

AC Surge Protective Device

FLP25-xxx/1(S)

Class I • Type 1



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: $I_{imp} = 25 \text{ kA (10/350 } \mu\text{s)}$
 $I_n = 25 \text{ kA (8/20 } \mu\text{s)}$
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/1(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60 Hz)	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 μs)	I_n			25 kA		
Maximum Discharge Current (8/20 μs)	I_{max}			100 kA		
Impulse Discharge Current (10/350 μs)	I_{imp}			25 kA		
Specific Energy	W/R			156 kJ/Q		
Charge	Q			12,5 As		
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Max. Backup Fuse				315 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50 kA		
TOV Withstand 5 s	U_T	180 V	335 V	335 V	335 V	580 V
TOV 120 min	U_T	230 V	440 V	440 V	440 V	765 V
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% to 95%				
Atmospheric Pressure and Altitude		80 kPa to 106 kPa / -500 m to 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		IP20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		White ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A				
RC Conductor Cross Section (max.)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Ordering Code		150	275	320	385	440
FLP25-xxx/1		2515011	2527511	2532011	2538511	2544011
FLP25-xxx/1S (with remote contacts)		2515012	2527512	2532012	2538512	2544012

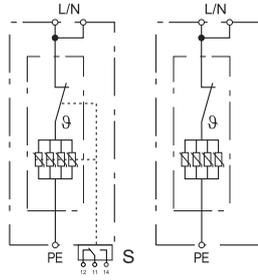


FLP25-xxx/1(S)

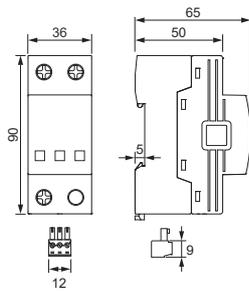
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging

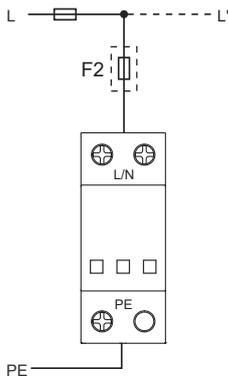


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Complete Unit					
FLP25-xxx/1(S)	150	275	320	385	440
DIN 43880 Dimension	1 CTN				
Packaging Dimensions (H x W x L)	[240 x 220 x 330 mm]				
Standard Order Quantity	42 Units				

Connection Diagram

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



AC Surge Protective Device

FLP25-xxx/2(S)

Class I • Type 1



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 Surge Ratings: $I_{imp} = 25 \text{ kA (10/350 } \mu\text{s)}$
 $I_n = 25 \text{ kA (8/20 } \mu\text{s)}$
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/2(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60 Hz)	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 μs)	I_n			25 kA		
Maximum Discharge Current (8/20 μs)	I_{max}			100 kA		
Impulse Discharge Current (10/350 μs)	I_{imp}			25 kA		
Specific Energy	W/R			156 kJ/Q		
Charge	Q			12,5 As		
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Max. Backup Fuse				315 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50 kA		
TOV Withstand 5 s	U_T	180 V	335 V	335 V	335 V	580 V
TOV 120 min	U_T	230 V	440 V	440 V	440 V	765 V
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% to 95%				
Atmospheric Pressure and Altitude		80 kPa to 106 kPa / -500 m to 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		IP20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		White ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A				
RC Conductor Cross Section (max.)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Ordering Code		150	275	320	385	440
FLP25-xxx/2		2515021	2527521	2532021	2538521	2544021
FLP25-xxx/2S (with remote contacts)		2515022	2527522	2532022	2538522	2544022

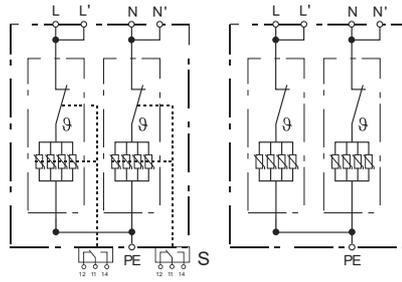


FLP25-xxx/2(S)

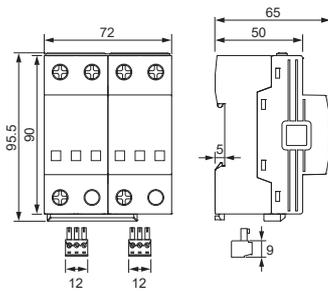
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging

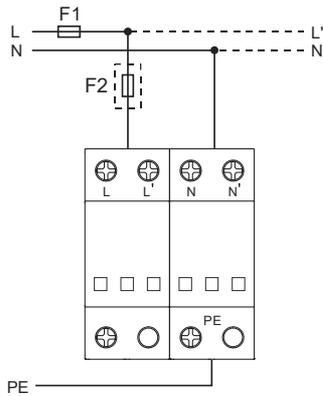


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Complete Unit					
FLP25-xxx/2(S)	150	275	320	385	440
DIN 43880 Dimension	1 CTN				
Packaging Dimensions (H x W x L)	[240 x 220 x 330 mm]				
Standard Order Quantity	24 Units				

Connection Diagram

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



AC Surge Protective Device

FLP25-xxx/3(S)

Class I • Type 1



Location of Use: Main Distribution Boards
 Network Systems: TN-C
 Mode of Protection: L-PEN
 Surge Ratings: $I_{imp} = 25 \text{ kA}$ (10/350 μs)
 $I_n = 25 \text{ kA}$ (8/20 μs)
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/3(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60 Hz)	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 μs)	I_n			25 kA		
Maximum Discharge Current (8/20 μs)	I_{max}			100 kA		
Impulse Discharge Current (10/350 μs)	I_{imp}			25 kA		
Specific Energy	W/R			156 kJ/Q		
Charge	Q			12,5 As		
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Max. Backup Fuse				315 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50 kA		
TOV Withstand 5 s	U_T	180 V	335 V	335 V	335 V	580 V
TOV 120 min	U_T	230 V	440 V	440 V	440 V	765 V
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% to 95%				
Atmospheric Pressure and Altitude		80 kPa to 106 kPa / -500 m to 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		IP20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		White ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A				
RC Conductor Cross Section (max.)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Ordering Code		150	275	320	385	440
FLP25-xxx/3		2515031	2527531	2532031	2538531	2544031
FLP25-xxx/3S (with remote contacts)		2515032	2527532	2532032	2538532	2544032

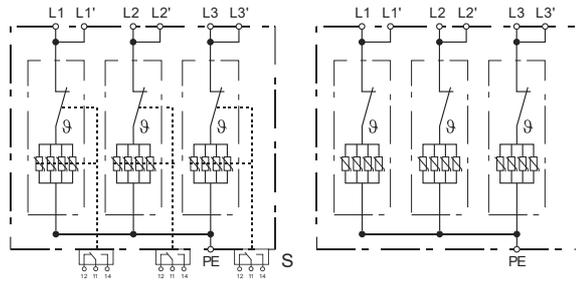


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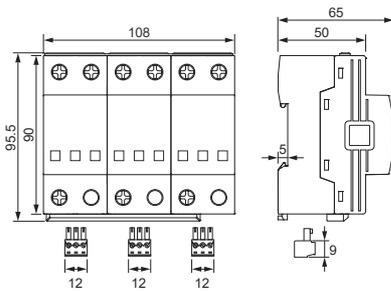
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging

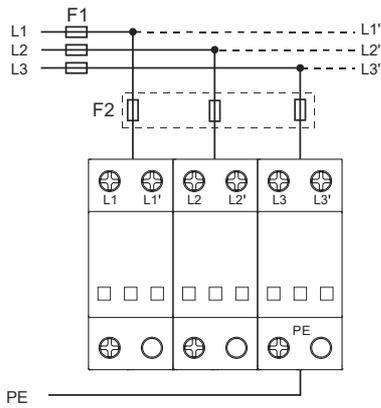


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Complete Unit					
FLP25-xxx/3(S)	150	275	320	385	440
DIN 43880 Dimension	1 CTN				
Packaging Dimensions (H x W x L)	[240 x 220 x 330 mm]				
Standard Order Quantity	16 Units				

Connection Diagram

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



AC Surge Protective Device

FLP25-xxx/4(S)

Class I • Type 1



Location of Use: Main Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 Surge Ratings: $I_{imp} = 25 \text{ kA (10/350 } \mu\text{s)}$
 $I_n = 25 \text{ kA (8/20 } \mu\text{s)}$
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/4(S)		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60 Hz)	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 μs)	I_n			25 kA		
Maximum Discharge Current (8/20 μs)	I_{max}			100 kA		
Impulse Discharge Current (10/350 μs)	I_{imp}			25 kA		
Specific Energy	W/R			156 kJ/Q		
Charge	Q			12,5 As		
Voltage Protection Level	U_p	1000 V	1500 V	1600 V	1800 V	2000 V
Response Time	t_A			< 25 ns		
Max. Backup Fuse				315 A gL / gG		
Short-Circuit Current Rating (AC)	I_{SCCR}			50 kA		
TOV Withstand 5 s	U_T	180 V	335 V	335 V	335 V	580 V
TOV 120 min	U_T	230 V	440 V	440 V	440 V	765 V
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% to 95%				
Atmospheric Pressure and Altitude		80 kPa to 106 kPa / -500 m to 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		White ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A				
RC Conductor Cross Section (max.)		16 AWG (Solid) / 1.5 mm ² (Solid)				
Order Information						
Ordering Code		150	275	320	385	440
FLP25-xxx/4		2515041	2527541	2532041	2538541	2544041
FLP25-xxx/4S (with remote contacts)		2515042	2527542	2532042	2538542	2544042

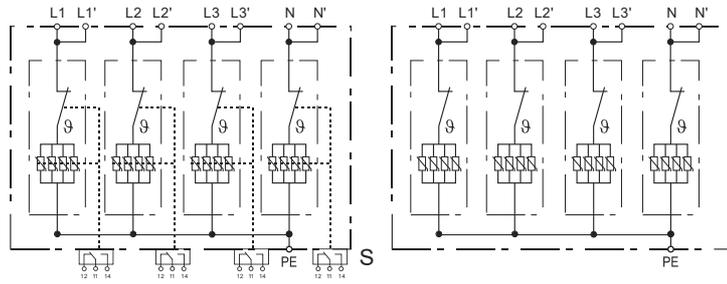


FLP25-xxx/4(S)

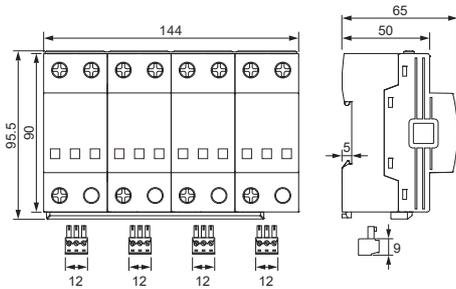
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging

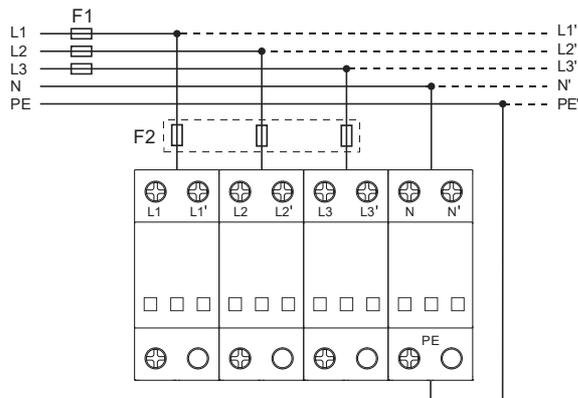


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Complete Unit					
FLP25-xxx/4(S)	150	275	320	385	440
DIN 43880 Dimension	1 CTN				
Packaging Dimensions (H x W x L)	[240 × 220 × 330 mm]				
Standard Order Quantity	12 Units				

Connection Diagram

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



AC Surge Protective Device

FLP25-xxx/1(S)+1

Class I • Type 1



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 25 \text{ kA} / 50 \text{ kA} (10/350 \mu\text{s})$
 $I_n = 25 \text{ kA} (8/20 \mu\text{s})$
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV and GDT
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/1(S)+1		75	150	275	320	385	440
IEC Electrical							
Nominal AC Voltage (50/60 Hz)	U_o / U_n	60 V	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage	(L-N) U_c	75 V	150 V	275 V	320 V	385 V	440 V
	(N-PE) U_c				255 V		
Nominal Discharge Current (8/20 μs)	(L-N) / (N-PE) I_n			25 kA / 50 kA			
Maximum Discharge Current (8/20 μs)	(L-N) / (N-PE) I_{max}			100 kA			
Impulse Discharge Current (10/350 μs)	(L-N) / (N-PE) I_{imp}			25 kA / 50 kA			
Specific Energy	(L-N) / (N-PE) W/R			156 kJ/ Ω / 625 kJ/ Ω			
Charge	(L-N) / (N-PE) Q			12.5 As / 25 As			
Voltage Protection Level	(L-N) / (N-PE) U_p	0.7 kV / 1.5 kV	1.0 kV / 1.5 kV	1.5 kV / 1.5 kV	1.6 kV / 1.5 kV	1.8 kV / 1.5 kV	2.0 kV / 1.5 kV
Follow Current Interrupt Rating	(N-PE) I_{fi}			100 A_{RMS}			
Response Time	(L-N) / (N-PE) t_A			< 25 ns / < 100 ns			
Max. Backup Fuse				315 A gL / gG			
Short-Circuit Current Rating (AC)	(L-N) I_{SCCR}			50 kA			
TOV Withstand 5 s	(L-N) U_T	114 V	180 V	335 V	335 V	335 V	580 V
TOV 120 min	(L-N) U_T	114 V	230 V	440 V	440 V	440 V	765 V
TOV Withstand 200 ms	(N-PE) U_T			1200 V			
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% to 95%			
Atmospheric Pressure and Altitude				80 kPa to 106 kPa / -500 m to 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				IP20 (built-in)			
Housing Material				Thermoplastic: Extinguishing Degree UL 94 V-0			
Thermal Protection				Yes			
Operating State / Fault Indication				White ok / Red defect			
Remote Contacts (RC)				Optional			
RC Switching Capacity				AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A			
RC Conductor Cross Section (max.)				16 AWG (Solid) / 1.5 mm ² (Solid)			
Order Information							
Ordering Code		75	150	275	320	385	440
FLP25-xxx/1+1		2507513	2515013	2527513	2532013	2538513	2544013
FLP25-xxx/1S+1 (with remote contacts)		2507514	2515014	2527514	2532014	2538514	2544014

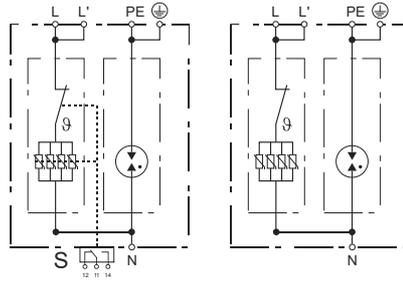


FLP25-xxx/1(S)+1

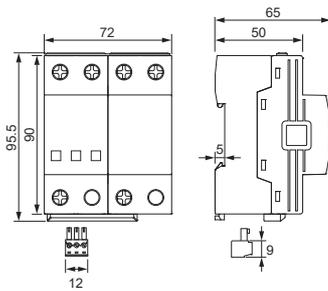
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging

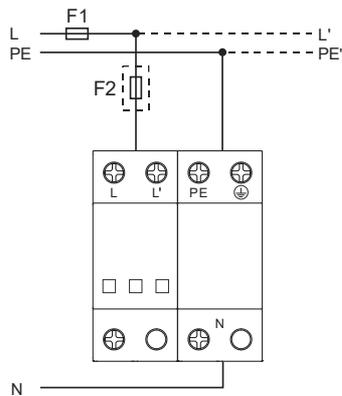


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Complete Unit						
FLP25-xxx/1(S)+1	75	150	275	320	385	440
DIN 43880 Dimension	1 CTN					
Packaging Dimensions (H x W x L)	[240 x 220 x 330 mm]					
Standard Order Quantity	24 Units					

Connection Diagram

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



AC Surge Protective Device

FLP25-xxx/3(S)+1

Class I • Type 1



Location of Use: Main Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, N-PE
 Surge Ratings: $I_{imp} = 25 \text{ kA} / 100 \text{ kA} (10/350 \mu\text{s})$
 $I_n = 25 \text{ kA} (8/20 \mu\text{s})$
 IEC/EN Category: Class I / Type 1
 Protective Elements: High Energy MOV and GDT
 Housing: Monobloc Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012

Technical Data

FLP25-xxx/3(S)+1		150	275	320	385	440
IEC Electrical						
Nominal AC Voltage (50/60 Hz)	U_o / U_n	120 V	230 V	230 V	230 V	400 V
Maximum Continuous Operating Voltage	(L-N) U_c	150 V	275 V	320 V	385 V	440 V
	(N-PE) U_c			255 V		
Nominal Discharge Current (8/20 μs)	(L-N) / (N-PE) I_n			25 kA / 100 kA		
Maximum Discharge Current (8/20 μs)	(L-N) / (N-PE) I_{max}			100 kA		
Impulse Discharge Current (10/350 μs)	(L-N) / (N-PE) I_{imp}			25 kA / 100 kA		
Specific Energy	(L-N) / (N-PE) W/R			156 kJ/ Ω / 2500 kJ/ Ω		
Charge	(L-N) / (N-PE) Q			12.5 As / 50 As		
Voltage Protection Level	(L-N) / (N-PE) U_p	1.0 kV / 1.5 kV	1.5 kV / 1.5 kV	1.6 kV / 1.5 kV	1.8 kV / 1.5 kV	2.0 kV / 1.5 kV
Follow Current Interrupt Rating	(N-PE) I_{fi}			100 A _{RMS}		
Response Time	(L-N) / (N-PE) t_A			< 25 ns / < 100 ns		
Max. Backup Fuse				315 A gL / gG		
Short-Circuit Current Rating (AC)	(L-N) I_{SCCR}			50 kA		
TOV Withstand 5 s	(L-N) U_T	180 V	335 V	335 V	335 V	580 V
TOV 120 min	(L-N) U_T	230 V	440 V	440 V	440 V	765 V
TOV Withstand 200 ms	(N-PE) U_T			1200 V		
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% to 95%				
Atmospheric Pressure and Altitude		80 kPa to 106 kPa / -500 m to 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		IP20 (built-in)				
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0				
Thermal Protection		Yes				
Operating State / Fault Indication		White ok / Red defect				
Remote Contacts (RC)		Optional				
RC Switching Capacity		AC: 250 V / 0.5 A; DC: 250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A				
RC Conductor Cross Section (max.)		16 AWG (Solid) / 1.5 mm ² (Solid)				

Order Information

Ordering Code	150	275	320	385	440
FLP25-xxx/3+1	2515033	2527533	2532033	2538533	2544033
FLP25-xxx/3S+1 (with remote contacts)	2515034	2527534	2532034	2538534	2544034

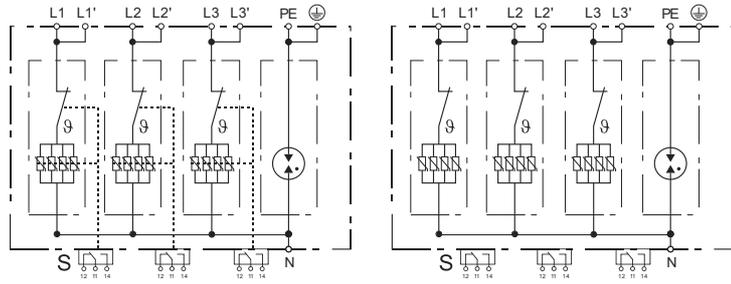


FLP25-xxx/3(S)+1

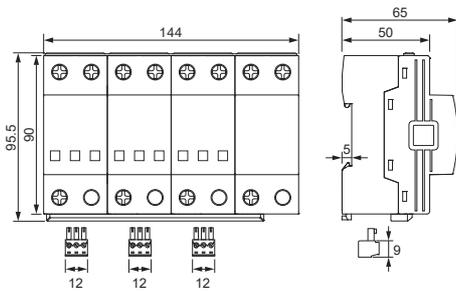
Internal Configuration

Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional



Dimensions & Packaging



[mm]

Complete Unit

FLP25-xxx/3(S)+1	150	275	320	385	440
DIN 43880 Dimension	1 CTN				
Packaging Dimensions (H x W x L)	[240 x 220 x 330 mm]				
Standard Order Quantity	12 Units				

Connection Diagram

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

