

# IDD05U SERIES

DC - DC CONVERTER  
5 ~ 6W SINGLE & DUAL OUTPUT



## FEATURES

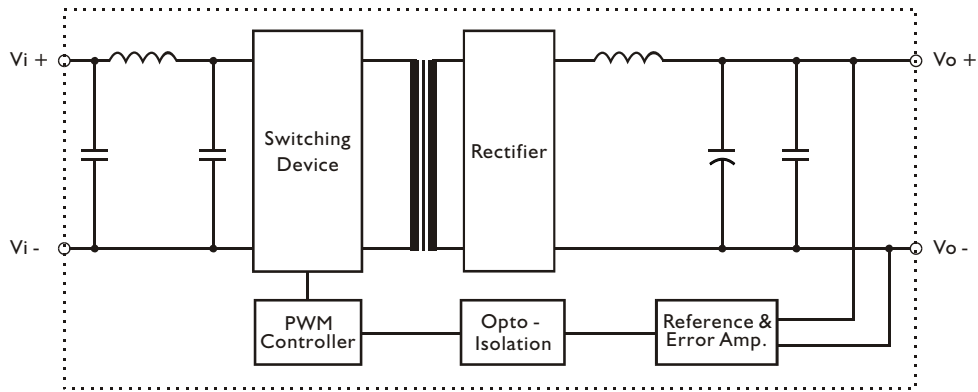
- LOW COST
- 4:1 WIDE INPUT RANGE
- I/O ISOLATION
- INPUT Pi FILTER
- SHORT CIRCUIT PROTECTION
- HIGH PERFORMANCE
- 2 YEARS WARRANTY
- UL/cUL/TUV/CE

## MODEL LIST

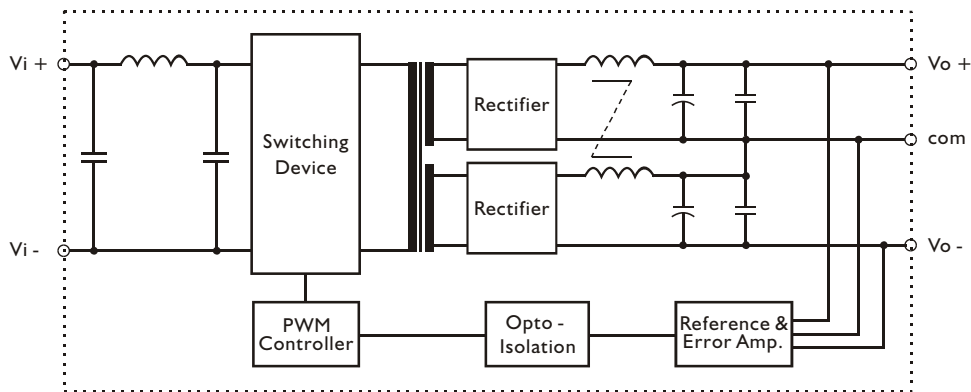
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (typ.)	EFF. (min.)
<b>Single Output Models</b>						
IDD05 - 03S4U	9~36 VDC	5 WATTS	+3.3 VDC	1500 mA	74%	72%
IDD05 - 05S4U	9~36 VDC	5 WATTS	+ 5 VDC	1000 mA	76%	74%
IDD05 - 12S4U	9~36 VDC	6 WATTS	+ 12 VDC	500 mA	82%	80%
IDD05 - 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			%
	single 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

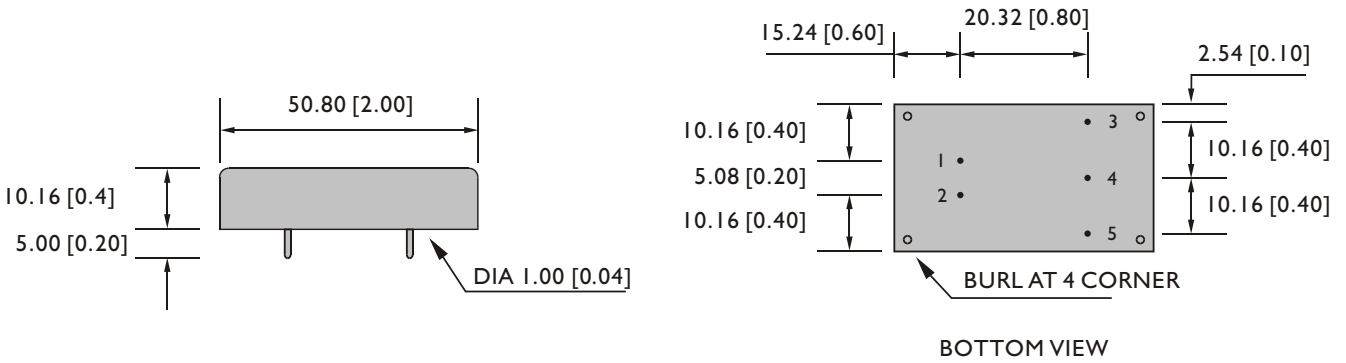
Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

### 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

