

## INSTALLATION INSTRUCTIONS

### ESP 50 and ESP 60 Series

### Switching Power Supply

Order Code	Output Power max.	Output 1	Output 2	Output 3
ESP 60-03SN	60 Watt	3.3VDC / 12.0A		
ESP 60-05SN	60 Watt	5.0VDC / 12.0A		
ESP 60-12SN	60 Watt	12.0VDC / 5.5A		
ESP 60-15SN	60 Watt	15.0VDC / 4.4A		
ESP 60-24SN	60 Watt	24.0VDC / 2.5A		
ESP 60-48SN	60 Watt	48.0VDC / 1.4A		
ESP 50-0522T	50 Watt	+5.0VDC / 6.0A	+12.0VDC / 2.0A	-12.0VDC / 1.0A
ESP 50-0533T	50 Watt	+5.0VDC / 6.0A	+15.0VDC / 1.4A	-15.0VDC / 1.0A

Input Voltage Range:	85 – 264VAC / 47 – 63Hz 110 – 350VDC	Operating temperature range:	-25°C - +60°C max
Input current:	<ul style="list-style-type: none"> <li>ESP 50: 0.70A typ at Vin = 115VAC</li> <li>ESP 50: 0.30A typ at Vin = 230VAC</li> <li>ESP 60: 1.20A typ at Vin = 115VAC</li> <li>ESP 60: 0.75A typ at Vin = 230VAC</li> </ul>	Load Derating:	all models: above +50°C of 5.0%/°C
Output voltage adjustment range:	<ul style="list-style-type: none"> <li>Single Output Models: ±10%</li> <li>Multi Output Models: +5% / -0% (Output 1) Output 2 and 3: ±3% (Factory Set)</li> </ul>	Terminal for wiring:	Recommended tightening torque 0.5 to 0.7Nm (4.5 to 6.2lb.in.). If flexible wires are used the wires have to be terminated. (e.g. by using ferrules)
		Case material:	Stainless Steel

### Safety Instructions:

- Before installation read these instructions carefully and completely. This installation instruction cannot claim for every possible example of installation, operation or maintenance. Further information's are obtainable from your local distributor office or from the product data sheet which can be downloaded from the Internet at <http://tracopower.com>.
- The power supplies are constructed in accordance with the safety requirements of IEC/EN60950 and UL1950. They fulfill the requirements of the Low Voltage Directive (LVD) and carries the CE-mark. They are UL and cUL approved in accordance to UL1950 (recognised).
- Before any installation, maintenance or modification work ensure that the main switch is switched off and prevented from being switched on again. In case of non-observance touching at any alive components or improper dealing with this power supply can result in death, severe personal injury or substantial property damage. The successful and safe operation is dependent on proper storage, handling, installation and operation.
- Compliance with the relevant national regulations (in the USA, Europe and the other countries) must be ensured. Before operation is started the following conditions must be ensured:
  - ❖ Connection to mains supply in compliance with national regulations (VDE0100 and EN50178).
  - ❖ By use of stranded wires, all strands must be fastened in the terminal blocks.
  - ❖ Power supply and mains cables must be sufficiently fused.
  - ❖ The non-fused protective earth connection must be connected to the FG terminal (Protection Class I).
  - ❖ All output wires must be rated for the power supply output current and must be connected with the correct polarity.

- ❖ Sufficient cooling must be ensured.
- ❖ Keep away from fire and water

- **Never work on the power supply if power is supplied!** Risk of electric arcs and electrical shock which can cause death, severe personal injury or substantial property damage.
- **Warning:** Hazardous voltages and components storing a very substantial amount of energy are present in this power supply during normal operating conditions. However, these are inaccessible. Improper handling may result in an electric shock or serious burns!  
  
**Do not open the power supply until at least 5 minutes after it has been disconnected from the mains on all poles.**

### Installation Instructions:

- This power supply is designed for professional indoor systems. In operation the power supply must not be accessible. It may be installed and put into service by qualified personnel only.
- Do not operate without PE connection! To comply with EMC and safety standards (CE mark, approvals) the power supply must be operated only if FG terminal is connected to the non-fused earth conductor.
- The correct mounting position for optimal cooling performance must be observed. Observe power derating. (see data sheet)
- **Recycling:** The unit contains elements which are suitable for recycling, and components which need special disposal. You are therefore requested to make sure that the power supply will be recycled by the end of its service life.