

# VAL-MS 320 HD ST - Type 2 surge protection plug



1224886

<https://www.phoenixcontact.com/us/products/1224886>

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Replacement plug for the SCX Smart Ethernet Box for the L-N path.

## Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Wide range of applications due to various nominal voltages
- High degree of modularity provides individual solutions for every application

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1224886       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | CL18          |
| Product key                          | CL1321        |
| GTIN                                 | 4063151316655 |
| Weight per piece (including packing) | 44.585 g      |
| Weight per piece (excluding packing) | 43.86 g       |
| Customs tariff number                | 85363030      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                                |                                         |
|--------------------------------|-----------------------------------------|
| IEC test classification        | II                                      |
|                                | T2                                      |
| EN type                        | T2                                      |
| IEC power supply system        | TN                                      |
|                                | TT                                      |
| Type                           | DIN rail module, two-section, divisible |
| Product type                   | Replacement plug                        |
| Product family                 | VALVETRAB MS                            |
| Number of positions            | 1                                       |
| Surge protection fault message | optical                                 |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 2   |

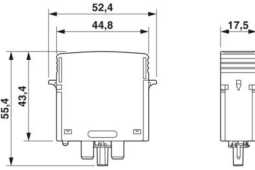
### Electrical properties

|                         |               |
|-------------------------|---------------|
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
|-------------------------|---------------|

### Connection data

|                   |           |
|-------------------|-----------|
| Connection method | pluggable |
|-------------------|-----------|

### Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 17.5 mm                                                                              |
| Height              | 52.4 mm                                                                              |
| Depth               | 55.4 mm                                                                              |
| Horizontal pitch    | 1 Div.                                                                               |

### Material specifications

|                                        |                  |
|----------------------------------------|------------------|
| Color                                  | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0              |
| CTI value of material                  | 600              |
| Insulating material                    | PA 6.6           |
| Material group                         | I                |
| Housing material                       | PA 6.6           |

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## Protective circuit

|                                                    |                                        |
|----------------------------------------------------|----------------------------------------|
| Mode of protection                                 | L-N                                    |
|                                                    | L-PEN                                  |
| Direction of action                                | 1L-N/PE                                |
| Nominal voltage $U_N$                              | 240/415 V AC (TN)                      |
|                                                    | 240/415 V AC (TT)                      |
| Nominal frequency $f_N$                            | 50 Hz (60 Hz)                          |
| Maximum continuous voltage $U_C$                   | 335 V AC                               |
| Residual current $I_{PE}$                          | $\leq 0.45$ mA                         |
| Standby power consumption $P_C$                    | $\leq 150.00$ mVA                      |
| Nominal discharge current $I_n$ (8/20) $\mu$ s     | 20 kA                                  |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s | 40 kA                                  |
| Short-circuit current rating $I_{SCCR}$            | 25 kA                                  |
| Voltage protection level $U_p$                     | $\leq 1.5$ kV                          |
| Residual voltage $U_{res}$                         | $\leq 1.5$ kV (at $I_n$ )              |
|                                                    | $\leq 1.3$ kV (at 10 kA)               |
|                                                    | $\leq 1.2$ kV (at 5 kA)                |
|                                                    | $\leq 1.1$ kV (at 3 kA)                |
| TOV behavior at $U_T$                              | 415 V AC (5 s / withstand mode)        |
|                                                    | 440 V AC (120 min / safe failure mode) |
| Response time $t_A$                                | $\leq 25$ ns                           |
| Max. backup fuse with branch wiring                | 125 A (gG)                             |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Degree of protection                    | IP20                                                      |
| Ambient temperature (operation)         | -40 °C ... 80 °C                                          |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                                          |
| Altitude                                | $\leq 2000$ m (amsl)                                      |
| Permissible humidity (operation)        | 5 % ... 95 %                                              |
| Shock (operation)                       | 25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ ) |
| Vibration (operation)                   | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z)                      |

## Approvals

### UL specifications

|                                                 |              |
|-------------------------------------------------|--------------|
| Maximum continuous operating voltage MCOV (L-N) | 320 V AC     |
| Nominal discharge current $I_n$ (L-N)           | 20 kA        |
| Mode of protection                              | L-N          |
| Nominal voltage                                 | 320 V AC     |
| Power distribution system                       | Single phase |
| Nominal frequency                               | 50/60 Hz     |
| Measured limiting voltage MLV (L-N)             | 2030 V       |

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|          |     |
|----------|-----|
| SPD Type | 4CA |
|----------|-----|

## Standards and regulations

|                          |              |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Note                     | 2011         |
| Standards/specifications | EN 61643-11  |
| Note                     | 2012         |

## Mounting

|               |                 |
|---------------|-----------------|
| Mounting type | on base element |
|---------------|-----------------|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130890 |
| ECLASS-13.0 | 27171292 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002496 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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## Environmental product compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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