



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						
Model		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	
Warranty	yrs	3				

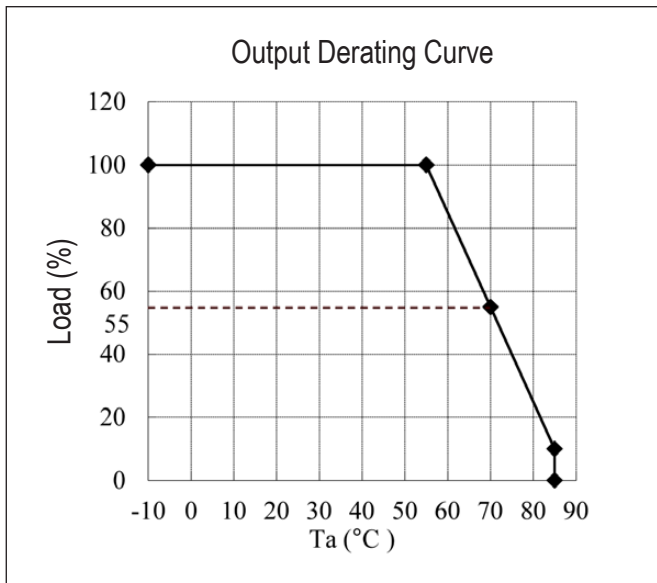
Note: (1) Derate to 80% load from 100 to 85VAC input (KWS5A 90% load from 90 to 85VAC)

Model Selector

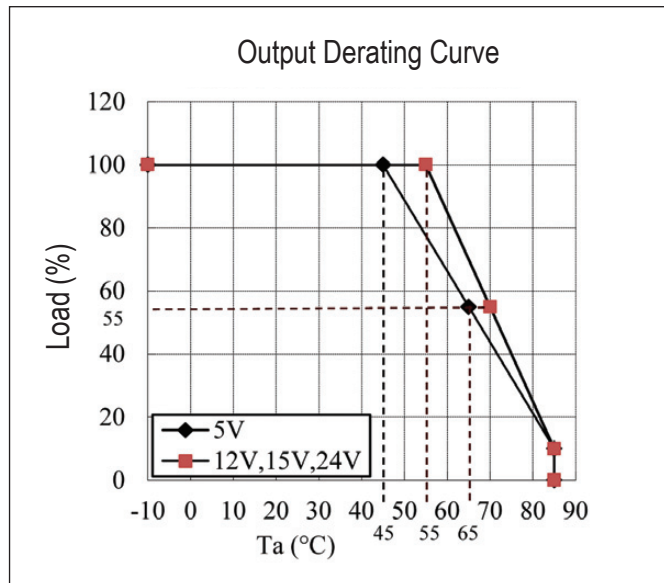
Model	Voltage (V)	Max Current (A)	Max Power (W)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) % ⁽³⁾
KWS5A-5	5	1.0	5.0	40	20	200	72 / 74
KWS10A-5	5	2.0	10.0	40	20	200	76 / 77
KWS15A-5	5	3.0	15.0	40	20	200	76 / 78
KWS25A-5	5	5.0	25.0	40	20	200	80 / 82
KWS5A-12	12	0.45	5.4	96	48	240	73 / 75
KWS10A-12	12	0.9	10.8	96	48	240	80 / 81
KWS15A-12	12	1.3	15.6	96	48	240	80 / 83
KWS25A-12	12	2.2	26.4	96	48	240	84 / 86
KWS5A-15	15	0.35	5.3	120	60	240	73 / 75
KWS10A-15	15	0.7	10.5	120	60	240	81 / 82
KWS15A-15	15	1.0	15.0	120	60	240	81 / 84
KWS25A-15	15	1.7	25.5	120	60	240	85 / 87
KWS5A-24	24	0.22	5.3	150	96	240	75 / 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) 100 / 200VAC input. Full load

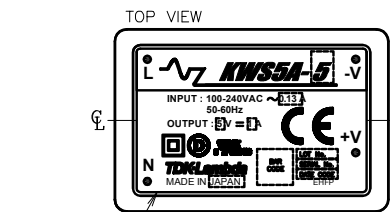
Output Derating Curve KWS5A



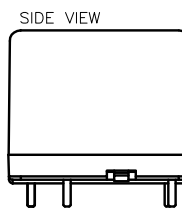
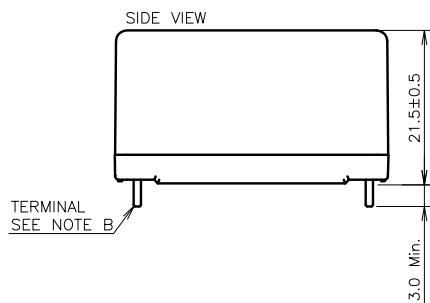
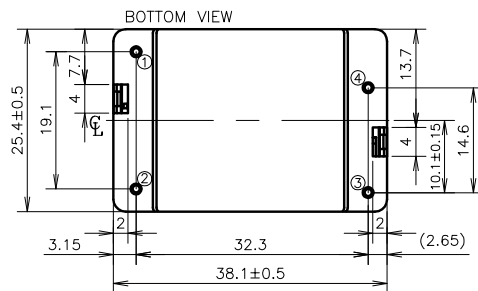
Output Derating Curve KWS-A Series (10, 15, 25W)



Outline Drawing KWS5A & KWS10A



NAME PLATE
SEE NOTE A



*TERMINAL 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

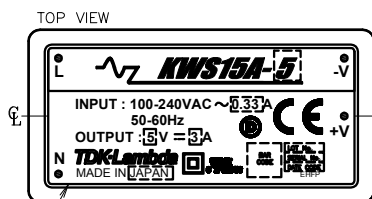
A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND MARKING ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

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

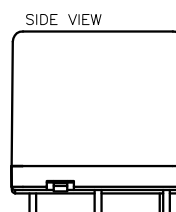
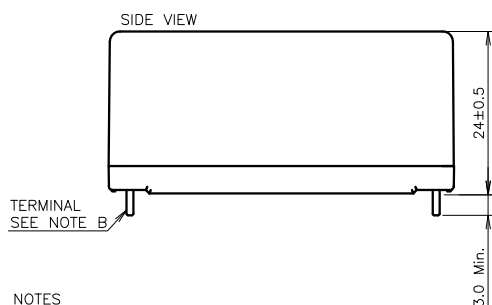
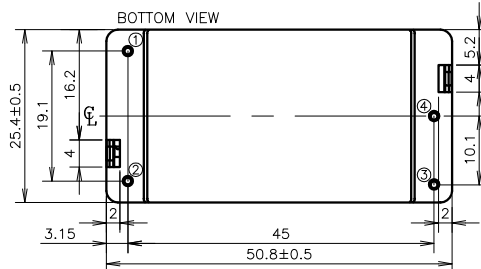
C: UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE : $\pm$ 0.3

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

Outline Drawing KWS15A



NAME PLATE
SEE NOTE A



*TERMINAL 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

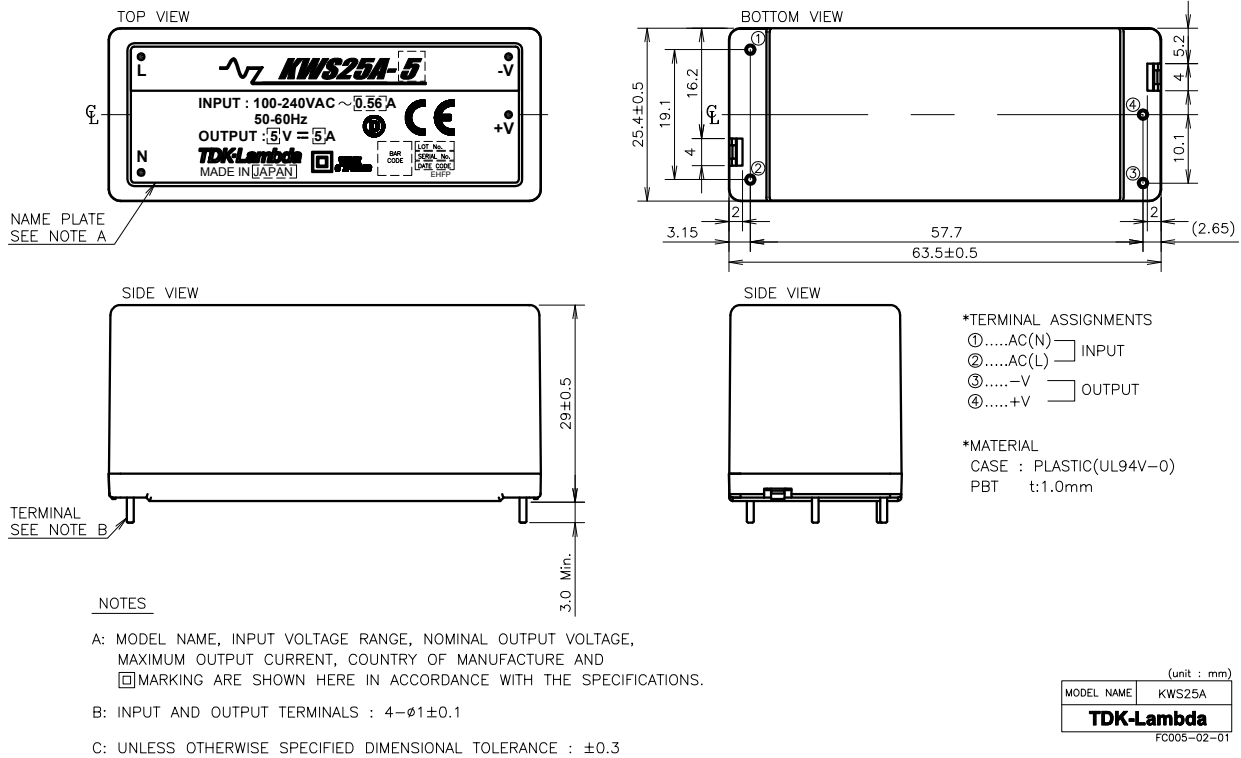
A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND MARKING ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

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

C: UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE : $\pm$ 0.3

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

Outline Drawing KWS25A





TDK-Lambda France SAS

ZAC des Delaches
CS 41077
9 rue Thuillere
91978 Villebon Courtaboeuf
France
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
france@fr.tdk-lambda.com
www.fr.tdk-lambda.com



Italy Sales Office

Via dei Lavoratori 128/130
20092 Cinisello Balsamo (MI)
Italy
Tel: +39 02 61 29 38 63
Fax: +39 02 61 29 09 00
info.italia@it.tdk-lambda.com
www.it.tdk-lambda.com



Netherlands

info@nl.tdk-lambda.com
www.nl.tdk-lambda.com



TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40
77855 Achern
Germany
Tel: +49 7841 666 0
Fax: +49 7841 5000
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Austria Sales Office

Aredstrasse 22
2544 Leobersdorf
Austria
Tel: +43 2256 655 84
Fax: +43 2256 645 12
info.germany@de.tdk-lambda.com
www.de.tdk-lambda.com



Switzerland Sales Office

Bahnhofstrasse 50
8305 Dietlikon
Switzerland
Tel: +41 44 850 53 53
Fax: +41 44 850 53 50
info@de.tdk-lambda.com
www.de.tdk-lambda.com



TDK-Lambda UK Ltd.

Kingsley Avenue
Ilfracombe
Devon EX34 8ES
United Kingdom
Tel: +44 (0) 12 71 85 66 66
Fax: +44 (0) 12 71 86 48 94
powersolutions@uk.tdk-lambda.com
www.uk.tdk-lambda.com



TDK-Lambda Ltd.

Kibbutz
Givat Hashlosha 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@tdk-lambda.co.il
www.tdk-lambda.co.il



C.I.S.

Commercial Support:

Tel: +7 (495) 665 2627

Technical Support:

Tel: +7 (812) 658 0463
info@tdk-lambda.ru
www.tdk-lambda.ru

Local Distribution

