SIEMENS

Data sheet

5SD7422-0



Surge arrester Type 2 Requirement class C, UC 350V Pluggable protective modules 2-pole, 1+1 circuit for TN-S and TT systems Narrow design

| standard IEC 6143-11: 2011, EN 61643-11: 2012 product designation Surge protection device SPD classification according to EN 61643-11 No • Test Class II, Type 1 No • Test Class II, Type 3 No number of SPD ports 1 design of the product Surge arrester design of the protective paths LN, N-PE accessories 1 x 5SD7428-1 + 1 x SSD7428-0 fastering method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1,4 MW degree of politoin 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 500 Hz limited to 2,5 h per axis 5 gn relative humidity during operation 5 95 % installation all turde at height above sea level maximum 2000 m weight 228 g Electrical data 17 NS operating voltage - • at AC maximum 350 V vibrational acceleration system TT, TNS operating voltage - • at AC maximum 360 V between N and PE at AC maximum 36 | General data | | |
|--|---|---------------------------------------|--|
| SPD classification according to EN 61643-11 No • Test Class II, Type 1 No • Test Class II, Type 2 Yes • Test Class II, Type 3 No number of SPD ports 1 design of the product Surge arrester design of the product Surge arrester design of the product Surge arrester design of pole 1+NPE accessories 1 x 5SD7428-1 + 1 x SSD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1.4 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 5 ung 9% installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 228 g Electrical data 71.5 mm type of distribution system TT, TN-S operating voltage 41.4C • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 350 V • at AC 350 V <t< td=""><td>standard</td><td>IEC 61643-11: 2011, EN 61643-11: 2012</td></t<> | standard | IEC 61643-11: 2011, EN 61643-11: 2012 | |
| Test Class I, Type 1 No Test Class II, Type 2 Yes Test Class II, Type 3 No number of SPD ports 1 design of the product Surge arester design of pole 1+NPE designation of the protective paths L-N, N-PE accessories 1 x SSD7428-1 + 1 x SSD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arester 1,4 MW degree of pollution vervotage category according to IEC 61010-1 III protection class IP at connection all terminals IP20 shock acceleration at 5 Hz 500 Hz limited to 2,5 h per axis relative humidity during operation for the spectration depth depth depth depth the dight down depth desting of the operating frequency So/ 60 Hz continuous operating requency sol / 60 Hz continuous operating requency sol / 80 V destarge current at (820) µs maximum deltA follow current extinguishing capability | product designation | Surge protection device | |
| Test Class II, Type 2 Yes Yes Test Class II, Type 3 No number of SPD ports Surge arrester design of pole I+NPE design of the product Surge arrester design are the product Surge arrester design of the enclosure Ster of surge arrester I 4 MW degree of pollution 2 overvoltage category according to IEC 61010-1 III protection class IP at connection all terminals IP20 shock acceleration vibrational acceleration at 5 Hz 500 Hz limited to 2,5 h per axis relative humidity during operation 5 | SPD classification according to EN 61643-11 | | |
| Test Class III, Type 3 No number of SPD pots 1 design of the product Guige arrester design of ople 1+N/PE designation of the protective paths L-N, N-PE accessories 1 x 5SD7428-11 x 5SD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 14 MW degree of pollution vervorlage category according to IEC 61010-1 III protection class IP at connection all terminals IP20 shock acceleration vibrational structure fastering ef distribution system T, TN-S operating voltage e it AC xel xel AC xel | Test Class I, Type 1 | No | |
| number of SPD parts 1 design of the product Surge arester design of pole 1+NVPE design of pole 1+NVPE accessories 1 x 5SD7428-1 + 1 x 5SD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1,4 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 500 Hz limited to 2,5 h per axis 5 gn relative humdity during operation 5 95 % installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 71.5 mm net weight 228 g Electrical data 50 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 60 V e at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 50 V e between N and PE a | Test Class II, Type 2 | Yes | |
| design of he product Surge arrester design of pole 1+N/PE designation of the protective paths L-N, N-PE accessories 1 x SSD7428-1 + 1 x SSD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1,4 MW degree of pollution 2 overvoltage category according to IEC 61010-1 III protection class IP at connection all terminals IP20 shock acceleration at S Hz 500 Hz limited to 2,5 h per axis axis S g n relative humidity during operation 5 95 % installation alitude at height above sea level maximum 2 000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data 11 type of distribution system TT, TN-S operating voltage • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage • at AC 230 V va | Test Class III, Type 3 | No | |
| design of pole 1+N/PE designation of the protective paths L-N, N-PE accessories 1 x SSD7428-1 + 1 x SSD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1.4 MW degree of pollution 2 overvoitage category according 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 5 gn relative humidity during operation 5 95 % installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data Tr, TN-S operating voltage 60 / 60 Hz continuous operating requency 50 / 60 Hz continuous operating voltage 64 V • at AC maximum 350 V • between L and (PE)N at AC maximum 250 | number of SPD ports | 1 | |
| designation of the protective paths L-N, N-PE accessories 1 x 5SD7428-1 + 1 x 5SD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1,4 MW degree of pollution 2 overvoitage category according 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 5 gn relative humidity during operation 5 95 % installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data TT, TN-S operating voltage 60 / 60 Hz continuous operating frequency 50 / 60 Hz continuous operating frequency 50 / 60 Hz continuous operating requency 50 / 00 Hz continuous operating voltage 90 V • at AC maximum • between N and PE at AC maximum 264 V • between N and PE at (8/20) µs 20 kA discharge current at (8/20) µs 20 kA discharge current at (8/20) µs 20 | design of the product | Surge arrester | |
| accessories 1 x 5SD7428-1 + 1 x 5SD7428-0 fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1,4 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 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 2000 m width 22.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data type of distribution system type of distribution system TT, TN-S operating voltage 420 V • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 420 V • at AC maximum 350 V • between N and PE at AC maximum 264 V • between N and PE at AC maximum 250 V • | design of pole | 1+N/PE | |
| fastening method DIN rail NS 35 material of the enclosure PBT size of surge arrester 1.4 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 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 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data type of distribution system type of distribution system TT, TN-S operating voltage 60 Hz e at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 60 Hz e at AC maximum 350 V e between N and PE at AC maximum 264 V • between L and (PE)N at AC maximum 350 V e idscharge current at (8/20) µs maximum 40 KA follow current extinguishing capability 20 KA | designation of the protective paths | L-N, N-PE | |
| material of the enclosure PBT size of surge arrester 1,4 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 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 26.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data TT, TN-S operating voltage 30 / 60 Hz continuous operating frequency 50 / 60 Hz continuous operating voltage 350 V • at AC maximum 264 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 204 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 264 V • between L and (PE)N at AC maximum 20 KA discharge current at | accessories | 1 x 5SD7428-1 + 1 x 5SD7428-0 | |
| size of surge arrester 1.4 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 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 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data TT, TN-S operating voltage e at AC value range of the operating frequency 50 / 60 Hz continuous operating voltage at AC e at AC maximum 350 V e between N and PE at AC maximum 20 KA discharge current at (8/20) µs 20 kA discharge current at (8/20) µs maximum 40 kA | fastening method | DIN rail NS 35 | |
| 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 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 2000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data | material of the enclosure | PBT | |
| 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 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 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data TT, TN-S type of distribution system TT, TN-S operating voltage at AC • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage | size of surge arrester | 1,4 MW | |
| 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 relative humidity during operation 5 95 % installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data type of distribution system 0TT, TN-S operating voltage • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage • at AC maximum 350 V • between N and PE at AC maximum 250 V discharge current at (8/20) µs maximum 40 kA follow current extinguishing capability | degree of pollution | 2 | |
| shock acceleration 30 gn vibrational acceleration at 5 Hz 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 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data type of distribution system TT, TN-S operating voltage • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage • at AC maximum 350 V • between N and PE at AC maximum 264 V • between L and (PE)N at AC maximum 350 V discharge current at (8/20) µs 20 kA discharge current at (8/20) µs maximum 40 kA | overvoltage category according to IEC 61010-1 | III | |
| vibrational acceleration at 5 Hz 500 Hz limited to 2,5 h per axis relative humidity during operation installation altitude at height above sea level maximum 2 000 m width 25 95 % installation altitude at height above sea level maximum 2 000 m depth 7 1.5 mm net weight 2 28 g Electrical data type of distribution system operating voltage • at AC value range of the operating frequency continuous operating voltage • at AC value range of the operating frequency 50 / 60 Hz continuous operating voltage • at AC maximum • between N and PE at AC maximum • between L and (PE)N at AC maximum discharge current at (8/20) µs maximum follow current extinguishing capability | protection class IP at connection all terminals | IP20 | |
| axisrelative humidity during operation5 95 %installation altitude at height above sea level maximum2 000 mwidth25.4 mmheight90 mmdepth71.5 mmnet weight228 gElectrical datatype of distribution systemTT, TN-Soperating voltage-• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage-• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs maximum40 kAfollow current extinguishing capability40 kA | shock acceleration | 30 gn | |
| installation altitude at height above sea level maximum 2 000 m width 25.4 mm height 90 mm depth 71.5 mm net weight 228 g Electrical data | | 5 gn | |
| width25.4 mmheight90 mmdepth71.5 mmnet weight228 gElectrical datatype of distribution systemTT, TN-Soperating voltage230 V• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kA | relative humidity during operation | 5 95 % | |
| height90 mmdepth71.5 mmnet weight228 gElectrical datatype of distribution systemTT, TN-Soperating voltage-• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage• at AC maximum350 V• between N and PE at AC maximum350 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kAfollow current extinguishing capability | installation altitude at height above sea level maximum | 2 000 m | |
| depth71.5 mmnet weight228 gElectrical datatype of distribution systemTT, TN-Soperating voltage• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kAfollow current extinguishing capability | width | 25.4 mm | |
| net weight228 gElectrical datatype of distribution systemTT, TN-Soperating voltage230 V• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage50 / 60 Hz• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs maximum40 kAfollow current extinguishing capability40 kA | height | 90 mm | |
| Electrical data type of distribution system TT, TN-S operating voltage 230 V • at AC 230 V value range of the operating frequency 50 / 60 Hz continuous operating voltage 50 / 60 Hz • at AC maximum 350 V • between N and PE at AC maximum 264 V • between L and (PE)N at AC maximum 350 V discharge current at (8/20) µs 20 kA discharge current 1 phase at (8/20) µs maximum 40 kA | depth | 71.5 mm | |
| type of distribution systemTT, TN-Soperating voltage • at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage • at AC maximum350 V• at AC maximum264 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kA | net weight | 228 g | |
| operating voltage• at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kA | Electrical data | | |
| • at AC230 Vvalue range of the operating frequency50 / 60 Hzcontinuous operating voltage-• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kA | type of distribution system | TT, TN-S | |
| value range of the operating frequency50 / 60 Hzcontinuous operating voltage350 V• at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kAfollow current extinguishing capability40 kA | operating voltage | | |
| continuous operating voltage 350 V • at AC maximum 350 V • between N and PE at AC maximum 264 V • between L and (PE)N at AC maximum 350 V discharge current at (8/20) µs 20 kA discharge current 1 phase at (8/20) µs maximum 40 kA follow current extinguishing capability 40 kA | • at AC | 230 V | |
| • at AC maximum350 V• between N and PE at AC maximum264 V• between L and (PE)N at AC maximum350 Vdischarge current at (8/20) µs20 kAdischarge current 1 phase at (8/20) µs maximum40 kAfollow current extinguishing capability20 kA | value range of the operating frequency | 50 / 60 Hz | |
| • between N and PE at AC maximum 264 V • between L and (PE)N at AC maximum 350 V discharge current at (8/20) μs 20 kA discharge current 1 phase at (8/20) μs maximum 40 kA follow current extinguishing capability 40 kA | continuous operating voltage | | |
| • between L and (PE)N at AC maximum350 Vdischarge current at (8/20) μs20 kAdischarge current 1 phase at (8/20) μs maximum40 kAfollow current extinguishing capability | • at AC maximum | 350 V | |
| discharge current at (8/20) µs 20 kA discharge current 1 phase at (8/20) µs maximum 40 kA follow current extinguishing capability 40 kA | between N and PE at AC maximum | 264 V | |
| discharge current 1 phase at (8/20) µs maximum 40 kA follow current extinguishing capability | between L and (PE)N at AC maximum | 350 V | |
| follow current extinguishing capability | discharge current at (8/20) µs | 20 kA | |
| | discharge current 1 phase at (8/20) µs maximum | 40 kA | |
| between N and PE 100 A (264 V a.c.) | 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 | |
| • maximum | 1.5 kV |
| between N and L | 1.4 kV |
| between PE and N and/or L | 1.5 kV |
| residual voltage | |
| between L and (PE)N | |
| — at rated value of discharge current maximum | 1.5 kV |
| — 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 | 0.5 kV |
| — at 10 kA maximum | 0.5 kV |
| — at 5 kA maximum | 0.5 kV |
| — at 4 kA maximum | 0.5 kV |
| — at 2 kA maximum | 0.5 kV |
| response value of the surge voltage at 6 kV at (1.2/50) μs | |
| between N and PE | 1.5 kV |
| a reasonable time between L and (DE)NL | 25 no |
| response time between L and (PE)N | 25 ns |
| response time between N and PE | 100 ns |
| adjustable response factor of tripping current fuse protection type at V-shaped connection | 1.6 63 A AC (gG) |
| fuse protection type for T-connector | 315 A AC (gG) |
| Connections/ Terminals | 515 A AC (gG) |
| type of electrical connection | Screw terminal |
| stripped length | 16 mm |
| tightening torque | 4.3 4.7 N·m |
| connectable conductor cross-section | T.U T./ IVIII |
| for finely stranded conductor | 2.5 16 mm² |
| for rigid conductor | 2.5 25 mm ² |
| finely stranded | 2.5 16 mm ² |
| AWG number as coded connectable conductor cross section | 12 4 |
| design of the thread of the connection screw | M5 |
| signal design | optical |
| Indicator/remote signaling | · · |
| product component remote signaling contact | No |
| NEMA/UL - Data | |
| type of surge protective device (SPD) according to UL | 4CA |
| type of distribution system according to UL | 1 |
| type of distribution system | TT, TN-S |
| designation of the protective paths according to UL | L-N, L-G, N-G |
| TOV behavior | |
| • at TOV test voltage (L-N) | 415 V AC (5 s / withstand mode) / 440 V AC (120 min / safe failure mode) |
| at TOV test voltage (N-PE) | 1200 V (200 ms / withstand mode) |
| Measured Limiting Voltage (MLV) | |
| • between L and Ground (GND) | 2.08 kV |
| between L and N | 2 kV |
| between N and Ground (GND) | 0.95 kV |
| Maximum Continuous Operating Voltage (MCOV) | |
| between L and Ground (GND) | 350 V |
| between L and N | 350 V |
| | 0041/ |
| between N and Ground (GND) | 264 V |
| between N and Ground (GND) discharge current | 264 V |
| | 20 kA |
| discharge currentbetween N and Ground (GND) according to UL rated | |
| | 350 V |

| AWG number as coded connectable conductor cross section | |
|--|-------------------|
| according to UL | 14 2 |
| ambient temperature | |
| during operation | -40 +80 °C |
| during storage | -40 +80 °C |
| installation altitude above sea level according to UL | 6 562 ft |
| gross weight [lb] according to UL | 0.49 lb(av) |
| net weight [lb] according to UL | 0.44 lb(av) |
| combustibility class according to UL 94 | VO |
| standards according to UL | UL 1449 edition 4 |
| Approvals Certificates | |

General Product Approval

Confirmation









 other
 Environment

 Miscellaneous
 Confirmation

 Miscellaneous
 Environmental Confirmations

Further information

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=5SD7422-0

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

CE EG-Konf.

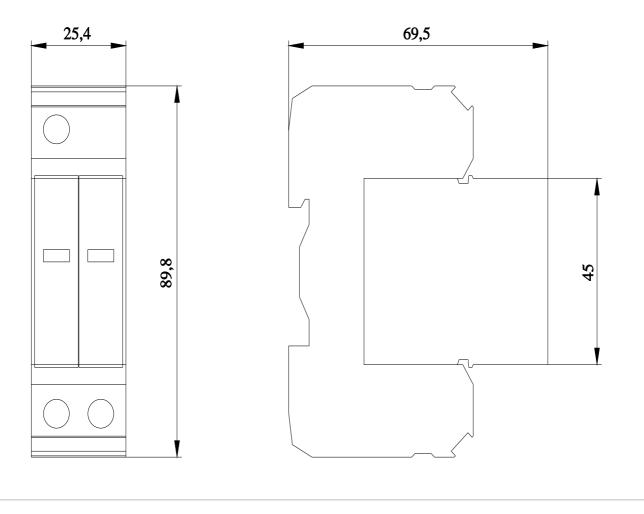
https://support.industry.siemens.com/cs/ww/en/ps/5SD7422-0

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7422-0

CAx-Online-Generator

http://www.siemens.com/cax



last modified:

