

## VPU AC I 3+1 300/12.5 LH

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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, TN-C, TN-S, TT, IT with N, IT without N |
| Order No.  | <a href="#">2983580000</a>   |
| Type       | VPU AC I 3+1 300/12.5 LH   |
| GTIN (EAN) | 4099986839700  |
| Qty.       | 1 items  |

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## Technical data

## Approvals

Approvals



|                         |                            |
|-------------------------|----------------------------|
| ROHS                    | Conform                    |
| UL File Number Search   | <a href="#">UL Website</a> |
| Certificate No. (cURus) | E3542610000                |

## Dimensions and weights

|            |         |                 |             |
|------------|---------|-----------------|-------------|
| Depth      | 70 mm   | Depth (inches)  | 2.7559 inch |
| Height     | 90 mm   | Height (inches) | 3.5433 inch |
| Width      | 72 mm   | Width (inches)  | 2.8346 inch |
| Net weight | 644.2 g |                 |             |

## Temperatures

|                       |                       |                                   |                       |
|-----------------------|-----------------------|-----------------------------------|-----------------------|
| Storage temperature   | -40 °C...85 °C        | Ambient temperature               | ...85 °C              |
| Operating temperature | -40 °C...85 °C        | Humidity at operating temperature | 5 - 95% rel. humidity |
| 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           | 240 V        |
| MCOV (L-PE)                                    | MCOV (N-PE)                | 305 V        |
| In   | Category                   | SPD TYPE 4CA |
| Ambient temperature (operational), min. -40 °C | Certificate No. (cURus)    | E3542610000  |
| MODE   | Measured. Limiting Voltage | 1200 V       |
| Voltage type                                   | UL Energy Networks         | 3-phase WYE  |

## Connection data, remote alert

|                  |      |                 |         |
|------------------|------|-----------------|---------|
| Stripping length | 8 mm | Connection type | PUSH IN |
|------------------|------|-----------------|---------|

## General data

|                          |   |                           |                         |
|--------------------------|---|---------------------------|-------------------------|
| Optical function display | green = OK; red = arrester is defective - replace | 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 | III | Pollution severity | 2 |
|------------------------|-----|--------------------|---|

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## Technical data

### Rated data IEC / EN

|   |   |  |   |
|---|---|--|---|
| Number of poles                                     | 4                                       | Leakage current at $U_n$                                   | 6 $\mu$ A                               |
| Signalling contact                                  | No                                      | Rated voltage (AC)   | 230 V                                   |
| Low voltage network                                 | TN-C, TN-S, TT, IT with N, IT without N | Protection level Up at IN (N-PE)                           | $\leq$ 1.5 kV                           |
| Protection level, UP wire - wire                    | 1500 V                                  | Protection level, UP wire - PE                             | 1500 V                                  |
| Voltage type  | AC                                      | Temporary surge voltage (over-voltage) - TOV               | 337 V                                   |
| Response time / fallback time                       | $\leq$ 25 ns                            | Frequency range, max.                                      | 60 Hz                                   |
| Frequency range, min.                               | 50 Hz                                   | Standards  | IEC 61643-11, EN 61643-11, UL 1449      |
| Lightning test current Iimp (10/350 $\mu$ s) (L-PE) | 12.5 kA                                 | Lightning test current, Iimp (10/350 $\mu$ s) (N-PE)       | 50 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)                 | 305 V                                   | Mains voltage  | 230 V / 400 V                           |
| Discharge current $I_{max}$ (8/20 $\mu$ s) N-PE     | 100 kA                                  | Discharge current $I_n$ (8/20 $\mu$ s) N-PE                | 50 kA                                   |
| Energy coordination ( $\leq$ 10 m)                  | Type I, Type II, Type III               | Discharge current $I_n$ (8/20 $\mu$ s) wire-PE             | 20 kA                                   |
| Discharge current $I_{max}$ (8/20 $\mu$ s) wire-PE  | 50 kA                                   | Protection level Up at IN (L/N-PE)                         | $\leq$ 1.5 kV                           |
| Short-circuit current rating ISCCR                  | 50 kA                                   | Follow-on current extinguishing capability I <sub>fi</sub> | Not available due for technical reasons |
| Integrated back-up fuse                             | No                                      |  |   |

### Connection data

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

### Electrical data

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

### General data

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

### Guarantee

|               |         |
|---------------|---------|
| Time interval | 5 years |
|---------------|---------|

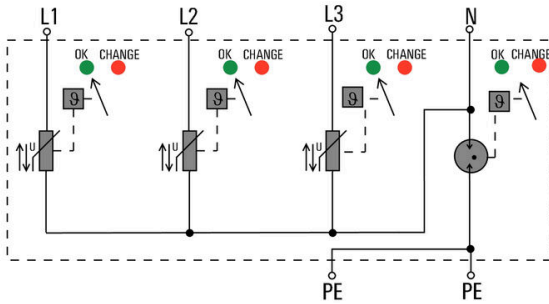
### Important note

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

### 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 |             |             |

**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.  | <a href="#">2749890000</a> | 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.  | <a href="#">2749850000</a> | 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.  | <a href="#">1880100000</a> | 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.  | <a href="#">3123500000</a> |         |  |
| GTIN (EAN) | 4099987270175              |         |  |
| Qty.       | 8 ST                       |         |  |

### Spare arrester



In the event of a defective arrester, you can easily reorder this spare arrester, replace the defective arrester and thus restore protection.

### General ordering data

|            |                            |                    |  |
|------------|----------------------------|--------------------|--|
| Type       | VPU AC I 0 300/12.5 LH     | Version            |  |
| Order No.  | <a href="#">2983620000</a> | , Surge protection |  |
| GTIN (EAN) | 4099986839748              |                    |  |
| Qty.       | 1 ST                       |                    |  |
| Type       | VPU AC I 0 N-PE 305/50 ... | Version            |  |
| Order No.  | <a href="#">2983630000</a> | , Surge protection |  |
| GTIN (EAN) | 4099986839755              |                    |  |
| 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.  | <a href="#">2735080000</a> |         |  |
| GTIN (EAN) | 4050118826050              |         |  |
| Qty.       | 10 ST                      |         |  |