SIEMENS

## Data sheet 5SD7442-1

Combination arrester type 1+2 Requirement class B+C, UC 350V Pluggable protective modules 2-pole, 1+1 circuit for TN-S and TT systems with remote display

| | |
|---|---|
| **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 | Yes |
| ● Test Class II, Type 2 | Yes |
| ● Test Class III, Type 3 | No |
| number of SPD ports | 1 |
| design of the product | Arrester combination |
| design of pole | 1/N/PE |
| designation of the protective paths | L-N, L-PE, N-PE |
| accessories | 1 x 5SD7428-1 + 1 x 5SD7418-0 + 1 x 5SD7448-1 |
| fastening method | DIN rail NS 35 |
| material of the enclosure | PBT |
| size of surge arrester | 4 TE |
| degree of pollution | 2 |
| overvoltage category according 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 |
| relative humidity during operation | 5 ... 95 % |
| installation altitude at height above sea level maximum | 2 000 m |
| width | 71.5 mm |
| height | 95 mm |
| depth | 71.5 mm |
| net weight | 666 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 | 350 V |
| ● between L and (PE)N at AC maximum | 350 V |
| apparent power consumption maximum | 100 mVA |
| **discharge current** | |
| ● between L and (PE)N at (8/20) µs | 25 kA |
| ● between L and PE at (8/20) µs | 25 kA |

| | |
|---|---|
| ● between N and PE at (8/20) µs | 100 kA |
| **lightning current peak value at (10/350) µs** | |
| ● lightning current peak value between L and PE | 25 kA |
| ● lightning current peak value between N and PE | 100 kA |
| ● lightning current peak value between L and N | 25 kA |
| **charge of the flash at (10/350) µs** | |
| ● charge of the flash between L and N | 12.5 A·s |
| ● charge of the flash between L and PE | 12.5 A·s |
| ● charge of the flash between N and PE | 50 A·s |
| **specific energy of the flash at (10/350) µs** | |
| ● between L and N | 160 kJ/? |
| ● between L and PE | 160 kJ/? |
| ● between N and PE | 2 500 kJ/? |
| **follow current extinguishing capability** | |
| ● between N and PE | 100 A (350 V AC) |
| ● between L and N | 25 kA (264 V AC), 3 kA (350 V AC) |
| short-circuit rating (SCCR) at 264 V | 25 kA |
| **protection level** | |
| ● between L and N maximum | 1.5 kV |
| ● between L and PE maximum | 2.2 kV |
| ● between N and PE maximum | 1.5 kV |
| **residual voltage** | |
| ● between L and (PE)N | |
| — at rated value of discharge current maximum | 1.5 kV |
| — at 10 kA maximum | 1.2 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 | 2.2 kV |
| — at 10 kA maximum | 2 kV |
| — at 5 kA maximum | 1.8 kV |
| — at 3 kA maximum | 1.6 kV |
| ● between N and PE | |
| — at rated value of discharge current maximum | 1.5 kV |
| — at 10 kA maximum | 1 kV |
| — at 5 kA maximum | 0.9 kV |
| — at 3 kA maximum | 0.8 kV |
| **response value of the surge voltage at 6 kV at (1.2/50) µs** | |
| ● between L and N | 1.5 kV |
| ● between L and PE | 2.2 kV |
| ● between N and PE | 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 | 125 A AC (gG) |
| fuse protection type for T-connector | 315 A AC (gG) |
| **Connections/ Terminals** | |
| type of electrical connection | Screw terminal |
| stripped length | 18 mm |
| tightening torque | 4.3 ... 4.7 N·m |
| **connectable conductor cross-section** | |
| ● for finely stranded conductor | 2.5 ... 25 mm² |
| ● for rigid conductor | 2.5 ... 35 mm² |
| ● finely stranded | 2.5 ... 25 mm² |
| AWG number as coded connectable conductor cross section | 13 ... 2 |
| design of the thread of the connection screw | M5 |
| signal design | Optical, remote signaling contact |
| **Indicator/remote signaling** | |
| product component remote signaling contact | Yes |
| switching function of the remote signaling contacts | PDT contact |

| | |
|---|---|
| operating voltage of the remote signaling contacts at AC | 12 ... 250 V |
| operational current of the remote signaling contacts at AC | 10 mA ... 1 A |
| connection type of remote signaling contact | M2 screw thread |
| connectable conductor cross-section for remote signaling contacts for rigid conductor | 0.14 ... 1.5 mm² |
| connectable conductor cross-section for remote signaling contacts for finely stranded conductor | 0.14 ... 1.5 mm² |
| AWG number as coded connectable conductor cross section for remote signaling contacts | 28 ... 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 surge protective device (SPD) according to UL | 4CA |
| type of distribution system according to UL | 1S |
| 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) / 457 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) | 1.55 kV |
| ● between L and N | 1.34 kV |
| ● between N and Ground (GND) | 1.08 kV |
| **Maximum Continuous Operating Voltage (MCOV)** | |
| ● between L and Ground (GND) | 528 V |
| ● between L and N | 264 V |
| ● between N and Ground (GND) | 264 V |
| **discharge current** | |
| ● between N and Ground (GND) according to UL rated value | 20 kA |
| ● between L and N according to UL rated value | 20 kA |
| ● between L and Ground (GND) according to UL rated value | 20 kA |
| **AWG number as coded connectable conductor cross section** | |
| ● according to UL | 12 ... 2 |
| ● for remote signaling contacts according to UL | 30 ... 14 |
| operating voltage of the remote signaling contacts according to UL | 125 V |
| operational current of the remote signaling contacts at AC according to UL | 1 A |
| **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 | 1.63 lb(av) |
| net weight [lb] according to UL | 1.53 lb(av) |
| combustibility class according to UL 94 | V0 |
| standards according to UL | UL 1449 edition 4 |

## Approvals Certificates

### General Product Approval

Confirmation

EG-Konf. KEMA UL UR

### other

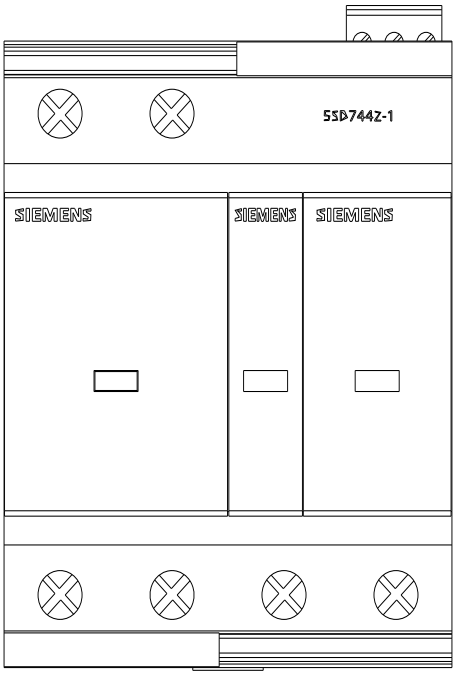
Confirmation Miscellaneous

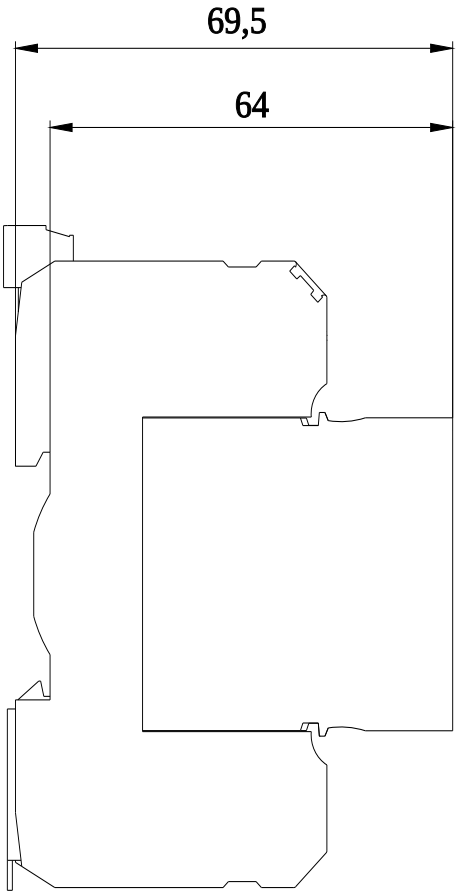
### Environment

Environmental Confirmations 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=5SD7442-1
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/5SD7442-1
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7442-1
**CAx-Online-Generator**
http://www.siemens.com/cax

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## Data sheet 5SD7443-1

Combination arrester type 1+2 Requirement class B+C, UC 350V Pluggable protective modules 3-pole, 3+0 circuit for TNC systems with remote display

| | |
|---|---|
| **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 | Yes |
| ● Test Class II, Type 2 | Yes |
| ● Test Class III, Type 3 | No |
| number of SPD ports | 1 |
| design of the product | Arrester combination |
| design of pole | 3 |
| designation of the protective paths | L-PEN |
| accessories | 3 x 5SD7428-1 + 3 x 5SD7448-1 |
| fastening method | DIN rail NS 35 |
| material of the enclosure | PBT |
| size of surge arrester | 6MW |
| degree of pollution | 2 |
| overvoltage category according 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 |
| relative humidity during operation | 5 ... 95 % |
| installation altitude at height above sea level maximum | 2 000 m |
| width | 106.9 mm |
| height | 95 mm |
| depth | 71.5 mm |
| net weight | 1 076 g |
| **Electrical data** | |
| type of distribution system | TN-C |
| **operating voltage** | |
| ● at AC | 230 V |
| value range of the operating frequency | 50 / 60 Hz |
| **continuous operating voltage** | |
| ● at AC maximum | 350 V |
| apparent power consumption maximum | 300 mVA |
| discharge current at (8/20) µs | 25 kA |
| **lightning current peak value at (10/350) µs** | 25 kA |
| **charge of the flash at (10/350) µs** | 12.5 A·s |
| **specific energy of the flash at (10/350) µs** | 160 kJ/? |
| **follow current extinguishing capability** | 25 kA (264 V AC), 3 kA (350 V AC) |

| | |
|---|---|
| short-circuit rating (SCCR) at 264 V | 25 kA |
| **protection level** | |
| ● maximum | 1.5 kV |
| **residual voltage** | |
| ● at rated value of discharge current maximum | 1.5 kV |
| ● at 10 kA maximum | 1.2 kV |
| ● at 5 kA maximum | 1 kV |
| ● at 3 kA maximum | 0.9 kV |
| **response value of the surge voltage at 6 kV at (1.2/50) µs** | 1.5 kV |
| | |
| ● **Response time** | 25 ns |
| adjustable response factor of tripping current | 1.6 |
| fuse protection type at V-shaped connection | 125 A AC (gG) |
| fuse protection type for T-connector | 315 A AC (gG) |
| **Connections/ Terminals** | |
| type of electrical connection | Screw terminal |
| stripped length | 18 mm |
| tightening torque | 4.3 ... 4.7 N·m |
| **connectable conductor cross-section** | |
| ● for finely stranded conductor | 2.5 ... 25 mm² |
| ● for rigid conductor | 2.5 ... 35 mm² |
| ● finely stranded | 2.5 ... 25 mm² |
| AWG number as coded connectable conductor cross section | 13 ... 2 |
| design of the thread of the connection screw | M5 |
| signal design | Optical, remote signaling contact |
| **Indicator/remote signaling** | |
| product component remote signaling contact | Yes |
| switching function of the remote signaling contacts | PDT contact |
| operating voltage of the remote signaling contacts at AC | 12 ... 250 V |
| operational current of the remote signaling contacts at AC | 10 mA ... 1 A |
| connection type of remote signaling contact | M2 screw thread |
| connectable conductor cross-section for remote signaling contacts for rigid conductor | 0.14 ... 1.5 mm² |
| connectable conductor cross-section for remote signaling contacts for finely stranded conductor | 0.14 ... 1.5 mm² |
| AWG number as coded connectable conductor cross section for remote signaling contacts | 28 ... 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 surge protective device (SPD) according to UL | 4CA |
| type of distribution system according to UL | 3D |
| type of distribution system | TN-C |
| designation of the protective paths according to UL | L-L, L-G |
| **TOV behavior** | |
| ● at TOV test voltage | 415 V AC (5 s / withstand mode) / 457 V AC (120 min / safe failure mode) |
| **Measured Limiting Voltage (MLV)** | |
| ● between L and L | 2.45 kV |
| ● between L and Ground (GND) | 1.34 kV |
| **Maximum Continuous Operating Voltage (MCOV)** | |
| ● between L and L | 528 V |
| ● between L and Ground (GND) | 264 V |
| **discharge current** | |
| ● between L and Ground (GND) according to UL rated value | 20 kA |
| ● between L and L according to UL rated value | 20 kA |
| **AWG number as coded connectable conductor cross section** | |
| ● according to UL | 12 ... 2 |
| ● for remote signaling contacts according to UL | 30 ... 14 |
| operating voltage of the remote signaling contacts according to UL | 125 V |

| | |
|---|---|
| operational current of the remote signaling contacts at AC according to UL | 1 A |
| **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 | 2.45 lb(av) |
| net weight [lb] according to UL | 2.08 lb(av) |
| combustibility class according to UL 94 | V0 |
| standards according to UL | UL 1449 edition 4 |

## Approvals Certificates

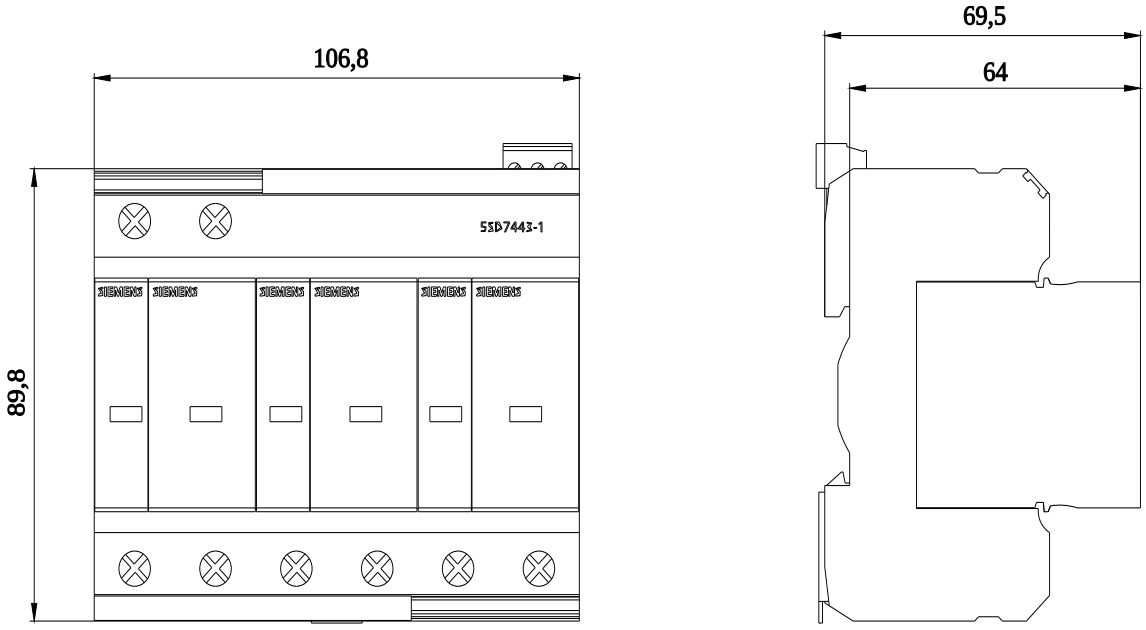
### General Product Approval

| | | | | | |
|---|---|---|---|---|---|
| CE EG-Konf. | Confirmation | KEMA KEUR KEMA | UL | UR | EAC |

| other | | Environment | |
|---|---|---|---|
| Confirmation | Miscellaneous | Environmental Confirmations | 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=5SD7443-1
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/5SD7443-1
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7443-1
**CAx-Online-Generator**
http://www.siemens.com/cax




**last modified:** 2/26/2025

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## Data sheet 5SD7444-1

Combination arrester type 1+2 Requirement class B+C, UC 350V Pluggable protective modules 4-pole, 3+1 circuit for TN-S and TT systems with remote display

| | |
|---|---|
| **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 | Yes |
| ● Test Class II, Type 2 | Yes |
| ● Test Class III, Type 3 | No |
| number of SPD ports | 1 |
| design of the product | Arrester combination |
| design of pole | 3+N/PE |
| designation of the protective paths | L-N, L-PE, N-PE |
| accessories | 3 x 5SD7428-1 + 1 x 5SD7418-0 + 3 x 5SD7448-1 |
| fastening method | DIN rail NS 35 |
| material of the enclosure | PBT |
| degree of pollution | 2 |
| overvoltage category according 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 |
| relative humidity during operation | 5 ... 95 % |
| installation altitude at height above sea level maximum | 2 000 m |
| width | 142.8 mm |
| height | 95 mm |
| depth | 71.5 mm |
| net weight | 1 372 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 | 350 V |
| ● between L and (PE)N at AC maximum | 350 V |
| apparent power consumption maximum | 300 mVA |
| **discharge current** | |
| ● between L and (PE)N at (8/20) µs | 25 kA |
| ● between L and PE at (8/20) µs | 25 kA |
| ● between N and PE at (8/20) µs | 100 kA |

| | |
|---|---|
| **lightning current peak value at (10/350) µs** | |
| ● lightning current peak value between L and PE | 25 kA |
| ● lightning current peak value between N and PE | 100 kA |
| ● lightning current peak value between L and N | 25 kA |
| **charge of the flash at (10/350) µs** | |
| ● charge of the flash between L and N | 12.5 A·s |
| ● charge of the flash between L and PE | 12.5 A·s |
| ● charge of the flash between N and PE | 50 A·s |
| **specific energy of the flash at (10/350) µs** | |
| ● between L and N | 160 kJ/? |
| ● between L and PE | 160 kJ/? |
| ● between N and PE | 2 500 kJ/? |
| **follow current extinguishing capability** | |
| ● between N and PE | 100 A (350 V AC) |
| ● between L and N | 25 kA (264 V AC), 3 kA (350 V AC) |
| short-circuit rating (SCCR) at 264 V | 25 kA |
| **protection level** | |
| ● between L and N maximum | 1.5 kV |
| ● between L and PE maximum | 2.2 kV |
| ● between N and PE maximum | 1.5 kV |
| **residual voltage** | |
| ● between L and (PE)N | |
| — at rated value of discharge current maximum | 1.5 kV |
| — at 10 kA maximum | 1.2 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 | 2.2 kV |
| — at 10 kA maximum | 2 kV |
| — at 5 kA maximum | 1.8 kV |
| — at 3 kA maximum | 1.6 kV |
| ● between N and PE | |
| — at rated value of discharge current maximum | 1.5 kV |
| — at 10 kA maximum | 1 kV |
| — at 5 kA maximum | 0.9 kV |
| — at 3 kA maximum | 0.8 kV |
| **response value of the surge voltage at 6 kV at (1.2/50) µs** | |
| ● between L and N | 1.5 kV |
| ● between L and PE | 2.2 kV |
| ● between N and PE | 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 | 125 A AC (gG) |
| fuse protection type for T-connector | 315 A AC (gG) |
| **Connections/ Terminals** | |
| type of electrical connection | Screw terminal |
| stripped length | 18 mm |
| tightening torque | 4.3 ... 4.7 N·m |
| **connectable conductor cross-section** | |
| ● for finely stranded conductor | 2.5 ... 25 mm² |
| ● for rigid conductor | 2.5 ... 35 mm² |
| ● finely stranded | 2.5 ... 25 mm² |
| AWG number as coded connectable conductor cross section | 13 ... 2 |
| design of the thread of the connection screw | M5 |
| signal design | Optical, remote signaling contact |
| **Indicator/remote signaling** | |
| product component remote signaling contact | Yes |
| switching function of the remote signaling contacts | PDT contact |
| operating voltage of the remote signaling contacts at AC | 12 ... 250 V |

| | |
|---|---|
| operational current of the remote signaling contacts at AC | 10 mA ... 1 A |
| connection type of remote signaling contact | M2 screw thread |
| connectable conductor cross-section for remote signaling contacts for rigid conductor | 0.14 ... 1.5 mm² |
| connectable conductor cross-section for remote signaling contacts for finely stranded conductor | 0.14 ... 1.5 mm² |
| AWG number as coded connectable conductor cross section for remote signaling contacts | 28 ... 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 surge protective device (SPD) according to UL | 4CA |
| type of distribution system according to UL | 3Y |
| type of distribution system | TT, TN-S |
| designation of the protective paths according to UL | L-L, L-N, L-G, N-G |
| **TOV behavior** | |
| ● at TOV test voltage (L-N) | 415 V AC (5 s / withstand mode) / 457 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 L | 2.47 kV |
| ● between L and Ground (GND) | 1.55 kV |
| ● between L and N | 1.34 kV |
| ● between N and Ground (GND) | 1.08 kV |
| **Maximum Continuous Operating Voltage (MCOV)** | |
| ● between L and L | 528 V |
| ● between L and Ground (GND) | 528 V |
| ● between L and N | 264 V |
| ● between N and Ground (GND) | 264 V |
| **discharge current** | |
| ● between N and Ground (GND) according to UL rated value | 20 kA |
| ● between L and N according to UL rated value | 20 kA |
| ● between L and Ground (GND) according to UL rated value | 20 kA |
| ● between L and L according to UL rated value | 20 kA |
| **AWG number as coded connectable conductor cross section** | |
| ● according to UL | 12 ... 2 |
| ● for remote signaling contacts according to UL | 30 ... 14 |
| operating voltage of the remote signaling contacts according to UL | 125 V |
| operational current of the remote signaling contacts at AC according to UL | 1 A |
| **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 | 3.15 lb(av) |
| net weight [lb] according to UL | 2.72 lb(av) |
| combustibility class according to UL 94 | V0 |
| standards according to UL | UL 1449 edition 4 |

## Approvals Certificates

**General Product Approval**

Confirmation

EG-Konf. KEMA UL UR

| other | Environment |
|---|---|
| Miscellaneous | Confirmation |
| | Environmental Con- |
| | Environmental Con- |

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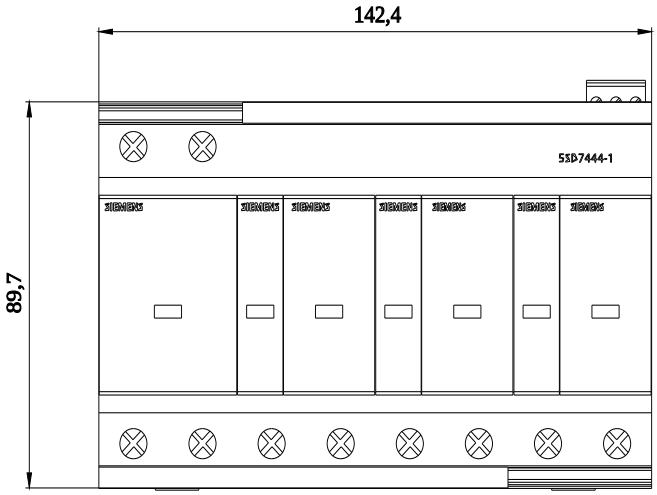
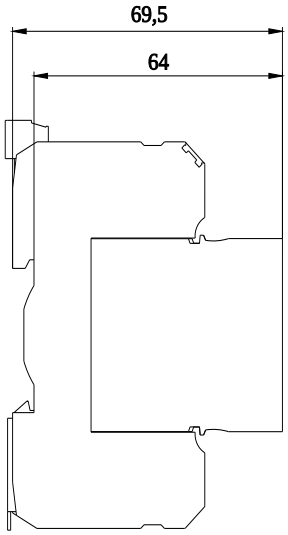
## Further information

**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=5SD7444-1
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/5SD7444-1
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SD7444-1
**CAx-Online-Generator**
http://www.siemens.com/cax

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