

VPU AC II US 1+1 R 277/50

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com



Picture similar

- compact SPD to install in application by NFPA 79
- no additional overcurrent protection devices needed
- short circuit current rating (SCCR) up to 200 kA
- tested according to IEC/EN 61643-11 and UL 1449 4.Ed

General ordering data

| | |
|------------|---|
| Version | Surge voltage arrester, Low voltage, Surge protection, with remote contact, Single-phase, TN, TT, IT with N, IT without N |
| Order No. | 2730660000 |
| Type | VPU AC II US 1+1 R 277/50 |
| GTIN (EAN) | 4050118807448 |
| Qty. | 1 items |

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Technical data

Approvals

Approvals



| | |
|-------------------------|----------------------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate no. (cULus) | E354261 |

Dimensions and weights

| | | | |
|--------------------------|-------------|-----------------------------|-------------|
| Depth | 68 mm | Depth (inches) | 2.6772 inch |
| Depth including DIN rail | 76 mm | Height | 104.5 mm |
| Height (inches) | 4.1142 inch | Width | 36 mm |
| Width (inches) | 1.4173 inch | Mounting dimension - height | 75 mm |
| Net weight | 251 g | | |

Temperatures

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

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 | 277 V |
| VPR (N-PE) | 1000 V | MCOV (L-PE) | 350 V |
| MCOV (N-PE) | 305 V | SCCR | 200 kA |
| In | 20 kA | Category | SPD TYPE 1 |
| Connection cross-section AWG, min. | AWG 14 | Connection cross-section AWG, max. | AWG 6 |
| Ambient temperature (operational), min. | -40 °C | MODE | all modes |
| VPR (L-N) | 1000 V | VPR (L-PE) | 3000 V |
| Voltage type | AC | UL Energy Networks | Split-Phase |

Connection data, remote alert

| | | | |
|--|----------------------|--|---------|
| Cross-section for connected wire, solid core, min. | 0.25 mm ² | Stripping length | 12 mm |
| Cross-section for connected wire, solid core, max. (AWG) | AWG 10 | Connection type | PUSH IN |
| Cross-section for connected wire, solid core, max. | 1.5 mm ² | Cross-section for connected wire, solid core, min. (AWG) | AWG 30 |

General data

| | | | |
|---------------------------|---|---------------|--|
| Optical function display | green = OK; red = arrester is defective - replace | Segment | Power distribution |
| Version | Surge protection, with remote contact | Design | Installation housing; 2TE, Insta IP 20 |
| UL 94 flammability rating | V-0 | Colour | orange, black, blue |
| Protection degree | IP20 in installed state | Mounting rail | TS 35 |
| Operating altitude | ≤ 4000 m | | |

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Insulation coordination acc. to EN 50178

| | | | |
|------------------------|-----|--------------------|---|
| Surge voltage category | III | Pollution severity | 2 |
|------------------------|-----|--------------------|---|

Rated data IEC / EN

| | | | |
|--|---|--|---|
| Number of poles | 2 | Leakage current at U_n | 1 μ A |
| Signalling contact | 250 V 1A 1CO | Rated voltage (AC) | 277 V |
| Low voltage network | Single-phase, TN, TT, IT with N, IT without N | Protection level Up at IN (N-PE) | ≤ 1.5 kV |
| Voltage type | AC | Temporary surge voltage (over-voltage) - TOV | 403 V |
| Fuse protection | No Fuse necessary ≤ 315 A gG, 250 A gG @50 kA Isccr, 315 A gG @25 kA Isccr | 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, NFPA 79 | Requirements class, acc. to EN 61643-11 | T2, T3 |
| Requirements category acc. to IEC 61643-11 | Type II | Max. continuous voltage, U_c (AC) | 350 V |
| Max. continuous voltage, U_c (N-PE) | 305 V | Discharge current I_{max} (8/20 μ s) N-PE | 65 kA |
| Discharge current I_n (8/20 μ s) N-PE | 40 kA | Energy coordination (≤ 10 m) | Type II, Type III |
| Discharge current I_n (8/20 μ s) wire-PE | 20 kA | Discharge current I_{max} (8/20 μ s) wire-PE | 50 kA |
| SPD type | T2 | Protection level Up at IN (L/N-PE) | ≤ 1.75 kV |
| Short-circuit current rating ISCCR | 50 kA | Follow-on current extinguishing capability I _{fi} | Follow current need not be taken into account |
| 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 connection cross section AWG, min. | AWG 16 |
| Wire connection cross section AWG, max. | AWG 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. | 4 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 | | |

Electrical data

| | |
|--------------|----|
| Voltage type | AC |
|--------------|----|

General data

| | | | |
|-----------------|---------------------|-------------------|-------------------------|
| Number of poles | 2 | Protection degree | IP20 in installed state |
| Colour | orange, black, blue | | |

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Technical data**Ratings IECEx/ATEX/cUL**

Certificate no. (cULus) E354261

Guarantee

Time interval 5 years

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).

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC000941 | ETIM 9.0 | EC000941 |
| ETIM 10.0 | EC000941 | ECLASS 14.0 | 27-17-12-02 |
| ECLASS 15.0 | 27-17-12-02 | | |

Electric symbol



Schematic circuit diagram

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Accessories

Crosshead screwdriver Phillips



VDE insulated crosshead screwdriver, for Phillips screws, SDIK PH DIN 7438, ISO 8764/2-PH, output to ISO 8764-PH, SoftFinish grip

General ordering data

| | | | |
|------------|----------------------------|---|--|
| Type | SDIK PH1 X 80 | Version | |
| Order No. | 2749890000 | Screwdriver, Blade width (B): 1 mm, 80 mm, Blade thickness (A): 1 | |
| GTIN (EAN) | 4050118897098 | | |
| Qty. | 1 ST | | |

Slotted screwdriver



VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

General ordering data

| | | | |
|------------|----------------------------|---|--|
| Type | SDIS 1.0X5.5X125 | Version | |
| Order No. | 2749850000 | Screwdriver, Blade width (B): 5.5 mm, Blade length: 125 mm, Blade thickness (A): 1 mm | |
| GTIN (EAN) | 4050118897050 | | |
| Qty. | 1 ST | | |

Blank



ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.

Advantages at a glance:

- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

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Accessories

General ordering data

| | | | |
|------------|----------------------------|--|--|
| Type | ESG 6/15 K MC NE WS | Version | |
| Order No. | 1880100000 | ESG, Device markers x 15 mm, PA 66, Colour: white, Self-adhesive | |
| GTIN (EAN) | 4032248478781 | | |
| Qty. | 200 ST | | |

VPU Series



Extensive accessories round off the product range

General ordering data

| | | | |
|------------|----------------------------|---------|--|
| Type | VPU AC EXTENDER | Version | |
| Order No. | 3123500000 | | |
| GTIN (EAN) | 4099987270175 | | |
| Qty. | 8 ST | | |

Spare arrester



- compact SPD to install in application by NFPA 79
- no additional overcurrent protection devices needed
- short circuit current rating (SCCR) up to 200 kA
- tested according to IEC/EN 61643-11 and UL 1449 4.Ed

General ordering data

| | | | |
|------------|----------------------------|--|--|
| Type | VPU AC II US 0 277/50 | Version | |
| Order No. | 2730560000 | Spare arrester, Surge protection, TN, Single-phase | |
| GTIN (EAN) | 4050118807547 | | |
| Qty. | 1 ST | | |
| Type | VPU AC II US 0 N-PE 240... | Version | |
| Order No. | 2726820000 | Spare arrester, Surge protection, TT nur für N-PE | |
| GTIN (EAN) | 4050118802467 | | |
| Qty. | 1 ST | | |

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Accessories

VPU Series



Extensive accessories round off the product range

General ordering data

| | | | |
|------------|----------------------------|---------|--|
| Type | VPU LOCKING CLIP S | Version | |
| Order No. | 2735080000 | | |
| GTIN (EAN) | 4050118826050 | | |
| Qty. | 10 ST | | |
| Type | PLUG VPU AC | Version | |
| Order No. | 2855300000 | | |
| GTIN (EAN) | 4064675533283 | | |
| Qty. | 10 ST | | |