

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



Article number

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
Design of the product	Surge arrester
Design of pole	1+N/PE
Designation of the protective paths	L-N, N-PE
accessories	1 x 5SD7428-1 + 1 x 5SD7428-0
Mounting type	DIN rail NS 35
Material / of the enclosure	PBT
Size of surge arrester	1,4 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	-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	25.4 mm
Height	98 mm
Depth	71.5 mm
Net weight	210 g

#### Electrical data

Type of distribution system	TT, TN-S
Operating voltage	240 V AC
Continuous operating voltage	
• between N and PE	264 V
• between L and (PE)N	350 V
Load current	40 A
Protective conductor current	1 µA (255 V AC)
Discharge current	
• at (8/20) µs	20 kA
• 1 phase / at (8/20) µs	40 kA
Follow current extinguishing capability	
• between N and PE	100 A (264 V a.c.)
Short-circuit rating (SCCR) / at 264 V	25 kA
Protection level	
• maximum	1.5 kV
• between N and L	1.4 kV
• between PE and N and/or L	1.5 kV
Residual voltage	
• between L and (PE)N	
— at rated value of discharge current / maximum	1.5 kV
— at 10 kA / maximum	1.3 kV
— at 5 kA / maximum	1.2 kV
— at 4 kA maximum	1.1 kV
— at 2 kA maximum	1 kV
• between N and PE	
— at rated value of discharge current / maximum	0.5 kV
— at 10 kA / maximum	0.5 kV
— at 5 kA / maximum	0.5 kV

— at 4 kA maximum	0.5 kV
— at 2 kA maximum	0.5 kV
Response value of the surge voltage / at 6 kV / at (1.2/50) $\mu$ s	
• between N and PE	1.5 kV
Response time	
• between L and (PE)N	25 ns
• between N and PE	100 ns
Settable response factor / of trip current	1.6
Fuse protection type / at V-shaped connection	63 A AC (gG)
Fuse protection type / for T-connector	315 A AC (gG)

### Connections/Terminals

Type of electrical connection	Screw terminal
Wire stripping length	16 mm
Tightening torque	4.3 ... 4.7
Wire stripping length	16 mm
Connectable conductor cross-section	
• for finely stranded conductor	2.5 ... 16
• for rigid conductor	2.5 ... 25
• finely stranded	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

### Indicator/remote signaling

Switching function / of the remote-signaling contacts	PDT contact
Operating voltage / of the remote-signaling contacts	
• at AC	5 ... 250
• at DC	125 V (200 mA DC)
Operating current / of the remote-signaling contacts	
• at AC	5 mA ... 1 A
• at DC	1 A
Connection type of remote signaling contact	M2
Connectable conductor cross-section	
• for remote signaling contacts / for rigid conductor	0.14 ... 1.5
• for finely stranded conductor / for remote signaling contacts	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
Wire stripping length / of the cable / for remote signaling contacts	7 mm

#### NEMA/UL - Data

Type of surge protective device (SPD) / according to UL	4CA
Type of distribution system / according to UL	1
Type of distribution system	TT, TN-S
Designation of the protective paths / according to UL	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 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 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
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	0.51 lb
Net weight [lb] / according to UL	0.46 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
Operating 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?mlfb=5SD7422-1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/5SD7422-1>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SD7422-1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7422-1)

**CAX-Online-Generator**

<http://www.siemens.com/cax>