

INSTALLATION INSTRUCTIONS

TSL Series Industrial Power Supply

Order Code	AC-Input Voltage Range	Output Power max.	Output	** Output Voltage Adjustment Range	recommended Circuit breaker (Characteristic C)
TSL 030-112	93VAC – 263VAC Universal Input	30 Watt	12.0VDC / 2.5A	12.0 – 14.0VDC	5A
TSL 030-124			24.0VDC / 1.25A	24.0 – 28.0VDC	
TSL 060-112	50 / 60Hz	60 Watt	12.0VDC / 5.0A	12.0 – 14.0VDC	5A
TSL 060-124			24.0VDC / 2.5A	24.0 – 28.0VDC	
* TSL 120-124 (P)	115VAC / 230VAC Autorange	120 Watt	24.0VDC / 5.0A	24.0 – 28.0VDC	10A
* TSL 120-148 (P)			48.0VDC / 2.5A	48.0 – 52.0VDC	
* TSL 240-124 (P)	93VAC – 132VAC 187VAC – 264VAC	240 Watt	24.0VDC / 10.0A	24.0 – 28.0VDC	16A
* TSL 240-148 (P)			48.0VDC / 5.0A	48.0 – 52.0VDC	
* TSL 480-124 (P)	50 / 60Hz	480 Watt	24.0VDC / 20.0A	24.0 – 28.0VDC	20A
* TSL 480-148 (P)			48.0VDC / 10.0A	48.0 – 52.0VDC	

* If compliance to EN 61000-3-2 (PFHC → Power Factor Harmonic Current) is required option P is available for these models

** Adjustable by potentiometer with a screwdriver.

Input current:	@ Vin=115VAC	@ Vin=230VAC	Power Consumption	@ Vin=115VAC	@ Vin=230VAC
➤ TSL 030	0.5A typ.	0.3A typ.	➤ TSL 030	37 Watt typ.	38 Watt typ.
➤ TSL 060	1.1A typ.	0.65A typ.	➤ TSL 060	73 Watt typ.	72 Watt typ.
➤ TSL 120	1.9A typ.	1.2A typ.	➤ TSL 120	144 Watt typ.	140 Watt typ.
➤ TSL 240	3.5A typ.	1.7A typ.	➤ TSL 240	285 Watt typ.	280 Watt typ.
➤ TSL 480	7.2A typ.	3.5A typ.	➤ TSL 480	560 Watt typ.	550 Watt typ.

Operating temperature range: Natural Air Convection Cooling	-25°C – +70°C max -13°F – +158°F max
Output Power Derating:	above +60°C → 2%/K above 140°F → 2%/K
Storage temperature range:	-25°C – +85°C max -13°F – +185°F max
<i>Parallel Operation:</i>	Up to 5 power supplies possible. User selectable standard mode and parallel mode by jumper on PCB.
Connections:	Screw type terminal COMBICON. Recommended tightening torque 0.5 to 0.7Nm (4.5 to 6.2lb.in.)
Case material:	Aluminium (chassis) and Zinc-plated steel (cover)

Safety Instructions:

- Before installation read these instructions carefully and completely. This installation instruction cannot account for every possible condition of installation, operation or maintenance. Further information can be obtained from your local distributor's office or from the product datasheet, which can be downloaded, from the Internet at <http://tracopower.com>. You will find additional information in our Instruction Manual, which can also be downloaded from the Internet at: http://www.tracopower.com/products/tsl_manual.pdf.
- The power supplies are constructed in accordance with the safety requirements of IEC/EN60950, UL1950 and UL508 . They are approved (BG-mark) in accordance with EN60950, EN50178 and fulfil the requirements of the Low Voltage Directive (LVD). They are UL and cUL approved in accordance to UL1950 (recognised) and UL508 (listed).
- Before any installation, maintenance or modification work ensure that the main switch is switched off and prevented from being switched on again. Non-observance, touching of any live components or improper handling of this power supply can result in death, severe personal injury or substantial property damage. Proper and safe operation is dependent on proper storage, handling, installation and operation.
- Compliance with the relevant national regulations (in the USA, Europe and 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. (Potential danger of contact with the case)
 - ❖ Power supply and mains cables must be sufficiently fused.
 - ❖ Degree of protection I to IEC536. 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.
- **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.**
 - ❖ Only trained personnel may open the power supply.
 - ❖ Do not introduce any objects into the power supply. The output voltage adjustment potentiometer may only be actuated using an insulated screwdriver.
 - ❖ Keep away from fire and water

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 PE terminal is connected to the non-fused earth conductor.
- The correct mounting position for optimal cooling performance must be observed. **Do not cover any ventilation holes.** Leave a free space of minimum 50mm (2in.) above and below the power supply. Observe power derating.
- The internal fuse is not accessible, as it may not be replaced by the user. If this internal fuse has blown, the power supply has an internal defect and, for safety reasons, must be shipped to the local distributor. In case this internal fuse has to be replaced in the field, replace only with same type and rating of fuse for continued protection against risk of fire.
- **Recycling:** The unit contains elements that are suitable for recycling, and components that need special disposal. You are therefore requested to make sure that the power supply will be recycled at the end of its service life.