

VPU AC I 1+1 300/12.5

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, Single-phase, TN-C, TN-C-S, TN-S, TT, $U_p(L/N-PE) \leq 1.5 \text{ kV}$ |
| Order No. | 2591480000 |
| Type | VPU AC I 1+1 300/12.5 |
| GTIN (EAN) | 4050118599466 |
| Qty. | 1 pc(s). |

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Technical data

Dimensions and weights

| | | | |
|----------------|------------|-----------------|------------|
| Depth | 91 mm | Depth (inches) | 3.583 inch |
| Height | 96.3 mm | Height (inches) | 3.791 inch |
| Net weight | 298 g | Width | 36 mm |
| Width (inches) | 1.417 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 (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 | L-N, L-G, N-G | VPR (L-N) | 900 V |
| VPR (L-PE) | 1,000 V | Voltage type | AC |

General data

| | | | |
|--------------------|-------------------------|---------------------------|---|
| Colour | black, orange, blue | Design | Installation housing; 2TE, 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

| | | | |
|------------------------|----------|--------------------|---|
| 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 | Single-phase, TN-C, 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 | 2 |
| 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 | No |
| 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

Guarantee

Time interval 5 years

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 |

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Technical data**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

Approvals

Approvals



ROHS

Conform

UL File Number Search

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Engineering Data

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Tender specification

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User Documentation

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Drawings

Electric symbol

