

K1-1PG

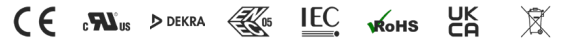
44120100



Surge protection device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for TT, TNS earthing systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 0+1 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | Neutral |
| Nominal discharge current (8/20)- In [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 50 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 200ms (HV systems, withstand)- Ut [V] | 1200 |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |

DATASHEET

Power Line SPDs

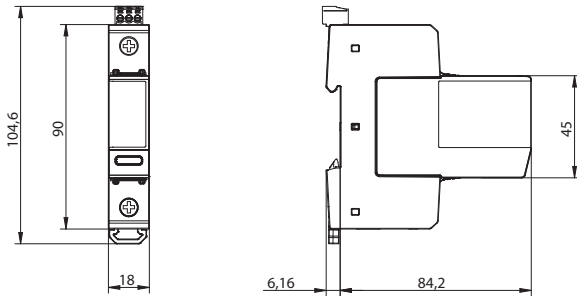
K1-1PG

44120100

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

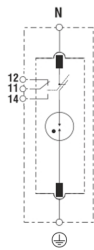
| | |
|--|-------------------------|
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.14 |
| Gross weight [kg] | 0.162 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

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K1-1PG-M

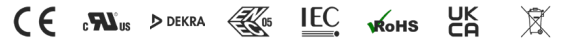
44120101



Surge protection device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for TT, TNS earthing systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 0+1 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | Neutral |
| Nominal discharge current (8/20)- In [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 50 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 200ms (HV systems, withstand)- Ut [V] | 1200 |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |

DATASHEET

Power Line SPDs

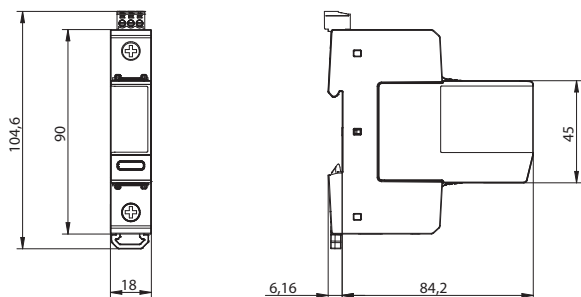
K1-1PG-M

44120101

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

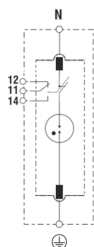
| | |
|--|-------------------------|
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.143 |
| Gross weight [kg] | 0.165 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Neutral (N-PE) | 44120000 | K1-N |

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K1-1P175

44120114



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 1+0 for 120V TNS, TNC, TT (only L-N) systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

Power Line SPDs

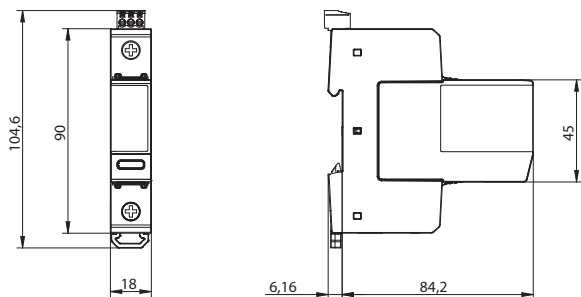
K1-1P175

44120114

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

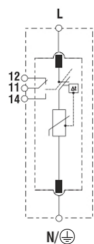
| | |
|----------------------------------|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.184 |
| Gross weight [kg] | 0.198 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 1+0 for 120V TNS, TNC, TT (only L-N) systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |

Power Line SPDs

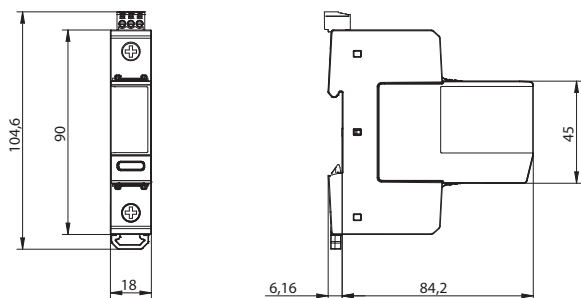
K1-1P175-M

44120115

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

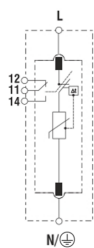
| | |
|--|-------------------------|
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.192 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+0 for 230V TNS, TNC, TT (only L-N) systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

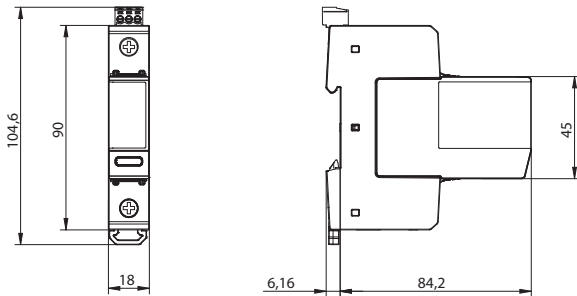
K1-1P275

44120102

MECHANICAL AND ENVIRONMENTAL FEATURES

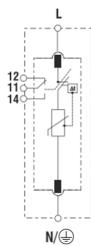
| | |
|----------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.184 |
| Gross weight [kg] | 0.198 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

DATASHEET

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K1-1P275-M

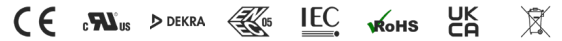
44120103



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+0 for 230V TNS, TNC, TT (only L-N) systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

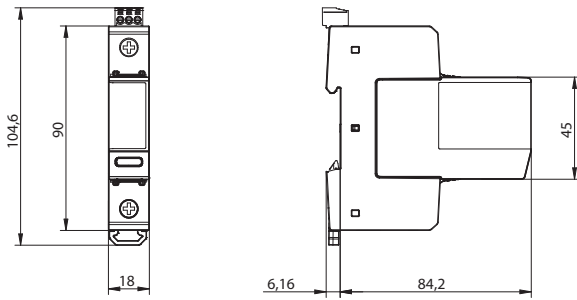
K1-1P275-M

44120103

MECHANICAL AND ENVIRONMENTAL FEATURES

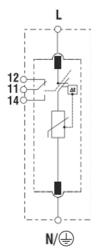
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.192 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

DATASHEET

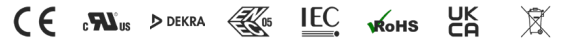
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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 1+0 for 277V TNS, TNC, TT (only L-N) systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

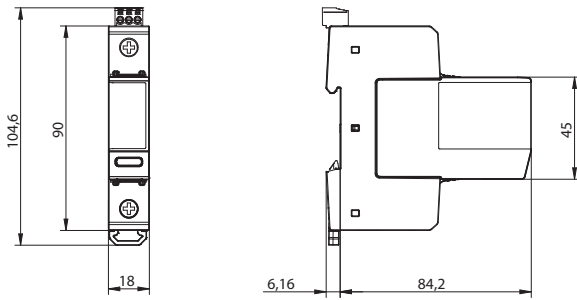
K1-1P320

44120106

MECHANICAL AND ENVIRONMENTAL FEATURES

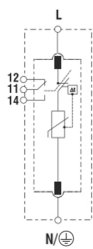
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.188 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

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K1-1P320-M

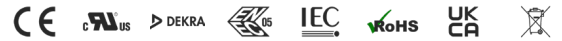
44120107



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 1+0 for 277V TNS, TNC, TT (only L-N) systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

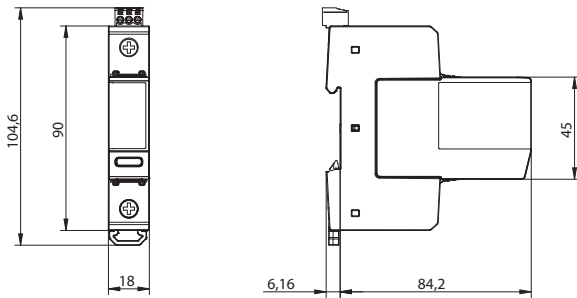
K1-1P320-M

44120107

MECHANICAL AND ENVIRONMENTAL FEATURES

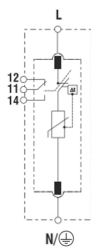
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.192 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 1+0 for 400V TNS, TNC, TT (only L-N) systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |

Power Line SPDs

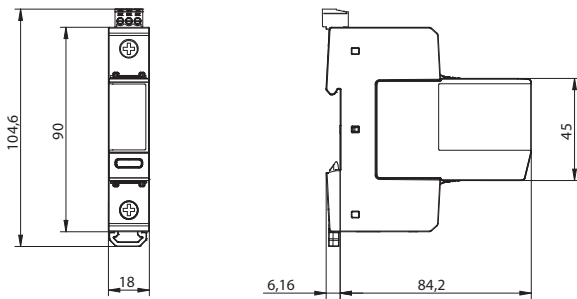
K1-1P440

44120110

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

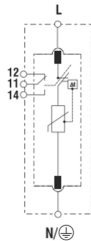
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.188 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

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K1-1P440-M

44120111



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 1+0 for 400V TNS, TNC, TT (only L-N) systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

Power Line SPDs

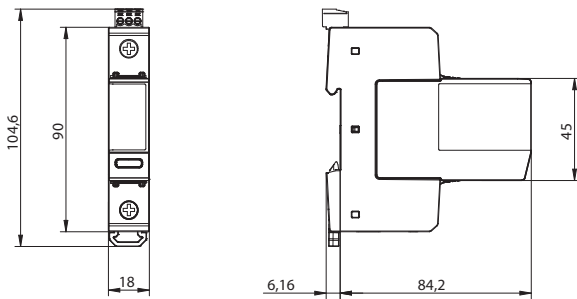
K1-1P440-M

44120111

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

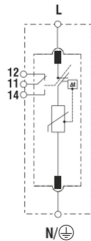
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.178 |
| Gross weight [kg] | 0.192 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

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Surge protection device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for TT, TNS earthing systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 0+1 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | Neutral |
| Nominal discharge current (8/20)- In [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 50 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 200ms (HV systems, withstand)- Ut [V] | 1200 |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|----------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |

Power Line SPDs

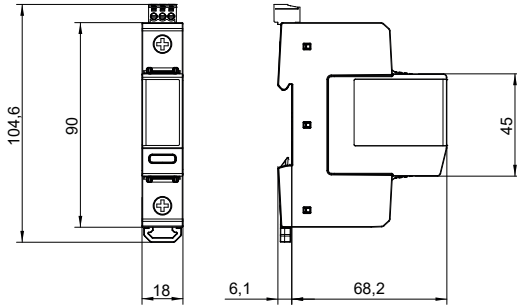
K1-1PG-L

44120122

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

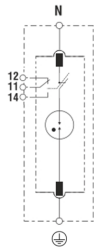
| | |
|--|----------------------|
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.119 |
| Gross weight [kg] | 0.129 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

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Surge protection device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for TT, TNS earthing systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 0+1 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | Neutral |
| Nominal discharge current (8/20)- In [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 50 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 200ms (HV systems, withstand)- Ut [V] | 1200 |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|----------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |

Power Line SPDs

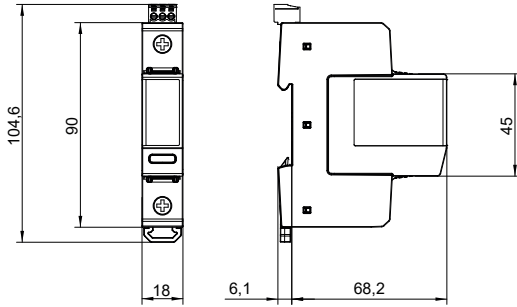
K1-1PG-LM

44120123

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

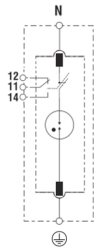
| | |
|--|----------------------|
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.119 |
| Gross weight [kg] | 0.129 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

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Power Line SPDs

K1-1P275-L

44120124



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+0 for 230V TNS, TNC, TT (only L-N) systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

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Power Line SPDs

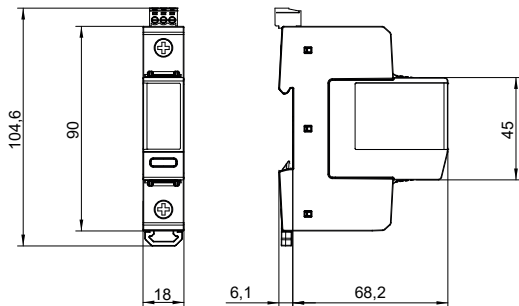
K1-1P275-L

44120124

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

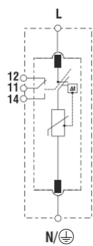
| | |
|----------------------------------|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.117 |
| Gross weight [kg] | 0.126 |
| Packaging dimensions (H x W x L) [mm] | 97 x 22 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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K1-1P275-LM

44120125



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+0 for 230V TNS, TNC, TT (only L-N) systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+0 |
| No. Poles | 1-Pole |
| No. DIN rail modules | 1 |
| Network configuration | TNS, TNC, TT (only L-N) |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

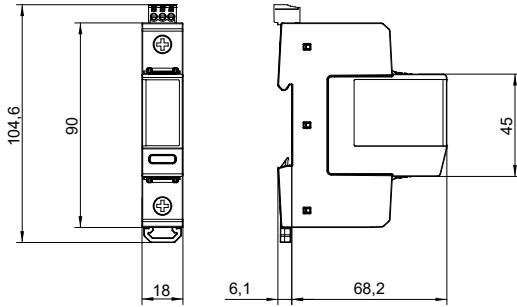
K1-1P275-LM

44120125

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

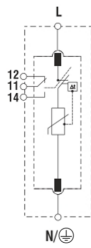
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.117 |
| Gross weight [kg] | 0.126 |
| Packaging dimensions (H x W x L) [mm] | 97 × 22 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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K1-2PG275

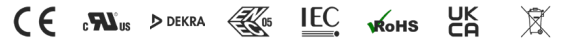
44120200



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+1 for 230V TT, TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-2PG275

44120200

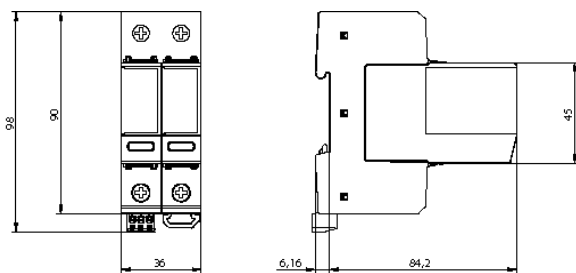
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

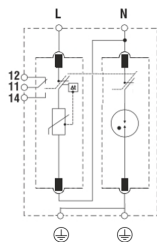
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.24 |
| Gross weight [kg] | 0.26 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120001 | K1-275 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-2PG275-M

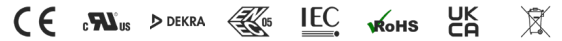
44120201



Surge protection device Type 1+2, limp 12.5 kA, Uc 275 Vac, 1+1 for 230V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

Power Line SPDs

K1-2PG275-M

44120201

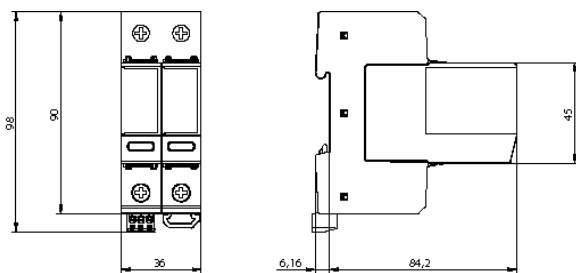
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

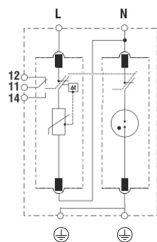
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.27 |
| Gross weight [kg] | 0.29 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120001 | K1-275 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-2PG320

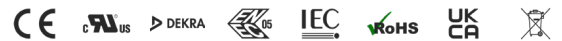
44120208



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 1+1 for 277V TT, TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 320 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 528 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-2PG320

44120208

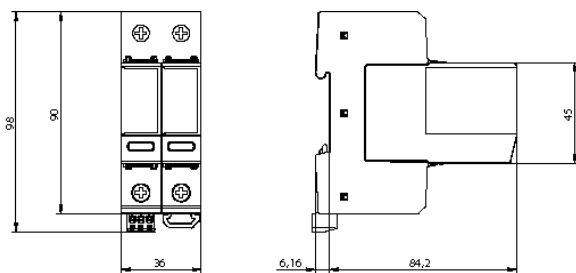
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

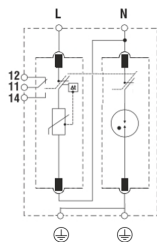
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.345 |
| Gross weight [kg] | 0.375 |
| Packaging dimensions (H x W x L) [mm] | 97 x 38 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120003 | K1-320 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-2PG320-M

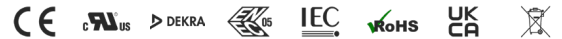
44120209



Surge protection device Type 1+2, limp 12.5 kA, Uc 320 Vac, 1+1 for 277V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 320 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 528 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-2PG320-M

44120209

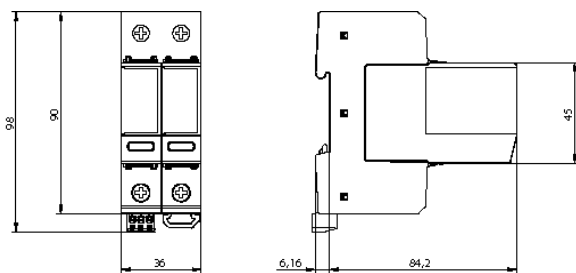
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

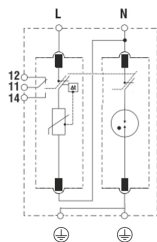
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.27 |
| Gross weight [kg] | 0.29 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120003 | K1-320 |
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

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Power Line SPDs

K1-2P175

44120228



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 2+0 for 120V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

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Power Line SPDs

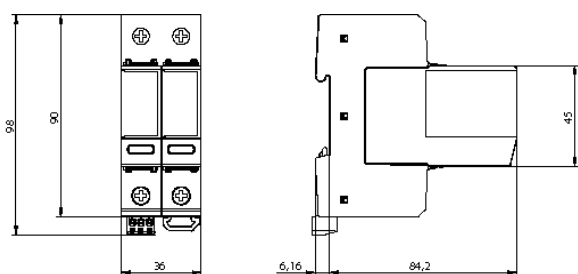
K1-2P175

44120228

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

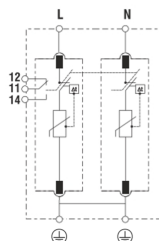
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.34 |
| Gross weight [kg] | 0.365 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

DATASHEET

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K1-2P175-M

44120229



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 2+0 for 120V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

Power Line SPDs

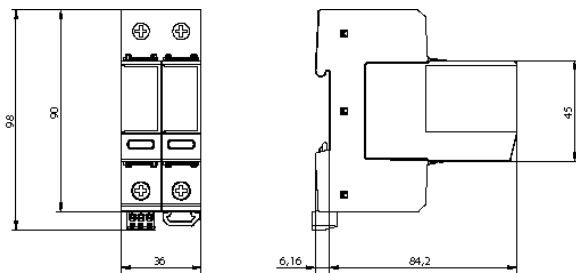
K1-2P175-M

44120229

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

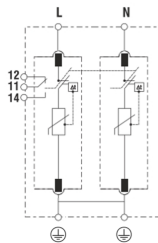
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.345 |
| Gross weight [kg] | 0.374 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

DATASHEET

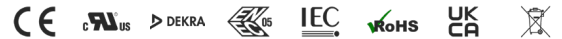
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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 2+0 for 230V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Iscrr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 275 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

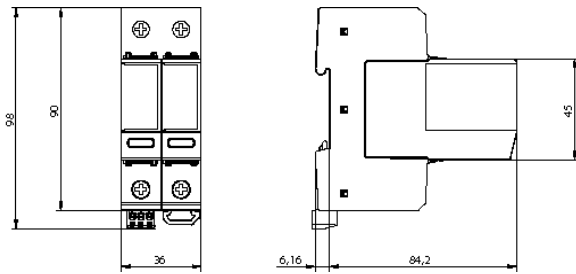
K1-2P275

44120204

MECHANICAL AND ENVIRONMENTAL FEATURES

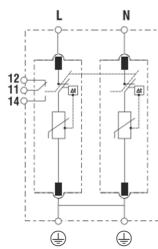
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.34 |
| Gross weight [kg] | 0.365 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

DATASHEET

K1-2P275-M

44120205



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 2+0 for 230V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Iscrr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 275 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

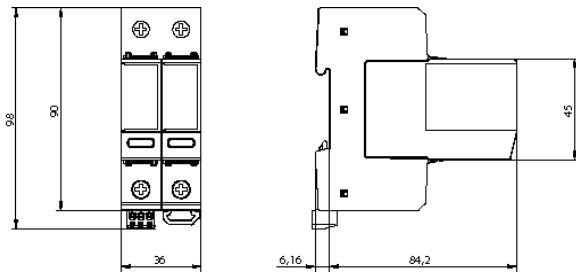
K1-2P275-M

44120205

MECHANICAL AND ENVIRONMENTAL FEATURES

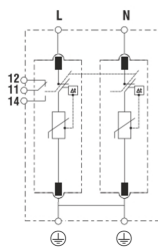
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.345 |
| Gross weight [kg] | 0.374 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

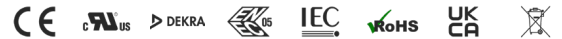
DATASHEET



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 2+0 for 277V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 320 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

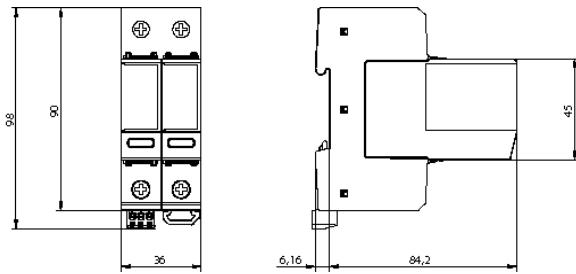
K1-2P320

44120212

MECHANICAL AND ENVIRONMENTAL FEATURES

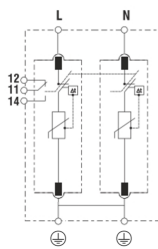
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.342 |
| Gross weight [kg] | 0.372 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET

K1-2P320-M

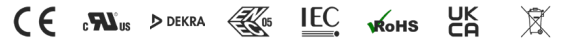
44120213



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 2+0 for 277V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 320 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

DATASHEET

Power Line SPDs

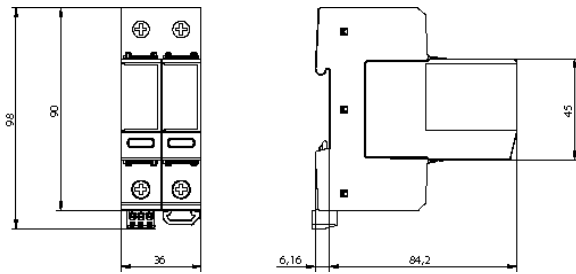
K1-2P320-M

44120213

MECHANICAL AND ENVIRONMENTAL FEATURES

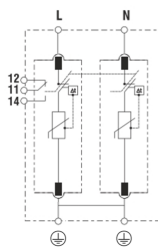
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.345 |
| Gross weight [kg] | 0.375 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET

Power Line SPDs

K1-2P440

44120220



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 2+0 for 400V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

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Power Line SPDs

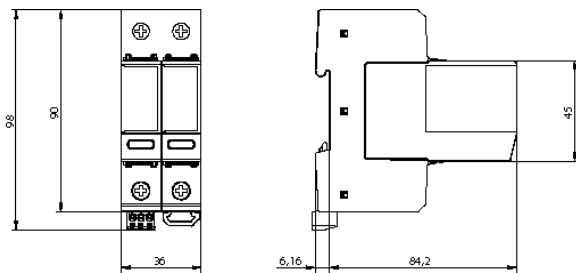
K1-2P440

44120220

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

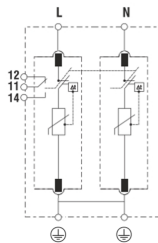
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.342 |
| Gross weight [kg] | 0.372 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

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K1-2P440-M

44120221



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 2+0 for 400V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

Power Line SPDs

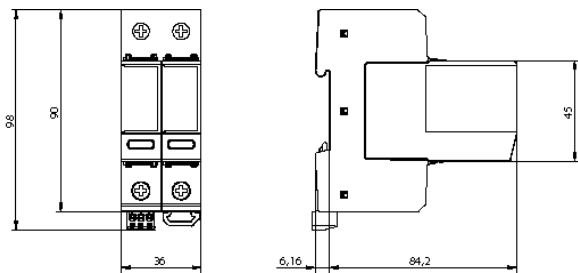
K1-2P440-M

44120221

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

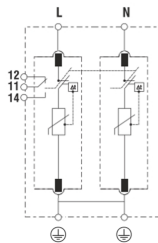
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.345 |
| Gross weight [kg] | 0.375 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

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K1-2PG175

44120224



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 1+1 for 120V TT, TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 175 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,5 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 229 |
| TOV 120min (LV systems, withstand) - Ut (L-N) [V] | 1200 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |

DATASHEET

Power Line SPDs

K1-2PG175

44120224

Continue SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--------------|---|
| No. of ports | 1 |
|--------------|---|

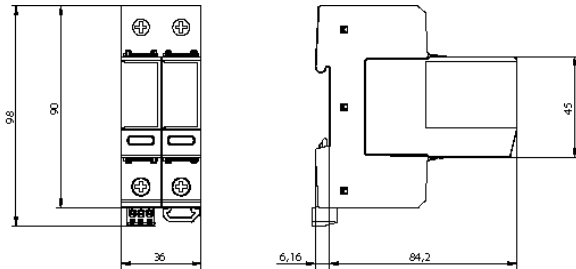
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

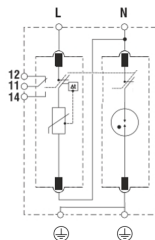
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.24 |
| Gross weight [kg] | 0.26 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120011 | K1-175 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-2PG175-M

44120225



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 1+1 for 120V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 175 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,5 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 229 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-2PG175-M

44120225

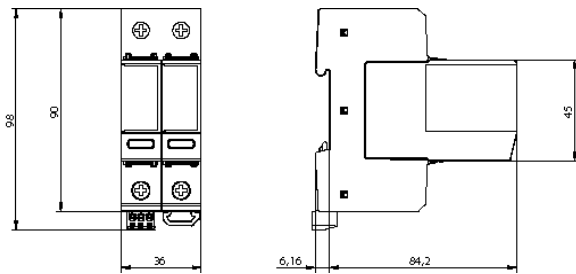
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

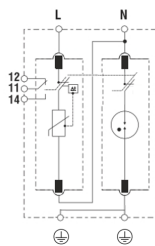
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.27 |
| Gross weight [kg] | 0.29 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120011 | K1-175 |
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

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K1-2PG275-L

44120234



Surge protection device Type 1+2, limp 12.5 kA, Uc 275 Vac, 1+1 for 230V TT, TNS systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

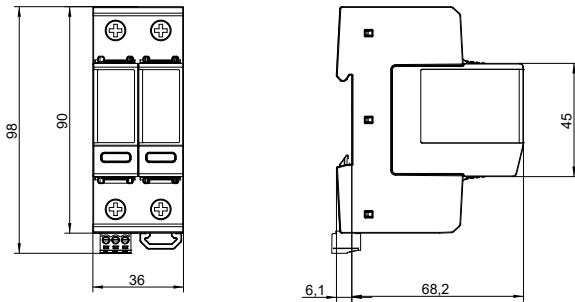
K1-2PG275-L

44120234

MECHANICAL AND ENVIRONMENTAL FEATURES

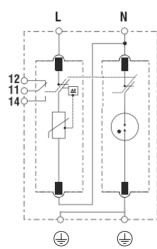
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.242 |
| Gross weight [kg] | 0.272 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

DATASHEET

K1-2PG275-LM

44120235



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 1+1 for 230V TT, TNS systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 1+1 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

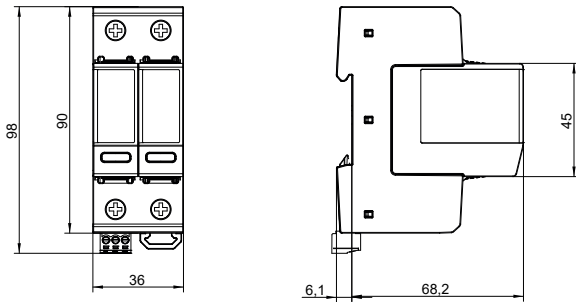
K1-2PG275-LM

44120235

MECHANICAL AND ENVIRONMENTAL FEATURES

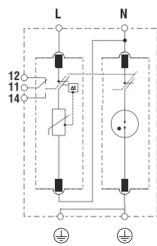
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.242 |
| Gross weight [kg] | 0.272 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

DATASHEET

K1-2P275-L

44120236



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 2+0 for 230V TNS systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

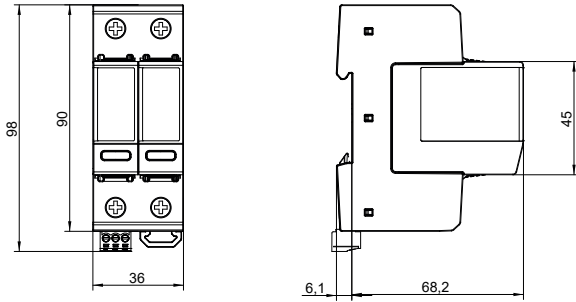
K1-2P275-L

44120236

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

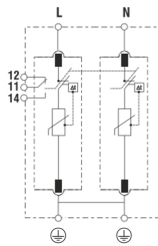
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.242 |
| Gross weight [kg] | 0.272 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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K1-2P275-LM

44120237



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 2+0 for 230V TNS systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 2+0 |
| No. Poles | 2-Pole |
| No. DIN rail modules | 2 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

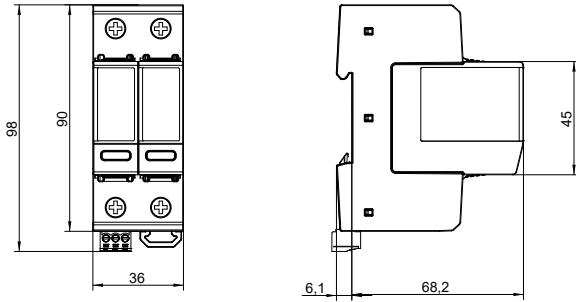
K1-2P275-LM

44120237

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

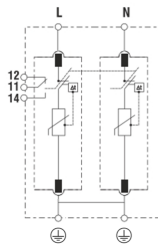
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.242 |
| Gross weight [kg] | 0.272 |
| Packaging dimensions (H x W x L) [mm] | 97 × 38 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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Power Line SPDs

K1-3P275

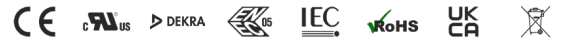
44120300



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+0 for 230/400V TNC systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

DATASHEET

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Power Line SPDs

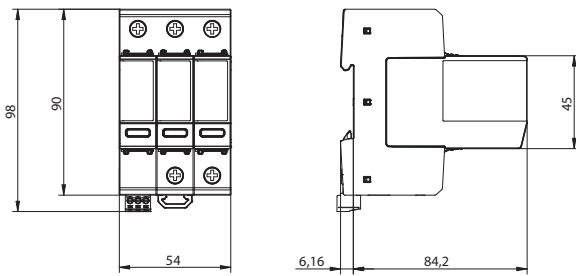
K1-3P275

44120300

MECHANICAL AND ENVIRONMENTAL FEATURES

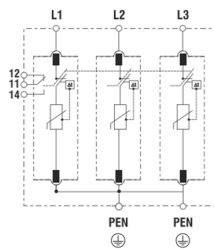
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.489 |
| Gross weight [kg] | 0.526 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

DATASHEET

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K1-3P275-M

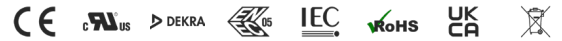
44120301



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+0 for 230/400V TNC systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

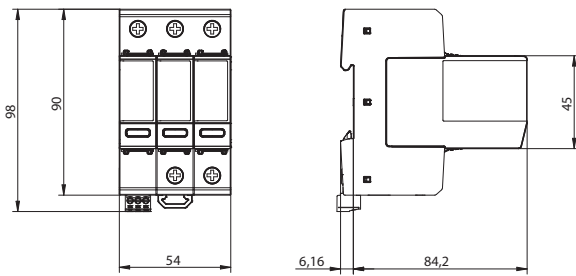
K1-3P275-M

44120301

MECHANICAL AND ENVIRONMENTAL FEATURES

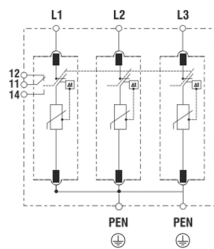
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.497 |
| Gross weight [kg] | 0.543 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

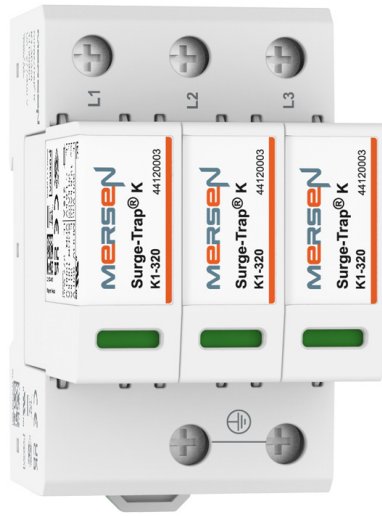
INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

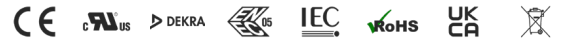
DATASHEET



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 3+0 for 277/480V TNC systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

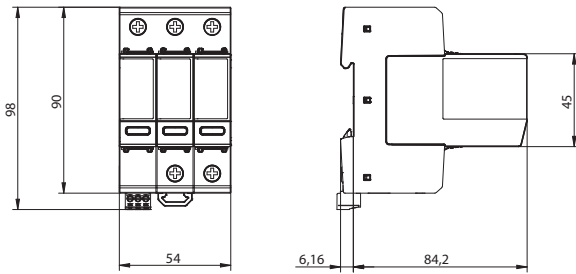
K1-3P320

44120304

MECHANICAL AND ENVIRONMENTAL FEATURES

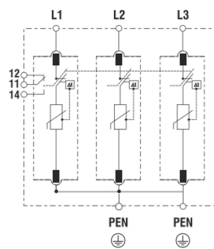
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.48 |
| Gross weight [kg] | 0.51 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET

K1-3P320-M

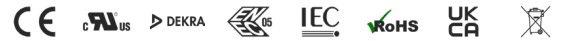
44120305



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 3+0 for 277/480V TNC systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

Power Line SPDs

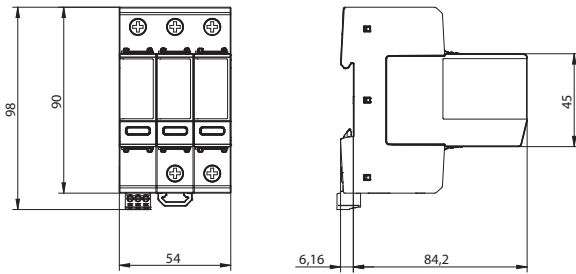
K1-3P320-M

44120305

MECHANICAL AND ENVIRONMENTAL FEATURES

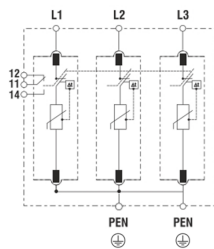
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.52 |
| Gross weight [kg] | 0.55 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

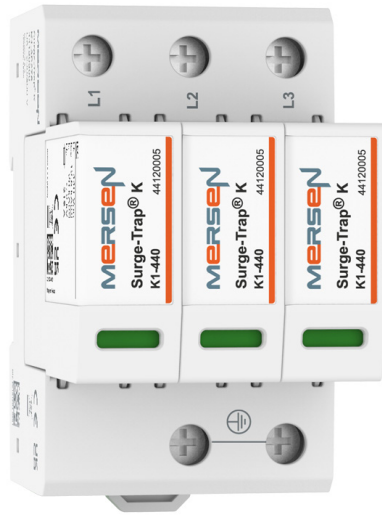
INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 3+0 for 400/690V TNC systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400/690 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

Power Line SPDs

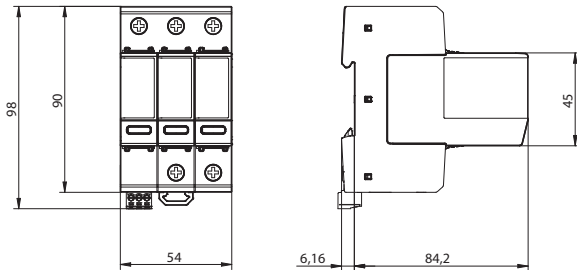
K1-3P440

44120308

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

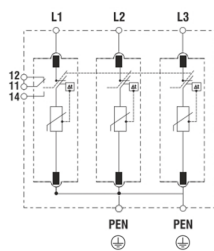
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.489 |
| Gross weight [kg] | 0.526 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

DATASHEET

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K1-3P440-M

44120309



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 3+0 for 400/690V TNC systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400/690 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

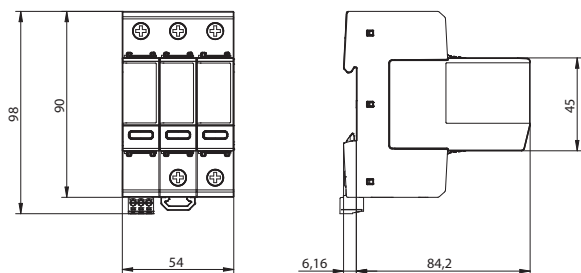
K1-3P440-M

44120309

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

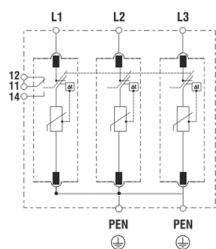
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.497 |
| Gross weight [kg] | 0.543 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION

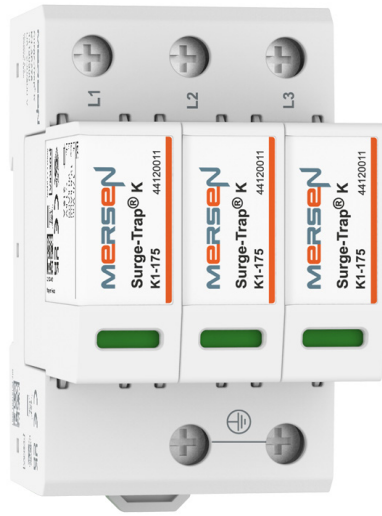


REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

DATASHEET

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 3+0 for 120/208V TNC systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |

Power Line SPDs

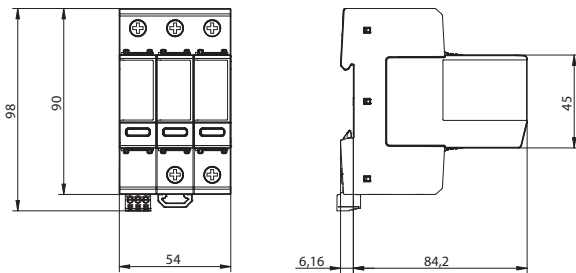
K1-3P175

44120320

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

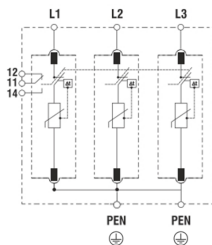
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.489 |
| Gross weight [kg] | 0.526 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

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K1-3P175-M

44120321



Surge protection device Type 1+2, limp 12.5 kA, Uc 175 Vac, 3+0 for 120/208V TNC systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|----|
| Nominal discharge current (8/20) - In [kA] | 20 |
|--|----|

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |

DATASHEET

Power Line SPDs

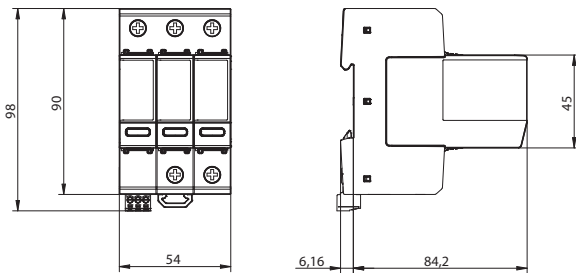
K1-3P175-M

44120321

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

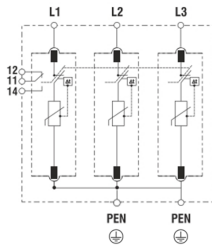
| | |
|--|-------------------------|
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.497 |
| Gross weight [kg] | 0.543 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

DATASHEET

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+0 for 230/400V TNC systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

Power Line SPDs

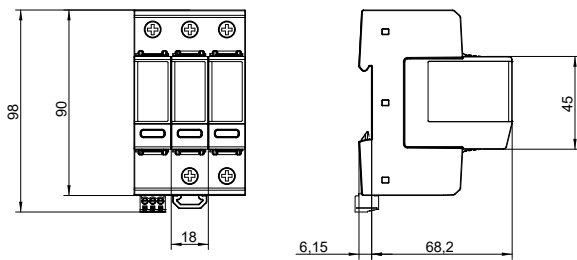
K1-3P275-L

44120340

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

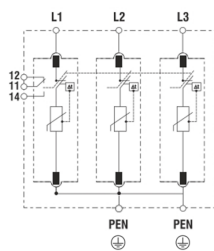
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.362 |
| Gross weight [kg] | 0.397 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

DATASHEET

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K1-3P275-LM

44120341



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+0 for 230/400V TNC systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+0 |
| No. Poles | 3-Pole |
| No. DIN rail modules | 3 |
| Network configuration | TNC |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE(N) |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

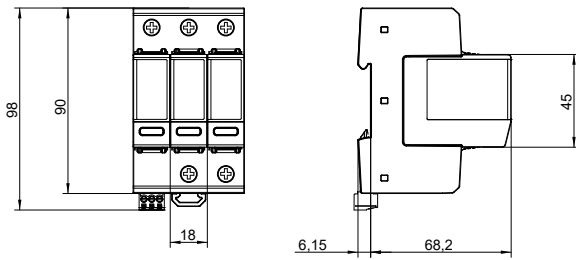
K1-3P275-LM

44120341

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

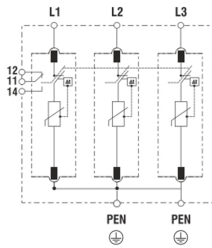
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.362 |
| Gross weight [kg] | 0.397 |
| Packaging dimensions (H x W x L) [mm] | 97 × 59 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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K1-4PG275

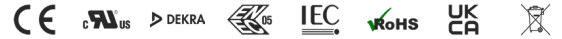
44120400



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+1 for 230/400V TT, TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-4PG275

44120400

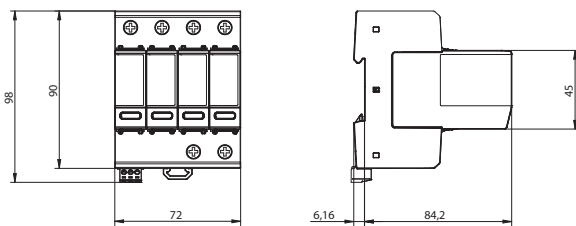
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

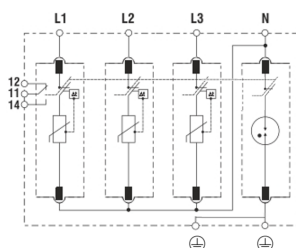
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.612 |
| Gross weight [kg] | 0.655 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120001 | K1-275 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-4PG275-M

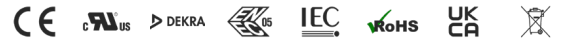
44120401



Surge protection device Type 1+2, limp 12.5 kA, Uc 275 Vac, 3+1 for 230/400V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

Power Line SPDs

K1-4PG275-M

44120401

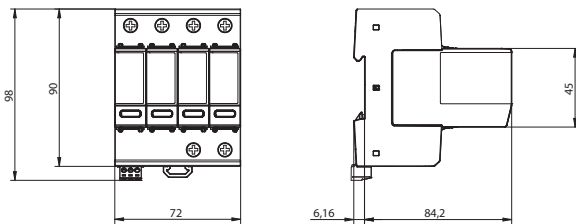
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 275 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

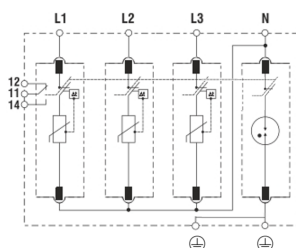
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.614 |
| Gross weight [kg] | 0.658 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120001 | K1-275 |
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

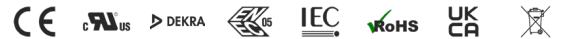
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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 4+0 for 230/400V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 275 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |

Power Line SPDs

K1-4P275

44120404

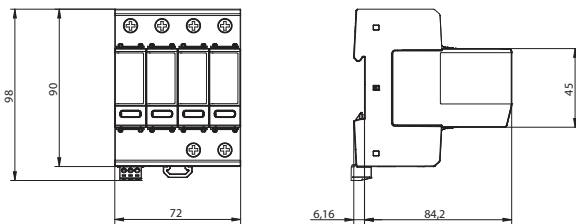
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|-----|
| Short-Circuit Current Rating-SCCR [kA] | 100 |
|--|-----|

MECHANICAL AND ENVIRONMENTAL FEATURES

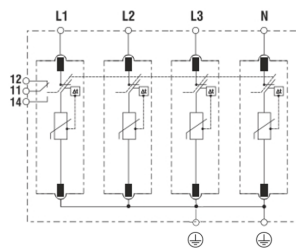
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.641 |
| Gross weight [kg] | 0.684 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

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K1-4P275-M

44120405



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 4+0 for 230/400V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 550 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 275 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 275 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |

DATASHEET

Power Line SPDs

K1-4P275-M

44120405

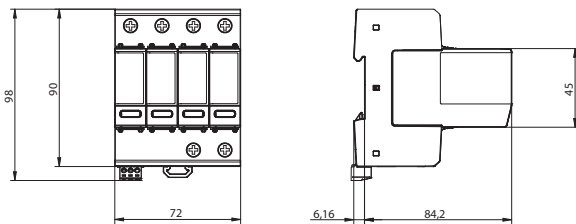
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|-----|
| Short-Circuit Current Rating-SCCR [kA] | 100 |
|--|-----|

MECHANICAL AND ENVIRONMENTAL FEATURES

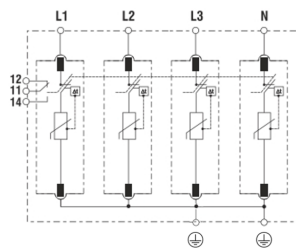
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.65 |
| Gross weight [kg] | 0.66 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120001 | K1-275 |

DATASHEET

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K1-4PG320

44120408



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 3+1 for 277/480V TT, TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 320 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 528 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

Power Line SPDs

K1-4PG320

44120408

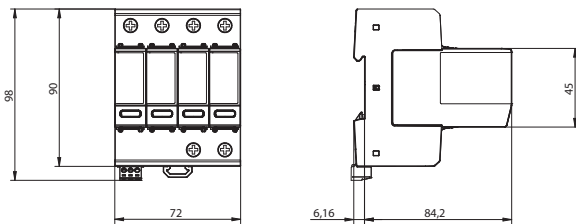
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

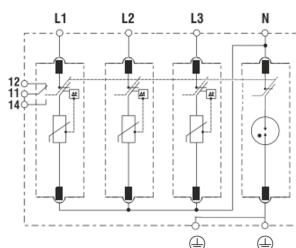
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.61 |
| Gross weight [kg] | 0.655 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120003 | K1-320 |
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

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K1-4PG320-M

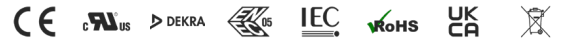
44120409



Surge protection device Type 1+2, limp 12.5 kA, Uc 320 Vac, 3+1 for 277/480V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 320 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 528 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

K1-4PG320-M

44120409

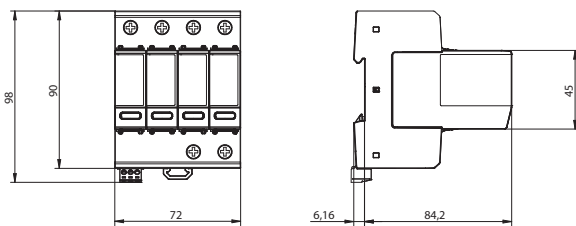
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 305 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 1200 |
| Voltage protection rating - VPR (L-G) [V] | 1500 |
| Voltage protection rating - VPR (N-G) [V] | 1000 |
| Short-Circuit Current Rating-SCCR [kA] | 100 |

MECHANICAL AND ENVIRONMENTAL FEATURES

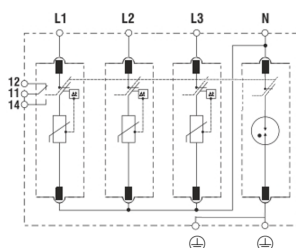
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.616 |
| Gross weight [kg] | 0.661 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120003 | K1-320 |
| Neutral (N-PE) | 44120000 | K1-N |

DATASHEET

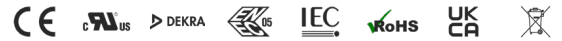
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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 320 Vac, 4+0 for 277/480V TNS systems, pluggable



GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 320 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |

Power Line SPDs

K1-4P320

44120412

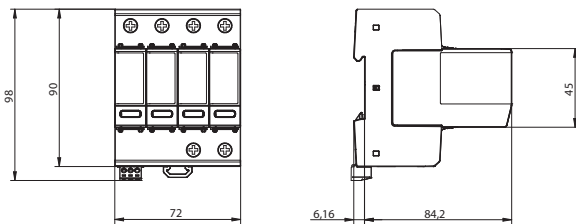
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|-----|
| Short-Circuit Current Rating-SCCR [kA] | 100 |
|--|-----|

MECHANICAL AND ENVIRONMENTAL FEATURES

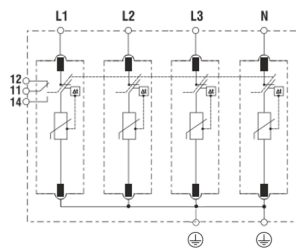
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.63 |
| Gross weight [kg] | 0.661 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET

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K1-4P320-M

44120413



Surge protection device Type 1+2, limp 12.5 kA, Uc 320 Vac, 4+0 for 277/480V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|---|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 *UL 1449 5th Edition |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 320 |
| Nominal voltage AC 50-60 Hz - Un [V] | 277/480 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 403 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 528 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|---|------|
| Nominal discharge current (8/20) - In [kA] | 20 |
| Maximum continuous operating voltage - MCOV (L-L) [V] | 640 |
| Maximum continuous operating voltage - MCOV (L-N) [V] | 320 |
| Maximum continuous operating voltage - MCOV (L-G) [V] | 320 |
| Maximum continuous operating voltage - MCOV (N-G) [V] | 320 |
| Voltage protection rating - VPR (L-L) [V] | 2000 |
| Voltage protection rating - VPR (L-N) [V] | 2000 |
| Voltage protection rating - VPR (L-G) [V] | 1200 |
| Voltage protection rating - VPR (N-G) [V] | 1200 |

DATASHEET

Power Line SPDs

K1-4P320-M

44120413

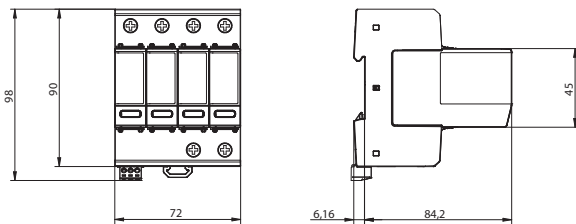
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

| | |
|--|-----|
| Short-Circuit Current Rating-SCCR [kA] | 100 |
|--|-----|

MECHANICAL AND ENVIRONMENTAL FEATURES

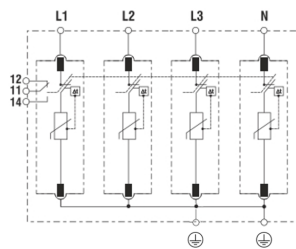
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.66 |
| Gross weight [kg] | 0.691 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120003 | K1-320 |

DATASHEET

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Power Line SPDs

K1-4P440

44120420



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 4+0 for 400/690V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400/690 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

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Power Line SPDs

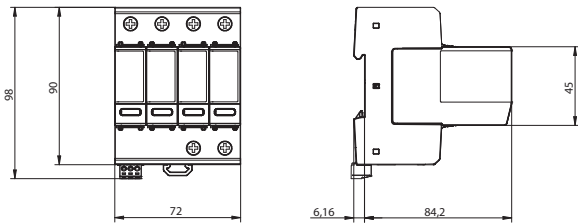
K1-4P440

44120420

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

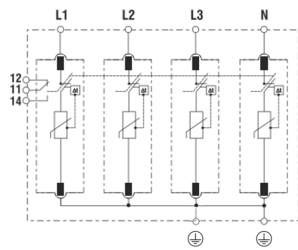
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.63 |
| Gross weight [kg] | 0.661 |
| Packaging dimensions (H x W x L) [mm] | 97 x 78 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

DATASHEET

K1-4P440-M

44120421



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 440 Vac, 4+0 for 400/690V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 440 |
| Nominal voltage AC 50-60 Hz - Un [V] | 400/690 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤2 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 581 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 763 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

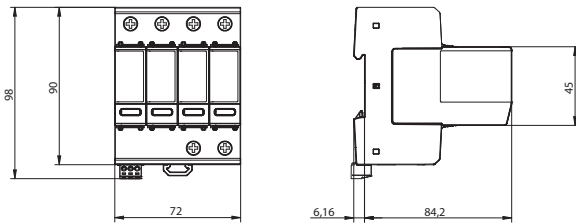
K1-4P440-M

44120421

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

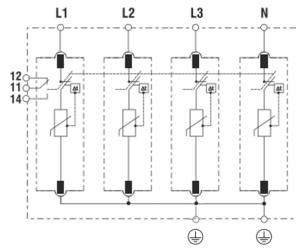
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.66 |
| Gross weight [kg] | 0.691 |
| Packaging dimensions (H x W x L) [mm] | 97 x 78 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120005 | K1-440 |

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Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 3+1 for 120/208V TT, TNS systems, pluggable



GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 175 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,5 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 229 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

Power Line SPDs

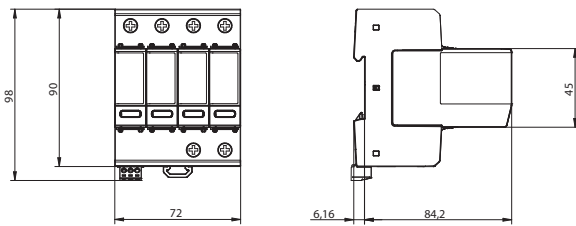
K1-4PG175

44120424

MECHANICAL AND ENVIRONMENTAL FEATURES

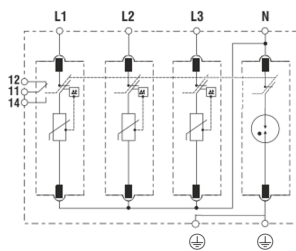
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.612 |
| Gross weight [kg] | 0.655 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120011 | K1-175 |
| Neutral (N-PE) | 44120000 | K1-N |

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K1-4PG175-M

44120425



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 3+1 for 120/208V TT, TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 175 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,5 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 229 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

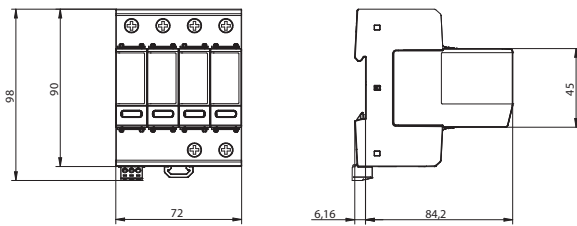
K1-4PG175-M

44120425

MECHANICAL AND ENVIRONMENTAL FEATURES

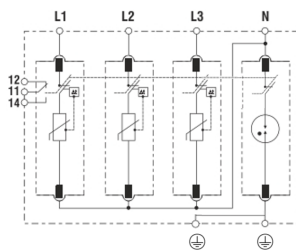
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.614 |
| Gross weight [kg] | 0.658 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L-N) | 44120011 | K1-175 |
| Neutral (N-PE) | 44120000 | K1-N |

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Power Line SPDs

K1-4P175

44120428



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 4+0 for 120/208V TNS systems, pluggable

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|--|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{scrr} [kA] | 25 |
| Residual current- I _{pe} [mA] | <1 |
| Response time - t _A [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

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Power Line SPDs

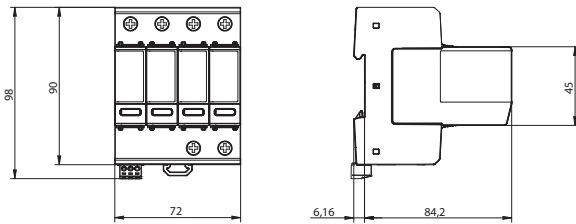
K1-4P175

44120428

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

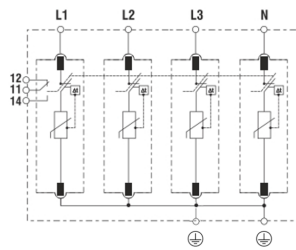
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.641 |
| Gross weight [kg] | 0.684 |
| Packaging dimensions (H x W x L) [mm] | 97 x 78 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

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K1-4P175-M

44120429



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 175 Vac, 4+0 for 120/208V TNS systems, pluggable, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 175 |
| Nominal voltage AC 50-60 Hz - Un [V] | 120/208 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 175 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 229 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

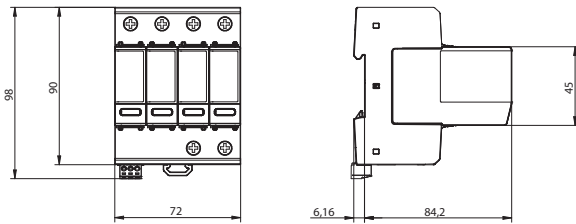
K1-4P175-M

44120429

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

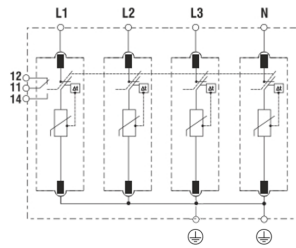
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.65 |
| Gross weight [kg] | 0.66 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120011 | K1-175 |

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K1-4PG275-L

44120446



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+1 for 230/400V TT, TNS systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

DATASHEET

Power Line SPDs

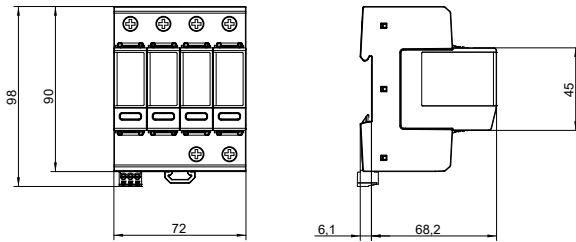
K1-4PG275-L

44120446

MECHANICAL AND ENVIRONMENTAL FEATURES

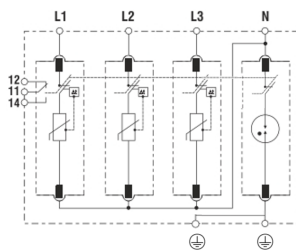
| | |
|--|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.429 |
| Gross weight [kg] | 0.474 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

DATASHEET

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K1-4PG275-LM

44120447



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 3+1 for 230/400V TT, TNS systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 3+1 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TT, TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-N / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc (L-N) [V] | 275 |
| Maximum continuous operating voltage (AC) - Uc (N-PE) [V] | 255 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Nominal discharge current (8/20) - In (L-N) [kA] | 20 |
| Nominal discharge current (8/20) - In (N-PE) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (L-N) [kA] | 50 |
| Max Discharge Current (8/20) - I _{max} (N-PE) [kA] | 100 |
| Lightning impulse current (10/350) - I _{imp} [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (L-N) [kA] | 12.5 |
| Lightning impulse current (10/350) - I _{imp} (N-PE) [kA] | 50 |
| Voltage protection level at In - Up (L-N) [kV] | ≤1,5 |
| Voltage protection level at In - Up (L-PE) [kV] | ≤1,8 |
| Voltage protection level at In - Up (N-PE) [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- I _{sc} [kA] | 25 |
| Following current - I _{fi} [A] | 100 |
| Residual current- I _{pe} [μA] | <10 |
| Response time - t _A (L-N) [ns] | ≤25 |
| Response time - t _A (N-PE) [ns] | ≤100 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 625 |
| TOV 5s (LV systems, withstand)- Ut(L-N) [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut(L-N) [V] | 442.5 |
| TOV 200 ms (HV Systems, withstand) - Ut (N-PE) [V] | 1200 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

Power Line SPDs

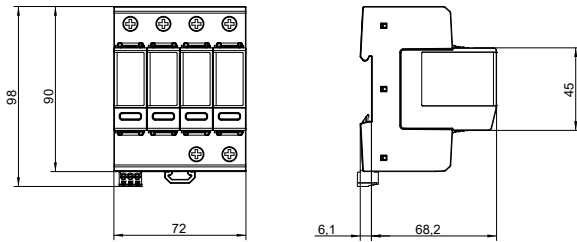
K1-4PG275-LM

44120447

MECHANICAL AND ENVIRONMENTAL FEATURES

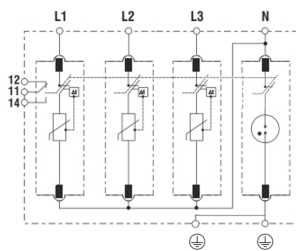
| | |
|--|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0.5 ... 1.5 |
| Remote indication switching capacity [V/A] | AC: 250/0.5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.429 |
| Gross weight [kg] | 0.474 |
| Packaging dimensions (H x W x L) [mm] | 97 × 78 × 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |
| Neutral (N-PE) | 44120030 | K1-N-L |

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K1-4P275-L

44120448



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 4+0 for 230/400V TNS systems, pluggable, Low height

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|----------------------------------|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace) |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

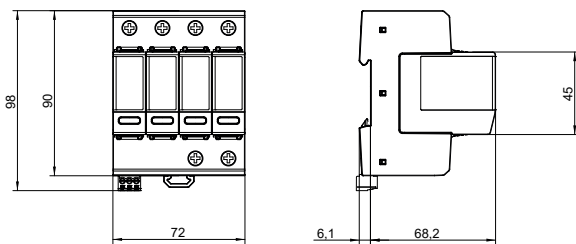
K1-4P275-L

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Continue MECHANICAL AND ENVIRONMENTAL FEATURES

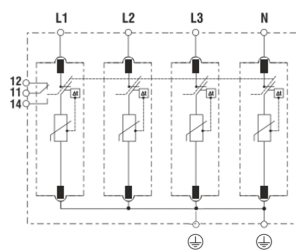
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.435 |
| Gross weight [kg] | 0.48 |
| Packaging dimensions (H x W x L) [mm] | 97 x 78 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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K1-4P275-LM

44120449



Surge protection device Type 1+2, Iimp 12.5 kA, Uc 275 Vac, 4+0 for 230/400V TNS systems, pluggable, Low height, with Microswitch

GENERAL DATA

| | |
|------------------------|----------------------------|
| Internal configuration | 4+0 |
| No. Poles | 4-Pole |
| No. DIN rail modules | 4 |
| Network configuration | TNS |
| IEC SPD Type | Class I+II |
| EN SPD Type | Type 1+2 |
| UL SPD Type | Type 1 Component Assembly |
| Format | Pluggable |
| Protection Modes | L-PE / N-PE |
| Product standards | *IEC 61643-11 *EN 61643-11 |



SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

| | |
|---|-------------------------|
| Maximum continuous operating voltage (AC) - Uc [V] | 275 |
| Nominal voltage AC 50-60 Hz - Un [V] | 230/400 |
| Nominal discharge current (8/20)- In [kA] | 20 |
| Max Discharge Current (8/20) - Imax [kA] | 50 |
| Lightning impulse current (10/350) - Iimp [kA] | 12.5 |
| Voltage protection level at In - Up [kV] | ≤1,5 |
| Maximum back-up fuse [A [gG]] | 315 |
| Short circuit withstand- Isccr [kA] | 25 |
| Residual current- Ipe [mA] | <1 |
| Response time - tA [ns] | ≤25 |
| Specific energy by pole (10/350 μs) - W/R (L-N) [kJ/Ohm] | 39 |
| Specific energy by pole (10/350 μs) - W/R (N-PE) [kJ/Ohm] | 39 |
| TOV 5s (LV systems, withstand) - Ut [V] | 337 |
| TOV 120min (LV systems, fail safe)- Ut [V] | 442.5 |
| Dynamic thermal disconnection | Yes |
| Thermal protection behaviour | OCM (Open Circuit Mode) |
| No. of ports | 1 |

MECHANICAL AND ENVIRONMENTAL FEATURES

| | |
|-------------------------------|---|
| Temperature range [°C] | -40 ... 85 |
| Humidity range [%] | 5 ... 95 |
| Max. Altitude [m] | 4000 |
| Indication System Type | Green (OK) / Not green (replace), Microswitch |
| Insulating material | PA6 CT1 & PA66 CT1 |
| Housing color | Grey RAL 7035 |
| Enclosure - IP | IP20 |
| Flammability class | UL94 V-0 |
| Solid conductor cross section | 1,5...35mm ² |

DATASHEET

Power Line SPDs

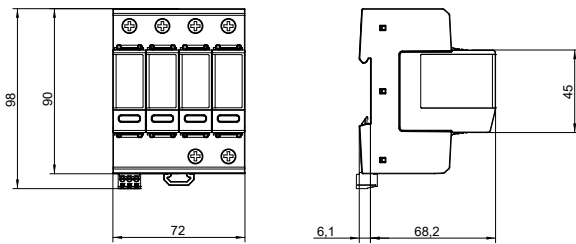
K1-4P275-LM

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Continue MECHANICAL AND ENVIRONMENTAL FEATURES

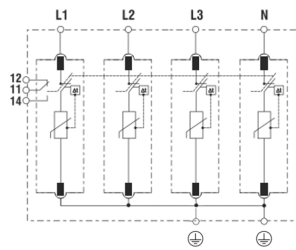
| | |
|--|-------------------------|
| Stranded conductor cross section | 1,5...25mm ² |
| Torque rating [N m] | 3 |
| Remote indication conductor cross section [mm ²] | 0,5 ... 1,5 |
| Remote indication switching capacity [V/A] | AC: 250/0,5 DC: 30/1 |

DIMENSIONS AND WEIGHT



| | |
|---------------------------------------|---------------|
| Net Weight [kg] | 0.435 |
| Gross weight [kg] | 0.48 |
| Packaging dimensions (H x W x L) [mm] | 97 x 78 x 118 |

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

| | Code | Description |
|----------|----------|-------------|
| Line (L) | 44120031 | K1-275-L |

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