

## VPU AC I 1+1 R 300/12.5

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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



Weidmüller VPU I (Type I), VPU II (Type II) and VPU III (Type III) surge protection products effectively reduce the interference coupling that can occur due to transient surge voltages, even significantly below the limits prescribed by insulation co-ordination according to EN 60664-3 / DIN VDE 0110-3. This means that the whole installation is exposed to fewer malfunctions. The arresters are co-ordinated using technical means. This means that decoupling between Types I, II and III is unnecessary. The arresters are tested according to product standard IEC 61643-11 / DIN EN 61643-11 and can be installed in systems according to IEC 61643-12 / VDE 0675-6-12 and IEC 62305-4 / VDE 0185-4. This lightning and surge protection device is suited for installation in power supply systems. Weidmüller offers different products depending on the particular mains network type and voltage level. A special Type I and Type II protective device is even available for photovoltaic applications.

### General ordering data

Version	Surge voltage arrester, Low voltage, Surge protection, with remote contact, Single-phase, TN-C, TN-C-S, TN-S, TT, TN, IT with N, IT without N
Order No.	<a href="#">2591490000</a>
Type	VPU AC I 1+1 R 300/12.5
GTIN (EAN)	4050118599459
Qty.	1 pc(s).
Replacement parts	<a href="#">2591370000</a> <a href="#">2591590000</a> <a href="#">2855300000</a>

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## Technical data

## Dimensions and weights

Depth	91 mm	Depth (inches)	3.583 inch
Height	104.5 mm	Height (inches)	4.114 inch
Width	36 mm	Width (inches)	1.417 inch
Net weight	38 g		

## Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...85 °C
Humidity	5 - 95% rel. humidity		

## Rated data UL

Ambient temperature (operational), max. 85 °C		Rated Voltage $U_N$	240 V
VPR (N-PE)	1,200 V	MCOV (L-PE)	300 V
MCOV (L/N-PE)	300 V	MCOV (N-PE)	305 V
SCCR	150 kA	$I_n$	20 kA
Category	SPD TYPE 1CA	Ambient temperature (operational), min. -40 °C	
Certificate No. (cURus)	E354261	MODE	L-N, L-G, N-G
VPR (L-N)	900 V	VPR (L-PE)	1,000 V
Voltage type	AC		

## Connection data, remote alert

Connection type	PUSH IN	Cross-section for connected wire, solid core, max.	1.5 mm <sup>2</sup>
Cross-section for connected wire, solid core, min.	0.14 mm <sup>2</sup>	Stripping length	8 mm

## General data

Colour	black, orange, blue	Design	Installation housing; 2TE, Insta IP 20
Operating altitude	≤ 4000 m	Optical function display	green = OK; red = arrester is defective - replace
Protection degree	IP20 in installed state	Rail	TS 35
Segment	Power distribution	UL 94 flammability rating	V-0
Version	Surge protection, with remote contact		

## Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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## Rated data IEC / EN

Discharge current $I_{\max}$ (8/20 $\mu$ s) N-PE	50 kA	Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-PE	50 kA
Discharge current $I_n$ (8/20 $\mu$ s) N-PE	50 kA	Discharge current $I_n$ (8/20 $\mu$ s) wire-PE	20 kA
Energy coordination ( $\leq 10$ m)	Type I, Type II, Type III	Follow-on current extinguishing capability $I_{fi}$	Not available due for technical reasons
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Fuse	No Fuse necessary $\leq 315$ A gG, 250 A gG @50 kA Iscrr, 315 A gG @25 kA Iscrr	Leakage current at $U_n$	1 $\mu$ A
Lightning test current $I_{\text{imp}}$ (10/350 $\mu$ s) (L-PE)	12.5 kA	Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) (N-PE)	50 kA
Low voltage network	Single-phase, TN-C, TN-C-S, TN-S, TT, TN, IT with N, IT without N	Mains voltage	230 V / 400 V
Max. continuous voltage, $U_c$ (AC)	300 V	Max. continuous voltage, $U_c$ (N-PE)	305 V
Number of poles	2	Protection level $U_p$ at $I_N$ (L/N-PE)	$\leq 1.5$ kV
Protection level $U_p$ at $I_N$ (N-PE)	$\leq 1.5$ kV	Rated voltage (AC)	230 V
Requirements category acc. to IEC 61643-11	Type I, Type II	Requirements class, acc. to EN 61643-11	T1, T2
Response time	$\leq 25$ ns, $\leq 100$ ns	Short-circuit current rating $I_{\text{SCCR}}$	50 kA
Signalling contact	250 V 1A 1CO	Standards	IEC61643-11, EN61643-11, UL 1449
Temporary surge voltage (over-voltage) - TOV	337 V	Voltage type	AC

## Connection data

Stripping length	15 mm	Wire connection method	Screw connection
Type of connection	Screw connection	Stripping length, rated connection	15 mm
Tightening torque, min.	2 Nm	Tightening torque, max.	4.5 Nm
Clamping range, rated connection	16 mm <sup>2</sup>	Clamping range, min.	4 mm <sup>2</sup>
Clamping range, max.	35 mm <sup>2</sup>	Wire cross-section, solid, min.	1.5 mm <sup>2</sup>
Wire cross-section, solid, max.	35 mm <sup>2</sup>	Wire connection cross section, finely stranded, min.	1.5 mm <sup>2</sup>
Wire connection cross section, finely stranded, max.	25 mm <sup>2</sup>	Connection cross-section, stranded, min.	1.5 mm <sup>2</sup>
Connection cross-section, stranded, max.	35 mm <sup>2</sup>		

## Guarantee

Time interval	5 years
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## Classifications

ETIM 6.0	EC000941	ETIM 7.0	EC000941
ETIM 8.0	EC000941	ETIM 9.0	EC000941
ECLASS 9.0	27-13-08-05	ECLASS 9.1	27-13-08-05
ECLASS 10.0	27-13-08-05	ECLASS 11.0	27-13-08-05
ECLASS 12.0	27-17-90-90	ECLASS 13.0	27-17-90-90

## Important note

Product information	Only applicable to IT power systems where the earth on the distribution transformer is interconnected with the earth on the consumer side (RE=RA in Figure 44.A1 of IEC 60634-4-44:2018). For use in DC applications, please use the fuse of SIBA Type NH2XL aR/aSF DC 1500 V
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## Technical data

## Approvals

Approvals



ROHS Conform

UL File Number Search UL Website

Certificate No. (cURus) E354261

## Downloads

Approval/Certificate/Document of Conformity

[EU Konformitätserklärung / EU Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)

Tender specification

[Ausschreibungstext DE](#)[Tenderspecification EN](#)

User Documentation

[Beipackzettel / Instruction sheet](#)

Catalogues

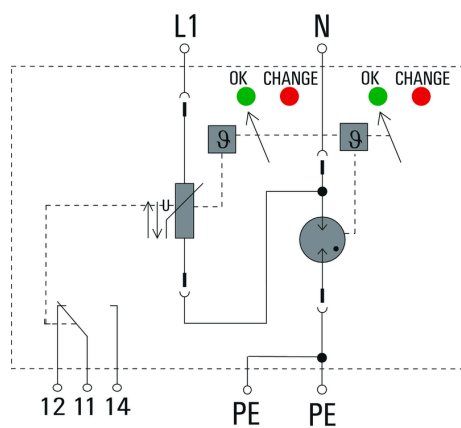
[Catalogues in PDF-format](#)

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[www.weidmueller.com](http://www.weidmueller.com)**Drawings****Electric symbol**

Schematic circuit diagram

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

ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.

Advantages at a glance:

- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

**General ordering data**

Type	ESG 6/15 K MC NE WS	Version
Order No.	<a href="#">1880100000</a>	ESG, Device markers x 15 mm, PA 66, Colour: white, Self-adhesive
GTIN (EAN)	4032248478781	
Qty.	200 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 PH1 X 80	Version
Order No.	<a href="#">2749890000</a>	Screwdriver, Blade width (B): 1 mm, 80 mm, Blade thickness (A): 1
GTIN (EAN)	4050118897098	
Qty.	1 pc(s).	

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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).	

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## Replacement parts

### Spare arrester



In the event of a defective arrester, you can easily reorder this spare arrester, replace the defective arrester and thus restore protection.

### General ordering data

Type	VPU AC I O N-PE 305/50	Version
Order No.	<a href="#">2591590000</a>	Spare arrester, Surge protection
GTIN (EAN)	4050118599350	
Qty.	1 pc(s).	
Type	VPU AC I O 300/12.5	Version
Order No.	<a href="#">2591370000</a>	Spare arrester, Surge protection, $U_p(L/N-PE) \leq 1.5 \text{ kV}$
GTIN (EAN)	4050118599565	
Qty.	1 pc(s).	

### VPU Series



Extensive accessories round off the product range

### General ordering data

Type	PLUG VPU AC
Order No.	<a href="#">2855300000</a>
GTIN (EAN)	4064675533283
Qty.	10 pc(s).