

## Type 2 surge protection plug - VAL-US 60 ST - 2800738

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Surge protection plug type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 60 V AC

The figure shows the VAL-US 347 ST version



### Key commercial data

|                                      |          |
|--------------------------------------|----------|
| Packing unit                         | 1 pc     |
| Weight per Piece (excluding packing) | 32.0 GRM |
| Custom tariff number                 | 85363090 |
| Country of origin                    | Germany  |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Height | 52.4 mm |
| Width  | 17.5 mm |
| Depth  | 55.3 mm |

#### 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                                    |
| Vibration (operation)                   | 5g                                     |

#### General

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

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### Technical data

#### General

|  |                       |
|--|-----------------------|
| IEC test classification  | II                    |
|  | T2                    |
| EN type  | T2                    |
| SPD design   | Voltage-limiting type |
| Mode of protection   | L-PEN                 |
| Mounting type  | On base element       |
| Color  | black                 |
| Housing material   | PA 6.6                |
| Pollution degree   | 2                     |
| Inflammability class 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 $U_N$                              | 60 V AC (TN)                    |
|  | 60 V DC                         |
|  | -48 V DC (RRH)                  |
| Nominal frequency $f_N$                            | 60 Hz (50 Hz)                   |
| Maximum continuous operating voltage $U_C$         | 75 V AC                         |
|  | 100 V DC                        |
| Residual current $I_{PE}$                          | $\leq 0.45$ mA                  |
| Standby power consumption $P_C$                    | $\leq 35$ mVA                   |
| Nominal discharge current $I_n$ (8/20) $\mu$ s     | 15 kA                           |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s | 40 kA                           |
| Short-circuit current rating $I_{SCCR}$            | 25 kA                           |
| Voltage protection level $U_p$                     | $\leq 0.55$ kV                  |
| Residual voltage $U_{res}$                         | $\leq 0.55$ kV (at $I_n$ )      |
|  | $\leq 0.425$ kV (at 10 kA)      |
|  | $\leq 0.325$ kV (at 5 kA)       |
|  | $\leq 0.275$ kV (at 3 kA)       |
| TOV behavior at $U_T$                              | 100 V AC (5 s / withstand mode) |
| Response time $t_A$                                | $\leq 25$ ns                    |
| Max. backup fuse with branch wiring                | 125 A AC (gG)                   |
|  | 50 A DC (gG)                    |

#### Connection data

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### Technical data

#### Connection data

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

#### NEMA/UL protective circuit

|   |                                    |
|---|------------------------------------|
| UL class  | Type 4 SPD for Type 2 applications |
| Maximum continuous operating voltage MCOV (L-N)       | 75 V AC                            |
| Maximum continuous operating voltage MCOV (L+) - (L-) | 100 V DC                           |
| Maximum continuous operating voltage MCOV (L+/L-) - G | 100 V DC                           |
| Nominal voltage $U_N$                                 | 60 V AC                            |
| Nominal voltage                                       | 60 V DC                            |
| Mode of protection                                    | L-N                                |
|   | (L+) - (L-)                        |
|   | (L+/L-) - G                        |
| Power distribution system                             | 1                                  |
| Nominal frequency                                     | 50/60 Hz                           |
| Voltage protection rating VPR (L-N)                   | 0.5 kV                             |
| Voltage protection rating VPR (L+) - (L-)             | 0.33 kV                            |
| Voltage protection rating VPR (L+/L-) -G              | 0.33 kV                            |
| Nominal discharge current $I_n$ (L-N)                 | 10 kA                              |
| Nominal discharge current $I_n$ (L+) - (L-)           | 10 kA                              |
| Nominal discharge current $I_n$ (L+/L-) - G           | 10 kA                              |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27140201 |
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130801 |
| eCl@ss 6.0 | 27130803 |
| eCl@ss 7.0 | 27130803 |
| eCl@ss 8.0 | 27130803 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000472 |
| ETIM 4.0 | EC000472 |
| ETIM 5.0 | EC000472 |

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## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11     | 39121610 |
| UNSPSC 12.01  | 39121610 |
| UNSPSC 13.2   | 39121620 |

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / CSA / cULus Recognized

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#### Ex Approvals


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#### Approvals submitted


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## Approval details

UL Recognized 

cUL Recognized 

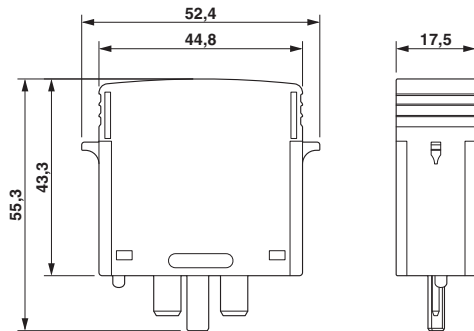
CSA

cULus Recognized 

## Drawings

## Type 2 surge protection plug - VAL-US 60 ST - 2800738

Dimensioned drawing



Circuit diagram

