

15-40W Medical AC-DC PCB-Mount Power Supplies

Features

- ◆ Small size and lightweight
- ◆ PC Board Mountable
- ◆ Wide Range Input
- ◆ Medical Safety Certifications (4kVAC Input - Output)
- ◆ Class II (No ground needed)
- ◆ High efficiency



Key Market Segments & Applications



Specifications		
Model		KMS15 KMD15 KMT15 KMS40 KMD40 KMT40
Input Voltage Range	-	90-264VAC 47-440Hz or 100-375VDC*
Inrush Current Limiting	A	10 / 20A, cold start, 25°C ambient (115 / 230VAC)
Input Current (115 / 230VAC)	mA	292 / 188mA 860 / 460mA
Recommended External Fuse	-	2A slow blow type 3.15A slow blow type
Temperature Coefficient	-	±0.01%/°C
Ripple and Noise (pk-pk)	mV	50mV or 1%, whichever is greater
Overcurrent Protection	-	> 105%, hiccup mode, automatic recovery
Overvoltage Protection	%	Yes, Zener diode clamp
Hold-up Time (typical)	ms	20ms 18ms
Enclosure Leakage (240VAC 63Hz) (264VAC 63Hz)	mA	0.055 max 0.08 max 0.06 max 0.085 max
Operating Temperature	°C	-25°C to 70°C, derate linearly to 50%(1) load from 50°C to 70°C. Max case temperature 95°C
Storage Temperature	°C	-40°C to 100°C
Humidity	%RH	20% to 95% RH (non-condensing)
Cooling	-	Convection, over temperature protected ~100°C case temperature
Withstand Voltage	VAC	Input to output: 4kVAC (Reinforced) (2 x MOPPS 3rd Edition)
Immunity	-	EN60601-1-2
Safety Agency Certification	-	UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN60950-1, CE Mark
Conducted EMI	-	EN55011, EN55022 Class B EN55011, EN55022 Class A
Switching Frequency	kHz	132kHz
Weight	g	120 280
Size (LxWxH)	in	2.52 x 1.79 x 0.92" 3.5 x 2.5 x 1.06"
Mounting & Case	-	PC board mountable. Plastic resin fiberglass case (UL 94V-0)
MTBF	hrs	200,000 to 400,000 hours, model dependent
Warranty	yrs	2 years

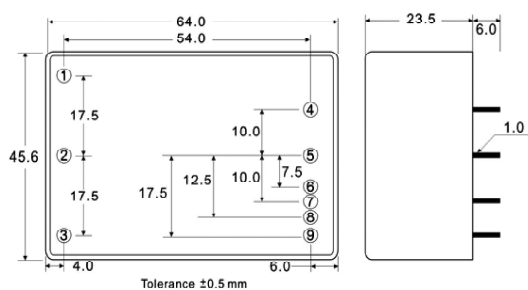
(1) KM15 derates linearly to 40% load

*Safety certified for AC input only

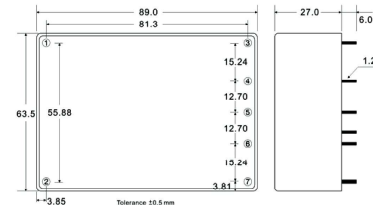
Output Ratings

		Output Voltage	Minimum Current	Maximum Current	Power	Output Set Accuracy	Line Regulation	Load Regulation (1)	Cross Regulation	Efficiency
Model		(V)	(A)	(A)	(W)	(%)	(%)	(%)		(%)
Single Output										
KMS15-3P3	V1	3.3V	0A	3.00A	9.9W	±2%	0.5%	1%	-	74%
KMS40-3P3	V1	3.3V	80mA	8.00A	26.4W	±2%	0.5%	1%	-	75%
KMS15-5	V1	5V	0A	3.00A	15W	±2%	0.5%	1%	-	78%
KMS40-5	V1	5V	80mA	8.00A	40W	±2%	0.5%	1%	-	79%
KMS15-9	V1	9V	0A	1.67A	15W	±2%	0.5%	1%	-	79%
KMS40-9	V1	9V	44mA	4.44A	40W	±2%	0.5%	1%	-	82%
KMS15-12	V1	12V	0A	1.25A	15W	±2%	0.5%	1%	-	81%
KMS40-12	V1	12V	33mA	3.33A	40W	±2%	0.5%	1%	-	83%
KMS15-15	V1	15V	0A	1.00A	15W	±2%	0.5%	1%	-	81%
KMS40-15	V1	15V	26.7mA	2.67A	40W	±2%	0.5%	1%	-	83%
KMS15-24	V1	24V	0A	0.62A	15W	±2%	0.5%	1%	-	83%
KMS40-24	V1	24V	16.7mA	1.67A	40W	±2%	0.5%	1%	-	83%
Dual Output										
KMD15-55	V1	+5V	150mA	1.5A	15W	±2%	0.5%	1%	5%	78%
	V2	-5V	150mA	1.5A		±2%	0.5%	1%	5%	
KMD40-55	V1	+5V	400mA	4A	40W	±2%	0.5%	1%	5%	79%
	V2	-5V	400mA	4A		±2%	0.5%	1%	5%	
KMD40-512	V1	5V(2)	1250mA	5A	40W	±3%	0.5%	2%	1%	80%
	V2	12V(2)	312mA	1.25A		±5%	5.0%	6%	7%	
KMD40-524	V1	5V(2)	1250mA	5A	40W	±3%	0.5%	2%	1%	80%
	V2	24V(2)	156mA	0.625A		±5%	5.0%	6%	7%	
KMD15-1212	V1	+12V	62.5mA	0.625A	15W	±2%	0.5%	1%	3%	80%
	V2	-12V	62.5mA	0.625A		±2%	0.5%	1%	3%	
KMD40-1212	V1	+12V	166mA	1.66A	40W	±2%	0.5%	1%	5%	83%
	V2	-12V	166mA	1.66A		±2%	0.5%	1%	5%	
KMD15-1515	V1	+15V	50mA	0.5A	15W	±2%	0.5%	1%	3%	81%
	V2	-15V	50mA	0.5A		±2%	0.5%	1%	3%	
KMD40-1515	V1	+15V	133mA	1.33A	40W	±2%	0.5%	1%	5%	81%
	V2	-15V	133mA	1.33A		±2%	0.5%	1%	5%	
Triple Output										
KMT15-51212	V1	5V(3)	500mA	2A	15W	±2%	0.5%	1%	1%	78%
	V2	+12V	50mA	0.2A		±3%	2.0%	5%	5%	
	V3	-12V	50mA	0.2A		±3%	2.0%	5%	5%	
KMT40-51212	V1	5V(3)	1250mA	5A	40W	±3%	0.5%	3%	3%	80%
	V2	+12V	150mA	0.6A		±5%	5.0%	7%	7%	
	V3	-12V	150mA	0.6A		±5%	5.0%	7%	7%	
KMT15-51515	V1	5V(3)	500mA	2A	15W	±2%	0.5%	1%	1%	78%
	V2	+15V	37.5mA	0.15A		±3%	2.0%	5%	5%	
	V3	-15V	37.5mA	0.15A		±3%	2.0%	5%	5%	
KMT40-51515	V1	5V(3)	1250mA	5A	40W	±3%	0.5%	3%	3%	80%
	V2	+15V	125mA	0.5A		±5%	5.0%	7%	7%	
	V3	-15V	125mA	0.5A		±5%	5.0%	7%	7%	

KM15 Outline Drawings



KM40 Outline Drawings



For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>



- (1) Symmetrical loading, from minimum to maximum load
- (2) Output V1 is isolated from output V2
- (3) Output V1 is isolated from outputs V2 & V3