300VA, Industrial Quality AC-AC Frequency Converter with PFC Universal AC input and Sine Wave Output
FCP 300-FX Series

- Sinusoidal output voltage
- PFC input with universal range
- Rugged, industrial quality
- Filtered input
- Conduction/convection cooled
- Full electronic protection
- Field-proven design topology

This rugged AC-AC frequency converter with universal PFC input utilizes field proven, microprocessor-controlled technology to generate the required output power with pure sine wave output voltage. It is a mature design with a track record in numerous applications. The AC-DC input stage boosts the input voltage to a higher DC bus voltage, which feeds the DC-AC inverter to generate the required AC output. The high frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage
95-264Vac (Universal) 47… 63Hz
400Hz on request
Input Current: 4Arms max.
Power Factor is better than 0.97 at full load for the entire input range.
Meets EN61000-3-2

Input Protection
Inrush current limiting
Varistors
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation
2250Vdc input to chassis
4300Vdc input to output
8mm spacing
2250Vdc output to chassis
Floating output

Standards
Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN60950-1

EMI
EN55032 Class A with margins
Class B EMI as option

Switching Frequency
80kHz ±5kHz PFC input section

Hold Up Time
Min. 10ms at any input for 5% drop in the output voltage

Output Voltage
115Vac @ 60Hz or 400Hz/2.6A rms continuous;
or 230Vac @ 50Hz/1.3A rms continuous.
Output is floating, either terminal can be grounded
Other outputs are available on request.

Output Wave Form
Sinusoidal

Total Harmonic Distortion
Less than 5% at full load

Line/Load Regulation
± 2% from no load to full load

Load Crest Factor
2 at 90% load

Output Noise
High frequency ripple is less than 500mVrms (20MHz BW)

Output Overload Protection
Current limiting with short circuit protection
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection
140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting

Efficiency
Typically 80% at full load

Operating Temperature Range
0°C to +50°C for full specification
Extended temperature ranges available

Temperature Drift
0.05% per °C over operating temperature range

Cooling
Conduction to customer heat-sink or chassis and natural convection

Environmental Protection
Basic ruggedizing
Conformal coating

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5 - 95% non-condensing

MTBF
120,000 hours at 45ºC
Demonstrated MTBF is significantly higher

Indicators
None

Control Input
None

Alarm Output
None
Option: output fail alarm (Form C)

Package/Dimensions (W x H x L)
FX: 153 x 67 x 358 mm
(6” x 2.7” x 14.1”)
Mounting holes are clear

Weight
2.2 kg (4.9 lbs.)

Connections
12 pole barrier type terminal block with 3/8” spacing

RoHS Compliance
Compliant

Warranty
Two years subject to application within good engineering practice

Terminal Block Pin-out

INPUT							OUTPUT				
PH ~	N ~	GND ⏚	NOT USED	NOT USED	NOT USED	NOT USED	GND ⏚	NOT USED	N ~	PH ~	NOT USED
1	2	3	4	5	6	7	8	9	10	11	12

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.

ABSOPULSE ELECTRONICS LTD
110 Walgreen Road, Ottawa. Ontario. K0A 1L0. CANADA
Tel: +1-613-836-3511 | Fax: +1-613-836-7488
https://absopulse.com/contact | https://www.absopulse.com

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Made in Canada