

**VSPC 3/4WIRE 5VDC****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



3 or 4-wire system protection includes the following signals:

- PT100, measuring bridges, DMS sensors, measuring bridges, ...
- Pluggable arrester, for interruption-free and impedance-neutral plug-in and pull-out
- Can be tested with V-TEST testing device
- Space-saving design for up to 4 binary signals
- Version with floating-earth PE connection used to avoid interference currents that result from differences in voltage potential
- For use in compliance with the IEC 62305 and IEC61643-22 (D1, C1, C2 and C3) installation standards
- 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 in the cabinet
- 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="#">8924540000</a>                                                                                                    |
| Type       | VSPC 3/4WIRE 5VDC                                                                                                             |
| GTIN (EAN) | 4032248696185                                                                                                                 |
| 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 | 46 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 | 2,655 a |
| SFF                                | 95.33 % | λges | 43      |
| PFH in 1*10 <sup>-9</sup> per hour | 7       |      |         |

## 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>       | 6.4 V |
| Internal capacity, max. C <sub>i</sub> | 4 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

|                                                                   |                       |                                                                     |                       |
|-------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------|-----------------------|
| Capacitance                                                       | 2.3 nF                | Discharge current $I_{\max}$ (8/20 $\mu$ s) GND-PE                  | 10 kA                 |
| Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-PE               | 10 kA                 | Discharge current $I_{\max}$ (8/20 $\mu$ s) wire-wire               | 10 kA                 |
| Discharge current $I_n$ (8/20 $\mu$ s) GND-PE                     | 2.5 kA                | Discharge current $I_n$ (8/20 $\mu$ s) wire-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-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)                               | 6.4 V                 | Number of poles                                                     | 1                     |
| Overload - failure mode                                           | Modus 2               | Protection level $U_p$ (typ.)                                       | <800 V                |
| Protection level on output side Wire-PE 1kV/ $\mu$ s, typically   | 250 V                 | Protection level on output side Wire-wire 1 kV/ $\mu$ s, typically  | 35 V                  |
| Protection level on output side Wire-wire 8/20 $\mu$ s, typically | 35 V                  | Protection level, $U_p$ GND - PE                                    | 450 V                 |
| Protection level, $U_p$ wire - PE                                 | 10 V                  | Protection level, $U_p$ wire - wire                                 | 20 V                  |
| Pulse-reset capacity                                              | $\leq 20$ ms          | Rated current $I_N$                                                 | 450 mA                |
| Rated voltage (DC)                                                | 3 V                   | Requirements category acc. to IEC 61643-21                          | C1, C2, C3, D1        |
| Signal transmission properties (-3 dB)                            | 750 KHz               | Signalling contact                                                  | No                    |
| Standards                                                         | IEC 61643-21          | Surge current-carrying capacity C1                                  | <1 kA 8/20 $\mu$ s    |
| Surge current-carrying capacity C2                                | 5 kA 8/20 $\mu$ s     | Surge current-carrying capacity C3                                  | 100 A 10/1000 $\mu$ s |
| Surge current-carrying capacity D1                                | 2.5 kA 10/350 $\mu$ s | Voltage type                                                        | DC                    |
| Volume resistance                                                 | 0.20 $\Omega$         |                                                                     |                       |

## Further details of approvals

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

## Connection data

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

## Electrical data

|              |    |
|--------------|----|
| Voltage type | DC |
|--------------|----|

## 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 |             |             |

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## Technical data

## Tender specification sheets

## Long specification

Surge protection plug for use in connection with the base element VSPC BASE 2/4 CH for four floating-ground driven signal cables. Two-stage protection consisting of coarse and fine protection between all signal cables as well as coarse common mode voltage protection to signal ground/earth. Mechanical identification of the plug to the base element according to the switching type and rated voltage. Protected plug with coding pin and counter-profile for the base element. Optical identification of the protected plug based on the type of protected switching and the voltage level. It is possible to mark the plug.

## Short specification

Surge protection plug for base element VSPC BASE 2/4 CH, transverse voltage coarse and fine protection for four floating-ground powered signal cables, coarse common mode voltage protection to earth. Version: 5 V DC

## 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    |

## VSPC 3/4WIRE 5VDC

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## Technical data

### Downloads

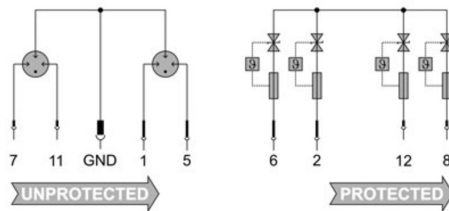
|                                             |                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------|
| 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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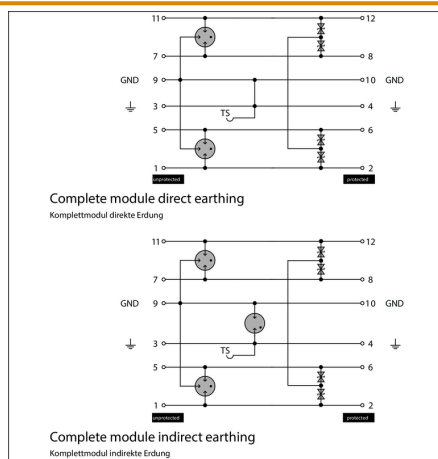
Germany

[www.weidmueller.com](http://www.weidmueller.com)
**Drawings**
**Electric symbol**


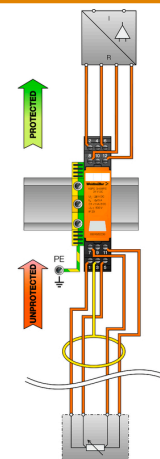
Circuit diagram

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

Discharge capacity



Kompletmodul



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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****Retaining clip**

The interlock mechanism on the VSPC Series pluggable arrester delivers extra reliability and an improved permanent contact under strong vibrating conditions.

**General ordering data**

|            |                            |                            |
|------------|----------------------------|----------------------------|
| Type       | VSPC LOCKING CLIP          | Version                    |
| Order No.  | <a href="#">1317340000</a> | Fastening element, Latches |
| GTIN (EAN) | 4050118121179              |                            |
| Qty.       | 100 pc(s).                 |                            |

**Direct earthing**

Base element for the pluggable VSPC arrester, integrated PE foot in impedance-neutral VSPC BASE. Can safely discharge up to 20 kA (8/20 µs) and 2.5 kA (10/350 µs) to the PE.

**General ordering data**

|            |                            |                                                                  |
|------------|----------------------------|------------------------------------------------------------------|
| Type       | VSPC BASE 2/4CH            | Version                                                          |
| Order No.  | <a href="#">8924740000</a> | Surge protection, Flange-mounted housing, Flange-mounted housing |
| GTIN (EAN) | 4032248696383              |                                                                  |
| Qty.       | 1 pc(s).                   |                                                                  |

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[www.weidmueller.com](http://www.weidmueller.com)**Accessories****V-TEST testing device for VSPC****V-TEST**

- Testing device for checking the protective function of the pluggable overvoltage protection PU I, PU II and VSPC series
- Device for implementing the IEC 62305 standard (regarding periodic testing)
- Easy-to-use device with integrated battery set for on-site measurements
- LCD results display
- Menu in two languages
- Including a protective bag and power supply
- User friendly navigation in German and English

The V-TEST is a compact, portable test instrument for the plug-in surge protectors VARITECTOR (VSPC) and the surge protectors for the power supply line PU I and PU II. Using this instrument Weidmüller overvoltage protectors can be tested for their protective function in line with the testing schedules laid down in IEC 62305-3 (DIN VDE 0185 part 3). In a display with background illumination, the test result is indicated with "OK" or "Not OK".

**General ordering data**

|            |                            |                                                |
|------------|----------------------------|------------------------------------------------|
| Type       | V-TEST                     | Version                                        |
| Order No.  | <a href="#">8951860000</a> | Lightning and surge protection, Testing device |
| GTIN (EAN) | 4032248743100              |                                                |
| Qty.       | 1 pc(s).                   |                                                |



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The Dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a wide range of ready-printed markers.

Strips for fast installation in only one work step. The printing is easy to read, rich in contrast and available in various widths.

- Large range of ready-to-use markers
- Strips for fast installation
- Terminal markers, suitable for all Weidmüller cable connectors
- Available as blank MultiCard or with standard printing

**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.

**General ordering data**

|            |                            |                                                           |
|------------|----------------------------|-----------------------------------------------------------|
| Type       | DEK 5/5 PLUS MC NE WS      | Version                                                   |
| Order No.  | <a href="#">1854490000</a> | Dekafix, Terminal marker, 5 x 5 mm, Pitch in mm (P): 5.00 |
| GTIN (EAN) | 4032248393596              | Weidmueller, white                                        |
| Qty.       | 1,000 pc(s).               |                                                           |