

25-150W Single Output General Purpose Power Supplies

<https://product.tdk.com/en/power/ls>
www.emea.lambda.tdk.com/ls



Industrial



Test



COMM



LED



Broadcast

The LS series offers economically priced 25 to 150W power supplies for general purpose light industrial use. With output voltages ranging from 3.3 to 48V, the products have a five-year warranty and conservatively rated electrolytic capacitor temperatures for longer field life. These compact products have a wide -25 to +70°C temperature range and are capable of withstanding a 300Vac surge for up to five seconds.

Features	Benefits
• Compact Package Sizes	• Space Saving in End Equipment
• Low Cost	• Suitable for General Purpose Light Industrial Use
• Withstands 300Vac Input Surges	• Can Operate on Unstable Input Voltages
• Conservative Electrolytic Capacitor Temperatures	• Long Field Life
• Five Year Warranty	• Lower Cost of Ownership

Model Selector							
Model	Voltage (V)	Adjustable Range (V)	Max Current (A)	Load Reg (mV)	Line Reg (mV)	Ripple Noise (mV)	Efficiency (typ) %
LS25-3	3.3	3.0 - 3.3	6	66	16.5	80	72
LS35-3	3.3	3.0 - 3.3	7	66	16.5	80	73
LS50-3	3.3	3.0 - 3.6	10	40	20	80	75
LS75-3	3.3	3.0 - 3.6	15	40	20	80	75
LS100-3	3.3	3.0 - 3.3	20	66	16.5	80	74
LS150-3	3.3	3.0 - 3.3	30	66	16.5	80	74
LS25-5	5	4.75 - 5.5	5	50	25	80	77
LS35-5	5	4.75 - 5.5	7	50	25	80	77
LS50-5	5	4.75 - 5.5	10	40	20	80	80
LS75-5	5	4.75 - 5.5	12	40	20	80	79
LS100-5	5	4.75 - 5.5	16	50	25	80	77
LS150-5	5	4.75 - 5.5	26	50	25	80	78
LS25-12	12	10.8 - 13.2	2.1	60	60	120	79
LS35-12	12	10.8 - 13.2	3	60	60	120	81
LS50-12	12	10.8 - 13.2	4.2	96	48	120	84
LS75-12	12	10.8 - 13.2	6	96	48	120	84
LS100-12	12	10.8 - 13.2	8.5	60	60	120	81
LS150-12	12	10.8 - 13.2	12.5	60	60	120	93
LS25-15	15	13.5 - 16.5	1.7	75	75	120	82
LS35-15	15	13.5 - 16.5	2.4	75	75	120	83
LS50-15	15	13.5 - 16.5	3.4	120	60	120	85
LS75-15	15	13.5 - 16.5	5	120	60	120	85
LS100-15	15	13.5 - 16.5	7	75	75	120	82
LS150-15	15	13.5 - 16.5	10	75	75	120	84
LS25-24	24	22 - 27.2	1.1	120	120	120	84
LS35-24	24	22 - 27.2	1.5	120	120	120	84
LS50-24	24	22 - 27.2	2.2	192	96	120	86
LS75-24	24	22 - 27.2	3.2	192	96	120	86
LS100-24	24	22 - 27.2	4.5	120	120	120	84
LS150-24	24	22 - 27.2	6.5	120	120	120	86
LS25-36	36	32 - 40	0.75	150	150	150	85
LS35-36	36	32 - 40	1	150	150	150	84
LS50-36	36	32 - 40	1.4	288	144	150	86
LS75-36	36	32 - 40	2.1	288	144	150	86
LS100-36	36	32 - 40	3	150	150	150	84
LS150-36	36	32 - 40	4.3	150	150	150	86
LS25-48	48	42 - 54	0.57	180	180	200	85
LS35-48	48	42 - 54	0.8	180	180	200	84
LS50-48	48	42 - 54	1.1	384	192	200	86
LS75-48	48	42 - 54	1.6	384	192	200	87
LS100-48	48	42 - 54	2.3	180	180	200	84
LS150-48	48	42 - 54	3.3	180	180	200	87

Related Products		
Type	Part Number	Description
Higher power LS	LS200	150W to 200W LS models
Higher power 7 yr warranty	RWSB	50W to 1500W single output AC-DC power supplies
DIN rail mounting bracket	LS-DIN-1	LS25, LS35, LS50 DIN rail bracket
DIN rail mounting bracket	LS-DIN-2	LS75 DIN rail bracket
DIN rail mounting bracket	LS-DIN-3	LS100, LS150 DIN rail bracket

Specifications		LS25	LS35	LS50	LS75	LS100	LS150	
Input								
AC Input Voltage Range	Vac	85 - 264					88-132/176-264 ⁽¹⁾	
Input Surge Voltage	Vac	300 for up to 5s						
Input Frequency	Hz	47 - 63						
DC Input Voltage Range	Vdc	125 - 373 ⁽²⁾					248 - 273 ⁽²⁾	
Input Current (115/230Vac)	A	0.7 / 0.4	0.8 / 0.55	1.3 / 0.8	1.6 / 1.0	2.2 / 1.2	3.5 / 2	
Inrush Current at 230Vac (Cold Start)	A	30	40			60	40	
Leakage Current (230Vac 60Hz)	mA	<1						
Harmonic Compliance	-	Meets IEC61000-3-2 Class A						
Hold Up Time (115 / 230Vac Input)	ms	14 / 80	12 / 80	14 / 60		25 / 150	20 / 28	
Efficiency	-	See Model Selector Table						
Conducted & Radiated EMI	-	EN55011/EN55032-B, FCC-B						
Immunity	-	IEC61000-4-2 (Ivl 2/3), -3 (Ivl 3), -4 (Ivl 3), -5 (Ivl 3,4), -6 (Ivl 3), -8 (Ivl 4), -11. (See immunity table and immunity test reports on website for more details)						
Insulation Class	-	Class I						
Safety Certifications and Markings	-	IEC/EN/UL/CSA62368-1, 60950-1, CE Mark and UKCA Mark						

Immunity				
Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	±8kV air discharge ±6kV contact discharge	A	LS100 results shown. See immunity reports on website for more details
Radiated Susceptibility	EN61000-4-3	3V/m from 80-1000 MHz	A	
Electrical Fast Transient Burst	EN61000-4-4	± 2kV	A	
Surge	EN61000-4-5	± 4kV common mode ±2kV differential mode	A	
Conducted Susceptibility	EN61000-4-6	10Vrms, 150kHz - 80 MHz	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11 (230Vac)	30% dip for 10ms	A	
		60% dip for 100ms	B	
		100% 5000ms	B	

Specifications		LS25	LS35	LS50	LS75	LS100	LS150
Output							
Output Voltage Adjustment	-	See model selector					
Switching Frequency	kHz	90 - 110	65				
Line Regulation	-	See model selector					
Load Regulation	-	See model selector					
External Load Capacitance	-	See instruction manual					
Ripple & Noise	-	See model selector					
Temperature Coefficient	%/°C	<0.02					
Minimum Load	-	No minimum load required					
Overcurrent Protection	%	>110 with auto recovery					
Overvoltage Protection	V	3.3V: 3.8 - 4.45, 5V: 5.75 - 6.75, 12V: 13.8 - 16.2, 15V: 17.25 - 20.25, 24V: 27.6 - 32.4, 36V: 41.4 - 48.6, 48V: 55.2 - 64.8					
Remote Sense	-	No					
Indicators	-	Green LED indicates DC is OK					
Parallel Operation	-	Not possible					

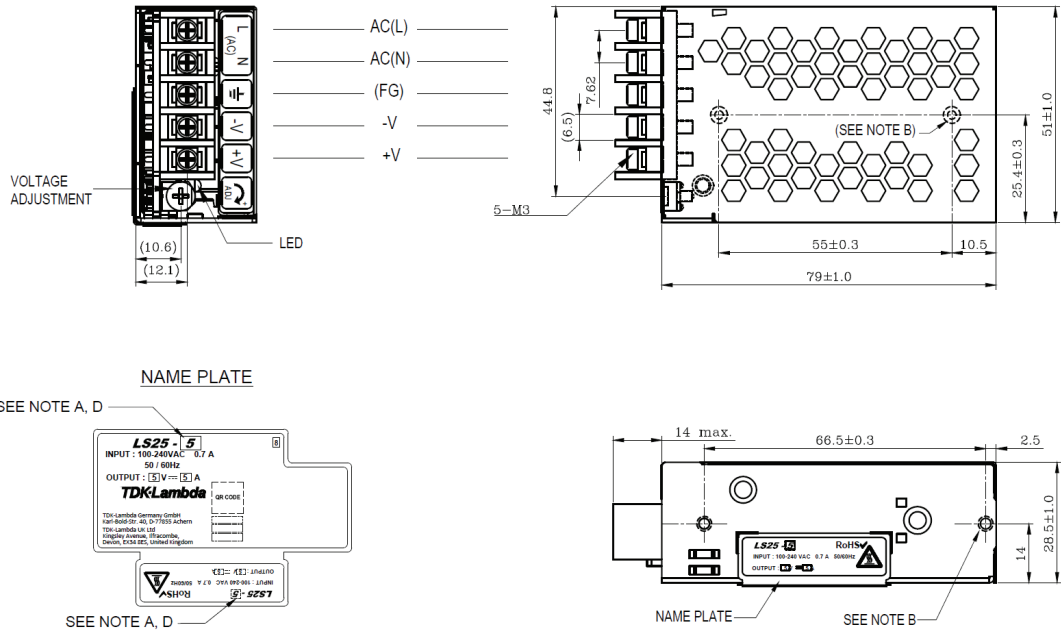
Specifications							
Model		LS25	LS35	LS50	LS75	LS100	LS150
Environmental							
Operating Temperature (-25°C start-up)	°C	-25 to +70. Derate linearly to 50% load from +50 to +70. See note (2) for exceptions					
Storage Temperature	°C	-40° to +85					
Humidity (non condensing)	%RH	Operating: 20 - 90, Storage: 10 - 95					
Cooling	-	Convection					
Altitude	m	2,000					
Withstand Voltage (For 1 minute)	Vac	Input to Ground 1,500, Input to Output 3,000, Output to Ground 500 for 1 min.					
Isolation Resistance	MΩ	>100 at 25°C, 70%RH & 500VDC					
Vibration (Non operating)	-	10 - 55Hz: 19.6m/s ² constant sweep 1 min X, Y, Z for 1 hour					
Shock	-	< 196.1 m/s ² (20G)					
Other							
Weight (Typ)	g	170	270	350	410	600	700
Size (LxWxH)	mm	79 x 51 x 28	99 x 82 x 36	99 x 97 x 36	129 x 98 x 38	159 x 97 x 38	199 x 98 x 38
Size (LxWxH)	Inches	3.1 x 2.0 x 1.1	3.9 x 3.2 x 1.4	3.9 x 3.8 x 1.4	5.1 x 3.8 x 1.5	6.3 x 3.8 x 1.5	7.8 x 3.9 x 1.5
Connectors		Screw terminals					
Case Material	-	Metal					
MTBF - MIL-HDBK-217F	Hrs	906,997	706,464	712,890	648,786	545,375	505,393
Warranty	Yrs	5					

Notes:

See website for detailed specifications, test methods and installation manual

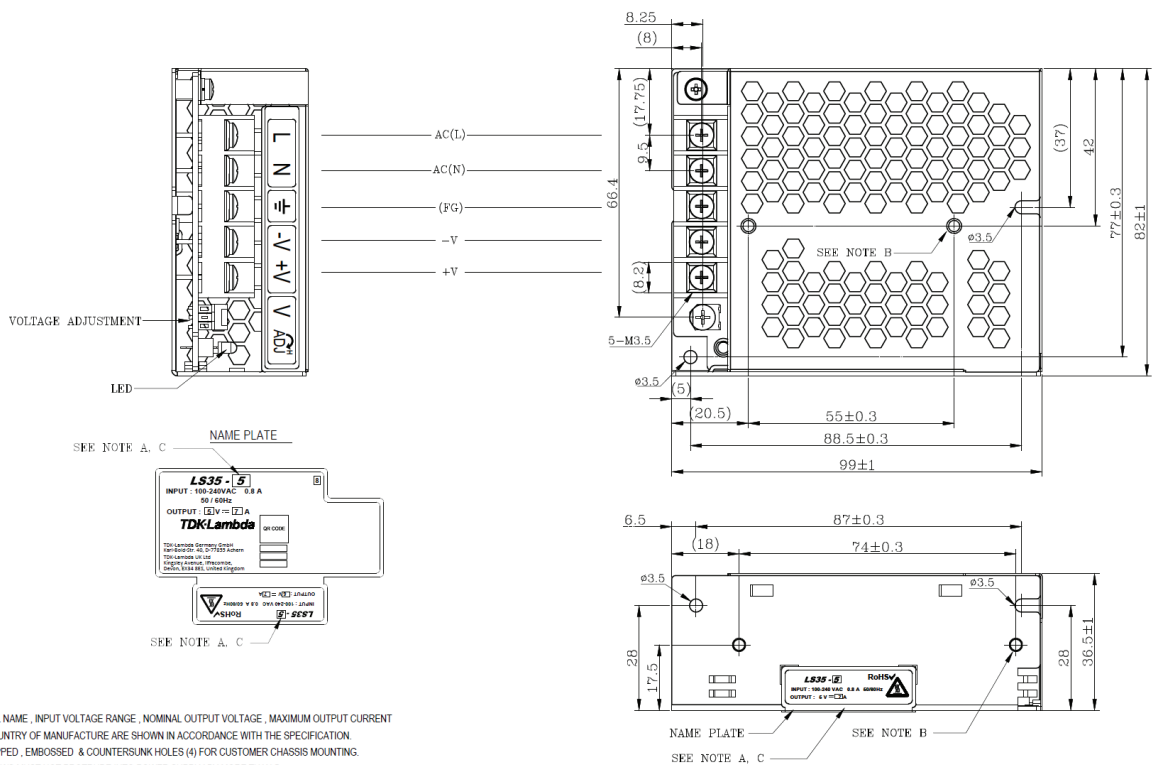
- (1) Switch selectable for 115 or 230Vac
- (2) Safety certified for AC input only
- (3) LS25-3 Derate linearly to 60% load from +40 to +70°C.
 LS50, LS75-3 & -5 Derate linearly to 70% load from +50 to +70°C.
 LS25-5 to 48, LS75-12 to 48 Derate linearly to 60% load from +50 to +70°C.
 LS100-3 & -5 Derate linearly to 60% load from +45 to +70°C. Derate linearly to 80% load from 115V to 88Vac input.
 LS100-12, -15, -24, -36, -48 Derate linearly to 60% load from +50 to +70°C. Derate linearly to 80% load from 115V to 88Vac input.
 LS150-3 & -5, Derate linearly to 50% load from +40 to +70°C.
 LS150-12, -15, -24, -36, -48 Derate linearly to 70% load from +50 to +70°C.

Outline Drawing LS25



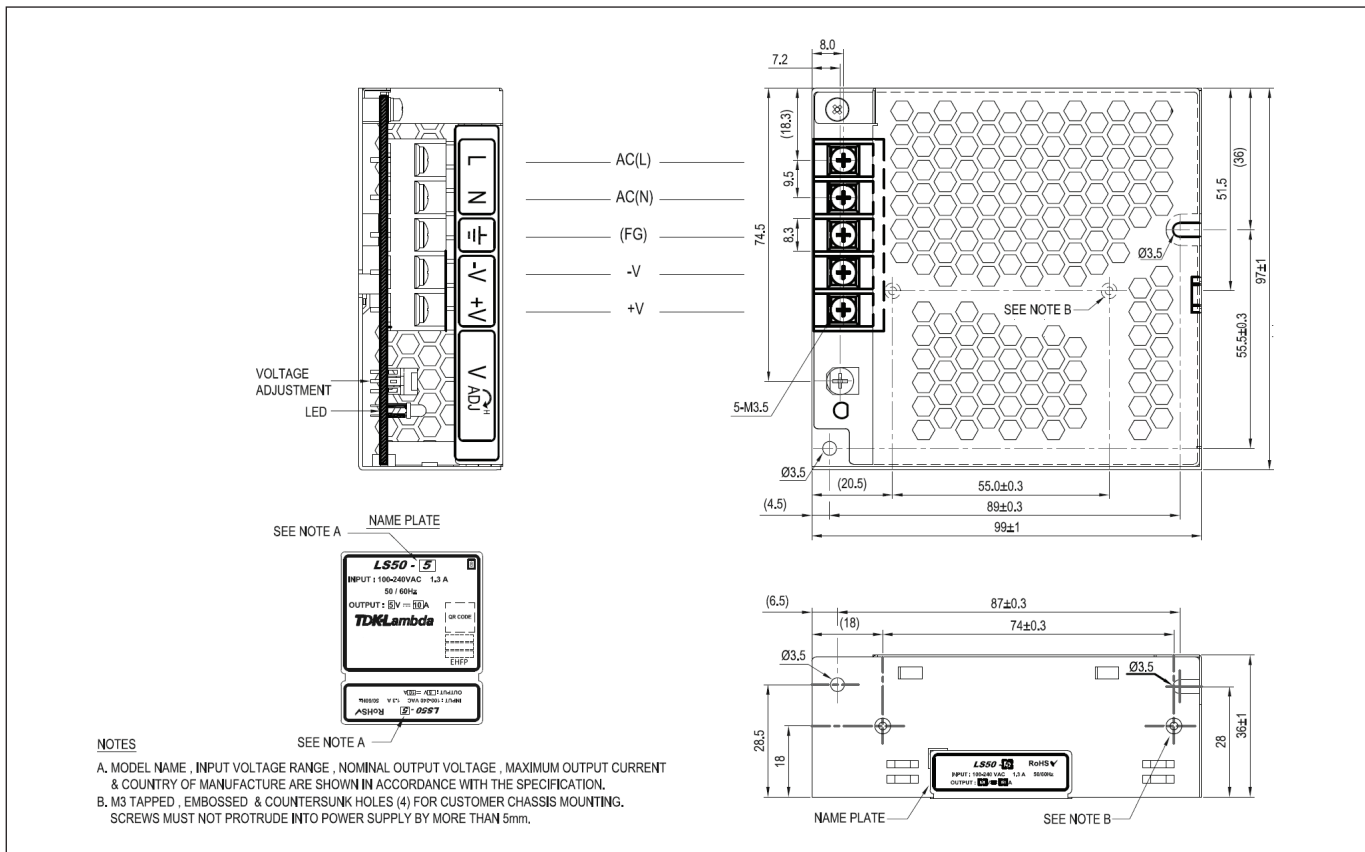
- NOTES**
- A. MODEL NAME , INPUT VOLTAGE RANGE , NOMINAL OUTPUT VOLTAGE , MAXIMUM OUTPUT CURRENT & COUNTRY OF MANUFACTURE ARE SHOWN IN ACCORDANCE WITH THE SPECIFICATION.
 - B. M3 TAPPED , EMBOSSED & COUNTERSUNK HOLES (4) FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 4mm.
 - C. UNLESS OTHERWISE SPECIFIED, DIMENSION TOLERANCE = ±0.3mm.
 - D. NAME PLATE DETAILS SHOWN HERE IS FOR REFERENCE ONLY, PLEASE SEE LATEST RELEASE FOR DETAILS.

Outline Drawing LS35

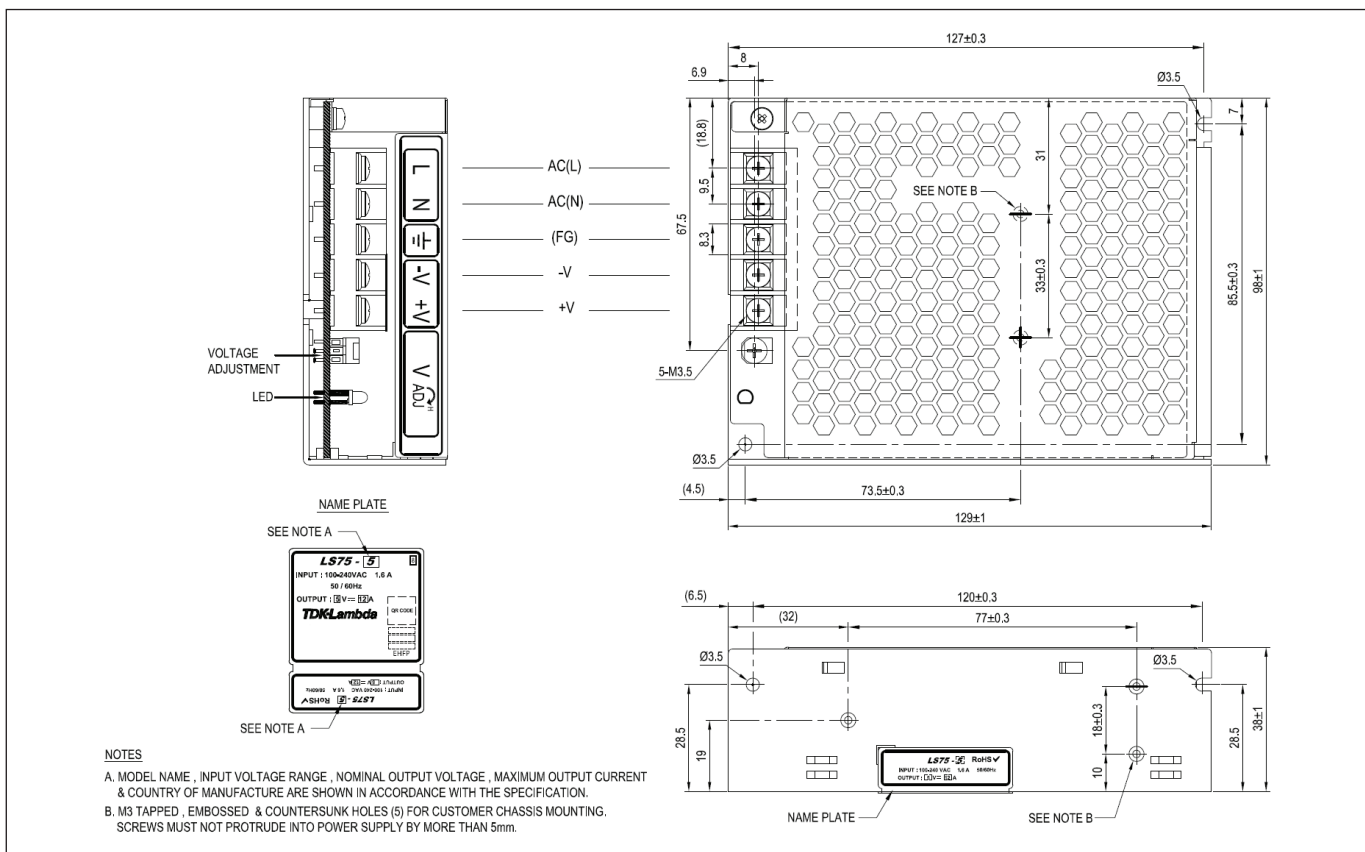


- NOTES**
- A. MODEL NAME , INPUT VOLTAGE RANGE , NOMINAL OUTPUT VOLTAGE , MAXIMUM OUTPUT CURRENT & COUNTRY OF MANUFACTURE ARE SHOWN IN ACCORDANCE WITH THE SPECIFICATION.
 - B. M3 TAPPED , EMBOSSED & COUNTERSUNK HOLES (4) FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 5mm.
 - C. NAME PLATE DETAILS SHOWN HERE IS FOR REFERENCE ONLY, PLEASE SEE LATEST RELEASE FOR DETAILS.

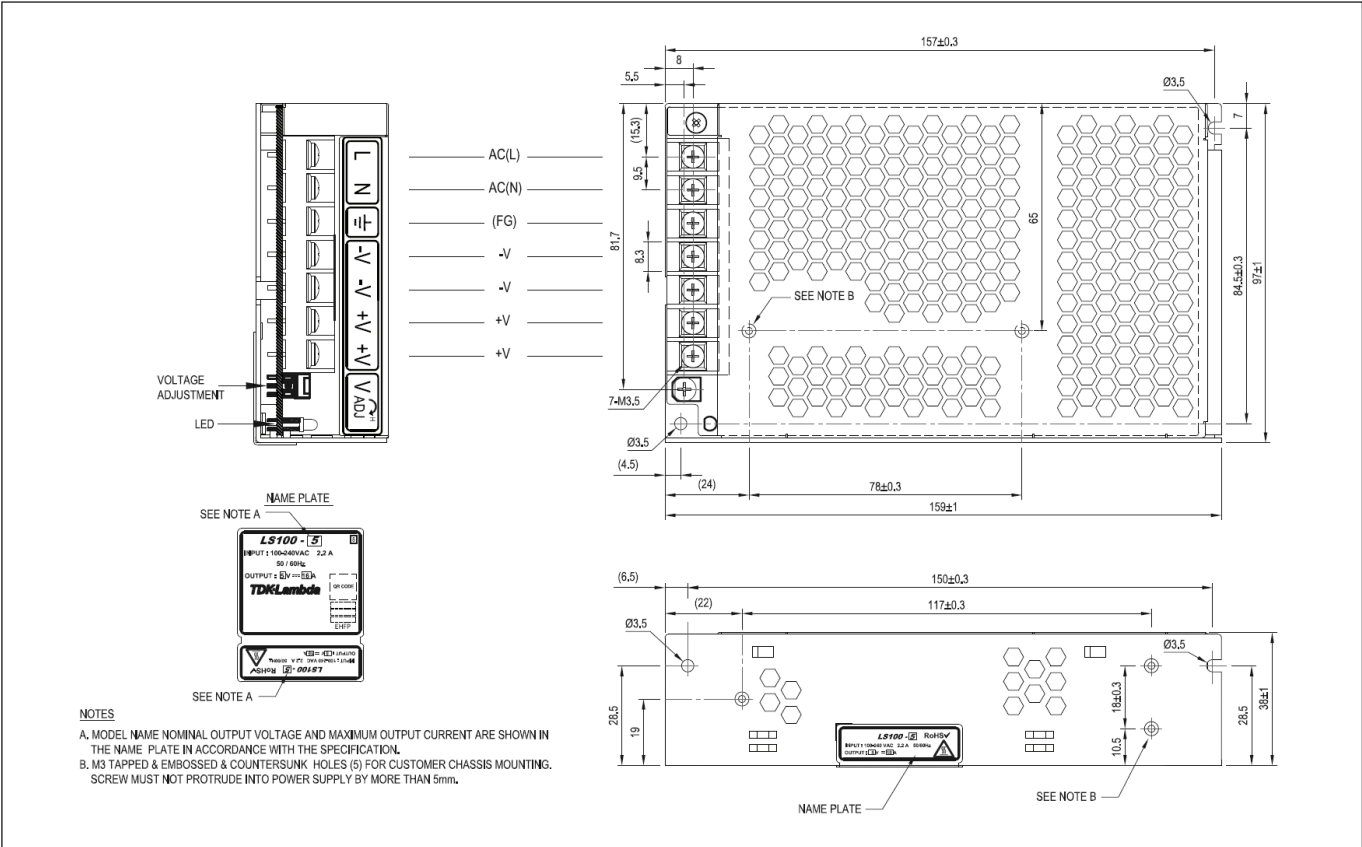
Outline Drawing LS50



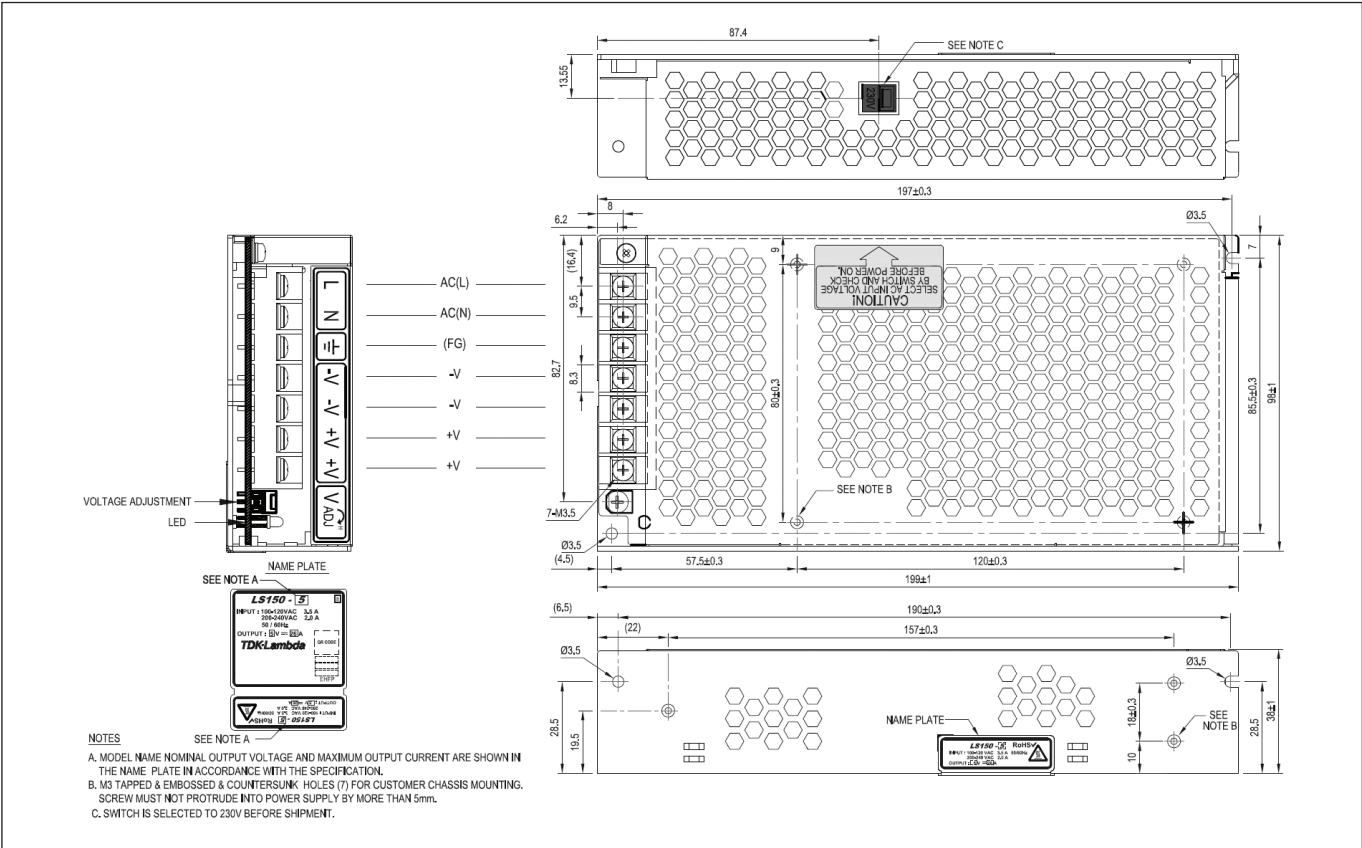
Outline Drawing LS75



Outline Drawing LS100



Outline Drawing LS150





TDK-Lambda France SAS

Tel: +33 1 60 12 71 65
france@fr.tdk-lambda.com
www.emea.lambda.tdk.com/fr



Italy Sales Office

Tel: +39 02 61 29 38 63
info.italia@it.tdk-lambda.com
www.emea.lambda.tdk.com/it



Netherlands

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



TDK-Lambda Germany GmbH

Tel: +49 7841 666 0
info@de.tdk-lambda.com
www.emea.lambda.tdk.com/de



Austria Sales Office

Tel: +43 2256 655 84
info@at.tdk-lambda.com
www.emea.lambda.tdk.com/at



Switzerland Sales Office

Tel: +41 44 850 53 53
info@ch.tdk-lambda.com
www.emea.lambda.tdk.com/ch



Nordic Sales Office

Tel: +45 8853 8086
info@dk.tdk-lambda.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.

Tel: +44 (0) 12 71 85 66 66
info@uk.tdk-lambda.com
www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.

Tel: +9 723 902 4333
info@tdk-lambda.co.il
www.emea.lambda.tdk.com/il



C.I.S.

Commercial Support:

Tel: +7 (495) 665 2627

Technical Support:

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



TDK-Lambda Americas

Tel: +1 800-LAMBDA-4 or 1-800-526-2324
powersolutions@us.tdk-lambda.com
www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda

Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation

Tel: +81-3-6778-1113
www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.

Tel: +86 21 6485-0777
powersolutions@cn.tdk-lambda.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.

Tel: +65 6251 7211
tts.mkt@sg.tdk-lambda.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division

Tel: +91 80 4039-0660
mathew.philip@in.tdk-lambda.com
www.sg.lambda.tdk.com

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

