

# **PFE-HSX-U1 SERIES**



#### **General Description**

"PF"-Series AC/DC Switching power supplies has been designed to meet harmonic current distortion. PF series has the 75 W PFC with the peak of 150 W, the 120W PFD with peak of 240W and 240 W PFE with peak of 480 W. They are suitable for motor drive.

| Application  |   |
|--|---|
| Broad needs  |   |
| Input  |   |
| Input Voltage:<br>Input Voltage Range:<br>Input Current:       | AC100-240V<br>AC85~264V<br>1.8-4.0A                                       |
| Frequency:<br>Frequency Range:<br>Phase:<br>Inrush Current: *1 | 50/60Hz<br>47-63Hz<br>Single<br>18A(max) at AC100VAC<br>40A (Typ.) 230VAC |

#### Features

Low line distortion

- **Power Factor correction**
- Pulse load response

Cost effective

Designed for peak loads (twice rated output)

**240 WATT** 

**AC-DC CONVERTER** 

PFE-HSX-U1

SERIES Universal Input

Universal input

#### Options

\*Cover (add suffix "-P")

\*Wire/harness 40cm

\*Remote control (add suffix "-R" ir "-RR")

Certified:





ETA-USA Tel: 408-778-2793 Fax: 408-779-2753 e-mail: sales@eta-usa.com



| Output                                  |      | Models   |             |             |             |
|---|------|--|-------------|-------------|-------------|
| Characteristic                          | Unit | PFE12HSX-U1  | PFE24HSX-U1 | PFE36HSX-U1 | PFE48HSX-U1 |
|   | Vdc  | 12   | 24          | 36          | 48          |
| Output Voltage                          |      |  |             |             |             |
| Output Current                          | A    | 18 / <b>@</b> 36   | 10 / @20    | 6.7 / @13.4 | 5.5 / @10   |
| Voltage Adjust Range                    | V    | $\pm$ 10% of Rated Output Voltage(at no load within the input range)                 |             |             |             |
| Ripple &                                | mVpp | 300  | 300         | 300         | 300         |
| Noise(max)*3                            |      |  |             |             |             |
| Rise up time                            | mS   | $500 \mathrm{mS}(\mathrm{maximum})$ at $25^\circ\!\mathrm{C}$ and rated input/output |             |             |             |
| Hold up time                            | mS   | $50\mathrm{mS}(\mathrm{minimum})$ at $25^\circ\!\mathrm{C}$ and rated input/output   |             |             |             |
| Regulation                              |      |  |             |             |             |
| a. Line Regulation                      | mV   | 60   | 120         | 180         | 240         |
| b. Load Regulation *3                   | mV   | 120  | 240         | 360         | 480         |
| c. Temperature<br>Coefficient *4        | °C   | 0.03%/℃  |             |             |             |
| d. Drift(maximum) *5                    | mV   | 75   | 135         | 195         | 255         |
| e. Dynamic Load<br>Regulation (typ.) *6 | mV   | 360  | 720         | 1080        | 1440        |
| f. Recovery Time *6                     | mS   | 0.5mS(typical)   |             |             |             |

| Efficiency *2 | olo | 78 / 81                                   | 82/85 | 83/86 | 84/87 |
|---------------|-----|---|-------|-------|-------|
| Power Factor  |     | 0.99 Typ. AC100 [V] / 0.95 Typ. AC230 [V] |       |       |       |

Conditions:

\*1 cold start

\*2 at AC100/230V input, rated output and  $25^\circ\!\!\mathrm{C}$ 

 $^{*3}$  measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

\*4 at -10 to +50°C

\*5 for 7hour period after 1hour warm-up at  $25^{\circ}\!\!\mathrm{C}$  and rated input/output

\*6 when output current changed from 50% to 150% of rated output current rapidly at rated input

\*7 safety approved at  $25^\circ\!\!\mathrm{C}$ 



ETA-USA Tel: 408-778-2793 Fax: 408-779-2753 e-mail: sales@eta-usa.com



| Environmental Specification                       |   |  |  |
|---|---|--|--|
| Operating Temperature*7                           | -10 to +45 °C   |  |  |
| Operating Humidity                                | 20 to 85%/RH(non-condensing)  |  |  |
| Storage Temperature                               | -20 to +85 °C   |  |  |
| Storage Humidity                                  | 10 to 85%/RH(non-condensing)  |  |  |
| Withstanding Voltage                              | Primary-Secondary AC3,000V for 1minute                                |  |  |
|   | Primary-Frame Ground AC2,500V for 1minute                             |  |  |
|   | Secondary-Frame Ground AC500V for 1minute                             |  |  |
| Isolation Resistance                              | Primary-Secondary-Frame Ground $50M\Omega$ (minimum) by               |  |  |
|   | DC500V insulation tester  |  |  |
| Vibration   | 5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' |  |  |
|   | period for 60minutes each along X,Y,Z axes(non-                       |  |  |
|   | operating)  |  |  |
| Shock   | 294m/s <sup>2</sup>   |  |  |
| Cooling   | Convection  |  |  |
| Environmental Agencies                            |   |  |  |
| Line Conducted Noise                              | Built to meet FCC Part15-B Class B                                    |  |  |
|   | Built to meet VCCI Class B  |  |  |
|   | Built to meet EN55022 Class B   |  |  |
| Line Harmonic Distortion                          | Built to meet IEC1000-3-2   |  |  |
| Safety UL: UL60950, IEC950 C-UL: CSA C22.2 No.950 |   |  |  |
|   | VDE EN60950, IEC950, VDE0805  |  |  |
| MTBF [H]  | 229,000   |  |  |
| Switching Frequency[kHz]                          | 140(typ.)   |  |  |
| Function/Protection                               |   |  |  |
| Over current Protection                           | Current Limiting with automatic recovery                              |  |  |
| Over voltage Protection                           | output shutdown(to reset, leave 3 minutes after shut-                 |  |  |
| ( $\geq$ 115% of Rated Output Voltage[V])         | off)  |  |  |
| Remote Sense                                      | not available   |  |  |
| Remote On/Off                                     | option  |  |  |
| Power Fail Detection                              | not available   |  |  |
| Series Operation                                  | not available   |  |  |
| Parallel Operation                                | not available   |  |  |
| Mechanical  |   |  |  |
| Dimension [mm]                                    | 110W × 246L × 65H   |  |  |
| Weight [g](typical)                               | 1200g enclosed type:1400g   |  |  |



HIGH QUALITY SWITCHING POWER SUPPLIES ETA-USA Tel: 408-778-2793 Fax: 408-779-2753 e-mail: sales@eta-usa.com



## **BLOCK DIAGRAM**



## **DIMENSION DIAGRAM**





ETA-USA Tel: 408-778-2793 Fax: 408-779-2753 e-mail: sales@eta-usa.com

# **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ETA-USA: PFE12HSX-U1