Power Line SPDs

K1-1PG

44120100



Surge Protection Device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for NeutralV TT, TNS 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	*EN IEC 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) - Imax [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	50
Voltage protection level at In - Up [kV]	≤1,5
Maximum back-up fuse [A [gG]]	315
Short circuit withstand- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA [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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

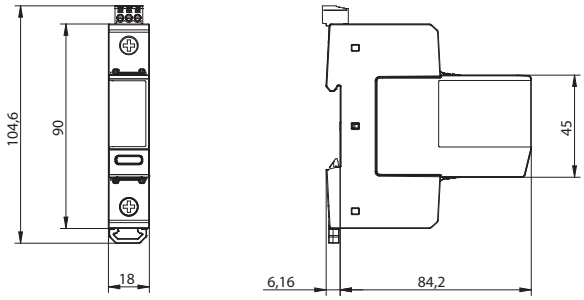
K1-1PG

44120100

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

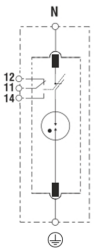
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1PG-M

44120101



Surge Protection Device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for NeutralV TT, TNS 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	*EN IEC 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) - Imax [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	50
Voltage protection level at In - Up [kV]	≤1,5
Maximum back-up fuse [A [gG]]	315
Short circuit withstand- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA [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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

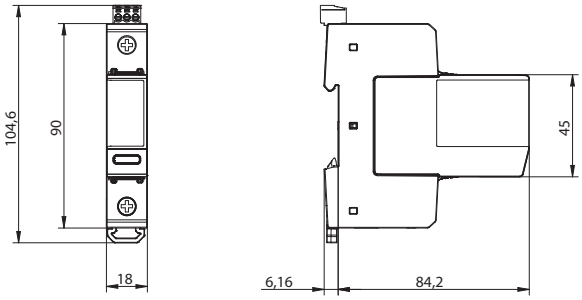
K1-1PG-M

44120101

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

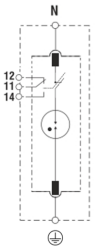
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching 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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1P275

44120102



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-1P275

44120102

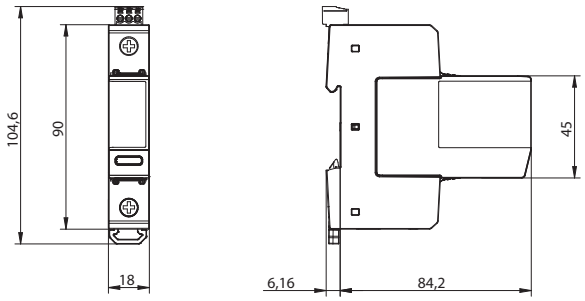
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

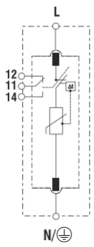
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES	
Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-1P275-M

44120103

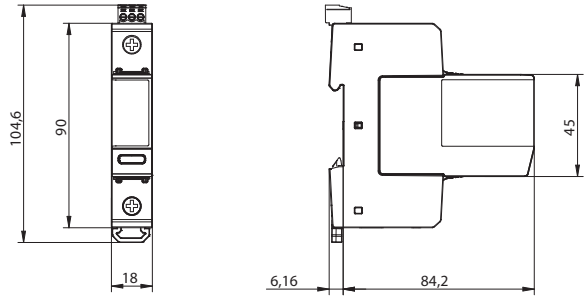
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

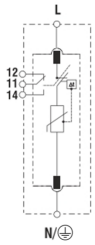
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1P320

44120106



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-1P320

44120106

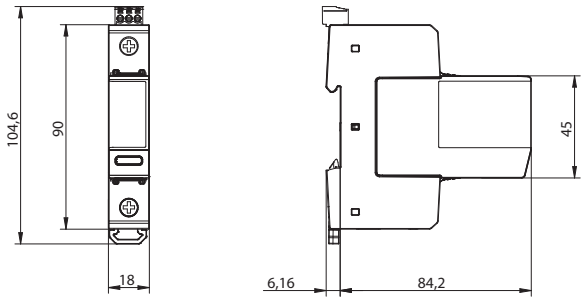
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

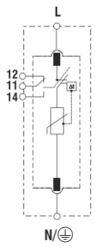
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-1P320-M

44120107

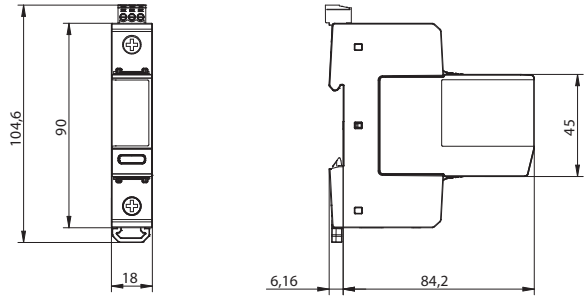
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

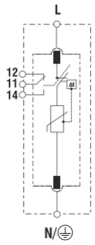
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1P440

44120110



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
Format	Pluggable
Product standards	*EN IEC 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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

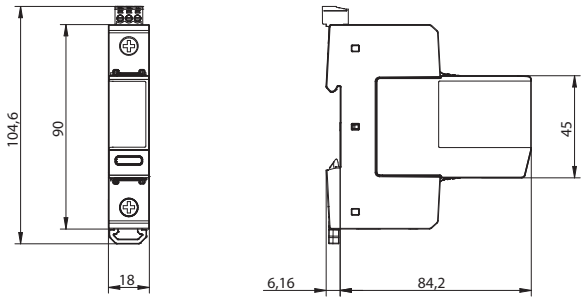
K1-1P440

44120110

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

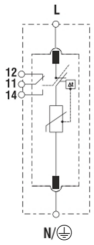
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Product standards	*EN IEC 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

MECHANICAL AND ENVIRONMENTAL FEATURES	
Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

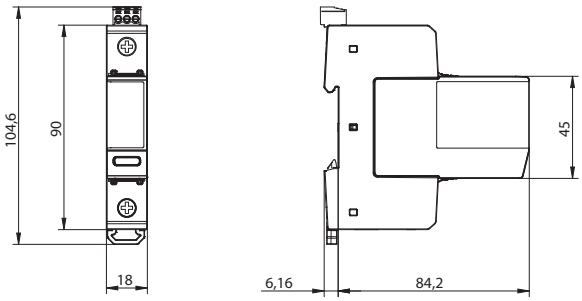
K1-1P440-M

44120111

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

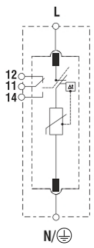
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Product standards	*EN IEC 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
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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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)

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

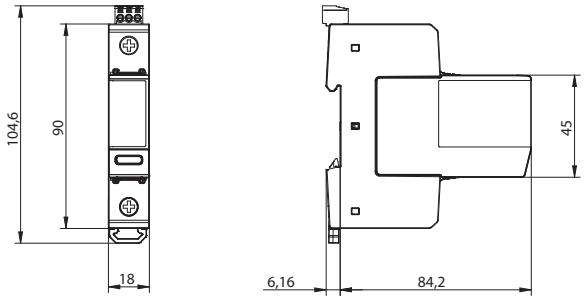
K1-1P175

44120114

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

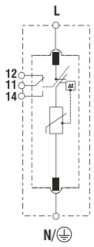
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1P175-M

44120115



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
Format	Pluggable
Product standards	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

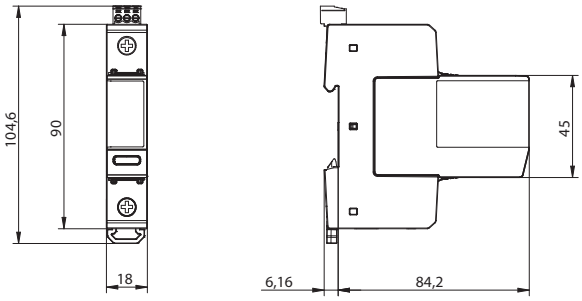
K1-1P175-M

44120115

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

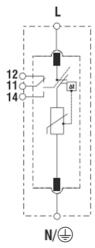
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1PG-L

44120122



Surge Protection Device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for NeutralV TT, TNS 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
Format	Pluggable
Protection Modes	N-PE
Product standards	*EN IEC 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) - Imax [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	50
Voltage protection level at In - Up [kV]	≤1,5
Maximum back-up fuse [A [gG]]	315
Short circuit withstand- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA [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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

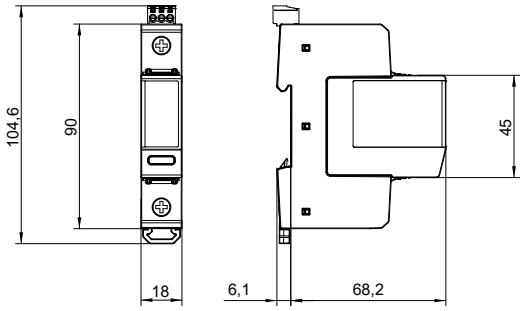
K1-1PG-L

44120122

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

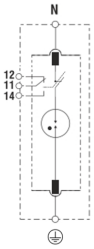
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-1PG-LM

44120123



Surge Protection Device Type 1+2, Iimp 50 kA, Uc 255 Vac, 0+1 for NeutralV TT, TNS 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
Format	Pluggable
Protection Modes	N-PE
Product standards	*EN IEC 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) - Imax [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	50
Voltage protection level at In - Up [kV]	≤1,5
Maximum back-up fuse [A [gG]]	315
Short circuit withstand- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA [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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

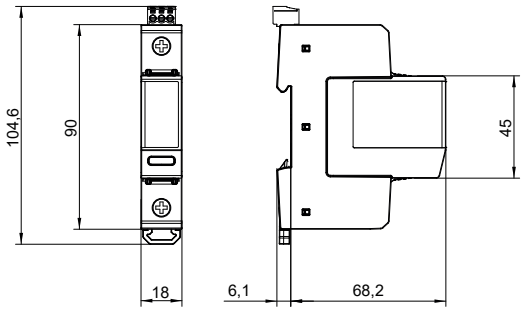
K1-1PG-LM

44120123

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

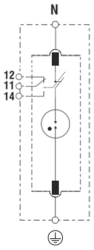
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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
Format	Pluggable
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

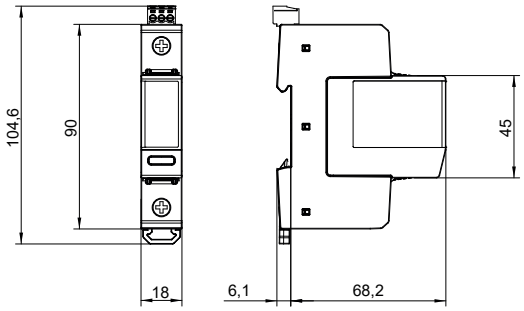
K1-1P275-L

44120124

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

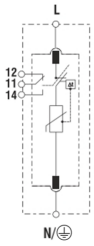
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

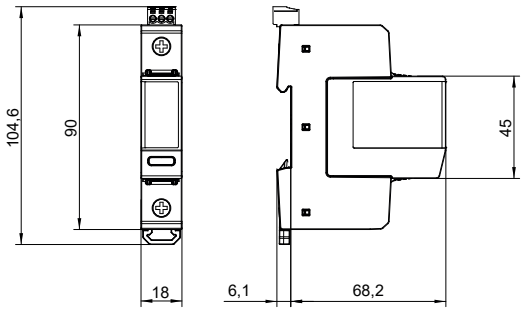
K1-1P275-LM

44120125

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

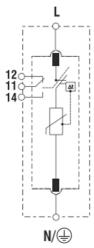
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275

44120200

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

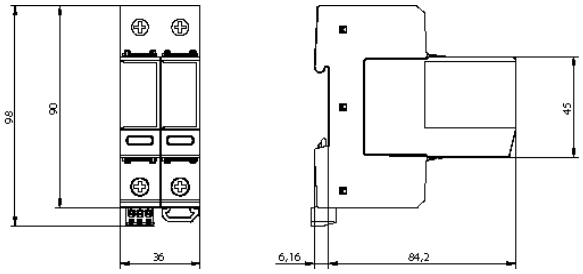
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

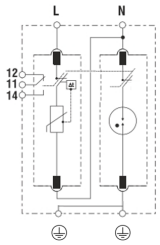
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275

44120200

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275-M

44120201



Surge Protection Device Type 1+2, Iimp 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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275-M

44120201

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

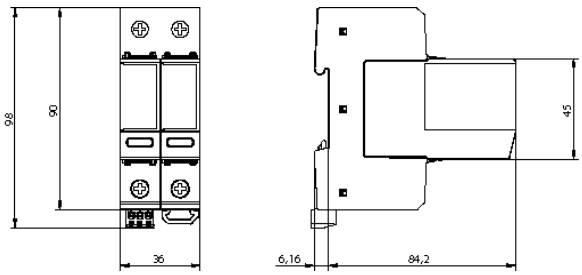
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

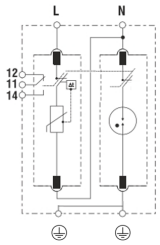
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275-M

44120201

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2P275

44120204



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-2P275

44120204

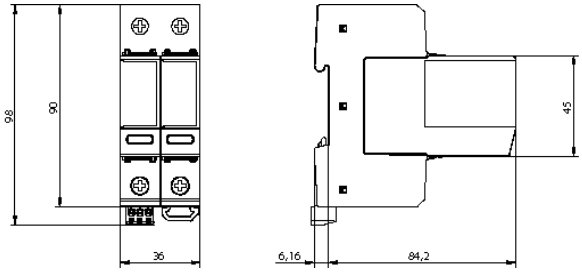
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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

MECHANICAL AND ENVIRONMENTAL FEATURES

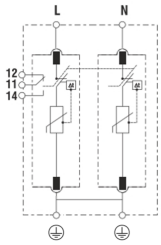
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-2P275-M

44120205

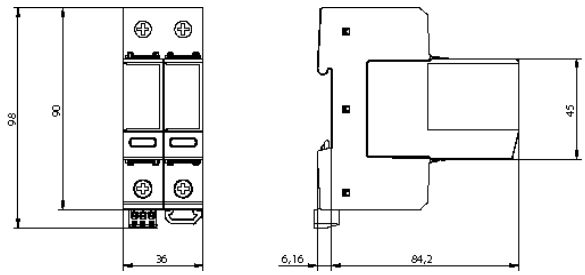
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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

MECHANICAL AND ENVIRONMENTAL FEATURES

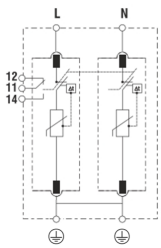
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG320

44120208

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

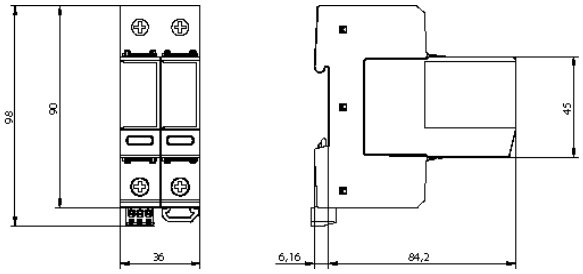
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

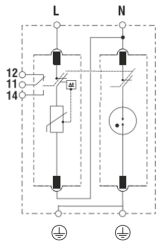
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG320

44120208

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG320-M

44120209



Surge Protection Device Type 1+2, Iimp 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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG320-M

44120209

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

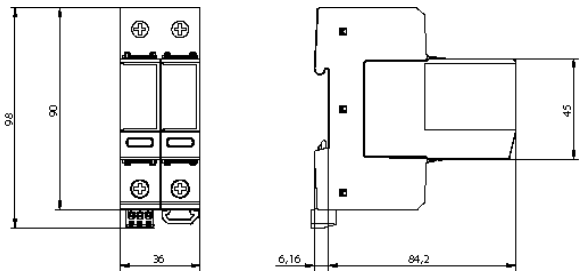
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

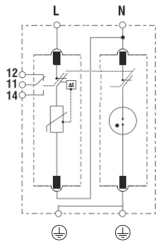
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG320-M

44120209

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2P320

44120212



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-2P320

44120212

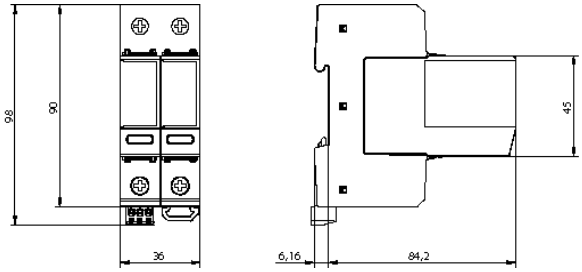
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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

MECHANICAL AND ENVIRONMENTAL FEATURES

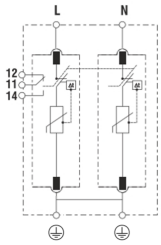
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-2P320-M

44120213

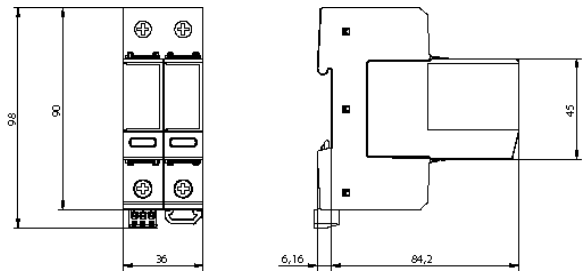
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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

MECHANICAL AND ENVIRONMENTAL FEATURES

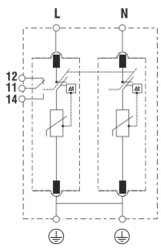
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 61643-11

[1] Also suitable for 230V IT network configuration.

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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

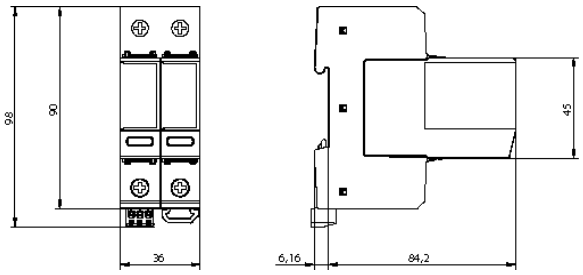
K1-2P440

44120220

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

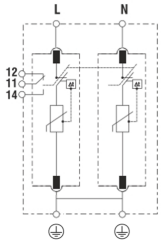
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 61643-11

[1] Also suitable for 230V IT network configuration.

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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

DATASHEET

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

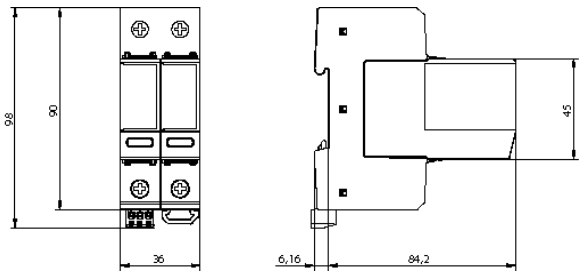
K1-2P440-M

44120221

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

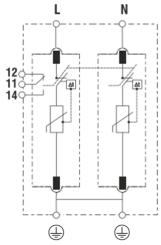
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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)

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-2PG175

44120224

Continue SURGE PROTECTION DEVICE (SPD) - IEC TECHNICAL FEATURES

No. of ports	1

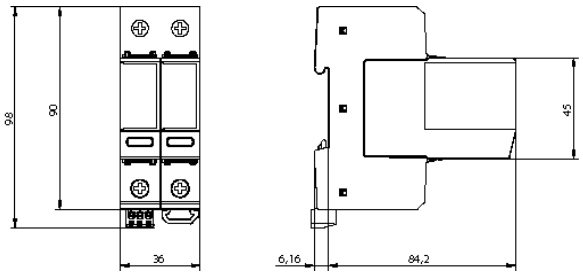
ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

MECHANICAL AND ENVIRONMENTAL FEATURES

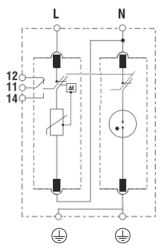
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG175-M

44120225

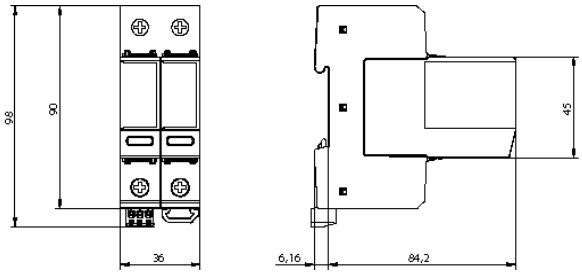
ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

MECHANICAL AND ENVIRONMENTAL FEATURES

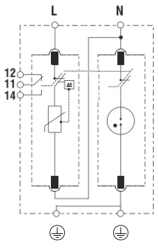
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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
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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

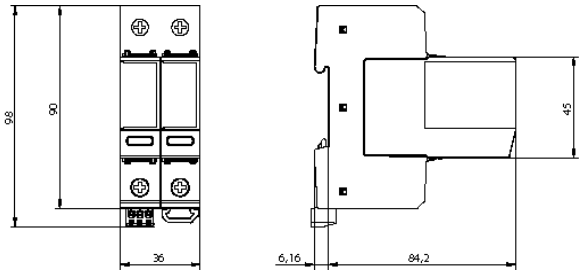
K1-2P175

44120228

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

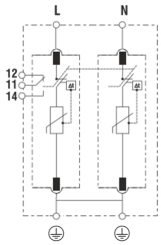
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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
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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

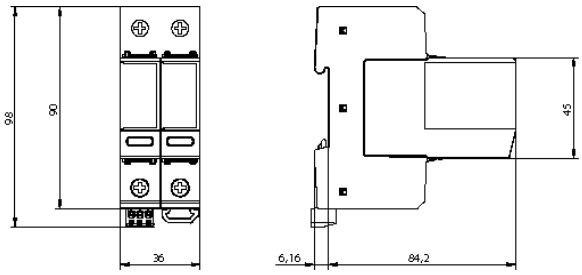
K1-2P175-M

44120229

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

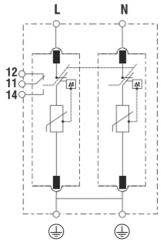
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching 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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-2PG275-L

44120234



Surge Protection Device Type 1+2, Iimp 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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

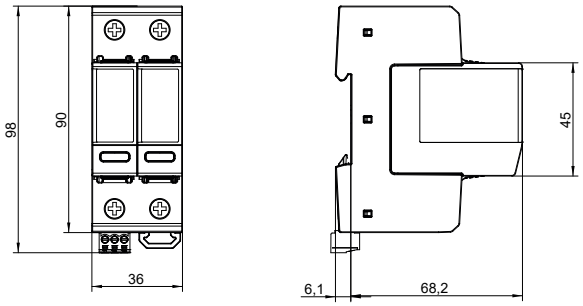
K1-2PG275-L

44120234

MECHANICAL AND ENVIRONMENTAL FEATURES

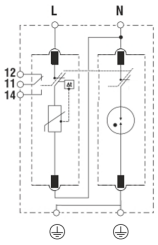
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

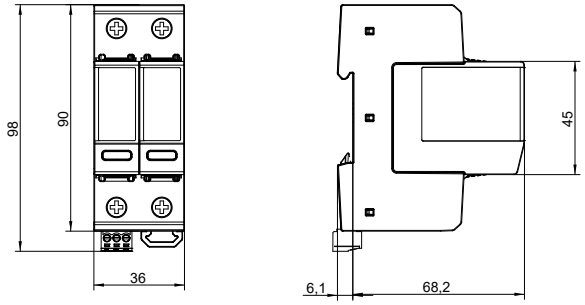
K1-2PG275-LM

44120235

MECHANICAL AND ENVIRONMENTAL FEATURES

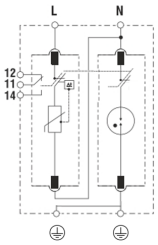
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

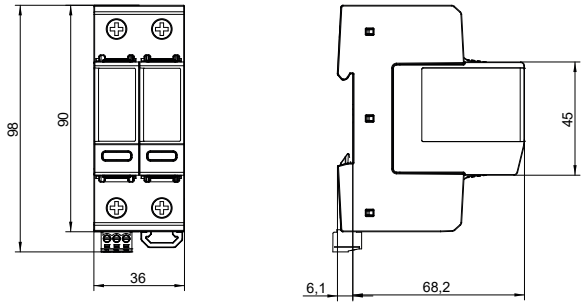
K1-2P275-L

44120236

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

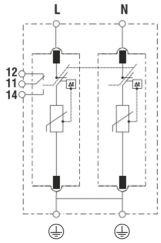
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

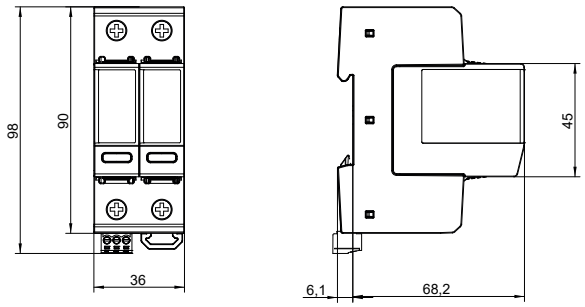
K1-2P275-LM

44120237

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

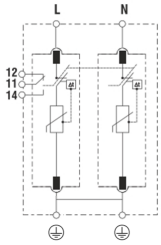
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

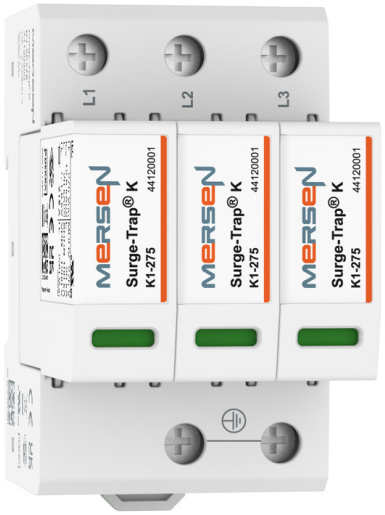
	Code	Description
Line (L)	44120031	K1-275-L

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-3P275

44120300

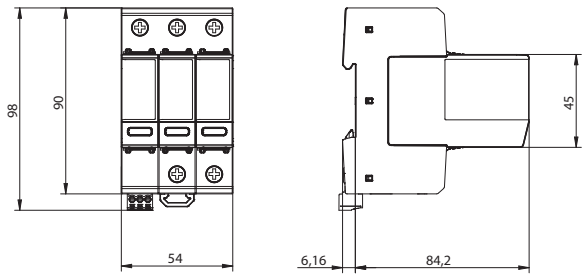
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

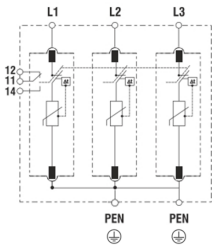
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-3P275-M

44120301

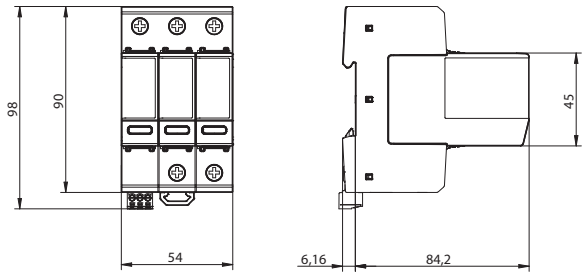
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

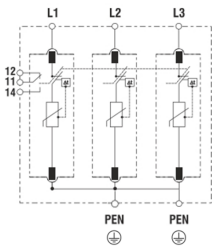
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

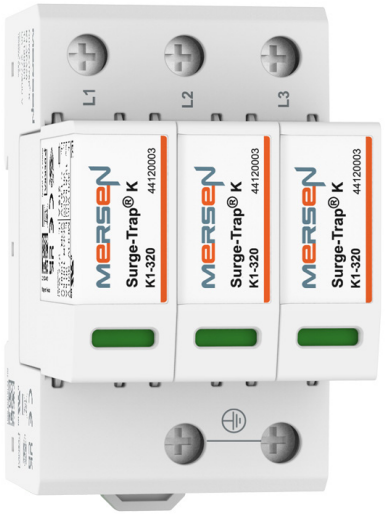
	Code	Description
Line (L)	44120001	K1-275

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-3P320

44120304



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-3P320

44120304

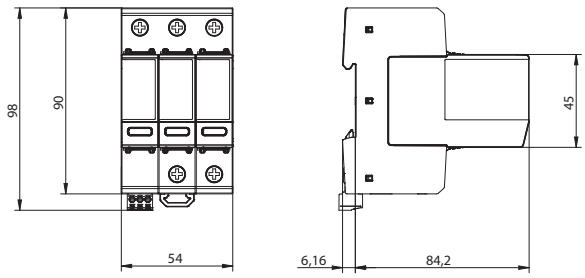
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

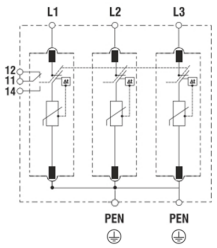
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

DATASHEET

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-3P320-M

44120305

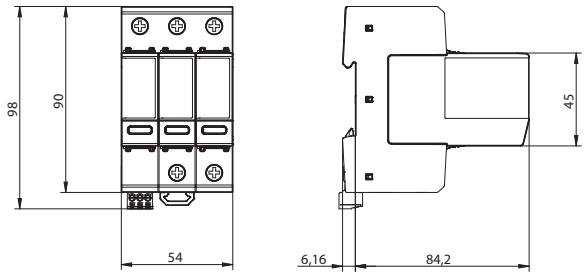
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

Voltage protection rating - VPR (L-G) [V]	1200
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

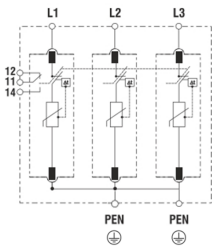
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-3P440

44120308



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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 61643-11

[1] Also suitable for -/400V IT network configuration.

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) - 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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

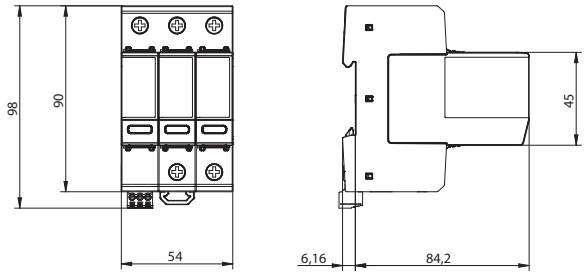
K1-3P440

44120308

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

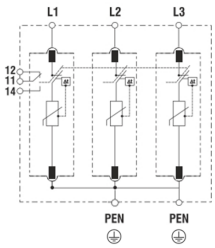
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 61643-11

[1] Also suitable for -/400V IT network configuration.

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) - 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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

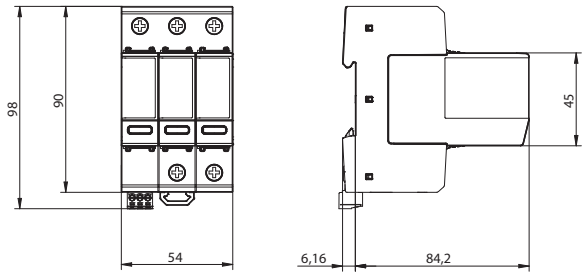
K1-3P440-M

44120309

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

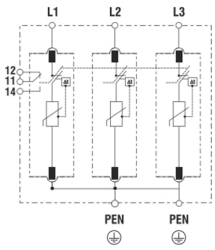
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

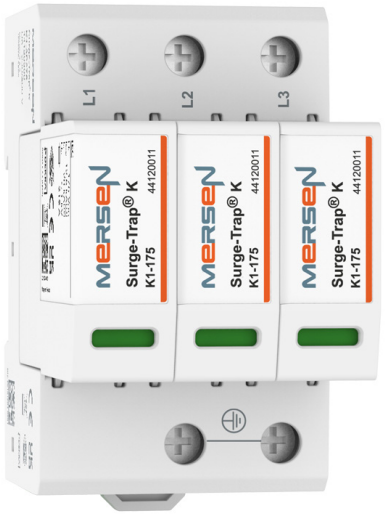
	Code	Description
Line (L)	44120005	K1-440

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-3P175

44120320



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
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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)

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

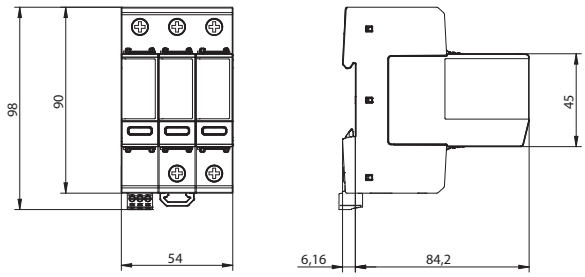
K1-3P175

44120320

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

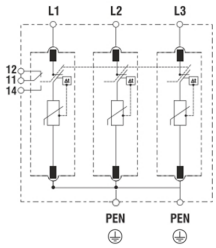
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-3P175-M

44120321



Surge Protection Device Type 1+2, Iimp 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
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

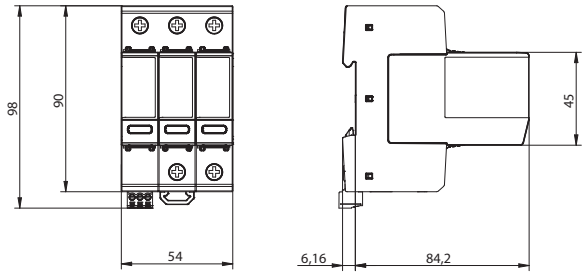
K1-3P175-M

44120321

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

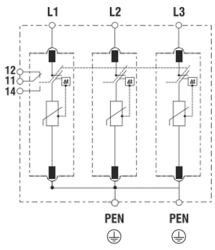
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching 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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-3P275-L

44120340



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
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

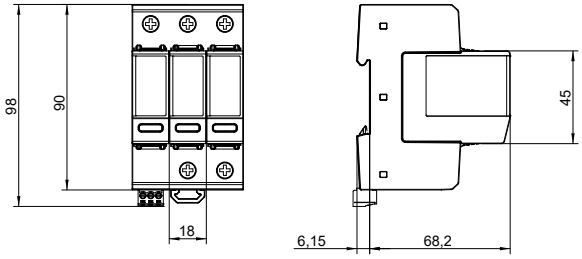
K1-3P275-L

44120340

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

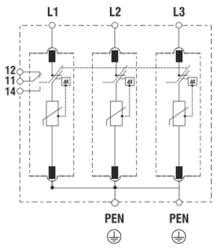
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE(N)
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

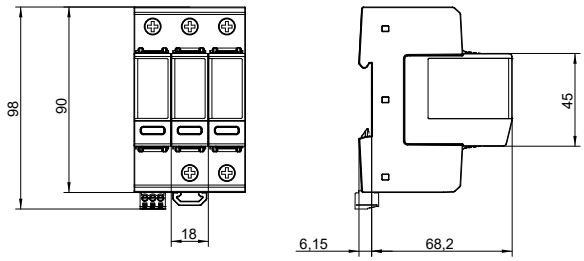
K1-3P275-LM

44120341

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

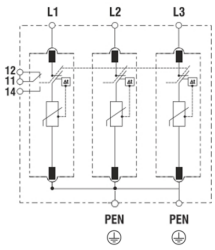
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG275

44120400

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

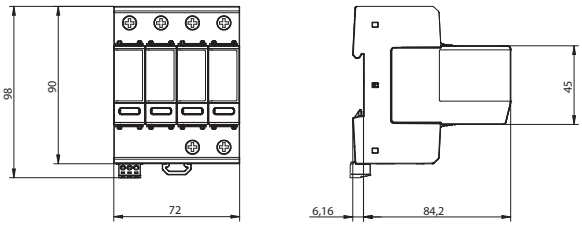
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

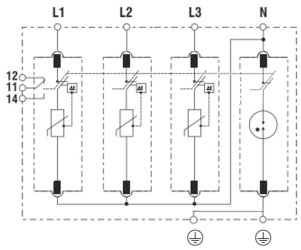
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG275

44120400

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG275-M

44120401



Surge Protection Device Type 1+2, Iimp 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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG275-M

44120401

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

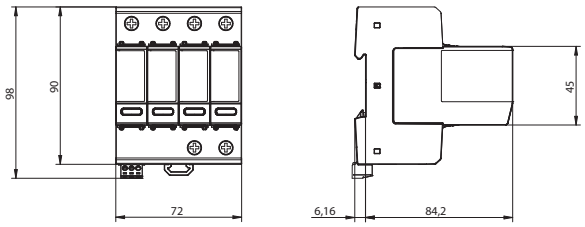
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

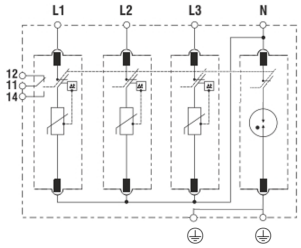
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG275-M

44120401

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4P275

44120404



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-4P275

44120404

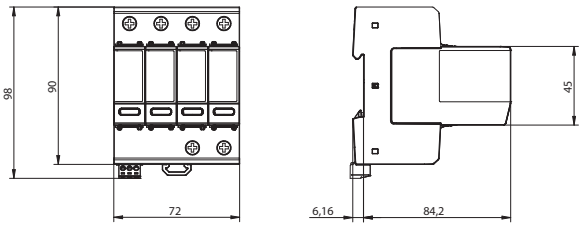
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

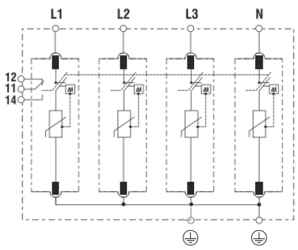
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

DATASHEET

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

K1-4P275-M

44120405

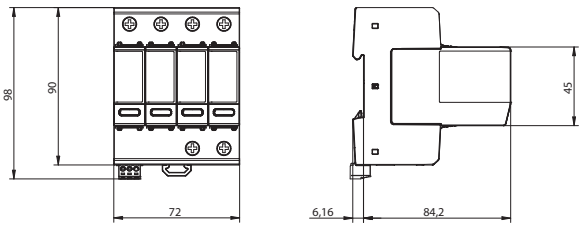
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

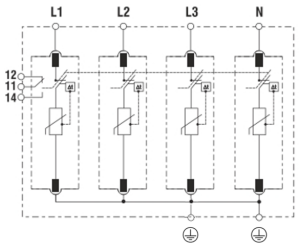
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG320

44120408

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

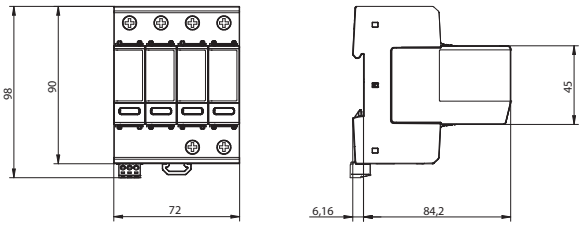
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

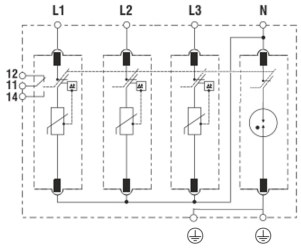
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG320

44120408

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG320-M

44120409



Surge Protection Device Type 1+2, Iimp 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	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG320-M

44120409

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

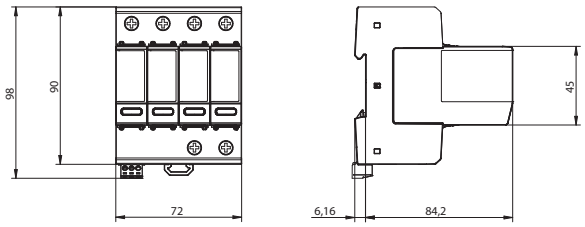
SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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 [ºC]	-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…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

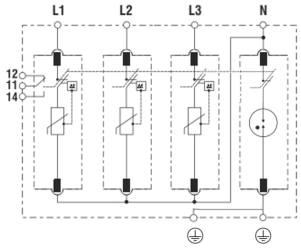
This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG320-M

44120409

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4P320

44120412



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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4P320

44120412

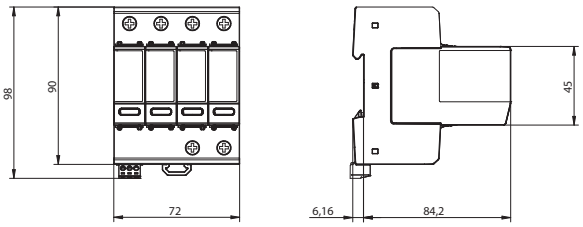
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

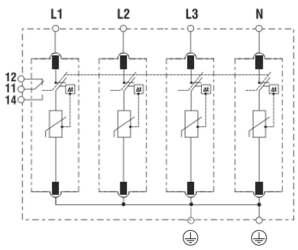
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4P320-M

44120413



Surge Protection Device Type 1+2, Iimp 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	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4P320-M

44120413

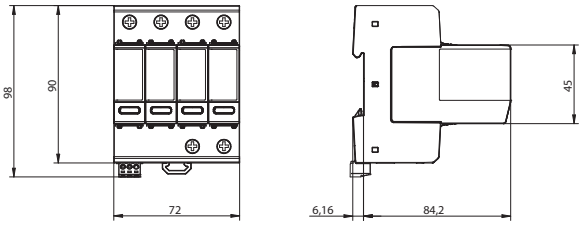
Continue SURGE PROTECTION DEVICE (SPD) - UL TECHNICAL FEATURES

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
Short-Circuit Current Rating-SCCR [kA]	100

MECHANICAL AND ENVIRONMENTAL FEATURES

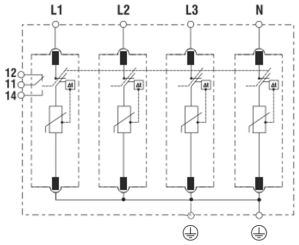
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 61643-11

[1] Also suitable for 230/400V IT network configuration.

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) - 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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

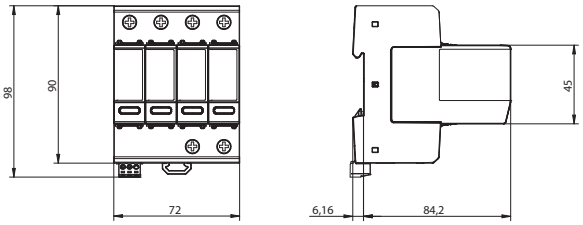
K1-4P440

44120420

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

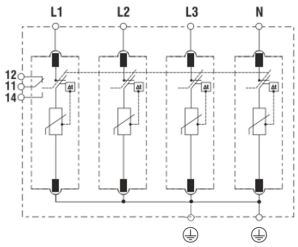
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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)	44120005	K1-440

DATASHEET

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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[1]
IEC SPD Type	Class I+II
EN SPD Type	Type 1+2
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 61643-11

[1] Also suitable for 230/400V IT network configuration.

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) - 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

MECHANICAL AND ENVIRONMENTAL FEATURES

Temperature range [ºC]	-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…35mm²

DATASHEET

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

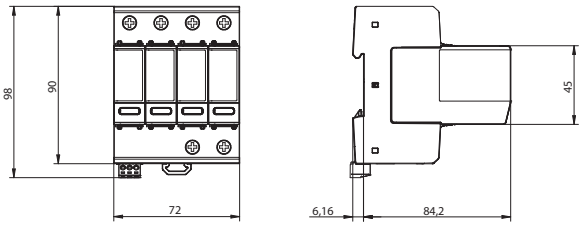
K1-4P440-M

44120421

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

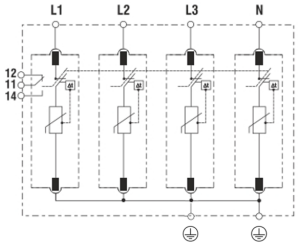
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

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)	44120005	K1-440

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG175

44120424



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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG175

44120424

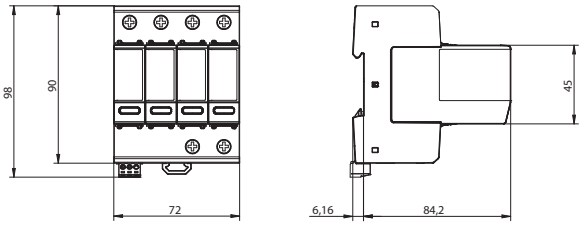
ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

MECHANICAL AND ENVIRONMENTAL FEATURES

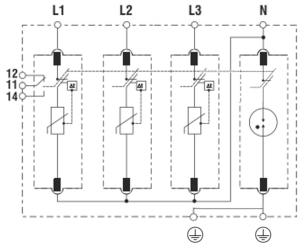
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

K1-4PG175-M

44120425

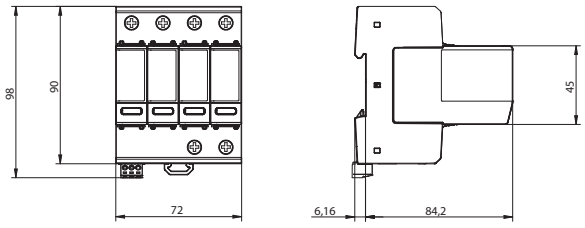
ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

MECHANICAL AND ENVIRONMENTAL FEATURES

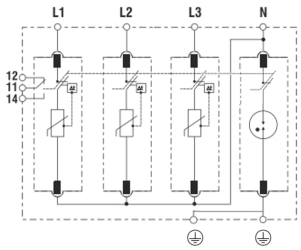
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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)

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

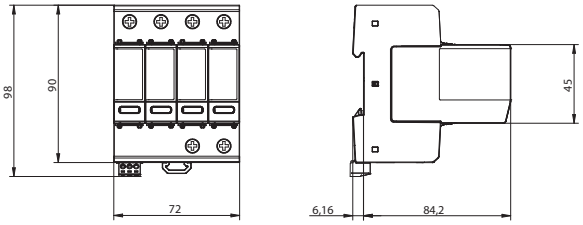
K1-4P175

44120428

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

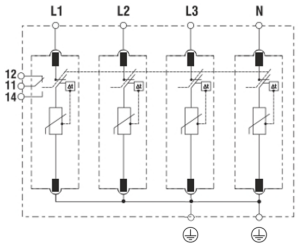
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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)	44120011	K1-175

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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

ADDITIONAL TESTING – TECHNICAL FEATURES

Max Discharge Current (8/20) - Imax (L-N) [kA]	75
Typical surge current (withstanding 200 impulses) - Ityp [kA]	10

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

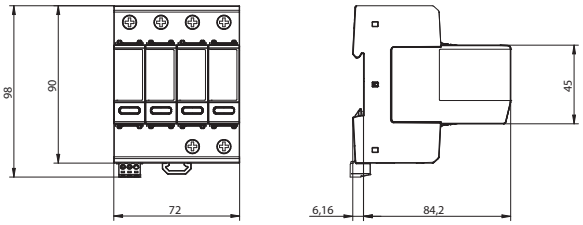
K1-4P175-M

44120429

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

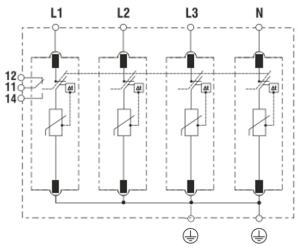
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching 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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

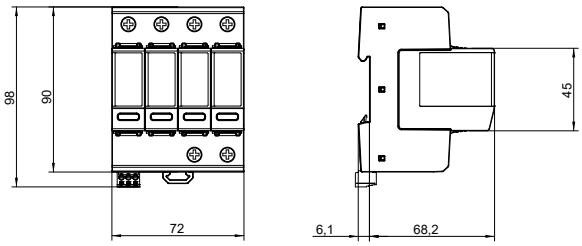
K1-4PG275-L

44120446

MECHANICAL AND ENVIRONMENTAL FEATURES

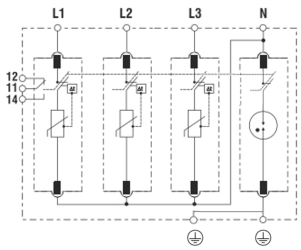
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace)
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-N / N-PE
Product standards	*EN IEC 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) - Imax [kA]	50
Max Discharge Current (8/20) - Imax (L-N) [kA]	50
Max Discharge Current (8/20) - Imax (N-PE) [kA]	100
Lightning impulse current (10/350) - Iimp [kA]	12.5
Lightning impulse current (10/350) - Iimp (L-N) [kA]	12.5
Lightning impulse current (10/350) - Iimp (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- Isccr [kA]	25
Following current - Ifi [A]	100
Residual current- Ipe [µA]	<10
Response time - tA (L-N) [ns]	≤25
Response time - tA (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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

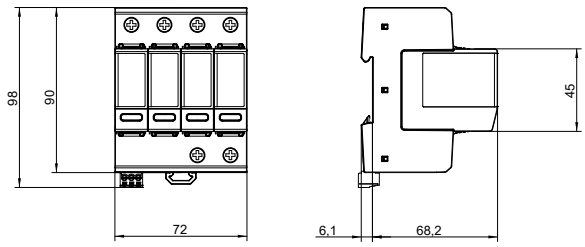
K1-4PG275-LM

44120447

MECHANICAL AND ENVIRONMENTAL FEATURES

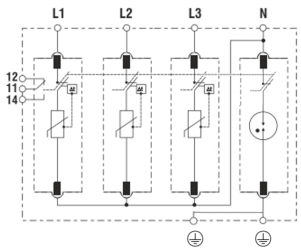
Temperature range [ºC]	-40 ... 85
Humidity range [%]	5 ... 95
Max. Altitude [m]	4000
Indication System Type	Green (OK) / Not green (replace), Microswitch
Insulating material	PA6 CT1 & PA66 CT1
Housing color	Grey RAL 7035
Enclosure - IP	IP20
Flammability class	UL94 V-0
Solid conductor cross section	1,5…35mm²
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

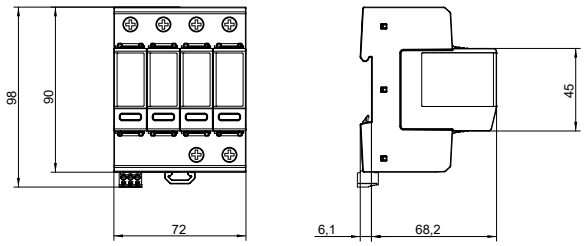
K1-4P275-L

44120448

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

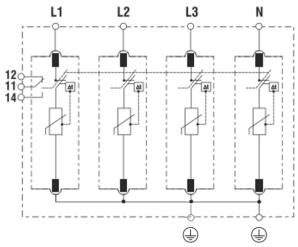
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3

DIMENSIONS AND WEIGHT



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

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

Power Line SPDs

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
Format	Pluggable
Protection Modes	L-PE / N-PE
Product standards	*EN IEC 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 [ºC]	-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…35mm²

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved

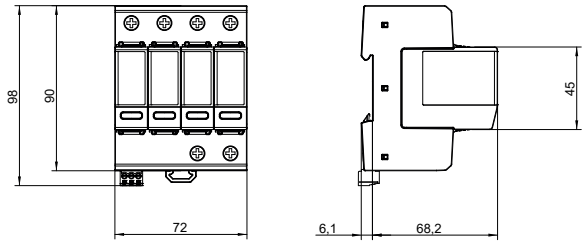
K1-4P275-LM

44120449

Continue MECHANICAL AND ENVIRONMENTAL FEATURES

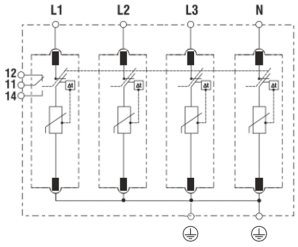
Stranded conductor cross section	1,5…25mm²
Torque rating [N m]	3
Remote indication conductor cross section [mm²]	0.5 ... 1.5
Remote indication switching capacity [V/A]	AC: 250/0.5 DC: 30/1

DIMENSIONS AND WEIGHT



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

INTERNAL CONFIGURATION



REPLACEMENT CARTRIDGES

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

This document is subject to change at any time without notice www.mersen.com | Lepanto 49 · 08223 Terrassa, Barcelona Spain © 2026 Cirprotec SLU | All rights reserved