



Surge Protective Device

MPAF Series Hardwired Series

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. A universal voltage option allows for installation on 120/208Y, 120/240D and 277/480Y three phase service voltages. 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.

Model	MPAF 120/240SP	MPAF 1201P	MPAF 2083P	MPAF 2401P	MPAF 4803P	MPAF - Universal
Nominal System Voltage, V_n	120/240 VAC	120 VAC	120/208 VAC	240 VAC	277/480 VAC	120/208Y, 120/240D, 277/480Y VAC
Distribution System	1Ph 2W+G	1Ph 2W+G	3Ph 4W+G, 3Ph Δ 3W+G	1Ph 2W+G	3Ph 4W+G, 3Ph Δ 3W+G	Δ3Ph 4W+G,
Max Cont. Operating Voltage, U_c	150/300 VAC	150 VAC	150/300 VAC	300 VAC	340/590 VAC	340/590 VAC
Frequency	0-100 Hz					
Max Discharge Current, I_{max}	40 kA 8/20 μs per mode					
Nominal Discharge Current, I_n	20 kA 8/20 μs					
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	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	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)	0.85 (0.385)
Enclosure	NEMA® 4x, IP 65					
Connection	36" of #12 AWG (900 mm of 3.31 mm ²) 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)					

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 μs maximum surge rating per mode
- UL® Type 1 SPD
- Universal voltage option allows for installations on 120/208Y, 120/240D and 277/480Y three phase service voltages.

Certifications

- UL 1449
- cUL CAN/CSA C233.1



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.

SAFETY

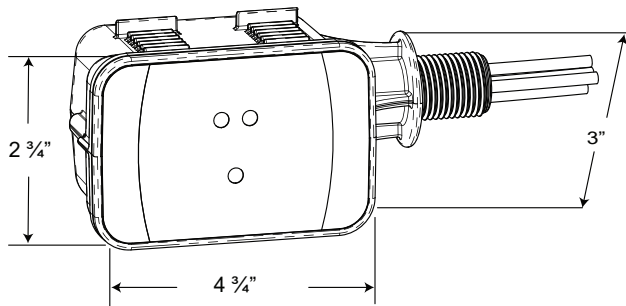
Always wear protective safety equipment.

Always verify panel voltages before installing devices

Do not install on 480 Delta services.

Size

DRAWING 1



Ordering Information

MODEL

MPAF 120-1P	1 Phase 120 Volt 2 Wire+ Ground (Single Pole)
MPAF 240-1P	1 Phase 240 Volt 2 Wire+ Ground (Single Pole)
MPAF 120/240-SP	Single Phase 120/240 Volt 2 Wire + Neutral/Ground
MPAF 208-3P	3 Phase 120/208Y 4 Wire + Ground
MPAF 480-3P	3 Phase 277/480Y 4 Wire + Ground
MPAF-Universal	3 Phase 120/208Y, 120/240D, 277/480Y 4 Wire + Ground

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.

ACCESSORIES *Former Accessory Name*

MPAF Light Tube	<i>MPAF-LT</i>
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