

Datasheet

SPD II & III – AC Surge Protector



The SPD II range of surge protectors are used for transient surge protection of single and multi-phase power circuits at the main electrical panel. SPD IIIs are for the protection of individual electrical devices. They provide common-mode protection (between each Line and Ground), with impulse discharge capacity (Imax) 40kA for SPD II and 20kA for SPD III.

The SPD design is based on high-energy varistors (MOVs) equipped with thermal disconnects and integral failure indicators. A remote signaling contact for disconnection indication is standard on each unit. For ease of replacement, varistors are housed in pluggable modules with connections that are mechanically keyed to the base to prevent incorrect arrestor module replacement.

Typical applications include low voltage distribution or protection of industrial control systems, equipment assemblies and devices.

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SPD II & III - AC Surge Protectors

For transient voltage protection of single and multi-phase circuits, in the main electrical panel, downstream of the main circuit breaker, or in control panels.

Technical Data

AC Network
Connection Mode
Max. Operating Voltage (MCOV)
TOV Withstand
Leakage Current at Uc
Follow Current
UL Nominal Discharge Current (In), 15 impulses 8/20 μs
Max. Discharge Current (Imax), 1 impulse 8/20 μs
UL Voltage Protection Rating (VPR)
Protection Level (Up)
UL Short-Circuit Current Rating (SCCR)
AC System
Thermal Disconnecter
Overcurrent Protection
Dimensions (mm)
Connection
Remote Signal Indicator
Mounting
Operating Temp
Operating Altitude (Max.)
Relative Humidity
Enclosure Material
Environmental Rating
Weight

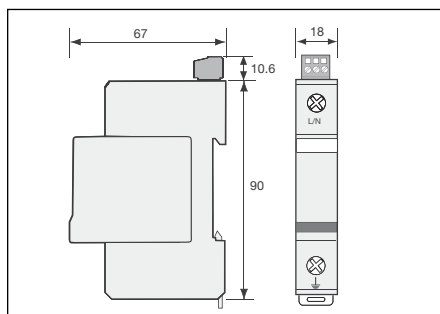
Approvals

IEC 61643-1 - INTERNATIONAL
EN 61643-11 - EUROPE
NF EN 61643-11 - FRANCE
UL1449 3rd Edition - USA and CANADA
RoHS

Ordering Data

Surge Protector	Part No.
SPD II 120V/40kA	6720005410
SPD II 230V/40kA	6720005411

Bus bars	Part No.
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419



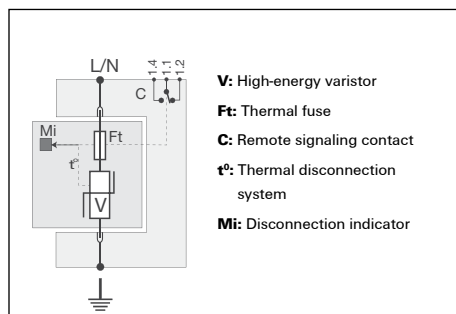
SPD II 120V/40kA



120/240V, 120/208V
1 Pole, L-N or L-G
150VAC
150VAC
<1mA
none
20kA
40kA
500V
0.9kV
25kAIC
Single-phase
UL 60691
Time Delay - 125A Max.
90 x 18 x 67
Screw terminals, #4 AWG Max.
250VAC Max, 2A
Din-rail, TS35
-50°C to +85°C
13,000 ft (4,000m)
5 to 95% non-condensing, up to 100% external
Thermoplastic UL94-V0
IP20
3.4 oz

Class I, Class II
Class I, Class II
Class I, Class II
Low Voltage SPD
Directive 2002/95/EC

Type	Part No.
SPD II 120V/40kA	6720005410
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419



SPD II 230V/40kA



220/380V, 240/415V
1 Pole, L-N or L-G
275VAC
275VAC
<1mA
none
20kA
40kA
900V
1.25kV
25kAIC
Single-phase
UL 60691
Time Delay - 125A Max.
90 x 18 x 67
Screw terminals, #4 AWG Max.
250VAC Max, 2A
Din-rail, TS35
-50°C to +85°C
13,000 ft (4,000m)
5 to 95% non-condensing, up to 100% external
Thermoplastic UL94-V0
IP20
3.4 oz

Class I, Class II
Class I, Class II
Class I, Class II
Low Voltage SPD
Directive 2002/95/EC

Type	Part No.
SPD II 230V/40kA	6720005411
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419



SPD II bus bars

For transient voltage protection of single and multi-phase circuits, in the main electrical panel, downstream of the main circuit breaker, or in control panels.

SPD II 277V/40kA



SPD II 480V/40kA



Technical Data

AC Network	220/380V, 277V
Connection Mode	1 Pole, L-N or L-G
Max. Operating Voltage (MCOV)	400VAC
TOV Withstand	400VAC
Leakage Current at Uc	<1mA
Follow Current	none
UL Nominal Discharge Current (In), 15 impulses 8/20 μs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 μs	40kA
UL Voltage Protection Rating (VPR)	1500V
Protection Level (Up)	1.8kV
UL Short-Circuit Current Rating (SCCR)	25kAIC
AC System	Single-phase
Thermal Disconnecter	UL 60691
Overcurrent Protection	Time Delay - 125A Max.
Dimensions (mm)	90 x 18 x 67
Connection	Screw terminals, #4 AWG Max.
Remote Signal Indicator	250VAC Max, 2A
Mounting	Din-rail, TS35
Operating Temp	-50°C to +85°C
Operating Altitude (Max.)	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Weight	3.4 oz

220/380V, 277V	347/600V, 480V
1 Pole, L-N or L-G	1 Pole, L-N or L-G
400VAC	550VAC
400VAC	550VAC
<1mA	<1mA
none	none
20kA	20kA
40kA	40kA
1500V	1800V
1.8kV	2.5kV
25kAIC	25kAIC
Single-phase	Single-phase
UL 60691	UL 60691
Time Delay - 125A Max.	Time Delay - 125A Max.
90 x 18 x 67	90 x 18 x 67
Screw terminals, #4 AWG Max.	Screw terminals, #4 AWG Max.
250VAC Max, 2A	250VAC Max, 2A
Din-rail, TS35	Din-rail, TS35
-50°C to +85°C	-50°C to +85°C
13,000 ft (4,000m)	13,000 ft (4,000m)
5 to 95% non-condensing, up to 100% external	5 to 95% non-condensing, up to 100% external
Thermoplastic UL94-V0	Thermoplastic UL94-V0
IP20	IP20
3.4 oz	3.4 oz

347/600V, 480V	347/600V, 480V
1 Pole, L-N or L-G	1 Pole, L-N or L-G
550VAC	550VAC
550VAC	550VAC
<1mA	<1mA
none	none
20kA	20kA
40kA	40kA
1800V	1800V
2.5kV	2.5kV
25kAIC	25kAIC
Single-phase	Single-phase
UL 60691	UL 60691
Time Delay - 125A Max.	Time Delay - 125A Max.
90 x 18 x 67	90 x 18 x 67
Screw terminals, #4 AWG Max.	Screw terminals, #4 AWG Max.
250VAC Max, 2A	250VAC Max, 2A
Din-rail, TS35	Din-rail, TS35
-50°C to +85°C	-50°C to +85°C
13,000 ft (4,000m)	13,000 ft (4,000m)
5 to 95% non-condensing, up to 100% external	5 to 95% non-condensing, up to 100% external
Thermoplastic UL94-V0	Thermoplastic UL94-V0
IP20	IP20
3.4 oz	3.4 oz

Approvals

IEC 61643-1 - INTERNATIONAL
EN 61643-11 - EUROPE
NF EN 61643-11 - FRANCE
UL1449 3rd Edition - USA and CANADA
RoHS

Class I, Class II
Class I, Class II
Class I, Class II
Class I, Class II
Low Voltage SPD
Directive 2002/95/EC

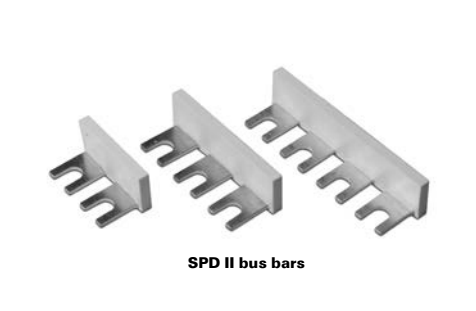
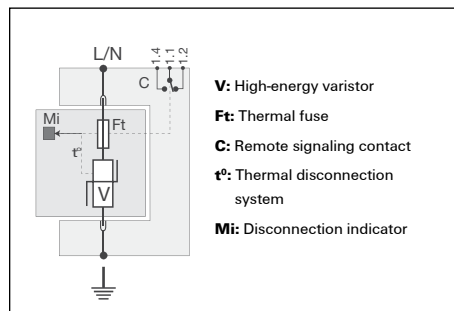
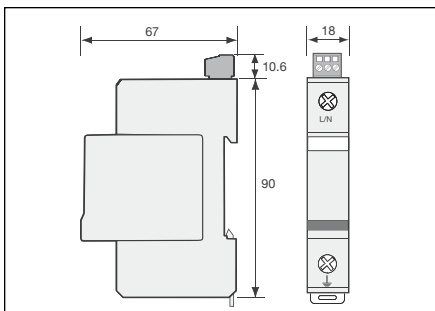
Class I, Class II
Class I, Class II
Class I, Class II
Class I, Class II
Low Voltage SPD
Directive 2002/95/EC

Ordering Data

Surge Protector
Bus bars

Type	Part No.
SPD II 277V/40kA	6720005412
Type	Part No.
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419

Type	Part No.
SPD II 480V/40kA	6720005413
Type	Part No.
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419



For transient voltage protection of multi-phase circuits with TT grounding systems.

SPD II N/PE



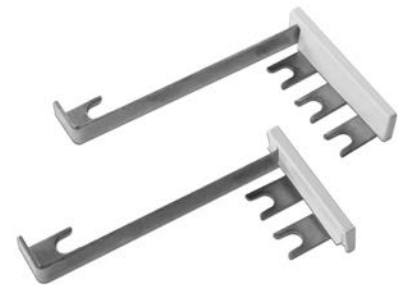
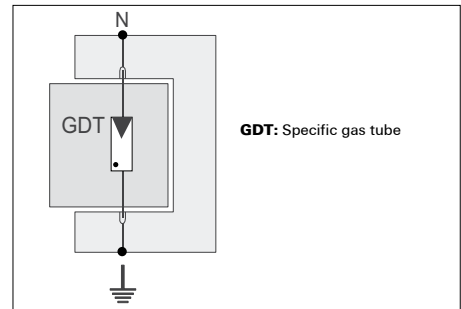
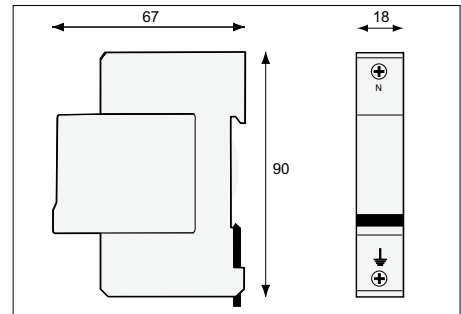
Technical Data

Network	230/400V, 120/208V
Max. Operating Voltage (MCOV)	255VAC
TOV Withstand	400VAC
Leakage Current at Uc	none
Follow Current	100A
Nominal Discharge Current (In), 15 impulses 8/20 μs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 μs	40kA
Protection Level (Up)	1.5kV
UL Short-Circuit Current Rating (SCCR)	25kAIC
Dimensions (mm)	90 x 18 x 67
Connection	Screw terminals, #4 AWG Max.
Mounting	Din-rail, TS35
Operating Temp	-40°C to +85°C
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Approvals	
IEC 61643-1 - INTERNATIONAL	Class II
EN 61643-11 - EUROPE	Class II
NF EN 61643-11 - FRANCE	Class II
UL1449 3rd Edition - USA and CANADA	Low Voltage SPD

Ordering Data

Surge Protector	Type	Part No.
	SPD II N/PE	6720005414

Bus bars	Type	Part No.
	SPD S LINK 1/3	6720005461



SPD II bus bars

For devices with single phase voltage supplies

- Protects L & N conductors (common and differential modes)
- Integrated contact for remote status indication
- Local status indicator on arrester
- Quick replacement with pluggable arrester

SPD II 120V/G/40kA



SPD II 240V/G/40kA



Technical Data

AC Network	120V
Connection Mode	TN-TT
Max. Operating Voltage (MCOV)	150VAC
TOV Withstand	150VAC
Leakage Current at Uc	<1mA
Protection Mode	MC/MD
Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA
Protection Level (Up)	1.5/0.9kV
Residual Voltage @ 5k	0.6kV
Short-Circuit Current Rating (SCCR)	10kAIC
AC System	Single-phase
Thermal Disconnecter	Internal
Overcurrent Protection	Fuses type gG 50A Max.
Dimensions (mm)	90 x 18 x 58
Connection	Screw terminals, #4AWG Max.
Disconnection Indicator	2 mechanical indicators
Installation Ground Fault Breaker	Type S or delayed
Mounting	Din-rail, TS35
Operating Temp	-40°C to +85°C
Operating Altitude	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Weight	3.4 oz
Approvals	
IEC 61643-1 - INTERNATIONAL	Low Voltage SPD - Test Class II
EN 61643-11 - EUROPE	Low Voltage SPD - Test Class II
NF EN 61643-11 - FRANCE	Low Voltage SPD - Test Class II
UL1449 3rd Edition - USA and CANADA	UL file E338172, CSA file 253665

AC Network	230V
Connection Mode	TN
Max. Operating Voltage (MCOV)	255VAC
TOV Withstand	255VAC
Leakage Current at Uc	<1mA
Protection Mode	MC/MD
Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA
Protection Level (Up)	1.5/1.25kV
Residual Voltage @ 5k	0.9kV
Short-Circuit Current Rating (SCCR)	10000 A
AC System	Single-phase
Thermal Disconnecter	Internal
Overcurrent Protection	Fuses type gG 50A Max.
Dimensions (mm)	90 x 18 x 67
Connection	Screw terminals, #4AWG Max.
Disconnection Indicator	2 mechanical indicators
Installation Ground Fault Breaker	Type S or delayed
Mounting	Din-rail, TS35
Operating Temp	-40°C to +85°C
Operating Altitude	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Weight	3.4 oz
Approvals	
IEC 61643-1 - INTERNATIONAL	Low Voltage SPD - Test Class II
EN 61643-11 - EUROPE	Low Voltage SPD - Test Class II
NF EN 61643-11 - FRANCE	Low Voltage SPD - Test Class II
UL1449 3rd Edition - USA and CANADA	UL file E338172, CSA file 253665

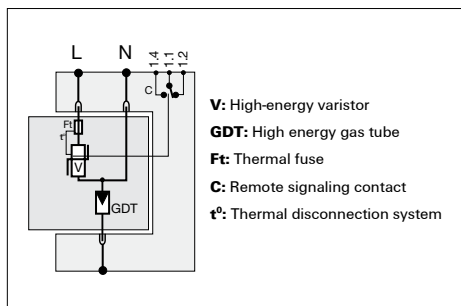
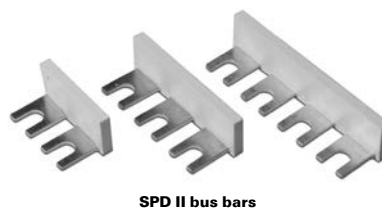
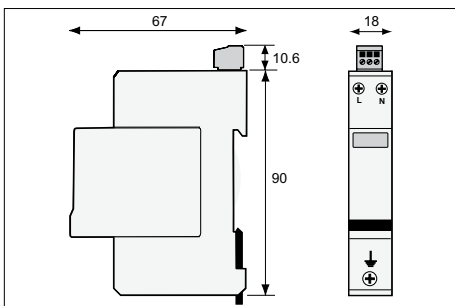
AC Network	230V
Connection Mode	TN
Max. Operating Voltage (MCOV)	255VAC
TOV Withstand	255VAC
Leakage Current at Uc	<1mA
Protection Mode	MC/MD
Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA
Protection Level (Up)	1.5/1.25kV
Residual Voltage @ 5k	0.9kV
Short-Circuit Current Rating (SCCR)	10000 A
AC System	Single-phase
Thermal Disconnecter	Internal
Overcurrent Protection	Fuses type gG 50A Max.
Dimensions (mm)	90 x 18 x 67
Connection	Screw terminals, #4AWG Max.
Disconnection Indicator	2 mechanical indicators
Installation Ground Fault Breaker	Type S or delayed
Mounting	Din-rail, TS35
Operating Temp	-40°C to +85°C
Operating Altitude	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Weight	3.4 oz
Approvals	
IEC 61643-1 - INTERNATIONAL	Low Voltage SPD - Test Class II
EN 61643-11 - EUROPE	Low Voltage SPD - Test Class II
NF EN 61643-11 - FRANCE	Low Voltage SPD - Test Class II
UL1449 3rd Edition - USA and CANADA	UL file E338172, CSA file 253665

Ordering Data

Surge Protector	
Bus bars	

Type	Part No.
SPD II 120V/G/40kA	6720005415
Type	Part No.
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419

Type	Part No.
SPD II 240V/G/40kA	6720005503
Type	Part No.
SPD 2P LINK	6720005417
SPD 3P LINK	6720005418
SPD 4P LINK	6720005419



SPD II & III - AC Surge Protectors

For transient voltage protection of single-phase devices.

- Protects 2 conductors - typically L & N, but could also be L1 & L2
- Integrated contact for remote status indication
- Pluggable replaceable arrester

SPD III 120V/40kA

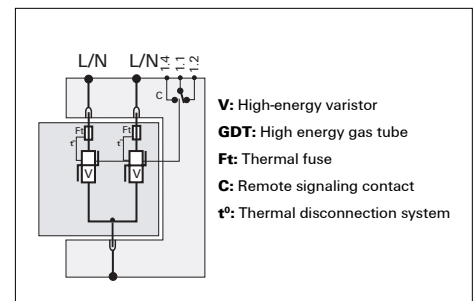
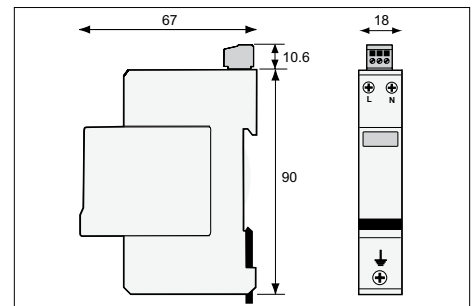


Technical Data

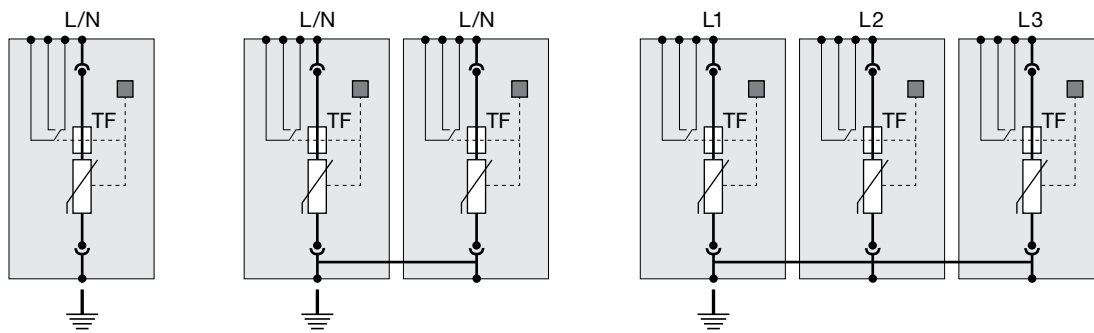
AC Network	120V
Connection Mode	TN
Max. Operating Voltage (MCOV)	150VAC
TOV Withstand	150VAC
Max load current	16A
Leakage Current at Uc	<1mA
Follow Current	none
Nominal Discharge Current (In), 15 impulses 8/20 μs	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 μs	40kA
Protection Level (Up)	1.5/0.9kV
Short-Circuit Current Rating (SCCR)	10kAIC
AC System	Single-phase
Thermal Disconnecter	UL 60691 Internal
Overcurrent Protection	Fuses type gG - 50A Max.
Dimensions (mm)	90 x 18 x 58
Connection	Screw terminals, #4 AWG Max.
Remote Signal Indicator	250VAC Max, 2A
Mounting	Din-rail, TS35
Operating Temp	-40°C to +85°C
Operating Altitude	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0
Environmental Rating	IP20
Weight	3.4 oz
Approvals	
IEC 61643-1 - INTERNATIONAL	Class II, Class III
EN 61643-11 - EUROPE	Class II, Class III
NF EN 61643-11 - FRANCE	Class II, Class III
UL1449 3rd Edition - USA and CANADA	UL file E338172, file 253665

Ordering Data

Surge Protector	Type	Part No.
	SPD III 120V/40kA	6720005416



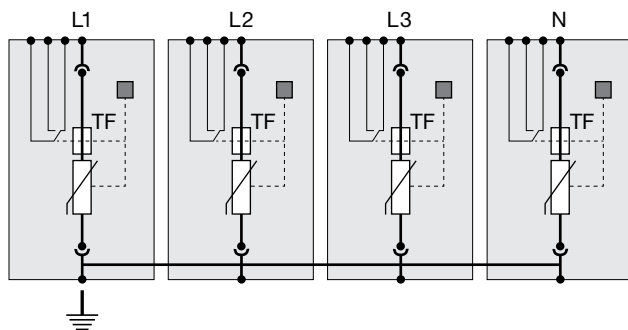
Basic configurations 1



SPD parts needed:

Nom. V	Description	Qty	Qty	Qty	Part No.
110/120V	SPD II 120V/40kA	1	2	3	6720005410
230/240V	SPD II 230V 40kA	1	2	3	6720005411
277V	SPD II 277V 40kA	1	2	3	6720005412
480V	SPD II 480V 40kA	1	2	3	6720005413
All	SPD 2P Link	0	1	0	6720005417
All	SPD 3P Link	0	0	1	6720005418

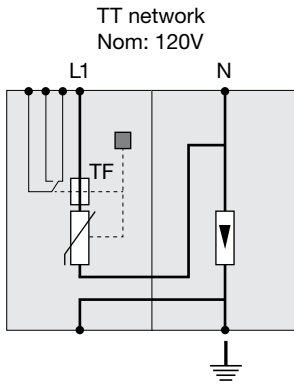
Basic configurations 2



SPD parts needed:

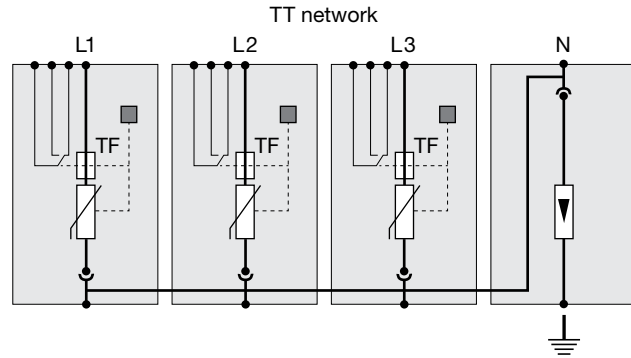
Nom. V	Description	Qty	Part No.
110/120V	SPD II 120V/40kA	4	6720005410
230/240V	SPD II 230V 40kA	4	6720005411
277V	SPD II 277V 40kA	4	6720005412
480V	SPD II 480V 40kA	4	6720005413
All	SPD 4P Link	1	6720005419

Basic configurations 3



SPD parts needed:

Nom. V	Description	Qty	Part No.
120V	SPD II 120V/G/40kA	1	6720005415



SPD parts needed:

Nom. V	Description	Qty	Part No.
110/120V	SPD II 120V/40kA	3	6720005410
230/240V	SPD II 230V 40kA	3	6720005411
277V	SPD II 277V 40kA	3	6720005412
480V	SPD II 480V 40kA	3	6720005413
All	SPD II N/PE	1	6720005414
All	SPD S Link 1/3	1	6720005461