

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

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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 (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, High-Leg Delta		

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

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 I_{max} (8/20 μ s) wire-PE	50 kA
Discharge current I_{max} (8/20 μ s) N-PE	65 kA	Discharge current I_n (8/20 μ s) N-PE	40 kA
Discharge current I_n (8/20 μ s) 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 necessary ≤ 315 A gG, 250 A gG @50 kA I_{sccr} , 315 A gG @25 kA I_{sccr}
Leakage current at U_n	1 μ A	Low voltage network	TN-C-S, TN-S, TT, 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	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/III
Requirements class, acc. to EN 61643-11	T2, T3	Response time	≤ 25 ns, ≤ 100 ns
SPD type	T2, T3	Short-circuit current rating I_{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

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.	4 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
ETIM 8.0	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		

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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

Downloads

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

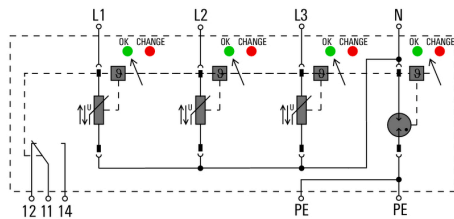
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Drawings

Electric symbol



Schematic circuit diagram