



# FEC30 Series

## 30 WATT DC/DC CONVERTER SINGLE OUTPUT



### FEATURES

- ✔ 30 WATT OUTPUT POWER
- ✔ 2 : 1 INPUT VOLTAGE RANGE
- ✔ EXTREMELY RELIABLE
- ✔ SIX SIDED CONTINUOUS SHIELD
- ✔ HIGH EFFICIENCY UP TO 90%
- ✔ SHORT CIRCUIT PROTECTION
- ✔ DIRECT PCB-SOLDERING
- ✔ INDUSTRY STANDARD 2 X 1.6 X.04 PACKAGE
- ✔ INTERNATIONAL SAFETY STANDARD

### APPROVALS

#### SAFETIES/APPROVALS

UL, TUV, CE  
UL1950  
EN60950

#### ELECTRICAL SPECIFICATIONS

All specifications are typical at nominal input, full load

#### INPUT SPECIFICATIONS

Input Voltage Range.....2 : 1  
Input Filter..... PI-Network

#### OUTPUT SPECIFICATIONS

Output Voltage Accuracy..... ±1%  
Voltage Adjustability.....±10%  
Minimum Load.....0%  
Efficiency.....Up to 90%  
Over-Current Protection.....150% max  
Ripple .....**12/15V:** 75mVp-p  
**Others:** 50mVp-p  
(20Mhz Bandwidth)  
Line Regulation.....±0.2%  
Line Filter..... Built-in  
Load Regulation.....±0.5%  
(Load Rate 10% ~ 100%)

#### GENERAL SPECIFICATIONS

Isolation Voltage.....1600VDC min  
MTBF..... >1.535 x 10<sup>6</sup> hours  
Isolation Resistance.....10<sup>9</sup> ohms min  
Isolation Capacitance.....1000pF  
Switching Frequency.....300Khz typical

#### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature .....-40°C ~ +85°C  
Temperature Coefficient.....±0.05%/ °C  
Humidity..... 5%~95% RH  
Storage Temperature..... -55°C ~ +105°C

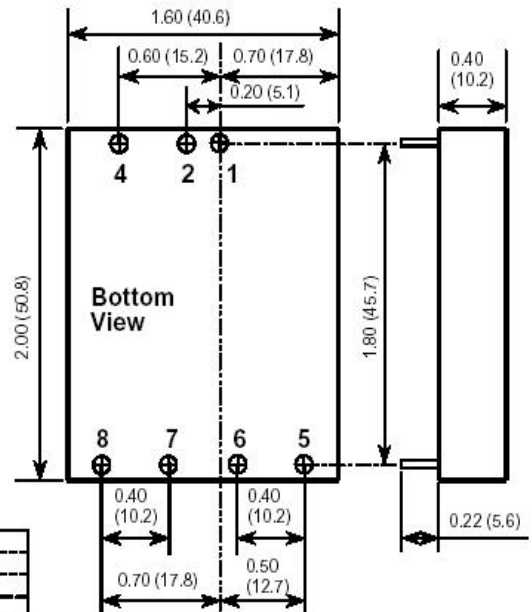
#### PHYSICAL SPECIFICATIONS

Case Material.....Nickel-Coated Copper  
Base Material.....Non-Conductive  
Black Plastic

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT
FEC30-24S1P8	24VDC (18 - 36V)	1.8VDC	6000mA
FEC30-24S2P5		2.5VDC	6000mA
FEC30-24S3P3		3.3VDC	6000mA
FDC30-24S05		5VDC	6000mA
FEC30-24S12		12VDC	2500mA
FEC30-24S15		15VDC	2000mA
FEC30-48S1P8	48VDC (36 - 75V)	1.8VDC	6000mA
FEC30-48S2P5		2.5VDC	6000mA
FEC30-48S3P3		3.3VDC	6000mA
FEC30-48S05		5VDC	6000mA
FEC30-48S12		12VDC	2500mA
FEC30-48S15		15VDC	2000mA

Note

1. An external filter capacitor is required for normal operation. The capacitor should be capable of handling 1A ripple current for 48V/24V models. Power mate suggest: Nippon chemi-con KMF series, 220  $\mu$ F/100V, ESR 90m $\Omega$ .
2. Simulated source impedance of 12uH. 12uH inductor in series with +Vin.
3. The ON/OFF control pin voltage is referenced to negative input
4. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
5. Heat sink is optional and P/N: 7G-0011A.
6. Maximum value at nominal input voltage and full load.
7. Typical value at nominal input voltage and full load.
8. Test by minimum Vin and constant resistor load.



1. All dimensions in Inches (mm)
2. Pin pitch tolerance  $\pm 0.014(0.35)$

PIN CONNECTION	
PIN	DEFINE
1	+ INPUT
2	- INPUT
4	CTRL
5	NO PIN
6	+ OUTPUT
7	- OUTPUT
8	TRIM

