# 600 WATT
## AC-DC POWER FACTOR CORRECTION MODULES
# EPX380SX

## GENERAL SPECIFICATION

World's Most Advanced Ultra High Density AC-DC Converters 600 Watts, AC Input w/Power Factor Correction 380 VDC Output.

## DESCRIPTION

This module accept 85-265VAC and convert it to 380 VDC to power 300VDC input DC-DC converters.

Power factor correction meets low harmonic distortion requirements of IEC 1000-3-2 and the new European EN55022 emissions specification when used with the Model HH-1199-6 EMI filter.

This module utilize a boost converter incorporating a solid state series switch for active inrush and short circuit current limiting. The series switch is also used to provide over temperature shutdown with automatic recovery.

## FEATURES

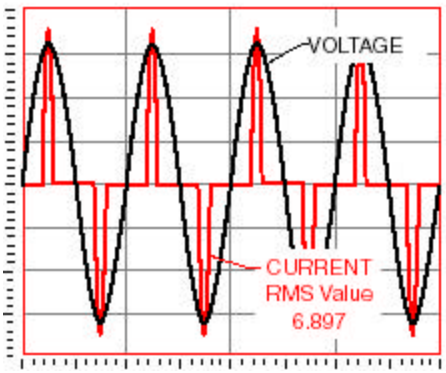
- 600Watts
- UL, CSA, & TUV Approved
- Meets New European EN55022 Emissions when used with HH-1199-EMI Filter
- Unity Power Factor
- High Efficiency
- Active Inrush Limiting and Short Circuit Protection
- Very Low Harmonic Distortion
- Auxiliary Supply
- Power Fail Warning Via DC OK Signal
- Load Enable Signal to Control DC-DC Converters
- Very Low Thermal Resistance
- Superior Thermal Design
- 100°C Baseplate Operation

## *MODEL SELECTION*

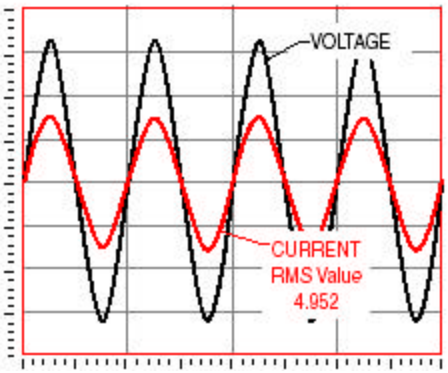
| Model Number | Input Voltage | Output Voltage | Output Power |
|---|---|---|---|
| EPX380SX | 85~265VAC | 380VDC | 600W |

## *POWER FACTOR CORRECTION*

**WITHOUT PFC**




**WITH PFC**

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## 1) POWER 600Watts

Derate output power linearly below 105 VAC from 600W at 105 VAC to 400W at 85 VAC.

## 2) INPUTS

| Description | Min. | Typical | Max. | Condition |
|---|---|---|---|---|
| Input Voltage | 85VAC | | 265VAC | Full Range; 50/60Hz |
| Line Frequency | 47Hz | | 63Hz | (operation up to 440Hz w/reduced specifications) |
| Power Factor | 0.99 | | | |
| Harmonic Distortion | <5% (conforming to IEC 1000-3-2) | | | |

## 3) OUTPUT REQUIREMENT:

| Description | |
|---|---|
| Output Voltage | 380 VDC |
| Efficiency | 90/94 % (120/240 VAC) typical |
| Inrush Limiting | <15 A peak typical |

## 4)PROTECTION:

### 4.1) SHORT CIRCUIT PROTECTION

Trip point 1.8 A (Shutdown, auto. recovery after removal of short)

### 4.2) THERMAL PROTECTION

105-110°C (Shutdown, automatic recovery)

### 4.3) OVERLOAD PROTECTION

415 VDC non-shutdown

### 4.4) ISOLATION

Input-Output Non-isolated
Input/Output-Case 2500 VDC

## 5) ENVIRONMENT:

**5.1) Operating temperature:** -40 to +100°C Case

## 6) Thermal Resistance (Case To Ambient): 3.3°C/W


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## *7) SAFETY REQUIREMENTS*

UL1950, CSA22.2-234-M90, EN 60950

## *8) LOAD ENABLE*

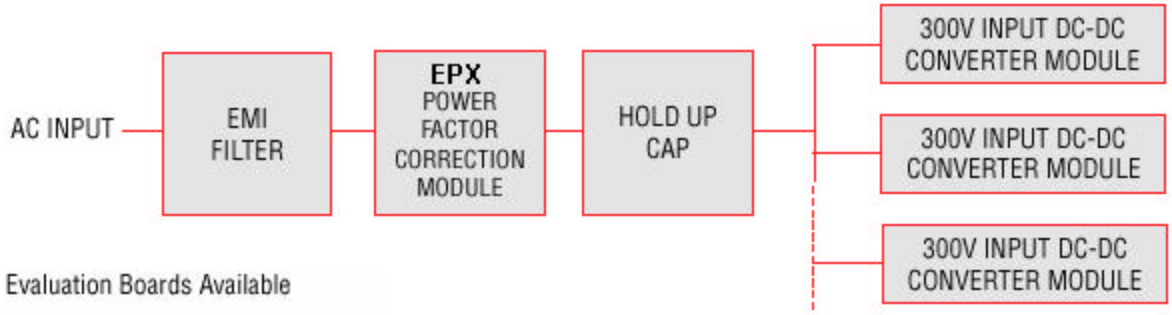
Direct interface with DC-DC Converter logic on/off pin

## *9) DC OK SIGNAL*

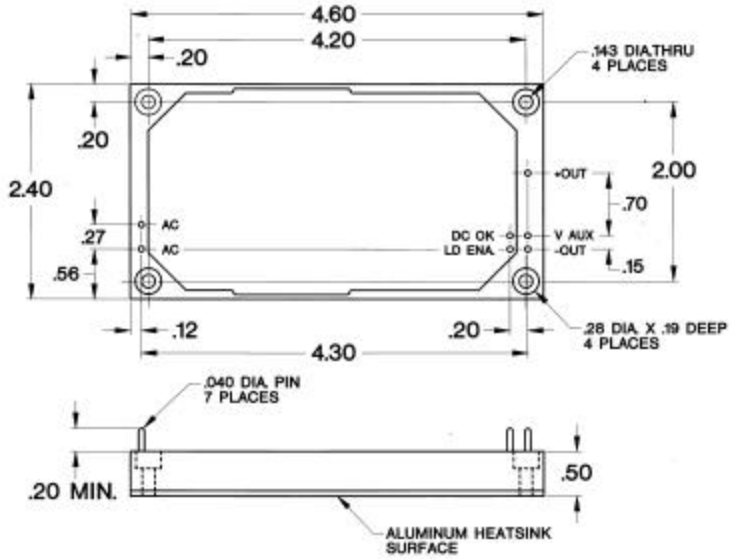
Provides power fail warning when output drops below 355VDC

## *10) AUXILLARY SUPPLY* 14 V @ 10 Ma

## *11) SYSTEM DIAGRAM*




## *12) OUTLINE DRAWING*





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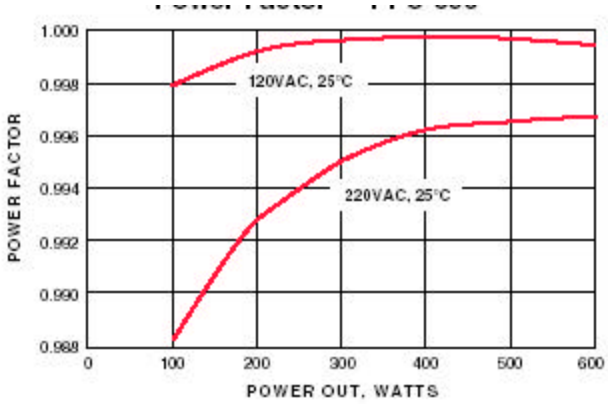
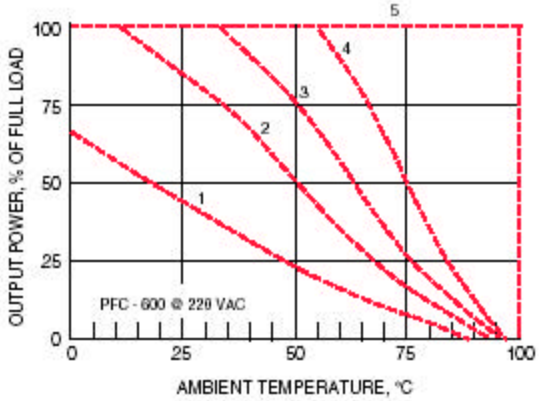
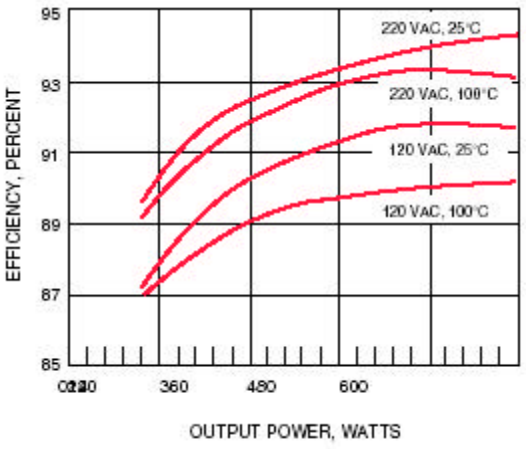
## *13) POWER FACTOR VS. LOAD*




## *14) THERMAL PERFORMANCE*
## *15)EFFICIENCY*




1 - With No Heatsink and No Airflow
2 - With 2006 Heatsink and No Airflow or, with a 2.0°C/W Heatsink
3 - With 2006 Heatsink and 200 LFM Airflow or, with a 1.5°C/W Heatsink
4 - With 2006 Heatsink and 400 LFM Airflow or with a 1.0°C/W Heatsink
5 - Output Power vs. Case Temperature





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