

# IDD05U SERIES

DC - DC CONVERTER  
5 ~ 6W 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
- UL/cUL/TUV/CE

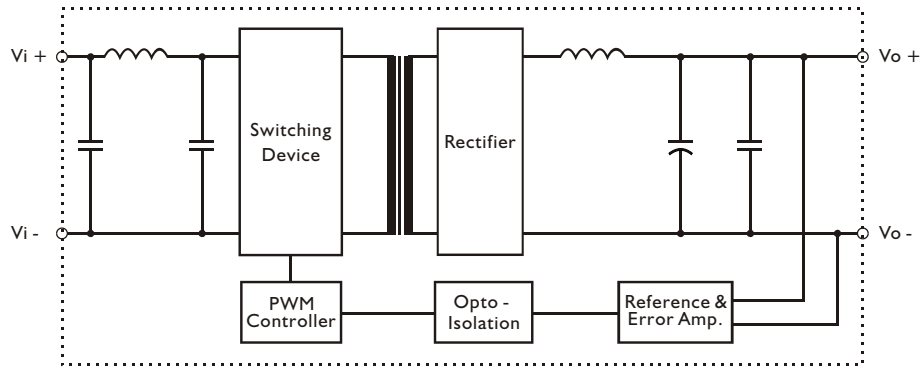
## MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (typ.)	EFF. (min.)
<b>Single Output Models</b>						
IDD05 - 03S4U	9~36 VDC	5 WATTS	+3.3 VDC	1500 mA	74%	72%
IDD05 - 05S4U	9~36 VDC	5 WATTS	+ 5 VDC	1000 mA	76%	74%
IDD05 - 12S4U	9~36 VDC	6 WATTS	+ 12 VDC	500 mA	82%	80%
IDD05 - 15S4U	9~36 VDC	6 WATTS	+ 15 VDC	400 mA	82%	80%
IDD05 - 03S5U	18~75 VDC	5 WATTS	+3.3 VDC	1500 mA	74%	72%
IDD05 - 05S5U	18~75 VDC	5 WATTS	+ 5 VDC	1000 mA	76%	74%
IDD05 - 12S5U	18~75 VDC	6 WATTS	+ 12 VDC	500 mA	82%	80%
IDD05 - 15S5U	18~75 VDC	6 WATTS	+ 15 VDC	400 mA	82%	80%
<b>Dual Output Models</b>						
IDD05 - 05D4U	9~36 VDC	5 WATTS	± 5 VDC	± 500 mA	76%	74%
IDD05 - 12D4U	9~36 VDC	6 WATTS	± 12 VDC	± 250 mA	80%	78%
IDD05 - 15D4U	9~36 VDC	6 WATTS	± 15 VDC	± 200 mA	80%	78%
IDD05 - 05D5U	18~75 VDC	5 WATTS	± 5 VDC	± 500 mA	78%	76%
IDD05 - 12D5U	18~75 VDC	6 WATTS	± 12 VDC	± 250 mA	80%	78%
IDD05 - 15D5U	18~75 VDC	6 WATTS	± 15 VDC	± 200 mA	80%	78%

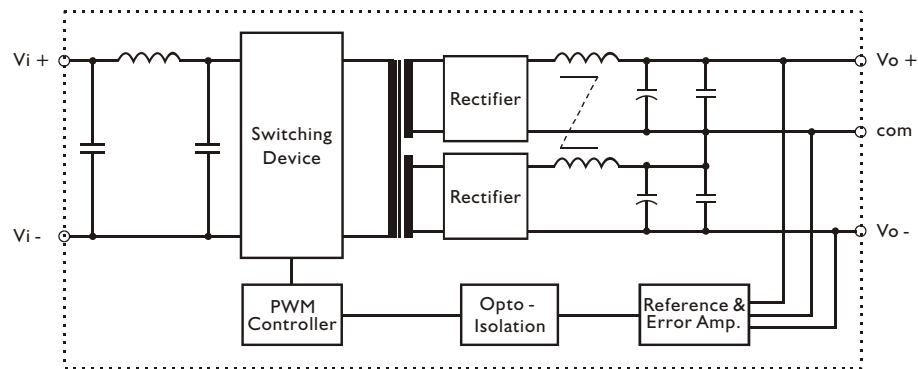


### CIRCUIT SCHEMATIC

• Block diagram for IDD05U series with single output



• Block diagram for IDD05U 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	Vi nom, Io nom		200		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	100			MΩ
Ambient temperature	Operating at Vi nom, Io nom	-40		+ 71	°C
Case temperature	Operating at Vi nom, Io nom			+ 100	°C
Derating	Vi nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 100	°C
Dimension	L50.8 x W25.4 x H10.16				mm
Cooling	Free air convection				
Case material	Metal				

INPUT SPECIFICATIONS					
Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	Ta min ... Ta max, Io nom	9	24	36	VDC
		18	48	75	VDC
No load input current	Vi = nom Io = 0	24V models		25	mA
		48V models		15	mA
Input voltage w/o damage	Io nom	24V models		40	VDC
		48V models		80	VDC
Startup voltage	Io nom	24V models	8.5		VDC
		48V models	16		VDC
Input filter	Pi type				

OUTPUT SPECIFICATIONS					
Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	Vi nom, Io nom			± 2	%
Minimum load	Vi nom	0			%
	sing output models dual output models (each output)	10			%
Line regulation	Io nom, Vi min ... Vi max			± 1	%
Load regulation	Vi nom Io 0 ... Io nom, single output models			± 2	%
	Vi nom, Io min ... Io nom, dual output models			± 5	%
Transient recovery time	25% load, step changed		500		μS
Temperature coefficient	Vi nom, Io nom			± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz	3.3V & 5V model		100	mV
		12V, 15V & dual		150	mV
Efficiency	Vi nom, Io nom, Po / Pi	Up to 82%, See model list			

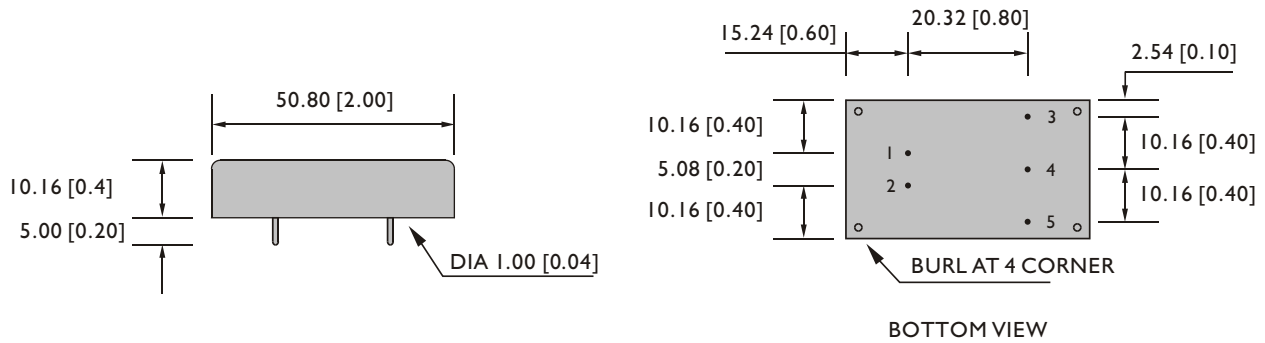
CONTROL AND PROTECTION	
Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

### APPROVALS AND STANDARD

UL/cUL	UL60950-1
TUV	EN60950-1
CE	EN61204-3(Class A for EMI)

### MECHANISM & PIN CONFIGURATION

mm [inch]



### PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 x 25.4 x 10.16 mm 2 x 1 x 0.4 inches
CASE MATERIAL	Metal
WEIGHT	35 g

### PIN ASSIGMENT

#### GENERAL

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

### DERATING

