

VPU AC I 1 N-PE 305/50

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

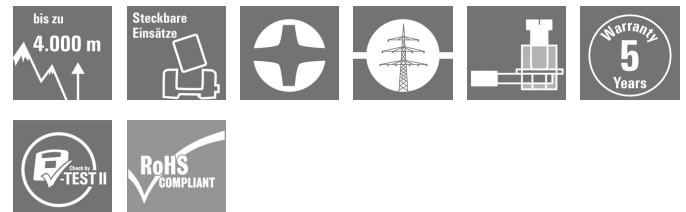
32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

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, Single-phase, TT nur für N-PE, U _p (L/N-PE) ≤ 1.5 kV
Order No.	2591570000
Type	VPU AC I 1 N-PE 305/50
GTIN (EAN)	4050118599374
Qty.	1 Stück
Replacement parts	2591590000

VPU AC I 1 N-PE 305/50

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

Technische Daten

Dimensions and weights

Depth	91 mm	Depth (inches)	3.583 inch
Height	96.3 mm	Height (inches)	3.791 inch
Width	18 mm	Width (inches)	0.709 inch
Net weight	143 g		

Temperatures

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

Probability of failure

MTBF	15 a
------	------

Rated data UL

Rated Voltage U_N	0 V	VPR (N-PE)	1,200 V
MCOV (N-PE)	305 V	I_n	20 kA
Category	SPD TYPE 1CA	Certificate No. (cURus)	E354261
Voltage type	AC		

General data

Colour	blue, black	Design	Installation housing; 1TE, 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		

Insulation coordination acc. to EN 50178

Pollution severity	2	Surge voltage category	IV
--------------------	---	------------------------	----

VPU AC I 1 N-PE 305/50

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

Technische Daten

info@weidmueller.com

www.weidmueller.com

Rated data IEC / EN

Discharge current I_{\max} (8/20 μ s) N-PE	100 kA	Discharge current I_n (8/20 μ s) N-PE	50 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	Not required	Leakage current at U_n	1 μ A
Lightning test current, I_{imp} (10/350 μ s) (N-PE)	50 kA	Low voltage network	Single-phase, TT nur für N-PE
Mains voltage	230 V / 400 V	Max. continuous voltage, U_c (N-PE)	305 V
Number of poles	1	Protection level U_p (typ.)	≤ 1.5 kV
Protection level U_p at I_N (N-PE)	≤ 1.5 kV	Rated load current I_L	100 A
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	≤ 100 ns
Short-circuit current rating I_{SCCR}	0.1 kA	Signalling contact	No
Standards	IEC61643-11, EN61643-11, UL 1449	Temporary surge voltage (over-voltage) - TOV	1,200 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 mm ²	Clamping range, min.	4 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	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.	1.5 mm ²
Connection cross-section, stranded, max.	35 mm ²		

Guarantee

Time interval 5 years

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	ECLASS 12.0	27-17-90-90

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).

VPU AC I 1 N-PE 305/50

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

Technische Daten

Approvals

Approvals



weidmueller.com

ROHS Conform

UL File Number Search UL Website

Certificate No. (cURus) E354261

Downloads

Approval/Certificate/Document of Conformity [EAC VPU SERIES](#)
[EU Konformitätserklärung / EU Declaration of Conformity](#)

Engineering Data [CAD data – STEP](#)

Engineering Data [EPLAN](#)

User Documentation [Beipackzettel / Instruction sheet](#)

Catalogues [Catalogues in PDF-format](#)

VPU AC I 1 N-PE 305/50

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

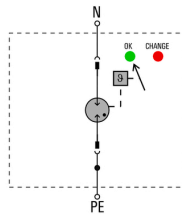
Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

Zeichnungen

Electric symbol



Schematic circuit diagram