

VPU AC I 4 480/10

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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

Version	Surge voltage arrester, Low voltage, Surge protection, TN-C-S, TN-S
Order No.	2591550000
Type	VPU AC I 4 480/10
GTIN (EAN)	4050118599398
Qty.	1 items

Technical data

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E354261

Dimensions and weights

Depth	91 mm	Depth (inches)	3.5827 inch
Height	90 mm	Height (inches)	3.5433 inch
Width	72 mm	Width (inches)	2.8346 inch
Net weight	770 g		

Temperatures

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

Probability of failure

MTBF	15 a
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Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

Rated data UL

Ambient temperature (operational), max. 85 °C	Rated Voltage UN	400 V
VPR (N-PE)	MCOV (L/N-PE)	480 V
SCCR	In	20 kA
Category	Ambient temperature (operational), min. -40 °C	
Certificate No. (cURus)	MODE	all modes
VPR (L-L)	VPR (L-N)	3000 V
VPR (L-PE)	Voltage type	AC

General data

Optical function display	green = OK; red = arrester is defective - replace	Segment	Power distribution
Version	Surge protection	Design	Installation housing: 4TE, Insta IP 20
UL 94 flammability rating	V-0	Colour	orange, black
Protection degree	IP20 in installed state	Mounting rail	TS 35
Operating altitude	≤ 4000 m		

Insulation coordination acc. to EN 50178

Surge voltage category	IV	Pollution severity	2
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Technical data

Rated data IEC / EN

Number of poles	4	Leakage current at U_n	0.6 mA
Signalling contact	No	Rated voltage (AC)	400 V
Low voltage network	TN-C-S, TN-S	Voltage type	AC
Temporary surge voltage (over-voltage) - TOV	762 V	Response time / fallback time	≤ 25 ns
Frequency range, max.	60 Hz	Frequency range, min.	50 Hz
Standards	IEC 61643-11, EN 61643-11, UL 1449	Lightning test current limp (10/350 μs) (L-PE)	10 kA
Requirements class, acc. to EN 61643-11	T1, T2	Requirements category acc. to IEC 61643-11	Type I, Type II
Max. continuous voltage, U_c (AC)	480 V	Mains voltage	400 V / 690 V
Energy coordination (≤10 m)	Type I, Type II, Type III	Discharge current I_n (8/20 μs) wire-PE	20 kA
Discharge current I_{max} (8/20 μs) wire-PE	50 kA	Protection level Up at IN (L/N-PE)	≤ 2.1 kV
Short-circuit current rating ISCCR	50 kA	Follow-on current extinguishing capability I_{fi}	Not available due for technical reasons
Integrated back-up fuse	No		

Connection data

Stripping length	18 mm	Wire connection method	Screw connection
Type of connection	Screw connection	Stripping length, rated connection	18 mm
Tightening torque, min.	3 Nm	Tightening torque, max.	4.5 Nm
Clamping range, rated connection	16 mm ²	Clamping range, min.	1.5 mm ²
Clamping range, max.	35 mm ²	Wire cross-section, solid, min.	1.5 mm ²
Wire cross-section, solid, max.	35 mm ²	Wire connection cross section, finely stranded, min.	1.5 mm ²
Wire connection cross section, finely stranded, max.	25 mm ²	Connection cross-section, stranded, min.	1.5 mm ²
Connection cross-section, stranded, max.	35 mm ²		

Electrical data

Voltage type	AC
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General data

Number of poles	4	Protection degree	IP20 in installed state
Colour	orange, black		

Guarantee

Time interval	5 years
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Important note

Product information	For use in DC applications, please use the fuse of SIBA Type NH2XL aR/aSF DC 1500 V
Notes	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).

Classifications

ETIM 8.0	EC001457	ETIM 9.0	EC001457
ETIM 10.0	EC001457	ECLASS 14.0	27-17-12-04
ECLASS 15.0	27-17-12-04		

Drawings

Electric symbol



Schematic circuit diagram