

KDD40 SERIES



DC - DC CONVERTER

33 ~ 48W SINGLE & DUAL & TRIPLE OUTPUT

FEATURES

- 2:1 INPUT RANGE
- ISOLATION INPUT AND OUTPUT 1.5KV DC
- HIGH PERFORMANCE UP TO 84%
- SHORT CIRCUIT PROTECTION
- 2 YEARS WARRANTY

MODEL LIST

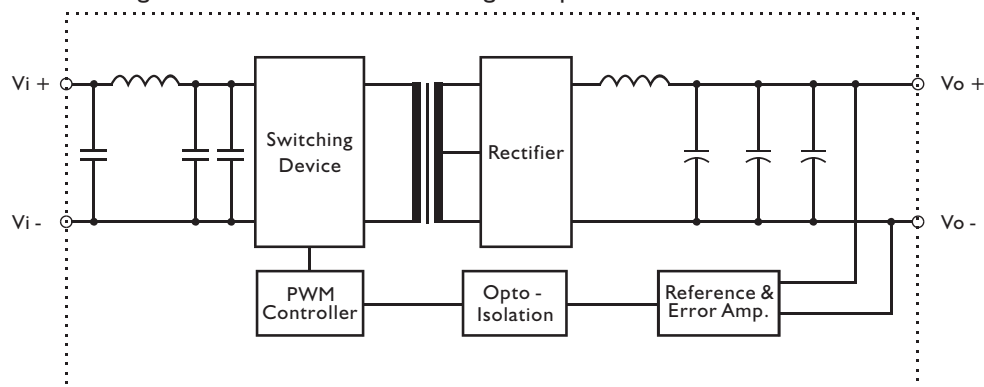
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)
Single Output Models					
KDD40 - 12S01	9~18 VDC	40 WATTS	+ 5 VDC	8000 mA	75%
KDD40 - 12S02	9~18 VDC	42 WATTS	+ 12 VDC	3500 mA	78%
KDD40 - 12S03	9~18 VDC	45 WATTS	+ 15 VDC	3000 mA	79%
KDD40 - 12S04	9~18 VDC	48 WATTS	+ 24 VDC	2000 mA	80%
KDD40 - 12S05	9~18 VDC	33 WATTS	+3.3 VDC	10000 mA	73%
KDD40 - 24S01	18~36 VDC	40 WATTS	+ 5 VDC	8000 mA	79%
KDD40 - 24S02	18~36 VDC	42 WATTS	+ 12 VDC	3500 mA	81%
KDD40 - 24S03	18~36 VDC	45 WATTS	+ 15 VDC	3000 mA	81%
KDD40 - 24S04	18~36 VDC	48 WATTS	+ 24 VDC	2000 mA	81%
KDD40 - 24S05	18~36 VDC	33 WATTS	+3.3 VDC	10000 mA	77%
KDD40 - 48S01	36~72 VDC	40 WATTS	+ 5 VDC	8000 mA	79%
KDD40 - 48S02	36~72 VDC	42 WATTS	+ 12 VDC	3500 mA	81%
KDD40 - 48S03	36~72 VDC	45 WATTS	+ 15 VDC	3000 mA	82%
KDD40 - 48S04	36~72 VDC	48 WATTS	+ 24 VDC	2000 mA	84%
KDD40 - 48S05	36~72 VDC	33 WATTS	+3.3 VDC	10000 mA	77%
Dual Output Models					
KDD40 - 12D01	9~18 VDC	37.5 WATTS	± 5 VDC	+7000 / -500 mA	75%
KDD40 - 12D02	9~18 VDC	42 WATTS	± 12 VDC	+3000 / -500 mA	78%
KDD40 - 12D03	9~18 VDC	37.5 WATTS	± 15 VDC	+2000 / -500 mA	79%
KDD40 - 24D01	18~36 VDC	42.5 WATTS	± 5 VDC	+8000 / -500 mA	77%
KDD40 - 24D02	18~36 VDC	42 WATTS	± 12 VDC	+3000 / -500 mA	78%
KDD40 - 24D03	18~36 VDC	37.5 WATTS	± 15 VDC	+2000 / -500 mA	80%
KDD40 - 48D01	36~72 VDC	42.5 WATTS	± 5 VDC	+8000 / -500 mA	79%
KDD40 - 48D02	36~72 VDC	42 WATTS	± 12 VDC	+3000 / -500 mA	81%
KDD40 - 48D03	36~72 VDC	37.5 WATTS	± 15 VDC	+2000 / -500 mA	82%

MODEL LIST

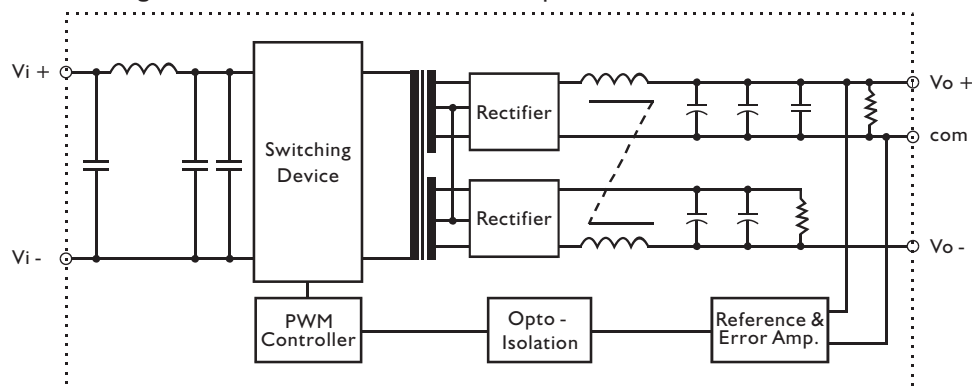
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)
Triple Output Models					
KDD40 - 12T01	9~18 VDC	42 WATTS	+5V / $\pm 12V$	+6000 / ± 500 mA	76%
KDD40 - 12T02	9~18 VDC	45 WATTS	+5V / $\pm 15V$	+6000 / ± 500 mA	77%
KDD40 - 24T01	18~36 VDC	42 WATTS	+5V / $\pm 12V$	+6000 / ± 500 mA	77%
KDD40 - 24T02	18~36 VDC	45 WATTS	+5V / $\pm 15V$	+6000 / ± 500 mA	78%
KDD40 - 24T03	18~36 VDC	38.5 WATTS	+5V / +12V / -5V	+6A / +0.5A / -0.5A	78%
KDD40 - 48T01	36~72 VDC	42 WATTS	+5V / $\pm 12V$	+6000 / ± 500 mA	78%
KDD40 - 48T02	36~72 VDC	45 WATTS	+5V / $\pm 15V$	+6000 / ± 500 mA	79%
KDD40 - 48T03	36~72 VDC	38.5 WATTS	+5V / +12V / -5V	+6A / +0.5A / -0.5A	79%

CIRCUIT SCHEMATIC

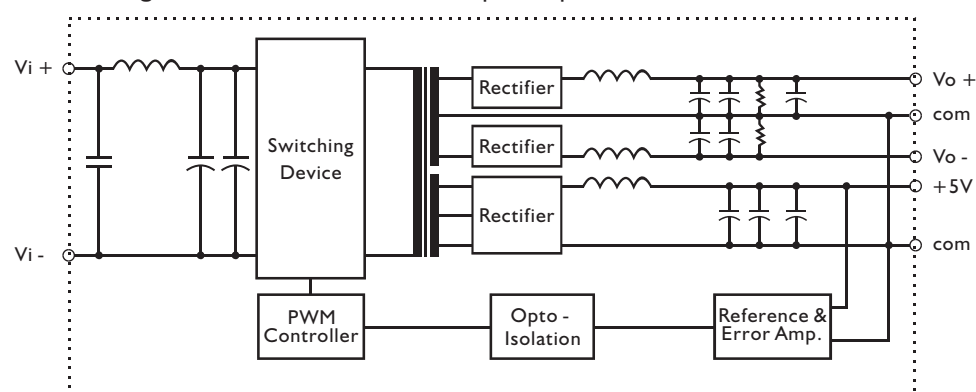
• Block diagram for KDD40 series with single output



• Block diagram for KDD40 series with dual output



• Block diagram for KDD40 series with triple 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		80		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	1G			Ω
Ambient temperature	Operating at Vi nom, Io nom	-25		+ 71	°C
Case temperature	Operating at Vi nom, Io nom			+ 90	°C
Derating	Vi nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 90	°C
Dimension	L70 x W100 x H23				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	12	18	VDC
		18	24	36	VDC
		36	48	72	VDC
No load input current	Vi nom, Io=0	12V models		35	mA
		24V models		30	mA
		48V models		25	mA
Input voltage w/o damage	Io nom	12V models		21	VDC
		24V models		40	VDC
		48V models		75	VDC
Input filter	Pi type				

OUTPUT SPECIFICATIONS

Characteristics	Conditions		min.	typ.	max.	unit
Output voltage accuracy	Vi nom, Io nom	single output models			± 1	%
		dual & triple output models			± 2	%
		-5V of triple output			± 3	%
Minimum load	Vi nom	single output models	0			%
		dual & triple (each output)	20			%
Line regulation	Io nom, Vi min ...Vi max				± 1	%
Load regulation	Vi nom	single output models			± 2	%
	Io min ... Io max	Vo+ of dual output models			± 2	%
		Vo- of dual output models			± 5	%
		+5V of triple output			± 2	%
		slave of triple output			± 5	%
Transient recovery time	25% load, step changed			500		μ S
Temperature coefficient	Vi nom, Io nom				± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz				Vout x ± 1%	mV
	-5V of triple output				150	mV
Efficiency	Vi nom, Io nom, Po / Pi		Up to 84%, See model list			

SPECIFICATION

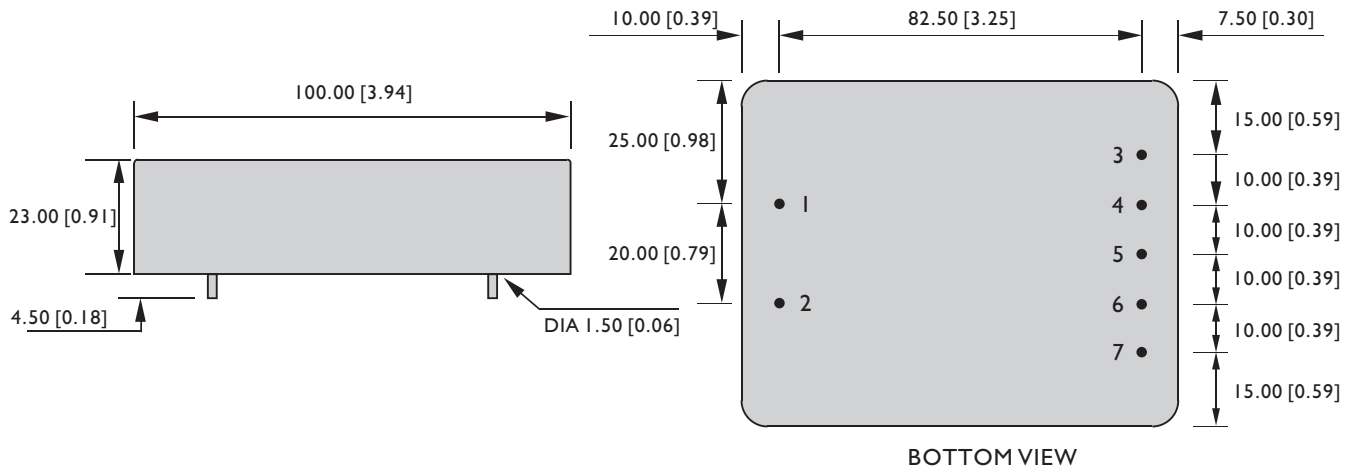
All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

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	70 x 100 x 23 mm 2.76 x 3.94 x 0.91 inches
CASE MATERIAL	Metal
WEIGHT	270 g

PIN ASSIGNMENT

GENERAL

PIN NO.	1	2	3	4	5	6	7
SINGLE	Vi+	Vi-	Vo+	Vo+	Vo-	Vo-	N. C.
DUAL	Vi+	Vi-	Vo+	Vo+	com	com	Vo-
TRIPLE	Vi+	Vi-	+5V OUT	com	Vo+	com	Vo-

DERATING

