

# Type 2 surge protection plug - VAL-US 240 ST - 2800740


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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 240 V AC

RoHS

## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 10 pc   |
| GTIN         | <br>4 046356 644389 |
| GTIN         | 4046356644389   |

## Technical data

### Dimensions

|                  |         |
|------------------|---------|
| Height           | 52.4 mm |
| Width            | 17.5 mm |
| Depth            | 55.3 mm |
| Horizontal pitch | 1 Div.  |

### Ambient conditions

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

### General

|                         |     |
|-------------------------|-----|
| IEC test classification | II  |
|                         | T2  |
| EN type                 | T2  |
| Mode of protection      | L-N |

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## Technical data

### General

|  |                    |
|--|--------------------|
|  | L-PEN              |
| Mounting type  | on base element    |
| Color  | jet black RAL 9005 |
| Housing material   | PA 6.6             |
| Degree of pollution  | 2                  |
| Flammability rating according to UL 94                         | V-0                |
| Type   | Male               |
| Number of positions  | 1                  |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.10  |
| Surge protection fault message                                 | optical            |

### Protective circuit

|  |  |
|--|--|
| Nominal voltage $U_N$                              | 240/415 V AC (TN)                      |
|  | 240/415 V AC (TT)                      |
| Nominal frequency $f_N$                            | 60 Hz (50 Hz)                          |
| Maximum continuous voltage $U_C$                   | 275 V AC                               |
| Residual current $I_{PE}$                          | $\leq 0.45$ mA                         |
| Standby power consumption $P_C$                    | $\leq 120$ 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 $U_p$                     | $\leq 1.35$ kV                         |
| Residual voltage $U_{res}$                         | $\leq 1.35$ kV (at $I_n$ )             |
|  | $\leq 1.1$ kV (at 10 kA)               |
|  | $\leq 1$ kV (at 5 kA)                  |
|  | $\leq 0.9$ kV (at 3 kA)                |
| TOV behavior at $U_T$                              | 335 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)                             |

### Connection data

|                   |                          |
|-------------------|--------------------------|
| Connection method | VALVETRAB plug-in system |
|-------------------|--------------------------|

### UL specifications

|   |          |
|---|----------|
| SPD Type  | 4CA      |
| Maximum continuous operating voltage MCOV (L-N) | 275 V AC |
| Nom. voltage                                    | 240 V AC |
| Mode of protection                              | L-N      |
| Power distribution system                       | 1        |
| Nominal frequency                               | 50/60 Hz |
| Measured limiting voltage MLV (L-N)             | 1910 V   |

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## Technical data

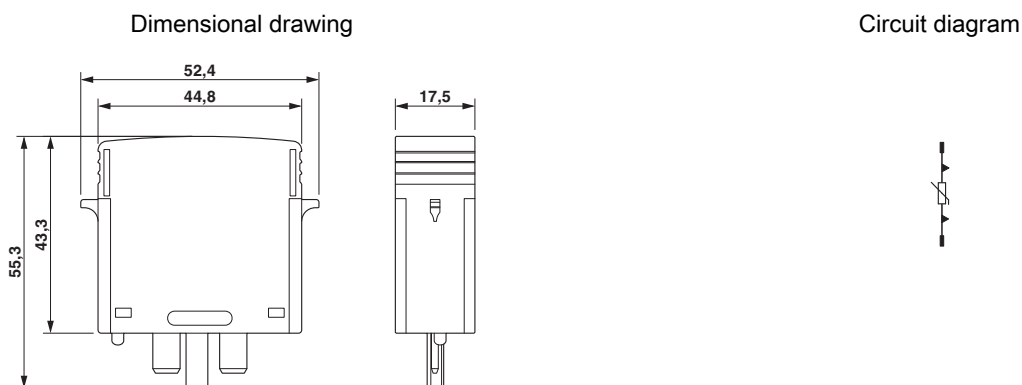
### UL specifications

|                                       |       |
|---------------------------------------|-------|
| Nominal discharge current $I_n$ (L-N) | 20 kA |
|---------------------------------------|-------|

### Standards and Regulations

|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
|                       | EN 61643-11 2012  |

## Drawings



## Approvals

### Approvals

#### Approvals

UL Recognized / cUL Recognized / CSA / EAC / cULus Recognized

#### Ex Approvals

### Approval details


|               |  |   |               |
|---------------|--|---|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330181 |
|---------------|--|---|---------------|


|                |  |   |               |
|----------------|--|---|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330181 |
|----------------|--|---|---------------|

|     |  |   |       |
|-----|--|---|-------|
| CSA |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|-----|--|---|-------|

## Type 2 surge protection plug - VAL-US 240 ST - 2800740

### Approvals

|     |   |                         |
|-----|---|-------------------------|
| EAC |  | RU C-<br>DE.A*30.B01561 |
|-----|---|-------------------------|

|                  |   |   |
|------------------|---|---|
| cULus Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> |
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