

VPU series

VPU AC II 1+1 300/50

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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

Type	VPU AC II 1+1 300/50
Order No.	2591060000
Version	Surge voltage arrester, Low voltage, Surge protection, Single-phase, TN, $U_p(L/N-PE) \leq 1.5 \text{ kV}$
GTIN (EAN)	4050118599879
Qty.	1 pc(s).

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Technical data
Dimensions and weights

Width	36 mm	Width (inches)	1.417 inch
Height	96.3 mm	Height (inches)	3.791 inch
Depth	68 mm	Depth (inches)	2.677 inch
Depth including DIN rail	76 mm	Net weight	254 g

Temperatures

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

Rated data UL

Voltage type	AC	Certificate No. (cURus)	E354261
Ambient temperature (operational), min.	-40 °C	Ambient temperature (operational), max.	85 °C
Rated Voltage U_N	240 V	VPR (L-PE)	1,000 V
VPR (L-N)	900 V	VPR (N-PE)	1,000 V
MCOV (L/N-PE)	300 Vac	MCOV (N-PE)	305 V
SCCR	150 kA	I_n	20 kA
Category	SPD TYPE 1CA	MODE	all modes
Altitude	≤ 4000 m		

General data

Altitude	≤ 4000 m	Colour	black, orange, blue
Design	Installation housing; 2TE, Insta IP 20	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		

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	III
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Technical data

Rated data IEC / EN

Rated voltage (AC)	230 V	SPD type	T2
Voltage type	AC	Max. continuous voltage, U_c (AC)	300 V
Max. continuous voltage, U_c (N-PE)	305 V	Low voltage network	Single-phase, TN
Discharge current I_n (8/20 μ s) N-PE	40 kA	Discharge current I_{max} (8/20 μ s) N-PE	65 kA
Discharge current I_n (8/20 μ s) wire-PE	20 kA	Discharge current I_{max} (8/20 μ s) wire-PE	50 kA
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Fuse	No Fuse necessary ≤ 315 A gG, 250 A gG @50 kA I _{sc} , 315 A gG @25 kA I _{sc}	Short-circuit current rating I _{SCCR}	50 kA
Follow-on current extinguishing capability I_{fi}	Follow current need not be taken into account	Standards	IEC61643-11, EN61643-11, UL 1449 Ed.4
Energy coordination (≤ 10 m)	Type II, Type III	Protection level U_p (typ.)	≤ 1.5 kV
Protection level U_p at I_N (N-PE)	≤ 1.5 kV	Leakage current at U_n	1 μ A
Temporary surge voltage (over-voltage)-TOV	337 V	Number of poles	2
Requirements category acc. to IEC 61643-11	Type II	Requirements class, acc. to EN 61643-11	T2
Response time	≤ 25 ns, ≤ 100 ns	Signalling contact	No

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

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	UNSPSC	30-21-19-21

Product information

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).

Approvals

Approvals



ROHS

Conform

Data sheet**VPU series**
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Approval/Certificate/Document of Conformity	EAC VPU SERIES Declaration of Conformity
Engineering Data	STEP
User Documentation	Instruction sheet

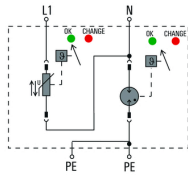
Data sheet

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Drawings

Electric symbol



Schematic circuit diagram
