

## VSPC 1CL 60VAC

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)



Analogue signal/current loop (CL) protection includes the following signals:

- Signals from current loops (analogue measurements of sensors over long distances) 4 – 20 mA, 0 – 20 mA etc.
- Two-wire, three-wire and four-wire, without a common reference potential
- e.g. level indication signals from voltage sensors (analogue measurements of sensors over short distances) 0 – 10 V, PT 100 etc.; e.g. temperature measurement
- Pluggable arrester, with interruption-free and impedance-neutral plug-in and pull-out
- Can be tested with the V-TEST testing device
- Version with floating-earth PE connection used to avoid differences in potential
- Can be used in compliance with the IEC 62305 (D1, C1, C2 and C3) installation standard
- Integrated PE foot safely discharges up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to the PE
- Colour coding of the voltage levels for fast identification on the panel
- Safety function through coding elements for different voltage levels

### General ordering data

|            |                                                                                                                                |
|------------|--------------------------------------------------------------------------------------------------------------------------------|
| Version    | Surge protection for instrumentation and control, without warning function / function indicator, $U_p(L/N-PE) < 800 \text{ V}$ |
| Order No.  | <a href="#">8924530000</a>                                                                                                     |
| Type       | VSPC 1CL 60VAC                                                                                                                 |
| GTIN (EAN) | 4032248696161                                                                                                                  |
| Qty.       | 1 pc(s).                                                                                                                       |

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**Technical data****Dimensions and weights**

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Depth      | 69 mm   | Depth (inches)  | 2.717 inch |
| Height     | 90 mm   | Height (inches) | 3.543 inch |
| Width      | 17.8 mm | Width (inches)  | 0.701 inch |
| Net weight | 40 g    |                 |            |

**Temperatures**

|                     |                |                       |                |
|---------------------|----------------|-----------------------|----------------|
| Storage temperature | -40 °C...80 °C | Operating temperature | -40 °C...70 °C |
| Humidity            | 5...96 %       |                       |                |

**Probability of failure**

|                                    |         |      |         |
|------------------------------------|---------|------|---------|
| SIL in compliance with IEC 61508   | 3       | MTTF | 2,537 a |
| SFF                                | 95.67 % | λges | 45      |
| PFH in 1*10 <sup>-9</sup> per hour | 1.95    |      |         |

**Rated data UL**

|                      |         |                |                     |
|----------------------|---------|----------------|---------------------|
| Certificate No. (UL) | E311081 | UL certificate | UL 497b Certificate |
|----------------------|---------|----------------|---------------------|

**CSA protection data**

|                                        |      |                                          |       |
|----------------------------------------|------|------------------------------------------|-------|
| Gas group C                            | IIB  | Gas group D                              | IIA   |
| Gas groups A, B                        | IIC  | Input voltage, max. U <sub>i</sub>       | 101 V |
| Internal capacity, max. C <sub>i</sub> | 1 nF | Internal inductance, max. L <sub>i</sub> | 0 μH  |

**General data**

|                 |        |                   |      |
|-----------------|--------|-------------------|------|
| Number of poles | 1      | Protection degree | IP20 |
| Colour          | orange |                   |      |

**Insulation coordination acc. to EN 50178**

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

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## Technical data

## Rated data IEC / EN

|                                                                    |                               |
|--------------------------------------------------------------------|-------------------------------|
| Discharge current $I_{\max}$ (8/20 $\mu$ s) GND-PE                 | 10 kA                         |
| Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-wire              | 10 kA                         |
| Discharge current $I_n$ (8/20 $\mu$ s) wire-PE                     | 2.5 kA                        |
| Fuse                                                               | 0.5 A                         |
| Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) Wire-PE  | 2.5 kA                        |
| Max. continuous voltage, $U_c$ (AC)                                | 72 V                          |
| Number of poles                                                    | 1                             |
| Protection level $U_p$ (typ.)                                      | <800 V                        |
| Protection level on output side Wire-wire 1 kV/ $\mu$ s, typically | 100 V                         |
| Protection level, $U_p$ GND - PE                                   | 650 V                         |
| Protection level, $U_p$ wire - wire                                | 100 V                         |
| Rated current $I_N$                                                | 250 mA                        |
| Rated voltage (DC)                                                 | 85 V                          |
| Signal transmission properties (-3 dB)                             | 7.3 MHz                       |
| Standards                                                          | IEC 61643-21, HART-compatible |
| Surge current-carrying capacity C2                                 | 5 kA 8/20 $\mu$ s             |
| Surge current-carrying capacity D1                                 | 2.5 kA 10/350 $\mu$ s         |
| Volume resistance                                                  | 2.20 $\Omega$                 |

|                                                                     |                       |
|---------------------------------------------------------------------|-----------------------|
| Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-PE                 | 10 kA                 |
| Discharge current $I_n$ (8/20 $\mu$ s) GND-PE                       | 2.5 kA                |
| Discharge current $I_n$ (8/20 $\mu$ s) wire-wire                    | 2.5 kA                |
| Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) GND-PE    | 2.5 kA                |
| Lightning test current, $I_{\text{imp}}$ (10/350 $\mu$ s) wire-wire | 2.5 kA                |
| Max. continuous voltage, $U_c$ (DC)                                 | 102 V                 |
| Overload - failure mode                                             | Modus 2               |
| Protection level on output side Wire-PE 1kV/ $\mu$ s, typically     | 450 V                 |
| Protection level on output side Wire-wire 8/20 $\mu$ s, typically   | 100 V                 |
| Protection level, $U_p$ wire - PE                                   | 450 V                 |
| Pulse-reset capacity                                                | $\leq 500$ ms         |
| Rated voltage (AC)                                                  | 60 V                  |
| Requirements category acc. to IEC 61643-21                          | C1, C2, C3, D1        |
| Signalling contact                                                  | No                    |
| Surge current-carrying capacity C1                                  | <1 kA 8/20 $\mu$ s    |
| Surge current-carrying capacity C3                                  | 100 A 10/1000 $\mu$ s |
| Voltage type                                                        | AC                    |

## Further details of approvals

|                  |                 |
|------------------|-----------------|
| GOST certificate | GOST-Zertifikat |
|------------------|-----------------|

## Connection data

|                    |                        |
|--------------------|------------------------|
| Type of connection | Pluggable in VSPC BASE |
|--------------------|------------------------|

## Electrical data

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

## Ratings IECEx/ATEX/cUL

|                 |                 |
|-----------------|-----------------|
| cUL certificate | cUL Certificate |
|-----------------|-----------------|

## Guarantee

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

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC000943    | ETIM 7.0    | EC000943    |
| ETIM 8.0    | EC000943    | ETIM 9.0    | EC000943    |
| ETIM 10.0   | EC000943    | ECLASS 9.0  | 27-13-08-07 |
| ECLASS 9.1  | 27-13-08-07 | ECLASS 10.0 | 27-13-08-07 |
| ECLASS 11.0 | 27-13-08-07 | ECLASS 12.0 | 27-17-90-90 |
| ECLASS 13.0 | 27-17-90-90 | ECLASS 14.0 | 27-17-90-90 |
| ECLASS 15.0 | 27-17-90-90 |             |             |

Creation date June 12, 2025 11:48:04 AM CEST

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## Technical data

## Tender specification sheets

| Long specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Short specification                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surge protection plug for use in connection with the base element VSPC BASE 1CL for one floating-ground driven paired cable. Two-stage protection circuit consisting of coarse protection, decoupling resistors and fine protection between the signal wires and coarse common mode voltage protection to earth. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Optical identification of the protected plug based on the type of protected switching and the voltage level. Protected plug with coding pin and counter-profile for the base element. It is possible to mark the plug. | Surge protection plug for base element VSPC BASE 1 CL, transverse voltage coarse and fine protection for one floating-ground powered paired cable, coarse common mode voltage protection to earth. Version: 60 V AC |

## Environmental Product Compliance

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status               | Compliant with exemption             |
| RoHS Exemption (if applicable/known) | 7a                                   |
| REACH SVHC                           | Lead 7439-92-1                       |
| SCIP                                 | 71e97bb7-979f-4330-94c0-20c629bb05e3 |

## Important note

|                     |                                                                                                                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product information | Mode 2: State where the voltage-limiting part of the SPD was short-circuited due to a very low impedance within the SPD. The line is inoperable, but the measuring equipment is still protected by means of a short-circuit. |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Approvals

Approvals



|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approvals MAMID       | <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319222/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319227/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319227/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319238/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319238/-T1z1mm-S800/</a> <a href="https://mdcop.weidmueller.com/mediadelivery/rendition/900_319261/-T1z1mm-S800/">https://mdcop.weidmueller.com/mediadelivery/rendition/900_319261/-T1z1mm-S800/</a> |
| ROHS                  | Conform                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| UL File Number Search | UL Website                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Certificate No. (UL)  | E311081                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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## Technical data

### Downloads

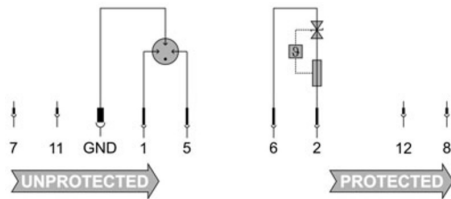
|                                             |                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">SIL Paper</a><br><a href="#">EU_Konformitätserklärung / EU_Declaration_of_Conformity</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a>                                                                      |
| User Documentation                          | <a href="#">Beipackzettel / Instruction sheet</a>                                                    |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                             |
| Brochures                                   |                                                                                                      |

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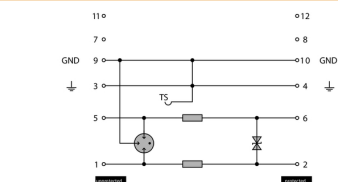
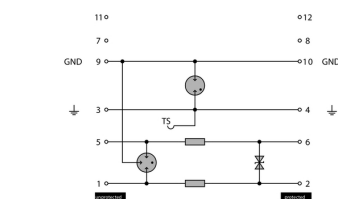
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**Drawings**
**Electric symbol**


Circuit diagram

| Cate-<br>gory | Testing<br>pulse         | Surge<br>voltage                | Surge<br>current                 | Pulse<br>Type                                                   |
|---------------|--------------------------|---------------------------------|----------------------------------|-----------------------------------------------------------------|
| C1            | Quick-<br>rising<br>edge | 0.5 - 2 kV<br>with<br>1.2/50 µs | 0.25 - 1 kA<br>mit<br>8/20 µs    | 300<br>Surge<br>voltage<br>arrester                             |
| C2            | Quick-<br>rising<br>edge | 2 - 10 kV<br>with<br>1.2/50 µs  | 1 - 5 kA<br>mit<br>8/20 µs       | 10<br>Surge<br>voltage<br>arrester                              |
| C3            | Quick-<br>rising<br>edge | ≥ 1 kV<br>with<br>1 kV/µs       | 10 - 100 A<br>mit<br>10/10000 µs | 300<br>Surge<br>voltage<br>arrester                             |
| D1            | High<br>power            | ≥ 1 kV                          | 0.5 - 2.5 kA<br>mit 10/350<br>µs | 2<br>Arrester for<br>lightning<br>current and<br>surge voltages |

Discharge capacity


 Complete module direct grounding  
Komplettmodul direkte Erdung

 Complete module indirect grounding  
Komplettmodul indirekte Erdung

Kompletmodul