

General Safety Instructions:**ENGLISH**

READ SAFETY INSTRUCTIONS

Servicing:

These products are not customer serviceable. TDK-Lambda UK LTD. and their authorised agents only are permitted to carry out repairs.

Critical Components:

These products are not authorised for use as critical components in nuclear control systems, life support systems or equipment for use in hazardous environments without the express written approval of the Managing Director of TDK-Lambda EMEA.

Product Usage:

These products are designed for use within a host equipment which restricts access to authorised competent personnel.

Environmental:

These products are IPX0, and therefore chemicals/solvents, cleaning agents and other liquids must not be used.

Environment:

This power supply is a switch mode power supply for use in applications within a Pollution Degree 2, overvoltage category II environment. Material Group IIIb PCB's are used within it.

Output Loading:

The output power taken from the power supply must not exceed the rating stated on the power supply label, except as stated in the product limitations in this handbook.

Input Parameters:

This product must be operated within the input parameters stated in the product limitations in this handbook.

End of Life Disposal:

The unit contains components that require special disposal. Make sure that the unit is properly disposed of at the end of its service life and in accordance with local regulations.



RISK OF ELECTRIC SHOCK

High Voltage Warning:

Dangerous voltages are present within the power supply. The professional installer must protect service personnel from inadvertent contact with these dangerous voltages in the end equipment.

This product must be reliably earthed and professionally installed in accordance with the prevailing local electrical wiring regulations and safety standards.

The (+) or (-) output(s) can be earthed or left floating.

An internal fuse protects the unit and must not be replaced by the user. In case of internal defect, the unit must be returned to TDK-Lambda UK LTD or one of their authorised agents.



HOT SURFACE

External Hot Surfaces:

In accordance with local regulations for Health and Safety at work, manufacturers have an obligation to protect service engineers as well as users. In order to comply with this, a label must be fitted to these products which is clearly visible to service personnel accessing the overall equipment, and which legibly warns that surfaces of these products may be hot and must not be touched when the products are in operation.

The ventilation openings on these products must not be impeded. Ensure that there is at least 25mm spacing between any obstruction and the ventilation openings.

The unit cover/chassis is designed to protect skilled personnel from hazards. They must not be used as part of the external covers of any equipment where they may be accessible to operators, since under full load conditions, part or parts of the unit chassis may reach temperatures in excess of those considered safe for operator access.

Special Safety Instructions

Standard Specific Safety Instructions:

Whilst all individual outputs are classed as SELV outputs in accordance with the standard IEC/EN/UL/CSA60950-1 (<60Vdc or 42.4V peak), seriesed combinations of these outputs may exceed these values and become hazardous output voltages.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

If the units are to be installed as Direct Plug-in Power Units and full compliance to UL1310 is required, the units must be installed in an airtight distributor box that conforms to the requirements of UL1310.

Environmental Specifications:

Description	Operation	Storage
Use	Indoor	-
Temperature	-25°C - +71°C (derating at 2.5%/°C from 55°C)	-25°C - +85°C
Humidity	20 - 95% RH, non-condensing	20 - 95% RH, non-condensing
Altitude	2000M	
Orientation	See Fig 1	ALL
Material Group	IIIb	
Pollution Degree	2	
Class	II (Double insulated no earth connection required)	

Level of Insulation:

Dielectric Strength testing is carried out as follows:

Primary mains circuit to earth: - 1500KVAC, 2121VDC

Primary mains circuits to secondary: 3kVAC, 4142VDC*

*This test is not possible with Y capacitors fitted to the unit as damage to these capacitors will occur. It is also necessary to short circuit the output together and to earth.

Safety Approvals:

UL508

UL/cUL60950-1 (2nd Edition)

IEC / EN60950-1 (2nd Edition)

CE marking when applied to any **DSP100-xx** product indicates compliance with the Low Voltage Directive (2006/95/EC) in that it complies with EN60950-1 (2nd Edition) and the EMC Directive 2004/108/EC in that it complies with EN61024-3, EN61000-6-3, EN61000-6-2 and EN55024.

Warning: This is a Class A product. In a residential, commercial or light industrial environment it may cause radio interference. This product is not intended to be installed in a residential environment; in a commercial and light industrial environment with connection to the public mains supply, the user may be required to take adequate measures to reduce interference.

Fusing: Internal fuses (F1): **Single fuse in the L line, T3.15AH, 250V, 5x20mm.**

Symbols:



AC



N – Neutral



L – Live

If the earth terminal of the DSP100-XX PSU is connected to the main incoming earth conductor of the end equipment, the installer must cover the earth symbol with a label bearing the earth symbol of IEC60417-5019.

Input Parameters:

Description	Operation
Nominal input voltage	90-264VAC
Input frequency range	47 – 63Hz
Maximum inrush current	60A

Output Parameters:

Output Watts	Vout (V)	Adjustment range (V)	Output current (A)
100W	12	11.4 -14.5	6
	15	13.5 – 16.5	5
	24	22.5 – 28.5	4.2
	24/C2	20 – 24.2	3.8

Adjusting output voltage beyond the stated range may cause overvoltage protection (OVP) to operate, whereby the output will latch off. To reset for normal operation simply adjust the potentiometer to reduce the output voltage to within its range and cycle the input off then on.

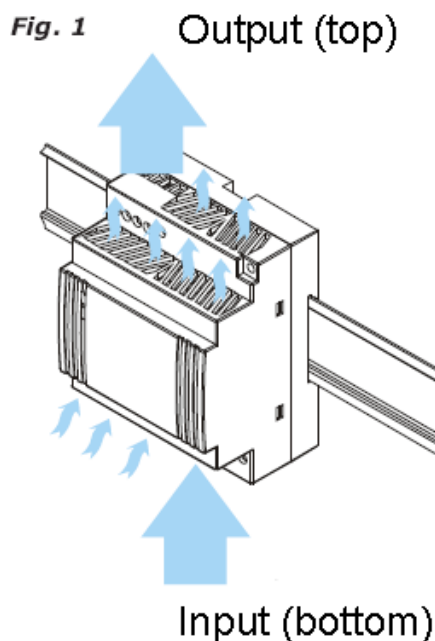
All outputs are SELV **except** under the following circumstance: Outputs connected in series are non-SELV if the total output voltage exceeds 60Vdc
 If the total voltage of outputs connected in series exceed the 60Vdc SELV limit then all outputs must be considered non-SELV.

Non-SELV outputs are hazardous and must not be made user accessible. Consideration must be given to service engineers making inadvertent contact with the output terminals in the end equipment.

All outputs have functional spacing to earth, and due consideration must be given to this in the end product design.

Cooling for unit

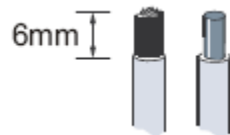
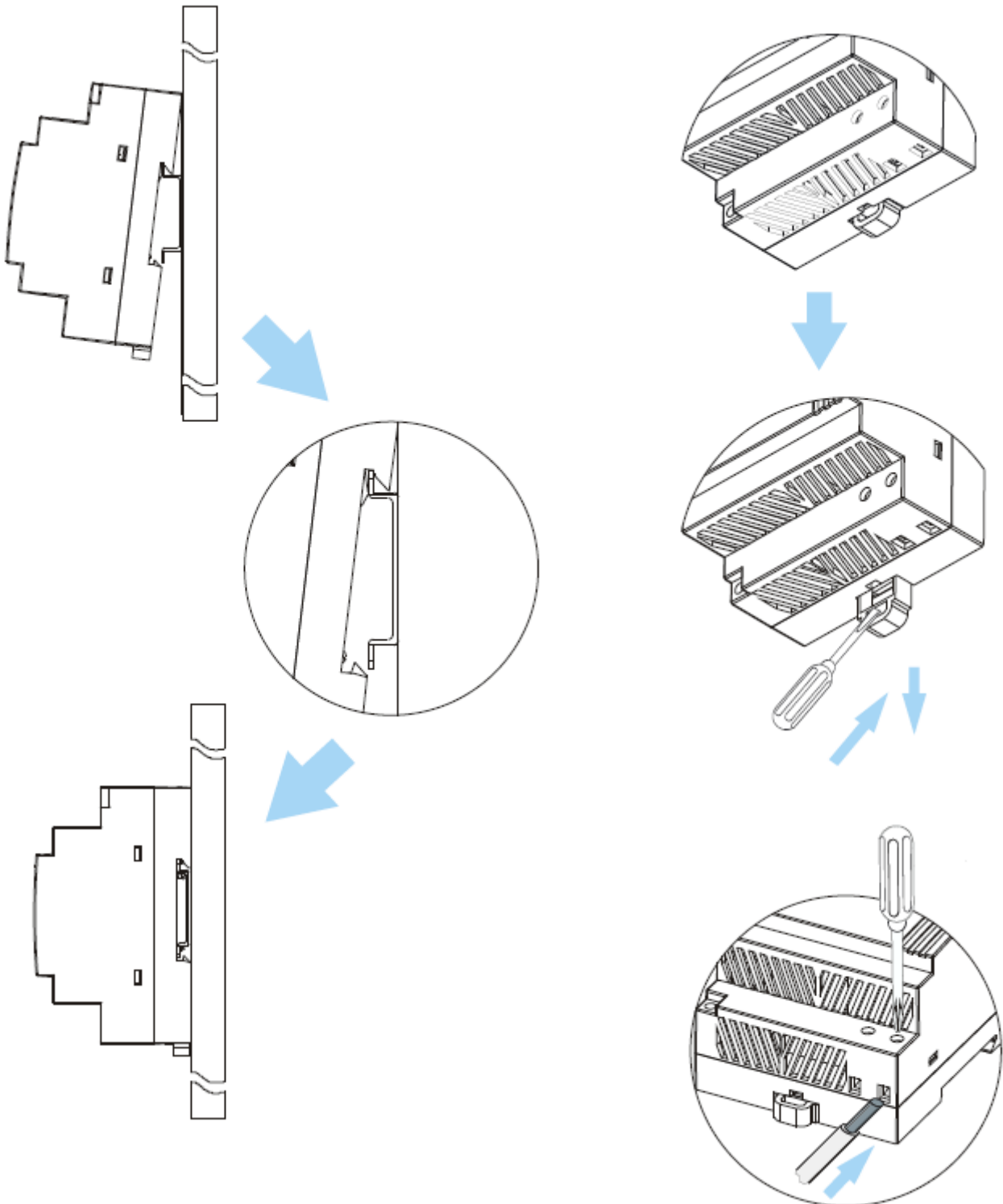
The unit must be mounted on a DIN rail with the output connection uppermost (toward the top of the equipment/installation) as below.



Placement

Removal

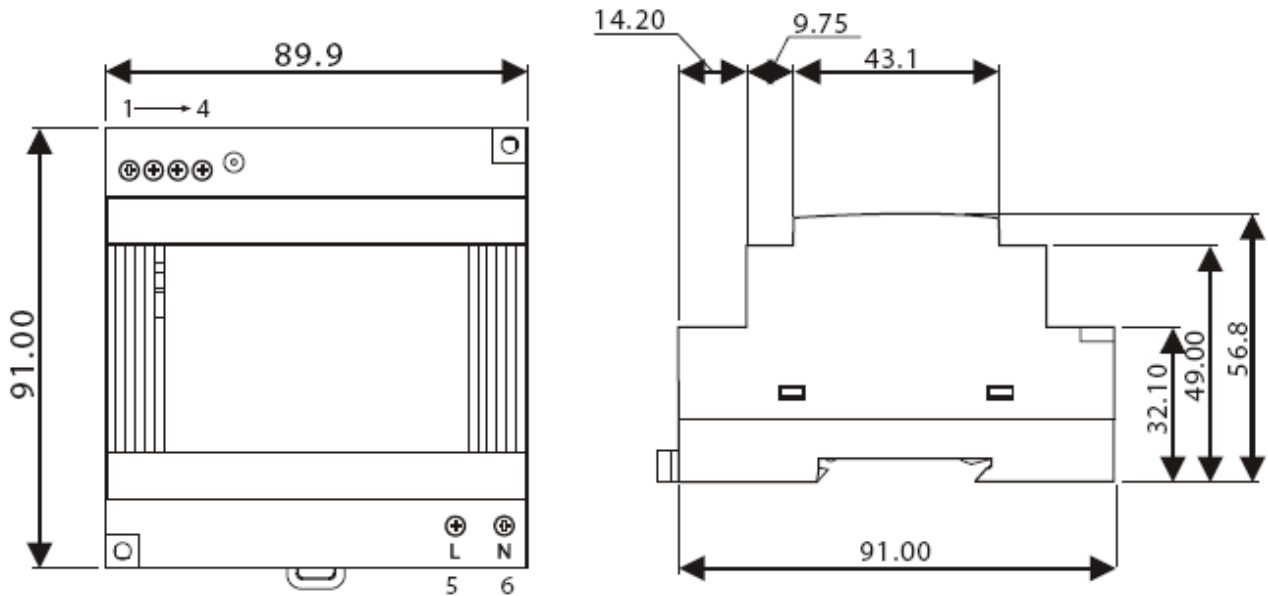
Fig. 2



Standard screw type connection:
AWG24 to AWG12 can be used,
maximum torque rating for the
input/output connector is 0.65Nm (5.5
Pound-inches).

Mechanical Outline Drawings:

mm [inch]



Pin number	Ident	Description	Function
1	+	Positive DC output terminal	Output
2	+		
3	-	Negative DC output terminal	
4	-		
5	L	Live AC input	Input
6	N	Neutral AC Input	
	Vout Adjust	Potentiometer for output voltage adjustment	Control & Signal
	DC ON	Green LED lit	
	DC LOW	Red LED Lit	

TDK-Lambda

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