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TC3001 700-1000A Installation Instructions Addendum
Part N° HA 174833 ENG003

TC3001

Three phase control
Power units

700A/1000A Addendum Installation Instructions



EUROTHERM

invensys
An Invensys company

Three-phase thyristor power units

TC3001 '700 and 1000 A' Installation Instructions

Addendum to User Manual ref: HA174833ENG

This Addendum contains informations relating to the installation and wiring of the **TC3001 700 A to 1000 A** (nominal) thyristor units, in **Compact versions** with integral control electronics (**product code TC3001** without MC option).

The **thyristor stack** and **separate driver unit** are listed under the product code TC3001 with **MC option** in the product code.

To install the MC3001 driver unit and to wire low-level signals (setpoint, enable, retransmission, alarm) refer to the manual 'MC3001 Installation and operating instructions' (ref: HA175385ENG).

For Safety instructions
Relevant European Directives
Operation and commissioning
Configuration and maintenance
please refer to the user manual for the TC3001 series (ref: HA174833ENG).

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OVERVIEW

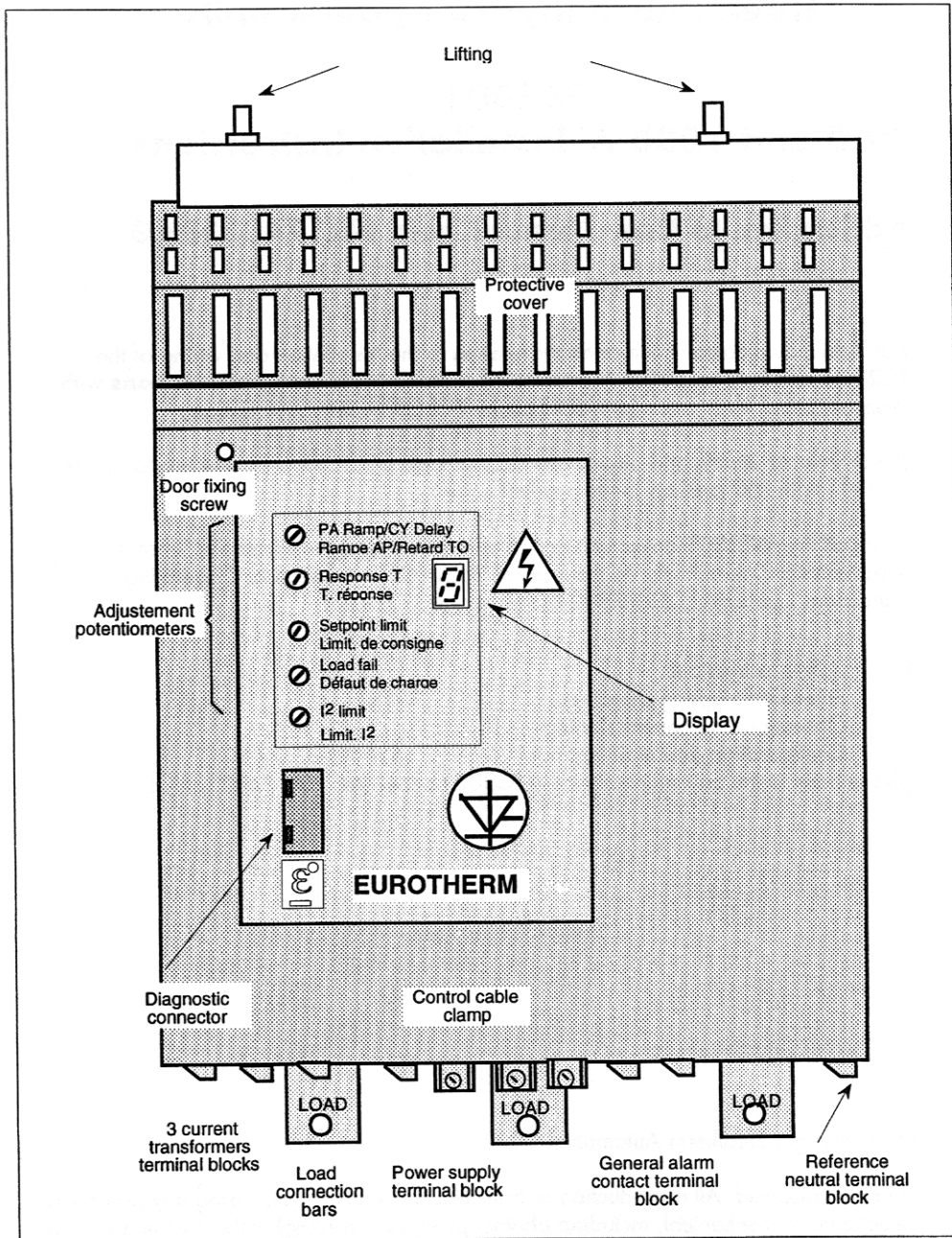


Figure 1 Overview of the TC3001 700A to 1000A thyristor unit (Compact version)

DIMENSIONS

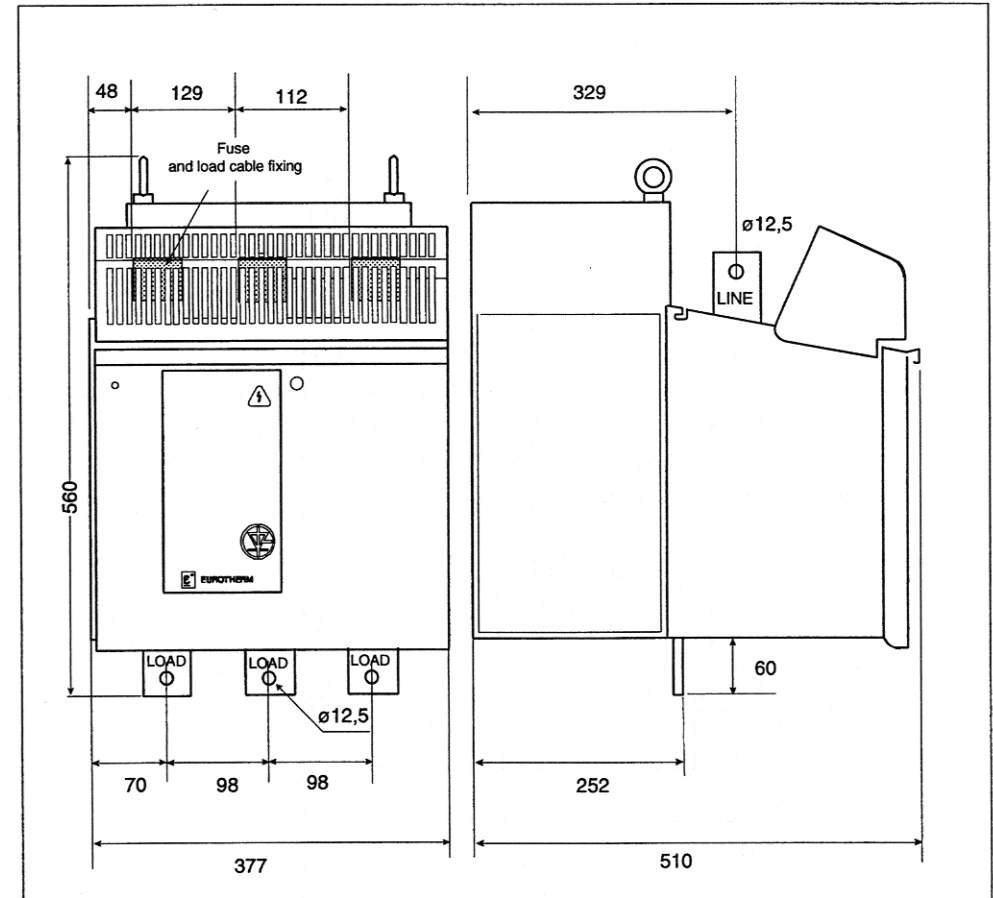


Figure 2 Overall dimensions (mm) of the TC3001 / 700A-1000 A nominal series thyristor units and power connection details

POWER CONNECTIONS

The line side connections are made on the terminals of each fuse at the upper part of the unit labelled LINE . The bars of load side connection at the below part of unit labelled LOAD.

- 3 fuse terminals M12
- 3 screw M12 x 35 mm.

Tightening torque 43,5 Nm.

Internal Fuse of thyristors protection:

700 A : CS 175633 U900 (Ferraz A300081)

1000A : CS 175633 U1200 (Ferraz D300084)

MOUNTING DETAILS

The TC3001 /700-1000A is mounted by means of four M10 screws on the bottom or the rear of the unit, depending on the type of mounting.

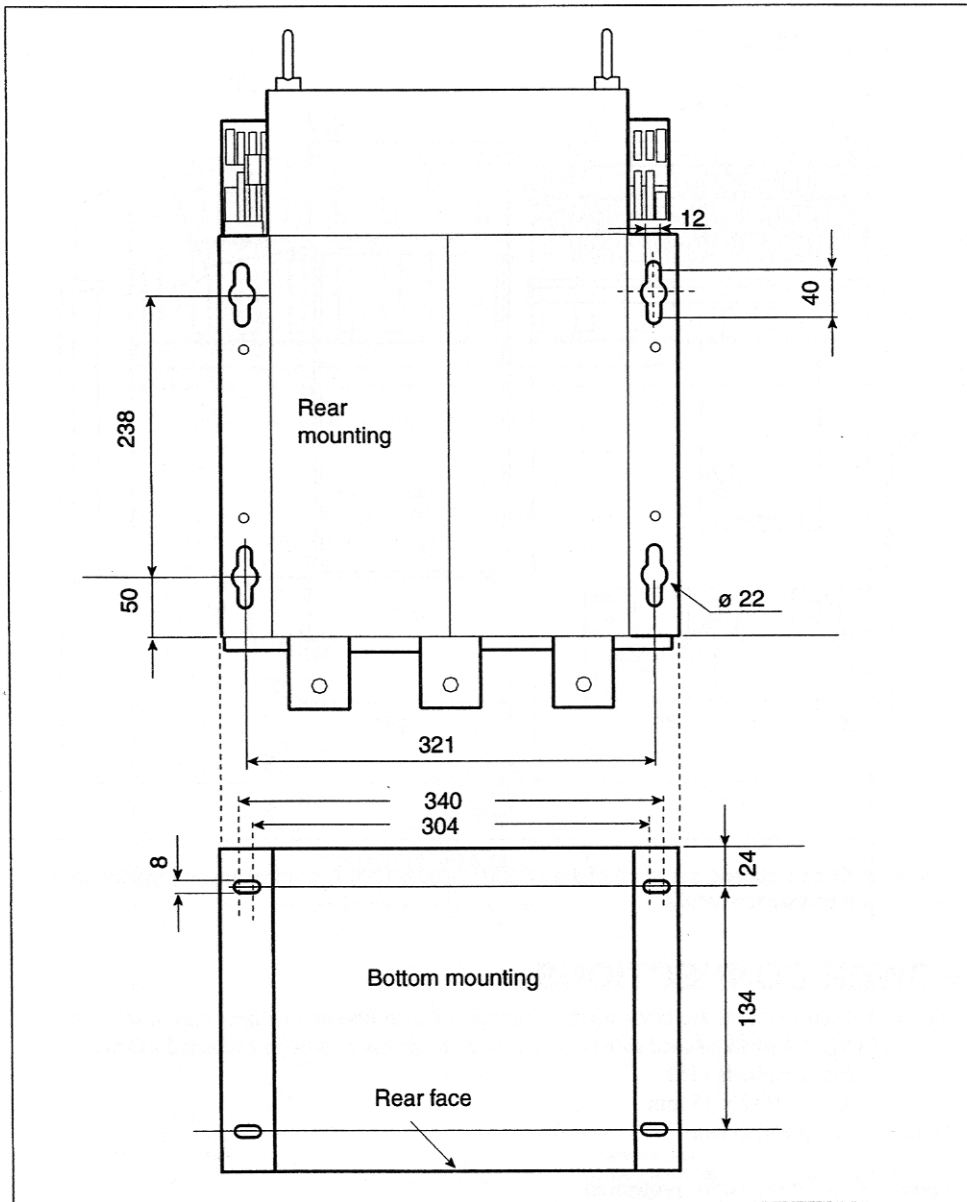


Figure 3 Mounting details (in mm) for the 700A and 1000A rated TC3001 units

LOW CURRENT USER TERMINAL BLOCKS

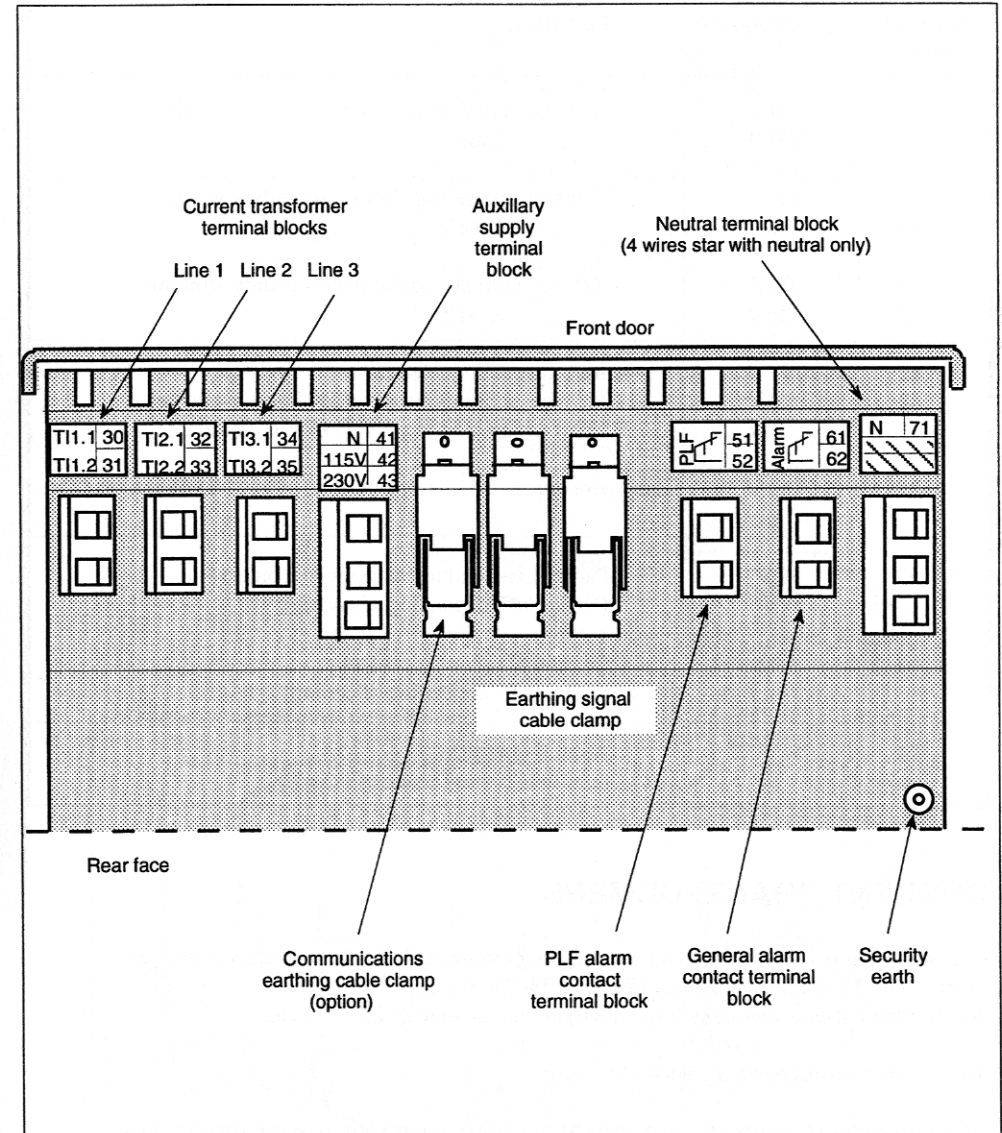


Figure 4 Layout of low current terminal blocks (view from below)

Terminal number	Labelling	Function
30 31	TI1.1 TI1.2	External current transformer secondary winding Line 1
32 33	TI2.1 TI2.2	External current transformer secondary winding Line 2
34 35	TI3.1 TI3.2	External current transformer secondary winding Line 3
41 42 43	N 115V 230V	Auxiliary supply Neutral 115 Vac auxiliary supply (230 V not available) 230 Vac auxiliary supply (115 V not available) Each wire connected to a line must be protected with a 1A fuse.
51, 52	PLF	Partial Load Failure alarm relay contact (NO or NC depending of coding)
61, 62	Alarm	General alarm relay contact (NO or NC depending of coding)
71	N	Neutral reference (star with neutral connection only)

CURRENT TRANSFORMERS

Correct wiring polarity is ensured by connecting terminals S1 of the secondary winding to terminals 30 (for line 1), 32 (for line 2) & 34 (for line 3) and mounting the current transformer the right way as indicated on drawing.

The current measurement is polarised.

It is important to ensure that the current transformers are wired in the correct sense.

In order to avoid the problem of current transformer saturation, use a 2.5 mm² size cable to connect the transformer secondaries and as short as possible.

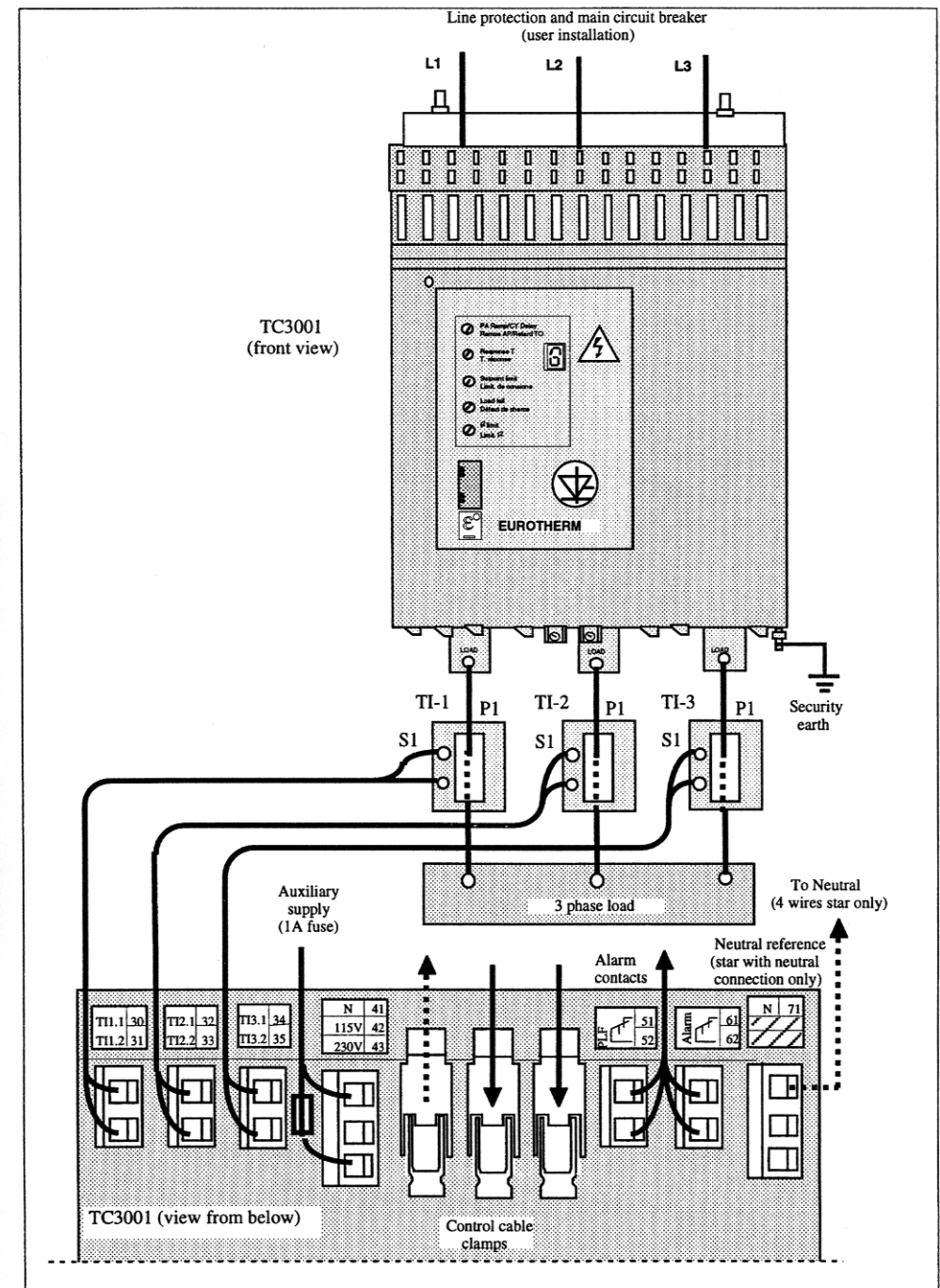


Figure 5 Electrical connections for the thyristor stack and driver unit (compact version)