



Surge arrester Type 2 Requirement class C, UC 350V Pluggable protective modules 4-pole, 3+1 circuit for TN-S and TT systems with FRN display, narrow type of construction

| General data  |                                       |
|---|---------------------------------------|
| standard  | IEC 61643-11: 2011, EN 61643-11: 2012 |
| product designation   | Surge protection device               |
| SPD classification / acc. to EN 61643-11  |                                       |
| • Test Class I, Type 1  | No                                    |
| • Test Class II, Type 2   | Yes                                   |
| • Test Class III, Type 3  | No                                    |
| number of SPD ports   | 1                                     |
| Product version   | Surge arrester                        |
| design of pole  | 3+N/PE                                |
| designation of the protective paths   | L-N, N-PE                             |
| Accessories   | 3 x 5SD7428-1 + 1 x 5SD7428-0         |
| fastening method  | DIN rail NS 35                        |
| material / of the enclosure   | PBT                                   |
| size of surge arrester  | 2,7 MW                                |
| Degree of pollution   | 2                                     |
| overvoltage category / acc. to IEC 61010-1  | III                                   |
| protection class IP / at connection all terminals   | IP20                                  |
| shock acceleration  | 30 gn                                 |
| vibrational acceleration / at 5 Hz ... 500 Hz / limited to 2,5 h / per axis   | 5 gn                                  |
| Ambient temperature / during operation / minimum permissible ... ambient temperature / during operation / maximum permissible | -40 °C ... 80 °C                      |
| ambient temperature / during storage and transport  | -40 °C ... 80 °C                      |
| relative humidity / during operation  | 5 % ... 95 %                          |
| installation altitude / at height above sea level / maximum   | 2 000 m                               |
| Width   | 49.2 mm                               |
| Height  | 98 mm                                 |
| depth   | 71.5 mm                               |
| net weight  | 394 g                                 |
| Electrical data   |                                       |
| type of distribution system   | TT, TN-S                              |
| operating voltage   | 240 / 415 V AC                        |
| operating voltage   | 230 V                                 |
| operating frequency   | 50/60 Hz                              |
| continuous operating voltage  |                                       |
| • maximum   | 350 V                                 |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• between N and PE</li> </ul>  | 264 V  |
| <ul style="list-style-type: none"> <li>• between L and (PE)N</li> </ul>   | 350 V  |
| load current  | 40 A   |
| protective conductor current  | 1 µA (255 V AC)                                |
| discharge current   |  |
| <ul style="list-style-type: none"> <li>• at (8/20) µs</li> </ul>  | 20 kA  |
| <ul style="list-style-type: none"> <li>• 1 phase / at (8/20) µs</li> </ul>  | 40 kA  |
| follow current extinguishing capability   |  |
| <ul style="list-style-type: none"> <li>• between N and PE</li> </ul>  | 100 A (264 V a.c.)                             |
| short-circuit rating (SCCR) / at 264 V  | 25 kA  |
| protection level  |  |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>   | 1.5 kV   |
| <ul style="list-style-type: none"> <li>• between N and L</li> </ul>   | 1.4 kV   |
| <ul style="list-style-type: none"> <li>• between PE and N and/or L</li> </ul>   | 1.5 kV   |
| residual voltage  |  |
| <ul style="list-style-type: none"> <li>• between L and (PE)N <ul style="list-style-type: none"> <li>— at rated value of discharge current / maximum</li> <li>— at 10 kA / maximum</li> <li>— at 5 kA / maximum</li> <li>— at 4 kA / maximum</li> <li>— at 2 kA / maximum</li> </ul> </li> </ul> | 1.5 kV<br>1.3 kV<br>1.2 kV<br>1.1 kV<br>1 kV   |
| <ul style="list-style-type: none"> <li>• between N and PE <ul style="list-style-type: none"> <li>— at rated value of discharge current / maximum</li> <li>— at 10 kA / maximum</li> <li>— at 5 kA / maximum</li> <li>— at 4 kA / maximum</li> <li>— at 2 kA / maximum</li> </ul> </li> </ul>    | 0.5 kV<br>0.5 kV<br>0.5 kV<br>0.5 kV<br>0.5 kV |
| response value of the surge voltage / at 6 kV / at (1.2/50) µs  |  |
| <ul style="list-style-type: none"> <li>• between N and PE</li> </ul>  | 1.5 kV   |
| <ul style="list-style-type: none"> <li>• response time / between L and (PE)N</li> </ul>   | 25 ns  |
| <ul style="list-style-type: none"> <li>• response time / between N and PE</li> </ul>  | 100 ns   |
| adjustable response factor / of tripping current  | 1.6  |
| fuse protection type / at V-shaped connection   | 63 A AC (gG)                                   |
| fuse protection type / for T-connector  | 315 A AC (gG)                                  |
| <b>Connections/ Terminals</b>   |  |
| type of electrical connection   | Screw terminal                                 |
| stripped length   | 16 mm  |
| tightening torque   | 4.3 ... 4.7                                    |
| stripped length   | 16 mm  |
| connectable conductor cross-section   |  |
| <ul style="list-style-type: none"> <li>• for finely stranded conductor</li> </ul>   | 2.5 ... 16                                     |
| <ul style="list-style-type: none"> <li>• for rigid conductor</li> </ul>   | 2.5 ... 25                                     |
| <ul style="list-style-type: none"> <li>• finely stranded</li> </ul>   | 2.5 ... 16                                     |
| AWG number / as coded connectable conductor cross section   | 12 ... 4                                       |
| design of the thread / of the connection screw  | M5   |
| signal design   | Optical, remote signaling contact              |
| <b>Indicator/remote signaling</b>   |  |
| switching function / of the remote signaling contacts   | PDT contact                                    |
| operating voltage / of the remote signaling contacts  |  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>   | 5 ... 250                                      |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>   | 125 V (200 mA DC)                              |
| operational current / of the remote signaling contacts  |  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>   | 5 mA ... 1 A                                   |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>   | 1 A  |
| connection type of remote signaling contact   | M2   |
| connectable conductor cross-section   |  |

|  |              |
|--|--------------|
| <ul style="list-style-type: none"> <li>• for remote signaling contacts / for rigid conductor</li> <li>• for finely stranded conductor / for remote signaling contacts</li> </ul> | 0.14 ... 1.5 |
| AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum  | 28           |
| AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum  | 16           |
| tightening torque / for remote signaling contacts  | 0.25 N·m     |
| stripped length / of the cable / for remote signaling contacts   | 7 mm         |

| <b>NEMA/UL - Data</b>   |  |
|---|--|
| type of surge protective device (SPD) / according to UL   | 4CA  |
| type of distribution system / according to UL   | 3Y   |
| type of distribution system   | TT, TN-S   |
| designation of the protective paths / according to UL   | L-L, L-N, L-G, N-G   |
| TOV behavior  |  |
| <ul style="list-style-type: none"> <li>• at TOV test voltage (L-N)</li> </ul>   | 415 V AC (5 s / withstand mode) / 440 V AC (120 min / safe failure mode) |
| <ul style="list-style-type: none"> <li>• at TOV test voltage (N-PE)</li> </ul>  | 1200 V (200 ms / withstand mode)   |
| Measured Limiting Voltage (MLV) / between L and L   | 3.28 kV  |
| Measured Limiting Voltage (MLV) / between L and Ground (GND)  | 2.08 kV  |
| Measured Limiting Voltage (MLV) / between L and N   | 2 kV   |
| Measured Limiting Voltage (MLV) / between N and Ground (GND)  | 0.95 kV  |
| Maximum Continuous Operating Voltage (MCOV) / between L and L   | 700 V  |
| Maximum Continuous Operating Voltage (MCOV) / between L and Ground (GND)  | 350 V  |
| Maximum Continuous Operating Voltage (MCOV) / between L and N   | 350 V  |
| Maximum Continuous Operating Voltage (MCOV) / between N and Ground (GND)  | 264 V  |
| leakage current / according to UL   | 20 kA  |
| leakage current / according to UL   | 20 kA  |
| leakage current / according to UL   | 20 kA  |
| leakage current / according to UL   | 20 kA  |
| sequential current  |  |
| <ul style="list-style-type: none"> <li>• between N and Ground (GND) / according to UL</li> </ul>                      | 200 A (264 V AC)   |
| AWG number / as coded connectable conductor cross section / for remote signaling contacts / according to UL / minimum | 30   |
| AWG number / as coded connectable conductor cross section / for remote signaling contacts / according to UL / maximum | 14   |
| installation altitude above sea level / according to UL   | 6 562 ft   |
| gross weight [lb] / according to UL   | 0.92 lb  |
| net weight [lb] / according to UL   | 0.87 lb  |
| combustibility class acc. to UL 94  | V0   |
| standards / according to UL   | UL 1449 edition 4  |
| operating voltage / of the remote signaling contacts / according to UL  | 125 V  |
| operational current / of the remote signaling contacts / at AC / according to UL                                      | 1 A  |
| AWG number / as coded connectable conductor cross section / according to UL / minimum                                 | 14   |
| AWG number / as coded connectable conductor cross section / according to UL / maximum                                 | 2  |

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/lowvoltage/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mifb=5SD7424-1>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/5SD7424-1>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SD7424-1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7424-1)

