

Lightning arresters, type 1 Requirement class B, UC 350V Pluggable protective modules 4-pole, 3+1 circuit for TN-S and TT systems with remote display



General data	
standard	IEC 61643-11: 2011, EN 61643-11: 2012
product designation	Surge protection device
<b>SPD classification according to EN 61643-11</b>	
• Test Class I, Type 1	Yes
• Test Class II, Type 2	Yes
• Test Class III, Type 3	No
number of SPD ports	1
design of the product	Lightning arresters
design of pole	3+N/PE
designation of the protective paths	L-N, L-PE, N-PE
accessories	3 x 5SD7418-1 + 1 x 5SD7418-0
fastening method	DIN rail NS 35
material of the enclosure	PBT
size of surge arrester	8 TE
degree of pollution	2
overvoltage category according to IEC 61010-1	III
protection class IP at connection all terminals	IP20
shock acceleration	25 gn
vibrational acceleration at 5 Hz ... 500 Hz limited to 2,5 h per axis	5 gn
relative humidity during operation	5 ... 95 %
installation altitude at height above sea level maximum	2 000 m
width	142.4 mm
height	95 mm
depth	71.5 mm
net weight	1 560 g
Electrical data	
type of distribution system	TT, TN-S
<b>operating voltage</b>	
• at AC	230 V
value range of the operating frequency	50 / 60 Hz
<b>continuous operating voltage</b>	
• at AC maximum	350 V
• between N and PE at AC maximum	350 V
• between L and (PE)N at AC maximum	350 V
<b>discharge current</b>	
• between L and (PE)N at (8/20) $\mu$ s	25 kA
• between L and N at (8/20) $\mu$ s	50 kA
• between L and PE at (8/20) $\mu$ s	25 kA

<ul style="list-style-type: none"> <li>• between N and PE at (8/20) <math>\mu</math>s</li> </ul>	50 kA
<ul style="list-style-type: none"> <li>• between N and PE at (8/20) <math>\mu</math>s</li> </ul>	100 kA
total lightning impulse current at (10/350) $\mu$ s	100 kA
<b>lightning current peak value at (10/350) <math>\mu</math>s</b>	
<ul style="list-style-type: none"> <li>• lightning current peak value between L and PE</li> </ul>	25 kA
<ul style="list-style-type: none"> <li>• lightning current peak value between N and PE</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• lightning current peak value between L and N</li> </ul>	25 kA
<b>charge of the flash at (10/350) <math>\mu</math>s</b>	
<ul style="list-style-type: none"> <li>• charge of the flash between L and N</li> </ul>	12.5 A·s
<ul style="list-style-type: none"> <li>• charge of the flash between L and PE</li> </ul>	12.5 A·s
<ul style="list-style-type: none"> <li>• charge of the flash between N and PE</li> </ul>	50 A·s
<b>specific energy of the flash at (10/350) <math>\mu</math>s</b>	
<ul style="list-style-type: none"> <li>• between L and N</li> </ul>	160
<ul style="list-style-type: none"> <li>• between L and PE</li> </ul>	160
<ul style="list-style-type: none"> <li>• between N and PE</li> </ul>	2 500
<b>follow current extinguishing capability</b>	
<ul style="list-style-type: none"> <li>• between N and PE</li> </ul>	100 A
<ul style="list-style-type: none"> <li>• between L and N</li> </ul>	50 kA
short-circuit rating (SCCR) at 264 V	50 kA
<b>protection level</b>	
<ul style="list-style-type: none"> <li>• between L and N maximum</li> </ul>	1.5 kV
<ul style="list-style-type: none"> <li>• between L and PE maximum</li> </ul>	2.5 kV
<ul style="list-style-type: none"> <li>• between N and L</li> </ul>	1.5 kV
<ul style="list-style-type: none"> <li>• between N and PE maximum</li> </ul>	1.5 kV
<ul style="list-style-type: none"> <li>• between PE and N and/or L</li> </ul>	1.5 kV
<b>residual voltage</b>	
<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> </ul> </li> </ul>	1.5 kV
<ul style="list-style-type: none"> <li>• between L and PE <ul style="list-style-type: none"> <li>— at rated value of discharge current maximum</li> </ul> </li> </ul>	2.5 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> </ul> </li> </ul>	1.5 kV
<b>response value of the surge voltage at 6 kV at (1.2/50) <math>\mu</math>s</b>	
<ul style="list-style-type: none"> <li>• between L and N</li> </ul>	1.5 kV
<ul style="list-style-type: none"> <li>• between L and PE</li> </ul>	2.5 kV
<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>	100 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	125 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	18 mm
tightening torque	4.3 ... 4.7 N·m
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• for finely stranded conductor</li> </ul>	2.5 ... 25 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• for rigid conductor</li> </ul>	2.5 ... 35 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• finely stranded</li> </ul>	2.5 ... 25 mm <sup>2</sup>
AWG number as coded connectable conductor cross section	13 ... 2
design of the thread of the connection screw	M5
signal design	Optical, remote signaling contact
<b>Indicator/remote signaling</b>	
product component remote signaling contact	Yes
switching function of the remote signaling contacts	PDT contact
operating voltage of the remote signaling contacts at AC	12 ... 250 V
operational current of the remote signaling contacts at AC	10 mA ... 1 A
connection type of remote signaling contact	M2
connectable conductor cross-section for remote signaling contacts for rigid conductor	0.14 ... 1.5 mm <sup>2</sup>

connectable conductor cross-section for remote signaling contacts for finely stranded conductor	0.14 ... 1.5 mm <sup>2</sup>
AWG number as coded connectable conductor cross section for remote signaling contacts	28 ... 15
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
<b>TOV behavior</b>	
<ul style="list-style-type: none"> <li>at TOV test voltage (L-N)</li> <li>at TOV test voltage (N-PE)</li> </ul>	415 V AC (5 s / withstand mode) / 457 V AC (120 min / withstand mode) 1200 V (200 ms / withstand mode)
<b>Measured Limiting Voltage (MLV)</b>	
<ul style="list-style-type: none"> <li>between L and L</li> <li>between L and Ground (GND)</li> <li>between L and N</li> <li>between N and Ground (GND)</li> </ul>	2.45 kV 1.57 kV 1.35 kV 1.08 kV
<b>Maximum Continuous Operating Voltage (MCOV)</b>	
<ul style="list-style-type: none"> <li>between L and L</li> <li>between L and Ground (GND)</li> <li>between L and N</li> <li>between N and Ground (GND)</li> </ul>	528 V 528 V 264 V 264 V
<b>discharge current</b>	
<ul style="list-style-type: none"> <li>between N and Ground (GND) according to UL rated value</li> <li>between L and N according to UL rated value</li> <li>between L and Ground (GND) according to UL rated value</li> <li>between L and L according to UL rated value</li> </ul>	20 kA 20 kA 20 kA 20 kA
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>according to UL</li> <li>for remote signaling contacts according to UL</li> </ul>	12 ... 2 30 ... 14
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
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> </ul>	-40 ... +80 °C -40 ... +80 °C
installation altitude above sea level according to UL	6 562 ft
gross weight [lb] according to UL	3.56 lb(av)
net weight [lb] according to UL	3.16 lb(av)
combustibility class according to UL 94	V0
standards according to UL	UL 1449 edition 4

#### Approvals Certificates

##### General Product Approval



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## Further information

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

### 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=5SD7414-1>

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

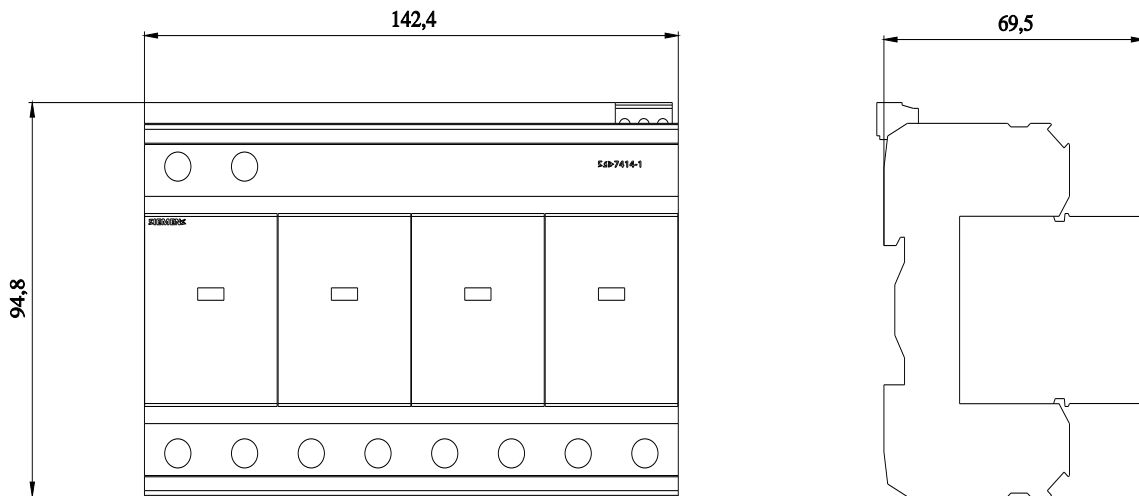
<https://support.industry.siemens.com/cs/ww/en/ps/5SD7414-1>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SD7414-1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7414-1)

### CAX-Online-Generator

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



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