

**PVN DC 2I 1O 4MPP SPD1R WM4 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 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, 4 MPP's, 2 Inputs / 1 Output per MPP, Surge protection I / II, WM4C
Order No.	<a href="#">2737600000</a>
Type	PVN DC 2I 1O 4MPP SPD1R WM4 11
GTIN (EAN)	4050118824872
Qty.	1 pc(s).
Replacement parts	<a href="#">2530600000</a> <a href="#">2534300000</a>

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**Technical data****Dimensions and weights**

Depth	175 mm	Depth (inches)	6.89 inch
Height	334 mm	Height (inches)	13.15 inch
Width	372 mm	Width (inches)	14.646 inch
Net weight	4,812 g		

**Temperatures**

Ambient temperature	-40 °C...+45 °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	Plug WM4C	Enclosure attachment	Via mounting feets
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	4 MPP		
DC Input + & -	Wire connection	Type of connection	WM4C plug-in connector
		Compatible cable crossection	EN 50618:2015, TÜV 2 Pfg 1169/08.07
		Wire cross-section, min.	4 mm <sup>2</sup>
		Wire cross-section, max.	6 mm <sup>2</sup>
	Cable entry	Number of cable entries	8

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Functional earth connector	Cable entry	Number of cable entries	1
		Cable diameter, min.	5
		Cable diameter, max.	10
		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 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	Cable diameter, min.	5
		Cable diameter, max.	10
		Cable glands	M 16

**Outputs**

DC Output + & -	Wire connection	Type of connection	WM4C plug-in connector
		Compatible cable cross-section	TÜV 2 Pfg 1169/08.07, EN 50618:2015
		Wire cross-section, min.	4 mm <sup>2</sup>
		Wire cross-section, max.	6 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
Lightning test current $I_{imp}$ (10/350 $\mu$ 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)	$\leq 3.8$ kV
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 $I_{SCPv}$	11,000 A	Standby power consumption $P_C$	$< 0.2$ W
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
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 4 MPP tracker, suitable for protecting the DC side of a photovoltaic system according to EN 51543-32.

## MPP1:

2 inputs, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

1 output, connection via WM4 C connector, compatible with cable type TÜV 2 Pfg1 169/08.07 / EN 50618:2063

MPP2 to 4:  
identical to MPP1

Max. string voltage Uoc:  
1000V

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: 334x372x175 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

bdb5698-6a20-4370-8e28-8810d882d01a

**Important note**

## Product information

The SCIP number was assigned due to a lead content of more than 0.1 % of the net weight.

Safe use instruction according to ECHA:

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

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Approvals

**Downloads**

Approval/Certificate/Document of Conformity

[EU Declaration of Conformity](#)

Engineering Data

[CAD data – PV Next Schematic Diagram 2in1](#)[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](#)

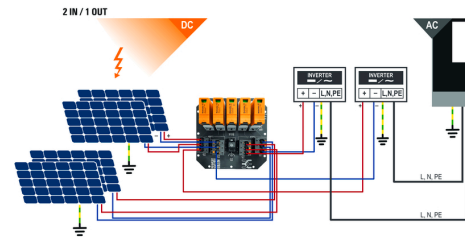
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## Drawings

### PCB design



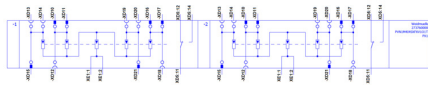
PVN 1 M2 I6 S0 F3 V1 Q1 TX PX 10									
<b>Series</b>		<b>Voltage</b>		<b>Powersupply</b>		<b>Monitoring</b>		<b>Output Type</b>	
PVN = PV Next		10 = 1kV		x = n/a		x = n/a		0 = DG	
VPU = PV Protect		11 = 1.1kV						1 = VMMAC	
		15 = 1.5kV						2 = MCA-5m 2	
<b>Level</b>		<b>SPD</b>		<b>Inputs</b>		<b>Switch</b>		<b>Fuses</b>	
1 = DC trunk box (L1)		0 = TYP II		1...12 inputs		x = n/a		x = n/a	
<b>Series</b>		1 = TYP I-II		1 = manual switch		0 = manual switch		3 = only fuse holders	
1 = 1 MPP supported		X = No SPD		1 = remote switch					
2 = 2 MPP supported									
3 = 3 MPP supported									
4 = 4 MPP supported									
6 = 6 MPP supported									

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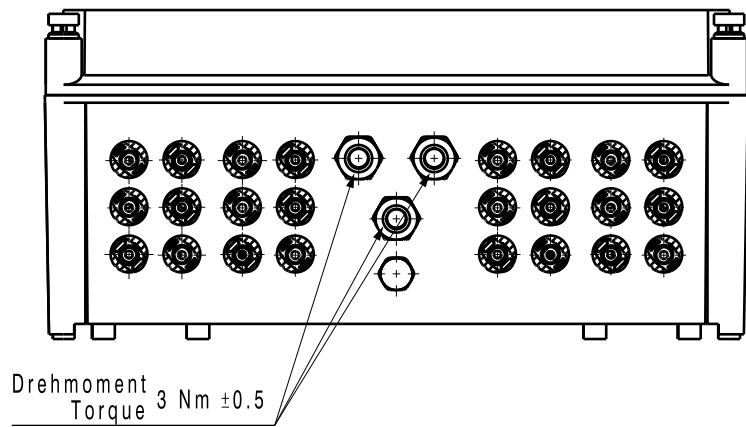
## Drawings



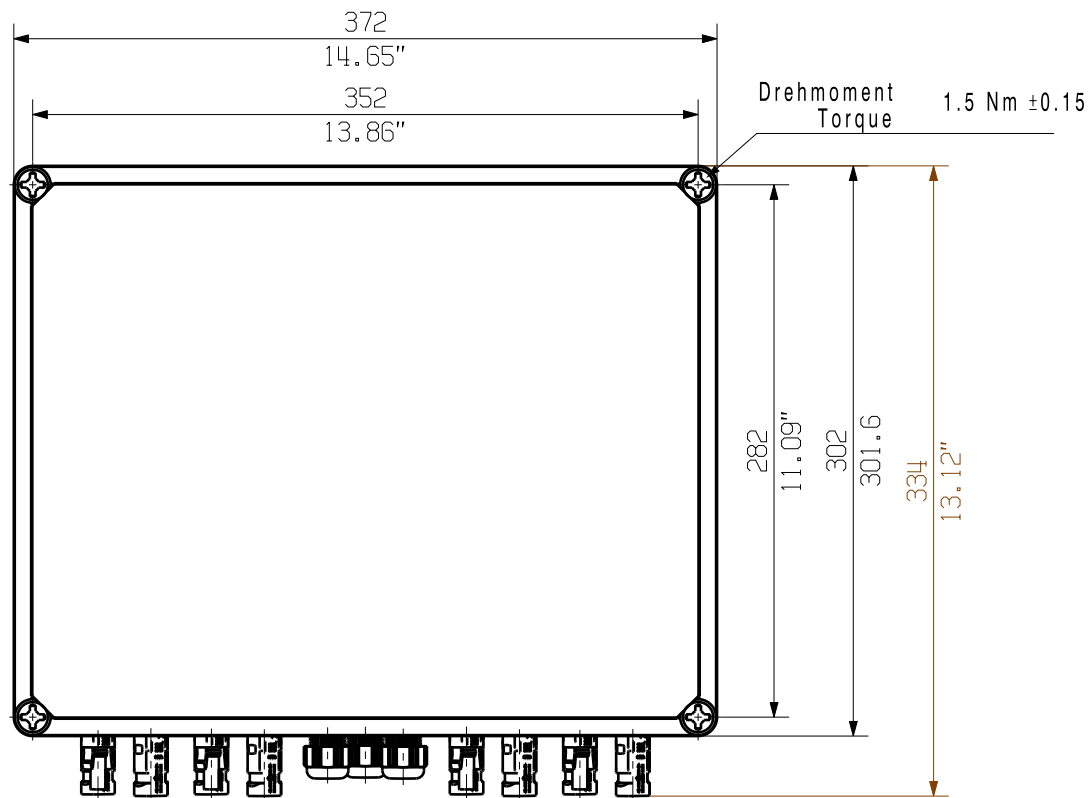
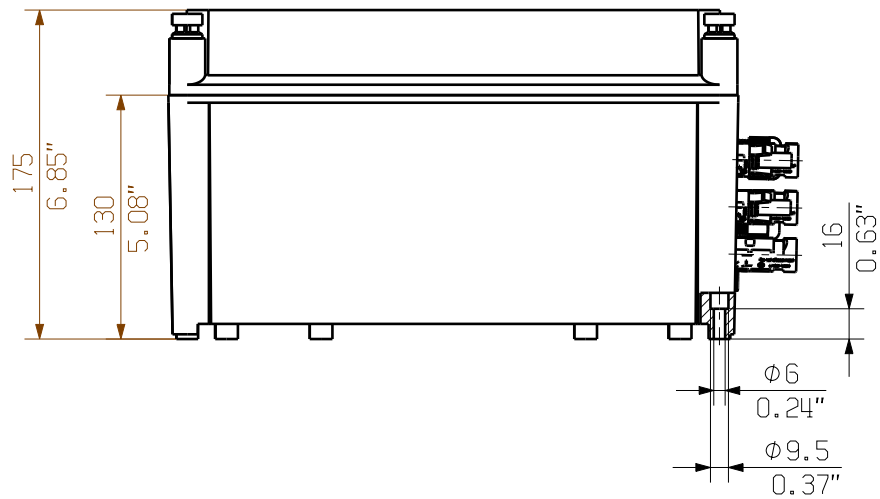
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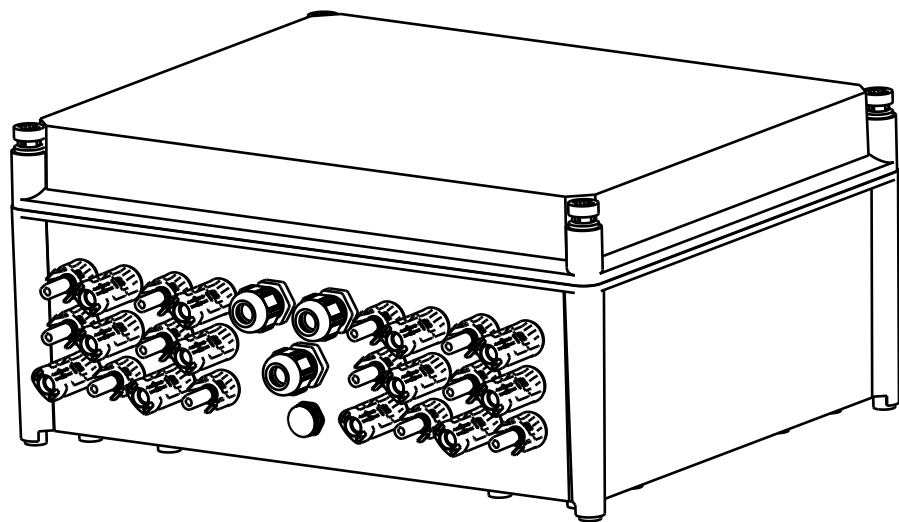
Dimensions without tolerances are no check dimensions



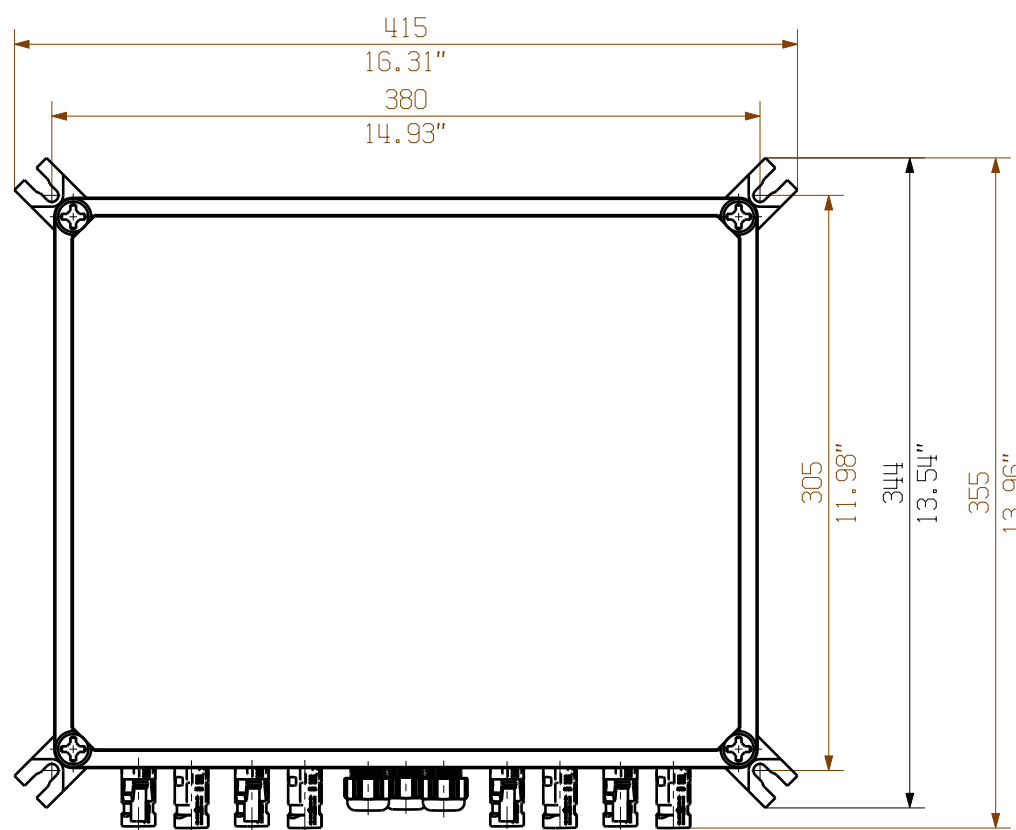
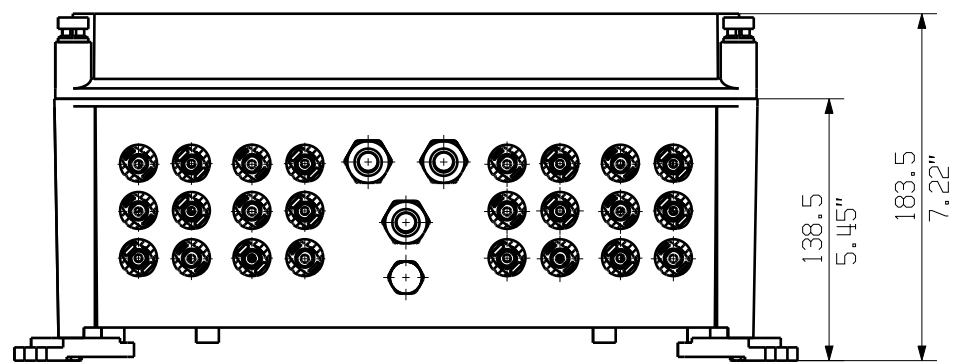
Drehmoment  
Torque 3 Nm ±0.5



Drehmoment  
Torque 1.5 Nm ±0.15





The English version is binding



Darstellung mit Zubehoer  
Shown with accessory 0360800000 MF TBF

Nicht im Lieferumfang enthalten!  
Not included in delivery!

EC00004112		Prim PLM Part No.: 1230340		Prim ERP Part No.: 2737600000	
First Issue Date 02.04.2020	Max. nos.		<b>Weidmüller</b> 		<b>72147</b> Drawing no. Issue no. Sheet 03 of 03 sheets
	Modification				
		Date	Name	<b>2737600000 PVN1M4I8SXFV101TXPX10</b> Combinerbox Residential/Commercial Combinerbox Residential/Commercial	
	Drawn	22.10.2020	Brüntrup, Anna		
	Responsible		Wohlgemuth, Kl		
Approved	22.10.2020	Püschner, Klau			
Scale: 1/4 Size: A3			Drawing customer		
Drawing customer			Product file:		