

4EE

15 WATT WIDE INPUT DC-DC CONVERTERS

Features:

- 15Watts Isolated Output
- 4:1 Input Range
- Six-Sided Shield
- Remote ON/OFF Control
- Efficiency to 82%
- 200KHz Switching Frequency

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
4EE01		5 VDC	3000 mA	15 mA	810 mA	77	
4EE02		12 VDC	1250 mA	15 mA	780 mA	80	
4EE03		15 VDC	1000 mA	15 mA	780 mA	80	
4EE04	9-36 VDC	±12 VDC	±625 mA	20 mA	780 mA	80	E
4EE05		±15 VDC	±500 mA	20 mA	780 mA	80	
4EE06		5/±12 VDC	1500/±310 mA	20 mA	780 mA	80	
4EE07		5/±15 VDC	1500/±250 mA	20 mA	780 mA	80	
4EE08		+5/+12/-5 VDC	1500/310/500 mA	20 mA	715 mA	80	
4EE11		5 VDC	3000 mA	10 mA	410 mA	77	
4EE12		12 VDC	1250 mA	10 mA	390 mA	80	
4EE13		15 VDC	1000 mA	10 mA	390 mA	80	
4EE14	18-72 VDC	±12 VDC	±625 mA	15 mA	380 mA	82	E
4EE15		±15 VDC	±500 mA	15 mA	380 mA	82	
4EE16		5/±12 VDC	1500/±310 mA	15 mA	380 mA	82	
4EE17		5/±15 VDC	1500/±250 mA	15 mA	380 mA	82	
4EE18		+5/+12/-5 VDC	1500/310/500 mA	15 mA	350 mA	82	

NOTE: 1. Nominal Input Voltage 24 or 48 VDC



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Specifications

4EE SERIES

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-72V
Input Filter.....		PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy		
Single Output.....		±1.0% max.
Dual +Output.....		±1.0% max.
-Output.....		±3.0% max.
Triple, 5V.....		±2.0% max.
12V/15V.....		±3.0% max.
Voltage Balance (Dual).....		±1.0% max.
Transient Response:		
Single, 25% Step Load Change.....		<500µ s.
Dual, FL-1/2L±1% Error Band.....		<500µ s.
External Trim Adj. Range.....		±10%.
Ripple & Noise, 20MHz BW.....		10mV RMS, max. 75mV p-p max.
Temperature Coefficient.....		± 0.02%/°C
Short Circuit Protection.....		Continuous
Line Regulation ¹ , Single/Dual.....		±0.2% max.
Triple.....		±1.0% max.
Load Regulation ² , Single/Dual.....		±1.0% max.
Triple.....		±5.0% max.

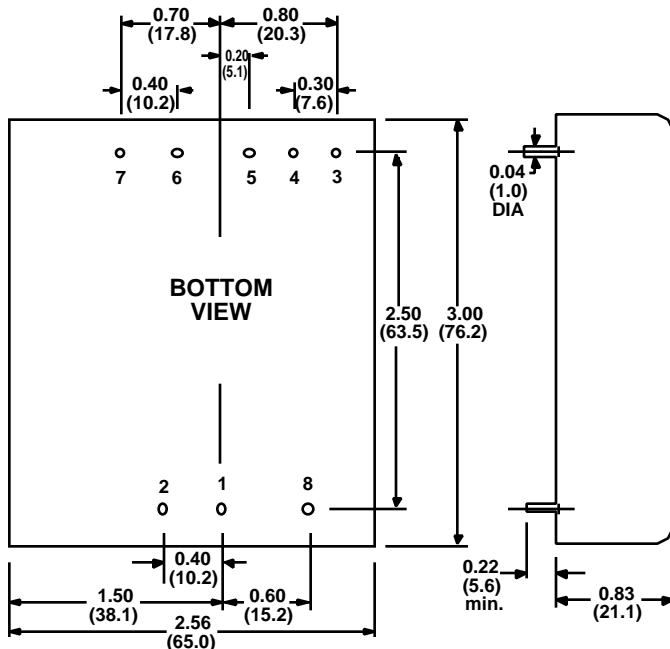
GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage.....	500 VDC min
Isolation Resistance.....	10 ⁹ ohms
Switching Frequency.....	200kHz, min
Operating Temperature Range.....	-25°C to + 71°C
Case Temperature.....	100°C max.
Cooling.....	Free-Air Convection
Storage Temperature Range.....	-55°C to + 105°C
EMI/RFI.....	Six-Sided Continuous Shield
Dimensions.....	2.56 x 3.0 x 0.83 inches (65 x 76.2 x 21.1 mm)
Case Material.....	Black Coated Copper with Non-Conductive Base

1. Measured from high line to low line. 2. Measured from full load to 1/2 load
Load regulation is for load change from 100% to 20% See graph of load regulation.

CASE E

All Dimensions In Inches(mm)



All Specifications Typical At Nominal Line, Full Load and 25°C
Unless Otherwise Noted.

TRIPLE OUTPUT LOADING TABLE (1)

Output (Pin No.)	Voltage	Amperes	
		Min.(2)	Nom.
6	+5	0.25	1.5
3 & 5	+12 or -12	0.10	0.31
3 & 5	+15 or -15	0.10	0.25
3 & 5	+12 & -5	0.10/0.10	0.31/0.50

- Maximum total power from all outputs is limited to 15 watts but no output should be allowed to exceed its maximum current.
- Minimum current on each output is required to maintain specified regulation.

PIN CONNECTION

Pin	Single Output	Dual Output	Triple Output
1.	+Input	+Input	+Input
2.	-Input	-Input	-Input
3.	No Pin	+Output	+Output
4.	Output Trim	Common	Common
5.	No Pin	-Output	-Output
6.	+Output	No Pin	+5V Output
7.	-Output	No Pin	No Pin
8.	Remote On/Off Control		

Remote On/Off Control

Logic Compatibility	CMOS or Open Collector TTL
EC-On	>+5.5VDC or Open Circuit
EC-Off	<1.8 VDC
Shutdown Idle Current	10 mA
Input Resistance	100K ohms (Ein 0 VDC to 9 VDC)
Control Common	Referenced to Input Minus

External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.

