

PVN DC 2I 1O 2MPP SPD1R CG 11**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, 1100 V, 2 MPP's, 2 Inputs / 1 Output per MPP, Surge protection I / II, Cable gland |
| Order No. | 2866320000 |
| Type | PVN DC 2I 1O 2MPP SPD1R CG 11 |
| GTIN (EAN) | 4064675604006 |
| Qty. | 1 pc(s). |
| Replacement parts | 2530600000 2534300000 |

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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 | 2,000 g | | |

Temperatures

| | | | |
|---------------------|-----------------|----------|---------------------------|
| Ambient temperature | -40 °C...+50 °C | Humidity | 5...95 %, no condensation |
|---------------------|-----------------|----------|---------------------------|

Approvals and norms

| | |
|-----------|-------------------------|
| Approvals | EN 61439-2, IEC 61439-2 |
|-----------|-------------------------|

Guarantee

| | |
|---------------|---------|
| Time interval | 5 years |
|---------------|---------|

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 foots |
| Impact resistance | IK08 in accordance with IEC 62208, IK10 in accordance with IEC 62262 | Insulating material | Polyester glass-fibre reinforced, Polycarbonate |
| Protection class | II | Switch disconnecter execution | no switch |
| Type of mounting | 4 screws, Wall mounting | | |

General data

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

Inputs

| | | | |
|--------------------------------|-----------------|-------------------------------|---------------------|
| Amount of maximum power points | 2 MPP | | |
| DC Input + & - | Wire connection | Type of connection | PUSH IN |
| | | Compatible cable crosssection | EN 50618:2015 |
| | | Wire cross-section, min. | 2.5 mm ² |
| | | Wire cross-section, max. | 16 mm ² |
| | Cable entry | Number of cable entries | 4 |

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Technical data

| | | | |
|------------------------------------|--|---|--|
| Functional earth connector | Cable entry | Number of cable entries | 1 |
| | 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 2 inputs connected in parallel | | |
| Surge protection auxiliary contact | Cable entry | Number of cable entries | 1 |
| | Wire connection | 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 |
| | | Wire cross-section, min. | 2.5 mm ² |
| | | Wire cross-section, max. | 16 mm ² |
| Max. number of DC outputs | per Maximum Power Point 1 output | | |

Surge protection DC side

| | | | |
|--|--------------------|--|---------------|
| Discharge current I_n (8/20 μ s) | 20 kA | Discharge current, max. (8/20 μ s) | 40 kA |
| Lightning test current I_{imp} (10/350 μ s) | 6.25 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 (+/-, -/PE, +/-PE) | ≤ 3.8 kV |
| 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_{SCP} | 11,000 A | Standby power consumption P_C | <0.2 W |
| Surge protection DC side | 1000 V type I + II | Total discharge current I_{total} (8/20 μ s) | 50 kA |
| Total discharge current I_{total} (10/350 μ s) | 12.5 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 2 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 - 6mm² single-wire, multi-wire, with/without ferrule.

1 output, connection via M25 cable gland with 3x7mm Ø cable entry. PUSH IN connection / 2.5 - 6mm² single-wire, multi-wire, with/without ferrule.

MPP2:

identical to MPP1

Max. string voltage U_{oc}: 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: 1.5mm²
Connection of the functional earth via cable glands (8-12mmØ) Conductor cross-section: 16-25mm²

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



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Technical data

Downloads

Approval/Certificate/Document of Conformity

[Declaration of Conformity for PV Next Mini 2](#)

Engineering Data

[CAD data – STEP](#)

Technical Documentation

[Customer drawing](#)[CAD data – Schematic Diagram for PV Next 2x 2In 1Out Boxes](#)[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](#)

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](#)

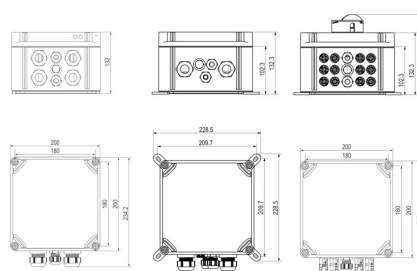
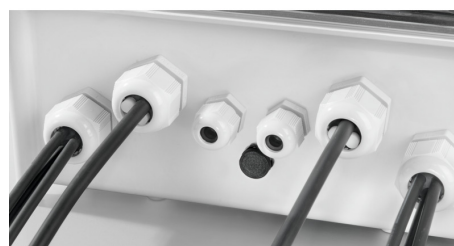
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Drawings

PCB design



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Accessories

External fixing lugs

External attachment lugs 4-part set



General ordering data

| Type | MF FPC | Version |
|------------|----------------------------|---|
| Order No. | 9536040000 | 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. | 1157820000 | Cutting tools, Cutting tool for one-hand operation |
| GTIN (EAN) | 4032248945344 | |
| Qty. | 1 pc(s). | |

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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). | |

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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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. | 2749850000 | 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. | 2749810000 | 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 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. | 2877850000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Female, 2x MC4 Male, |
| GTIN (EAN) | 4064675666417 | 6mm ² , 1500 V |
| Qty. | 1 pc(s). | |
| Type | PVHYM+M+XXXX6W-15 | Version |
| Order No. | 2877860000 | Photovoltaics, Y-Connector Cable, 1x WM4 C Male, 2x MC4 Female, |
| GTIN (EAN) | 4064675666424 | 6mm ² , 1500 V |
| Qty. | 1 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). | |

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

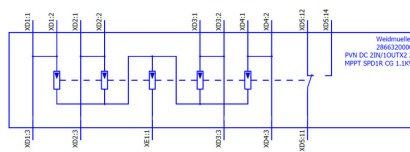
| | | |
|------------|----------------------------|--|
| Type | VPU PV I+II OM 1000 | Version |
| Order No. | 2534300000 | Surge voltage arrester, Low voltage, Surge protection I / II, Spare |
| GTIN (EAN) | 4050118545906 | arrester |
| Qty. | 9 pc(s). | |
| Type | VPU PV I+II O 1000 | Version |
| Order No. | 2530600000 | Surge voltage arrester, Low voltage, Accessories, Surge protection I / |
| GTIN (EAN) | 4050118540819 | II, Spare arrester |
| Qty. | 9 pc(s). | |

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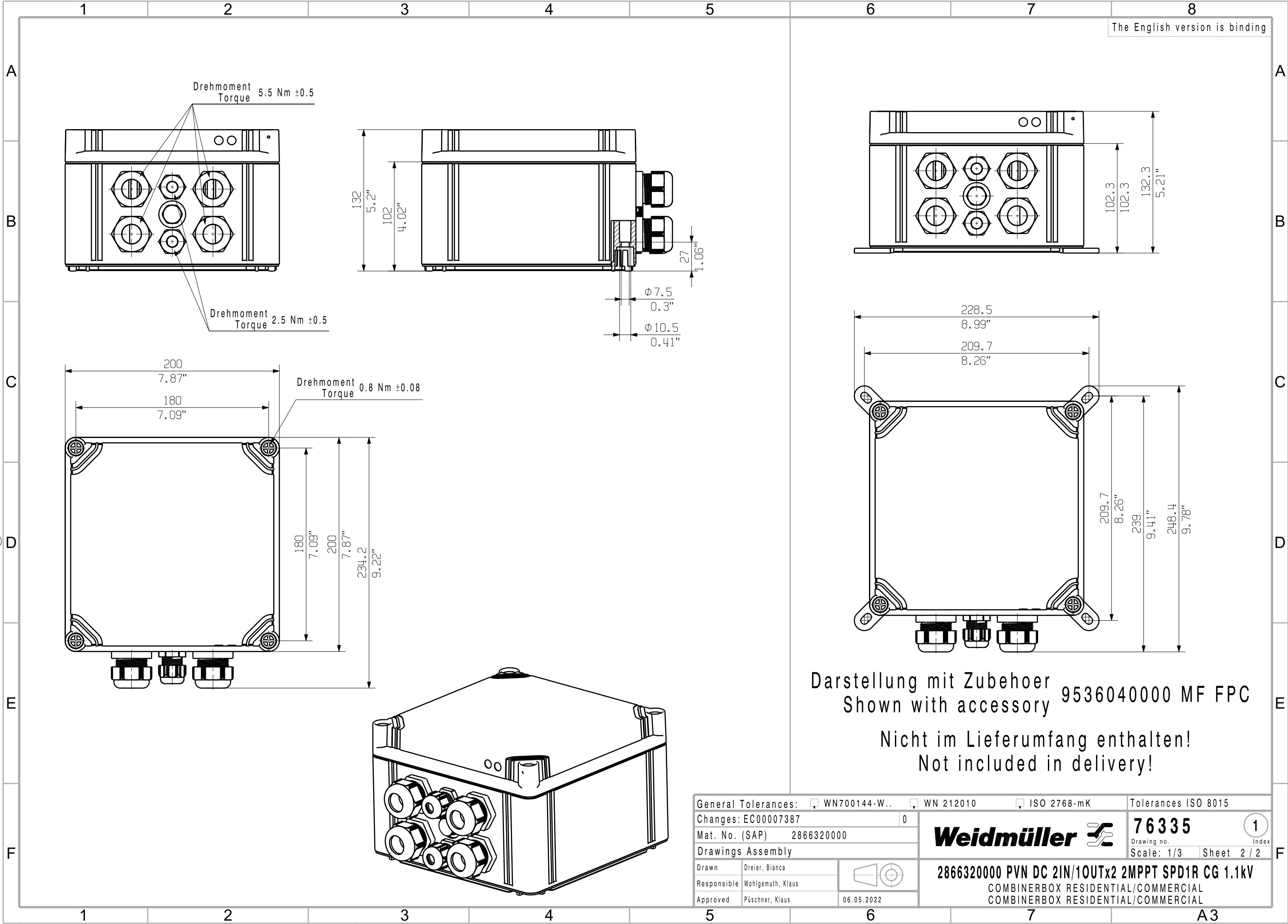
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Drawings



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| | | | | |
|---|--|--|---|--|
| General Tolerances: <input type="checkbox"/> WN700144-W.. <input type="checkbox"/> WN 212010 <input type="checkbox"/> ISO 2768-mK | | | Tolerances ISO 8015 | |
| Changes: EC00007387 | | | 0 | |
| Mat. No. (SAP) 2866320000 | | | 76335 | |
| Drawings Assembly | | | Drawing no. 1 | |
| Drawn Dreier, Bianca | | | Scale: 1/3 Sheet 2 / 2 | |
| Responsible Wohlgemuth, Klaus | | | Index | |
| Approved Püschner, Klaus | | | 06.05.2022 | |
| | | | 2866320000 PVN DC 2IN/1OUTx2 2MPPT SPD1R CG 1.1kV | |
| | | | COMBINERBOX RESIDENTIAL/COMMERCIAL | |
| | | | COMBINERBOX RESIDENTIAL/COMMERCIAL | |