600 Watt, 43 – 160VDC Wide Input DC/DC Converters
Series DV600F4-110

E357872

Railway System

RoHS

Features

- 600 Watt Isolated Output
- Regulated Outputs
- 4 : 1 Wide Input Range
- Fixed Switching Frequency
- Remote ON/OFF
- Shock & Vibration: EN50155 (EN61373)
- Meet UL60950-1 2nd (Basic Insulation)
- Efficiency to 88%
- Continuous Short Circuit Protection
- Over Temperature Protection
- Over Voltage / Current Protection
- Full-Brick Size Meet Industry Standard
- Fire & Smoke Meets EN45545-2

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A]	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [A]	EFF. [%]	CAP. LOAD Max. [µF]	CASE
DV600F4-110S12	43 – 160	12	50	25	6,3	87	10000	F
DV600F4-110S24		24	25	25	6,2	88	10000	
DV600F4-110S28		28	21,4	25	6,2	88	10000	
DV600F4-110S48		48	12,5	25	6,2	88	10000	

NOTE:
Nominal Input Voltage 110VDC.

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INPUT SPECIFICATIONS:

Input Voltage Range	110V	43-160Vdc
Input Surge Voltage (100ms max.)	110V	180Vdc max.
Under Voltage Lockout	110Vin power up	42Vdc
	110Vin power down	40Vdc
Opto Isolated Remote On/Off (Note 8)		
Input Filter		PI Filter

OUTPUT SPECIFICATION:

Output Current Min.		0 mA
Voltage Accuracy		±1,0%max.
Transient Response: 25% Step Load Change		<500µ sec.
Trim Adj. Range		60% - 110%
Ripple and Noise (Note 3), 20 MHz BW	12V	60mV RMS / 120mV pk-pk max.
	24V	100mV RMS / 240mV pk-pk max.
	28V	100mV RMS / 280mV pk-pk max.
	48V	200mV RMS / 480mV pk-pk max.
Temperature Coefficient		±0,03%/°C max.
Short Circuit Protection		Continuous
Line Regulation (Note 1)		±0,2% max.
Load Regulation (Note 2)		±0,5% max.
Over Voltage Protection trip Range, % Vo nom		115-140%
Current Limit		105-140% Nominal Output
Auxiliary Output Voltage/Current		10±3Vdc/20mA max.
Load Share Accuracy		±10% at 50% to 100% Full Load
Start up Time		160ms typ.

GENERAL SPECIFICATIONS:

Efficiency		See Table
Isolation Voltage	Input/Output	2250 VDC min.
	Input/Case	2250 VDC min.
	Output/Case	1500 VDC min.
Isolation Resistance		10^7 Ohm min.
Isolation Capacitance		4000pF typ.
Switching Frequency		250 KHz typ.
Operating Case Temperature Range		-40°C to +100°C
Storage Temperature Range		-40°C to +105°C
Thermal Shutdown, Case Temp (DC Module).		110°C typ.
Humidity		95% RH max. Non condensing
MTBF 25°C (MIL-HDBK-217F, GB, Full Load)		450Khrs typ.
Safety		UL60950-1 2nd (Basic Insulation)
EMC		Meets EN50155 (EN50121-3-2) with External Filter
Shock/Vibration		Meet EN50155 (EN61373)
Environmental		Meet EN50155 (EN60068-2-1)
Dimensions		4.60×2.40x0.50 inches (116.8x61.0x12.7mm)
Case Material		Aluminum Baseplate with Plastic Case
Weight		220g

NOTE:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF tantalum capacitor and 1uF ceramic capacitor across output.(48Vo: 10uF aluminum capacitor and 1.0uF ceramic capacitors)
4. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.
5. For information about EN50155 and RIA12, refer to application note.
6. Trim-up: connect a resistor between trim pin and +sense.
   Trim-down: connect a resistor between trim pin and –sense.
7. Suffix “-C0” to the model number with threaded mounting holes (M3x0.5).
8. Standard model is negative logic, suffix “P” to the model number with positive logic. (refer application note).
9. The Output Terminal Required a Minimum Capacitor 470uF to Maintain Specified Regulation.
10. Efficiency Measured at Nominal Input Voltage.
11. All Specifications Typical At Nominal Line, Full Load, and 25℃ Unless Otherwise Noted.

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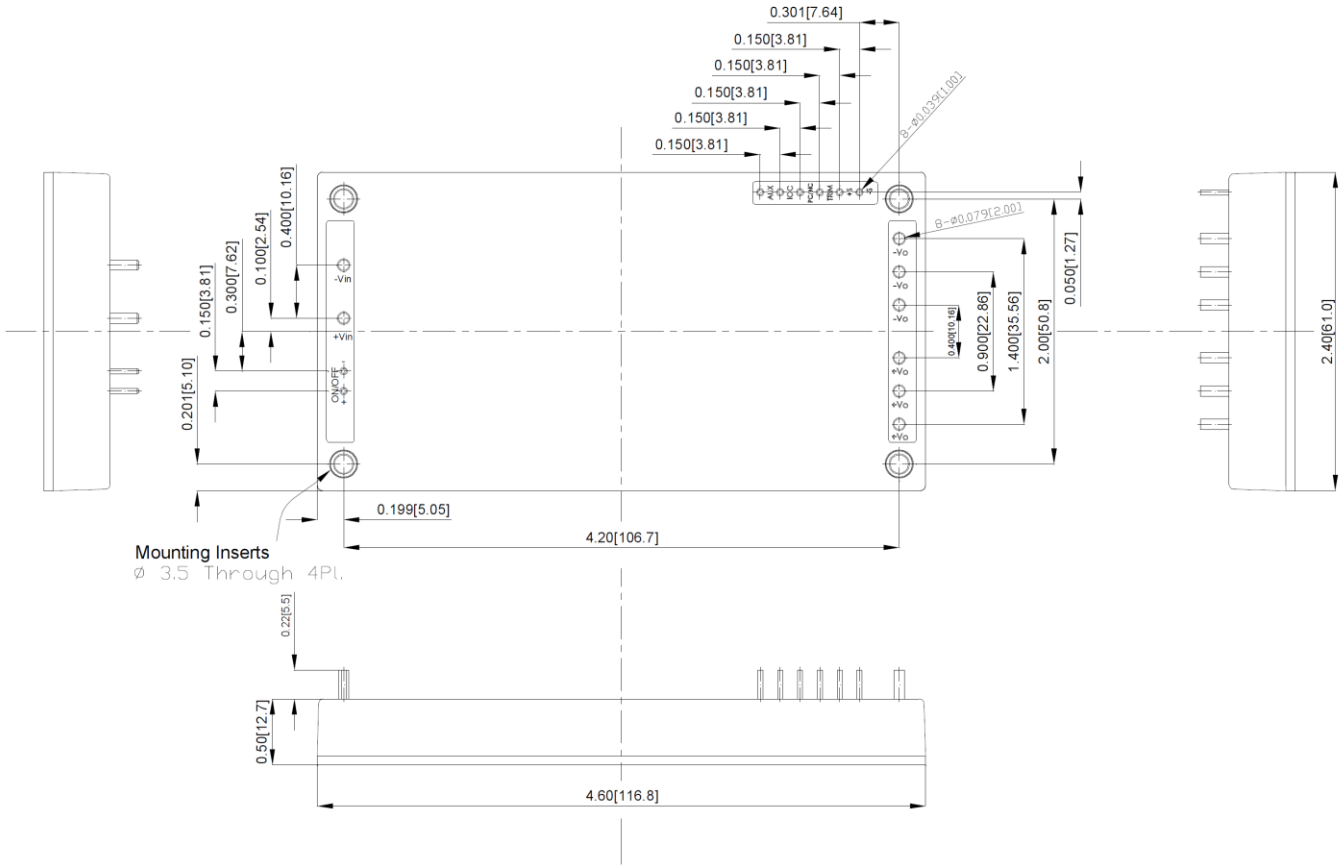
All Dimensions in Inches (mm)			Pin
Tolerance Inches	x.xx±0.02	x.xxx±0.010	±0.004
Millimeters	x.x±0.5	x.xx±0.25	±0.1



PIN CONNECTION	
Pin	**Function**
1	**-V Input**
2	**+V Input**
3	**-On/Off**
4	**+On/Off**
5-7	**+Vout**
8-10	**-Vout**
11	**-Sense**
12	**+Sense**
13	**TRIM**
14	**PC**
15	**IOC**
16	**AUX**

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