

In order to take the best advantage of the features that this power supply has to offer and to ensure long term reliability for your equipment, please read these instructions carefully before installation and use. They should be retained for future reference.

## (1) General

This unit employs many features previously unavailable in an industrial power supply. It has been designed to withstand the high levels of interference found in heavy industry and has emission levels low enough for it to be used in residential, commercial and light industrial environments.

The Eco-Rail 2.5 - 100-240/24 has a high level of reserve power. This enables loads with significant inrush current to be supported and will also ensure that circuit breakers will trip in event of short circuit.

A protective feature is provided which will take control as the unit approaches the power limit due the overload or excessive temperature brought about by lack of ventilation.

This equipment shall be connected directly to the d.c. supply system earthing electrode conductor or to a bonding jumper from an earthing terminal bar or bus to which the d.c. supply system earthing electrode is connected.

This product is intended to work with IT power system.

## (2) Technical specification, Part-No. 85302

V.1.4

Nominal voltage	100 - 240 VAC 50/60 Hz
Input voltage range	90 - 264 VAC 50/60 Hz
Input current, I <sub>nom</sub>	1.1 A / 115 VAC - 0.6 A / 230 VAC
Inrush current	< 20 A
Efficiency, typ.	85% / 115 VAC - 87% / 230 VAC
Power factor, typ.	0.61 / 115 VAC - 0.50 / 230 VAC
Internal fuse F1:	4 A
External fuse max:	20 A
Safety class	1
Output voltage, adjustable 23 - 28 VDC	24VDC
Static regulation accuracy	+/- 1%
Dynamic regulation accuracy	0-> 100% -> 5% x I <sub>nenn</sub> , <5% after 1ms
Start-up time typ.	1,7 s / 115 VAC - 600 ms / 230 VAC
Hold up time of the output, typ.	20 ms / 115 VAC - 100 ms / 230 VAC
Output current, continuous	24 VDC - 2.5 A (40°C) / 2 A (55°C)
Output current, short circuit, max. 200 ms	> 20 A / 230 VAC
Output ripple	< 20 mV
Over loading / temperature protection	Yes
Relative humidity	20 - 90% , no condensing
Operation temperature	0°C - +40°C
Storage temperature	-20°C - +85°C
Protection class, case , EN 60529	IP20
Dimensions W x H x D weight	50 x 125 x 80 mm; 0,49 kg

## (3) Features

### [1]Output terminal

Conductor sizes

Solid / Stranded 1.5 - 2.5 mm<sup>2</sup> / 16 - 14 AWG

Tightening torque: See table

Connector type:	Tightening torque:	
5ESD	4.5 lb. In.	0.5 Nm
MSTB 2.5	5 - 7 lb. In.	0.6 - 0.8 Nm

### [2]Output voltage "OK", green LED

### [3]Output voltage adjust: 23 - 28 VDC

### [4]Input terminal:

Conductor sizes

Solid / Stranded 1.5 - 2.5 mm<sup>2</sup> / 16 - 14 AWG

Tightening torque: See table

## (4) Location

The power supply is cooled by natural convection. It is important to maintain clearance to other components as much as possible to ensure best performance and long term stability. Top and bottom clearances should be 30 mm at minimum. Side clearance to other equipment should be 10 mm or > 20 mm if that equipment is heat generating. If natural convection is restricted, forced cooling should be used.

Protection class of the case IP20 (EN 60529).

## (5) Mounting [5]

There are two ways to assemble the clip. Back [6] Side [7].

Screw tightening torque 5 lb.in.

DIN Rail Mounting:

The rail should be fixed solidly so that it cannot twist when mounting or removing the unit. Mounting instructions [8], Removing instructions [9].

## (6) Switching on

Factory set, ready to use, check the connection diagram for series connection.

## (7) Loading capacity

The nominal current is 2.5 A (60W) but due to the nature of industrial loading, the power supply has been designed to support loads with high inrush currents without damage or shutdown. Curve [10] shows the typical current / voltage curve. Curve [11] show the current / temperature limits.

## (8) Series connection

Up to 2 units may be connected in series to give either 48 VDC or +/- 24 VDC. Check The connection diagram [12].

## (9) Standards

EN 61204-3 (2000)EMI: class B, EMS: industrial environment  
EN 55022B Fulfill  
EN 61000-4-2 ESD:Contact +/- 4 kV, air +/- 8 kV  
EN 61000-4-3 HF-Feld / RF-Field:10 V/m  
EN 61000-4-4 Burst:+/- 2 kV  
EN 61000-4-5 Surge:AC Input symm. / asymm. +/- 1 kV / +/- 2 kV  
EN 61000-4-6 HF-asymm. / Conducted RF:10 V  
EN 61000-4-11  
ENV 50204:RF-field 10 V/m  
EN 60950-1, SELV

We reserve the right to change this specification.

