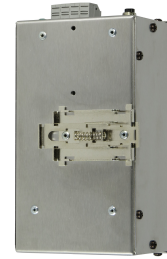


## Facility Filters—DIN Rail Mount



Connector View



Back View

## 100% Surge Protection, 0% Failure

Zero Surge series mode products protect connected equipment repeatedly from even worst case surges without degradation or failure. Zero Surge's core technology has been certified for performance and endurance, in addition to safety. It was subjected to 1,000 worst case surges of 6,000 Volts/3,000 Amps in 30 second intervals without any resulting degradation or failure. This equates to 10 years of worst case surges, but Zero Surge's in-service history proves that the products will serve far beyond a 10 year life. There have been no reports of surge failures, no fires, and no recalls since Zero Surge began manufacturing in 1989.

Zero Surge's Spectrum Wide Voltage Range (WVR) technology, effectively senses and suppresses surges on your 120V power line even when the power is low at 85 Volts or high at 175 Volts and anywhere in between. This is especially beneficial when the voltage is variable and unpredictable, during brownout and blackout conditions, and when standby generators are in use. It also provides the benefit of conditioning the power line by removing EMI and RFI disturbances which can disrupt data signals and cause electronic equipment to malfunction. These disturbances can also degrade the electronic components in the equipment, shortening the life expectancy.

The superior power conditioning and high reliability provided by Zero Surge's series mode with Spectrum WVR technology makes it the preferred choice for the PLC/industrial market.

### Features:

- Heavy Duty Stainless Steel Enclosure
- 4 Directional DIN-Rail Adapter\*
- Built-in, resettable circuit breaker eliminates fuse replacement
- Easy Installation
- Repeatedly suppresses worst case surges
- No metal oxide varistors (non-MOV technology)
- Non-sacrificial—does not wear out or degrade
- Made in USA
- 10 year warranty
- No history of surge damage

| Model          | Item #     | Max Amperage<br>Voltage (AC) / Hz | Over-current<br>Protection    | Wire Connector   |
|----------------|------------|-----------------------------------|-------------------------------|--|
| FF2-5W-120-DIN | #002-00090 | 5A / 120V / 50-60 Hz              | 5A Resettable Circuit Breaker | 4 Position Terminal Block (hot leg in, hot leg out, 2 neutral connections) |

\*2 bi-directional options to choose from.

|   |  |
|---|--|
| <b>Technical Specifications</b>                     | <b>FF2-5W-120—#002-00090</b>   |
| <b>Current / Voltage Rating</b>                     | 5A / 120V<br>*Wide Voltage Range (WVR) Technology operates over a voltage range of 85-175V.  |
| <b>Operating Temperature Range</b>                  | 0-40° C / 32-104° F  |
| <b>Technology/Mode</b>                              | Series Mode with Wide Voltage Range (WVR) Technology, Mode 1 applications, L-N (filter operates independent of ground line)  |
| <b>Agency Certifications</b>                        | ETL & cETL certified to UL 1283 6th Edition, CSA 22.2 No. 8-M1986 (File #3162119)  |
| <b>Limiters</b>                                     | Series surge reactor current limiter; cascaded, auto-tracking dual polarity dynamic surge and noise sensing; bi-modal dynamic filtering. Parameters optimized for switch-mode power supply protection. |
| <b>Dynamic Filtering Onset</b>                      | 172V nominal, 2V above peak line voltage (auto-tracking, WVR)  |
| <b>Max Surge Voltage Let-through</b>                | 130V above peak line voltage @ 6,000V/3,000A for ANSI C62.41 Category B3/C1 Combination Wave   |
| <b>Max. Applied Pulse Voltage</b>                   | 6,000V (1.2 x 50 $\mu$ s—ANSI C62.41 Combination Wave)   |
| <b>Max. Applied Pulse Current</b>                   | Does not apply due to internal current limiting.   |
| <b>Joule Rating</b>                                 | No metal oxide varistors to wear out; therefore, not applicable to this technology.  |
| <b>Endurance Rating</b>                             | 1,000 worst case pulses: ANSI C62.41, Category B3/C1 pulses (6,000V/3,000A); >10,000 pulses @ 4,000V; >100,000 pulses @ 2,000V   |
| <b>Filter Slew Rate</b>                             | 5,000V/ $\mu$ s disturbance reduced to 35V/ $\mu$ s within AC power wave envelope; 10V/ $\mu$ s outside the power wave envelope  |
| <b>EMI/RFI Filter Response (50 ohm Rgen., load)</b> | Bi-directional, wave tracking — 3 dB @ 7 kHz; 25 dB @ 100 kHz; 38 dB @ 300 kHz   |
| <b>Enclosure</b>                                    | Magnetic shielded stainless steel; exterior terminal block, ground screw, and circuit breaker.   |
| <b>DIN Rail Widths</b>                              | 32-35 mm   |
| <b>Weight</b>                                       | 2.75 lb  |
| <b>Dimensions</b>                                   | 7" H x 4" W x 3" D—without connectors; 7.5" H x 4" W x 3.5" D—with connectors.   |
| <b>Options:</b>                                     | DIN adapter can be mounted for 0°/180° or 90°/270° mount. Specify at time of order.  |

\*H-N reversal can compromise any appliance's safety and performance. Check line wiring for hot/neutral reversal prior to connecting product.

Suggested applications: PLC, industrial automation, control panels, and AC distribution.



**100% Surge Protection, 0% Failure • Are you Zero Surge protected?**

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