

Pluggable Single-Pole SPD

FLP12.5-XXX/1(S)

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards

Network Systems: TN-S, TN-C, TT (only L-N)

Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N

Surge Ratings: I_{imp} = up to 12.5 kA (10/350 μ s)

I_n = up to 20 kA (8/20 μ s)

IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA

Protective Elements: High Energy MOV

Housing: Pluggable Design

Compliance: IEC 61643-11:2011

EN 61643-11:2012

Technical Data

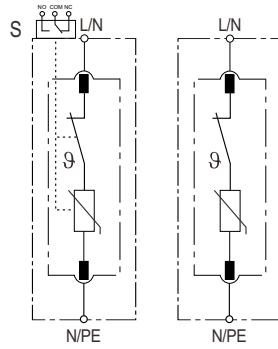
FLP12.5-XXX/1(S)		75	150	275	320	385	440
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	60 V	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	75 V	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA	12.5 kA	12.5 kA	12.5 kA	10 kA	10 kA
Specific Energy	W/R	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	25 kJ/ Ω	25 kJ/ Ω
Charge	Q	6.25 As	6.25 As	6.25 As	6.25 As	5 As	5 As
Voltage Protection Level	U_p	700 V	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A	< 25 ns					
Back-Up Fuse (max)		160 A gL / gG					
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA					
TOV Withstand 5s	U_T	114V	180V	335V	335V	335V	580V
TOV 120min	U_T	114V	230V	440V	440V	440V	765V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					
Mechanical & Environmental							
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]					
Permissible Operating Humidity	RH	5%...95%					
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m					
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)					
Mounting		35 mm DIN Rail, EN 60715					
Degree of Protection		IP 20 (built-in)					
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0					
Thermal Protection		Yes					
Operating State / Fault Indication		Green ok / Red defect					
Remote Contacts (RC)		Optional					
RC Switching Capacity		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A					
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)					
Order Information							
Order Code		75	150	275	320	385	440
FLP12.5-XXX/1		1207511	1215011	1227511	1232011	1238511	1244011
FLP12.5-XXX/1S (with remote contacts)		1207512	1215012	1227512	1232012	1238512	1244012
FLP12.5-XXX/0 (spare modules)		1207501	1215001	1227501	1232001	1238501	1244001

FLP12.5-XXX/1(S)

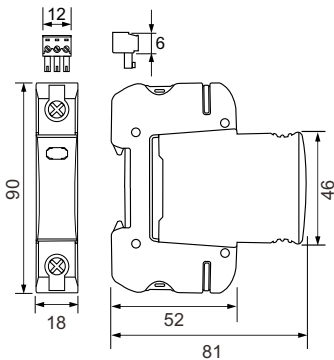
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

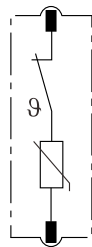


Dimensions & Packaging

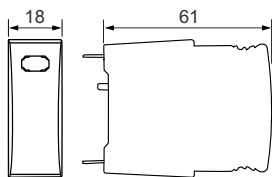
FLP12.5-XXX/1(S)	75	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	52 Units					

Plug Internal Configuration

FLP12.5-XXX/0



Dimensions & Packaging

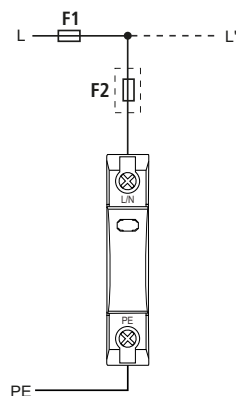


Dimensions & Packaging

FLP12.5-XXX/0	75	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	64 Units					

Connection Diagram

TN-S, TN-C, TT (Single-phase, 1+0)



Pluggable Multi-Pole SPD FLP12.5-XXX/2(S)

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 Surge Ratings: $I_{imp} =$ up to 12.5 kA (10/350 μ s)
 $I_n =$ up to 20kA (8/20 μ s)
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

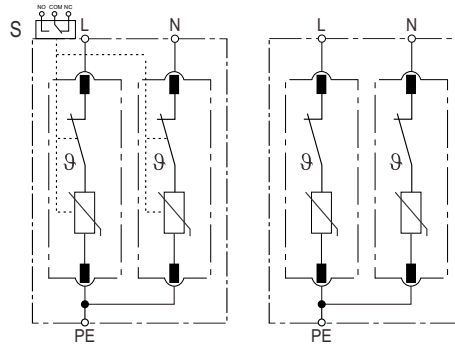
FLP12.5-XXX/2(S)		75	150	275	320	385	440
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o/U_n	60 V	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	75 V	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA	12.5 kA	12.5 kA	12.5 kA	10 kA	10 kA
Specific Energy	W/R	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	25 kJ/ Ω	25 kJ/ Ω
Charge	Q	6.25 As	6.25 As	6.25 As	6.25 As	5 As	5 As
Voltage Protection Level	U_p	700 V	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A	< 25 ns					
Back-Up Fuse (max)		160 A gL / gG					
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA					
TOV Withstand 5s	U_T	114V	180V	335V	335V	335V	580V
TOV 120min	U_T	114V	230V	440V	440V	440V	765V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					
Mechanical & Environmental							
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]					
Permissible Operating Humidity	RH	5%...95%					
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m					
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)					
Mounting		35 mm DIN Rail, EN 60715					
Degree of Protection		IP 20 (built-in)					
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0					
Thermal Protection		Yes					
Operating State / Fault Indication		Green ok / Red defect					
Remote Contacts (RC)		Optional					
RC Switching Capacity		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A					
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)					
Order Information							
Order Code		75	150	275	320	385	440
FLP12.5-XXX/2		1207521	1215021	1227521	1232021	1238521	1244021
FLP12.5-XXX/2S (with remote contacts)		1207522	1215022	1227522	1232022	1238522	1244022
FLP12.5-XXX/0 (spare modules)		1207501	1215001	1227501	1232001	1238501	1244001

FLP12.5-XXX/2(S)

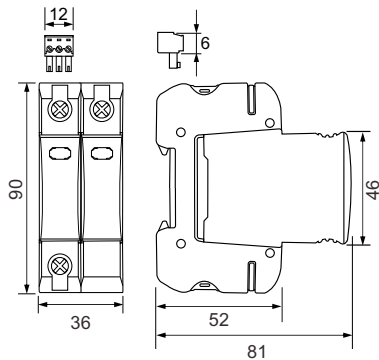
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

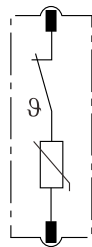


Dimensions & Packaging

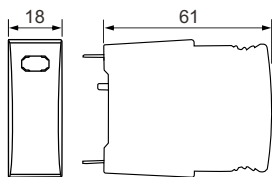
FLP12.5-XXX/2(S)	75	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	28 Units					

Plug Internal Configuration

FLP12.5-XXX/0



Dimensions & Packaging

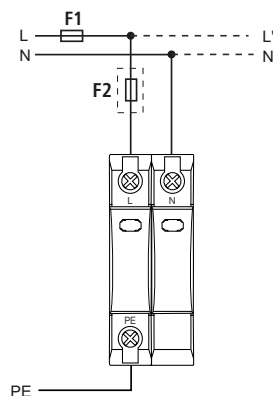


Dimensions & Packaging

FLP12.5-XXX/0	75	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	64 Units					

Connection Diagram

TN-S (Single-phase, 2+0)



Pluggable Multi-Pole SPD FLP12.5-XXX/3(S)

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 Surge Ratings: $I_{imp} =$ up to 12.5 kA (10/350 μ s)
 $I_n =$ up to 20kA (8/20 μ s)
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP12.5-XXX/3(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA	12.5 kA	12.5 kA	10 kA	10 kA
Specific Energy	W/R	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	25 kJ/ Ω	25 kJ/ Ω
Charge	Q	6.25 As	6.25 As	6.25 As	5 As	5 As
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Back-Up Fuse (max)				160 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			25 kA / 50 kA		
TOV Withstand 5s	U_T	180V	335V	335V	335V	580V
TOV 120min	U_T	230V	440V	440V	440V	765V
	mode	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports				1		

Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]				
Permissible Operating Humidity	RH	5%...95%				
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m				
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]				
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)				
Mounting		35 mm DIN Rail, EN 60715				
Degree of Protection		IP 20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		Green ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A				
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)				

Order Information

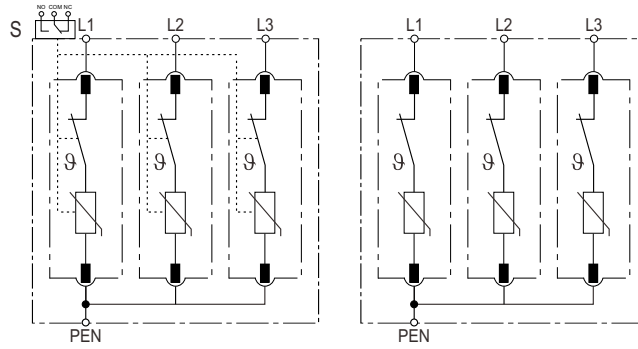
Order Code	150	275	320	385	440
FLP12.5-XXX/3	1215031	1227531	1232031	1238531	1244031
FLP12.5-XXX/3S (with remote contacts)	1215032	1227532	1232032	1238532	1244032
FLP12.5-XXX/0 (spare modules)	1215001	1227501	1232001	1238501	1244001

FLP12.5-XXX/3(S)

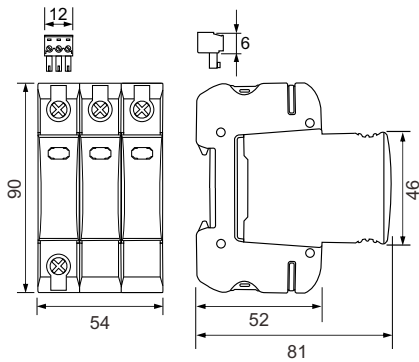
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

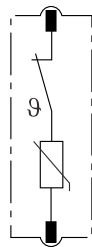


Dimensions & Packaging

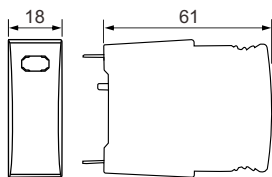
FLP12.5-XXX/3(S)	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 × 230 × 330 mm]				
Minimum Order Quantity	20 Units				

Plug Internal Configuration

FLP12.5-XXX/0



Dimensions & Packaging

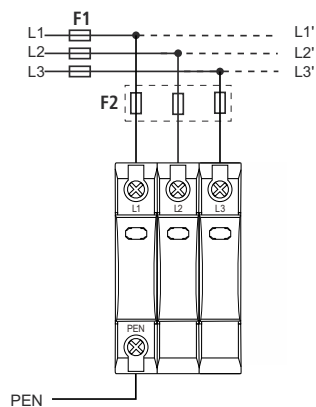


Dimensions & Packaging

FLP12.5-XXX/0	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 × 230 × 330 mm]				
Minimum Order Quantity	64 Units				

Connection Diagram

TN-C (Three-phase, 3+0)



Pluggable Multi-Pole SPD FLP12.5-XXX/4(S)

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 Surge Ratings: I_{imp} = up to 12.5 kA (10/350 μ s)
 I_n = up to 20kA (8/20 μ s)
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

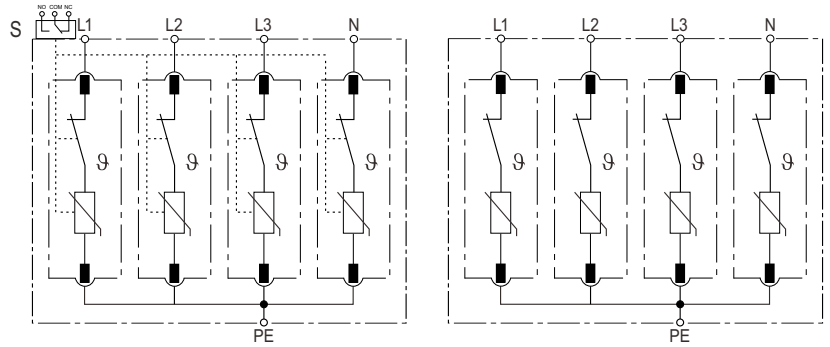
FLP12.5-XXX/4(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60Hz)	U_o/U_n	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage (AC)	U_c	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μ s)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 μ s)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA
Impulse Discharge Current (10/350 μ s)	I_{imp}	12.5 kA	12.5 kA	12.5 kA	10 kA	10 kA
Specific Energy	W/R	39 kJ/ Ω	39 kJ/ Ω	39 kJ/ Ω	25 kJ/ Ω	25 kJ/ Ω
Charge	Q	6.25 As	6.25 As	6.25 As	5 As	5 As
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Back-Up Fuse (max)				160 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			25 kA / 50kA		
TOV Withstand 5s	U_T	180V	335V	335V	335V	580V
TOV 120min	U_T	230V	440V	440V	440V	765V
	mode	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports				1		
Mechanical & Environmental						
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]				
Permissible Operating Humidity	RH	5%...95%				
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m				
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]				
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)				
Mounting		35 mm DIN Rail, EN 60715				
Degree of Protection		IP 20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		Green ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A				
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Order Code		150	275	320	385	440
FLP12.5-XXX/4		1215041	1227541	1232041	1238541	1244041
FLP12.5-XXX/4S (with remote contacts)		1215042	1227542	1232042	1238542	1244042
FLP12.5-XXX/0 (spare modules)		1215001	1227501	1232001	1238501	1244001

FLP12.5-XXX/4(S)

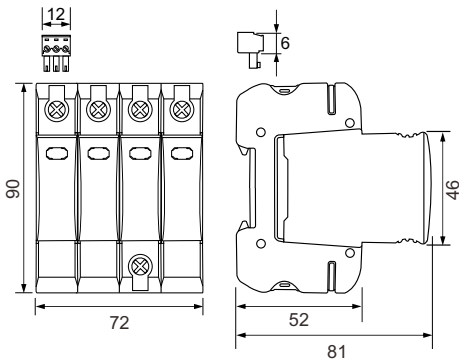
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

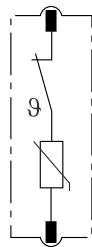


Dimensions & Packaging

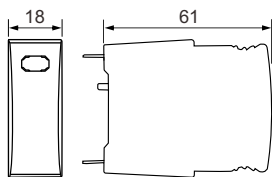
FLP12.5-XXX/4(S)	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	16 Units				

Plug Internal Configuration

FLP12.5-XXX/0



Dimensions & Packaging

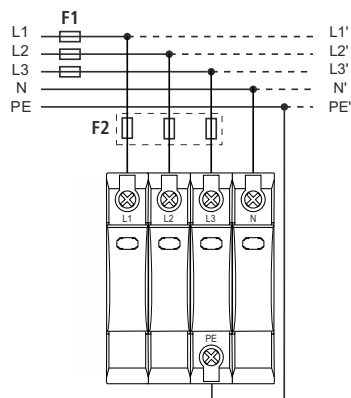


Dimensions & Packaging

FLP12.5-XXX/0	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	64 Units				

Connection Diagram

TN-S (Three-phase, 4+0)



Pluggable Multi-Pole SPD FLP12.5-XXX/1(S)+1

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 12.5 \text{ kA (10/350 } \mu\text{s)}$
 $I_n = 20 \text{ kA (8/20 } \mu\text{s)}$
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV and GDT
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

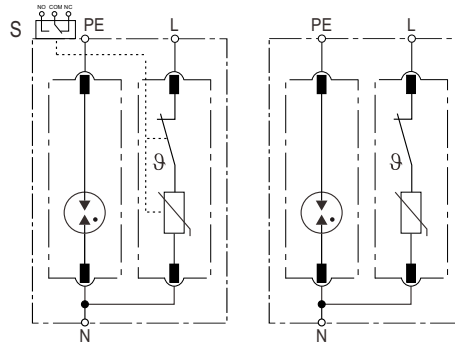
FLP12.5-XXX/1(S)+1	75	150	275	320	385	440	
IEC Electrical							
Nominal AC Voltage (50/60Hz)	60 V	120 V	230 V	230 V	230 V	400 V	
Maximum Continuous Operating Voltage	(L - N) U_c (N - PE) U_c	75 V	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μs)	(L - N) / (N - PE) I_n	20 kA / 25 kA					
Maximum Discharge Current (8/20 μs)	(L - N) / (N - PE) I_{max}	50 kA / 50 kA					
Impulse Discharge Current (10/350 μs)	(L - N) / (N - PE) I_{imp}	12.5 kA / 25 kA	12.5 kA / 25 kA	12.5 kA / 25 kA	12.5 kA / 25 kA	10 kA / 25 kA	10 kA / 25 kA
Specific Energy	(L - N) / (N - PE) W/R	39 kJ/ Ω / 156 kJ/ Ω					
Charge	(L-N)/(N-PE) Q	6.25 As / 12.5 As					
Voltage Protection Level	(L - N) / (N - PE) U_p	0.7kV / 1.5kV	1.0kV / 1.5kV	1.5kV / 1.5kV	1.6kV / 1.5kV	1.8kV / 1.5kV	2.0kV / 1.5kV
Follow Current Interrupt Rating	(N-PE) I_{fi}	100A _{RMS}					
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns					
Back-Up Fuse (max)		160 A gL / gG					
Short-Circuit Current Rating (AC)	(L - N) I_{SCCR}	25 kA / 50 kA					
TOV Withstand 5s	(L - N) U_T	114V	180V	335V	335V	335V	580V
TOV 120min	(L - N) U_T	114V	230V	440V	440V	440V	765V
	mode	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail	Safe Fail
TOV Withstand 200ms	(N-PE) U_T	1200V					
Number of Ports		1					
Mechanical & Environmental							
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]					
Permissible Operating Humidity	RH	5%...95%					
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m					
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]					
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)					
Mounting		35 mm DIN Rail, EN 60715					
Degree of Protection		IP 20 (built-in)					
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0					
Thermal Protection		Yes					
Operating State / Fault Indication		Green ok / Red defect					
Remote Contacts (RC)		Optional					
RC Switching Capacity		AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5A					
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)					
Order Information							
Order Code	75	150	275	320	385	440	
FLP12.5-XXX/1+1	1207513	1215013	1227513	1232013	1238513	1244013	
FLP12.5-XXX/1S+1 (with remote contacts)	1207514	1215014	1227514	1232014	1238514	1244014	
FLP12.5-XXX/0 (spare modules)	1207501	1215001	1227501	1232001	1238501	1244001	
FLP12.5-NPE/0 (spare modules)	1225501	1225501	1225501	1225501	1225501	1225501	

FLP12.5-XXX/1(S)+1

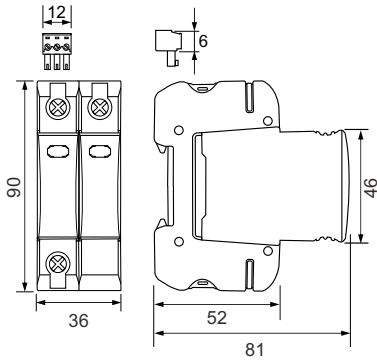
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

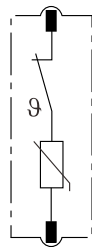


Dimensions & Packaging

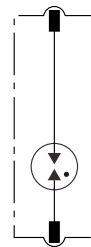
FLP12.5-XXX/1(S)+1	75	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	28 Units					

Plug Internal Configuration

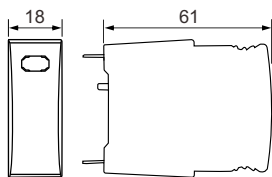
FLP12.5-XXX/0



FLP12.5-NPE/0



Dimensions & Packaging

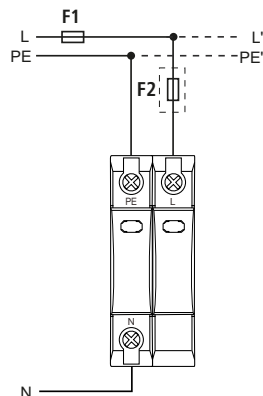


Dimensions & Packaging

FLP12.5-XXX/0	75	150	275	320	385	440
FLP12.5-NPE/0	25					
Single Unit DIN 43880 Dimension	1 CTN					
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]					
Minimum Order Quantity	64 Units					

Connection Diagram

TN-S,TT (Single-phase, 1+1)



Pluggable Multi-Pole SPD FLP12.5-XXX/2(S)+1

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 12.5 \text{ kA (10/350 } \mu\text{s)}$
 $I_n = 20 \text{ kA (8/20 } \mu\text{s)}$
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV and GDT
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

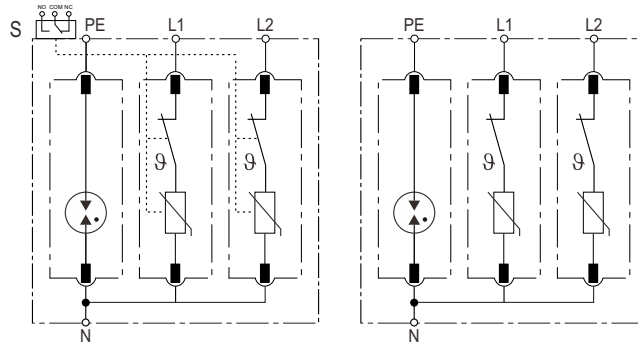
FLP12.5-XXX/2(S)+1	150	275	320	385	440
IEC Electrical					
Nominal AC Voltage (50/60Hz)	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage	(L - N) U_c (N - PE) U_c	150 V	275 V	320 V 255 V	385 V 440 V
Nominal Discharge Current (8/20 μs)	(L - N) / (N - PE) I_n			20 kA / 50 kA	
Maximum Discharge Current (8/20 μs)	(L - N) / (N - PE) I_{max}			50 kA / 100 kA	
Impulse Discharge Current (10/350 μs)	(L - N) / (N - PE) I_{imp}	12.5 kA / 50 kA	12.5 kA / 50 kA	12.5 kA / 50 kA	10 kA / 50 kA 10 kA / 50 kA
Specific Energy	(L - N) / (N - PE) W/R			39 kJ/ Ω / 625 kJ/ Ω	
Charge	(L-N)/(N-PE) Q			6.25 As / 25 As	
Voltage Protection Level	(L - N) / (N - PE) U_p	1.0kV / 1.5kV	1.5kV / 1.5kV	1.6kV / 1.5kV	1.8kV / 1.5kV 2.0kV / 1.5kV
Follow Current Interrupt Rating	(N-PE) I_{fi}			100 A _{RMS}	
Response Time	(L-N)/(N-PE) t_A			< 25 ns / < 100 ns	
Back-Up Fuse (max)				160 A gL / gG	
Short-Circuit Current Rating (AC)	(L - N) I_{SCCR}			25 kA / 50 kA	
TOV Withstand 5s	(L - N) U_T	180V	335V	335V	335V 580V
TOV 120min	(L - N) U_T mode	230V Safe Fail	440V Safe Fail	440V Safe Fail	440V Safe Fail 765V Safe Fail
TOV Withstand 200ms	(N - PE) U_T			1200V	
Number of Ports			1		
Mechanical & Environmental					
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]			
Permissible Operating Humidity	RH	5%...95%			
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m			
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5 Nm]			
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)			
Mounting		35 mm DIN Rail, EN 60715			
Degree of Protection		IP 20 (built-in)			
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0			
Thermal Protection		Yes			
Operating State / Fault Indication		Green ok / Red defect			
Remote Contacts (RC)		Optional			
RC Switching Capacity		AC: 250V/0.5 A; DC: 250V/0.1 A; 125V/0.2 A; 75V/0.5 A			
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)			
Order Information					
Order Code	150	275	320	385	320
FLP12.5-XXX/2+1	1215023	1227523	1232023	1238523	1244023
FLP12.5-XXX/2S+1 (with remote contacts)	1215024	1227524	1232024	1238524	1244024
FLP12.5-XXX/0 (spare modules)	1215001	1227501	1232001	1238501	1244001
FLP12.5-NPE/0 (spare modules)	1225502	1225502	1225502	1225502	1225502

FLP12.5-XXX/2(S)+1

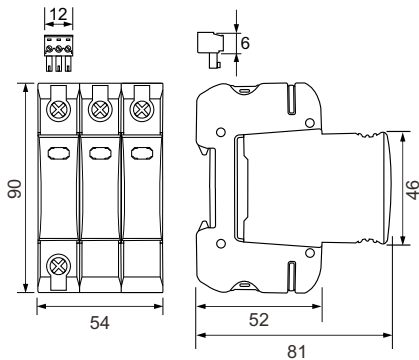
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

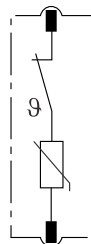


Dimensions & Packaging

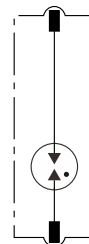
FLP12.5-XXX/2(S)+1	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	20 Units				

Plug Internal Configuration

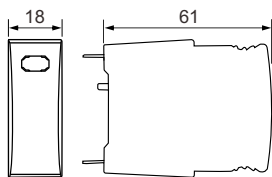
FLP12.5-XXX/0



FLP12.5-NPE/0



Dimensions & Packaging

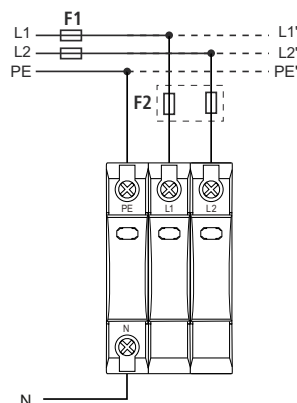


Dimensions & Packaging

FLP12.5-XXX/0	150	275	320	385	440
FLP12.5-NPE/0	50				
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	64 Units				

Connection Diagram

TN-S, TT (Three-phase, 2+1)



Pluggable Multi-Pole SPD FLP12.5-XXX/3(S)+1

Class I • Class II • Type 1 • Type 2 • Type 1CA



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 12.5 \text{ kA} (10/350 \mu\text{s})$
 $I_n = 20 \text{ kA} (8/20 \mu\text{s})$
 IEC/EN/UL Category: Class I+II / Type 1+2 / Type 1CA
 Protective Elements: High Energy MOV and GDT
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

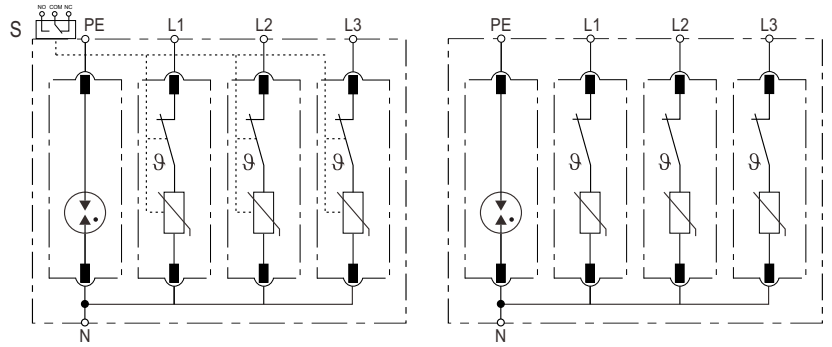
FLP12.5-XXX/3(S)+1	150	275	320	385	440	
IEC Electrical						
Nominal AC Voltage (50/60Hz)	120 V	230 V	230 V	230 V	400 V	
Maximum Continuous Operating Voltage	(L - N) U_c (N - PE) U_c	150 V	275 V	320 V	385 V	440 V
Nominal Discharge Current (8/20 μs)	(L - N) / (N - PE) I_n			20 kA / 50 kA		
Maximum Discharge Current (8/20 μs)	(L - N) / (N - PE) I_{max}			50 kA / 100 kA		
Impulse Discharge Current (10/350 μs)	(L - N) / (N - PE) I_{imp}	12.5 kA / 50 kA	12.5 kA / 50 kA	12.5 kA / 50 kA	10 kA / 50 kA	10 kA / 50 kA
Specific Energy	(L - N) / (N - PE) W/R			39 kJ/ Ω / 625 kJ/ Ω		
Charge	(L-N)/(N-PE) Q			6.25 As / 25 As		
Voltage Protection Level	(L - N) / (N - PE) U_p	1.0kV / 1.5kV	1.5kV / 1.5kV	1.6kV / 1.5kV	1.8kV / 1.5kV	2.0kV / 1.5kV
Follow Current Interrupt Rating	(N-PE) I_{fi}			100A _{RMS}		
Response Time	(L-N)/(N-PE) t_A			< 25 ns / < 100 ns		
Back-Up Fuse (max)				160 A gL / gG		
Short-Circuit Current Rating (AC)	(L - N) I_{SCCR}			25 kA / 50 kA		
TOV Withstand 5s	(L - N) U_T	180V	335V	335V	335V	580V
TOV 120min	(L - N) U_T mode	230V Safe Fail	440V Safe Fail	440V Safe Fail	440V Safe Fail	765V Safe Fail
TOV Withstand 200ms	(N - PE) U_T			1200V		
Number of Ports				1		
Mechanical & Environmental						
Operating Temperature Range	T_a	-40 °F to +158 °F [-40 °C to +70 °C]				
Permissible Operating Humidity	RH	5%...95%				
Atmospheric pressure and altitude		80k Pa ... 106k Pa / -500 m ... 2000 m				
Terminal Screw Torque	M_{max}	39.9 lbf-in [4.5Nm]				
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible) 35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)				
Mounting		35 mm DIN Rail, EN 60715				
Degree of Protection		IP 20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		Green ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250V/0.5 A; DC: 250V/0.1 A; 125V/0.2 A; 75V/0.5 A				
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Order Code	150	275	320	385	440	
FLP12.5-XXX/3+1	1215033	1227533	1232033	1238533	1244033	
FLP12.5-XXX/3S+1 (with remote contacts)	1215034	1227534	1232034	1238534	1244034	
FLP12.5-XXX/0 (spare modules)	1215001	1227501	1232001	1238501	1244001	
FLP12.5-NPE/0 (spare modules)	1225502	1225502	1225502	1225502	1225502	

FLP12.5-XXX/3(S)+1

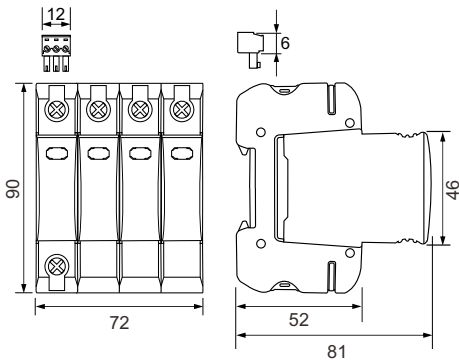
Internal Configuration

Legend

- L Line
- N Neutral
- PE Protective Earth
- S Signalling Contacts Optional



Dimensions & Packaging

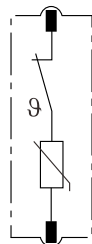


Dimensions & Packaging

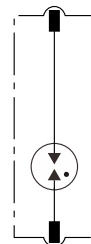
FLP12.5-XXX/3(S)+1	150	275	320	385	440
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	16 Units				

Plug Internal Configuration

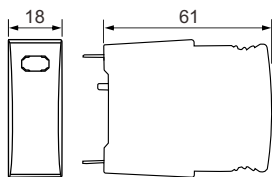
FLP12.5-XXX/0



FLP12.5-NPE/0



Dimensions & Packaging



Dimensions & Packaging

FLP12.5-XXX/0	150	275	320	385	440
FLP12.5-NPE/0	50				
Single Unit DIN 43880 Dimension	1 CTN				
Packaging Dimensions (HxWxL)	[200 x 230 x 330 mm]				
Minimum Order Quantity	64 Units				

Connection Diagram

TN-S, TT (Three-phase, 3+1)

