



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	
• Test Class I, Type 1	Yes
• Test Class II, Type 2	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 style="list-style-type: none"> • between N and PE 	264 V
<ul style="list-style-type: none"> • between L and (PE)N 	335 V
load current	80 A
protective conductor current	5 μ A (255 V AC)
apparent power consumption / maximum	270 mVA
discharge current	
<ul style="list-style-type: none"> • between L and (PE)N / at (8/20) μs 	12.5 kA
<ul style="list-style-type: none"> • between L and N / at (8/20) μs 	50 kA
<ul style="list-style-type: none"> • between N and PE / at (8/20) μs 	50 kA
<ul style="list-style-type: none"> • between N and PE / at (8/20) μs 	50 kA
total discharge current / at (8/20) μ s	50 kA
total lightning impulse current / at (10/350) μ s	25 kA
lightning current peak value / at (10/350) μ s	
<ul style="list-style-type: none"> • lightning current peak value / between N and PE 	50 kA
<ul style="list-style-type: none"> • lightning current peak value / between L and N 	12.5 kA
charge of the flash / at (10/350) μ s	
<ul style="list-style-type: none"> • charge of the flash / between L and N 	6.25 A·s
<ul style="list-style-type: none"> • charge of the flash / between N and PE 	25 A·s
specific energy of the flash / at (10/350) μ s	
<ul style="list-style-type: none"> • between L and N 	39
<ul style="list-style-type: none"> • between N and PE 	625
follow current extinguishing capability	
<ul style="list-style-type: none"> • between N and PE 	100 A (264 V a.c.)
short-circuit rating (SCCR) / at 264 V	25 kA
protection level	
<ul style="list-style-type: none"> • between L and N 	1.2 kV
<ul style="list-style-type: none"> • between L and PE 	2 kV
<ul style="list-style-type: none"> • between N and L 	1.2 kV
<ul style="list-style-type: none"> • between N and PE 	1.7 kV
residual voltage	
<ul style="list-style-type: none"> • between L and (PE)N <ul style="list-style-type: none"> — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 3 kA / maximum 	1.2 kV 1.1 kV 1 kV 0.9 kV
<ul style="list-style-type: none"> • between L and PE <ul style="list-style-type: none"> — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 3 kA / maximum 	2 kV 1.5 kV 1.2 kV 1.1 kV
<ul style="list-style-type: none"> • between N and PE <ul style="list-style-type: none"> — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 3 kA / maximum 	0.6 kV 0.5 kV 0.5 kV 0.4 kV
response value of the surge voltage / at 6 kV / at (1.2/50) μ s	
<ul style="list-style-type: none"> • between L and PE 	1.7 kV
<ul style="list-style-type: none"> • between N and PE 	1.7 kV
<ul style="list-style-type: none"> • response time / between L and (PE)N 	25 ns
<ul style="list-style-type: none"> • 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 (gG)
fuse protection type / for T-connector	160 A AC (gG)
Connections/ Terminals	
type of electrical connection	Screw terminal
stripped length	16 mm
tightening torque	4.3 ... 4.7

stripped length	16 mm
connectable conductor cross-section	
• for finely stranded conductor	1.5 ... 25
• for rigid conductor	1.5 ... 35
• finely stranded	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	
• at TOV test voltage (L-N)	415 V AC (5 s / withstand mode)
• at TOV test voltage (N-PE)	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

