## **SIEMENS**

Data sheet 5SD7412-2



Lightning arrester type 1, 12.5 kA, lightning protection class III and IV, for 3-wire networks (L, N, PE), UC 335V/264V AC (L-N/N-PE), Mechanical defect indication

General data	
standard	IEC 61643-11: 2011, EN 61643-11: 2012
product designation	Surge protection device
SPD classification / acc. to EN 61643-11	
<ul> <li>Test Class I, Type 1</li> </ul>	Yes
<ul> <li>Test Class II, Type 2</li> </ul>	Yes
Test Class III, Type 3	No
number of SPD ports	1
Product version	Combination surge arresters
design of pole	1+N/PE
designation of the protective paths	L-N, L-PE, N-PE
Accessories	1 x 5SD7418-3 + 1 x 5SD7418-2
fastening method	DIN rail NS 35
material / of the enclosure	PA 6.6 / PBT
size of surge arrester	2 TE
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	7.5 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	35.6 mm
Height	89.9 mm
depth	77.5 mm
net weight	328 g
Electrical data	
type of distribution system	TT, TN-S
operating voltage	240 V
operating voltage	230 V
operating frequency	50/60 Hz
continuous operating voltage	
• maximum	335 V

<ul> <li>between N and PE</li> </ul>	264 V
between L and (PE)N	335 V
load current	80 A
protective conductor current	5 μA (255 V AC)
apparent power consumption / maximum	270 mVA
discharge current	
• between L and (PE)N / at (8/20) μs	12.5 kA
<ul> <li>between L and N / at (8/20) μs</li> </ul>	50 kA
• between N and PE / at (8/20) µs	50 kA
• between N and PE / at (8/20) µs	50 kA
total discharge current / at (8/20) µs	50 kA
total lightning impulse current / at (10/350) µs	25 kA
lightning current peak value / at (10/350) µs	20101
• lightning current peak value / between N and PE	50 kA
lightning current peak value / between L and N	12.5 kA
charge of the flash / at (10/350) µs	12.0 10 (
• charge of the flash / between L and N	6.25 A·s
charge of the flash / between N and PE	25 A·s
specific energy of the flash / at (10/350) µs	20 / 3
• between L and N	39
between N and PE	625
follow current extinguishing capability	023
between N and PE	100 / (264 ) / 2.0 )
	100 A (264 V a.c.) 25 kA
short-circuit rating (SCCR) / at 264 V	20 KA
protection level	1.214/
• between L and N	1.2 kV
between L and PE	2 kV
• between N and L	1.2 kV
between N and PE	1.7 kV
residual voltage	
• between L and (PE)N	4007
at rated value of discharge current / maximum	1.2 kV
— at 10 kA / maximum	1.1 kV
— at 5 kA / maximum	1 kV
— at 3 kA / maximum	0.9 kV
• between L and PE	
— at rated value of discharge current / maximum	2 kV
— at 10 kA / maximum	1.5 kV
— at 5 kA / maximum	1.2 kV
— at 3 kA / maximum	1.1 kV
<ul> <li>between N and PE</li> </ul>	
— at rated value of discharge current / maximum	0.6 kV
— at 10 kA / maximum	0.5 kV
— at 5 kA / maximum	0.5 kV
— at 3 kA / maximum	0.4 kV
response value of the surge voltage / at 6 kV / at (1.2/50) μs	
<ul> <li>between L and PE</li> </ul>	1.7 kV
<ul> <li>between N and PE</li> </ul>	1.7 kV
response time / between L and (PE)N	25 ns
• response time / between N and PE	100 ns
adjustable response factor / of tripping current	1.6
fuse protection type / at V-shaped connection	80 A AC (qG)
fuse protection type / at V-shaped connection  fuse protection type / for T-connector	80 A AC (gG) 160 A AC (aG)
fuse protection type / for T-connector	160 A AC (gG)
fuse protection type / for T-connector Connections/ Terminals	160 A AC (gG)
fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection	160 A AC (gG)  Screw terminal
fuse protection type / for T-connector Connections/ Terminals	160 A AC (gG)

stripped length	16 mm
connectable conductor cross-section	
<ul> <li>for finely stranded conductor</li> </ul>	1.5 25
<ul> <li>for rigid conductor</li> </ul>	1.5 35
<ul> <li>finely stranded</li> </ul>	1.5 25
AWG number / as coded connectable conductor cross section	15 2
design of the thread / of the connection screw	M5
signal design	optical
NEMA/UL - Data	
type of distribution system	TT, TN-S
TOV behavior	
<ul> <li>at TOV test voltage (L-N)</li> </ul>	415 V AC (5 s / withstand mode)
<ul> <li>at TOV test voltage (N-PE)</li> </ul>	1200 V (200 ms / withstand mode)
combustibility class acc. to UL 94	V0
Further information	

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

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

Industry Mall (Online ordering system)

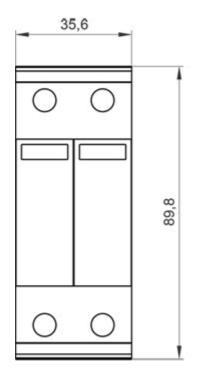
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SD7412-2

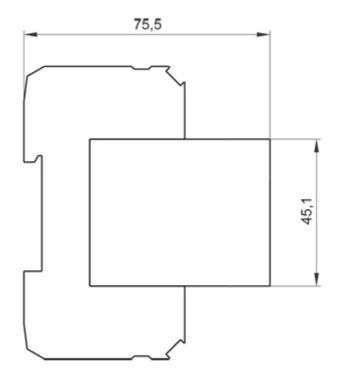
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/5SD7412-2

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SD7412-2





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