

# PV Surge Protective Device FLP-PVxxxG/(S)

Class I • Class II • Type 1 • Type 2



Location of Use: String box, Inverter  
 Network Systems: (DC+)-PE, (DC-)-PE  
 Surge Ratings:  $I_{total} = 12.5 \text{ kA (10/350 } \mu\text{s)}$   
 $I_{total} = 40 \text{ kA (8/20 } \mu\text{s)}$   
 IEC/EN Category: Class I+II / Type 1+2  
 Protective Elements: High Energy MOV  
 Housing: Monoblock Design  
 Compliance: IEC 61643-31:2018  
 EN 61643-31:2019

## Technical Data

FLP-PVxxxG/(S)		1000	1500	
<b>IEC Electrical</b>				
Maximum Continuous Operating DC Voltage	(DC+)-PE, (DC-)-PE	$U_{CPV}$	725 V	1100 V
	(DC+)-(DC-)	$U_{CPV}$	1000 V	1500 V
Nominal Discharge Current (8/20 $\mu\text{s}$ )		$I_n$	20 kA	
Impulse Discharge Current (10/350 $\mu\text{s}$ )		$I_{imp}$	6.25 kA	
Specific energy [(DC+)-PE / (DC-)-PE]		W/R	9.76 kJ/ $\Omega$	
Total Discharge Current (10/350 $\mu\text{s}$ )		$I_{total}$	12.5 kA	
Specific energy [(DC+) / (DC-)-PE]		$I$	39.06 kJ/ $\Omega$	
Total Discharge Current (8/20 $\mu\text{s}$ )		$I_{total}$	40 kA	
Maximum Discharge Current (8/20 $\mu\text{s}$ )		$I_{max}$	40 kA	
Voltage Protection Level	(DC+)-PE, (DC-)-PE	$U_p$	2.5 kV	3.75 kV
	(DC+)-(DC-)	$U_p$	4.75 kV	7.25 kV
Residual Current at $U_c$		$I_{PE}$	none	
Response Time		$t_A$	< 25 ns	
Short-Circuit Current Rating		$I_{SCPV}$	2000 A	
Number of Ports			1	
<b>Mechanical &amp; Environmental</b>				
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 <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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			Green 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 <sup>2</sup> (Solid)	
<b>Order Information</b>				
Ordering Code			1000	1500
FLP-PVxxxG			0710237	0715233
FLP-PVxxxG/(S) (with remote contacts)			0710238	0715234

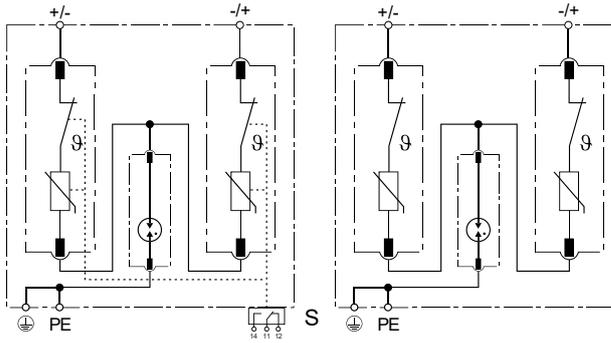


# FLP-PVxxxG/(S)

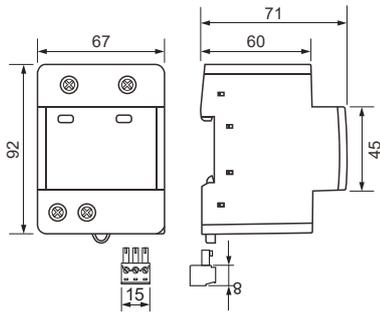
## Internal Configuration

### Legend

-  PE/G Conductor Terminal
-  S Signalling Contacts Optional



## Dimensions & Packaging



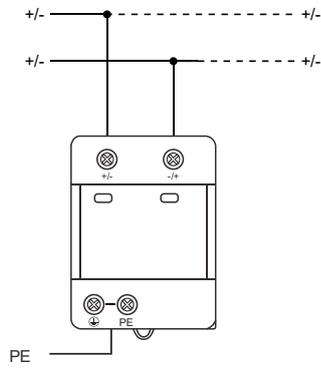
[mm]

### Complete Unit

FLP-PVxxxG/(S)	1000	1500
DIN 43880 Dimension	1 CTN	
Packaging Dimensions (H x W x L)	[210 x 220 x 330 mm]	
Standard Order Quantity	16 Units	

## Connection Diagram

### FLP-PVxxxG/(S)



# PV Surge Protective Device

## FLP-PVxxx/(S)

Class I • Class II • Type 1 • Type 2



Location of Use: String box, Inverter  
 Network Systems: (DC+)-PE, (DC-)-PE  
 Surge Ratings:  $I_{total} = 12.5 \text{ kA (10/350 } \mu\text{s)}$   
 $I_{total} = 40 \text{ kA (8/20 } \mu\text{s)}$   
 IEC/EN Category: Class I+II / Type 1+2  
 Protective Elements: High Energy MOV  
 Housing: Pluggable Design  
 Compliance: IEC 61643-31:2018  
 EN 61643-31:2019

### Technical Data

FLP-PVxxx/(S)		600	1000	1200	1500	
<b>IEC Electrical</b>						
Maximum Continuous Operating DC Voltage	(DC+)-PE, (DC-)-PE	$U_{CPV}$	600 V	1000 V	1200 V	1500 V
	(DC+)-(DC-)	$U_{CPV}$	-	1000 V	1200 V	1500 V
Nominal Discharge Current (8/20 $\mu\text{s}$ )		$I_n$		20 kA		
Impulse Discharge Current (10/350 $\mu\text{s}$ )		$I_{imp}$		6.25 kA		
Total Discharge Current (10/350 $\mu\text{s}$ )		$I_{total}$		12.5 kA		
Total Discharge Current (8/20 $\mu\text{s}$ )		$I_{total}$		40 kA		
Maximum Discharge Current (8/20 $\mu\text{s}$ )		$I_{max}$		40 kA		
Voltage Protection Level	(DC+)-PE, (DC-)-PE	$U_p$	2.2 kV	4 kV	4.4 kV	5.2 kV
	(DC+)-(DC-)	$U_p$	-	4 kV	4.4 kV	5.2 kV
Residual Current at $U_c$		$I_{PE}$		< 0.5 mA		
Response Time		$t_A$		< 25 ns		
Short-Circuit Current Rating		$I_{SCPV}$		10 kA		
Number of Ports				1		
<b>Mechanical &amp; Environmental</b>						
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 <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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			Green 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 <sup>2</sup> (Solid)			
<b>Order Information</b>						
Ordering Code		600	1000	1200	1500	
FLP-PVxxx		0760025	0710235	0712231	0715231	
FLP-PVxxx/(S) (with remote contacts)		0760026	0710236	0712232	0715232	
FLP-PVxxx/0 (spare modules)		0760002	0710202	0712202	0715202	



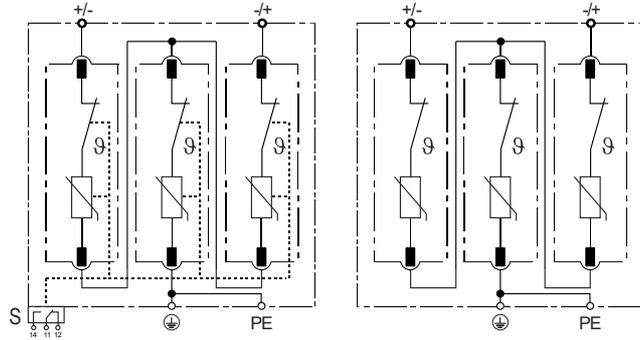
# FLP-PVxxx/(S)

## Internal Configuration

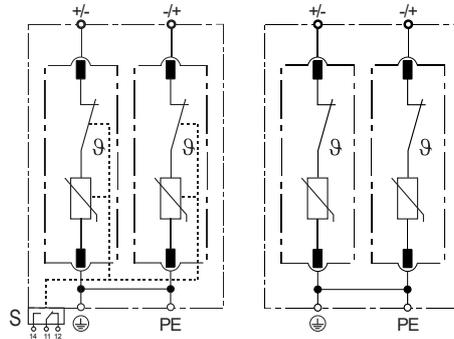
### Legend

- ⊕ PE/G Conductor Terminal
- S Signalling Contacts Optional

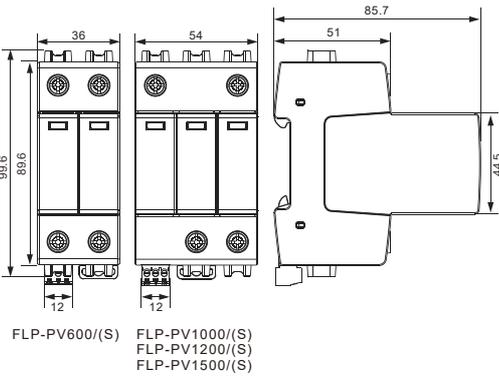
### FLP-PV1000/(S), FLP-PV1200/(S), FLP-PV1500/(S)



### FLP-PV600/(S)



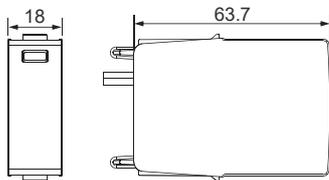
## Dimensions & Packaging



[mm]

Complete Unit				
FLP-PVxxx/(S)	600	1000	1200	1500
DIN 43880 Dimension	1 CTN			
Packaging Dimensions (H x W x L)	[210 × 220 × 330 mm]			
Standard Order Quantity	32 Units	32 Units	32 Units	32 Units

## Spare Plug



Single Unit				
FLP-PVxxx/0	600	1000	1200	1500
DIN 43880 Dimension	1 CTN			
Packaging Dimensions (H x W x L)	[210 × 220 × 330 mm]			
Standard Order Quantity	120 Units			