



Industrial

Test

Comm

Broadcast

Single Output 5W to 25W AC-DC PCB-Mount Power Supplies



Features	Benefits
• Protection Class II, No Ground Connection	• Easy, rapid on-board integration
• Small footprint without the need for external components	• Saves space, time and cost
• Long Electrolytic Capacitor Lifetime	• Higher reliability, longer product or system life
• No load power consumption less than 0.5W	• Better energy efficiency, better environmental footprint
• Improved efficiencies up to 88%	• Reduced power losses, easier on board thermal management
• Wide Temperature Range -40°C (start up) to +85°C	• Enables use in wide range of professional industrial applications

Specification		KWS5A	KWS10A	KWS15A	KWS25A
AC Input Voltage	VAC	85 - 265 (1)			
Input Frequency	Hz	47 - 440			
Inrush Current (cold start)	A	15 at 100VAC, 30 at 200VAC			
Power Factor	-	Meets EN61000-3-2			
Input Current (100/200VAC)	A	0.13 / 0.07	0.25 / 0.13	0.33 / 0.24	0.56 / 0.34
Output Voltage Accuracy	%	±5			
No Load Power Consumption	W	<0.5			
Temperature Coefficient	%/°C	<0.02			
Overcurrent Protection	-	> 105% of rated current			
Overvoltage Protection	V	5V: 5.75 - 7, 12V: 13.8 - 18.3, 15V: 17.25 - 22.4, 24V: 27.6 - 34			
Hold Up Time (100 / 200V input)	ms	15 / 30	10 / 20		
Leakage Current	mA	<0.25 at 265VAC, 60Hz			
Operating Temperature	°C	-40°C start-up; -10 to +85°C. See derating curve for details			
Storage Temperature	°C	-40 to +85°C			
Humidity (non condensing)	%RH	30 - 90 Operating, 20 - 95 Storage			
Cooling	-	Convection Cooled			
Withstand Voltage	VAC	Input to Output 3kVAC			
Isolation Resistance	MΩ	>100MΩ at 25°C & 70%RH, Input to Output 500VDC			
Vibration (non operating)	-	10 - 55Hz: 1.65mm p-p (Max 10G) sweep for 1 min X, Y, Z for 1 hour			
Shock	-	< 50G for 11 ±5ms on (X,Y,Z) each axis 3 times			
Immunity	-	IEC61000-4-2, -3, -4, -5, -6, -8, -11; IEC61000-6-2			
Safety Agency Certifications	-	EN60950-1, UL/CSA60950-1, CE Mark LVD & RoHS2			
Conducted & Radiated EMI	-	EN55011-A, EN55022-A, FCC Class A (Requires external X capacitor to meet -B)			
Weight (Typ)	g	35	35	60	85
Size (LxWxH)	mm	38.1 x 25.4 x 21.5		50.8 x 25.4 x 24	63.5 x 25.4 x 29
MTBF (2)	hours	14,416,059	7,784,121	8,202,502	5,747,627
Warranty	yrs	3			

Notes: (1) Derate to 80% load from 100 to 85VAC input (KWS5A 90% load from 90 to 85VAC)

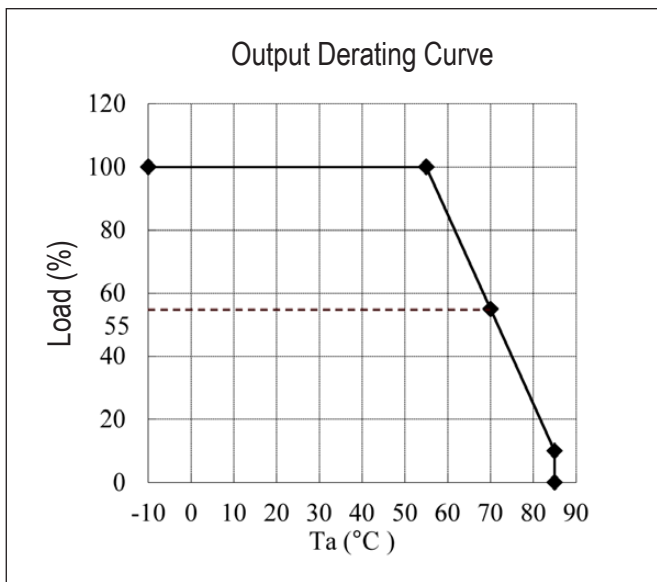
(2) According to Telcordia document SR-332, issue 3, "Reliability Prediction Procedure for Electronic Equipment"
Conditions: ambient temp. 25°C, 230Vac input, full load (figures shown for 24V models)

Model Selector

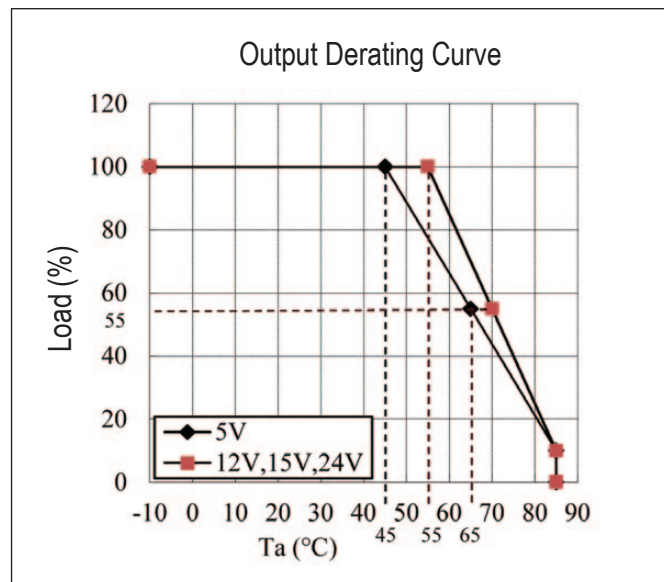
Model	Voltage (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) % (3)
KWS5A-5	5	1.0	5.0	40	20	200	76 / 74
KWS10A-5	5	2.0	10.0	40	20	200	76 / 77
KWS15A-5	5	3.0	15.0	40	20	200	77 / 78
KWS25A-5	5	5.0	25.0	40	20	200	81 / 82
KWS5A-12	12	0.45	5.4	96	48	240	78 / 75
KWS10A-12	12	0.9	10.8	96	48	240	80 / 81
KWS15A-12	12	1.3	15.6	96	48	240	81 / 83
KWS25A-12	12	2.2	26.4	96	48	240	84 / 86
KWS5A-15	15	0.35	5.3	120	60	240	79 / 75
KWS10A-15	15	0.7	10.5	120	60	240	81 / 82
KWS15A-15	15	1.0	15.0	120	60	240	82 / 84
KWS25A-15	15	1.7	25.5	120	60	240	85 / 87
KWS5A-24	24	0.22	5.3	150	96	240	80 / 77
KWS10A-24	24	0.5	12.0	150	96	240	82 / 84
KWS15A-24	24	0.7	16.8	150	96	240	82 / 85
KWS25A-24	24	1.1	26.4	150	96	240	86 / 88

Notes: (3) 115 / 230VAC input. Full load

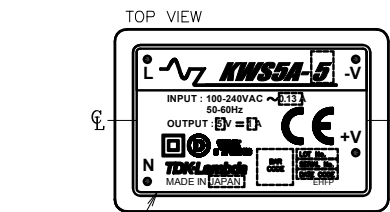
Output Derating Curve KWS5A



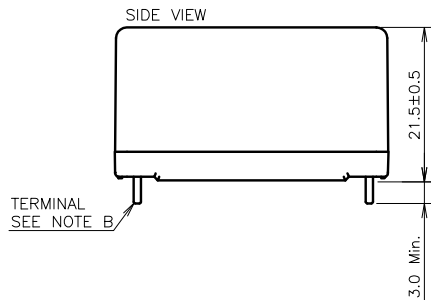
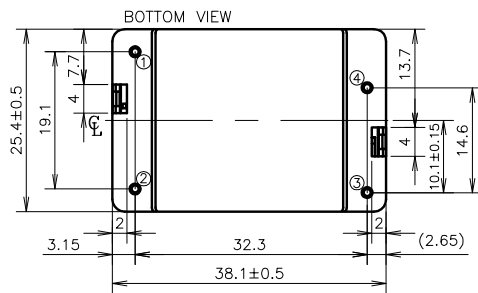
Output Derating Curve KWS-A Series (10, 15, 25W)



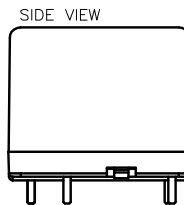
Outline Drawing KWS5A & KWS10A



NAME PLATE
SEE NOTE A



TERMINAL
SEE NOTE B



***TERMINAL ASSIGNMENTS**

- ①.....AC(N) INPUT
- ②.....AC(L) INPUT
- ③.....-V OUTPUT
- ④.....+V OUTPUT

***MATERIAL**

CASE : PLASTIC(UL94V-0)
PBT t=1.0mm

NOTES

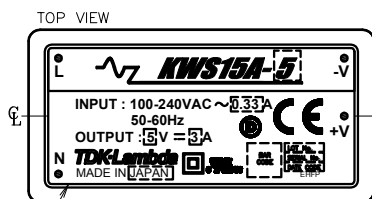
A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND MARKING ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

B: INPUT AND OUTPUT TERMINALS : 4- ϕ 1 \pm 0.1

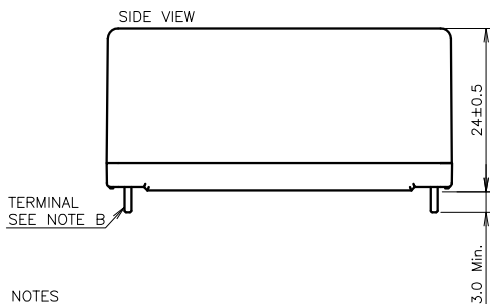
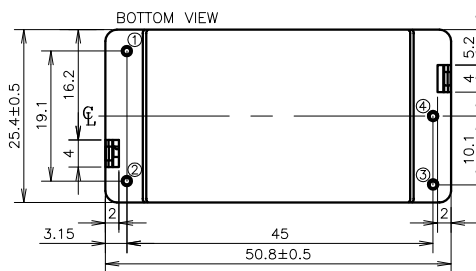
C: UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE : \pm 0.3

(unit : mm)	
MODEL NAME	KWS5A
TDK-Lambda	
FC002-02-01	

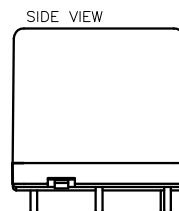
Outline Drawing KWS15A



NAME PLATE
SEE NOTE A



TERMINAL
SEE NOTE B



***TERMINAL ASSIGNMENTS**

- ①.....AC(N) INPUT
- ②.....AC(L) INPUT
- ③.....-V OUTPUT
- ④.....+V OUTPUT

***MATERIAL**

CASE : PLASTIC(UL94V-0)
PBT t=1.0mm

NOTES

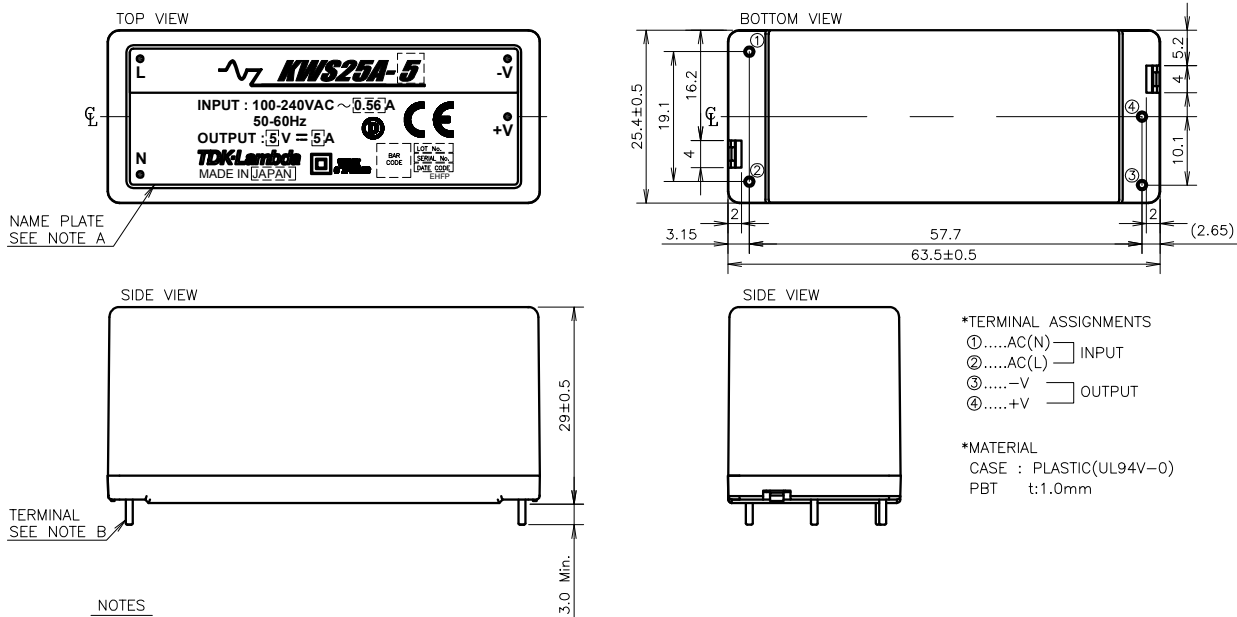
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B: INPUT AND OUTPUT TERMINALS : 4- ϕ 1 \pm 0.1

C: UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE : \pm 0.3

(unit : mm)	
MODEL NAME	KWS15A
TDK-Lambda	
FC004-02-01	

Outline Drawing KWS25A



NOTES

- A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND MARKING ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
- B: INPUT AND OUTPUT TERMINALS : 4- ϕ 1±0.1
- C: UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE : ±0.3

(unit : mm)	
MODEL NAME	KWS25A
TDK-Lambda	
FC005-02-01	



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