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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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 120V/40kA



SPD II 230V/40kA



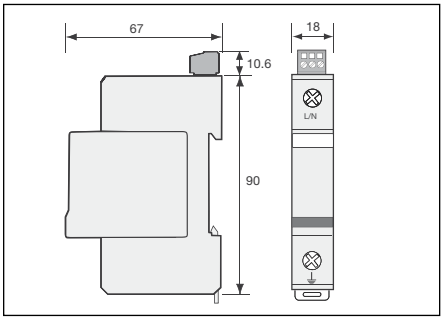
Technical Data

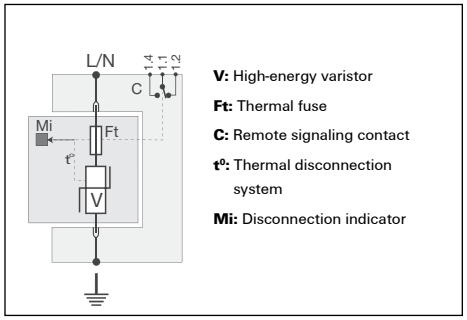
AC Network	120/240V, 120/208V	220/380V, 240/415V
Connection Mode	1 Pole, L-N or L-G	1 Pole, L-N or L-G
Max. Operating Voltage (MCOV)	150VAC	275VAC
TOV Withstand	150VAC	275VAC
Leakage Current at Uc	<1mA	<1mA
Follow Current	none	none
UL Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA	40kA
UL Voltage Protection Rating (VPR)	500V	900V
Protection Level (Up)	0.9kV	1.25kV
UL Short-Circuit Current Rating (SCCR)	25kAIC	25kAIC
AC System	Single-phase	Single-phase
Thermal Disconnector	UL 60691	UL 60691
Overcurrent Protection	Time Delay - 125A Max.	Time Delay - 125A Max.
Dimensions (mm)	90 x 18 x 67	90 x 18 x 67
Connection	Screw terminals, #4 AWG Max.	Screw terminals, #4 AWG Max.
Remote Signal Indicator	250VAC Max, 2A	250VAC Max, 2A
Mounting	Din-rail, TS35	Din-rail, TS35
Operating Temp	-50°C to +85°C	-50°C to +85°C
Operating Altitude (Max.)	13,000 ft (4,000m)	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0	Thermoplastic UL94-V0
Environmental Rating	IP20	IP20
Weight	3.4 oz	3.4 oz

Approvals		
IEC 61643-1 - INTERNATIONAL	Class I, Class II	Class I, Class II
EN 61643-11 - EUROPE	Class I, Class II	Class I, Class II
NF EN 61643-11 - FRANCE	Class I, Class II	Class I, Class II
UL1449 3rd Edition - USA and CANADA	Low Voltage SPD	Low Voltage SPD
RoHS	Directive 2002/95/EC	Directive 2002/95/EC

Ordering Data

Surge Protector	**Type**	**Part No.**	**Type**	**Part No.**
	SPD II 120V/40kA	**6720005410**	SPD II 230V/40kA	**6720005411**
Bus bars	**Type**	**Part No.**	**Type**	**Part No.**
	SPD 2P LINK	**6720005417**	SPD 2P LINK	**6720005417**
	SPD 3P LINK	**6720005418**	SPD 3P LINK	**6720005418**
	SPD 4P LINK	**6720005419**	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

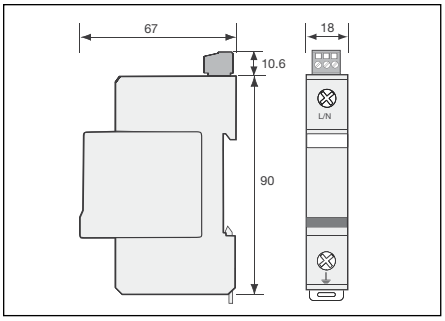
AC Network	220/380V, 277V	347/600V, 480V
Connection Mode	1 Pole, L-N or L-G	1 Pole, L-N or L-G
Max. Operating Voltage (MCOV)	400VAC	550VAC
TOV Withstand	400VAC	550VAC
Leakage Current at Uc	<1mA	<1mA
Follow Current	none	none
UL Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA	40kA
UL Voltage Protection Rating (VPR)	1500V	1800V
Protection Level (Up)	1.8kV	2.5kV
UL Short-Circuit Current Rating (SCCR)	25kAIC	25kAIC
AC System	Single-phase	Single-phase
Thermal Disconnector	UL 60691	UL 60691
Overcurrent Protection	Time Delay - 125A Max.	Time Delay - 125A Max.
Dimensions (mm)	90 x 18 x 67	90 x 18 x 67
Connection	Screw terminals, #4 AWG Max.	Screw terminals, #4 AWG Max.
Remote Signal Indicator	250VAC Max, 2A	250VAC Max, 2A
Mounting	Din-rail, TS35	Din-rail, TS35
Operating Temp	-50°C to +85°C	-50°C to +85°C
Operating Altitude (Max.)	13,000 ft (4,000m)	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0	Thermoplastic UL94-V0
Environmental Rating	IP20	IP20
Weight	3.4 oz	3.4 oz

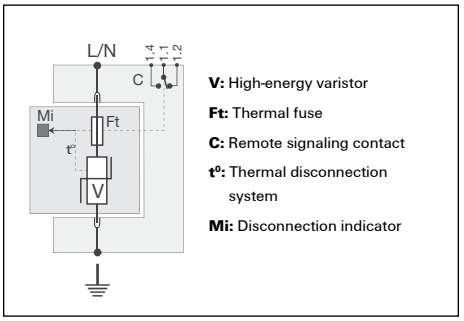
Approvals		
IEC 61643-1 - INTERNATIONAL	Class I, Class II	Class I, Class II
EN 61643-11 - EUROPE	Class I, Class II	Class I, Class II
NF EN 61643-11 - FRANCE	Class I, Class II	Class I, Class II
UL1449 3rd Edition - USA and CANADA	Low Voltage SPD	Low Voltage SPD
RoHS	Directive 2002/95/EC	Directive 2002/95/EC

Ordering Data

Surge Protector		
	Type	**Part No.**
	SPD II 277V/40kA	**6720005412**
Bus bars	**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**







SPD II bus bars

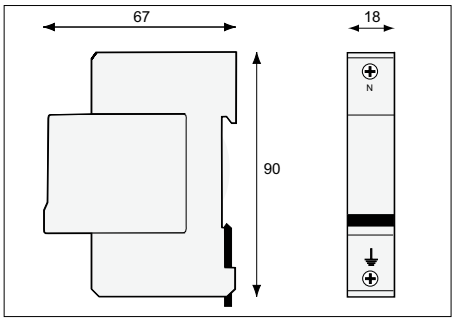
For transient voltage protection of multi-phase circuits with TT grounding systems.

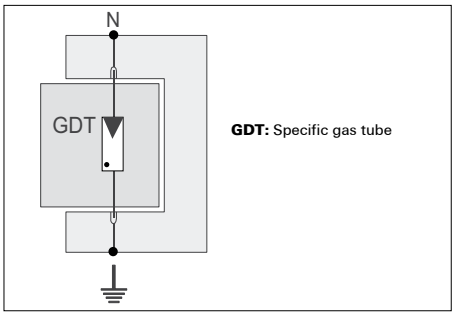
SPD II N/PE



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

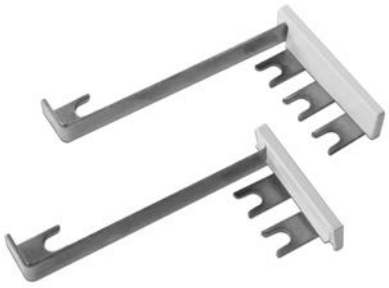




GDT: Specific gas tube

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

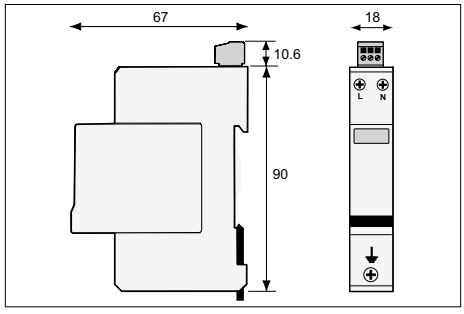


Technical Data

AC Network	120V	230V
Connection Mode	TN-TT	TN
Max. Operating Voltage (MCOV)	150VAC	255VAC
TOV Withstand	150VAC	255VAC
Leakage Current at Uc	<1mA	<1mA
Protection Mode	MC/MD	MC/MD
Nominal Discharge Current (In), 15 impulses 8/20 µs	20kA	20kA
Max. Discharge Current (Imax), 1 impulse 8/20 µs	40kA	40kA
Protection Level (Up)	1.5/0.9kV	1.5/1.25kV
Residual Voltage @ 5k	0.6kV	0.9kV
Short-Circuit Current Rating (SCCR)	10kAIC	10000 A
AC System	Single-phase	Single-phase
Thermal Disconnector	Internal	Internal
Overcurrent Protection	Fuses type gG 50A Max.	Fuses type gG 50A Max.
Dimensions (mm)	90 x 18 x 58	90 x 18 x 67
Connection	Screw terminals, #4AWG Max.	Screw terminals, #4AWG Max.
Disconnection Indicator	2 mechanical indicators	2 mechanical indicators
Installation Ground Fault Breaker	Type S or delayed	Type S or delayed
Mounting	Din-rail, TS35	Din-rail, TS35
Operating Temp	-40°C to +85°C	-40°C to +85°C
Operating Altitude	13,000 ft (4,000m)	13,000 ft (4,000m)
Relative Humidity	5 to 95% non-condensing, up to 100% external	5 to 95% non-condensing, up to 100% external
Enclosure Material	Thermoplastic UL94-V0	Thermoplastic UL94-V0
Environmental Rating	IP20	IP20
Weight	3.4 oz	3.4 oz
Approvals		
IEC 61643-1 - INTERNATIONAL	Low Voltage SPD - Test Class II	Low Voltage SPD - Test Class
EN 61643-11 - EUROPE	Low Voltage SPD - Test Class II	Low Voltage SPD - Test Class
NF EN 61643-11 - FRANCE	Low Voltage SPD - Test Class II	Parafoudre Basse Tension - Essais Classe
UL1449 3rd Edition - USA and CANADA	UL file E338172, CSA file 253665	UL file E338172, CSA file 253665

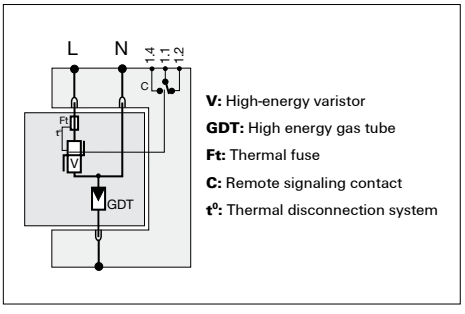
Ordering Data

Surge Protector	**Type**	**Part No.**	**Type**	**Part No.**
	SPD II 120V/G/40kA	**6720005415**	SPD II 240V/G/40kA	**6720005503**
Bus bars	**Type**	**Part No.**	**Type**	**Part No.**
	SPD 2P LINK	**6720005417**	SPD 2P LINK	**6720005417**
	SPD 3P LINK	**6720005418**	SPD 3P LINK	**6720005418**
	SPD 4P LINK	**6720005419**	SPD 4P LINK	**6720005419**





SPD II bus bars



V: High-energy varistor
GDT: High energy gas tube
Ft: Thermal fuse
C: Remote signaling contact
t°: Thermal disconnection system

For transient voltage protection of single-phase devices.

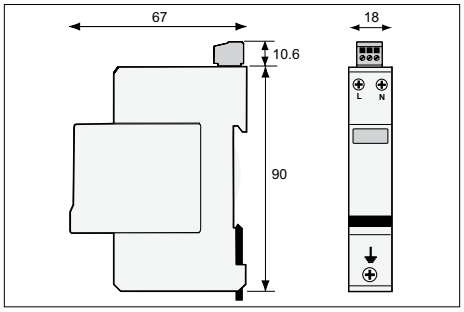
- Protects 2 conductors - typically L & N, but could also be L1 & L2
- Integrated contact for remote status indication
- Pluggable replaceable arrester

SPD III 120V/40kA



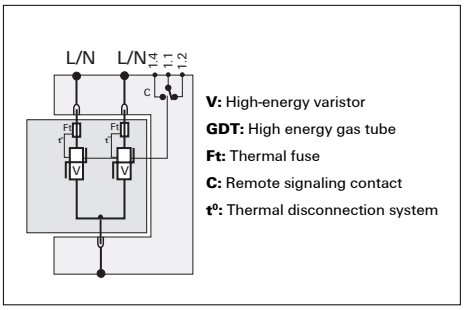
Technical Data

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 Disconnector	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

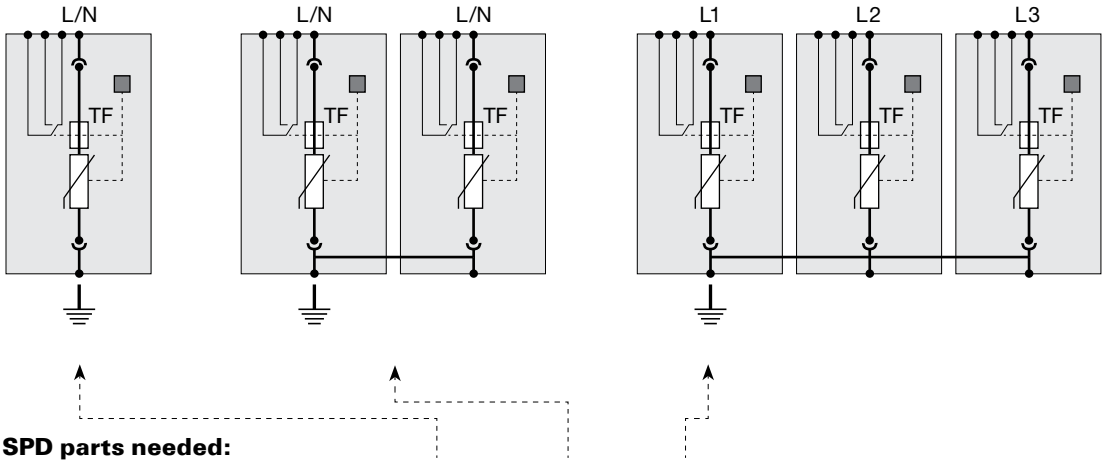


Ordering Data

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



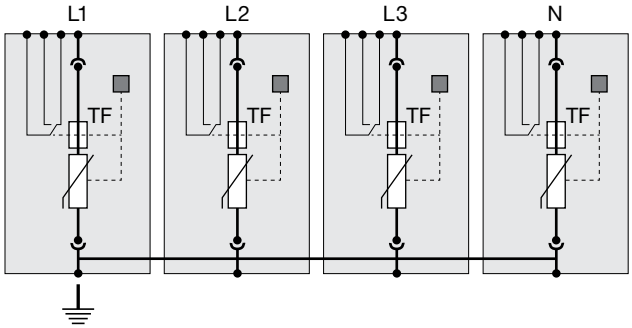
Basic configurations 1



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**

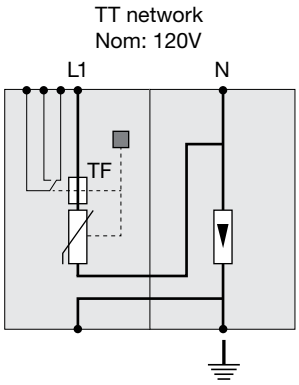
Basic configurations 2

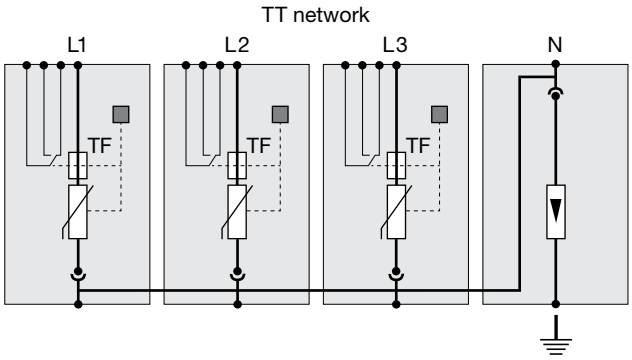


SPD parts needed:

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**