



Unit measures 2.76"W x 3.94"L x 0.75"H

- Wide 2 : 1 Input Range
- High Efficiency
- Regulated Outputs
- 1600V Isolation
- Full EMI Shielding
- PI Input Filter

| Model Number | Output Voltage | Output Amps | Input Range |
|----------------------|----------------|-------------|-------------|
| SINGLE OUTPUT | | | |
| FDC40-12S33 | 3.3 VDC | 10 | 9-18 VDC |
| FDC40-24S33 | | 10 | 18-36 VDC |
| FDC40-48S33 | | 10 | 36-72 VDC |
| FDC40-12S05 | 5 VDC | 8 | 9-18 VDC |
| FDC40-24S05 | | 8 | 18-36 VDC |
| FDC40-48S05 | | 8 | 36-72 VDC |
| FDC40-12S12 | 12 VDC | 3.4 | 9-18 VDC |
| FDC40-24S12 | | 3.4 | 18-36 VDC |
| FDC40-48S12 | | 3.4 | 36-72 VDC |
| FDC40-12S15 | 15 VDC | 2.7 | 9-18 VDC |
| FDC40-24S15 | | 2.7 | 18-36 VDC |
| FDC40-48S15 | | 2.7 | 36-72 VDC |



UL E193009;
TUV R2054535;
CB JPTUV-001393





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| Model Number | Output Voltage | Output Amps | Input Range |
|----------------------|----------------|-------------|-------------|
| DUAL OUTPUT | | | |
| FDC40-12D3305 | 3.3 / 5 VDC | 4-Apr | 9-18 VDC |
| FDC40-24D3305 | | 4-Apr | 18-36 VDC |
| FDC40-48D3305 | | 4-Apr | 36-72 VDC |
| FDC40-12D05 | +/-5 VDC | -7 | 9-18 VDC |
| FDC40-24D05 | | -7 | 18-36 VDC |
| FDC40-48D05 | | -7 | 36-72 VDC |
| FDC40-12D12 | +/-12 VDC | +/-1.8 | 9-18 VDC |
| FDC40-24D12 | | +/-1.8 | 18-36 VDC |
| FDC40-48D12 | | +/-1.8 | 36-72 VDC |
| FDC40-12D15 | +/-15 VDC | +/-1.4 | 9-18 VDC |
| FDC40-24D15 | | +/-1.4 | 18-36 VDC |
| FDC40-48D15 | | +/-1.4 | 36-72 VDC |
| TRIPLE OUTPUT | | | |
| FDC40-12T0512 | 5, +/-12 VDC | 4, +/-0.85 | 9-18 VDC |
| FDC40-24T0512 | | 4, +/-0.85 | 18-36 VDC |
| FDC40-48T0512 | | 4, +/-0.85 | 36-72 VDC |
| FDC40-12T0515 | 5, +/-15 VDC | 4, +/-0.68 | 9-18 VDC |
| FDC40-24T0515 | | 4, +/-0.68 | 18-36 VDC |
| FDC40-48T0515 | | 4, +/-0.68 | 36-72 VDC |





Isolated and Regulated 40 WATT Modular DC/DC Converters

FDC40 series

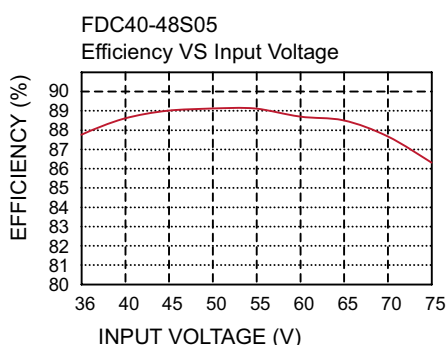
INPUT SPECIFICATIONS

| | | |
|-----------------------|----------------|-----------|
| Input Voltage Ranges: | 12 VDC Nominal | 9-18 VDC |
| | 24 VDC Nominal | 18-36 VDC |
| | 48 VDC Nominal | 36-72 VDC |
| Input Filter | Pi Type | |

OUTPUT SPECIFICATIONS

| | | |
|-----------------------------------|----------------------------------|----------|
| Voltage and Current | See Selection Chart | |
| Load Regulation | singles: +/-0.5% | |
| | duals: +/-1% | |
| | triples: 5 V: +/-2%, Aux: +/-5% | |
| Line Regulation | singles: +/-0.5% | |
| | duals: +/-1% | |
| | triples: 5V: +/-2%, Aux: +/-5% | |
| Temperature Coefficient | +/-0.02%/DegC | |
| Ripple/Noise | 1% Pk-Pk of Vout, typ | |
| Voltage Stability | (singles/duals) | +/- 2% |
| | (triples) 5 V: +/-2%, Aux: +/-5% | |
| Short Circuit Protection | Continuous, self-recovering | |
| Overvoltage Protection Threshold: | 3.3V Output | 3.9Volts |
| | 5V Output | 6.2Volts |
| | 12V Output | 15Volts |
| | 15V Output | 18Volts |

EFFICIENCY CURVES



GENERAL SPECIFICATIONS

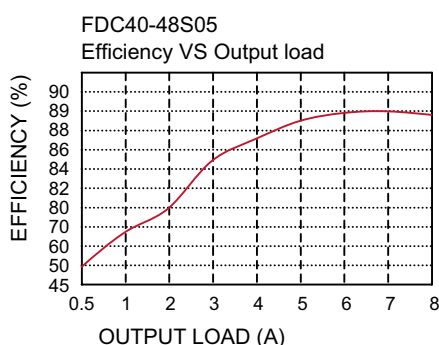
| | |
|----------------------|----------------------|
| On/Off Control | (Ref to - Input pin) |
| | Logic "1"/Open=ON |
| | Logic "0"/GND=OFF |
| Input-Out Isolation | 1600VDC |
| Isolation Resistance | 10000 M Ohms |
| Efficiency | 82%, typ |
| Switching Frequency | 185Khz, typ |

ENVIRONMENTAL SPECIFICATIONS

| | |
|--------------------------|-----------------------------|
| Oper. Temperature (Case) | -25 to +85 DegC(see derate) |
| Storage Temperature | -55 to +125 DegC * |
| Maximum Case Temp | 100 DegC * |
| MTBF | 1.61 MHrs |
| | MIL-HDBK-217F TA=25C FL |

PHYSICAL SPECIFICATIONS

| | |
|---------------|----------------------|
| Case Material | Nickel-Coated Copper |
| | Non-Conductive Base |
| Construction | Fully Encapsulated |
| Weight | 4.5 oz, (126g) |

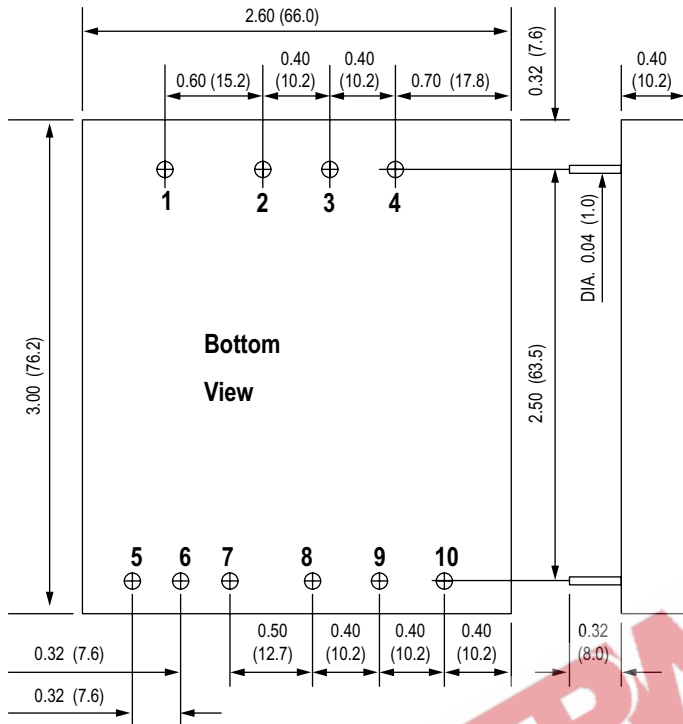


All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

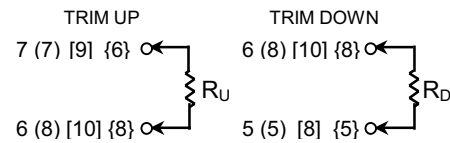
MECHANICAL DIMENSIONS



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

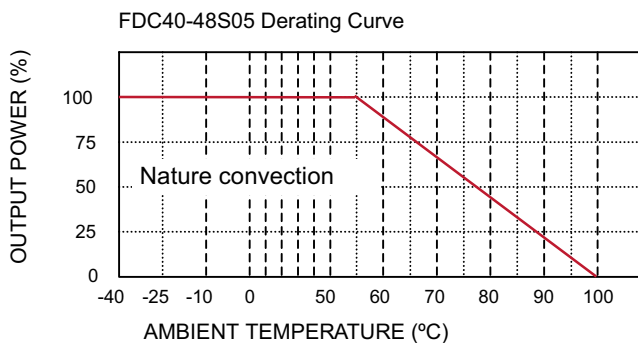
EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown below.
 () for dual output trim
 [] for triple output trim
 { } XXD3305 only trim 3.3V/5V



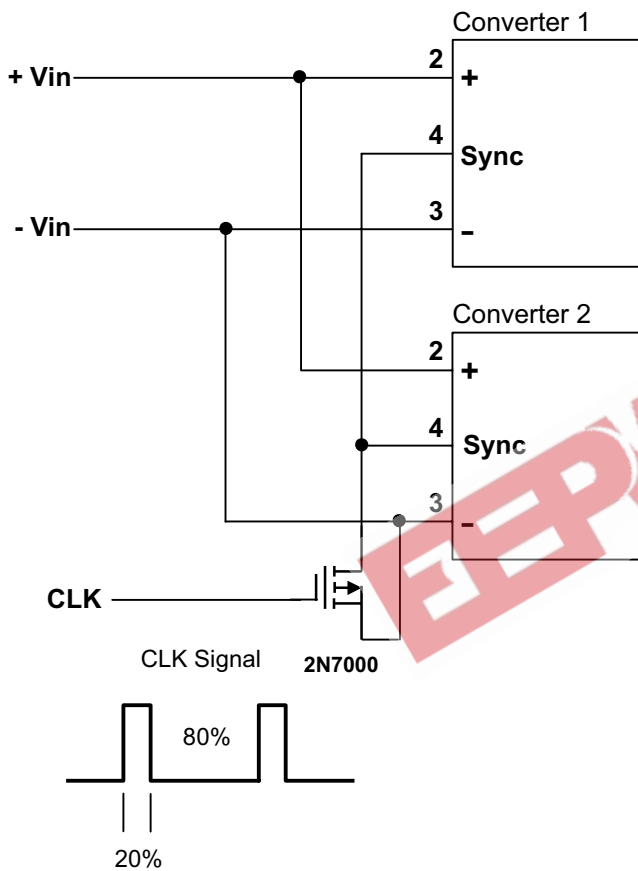
| Pin # | Single | Dual | Triple |
|-------|--------|-------------------|--------|
| 1 | Ctrl | Ctrl | Ctrl |
| 2 | + Vin | + Vin | + Vin |
| 3 | - Vin | - Vin | - Vin |
| 4 | Sync | Sync | Sync |
| 5 | + OutS | + Vout or 3.3 out | + Vout |
| 6 | Trim | Com | Com |
| 7 | - OutS | - Vout or 5 out | - Vout |
| 8 | + Vout | Trim | +5 Out |
| 9 | - Vout | No Pin | -5 Out |
| 10 | No Pin | No Pin | Trim |

OUTPUT DERATING CURVE



APPLICATION OF SYNCHRONIZATION

1. The unit is capable of external synchronization from an independent time base with a switching rate between 200kHz and 215kHz
2. The amplitude of the synchronizing pulse train is TTL compatible
3. The duty cycle of the CLK should be 20% high and 80% low
4. Synchronization is referenced to negative input (-Vin)



ON/OFF Control application

