

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.

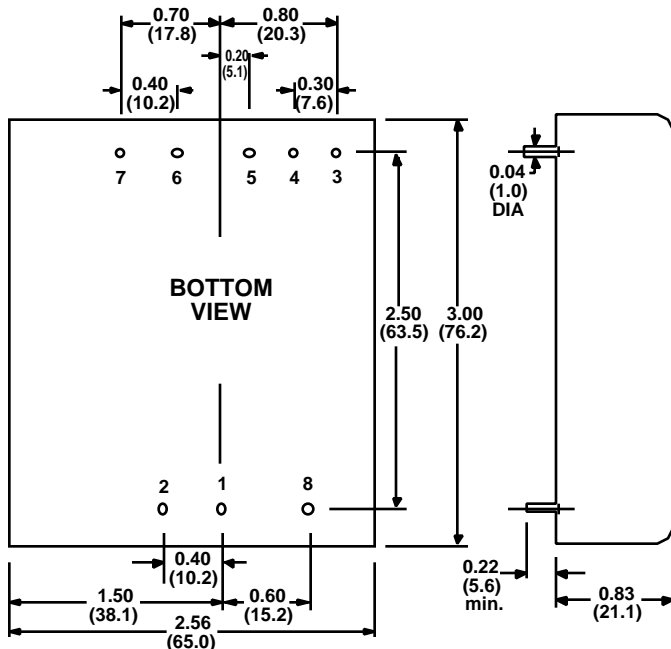
GENERAL SPECIFICATIONS:

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

1. Maximum total power from all outputs is limited to 15 watts but no output should be allowed to exceed its maximum current.

2. 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.

