

**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, 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>

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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 current per connection	Current per string, max.	30 A
Rated short-term current resistance	Rated current	37.5 A
Rated DC voltage	1,100 V	

**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	Switch disconnecter 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 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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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		
Max. number of DC inputs	per Maximum Power Point 2 inputs connected in parallel		
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

**Outputs**

DC Output + & -	Wire connection	Type of connection	PUSH IN
		Compatible cable crosssection	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 $U_p$ (+/-)	$\leq 3.8$ kV	Protection level $U_p$ (+/PE)	$\leq 3.8$ kV
Protection level $U_p$ (-/PE)	$\leq 3.8$ kV	Requirements class	Type I/II
Short-circuit current $I_{SCP}$	11,000 A	Total discharge current $I_{total}$ (8/20 $\mu$ 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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## 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 U<sub>oc</sub>: 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

**Environmental Product Compliance**

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

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## Technical data

## Approvals

Approvals



ROHS

Conform

## Downloads

Approval/Certificate/Document of Conformity

[PV Next Mini EU Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)[Application notes – Schematic Diagram for PV Next Mini](#)

Technical Documentation

[Customer drawing](#)[2932700000\\_00\\_03-2023\\_DRILL-TEMP\\_PV-Next\\_20-20](#)

User Documentation

[Manual PV Next String Combiner Box](#)[MANUAL PV NEXT IT/ES/FR](#)[Instruction leaflet PV NEXT MINI DE/EN](#)[Instruction leaflet PV NEXT MINI](#)

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](#)

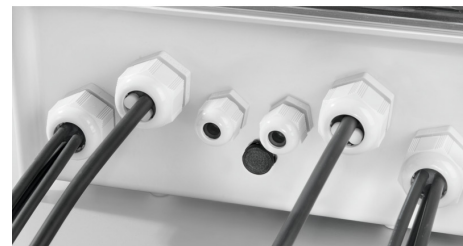
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## Drawings

### PCB design



PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10									
<b>Series</b> PVN = PV Next VPU = PV Protect								<b>Voltage</b> 10 = 1kV 11 = 1.1kV 15 = 1.5kV	
<b>Level</b> 1 = DC trunk box (L1)								<b>Power supply</b> x = n/a	
<b>Series</b> 1 = 1 MPP supported 2 = 2 MPP supported 3 = 3 MPP supported 4 = 4 MPP supported 6 = 6 MPP supported								<b>Monitoring</b> x = n/a	
<b>Inputs</b> 1..12 inputs								<b>Output Type</b> 0 = CC 1 = VMA400 2 = MCA400 2 = MCA400 Evo	
<b>Switch</b> x = n/a 0 = manual switch 1 = remote switch								<b>SPD</b> 0 = TYP II 1 = TYP I+II X = No SPD	
								<b>Fuses</b> x = n/a 3 = only fuse holders	

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Y-Connector Cables**

The Y or X cable is used to connect three or four elements of a PV system, such as the connection between PV panels, inverters and surge protection boxes. The cables are available in different connection variants.

**General ordering data**

Type	PVHYM+M+XXXX6W-15	Version
Order No.	<a href="#">2877860000</a>	Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female,
GTIN (EAN)	4064675666424	6mm², 1500 V
Qty.	1 pc(s).	
Type	PVHYM-M-XXXX6W+15	Version
Order No.	<a href="#">2877850000</a>	Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male,
GTIN (EAN)	4064675666417	6mm², 1500 V
Qty.	1 pc(s).	

**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).	

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## 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 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).	
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).	

## PV Sun Covers



## General ordering data

Type	PV SUN COVER 30/19/18	Version
Order No.	<a href="#">8000086576</a>	Photovoltaics
GTIN (EAN)	4064675845164	
Qty.	1 pc(s).	



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

**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****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).	

**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.	<a href="#">2729230000</a>	Photovoltaics
GTIN (EAN)	4050118804508	
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**

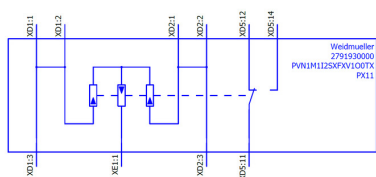
Type	VPU PV I+II 0 1000 E	Version
Order No.	<a href="#">2530530000</a>	Surge voltage arrester, Low voltage, Accessories, Surge protection I /
GTIN (EAN)	4050118540741	II, Spare arrester
Qty.	9 pc(s).	

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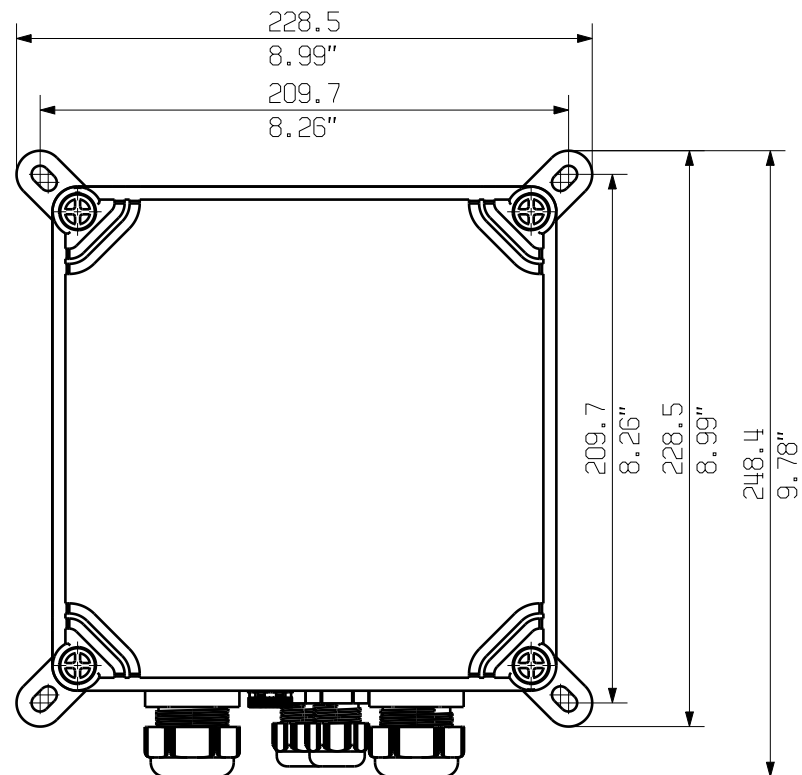
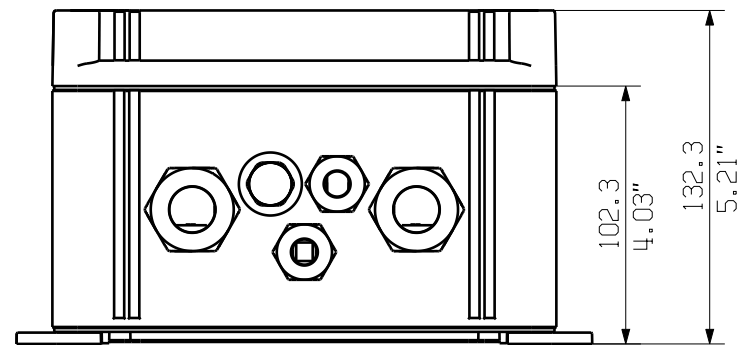
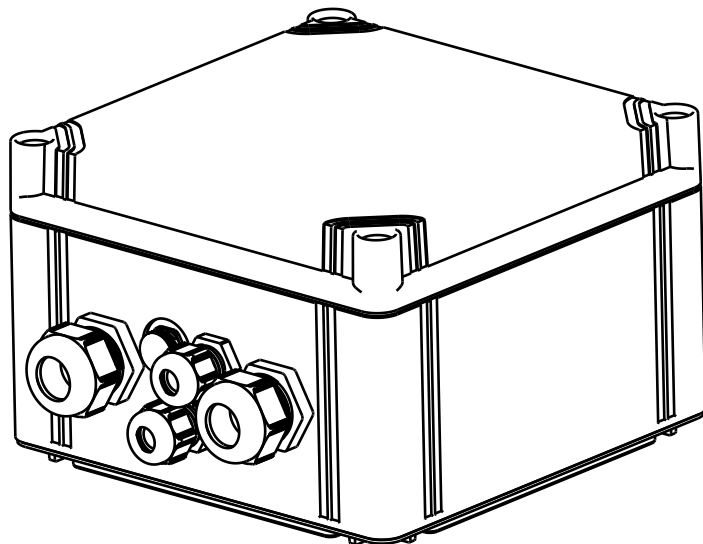
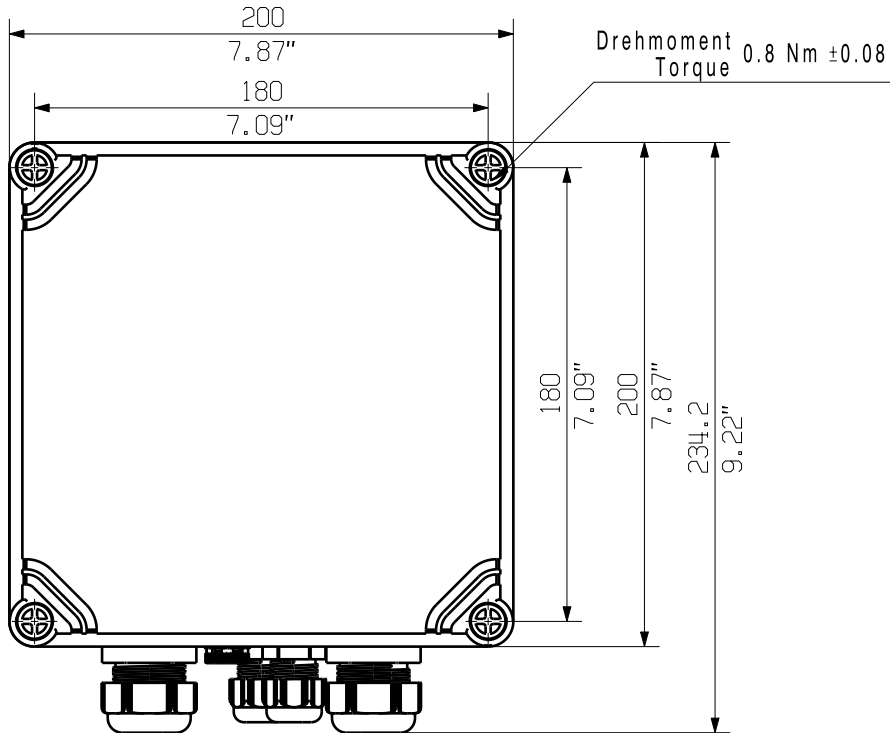
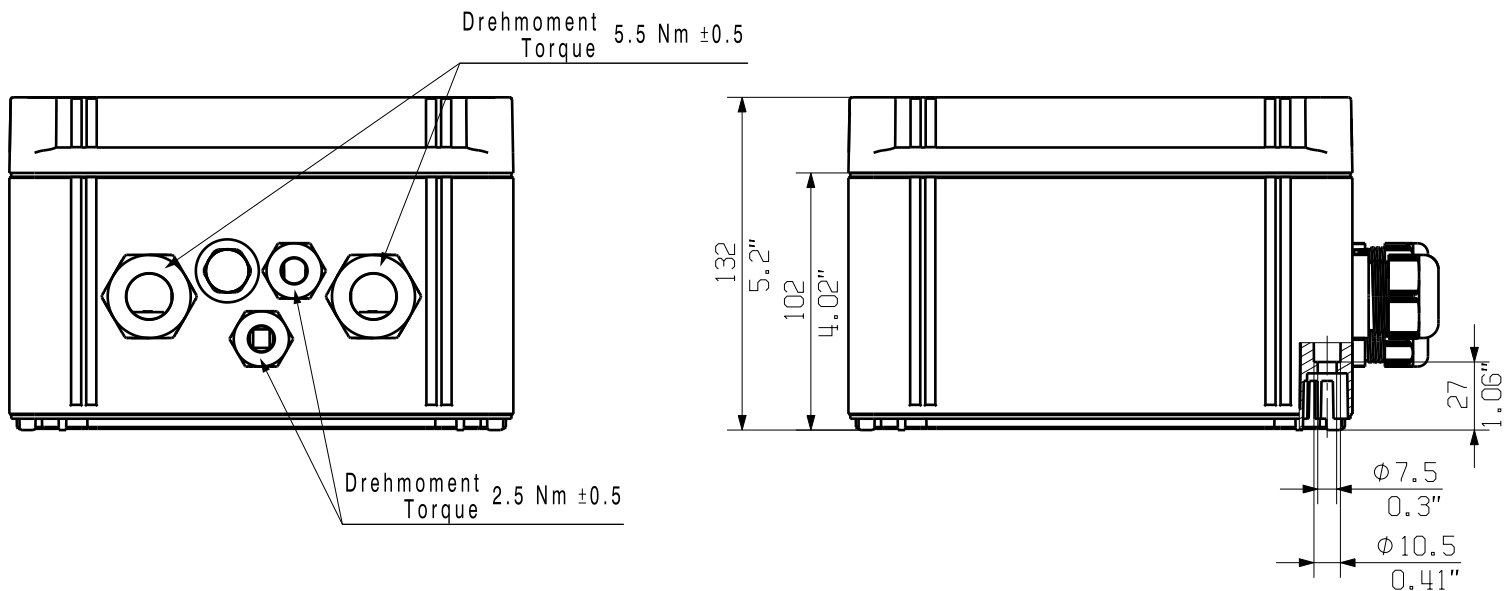
# Drawings



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The English version is binding



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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