

VPU AC I 3+1 R 300/12.5
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, $U_p(L/N-PE) \leq 1.5 \text{ kV}$
Order No.	2591470000
Type	VPU AC I 3+1 R 300/12.5
GTIN (EAN)	4050118599473
Qty.	1 pc(s).

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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
Net weight	632 g	Width	76 mm
Width (inches)	2.992 inch		

Temperatures

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

Rated data UL

Operating altitude	≤ 4000 m	Ambient temperature (operational), max. 85 °C	
Rated Voltage U_N	240 V	VPR (N-PE)	1,200 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	all modes
VPR (L-L)	1,800 V	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 ²
Cross-section for connected wire, solid core, min.	0.14 mm ²	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

Operating altitude	≤ 4000 m	Pollution severity	2
Surge voltage category	III		

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Technical data

Rated data IEC / EN

Discharge current $I_{\max}$ (8/20 μ s) wire-PE	50 kA	Discharge current $I_{\max}$ (8/20 μ s) N-PE	50 kA
Discharge current I_n (8/20 μ s) N-PE	50 kA	Discharge current I_n (8/20 μ s) wire-PE	20 kA
Energy coordination (≤ 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 ≤ 315 A gG, 250 A gG @50 kA Iscrr, 315 A gG @25 kA Iscrr	Leakage current at U_n	1 μ A
Lightning test current I_{imp} (10/350 μ s) (L-PE)	12.5 kA	Lightning test current, I_{imp} (10/350 μ s) (N-PE)	50 kA
Low voltage network	TN-C-S, TN-S, TT	Max. continuous voltage, U_c (AC)	300 V
Max. continuous voltage, U_c (N-PE)	305 V	Number of poles	4
Protection level U_p (typ.)	≤ 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 I, Type II
Requirements class, acc. to EN 61643-11	T1, T2	Response time	≤ 25 ns, ≤ 100 ns
Short-circuit current rating I_{SCCR}	50 kA	Signalling contact	250 V 1A 1CO
Standards	IEC61643-11, EN61643-11	Temporary surge voltage (over-voltage) - TOV	337 V
Voltage type	AC		

Connection data

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 ²
Clamping range, min.	4 mm ²	Clamping range, max.	35 mm ²
Wire cross-section, solid, min.	2.5 mm ²	Wire cross-section, solid, max.	35 mm ²
Wire connection cross section, finely stranded, min.	2.5 mm ²	Wire connection cross section, finely stranded, max.	35 mm ²
Conductor cross-section, flexible, AEH (DIN 46228-1), min.	2.5 mm ²	Conductor cross-section, flexible, AEH (DIN 46228-1), max.	35 mm ²
Connection cross-section, stranded, min.	2.5 mm ²	Connection cross-section, stranded, max.	35 mm ²

Ratings IECEx/ATEX/cUL

Certificate no. (cULus)	E354261
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Guarantee

Time interval	5 years
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Classifications

ETIM 6.0	EC000941	ETIM 7.0	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

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

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Approvals



ROHS	Conform
UL File Number Search	E354261

Downloads

Approval/Certificate/Document of Conformity	EAC VPU SERIES Declaration of Conformity Declaration of Conformity Declaration of Conformity
Engineering Data	STEP
Tender specification	Ausschreibungstext DE Tenderspecification EN
User Documentation	Instruction sheet
Brochure/Catalogue	Catalogues in PDF-format

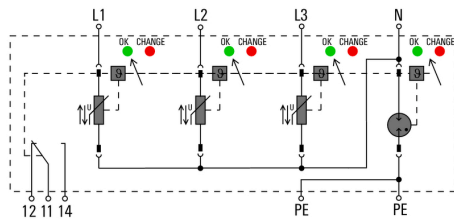
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Drawings

Electric symbol



Schematic circuit diagram