VPU AC II 3+1 R 300/50

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

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, TN-C-S, TN-S, TT, IT with N, IT without N
Order No.	2591090000
Type	VPU AC II 3+1 R 300/50
GTIN (EAN)	4050118599848
Qty.	1 pc(s).
Replacement parts	2591010000 2591190000 2855300000

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Technical data

Dimensions and weights

Depth	68 mm	Depth (inches)	2.677 inch
Depth including DIN rail	76 mm	Height	104.5 mm
Height (inches)	4.114 inch	Width	72 mm
Width (inches)	2.835 inch	Net weight	488 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)	1,000 V	MCOV (L-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	all modes	VPR (L-L)	1,800 V
VPR (L-N)	900 V	VPR (L-PE)	1,000 V
Voltage type	AC	UL Energy Networks	3-phase WYE

Connection data, remote alert

Connection type	PUSH IN	Cross-section for connected wire, solid core, max.	1.5 mm²
Cross-section for connected wire, solid core, min.	0.14 mm²	Stripping length	8 mm

General data

Colour	black, orange, blue	Design	Installation housing; 4TE, 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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Technical data

Rated data IEC / EN

Combined pulse U_{OC}	6 kV	Discharge current (type III)	3 kA
Discharge current I_{max} (8/20µs) N-PE	65 kA	Discharge current I_{max} (8/20µs) wire-PE	50 kA
Discharge current I_n (8/20µs) N-PE	40 kA	Discharge current I_n (8/20µs) wire-PE	20 kA
Energy coordination (≤10 m)	Type II, Type III	Follow-on current extinguishing capability I_{fi}	Follow current need not be taken into account
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Fuse	No Fuse neccessary ≤315 A gG, 250 A gG @50 kA Isccr, 315 A gG @25 kA Isccr	Leakage current at U_n	1 µA
Low voltage network	TN-C-S, TN-S, TT, IT with N, IT without N	Mains voltage	230 V / 400 V
Max. continuous voltage, Uc (AC)	300 V	Max. continuous voltage, Uc (N-PE)	305 V
Number of poles	4	Protection level U_p at I_N (L/N-PE)	≤ 1.5 kV
Protection level U_p at I_N (N-PE)	≤ 1.5 kV	Rated voltage (AC)	230 V
Requirements category acc. to IEC 61643-11	Type II, Type III	Requirements class, acc. to EN 61643-11	T2, T3
Response time	≤ 25 ns	SPD type	T2, T3
Short-circuit current rating I_{SCCR}	50 kA	Signalling contact	250 V 1A 1CO
Standards	IEC 61643-11, EN 61643-11, 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 mm²	Clamping range, min.	1.5 mm²
Clamping range, max.	35 mm²	Wire cross-section, solid, min.	1.5 mm²
Wire cross-section, solid, max.	16 mm²	Wire connection cross section, finely stranded, min.	1.5 mm²
Wire connection cross section, finely stranded, max.	25 mm²	Connection cross-section, stranded, min.	1.5 mm²
Connection cross-section, stranded, max.	35 mm²		

Guarantee

Time interval	5 years

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
ECLASS 14.0	27-17-90-90		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	/

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Technical data

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

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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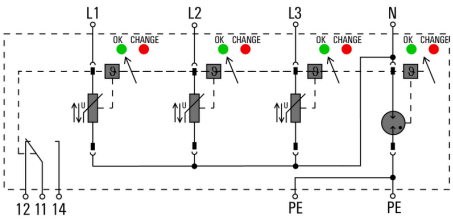
Drawings

Electric symbol



Schematic circuit diagram

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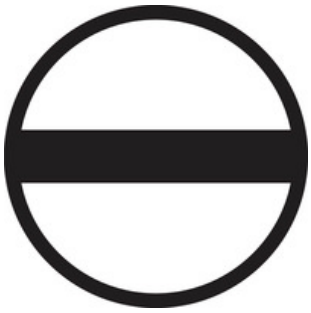
Accessories

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 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).	

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.	2749890000	Screwdriver, Blade width (B): 1 mm, 80 mm, Blade thickness (A): 1
GTIN (EAN)	4050118897098	
Qty.	1 pc(s).	

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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.	1880100000	ESG, Device markers x 15 mm, PA 66, Colour: white, Self-adhesive
GTIN (EAN)	4032248478781	
Qty.	200 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 II 0 300/50	Version
Order No.	2591010000	Spare arrester, Surge protection
GTIN (EAN)	4050118599923	
Qty.	1 pc(s).	

Type	VPU AC II 0 N-PE 305/65	Version
Order No.	2591190000	Spare arrester, Surge protection, TT nur für N-PE
GTIN (EAN)	4050118599749	
Qty.	1 pc(s).	

VPU Series

Extensive accessories round off the product range

General ordering data

Type	PLUG VPU AC
Order No.	2855300000
GTIN (EAN)	4064675533283
Qty.	10 pc(s).