

## Surge Protective Device

## Technical Documentation



The MPAF Series Surge Protective Device (SPD) provides the industry's strongest level of surge protection in a very compact and easily installed unit. Unlike competitive bulky and expensive surge devices, the MPAF is modern and state of the art with extreme performance. It can handle over three times the average lightning peak surge current.

The MPAF series is designed for primary protection at the service entrance. As the first-in-line protection device, the MPAF handles any incoming surges safely. Other applications include: branch panels, switches, equipment disconnects and generator transfer switches. The MPAF is used in OEM panels as well as solar combiner boxes. It fulfills the requirements for UL 96A lightning protection installations and light pole applications. The housing is constructed of UV-stabilized thermoplastic and meets the UL 50 Type 4x rating, making it ideal for both indoor and outdoor applications. All of the models have a 20kA nominal discharge current rating, the highest level recognized under the UL 1449 Edition 4 standard.

The MPAF is a Type 1 device UL® Listed to UL 1449 Edition 4 and cUL® Listed to CAN/CSA C233.1. This allows installations on the line or load side of the service panel in accordance with the NEC® 2014 or CAN/CSA C233.1 without the requirement for additional circuit breakers or fuses.

## Features

- Compact design can be directly mounted to panel or installed in a small space
- Front-facing design eases installation and performance monitoring
- 40 kA 8/20  $\mu$ s maximum surge rating per mode
- UL® Type 1 SPD
- Optional Flush Mounting Plate

## Certifications

- UL 1449

Model	MPAF 120/240SP	MPAF 1201P	MPAF 2083P	MPAF 2401P	MPAF 4803P
Nominal System Voltage, $U_n$	120/240 VAC	120 VAC	120/208 VAC	240 VAC	277/480 VAC
Distribution System	1Ph 2W+G	1Ph 2W+G	3Ph 4W+G, 3Ph $\Delta$ 3W+G	1Ph 2W+G	3Ph 4W+G, 3Ph $\Delta$ 3W+G
Max Cont. Operating Voltage, $U_c$	150/300 VAC	150 VAC	150/300 VAC	300 VAC	340/590 VAC
Frequency	0-100 Hz				
Max Discharge Current, $I_{(max)}$	40 kA 8/20 $\mu$ s per mode				
Nominal Discharge Current, $I_n$	20 kA 8/20 $\mu$ s				
Protection Modes	L-L, L-N	L-G, L-N, N-G	L-G, L-L, L-N, N-G	L-G, L-N, N-G	L-G, L-L, L-N, N-G
Voltage Protection Rating (VPR)	1800, 900 V @ 3 kA	900, 1800, 900 V @ 3 kA	1800, 1800, 800, 800 V @ 3 kA	1500, 2500, 1200 V @ 3 kA	2500, 2500, 1500, 1500 V @ 3 kA
Short Circuit Current Rating (SCCR)	200 kA				
Status	Blue LED indicator				
Dimensions H x D x W : in (mm)	2.75 X 3 X 4.75 (69.85 X 76.20 X 120.65)				
Weight lbs (kg)	0.55 (0.25)	0.55 (0.25)	0.85 (0.385)	0.55 (0.25)	0.85 (0.385)
Enclosure	NEMA® 4x, IP 65				
Connection	36" of #12 AWG (900 mm of 3.31 mm <sup>2</sup> ) flying leads				
Mounting	1/2" straight nipple				
Temperature	-40°C to 80°C (-40°F to 176°F)				
Approvals	UL® 1449 Ed. 4 Listed Type 1/2, 20kA mode				
Available Options	Flush Mounting Plate (Part #: MPAF FMP)				

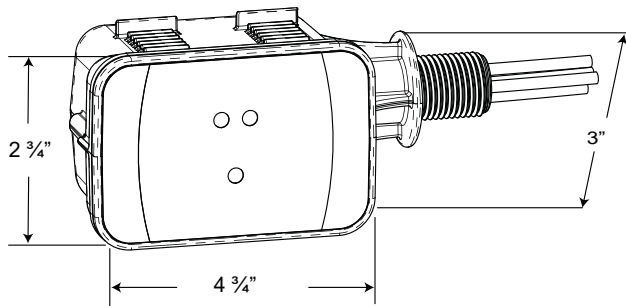


## DANGER!

Only qualified personnel should install or service this system. Electrical safety precautions must be followed when installing or servicing this equipment. To prevent risk of electrical shock, turn off and lock out all power sources to the unit before making electrical connections or servicing.

## Size

### DRAWING 1



## Ordering Information

### MODEL

MPAF 120-1P

MPAF 240-1P

MPAF 120/240-1P

MPAF 208-3P

MPAF 480-3P

### ACCESSORIES *Former Accessory Name*

MPAF Flush Mounted Plate *MPAF FMP*

MPAF Light Tube *MPAF-LT*

## Read and Understand These Instructions

### Note:

- Do not cut wires until the SPD is mounted and minimum wire lengths have been verified. All connection leads should be cut to minimum possible length; never coil or push aside excess length.
- For outdoor installations, include drip loop as additional precaution.

### Installation:

1. Detailed Instructions can be found in box or upon request.
2. Verify system voltage.
3. Identify proper location for the SPD.
4. Connect ground.
5. AC Rated Units: Connect neutral and phase conductors.
6. Connector and Lugs.

DPS  
1030 Arlington Avenue North  
St. Petersburg, FL 33705  
Phone: (800) 862-4377  
[www.DiversifiedPower.com](http://www.DiversifiedPower.com)



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