## SIEMENS

## Data sheet

## 5SD7481-1



Surge arrester, Type 2, pluggable protective modules, UC 800 V AC, 1-pole, Varistor connected in series and gas-filled spark gap 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	
<ul> <li>Test Class I, Type 1</li> </ul>	No
<ul> <li>Test Class II, Type 2</li> </ul>	Yes
Test Class III, Type 3	No
number of SPD ports	1
Product version	Surge arrester
design of pole	1
designation of the protective paths	L-PEN, L-PE
Accessories	1 x 5SD7488-2 + 1 x 5SD7488-4
fastening method	DIN rail NS 35
material / of the enclosure	PA 6.6 / PBT
Degree of pollution	2
overvoltage category / acc. 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
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	97 mm
depth	71.5 mm
net weight	388 g
Electrical data	
type of distribution system	TN-C, IT
operating voltage	400 / 690 V AC90 V AC (IT)
operating voltage	690 V
operating frequency	50/60 Hz
continuous operating voltage	
• maximum	800 V
load current	80 A

protective conductor current	3 µA (760 V AC)
apparent power consumption / maximum	3 mVA
discharge current	
• at (8/20) µs	15 kA
<ul> <li>1 phase / at (8/20) μs</li> </ul>	_ 30 kA
short-circuit rating (SCCR) / at 264 V	_ 25 kA
protection level	
• maximum	5 kV
residual voltage	
<ul> <li>at rated value of discharge current / maximum</li> </ul>	3 kV
• at 10 kA / maximum	2.6 kV
<ul> <li>at 5 kA / maximum</li> </ul>	2.4 kV
• at 3 kA / maximum	2.3 kV
response value of the surge voltage / at 6 kV / at (1.2/50) $\mu s$	5 kV
Response time	- 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	100 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	
<ul> <li>for finely stranded conductor</li> </ul>	1.5 25
<ul> <li>for rigid conductor</li> </ul>	1.5 35
AWG number / as coded connectable conductor cross	15 2
section	
section design of the thread / of the connection screw	M5
	M5 Optical, remote signaling contact
design of the thread / of the connection screw	
design of the thread / of the connection screw signal design	
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts	Optical, remote signaling contact
design of the thread / of the connection screw signal design Indicator/remote signaling	Optical, remote signaling contact
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC	Optical, remote signaling contact PDT contact 5 250
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC	Optical, remote signaling contact PDT contact
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC	Optical, remote signaling contact PDT contact 5 250 30 V
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC	Optical, remote signaling contact PDT contact 5 250 30 V 5 mA 1.5 A
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC	Optical, remote signaling contact PDT contact 5 250 30 V
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC	Optical, remote signaling contact PDT contact 5 250 30 V 5 mA 1.5 A 1 A DC (30 V DC)
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section	Optical, remote signaling contact PDT contact 5 250 30 V 5 mA 1.5 A 1 A DC (30 V DC) M2
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor	Optical, remote signaling contact           PDT contact           5 250           30 V           5 mA 1.5 A           1 A DC (30 V DC)           M2           0.14 1.5
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section	Optical, remote signaling contact PDT contact 5 250 30 V 5 mA 1.5 A 1 A DC (30 V DC) M2
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross	Optical, remote signaling contact           PDT contact           5 250           30 V           5 mA 1.5 A           1 A DC (30 V DC)           M2           0.14 1.5
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         1.6
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum tightening torque / for remote signaling contacts	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         28         16         0.25 N·m
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         1.6
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts NEMA/UL - Data	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         28         16         0.25 N·m         7 mm
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         28         16         0.25 N·m
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts NEMA/UL - Data	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         28         16         0.25 N·m         7 mm
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         0.14 1.5         28         16         0.25 N·m         7 mm
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts NEMA/UL - Data type of distribution system TOV behavior	Optical, remote signaling contact           PDT contact           5 250           30 V           5 mA 1.5 A           1 A DC (30 V DC)           M2           0.14 1.5           28           16           0.25 N·m           7 mm
design of the thread / of the connection screw signal design Indicator/remote signaling switching function / of the remote signaling contacts operating voltage / of the remote signaling contacts • at AC • at DC operational current / of the remote signaling contacts • at AC • at DC connection type of remote signaling contact connectable conductor cross-section • for remote signaling contacts / for rigid conductor • for finely stranded conductor / for remote signaling contacts AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum AWG number / as coded connectable conductor cross section / for remote signaling contacts / minimum tightening torque / for remote signaling contacts stripped length / of the cable / for remote signaling contacts NEMA/UL - Data type of distribution system TOV behavior • at TOV test voltage	Optical, remote signaling contact         PDT contact         5 250         30 V         5 mA 1.5 A         1 A DC (30 V DC)         M2         0.14 1.5         28         16         0.25 N·m         7 mm         TN-C, IT         1550 V AC (5 s / withstand mode)

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=5SD7481-1 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/5SD7481-1 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SD7481-1

C