

FDD 12 SERIES



DC - DC CONVERTER
10 ~ 12W SINGLE & DUAL OUTPUT

FEATURES

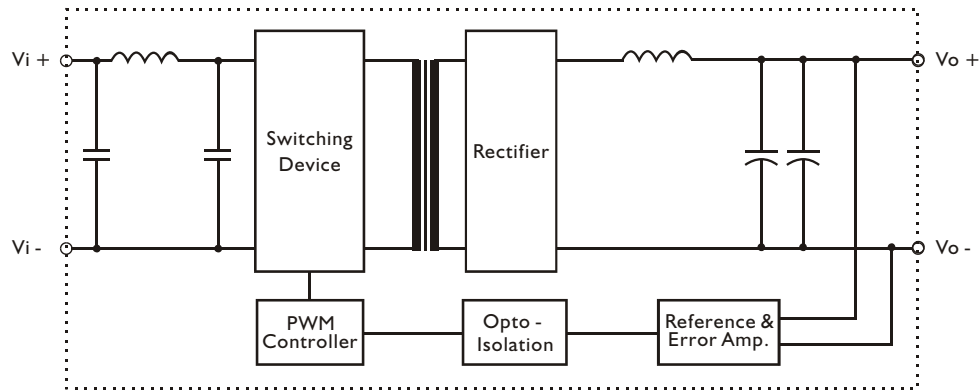
- LOW COST
- 4:1 WIDE INPUT RANGE
- ?I/O ISOLATION
- ?INPUT Pi FILTER
- ?SHORT CIRCUIT PROTECTION
- ?HIGH PERFORMANCE
- ?2 YEARS WARRANTY

MODEL LIST

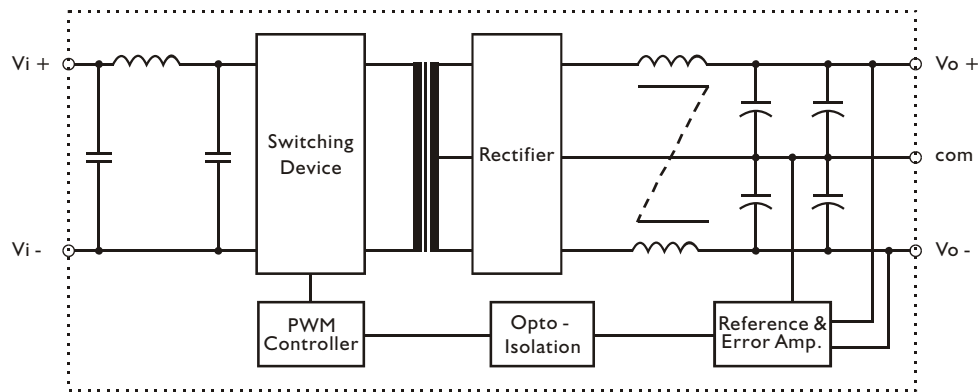
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)
Single Output Models					
FDD12 - 03S4	10~36 VDC	10 WATTS	+3.3 VDC	3000 mA	75%
FDD12 - 05S4	10~36 VDC	12 WATTS	+ 5 VDC	2400 mA	77%
FDD12 - 12S4	10~36 VDC	12 WATTS	+ 12 VDC	1000 mA	77%
FDD12 - 15S4	10~36 VDC	12 WATTS	+ 15 VDC	800 mA	77%
FDD12 - 03S5	18~72 VDC	10 WATTS	+3.3 VDC	3000 mA	77%
FDD12 - 05S5	18~72 VDC	12 WATTS	+ 5 VDC	2400 mA	77%
FDD12 - 12S5	18~72 VDC	12 WATTS	+ 12 VDC	1000 mA	77%
FDD12 - 15S5	18~72 VDC	12 WATTS	+ 15 VDC	800 mA	77%
Dual Output Models					
FDD12 - 05D4	10~36 VDC	12 WATTS	± 5 VDC	± 1200 mA	77%
FDD12 - 12D4	10~36 VDC	12 WATTS	± 12 VDC	± 500 mA	77%
FDD12 - 15D4	10~36 VDC	12 WATTS	± 15 VDC	± 400 mA	77%
FDD12 - 05D5	18~72 VDC	12 WATTS	± 5 VDC	± 1200 mA	77%
FDD12 - 12D5	18~72 VDC	12 WATTS	± 12 VDC	± 500 mA	77%
FDD12 - 15D5	18~72 VDC	12 WATTS	± 15 VDC	± 400 mA	77%

CIRCUIT SCHEMATIC

- Block diagram for FDD12 series with single output



- Block diagram for FDD12 series with dual output



SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	V_i nom, I_o nom		200		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	100			MΩ
Ambient temperature	Operating at V_i nom, I_o nom	-25		+ 71	°C
Case temperature	Operating at V_i nom, I_o nom			+ 100	°C
Derating	V_i nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 100	°C
Dimension	L50.8 x W50.8 x H11.9				mm
Cooling	Free air convection				
Case material	Metal				

INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	T_a min ... T_a max, I_o nom	10	24	36	VDC
		18	48	72	VDC
No load input current	V_i nom, $I_o = 0$	24V models		20	mA
		48V models		15	mA
Input voltage w/o damage	I_o nom	24V models		40	VDC
		48V models		75	VDC
Input filter	Pi type				

OUTPUT SPECIFICATIONS

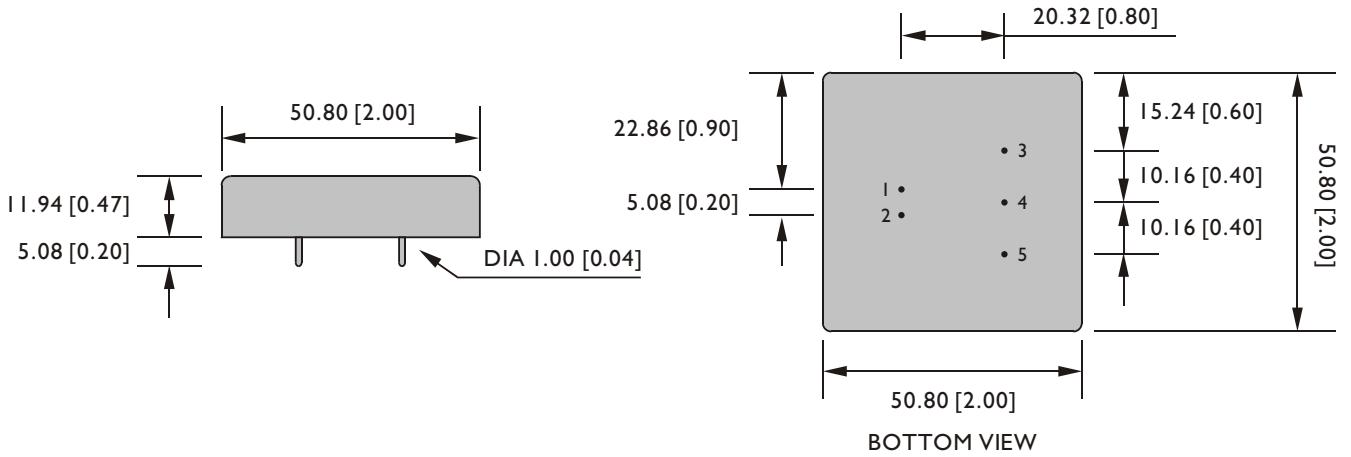
Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	V_i nom, I_o nom			± 2	%
Minimum load	V_i nom	0			%
	single output models dual output models (each output)	20			%
Line regulation	I_o nom, V_i min ... V_i max			± 1	%
Load regulation	V_i nom, $I_o 0 \dots I_o$ nom, single output models			± 2	%
	V_i nom, I_o min ... I_o nom, dual output models			± 5	%
Transient recovery time	V_i nom, I_o nom ... $I_o/2$		500		μs
Temperature coefficient	V_i nom, I_o nom			± 0.02	% / °C
Ripple & noise	V_i nom, I_o nom, BW = 20MHz	3.3V model		100	mV
	5V, 12V, 15V & dual			$V_{out} \times \pm 1\%$	mV
Efficiency	V_i nom, I_o nom, P_o / P_i	Up to 77%, See model list			

CONTROL AND PROTECTION

Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

MECHANISM & PIN CONFIGURATION

mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 x 50.8 x 11.9 mm 2 x 2 x 0.47 inches
CASE MATERIAL	Metal
WEIGHT	65 g (typ.)

PIN ASSIGNMENT

GENERAL					
PIN NO.	1	2	3	4	5
SINGLE	Vi+	Vi-	Vo+	NO PIN	Vo-
DUAL	Vi+	Vi-	Vo+	com	Vo-

DERATING

