

PFE1000FA SERIES

AC / DC Single Output: 1000 Watts



Features

- Full brick AC/DC Power Module in one package
- Harmonic input correction: EN61000-3-2
- Universal input 85~264vac with PFC
- Wide baseplate temperature -40°C to +100°C
- OVP, OCP and Over temperature protection
- Safety UL60950, EN60950
- Fully isolated input-output
- External components required for operation, refer to instruction manual.
- PCB mounting

General Specifications

| | |
|------------------------------------|--------------------------------------------------------------------------------|
| Input Voltage | 85 ~ 264 VAC, 47 ~ 63Hz |
| Input Current | 12.3A / 6.0A (100 / 200VAC) |
| Power Factor | 0.95 |
| Output Voltage | See table |
| Output Power | 1000 watts |
| Efficiency | Typically 88% |
| Output V Accuracy | ±2% |
| Output Voltage Range | -20% to +20% |
| Ripple & Noise | 12V / 120mV, 28V / 280mV, 48V/480mV |
| Regulation Line | ±0.2% |
| Regulation Load | ±0.2% |
| Over Current Protection | 105% ~140% with auto recovery. |
| Over Voltage Protection | 125 ~ 145% Inverter shutdown, recycle input to restart. |
| Over Temperature Protection | Yes |
| Parallel Operation | YES – refer to manual |
| Series Operation | Yes |
| Remote Sense | Yes |
| Remote ON/OFF | Yes |
| Operating Temperature | -40°C to +100°C baseplate temperature |
| Humidity | 20 ~ 95% RH No dewdrop |
| Cooling | Baseplate / Conduction, refer to manual |
| Tem. Coeff | 0.02% / °C |
| Isolation | Input-Output: 3.0KVAC Input-Baseplate: 2.5KVAC Output-Baseplate: 1.5KVDC |
| Vibration / Shock | 10-55Hz (sweep for 1min) 196.1m / s ² |
| Safety | Approvals UL60950-1, EN60950-1 |
| Size & Weight | 160 x 100 x 13.4mm 420g |

Description

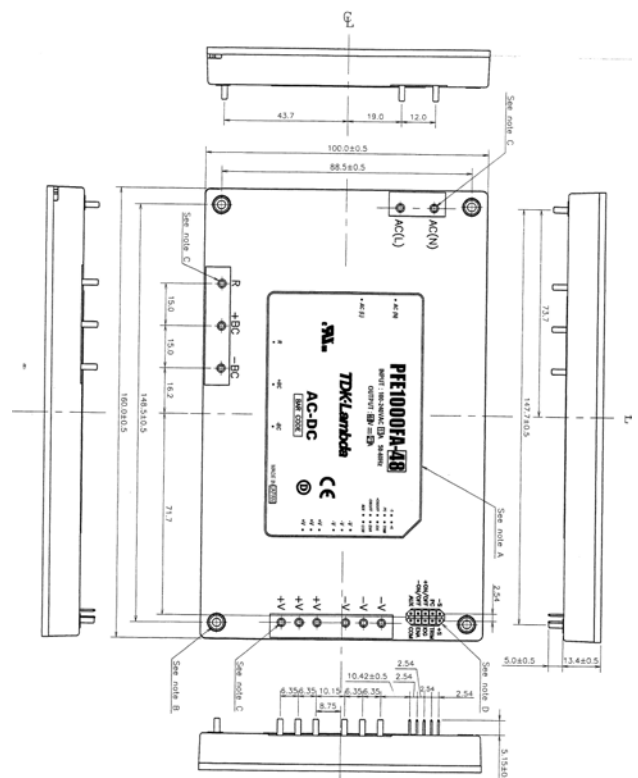
The **PFE1000SA** series is a 2nd generation “Full Brick” AC input power supply module , capable of operating up to +100°C base plate temperature.

It offers a **single device** containing power factor correction, regulation and primary secondary isolation, offering up to 50% space savings over previous power module solutions. These power modules meet the needs of many industrial, datacom and telecom applications particularly where high operating temperatures are required and space is at a premium.

Fully regulated outputs in 12, 28 and 48 volt with ±20% adjustment.

- **For full application notes, contact our office.**

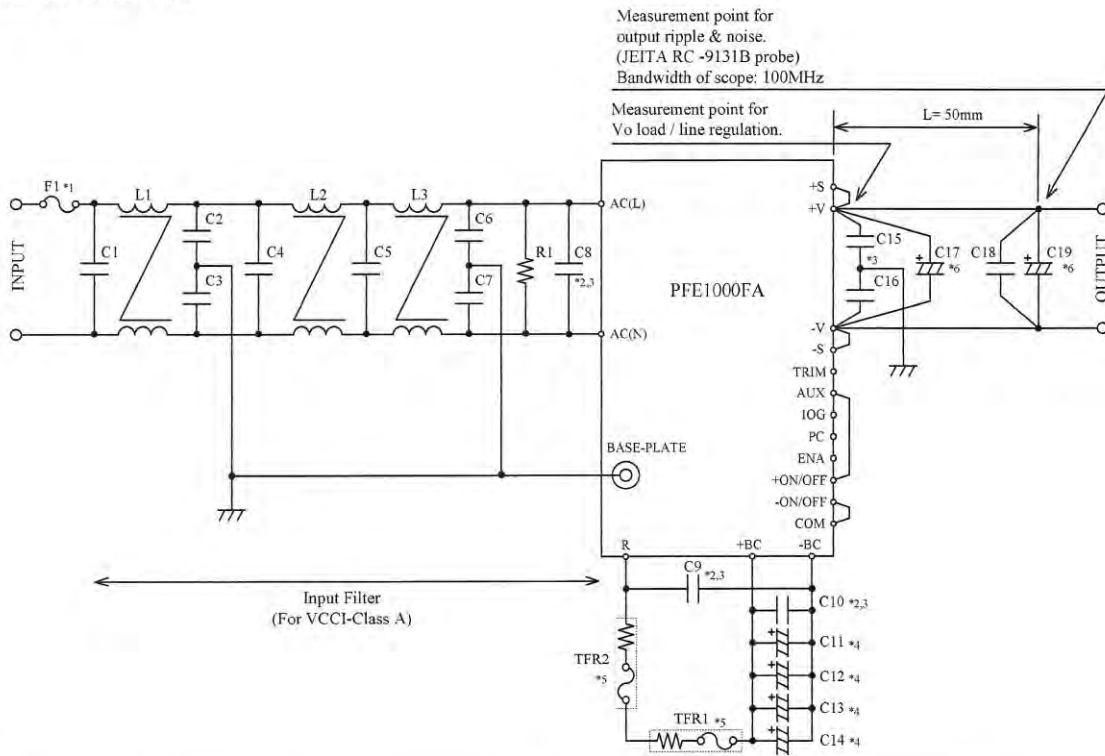
| Model | Output | | Voltage Range | Power W |
|---------------------|--------|-----|---------------|---------|
| | V | A | | |
| PFE1000FA-12 | 12V | 60A | 9.6 ~ 14.4V | 1000W |
| PFE1000FA-28 | 28V | 36A | 22.4 ~ 33.6V | 1000W |
| PFE1000FA-48 | 48V | 21A | 38.4 ~ 57.6V | 1000W |



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BASIC CONNECTION



| | | | |
|-----|--------------------|------|----------------------------------------------------|
| F1 | AC250V 25A | C15 | 0.033uF |
| C1 | AC250V 1uF (Film) | C16 | 0.033uF |
| C2 | 470pF | C17 | 12V: 25V 1000uF (Elec.) |
| C3 | 470pF | | 28V: 50V 470uF (Elec.) |
| C4 | AC250V 1uF (Film) | C18 | 48V: 100V 220uF (Elec.) |
| C5 | AC250V 1uF (Film) | | 100V 2.2uF (Ceramic) |
| C6 | 4700pF | C19 | 12V: 25V 1000uF (Elec.) |
| C7 | 4700pF | | 28V: 50V 470uF (Elec.) |
| C8 | AC250V 1uF (Film) | C19 | 48V: 100V 220uF (Elec.) |
| C9 | 450V 1uF (Film) | | R1 |
| C10 | 450V 1uF (Film) | TFR1 | 5.1 Ω 139 $^{\circ}$ C (Res., Thermal fuse) |
| C11 | 450V 390uF (Elec.) | TFR2 | 5.1 Ω 139 $^{\circ}$ C (Res., Thermal fuse) |
| C12 | 450V 390uF (Elec.) | L1 | 2mH |
| C13 | 450V 390uF (Elec.) | L2 | 2mH |
| C14 | 450V 390uF (Elec.) | L3 | 2mH |

==NOTES==

- *1. Use an external fuse of fast blow type for each unit.
- *2. The allowable ripple current of capacitor must be more than 3A(rms).
- *3. Put this capacitor near the terminal as close as possible.
- *4. The maximum capacitance that can be used is less than 2300uF(Rated capacitance).
Avoid the connection of capacitance which is more than above, else it will lead to module to damage.
- *5. The inrush current at AC throw in can be suppressed by the external Resistor (Built-in thermal fuse) connected between the R and +BC terminals.
- *6. If the ambient temperature is less than -20 $^{\circ}$ C, use twice the recommended capacitor above.
- *7. Refer to instruction manual for further details.