

**PVN1M1I3S0FXV100TXPX10**
**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



PV Next: PV-Next, PV generator junction box for combination of 1-6 strings (input and output side) and connection to the inverter. Intelligent innovative design individual for every customer application. Advanced overvoltage protection, optional fuses and switch-disconnectors for optimum operation and safety for the system. In addition, all PV generator junction boxes comply with IEC/EN 61439-2 for maximum reliability of each component.

**General ordering data**

|            |                                                                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Version    | Photovoltaics, Combiner Box, 1000 V, 1 MPPT, 3 Inputs / 3 Outputs per MPPT, Surge protection I / II, Switch disconnector, Cable gland |
| Order No.  | <a href="#">2683140000</a>                                                                                                            |
| Type       | PVN1M1I3S0FXV100TXPX10                                                                                                                |
| GTIN (EAN) | 4050118699920                                                                                                                         |
| Qty.       | 1 pc(s).                                                                                                                              |

Creation date April 16, 2021 8:06:03 AM CEST

Catalogue status 09.04.2021 / We reserve the right to make technical changes.

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## Technical data

## Dimensions and weights

|                              |            |                |            |
|------------------------------|------------|----------------|------------|
| Depth                        | 175 mm     | Depth (inches) | 6.89 inch  |
| Depth with add-on components | 215 mm     | Height         | 302 mm     |
| Height (inches)              | 11.89 inch | Net weight     | 4,048 g    |
| Width                        | 186 mm     | Width (inches) | 7.323 inch |

## Temperatures

|                     |                 |
|---------------------|-----------------|
| Ambient temperature | -25 °C...+50 °C |
|---------------------|-----------------|

## Electrical characteristics

|                                 |                              |                 |                        |
|---------------------------------|------------------------------|-----------------|------------------------|
| Rated DC current per connection | Rated current                | 10 A            |                        |
|                                 | Ambient temperature          | -25 °C...+50 °C |                        |
|                                 | Short-circuit at main output | Duration        | 10 h                   |
|                                 |                              | Factor          | 1.25 * I <sub>nc</sub> |
| Rated DC voltage                | 1,000 V DC                   |                 |                        |
| Switching disconnecter capacity | DC-PV-2, IEC 60947-3         |                 |                        |

## Enclosure

|                               |                                                   |                     |                                                 |
|-------------------------------|---------------------------------------------------|---------------------|-------------------------------------------------|
| Connection type String        | Internal terminal (with cable gland feed-through) | Cover               | with cover, removeable                          |
| Enclosure attachment          | Via the four holes under the cover screws         | Insulating material | Polyester glass-fibre reinforced, Polycarbonate |
| Switch disconnecter execution | switch in cover                                   | Type of mounting    | Wall mounting                                   |

## General data

|                       |                                         |                   |      |
|-----------------------|-----------------------------------------|-------------------|------|
| Installation location | Protected outdoor area (>1 km from sea) | Protection degree | IP65 |
| Standards             | IEC 61439-2 ed 2.0, EN 61439-2:2011     |                   |      |

## Inputs

|                                        |                                                                 |                                           |                                     |
|----------------------------------------|-----------------------------------------------------------------|-------------------------------------------|-------------------------------------|
| Amount of Maximum Power Point Tracking | 1 MPPT                                                          |                                           |                                     |
| DC Input + & -                         | Wire connection                                                 | Type of connection                        | PUSH IN                             |
|                                        |                                                                 | Compatible cable cross-section            | EN 50618:2015, 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>                  |
| Functional earth connector             | Cable entry                                                     | Number of cable entries                   | 1                                   |
|                                        |                                                                 | Cable diameter, min.                      | 5 mm                                |
|                                        |                                                                 | Cable diameter, max.                      | 10 mm                               |
|                                        |                                                                 | Cable glands                              | M 16                                |
|                                        | Wire connection                                                 | Type of connection                        | Screw connection                    |
|                                        |                                                                 | 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 Tracking 3 inputs connected in parallel |                                           |                                     |

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|------------------------------------|-----------------|-------------------------------------------|----------------------------------------|
| 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                                      |
|                                    |                 | Cable diameter, min.                      | 5 mm                                   |
|                                    |                 | Cable diameter, max.                      | 10 mm                                  |
|                                    |                 | Cable glands                              | M 16                                   |

**Outputs**

|                 |                 |                          |                     |
|-----------------|-----------------|--------------------------|---------------------|
| DC Output + & - | Wire connection | 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 Tracking 3 outputs connected in parallel

**Surge protection DC side**

|                                                      |                                                            |                                                    |               |
|------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------|---------------|
| Discharge current $I_n$ (8/20 $\mu$ s)               | 20 kA                                                      | Discharge current, max. (8/20 $\mu$ s)             | 40 kA         |
| Lightning test current $I_{imp}$ (10/350 $\mu$ s)    | 6.25 kA                                                    | PV system voltage, max. $U_{cpv}$                  | 1,100 V       |
| Protection level $U_p$ mode (+/-, -/PE, +/- PE)      | $\leq 3.8$ kV                                              | Protection level $U_p$ mode (+/-)                  | $\leq 3.8$ kV |
| Protection level $U_p$ mode (-/PE)                   | $\leq 3.8$ kV                                              | Protection level $U_p$ mode (+/PE)                 | $\leq 3.8$ kV |
| Requirements class                                   | Type I/II                                                  | Short-circuit current $I_{SCPv}$                   | 11,000 A      |
| Standards                                            | IEC 61439-2 ed 2.0, EN 61439-2:2011                        | Standby power consumption $P_C$                    | < 0.2 W       |
| Surge protection DC side                             | 1000 V type I + II with remote contact, 1000 V type I + II | Total discharge current $I_{total}$ (8/20 $\mu$ s) | 50 kA         |
| Total discharge current $I_{total}$ (10/350 $\mu$ s) | 12.5 kA                                                    |                                                    |               |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002928    | ETIM 7.0    | EC002928    |
| 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 |

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**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  
- 6mm<sup>2</sup> single-wire, multi-  
wire, with/without ferrule  
Up to 3 outputs,  
connection via M25 cable  
gland with 3x7mm Ø  
cable entry (for positive  
and negative one each)  
PUSH IN connection / 2.5  
- 6mm<sup>2</sup> single-wire, multi-  
wire, with/without ferrule

with DC switch  
1 surge protection 1000  
V type I + II with remote  
contact

Connection of the signal  
contact via cable glands  
(8-12mmØ) max. cable  
cross-section: 1.5mm<sup>2</sup>  
Connection of functional  
earth via cable glands  
(8-12mmØ) cable cross-  
section: 16mm<sup>2</sup>  
Protection class: IP65  
Plastic enclosure  
Dimensions HxWxD:  
186x302x175 mm

According to standard,  
Low-voltage switchgear  
assemblies -  
Part 1: General  
specifications, (IEC  
61439-1:2011), BS EN  
61439-2:2022

**Downloads**

|                                                |                                                                                |
|------------------------------------------------|--------------------------------------------------------------------------------|
| Approval/Certificate/Document of<br>Conformity | <a href="#">EU Declaration of Conformity</a>                                   |
| Engineering Data                               | <a href="#">PV Next Schematic Diagram<br/>STEP</a>                             |
| Technical Documentation                        | <a href="#">customer drawing</a>                                               |
| User Documentation                             | <a href="#">Manual PV Next String Combiner Box<br/>MANUAL PV NEXT IT/ES/FR</a> |
| Brochure/Catalogue                             | <a href="#">Catalogues in PDF-format</a>                                       |

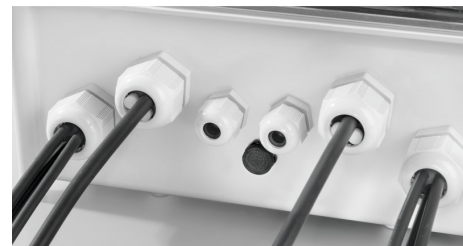
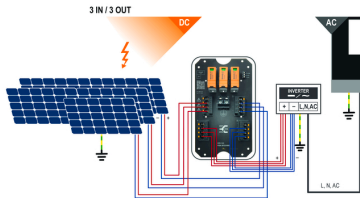
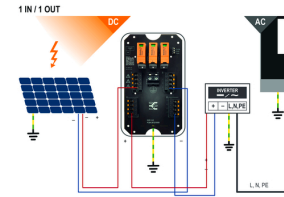
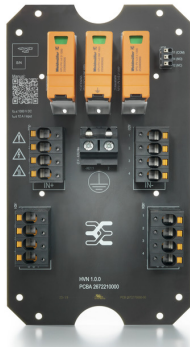
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## Drawings

### PCB design



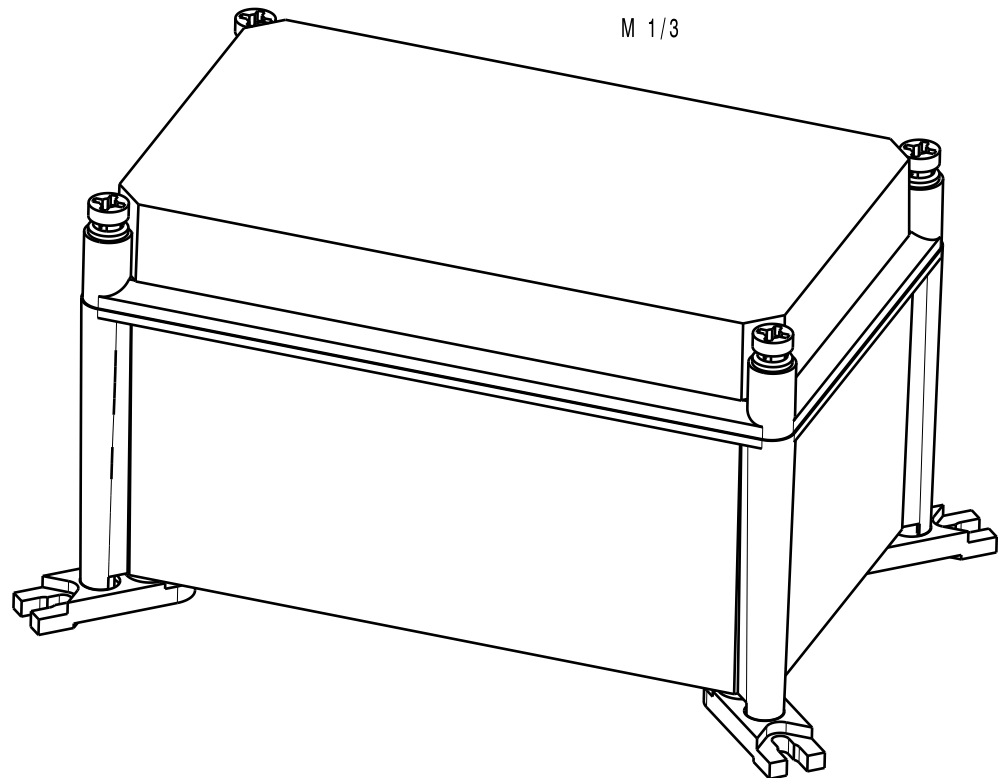
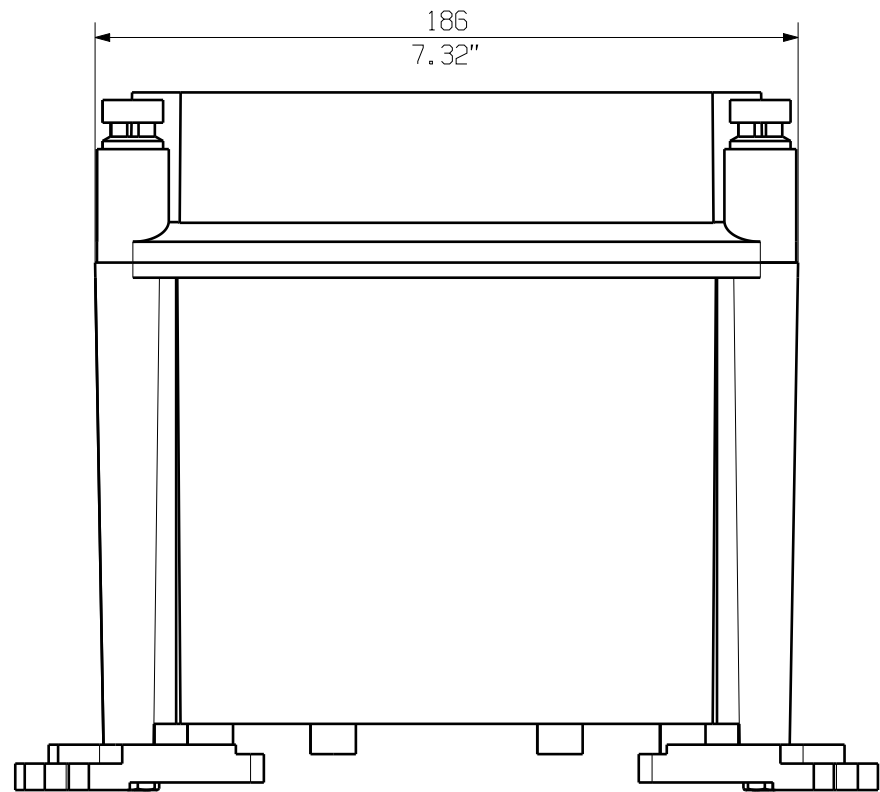
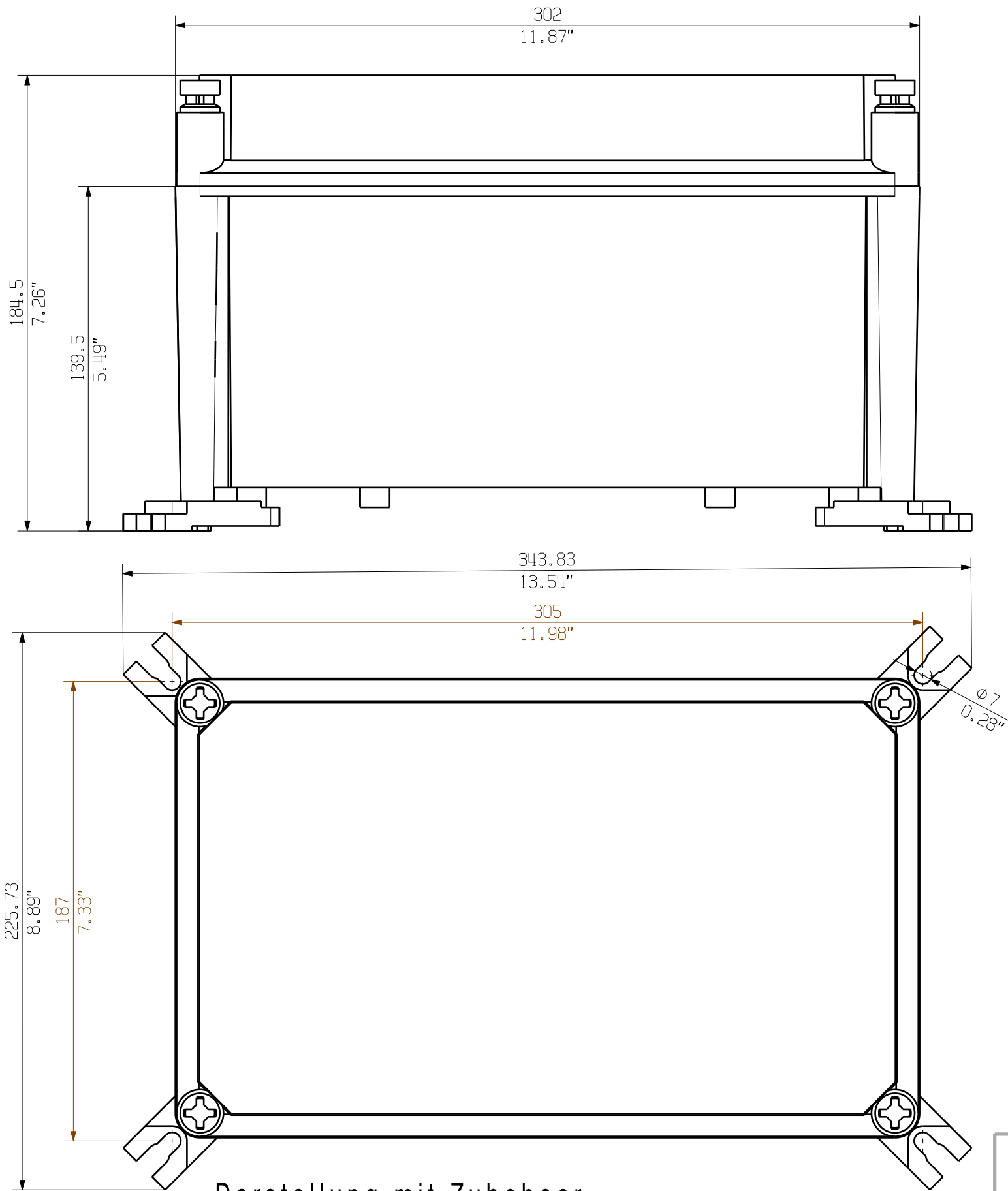
| PVN 1 M2 I6 S0 F3 V1 01 TX PX 10                                                                                                                              |                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Series</b><br>PVN = PV Next<br>VPU = PV Protect                                                                                                            | <b>Voltage</b><br>10 = 10V<br>15 = 15.5kV        |
| <b>Level</b><br>1 = DC trunk box (L1)                                                                                                                         | <b>Powersupply</b><br>x = n/a                    |
| <b>Series</b><br>1 = 1 MPPT supported<br>2 = 2 MPPT supported<br>3 = 3 MPPT supported<br>4 = 4 MPPT supported<br>5 = 5 MPPT supported<br>6 = 6 MPPT supported | <b>Monitoring</b><br>x = n/a                     |
| <b>Inputs</b><br>1...12 inputs                                                                                                                                | <b>Output Type</b><br>0 = GG<br>1 = WMAC         |
| <b>Switch</b><br>x = n/a<br>0 = manual switch                                                                                                                 | <b>SPD</b><br>2 = TYP II<br>1 = TYP I+II         |
|                                                                                                                                                               | <b>Fuses</b><br>x = n/a<br>3 = only fuse holders |

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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<br><br>29.01.2020                                                    |  | Max. nos.    |  | <b>Weidmüller</b>  |  | <b>71728</b>                       |  |
|                                                                                       |  | Modification |  |                                                                                                         |  | Drawing no. <span>Issue no.</span> |  |
|  |  |              |  | Date                                                                                                    |  | Name                               |  |
|                                                                                       |  | Drawn        |  | 29.01.2020                                                                                              |  | Brüntrup, Anna                     |  |
|                                                                                       |  | Responsible  |  |                                                                                                         |  | Wohlgemuth, Kl                     |  |
| Scale: 1/2      Size: A3                                                              |  | Approved     |  | 31.01.2020                                                                                              |  | Püschner, Klau                     |  |
| Drawings Customer                                                                     |  |              |  | Product file:                                                                                           |  |                                    |  |
|                                                                                       |  |              |  | <b>PVN TBF 301918</b><br>COMBINERBOX RESIDENTIAL/COMMERCIAL<br>COMBINERBOX RESIDENTIAL/COMMERCIAL       |  |                                    |  |
|                                                                                       |  |              |  |                                                                                                         |  | Sheet 01 of 01 sheets              |  |
|                                                                                       |  |              |  |                                                                                                         |  | <div>0</div>                       |  |