SIEMENS

Data sheet 5SD7414-3

Lightning conductor T1/T2, UN 240/400 V, UC 335/264 V A.C., pluggable protective modules, 3+1 circuit (TN-S, TT), Width 72 mm with remote signaling

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	3+N/PE
designation of the protective paths	L-N, L-PE, N-PE
Accessories	3 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	4 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	71.2 mm
Height	98.7 mm
depth	77.5 mm
net weight	641 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	335 V

● between N and PE	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	810 mVA
discharge current	
● between L and (PE)N / at (8/20) µs	12.5 kA
● between L and N / at (8/20) µs	50 kA
● between L and PE / at (8/20) µs	50 kA
● between L and PE / at (8/20) µs	12.5 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	50 kA
lightning current peak value / at (10/350) µs	
● lightning current peak value / between L and PE	12.5 kA
● 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	
● charge of the flash / between L and N	6.25 A·s
● charge of the flash / between L and PE	6.25 A·s
● charge of the flash / between N and PE	25 A·s
specific energy of the flash / at (10/350) µs	
● between L and N	39
● between L and PE	39
● between N and PE	625
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	
● 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
● between PE and N and/or L	1.7 kV
residual voltage	
● between L and (PE)N	
— 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
● between N and PE	
— 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	
● between N and PE	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 (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, 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	30 V
operational current / of the remote signaling contacts	
● at AC	5 mA ... 1.5 A
● at DC	1 A DC (30 V DC)
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
stripped length / of the cable / for remote signaling contacts	7 mm
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=5SD7414-3
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/5SD7414-3
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7414-3