



Size: 2.07in x 1.08in x 0.93in (52.5mm x 27.5mm x 23.5mm)

**FEATURES**

- Input Voltage of 90-264VAC/120-370VDC
- Switching Power Module for PCB Mount
- Full Encapsulated Plastic Case
- Low Standby <0.25W
- Regulated Output and Low Ripple & Noise
- Isolation Class II
- Over Power, Over Voltage, and Short Circuit Protection
- CE and UL Safety Approvals

**DESCRIPTION**

The PSAFCN series of AC/DC PCB mount power supplies offers up to 10 watts of output power in a compact 2.07" x 1.08" x 0.93" package. This series consists of single output models with an input voltage range of 90-264VAC. Each model in this series has over power, over voltage, and short circuit protection as well as CE and UL safety approvals. Please call factory for order details.

**MODEL SELECTION TABLE**

| Model Number | Input Voltage Range     | Output Voltage | Output Current |          | Ripple     | Noise      | Output Power | Maximum Capacitive Load | Efficiency |
|--------------|-------------------------|----------------|----------------|----------|------------|------------|--------------|-------------------------|------------|
|              |                         |                | Min Load       | Max Load |            |            |              |                         |            |
| PSAFCN-3.3S  | 90-264VAC or 120-370VDC | 3.3V           | 0%             | 2500mA   | 75mVp-p    | 120mVp-p   | 8.25W        | 8000uF                  | 74%        |
| PSAFCN-5S    |                         | 5V             | 0%             | 2000mA   | 75mVp-p    | 120mVp-p   | 10W          | 8000uF                  | 79%        |
| PSAFCN-12S   |                         | 12V            | 0%             | 833mA    | 1% of Vout | 1% of Vout | 10W          | 2000uF                  | 82%        |
| PSAFCN-15S   |                         | 15V            | 0%             | 667mA    | 1% of Vout | 1% of Vout | 10W          | 1500uF                  | 78%        |
| PSAFCN-24S   |                         | 24V            | 0%             | 417mA    | 1% of Vout | 1% of Vout | 10W          | 560uF                   | 80%        |

**SPECIFICATIONS**

All specifications are based on 25°C After Warm-Up, Normal Input Voltage, and Full Load unless otherwise noted. We reserve the right to change specifications based on technological advances.

| SPECIFICATION                       | TEST CONDITIONS           | Min  | Typ  | Max   | Unit  |
|-------------------------------------|---------------------------|--|------|-------|-------|
| <b>INPUT SPECIFICATIONS</b>         |                           |  |      |       |       |
| Input Voltage Range                 |                           | 90   |      | 264   | VAC   |
|                                     |                           | 120  |      | 370   | VDC   |
| Input Frequency                     |                           | 47   |      | 440   | Hz    |
| Inrush Current                      | @115VAC, <2ms, Cold Start |  |      | 20    | A     |
|                                     | @230VAC, <2ms, Cold Start |  |      | 40    | A     |
| Leakage Current                     |                           |  |      | 0.25  | mA    |
| Input Current                       | @115VAC, Full Load        |  |      | 220   | mA    |
|                                     | @230VAC, Full Load        |  |      | 150   | mA    |
| External Fuse (Mandatory)           | Slow Blow Type            |  |      | 2     | A     |
| <b>OUTPUT SPECIFICATIONS</b>        |                           |  |      |       |       |
| Output Voltage                      |                           | See Table                                    |      |       |       |
| Voltage Accuracy                    |                           |  | ±2   |       | %     |
| Line Regulation                     | LL-HL                     |  | ±0.5 |       | %     |
| Load Regulation                     | 5-100%                    |  | ±1   |       | %     |
| Output Power                        |                           | See Table                                    |      |       |       |
| Output Current                      |                           | See Table                                    |      |       |       |
| Maximum Capacitive Load             |                           | See Table                                    |      |       |       |
| Ripple & Noise <sup>(1)</sup>       |                           | See Table                                    |      |       |       |
| Hold-Up Time                        | @115VAC                   |  | 20   |       | ms    |
|                                     | @230VAC                   |  | 80   |       |       |
| Temperature Coefficient             |                           | -0.05  |      | +0.05 | %/°C  |
| <b>PROTECTION</b>                   |                           |  |      |       |       |
| Short Circuit Protection            |                           | Hiccup Mode, Indefinite (Automatic Recovery) |      |       |       |
| Over Power Protection               |                           | Hiccup Technique, Automatic Recovery         |      |       |       |
| Over Voltage Protection             |                           | Zener Diode Clamp                            |      |       |       |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                           |  |      |       |       |
| Operating Case Temperature          | With Derating             | -40  |      | +70   | °C    |
| Storage Temperature                 |                           | -40  |      | +85   | °C    |
| Humidity                            |                           | 20   |      | 85    | % RH  |
| MTBF                                | @25°C (MIL-HDBK-217F)     | 330,000                                      |      |       | Hours |

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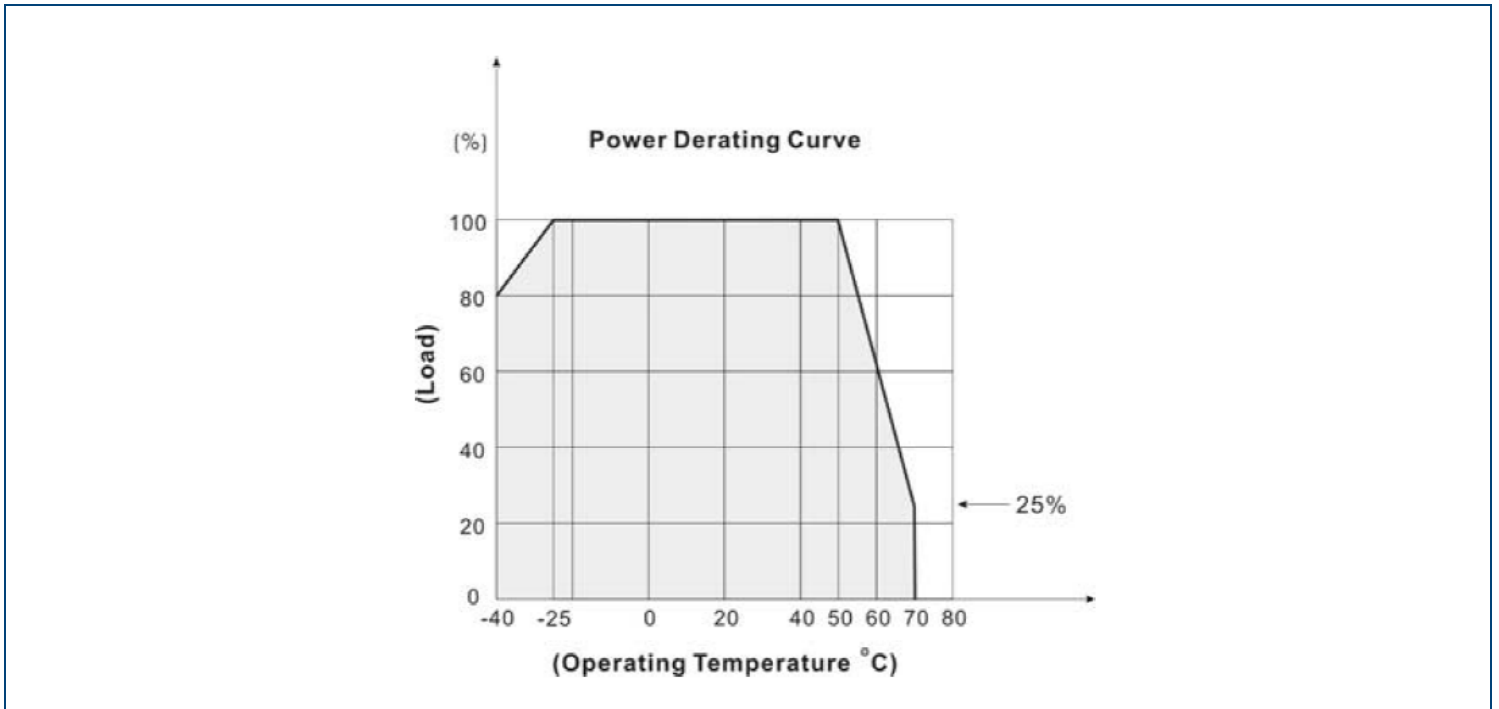
| SPECIFICATION                  | TEST CONDITIONS                        | Min  | Typ       | Max | Unit    |
|--------------------------------|--|--|-----------|-----|---------|
| <b>GENERAL SPECIFICATIONS</b>  |  |  |           |     |         |
| Efficiency                     |  |  | See Table |     |         |
| Isolation                      | Input-Output VAC                       |  | 3000      |     | VAC     |
| <b>PHYSICAL SPECIFICATIONS</b> |  |  |           |     |         |
| Weight                         |  | 2.05oz (58g)   |           |     |         |
| Dimensions (L x W x H)         | Tolerance ±0.5mm                       | 2.07in x 1.08in x 0.93in<br>(52.5mm x 27.5mm x 23.5mm) |           |     |         |
| Case Material                  |  | Plastic Resin (Flammability to UL 94V-0)               |           |     |         |
| Cooling Method                 |  | Free Air Convection                                    |           |     |         |
| <b>SAFETY CHARACTERISTICS</b>  |  |  |           |     |         |
| Safety Approvals               |  | UL/cUL <sup>(3)</sup> , CE                             |           |     |         |
| EMI                            | Conducted & Radiated Emission, EN55022 |  |           |     | Class B |
| EMS                            | Noise Immunity, EN55024                |  |           |     |         |

**NOTES**

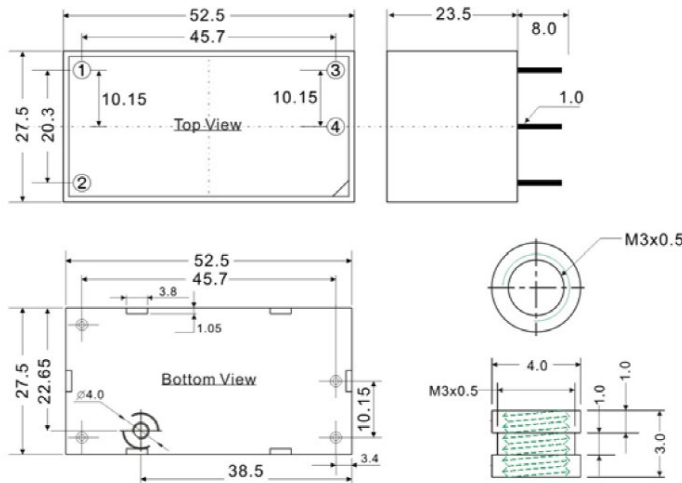
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S471K at L/N input side in parallel.
3. This product is Listed to applicable standards and requirements by UL.

*\*Due to advances in technology, specifications subject to change without notice.*

**DERATING CURVES**



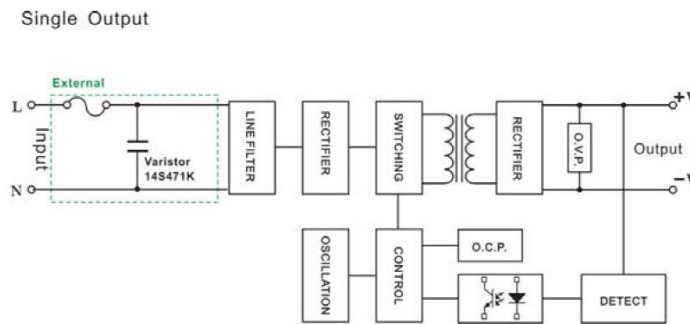
MECHANICAL DRAWINGS



| Pin # | Single    |
|-------|-----------|
| 1     | AC IN (L) |
| 2     | AC IN (N) |
| 3     | +DC OUT   |
| 4     | -DC OUT   |

Maximum Torque 12 {1.21} (kgf.cm {N.m})

BLOCK DIAGRAM



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

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Contact **Wall Industries** for further information:

Phone: ☎ (603)778-2300  
 Toll Free: ☎ (888)597-9255  
 Fax: ☎ (603)778-9797  
 E-mail: [sales@wallindustries.com](mailto:sales@wallindustries.com)  
 Web: [www.wallindustries.com](http://www.wallindustries.com)  
 Address: 37 Industrial Drive  
 Exeter, NH 03833

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