP supported									
4 = 4 MPP supported									
6 = 6 MPP supported									



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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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.	<a href="#">2749850000</a>	Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade
GTIN (EAN)	4050118897050	thickness (A): 1 mm
Qty.	1 pc(s).	
Type	SDIS 0.6X3.5X100	Version
Order No.	<a href="#">2749810000</a>	Screwdriver, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade
GTIN (EAN)	4050118897012	thickness (A): 0.6 mm
Qty.	1 pc(s).	

**Y-Connector Cables**

The Y cable is used for the parallel connection of several strings in a PV system, e.g. for splitting a line in front of an inverter.

The cables are available in different connection variants.

**General ordering data**

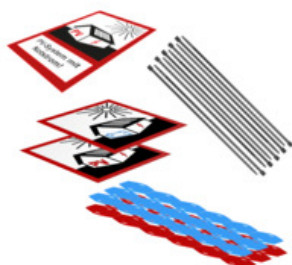
Type	PVHYM+M+XXXX6W-11	Version
Order No.	<a href="#">2877860000</a>	Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female,
GTIN (EAN)	4064675666424	6mm², 1100 V
Qty.	1 pc(s).	
Type	PVHYM-M-XXXX6W+11	Version
Order No.	<a href="#">2877850000</a>	Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male,
GTIN (EAN)	4064675666417	6mm², 1100 V
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****PV marking sets****General ordering data**

Type	PV MARKER 1-3 MPP	Version	Packaging
Order No.	<a href="#">8000149520</a>	Photovoltaics, Device markers, Accessories, Conductor and cable	Plastic bag
GTIN (EAN)	4099987229197	markers, Cable ties, Marking set, Warning label, Cable marker	
Qty.	1 pc(s).		

**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.	<a href="#">2659350000</a>	Cable ties, 4.5 x 290 mm, Polyamide 66, 220 N
GTIN (EAN)	4050118682816	
Qty.	100 pc(s).	



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**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.	<a href="#">2749910000</a>	Screwdriver, Blade width (B): 3 mm, 150 mm, Blade thickness (A): 3
GTIN (EAN)	4050118897210	
Qty.	1 pc(s).	

**External fixing lugs**

External attachment lugs 4-part set

**General ordering data**

Type	MF FPC	Version
Order No.	<a href="#">9536040000</a>	FPC (polycarbonate empty enclosure), Mounting foot, Fixing lugs,
GTIN (EAN)	4032248009442	Height: 40 mm, Width: 19 mm, Depth: 35.5 mm, Material: Polyamide,
Qty.	1 pc(s).	Light Grey

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Sealing sets****General ordering data**

Type	BLINDPLUG SET50 7X28MM	Version
Order No.	<a href="#">3077650000</a>	Photovoltaics, Blind plug, Accessories, Blind plug, 50 pieces
GTIN (EAN)	4099987081870	
Qty.	1 pc(s).	
Type	SL SET PV NEXT	Version
Order No.	<a href="#">2729230000</a>	Photovoltaics
GTIN (EAN)	4050118804508	
Qty.	1 pc(s).	
Type	BLINDPLUG SET5 7X28MM	Version
Order No.	<a href="#">3077670000</a>	Photovoltaics, Blind plug
GTIN (EAN)	4099987081894	
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.	<a href="#">1157820000</a>	Cutting tools, Cutting tool for one-hand operation
GTIN (EAN)	4032248945344	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****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.	<a href="#">1190490000</a>	Photovoltaics, Plug-in connector
GTIN (EAN)	4032248973262	
Qty.	1 pc(s).	

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[www.weidmueller.com](http://www.weidmueller.com)**Replacement parts****Spare Arrester****General ordering data**

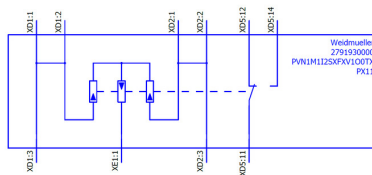
Type	VPU PV I+II O 1000 E	Version
Order No.	<a href="#">2530530000</a>	Surge voltage arrester, Low voltage, Accessories, Surge protection I /
GTIN (EAN)	4050118540741	II, Spare arrester
Qty.	9 pc(s).	

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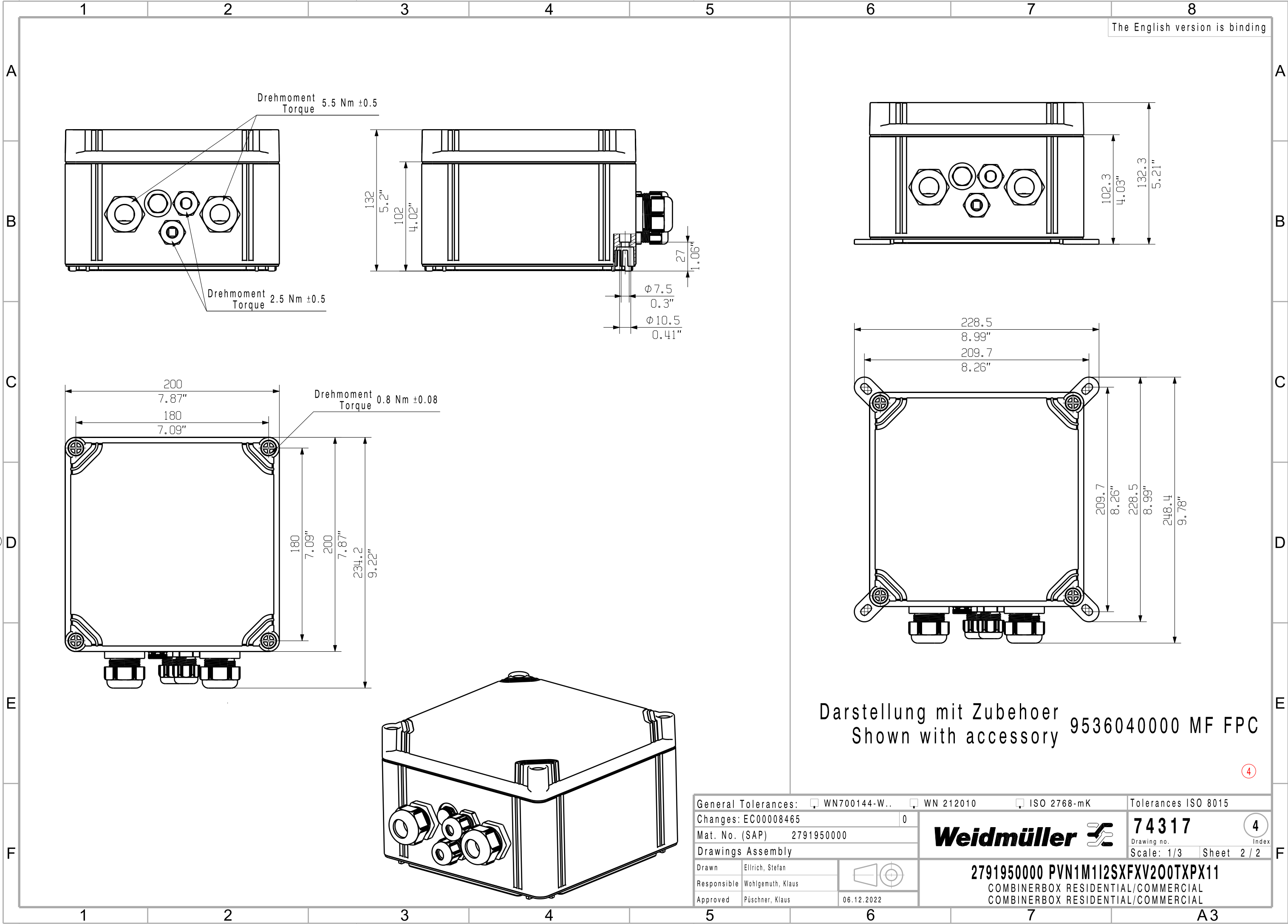
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# Drawings



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Darstellung mit Zubehoer  
Shown with accessory 9536040000 MF FPC

General Tolerances: <input type="checkbox"/> WN700144-W.. <input type="checkbox"/> WN 212010 <input type="checkbox"/> ISO 2768-mK			Tolerances ISO 8015	
Changes: EC00008465			0	
Mat. No. (SAP) 2791950000			74317	
Drawings Assembly			Drawing no. 4	
Drawn Ellrich, Stefan			Scale: 1/3 Sheet 2 / 2	
Responsible Wohlgemuth, Klaus			Index	
Approved Püschner, Klaus			06.12.2022	
			2791950000 PVN1M1I2SXFV200TXPX11	
			COMBINERBOX RESIDENTIAL/COMMERCIAL	
			COMBINERBOX RESIDENTIAL/COMMERCIAL	

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