## **SIEMENS**

Data sheet 5SD7424-3



Surge arrester T2, UN 240/400 V, UC 350/264 V AC, pluggable protective module, 3+1 circuit (TN-S, TT), Width 49.2 mm

General data	
standard	IEC 61643-11: 2011, EN 61643-11: 2012
product designation	Surge protection device
SPD classification / according to EN 61643-11	
• Test Class I, Type 1	No
• Test Class II, Type 2	Yes
Test Class III, Type 3	No
number of SPD ports	1
design of the product	Surge arrester
design of pole	3+N/PE
designation of the protective paths	L-N, N-PE
accessories	3 x 5SD7428-1 + 1 x 5SD7428-2
fastening method	DIN rail NS 35
material / of the enclosure	PA 6.6 / PBT
size of surge arrester	2,7 MW
degree of pollution	2
overvoltage category / according to IEC 61010-1	III
protection class IP / at connection all terminals	IP20
shock acceleration	30 gn
vibrational acceleration / at 5 Hz $\dots$ 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	49.2 mm
height	98 mm
depth	71.5 mm
net weight	394 g
Electrical data	
type of distribution system	TT, TN-S
operating voltage	230 V
continuous operating voltage	
• maximum	350 V
<ul><li>between N and PE</li></ul>	264 V
• between L and PE	350 V
• between L and (PE)N	350 V
discharge current	
• between L and (PE)N / at (8/20) µs	20 kA
• between L and N / at (8/20) µs	40 kA
<ul> <li>between L and PE / at (8/20) μs</li> </ul>	40 kA
<ul> <li>between L and PE / at (8/20) μs</li> </ul>	20 kA

follow current extinguishing capability	
• between N and PE  short-circuit rating (SCCR) / at 264 ∨ 25 kA  protection level • between L and N • between L and PE • between N and PE 1.9 kV • between N and PE 1.5 kV  residual voltage • between L and (PE)N — at rated value of discharge current / maximum — at 10 kA / maximum — at 10 kA / maximum 1.2 kV — at 4 kA / maximum 1.1 kV — at 2 kA / maximum 1.1 kV • between N and PE — at rated value of discharge current / maximum 1.7 kV — at 2 kA / maximum 1.7 kV — at 2 kA / maximum 1.7 kV — at 2 kA / maximum 0.7 kV — at 10 kA / maximum 0.7 kV — at 10 kA / maximum 0.7 kV — at 2 kA / maximum 1.5 kV  seponse time / between N and PE 1.5 kV  eresponse time / between L and (PE)N 1.5 kV  eresponse time / between L and (PE)N 1.5 kV  eresponse time / between N and PE 1.6 ms adjustable response factor / of tripping current 1.6 1.6 ms 1.5 kV  connections/ Terminals 1.5 kV  stripped length 1.6 mm 1.7 km 1.7 km 1.7 km 1.8 km 1.8 km 1.9 km 1	
short-circuit rating (SCCR) / at 264 V  protection level  ● between L and N  ● between L and PE  ● between N and PE  1.5 kV  residual voltage  ● between L and (PE)N  — at rated value of discharge current / maximum  — at 10 kA / maximum  — at 5 kA / maximum  — at 2 kA / maximum  1.1 kV  — at 2 kA / maximum  1 kV  • between N and PE  — at rated value of discharge current / maximum  1.1 kV  — at 5 kA / maximum  0.7 kV  — at 2 kA / maximum  0.7 kV  — at 2 kA / maximum  0.7 kV  — at 10 kA / maximum  0.7 kV  — at 2 kA / maximum  0.7 kV  — at 2 kA / maximum  0.7 kV  — at 5 kA / maximum  0.7 kV  — at 5 kA / maximum  0.7 kV  — at 5 kA / maximum  0.7 kV  — at 6 kA / maximum  0.7 kV  — at 6 kA / maximum  0.7 kV  — at 7 kA / maximum  0.7 kV  — at 8 kA / maximum  0.7 kV  — at 8 kA / maximum  0.7 kV  — at 9 kA / maximum  0.7 kV  1.5 kV  response value of the surge voltage / at 6 kV / at (1.2/50) μs  • between N and PE  1.5 kV  • response time / between L and (PE)N  • response time / between N and PE  100 ns  adjustable response factor / of tripping current fuse protection type / fat V-shaped connection  1.6 fuse protection type / far T-connector  135 AAC (gG)  connections/ Terminals  type of electrical connection  stripped length 16 mm  tightening torque  4.3 4.7  stripped length 16 mm  connectable conductor cross-section  • for finely stranded conductor  • for finely stranded conductor	
protection level	
• between L and PE • between N and PE residual voltage • between L and (PE)N — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 5 kA / maximum — at 2 kA / maximum — 1.1 kV — at 2 kA / maximum — at 10 kA / maximum — at 10 kA / maximum — 1.1 kV — at 2 kA / maximum — at 10 kA / maximum 0.7 kV — at 4 kA / maximum — at 10 kA / maximum — at 10 kA / maximum — at 10 kA / maximum 0.7 kV — at 5 kA / maximum 0.7 kV — at 5 kA / maximum 0.7 kV — at 5 kA / maximum 0.7 kV — at 6 kA / maximum 0.7 kV — at 6 kA / maximum 0.7 kV — at 2 kA / maximum 0.7 kV — at 2 kA / maximum 1.5 kV  response value of the surge voltage / at 6 kV / at (1.2/50) μs • between N and PE 1.5 kV  • response time / between L and (PE)N • response time / between N and PE 100 ns adjustable response factor / of tripping current 1.6 fuse protection type / at V-shaped connection 40 A AC (gG)  fuse protection type / for T-connector 315 AAC (gG)  Connections/ Terminals type of electrical connection stripped length 16 mm tightening torque 4.3 4.7  stripped length 16 mm connectable conductor cross-section • for frigid conductor • for frigid stranded conductor • for frigid conductor • for frigid conductor	
• between N and PE  residual voltage • between L and (PE)N  — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 2 kA / maximum — at 2 kA / maximum — at 10 kA / maximum — at 5 kA / maximum — at 2 kA / maximum — at 3 kA / a / a / a / a / a / a / a / a / a /	
residual voltage	
between L and (PE)N  — at rated value of discharge current / maximum — at 10 kA / maximum — at 5 kA / maximum — at 4 kA / maximum — at 2 kA / maximum — at 10 kA / maximum — at 5 kA / maximum — at 4 kA / maximum — at 2 kA / maximum — at 2 kA / maximum — at 9 kA / maximum — at 8 kA / maximum — at 8 kA / maximum — at 8 kA / maximum — at 9 kA / maximum — at 8 kA / maximum — at 8 kA / maximum — at 8 kA / maximum — at 9 kA / maximum — at 8 kA / maximum  at 10 k	
— at rated value of discharge current / maximum       1.5 kV         — at 10 kA / maximum       1.3 kV         — at 4 kA / maximum       1.1 kV         — at 2 kA / maximum       1.1 kV         — at 2 kA / maximum       1 kV         • between N and PE       — at rated value of discharge current / maximum       0.7 kV         — at 10 kA / maximum       0.7 kV         — at 4 kA / maximum       0.7 kV         — at 2 kA / maximum       0.7 kV         response value of the surge voltage / at 6 kV / at (1.2/50) μs       1.5 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       40 A AC (gG)         fuse protection type / for T-connector       315 A AC (gG)         connections/ Torminals       Screw terminal         type of electrical connection       Screw terminal         stripped length       16 mm         tipped length       16 mm         connectable conductor cross-section       6 for finely stranded conductor       2.5 16         • for rigid conductor       2.5 25	
— at 10 kA / maximum       1.3 kV         — at 5 kA / maximum       1.2 kV         — at 4 kA / maximum       1.1 kV         — at 2 kA / maximum       1 kV         • between N and PE       — at rated value of discharge current / maximum       0.7 kV         — at 10 kA / maximum       0.7 kV         — at 4 kA / maximum       0.7 kV         — at 4 kA / maximum       0.7 kV         — at 2 kA / maximum       0.7 kV         response value of the surge voltage / at 6 kV / at (1.2/50) μs       1.5 kV         • response time / between N and PE       1.5 kV         • response time / between N and PE       100 ns         adjustable response factor / of tripping current       1.6         fuse protection type / at V-shaped connection       40 A AC (gG)         fuse protection type / for T-connector       315 A AC (gG)         Connections/ Terminals       Screw terminal         type of electrical connection       Screw terminal         stripped length       16 mm         connectable conductor cross-section       6 for finely stranded conductor       2.5 16         • for rigid conductor       2.5 25	
— at 5 kA / maximum       1.2 kV         — at 2 kA / maximum       1.1 kV         — at 2 kA / maximum       1 kV         • between N and PE       — at rated value of discharge current / maximum       0.7 kV         — at 10 kA / maximum       0.7 kV         — at 5 kA / maximum       0.7 kV         — at 2 kA / maximum       0.7 kV         response value of the surge voltage / at 6 kV / at (1.2/50) μs       • between N and PE         • 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       40 A AC (gG)         fuse protection type / for T-connector       315 A AC (gG)         Connections/ Terminals       Screw terminal         stripped length       16 mm         tightening torque       4.3 4.7         stripped length       16 mm         connectable conductor cross-section       6 for finely stranded conductor       2.5 16         • for rigid conductor       2.5 25	
— at 4 kA / maximum       1.1 kV         — at 2 kA / maximum       1 kV         • between N and PE       — at rated value of discharge current / maximum       0.7 kV         — at 10 kA / maximum       0.7 kV         — at 4 kA / maximum       0.7 kV         — at 2 kA / maximum       0.7 kV         — at 2 kA / maximum       0.7 kV         response value of the surge voltage / at 6 kV / at (1.2/50) μs       • between N and PE         • 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       40 A AC (gG)         fuse protection type / for T-connector       315 A AC (gG)         connections/ Terminals       Screw terminal         stripped length       16 mm         tightening torque       4.3 4.7         stripped length       16 mm         connectable conductor cross-section       6 for finely stranded conductor       2.5 16         • for rigid conductor       2.5 25	
- at 2 kA / maximum  • between N and PE  - at rated value of discharge current / maximum  - at 10 kA / maximum  - at 5 kA / maximum  - at 4 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  - at 4 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 4 kA / maximum  -	
between N and PE     — at rated value of discharge current / maximum     — at 10 kA / maximum     — at 5 kA / maximum     — at 5 kA / maximum     — at 2 kA / maximum	
- at rated value of discharge current / maximum    - at 10 kA / maximum    - at 5 kA / maximum    - at 5 kA / maximum    - at 4 kA / maximum    - at 2 kA / maximum    - at 4 kA / max	
- at 10 kA / maximum  - at 5 kA / maximum  - at 4 kA / maximum  - at 2 kA / maximum  - at 2 kA / maximum  0.7 kV  response value of the surge voltage / at 6 kV / at (1.2/50) μs  • between N and PE  1.5 kV   • response time / between L and (PE)N  • response time / between N and PE  100 ns  adjustable response factor / of tripping current  fuse protection type / at V-shaped connection  fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection  stripped length  16 mm  tightening torque  4.3 4.7  stripped length  16 mm  connectable conductor cross-section  • for finely stranded conductor  • for rigid conductor  2.5 16  • for rigid conductor	
- at 5 kA / maximum    -at 4 kA / maximum    -at 2 kA / maximum	
- at 4 kA / maximum	
- at 2 kA / maximum  response value of the surge voltage / at 6 kV / at (1.2/50) μs  • between N and PE  1.5 kV  • response time / between L and (PE)N • response time / between N and PE  100 ns  adjustable response factor / of tripping current fuse protection type / at V-shaped connection fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection stripped length fughtening torque 4.3 4.7  stripped length for mm  connectable conductor cross-section • for finely stranded conductor • for rigid conductor • for rigid conductor	
response value of the surge voltage / at 6 kV / at (1.2/50) µs  • between N and PE  1.5 kV  • response time / between L and (PE)N • response time / between N and PE  adjustable response factor / of tripping current  fuse protection type / at V-shaped connection  fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection  stripped length  fightening torque  4.3 4.7  stripped length  connectable conductor cross-section • for finely stranded conductor • for rigid conductor  7.5 25	
between N and PE      response time / between L and (PE)N     response time / between N and PE      adjustable response factor / of tripping current     fuse protection type / at V-shaped connection     fuse protection type / for T-connector      Connections/ Terminals      type of electrical connection     stripped length     fughtening torque     stripped length     connectable conductor cross-section     for finely stranded conductor     for rigid conductor     for rigid conductor     conductor     stripped conductor	
response time / between L and (PE)N     response time / between N and PE     adjustable response factor / of tripping current     fuse protection type / at V-shaped connection     fuse protection type / for T-connector      Connections/ Terminals     type of electrical connection     stripped length     16 mm     tightening torque     stripped length     connectable conductor cross-section     for finely stranded conductor     for rigid conductor     for rigid conductor     connectable conductor	
response time / between N and PE     adjustable response factor / of tripping current     fuse protection type / at V-shaped connection     fuse protection type / for T-connector     315 A AC (gG)  Connections/ Terminals  type of electrical connection     stripped length     16 mm  tightening torque     4.3 4.7  stripped length     16 mm  connectable conductor cross-section     • for finely stranded conductor     • for rigid conductor     2.5 16     • for rigid conductor     2.5 25	
response time / between N and PE     adjustable response factor / of tripping current     fuse protection type / at V-shaped connection     fuse protection type / for T-connector     315 A AC (gG)  Connections/ Terminals  type of electrical connection     stripped length     16 mm  tightening torque     4.3 4.7  stripped length     16 mm  connectable conductor cross-section     • for finely stranded conductor     • for rigid conductor     2.5 16     • for rigid conductor     2.5 25	
adjustable response factor / of tripping current  fuse protection type / at V-shaped connection  fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection  stripped length  tightening torque  4.3 4.7  stripped length  connectable conductor cross-section  • for finely stranded conductor  • for rigid conductor  2.5 16  • for rigid conductor	
fuse protection type / at V-shaped connection  fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection  Screw terminal  stripped length  tightening torque  4.3 4.7  stripped length  connectable conductor cross-section  • for finely stranded conductor  • for rigid conductor  2.5 16  • for rigid conductor  2.5 25	
fuse protection type / for T-connector  Connections/ Terminals  type of electrical connection  stripped length  tightening torque  4.3 4.7  stripped length  for finely stranded conductor  of for rigid conductor  2.5 16  of or rigid conductor  2.5 25	
type of electrical connection  stripped length  tightening torque  stripped length  tonnectable conductor cross-section  of or finely stranded conductor  for rigid conductor  2.5 16  of or rigid conductor  2.5 25	
type of electrical connection  stripped length  tightening torque  4.3 4.7  stripped length  tonnectable conductor cross-section  of or finely stranded conductor  for rigid conductor  2.5 16  stripped length  2.5 25	
stripped length tightening torque 4.3 4.7 stripped length tonnectable conductor cross-section of for finely stranded conductor of for rigid conductor 2.5 16 of or rigid conductor 2.5 25	
tightening torque 4.3 4.7 stripped length 16 mm  connectable conductor cross-section  • for finely stranded conductor 2.5 16  • for rigid conductor 2.5 25	
stripped length  connectable conductor cross-section  • for finely stranded conductor  • for rigid conductor  2.5 16  2.5 25	
connectable conductor cross-section  • for finely stranded conductor  • for rigid conductor  2.5 16  2.5 25	
<ul> <li>for finely stranded conductor</li> <li>for rigid conductor</li> <li>2.5 16</li> <li>2.5 25</li> </ul>	
• for rigid conductor 2.5 25	
5	
AWG number / as coded connectable conductor cross section 12 4	
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	
operational current / of the remote signaling contacts / at AC 5 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	
<ul> <li>for finely stranded conductor / for remote signaling contacts</li> <li>0.14 1.5</li> </ul>	
AWG number / as coded connectable conductor cross section / 28	
for remote signaling contacts / minimum	
AWG number / as coded connectable conductor cross section / for remote signaling contacts / maximum	
tightening torque / for remote signaling contacts  0.25 N·m	
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) / 457 V AC (120 min / safe failure mod	
• at TOV test voltage (N-PE) 1200 V (200 ms / withstand mode)	:)
combustibility class according to UL 94	:)

## **Further information**

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

## Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

## 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=5SD7424-3

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

https://support.industry.siemens.com/cs/ww/en/ps/5SD7424-3

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=5SD7424-3

**CAx-Online-Generator** 

http://www.siemens.com/cax

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