

READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

1. Safety instructions

Read this first!

WARNING ELECTRIC SHOCK

- Switch main power off before connecting or disconnecting the device.
- If the unit is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- The main power must be turned off before connecting or disconnecting wires to the terminals!
- Do not introduce any objects into the unit!
- Dangerous voltage present for at least 5 minutes after disconnecting all sources of power.
- The power supplies are built-in units and must be installed in a cabinet or room (condensation free environment and indoor location) that is relatively free of conductive contaminants.
- "FOR USE IN A CONTROLLED ENVIRONMENT".

Failure to follow these instructions can result in death, serious injury, or equipment damage.

CAUTION **BURNING HAZARD**

- To guarantee sufficient convection cooling, please keep a distance of 50 mm above and below the device as well as a lateral distance of 10 mm to other units.
- Note that the enclosure of the device can become very hot depending on the ambient temperature and load of the power supply. Risk of burns!

Failure to follow these instructions can result in injury or equipment damage.

2. Device description (Fig. 1)

- (1) Input terminal block connector
- (2) Output terminal block connector
- (3) DC voltage adjustment potentiometer
- (4) DC OK LED (green)
- (5) Universal mounting rail system

3. Mounting (Fig. 2)

The power supply unit can be mounted on 35 mm DIN rails in accordance with EN 60715. For vertical mounting, the device should be installed with input terminal block on the bottom.

Each device is delivered ready to install. Snap on the DIN rail as shown in Fig. 2.

1. Pull the unit's DIN rail latch OUT.
2. Tilt the unit slightly upwards, hook the top end onto the DIN rail and push downwards until stopped.
3. Position the bottom front end against the DIN rail.
4. Push the unit's latch DIN rail IN to lock.

4. Dismounting (Fig. 3)

To uninstall,

1. Pull the unit's DIN rail latch OUT.
2. Tilt the bottom part of the unit out.
3. Push the unit up and pull out from the DIN rail.

5. Connection

The terminal block connectors allow easy and fast wiring.

You can use flexible (stranded wire) or solid cables with the following cross sections:

Refer to Fig. 1:	Stranded / Solid		Torque	
	(mm ²)	(AWG)	(Kgf-cm)	(lb-in)
(1)	1.0 ... 4.0	18 ... 12	5.76	5
(2)	0.34 ... 4.0	22 ... 12	5.76	5

To secure reliable and shock proof connections, the stripping length should be 5 mm (see Fig. 4 (1)). Please ensure that the wires are fully inserted into the connecting terminals as shown in Fig. 4 (2). All wire strands must be fully inserted into the terminals with the screws securely fastened in order to ensure safety and maximum contact.

In accordance to EN/UL 62368-1 and EN/UL 61010-2-201. Use Copper Conductors Only. Wires are designed to sustain operating temperature of at least 105 °C.

5.1. Input connection (Fig. 1, Fig. 5)

Use L, N and PE connections of input terminal connector (see Fig. 1 (1)) to establish the 100V AC ... 240 V AC connection.

The device has an internal fuse. The unit is tested and approved with branch circuit protective device up to 20 A.

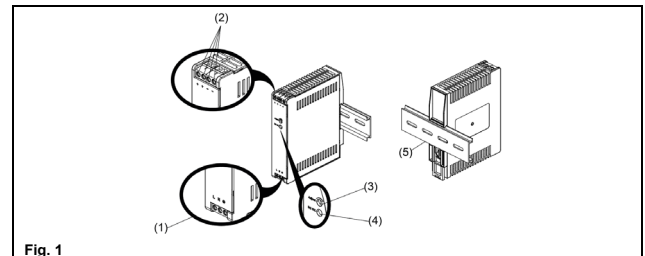


Fig. 1

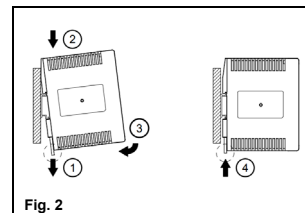


Fig. 2

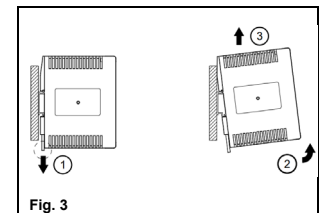


Fig. 3

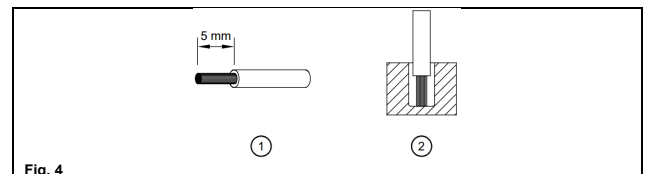


Fig. 4

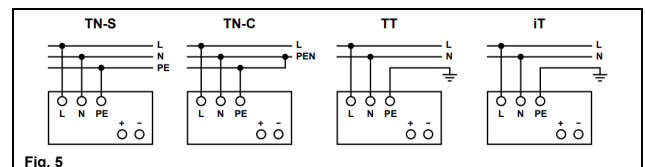


Fig. 5



The internal fuse must not be replaced by the user.

5.2. Output connection (Fig. 1 (2))

Use the "+" and "-" screw connections to establish the 24 V DC connection. The green LED DC OK displays correct function of the output (Fig. 1 (4)). The device has a short circuit and overload protection and an overvoltage protection limited to < 33.6 V.

5.3. Output characteristic curve

The device functions normal under operating line and load conditions. In the event of an overload ($I_o = 105\% \dots 133\%$) the output voltage will start to droop until overload has been removed.

5.4. Thermal behavior (Fig. 6)

If the output capacity is beyond what is recommended in Fig. 6, the device will run into thermal protection by switching off i.e. the output voltage will go into latch-off mode until the component temperature cools down and the AC power is recycled.

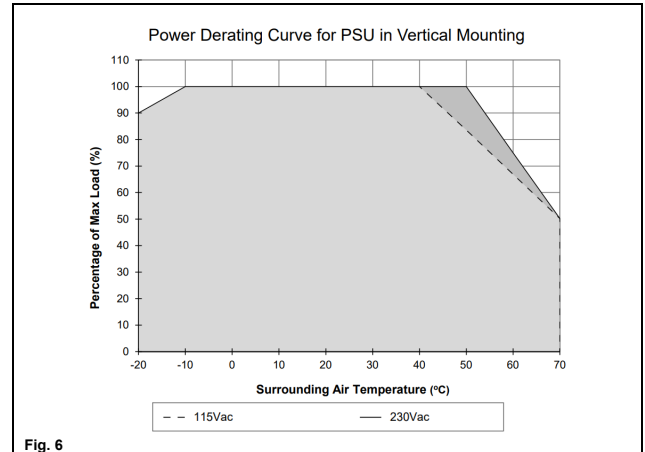


Fig. 6

Input (AC)		
Nominal input voltage	100 V AC ... 240 V AC	
Voltage range	85 V AC ... 264 V AC	
Frequency	47 Hz ... 63 Hz	
Nominal current	1.4 A typ. @ 115 V AC, 0.9 A typ. @ 230 V AC	
Inrush current limitation (+25 °C)	50 A typ. @ 230 V AC	
Mains buffering at nominal load	16 ms typ. @ 115 V AC, 60 ms typ. @ 230 V AC	
Turn-on time	1200 ms typ. @ 115 V AC, 1000 ms typ. @ 230 V AC	
Internal fuse	F5AH / 250 V	
Recommended backup fuse	20 A	
Power circuit-breaker characteristic	B	
Leakage current	< 1 mA @ 240 V AC	
Output (DC)		
Nominal output voltage U_N / tolerance	24 V DC $\pm 2\%$	
Adjustment range of the voltage	21.6 V DC ... 26.0 V DC (Maximum power $\leq 75W$)	
Nominal current	3.125 A	
Derating	Temperature	-10 °C ... -20 °C (1 % / °C) > 40 °C (1.67 % / °C) @ 115 V AC > 50 °C (2.50 % / °C) @ 230 V AC
	Input voltage	< 100 V AC (1.33 % / Vac)
Startup with capacitive loads	Max. 5000 μF	
Efficiency at 100 % load	89 % typ. @ 230 V AC	
PARD (20 MHz) at 100 % load	< 120 mVpp @ > -10 °C ... +70 °C < 360 mVpp @ \leq -10 °C ... -30 °C	
General Data		
Type of housing	Plastic (PC), enclosed	
Signals	Green LED DC OK	
MTBF	Telcordia SR-332 > 700000 hrs. (I/P: 100 V AC; O/P: 100 % load; Ta: 25 °C)	
Dimensions (H x W x D)	123.6 mm x 27 mm x 102 mm	
Weight	0.22 kg	
Connection method	Screw connection	
Wire stripping length	5 mm	
Operating temperature	-20 °C ... +70 °C (Refer to Fig. 6)	
Storage temperature	-40 °C ... +85 °C	
Humidity at +25 °C, no condensation	5 to 95 % RH	
Vibration	Operating	IEC 60068-2-6, Sine Wave: 10 Hz ... 500 Hz @ 19.6 m/s ² (2 G peak); 10 min per cycle, 60 min for X direction
	Non-operating	IEC 60068-2-6, Random: 5 Hz ... 500 Hz (2.09 Grms); 20 min. per axis for all X, Y, Z directions
Shock	Operating	IEC 60068-2-27, Half Sine Wave: 10 G for a duration of 11 ms, shock for 1 direction (X axis)
	Non-operating	IEC 60068-2-27, Half Sine Wave: 50 G for duration of 11 ms, 3 shocks for each 3 directions
Pollution degree	2	
Altitude	Operating 5000 Meters	
Safety and Protection		
Surge voltage protection against internal surge voltages	Yes	
Isolation voltage	Input / output	3 kV AC
	Input / PE	2 kV AC
	Output / PE	0.5 kV AC
Safety class	Class I with PE connection	