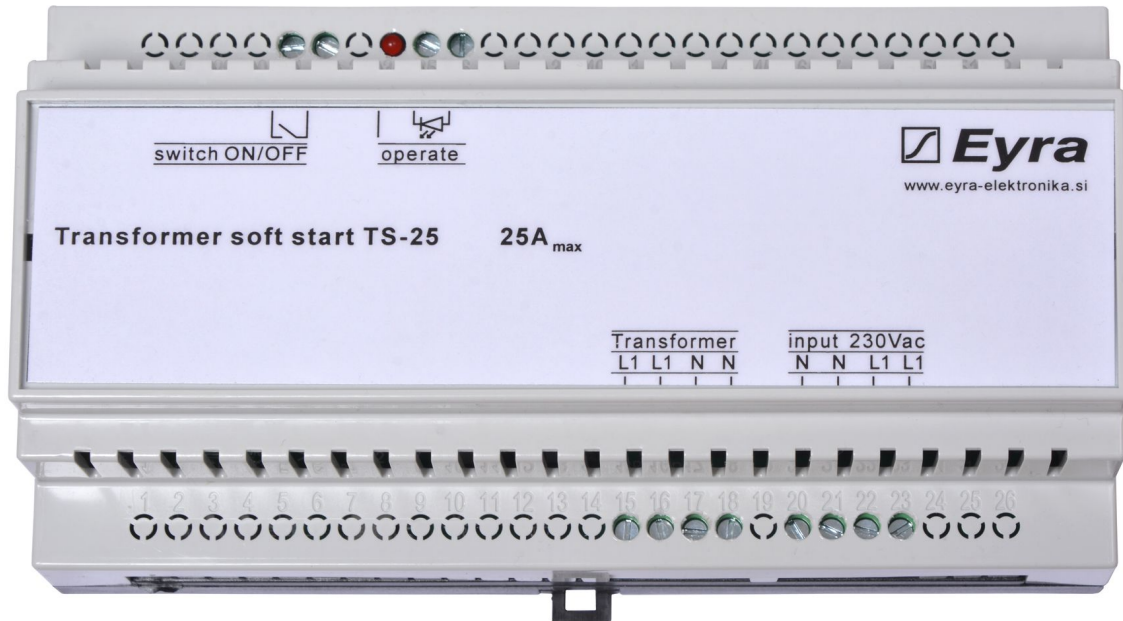


USER MANUAL

Transformer soft start TS-10 and TS-25

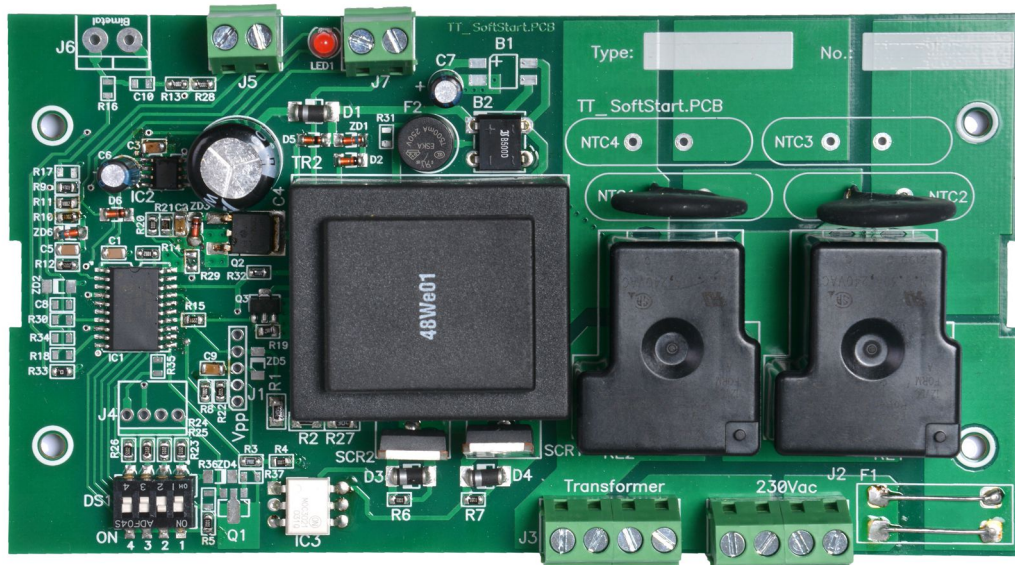


PURPOSE OF THE DEVICE

Transformers higher than 200VA usually cause problems when connected to the mains. Due to the very low ohmic resistance, switching on such a transformer for a period of a few tens of miles means a virtually short circuit.

Transformer soft start TS-10 and TS-25 fixes the problem so that the circuit breaker does not fail.

METHOD OF OPERATION



Transformer soft start TS-10 and TS-25 uses a microcontroller to detect the mains voltage phase. When the external switch is switched on, the transformer is switched on at the most favorable moment of the 230Vac mains input phase. Switching on is performed with the help of two thyristors via NTC power resistors, and immediately afterwards the mentioned elements are short-circuited by a relay. The transformer is also switched off after the switch is switched off at the moment when it is most convenient for the transformer. The microcontroller ensures that excessive magnetization of the iron core in the transformer never occurs.

In the event of a sudden switching on, switching off and immediately after switching on the system again, the microcontroller prevents this by prolonging the switch-on delay. This delay is accompanied by a fast flashing LED. This delay prevents the input fuse from failing due to overheated NTC resistors and therefore soft switching would not be possible. They need to be cooled properly to allow a smooth re-start of the transformer.

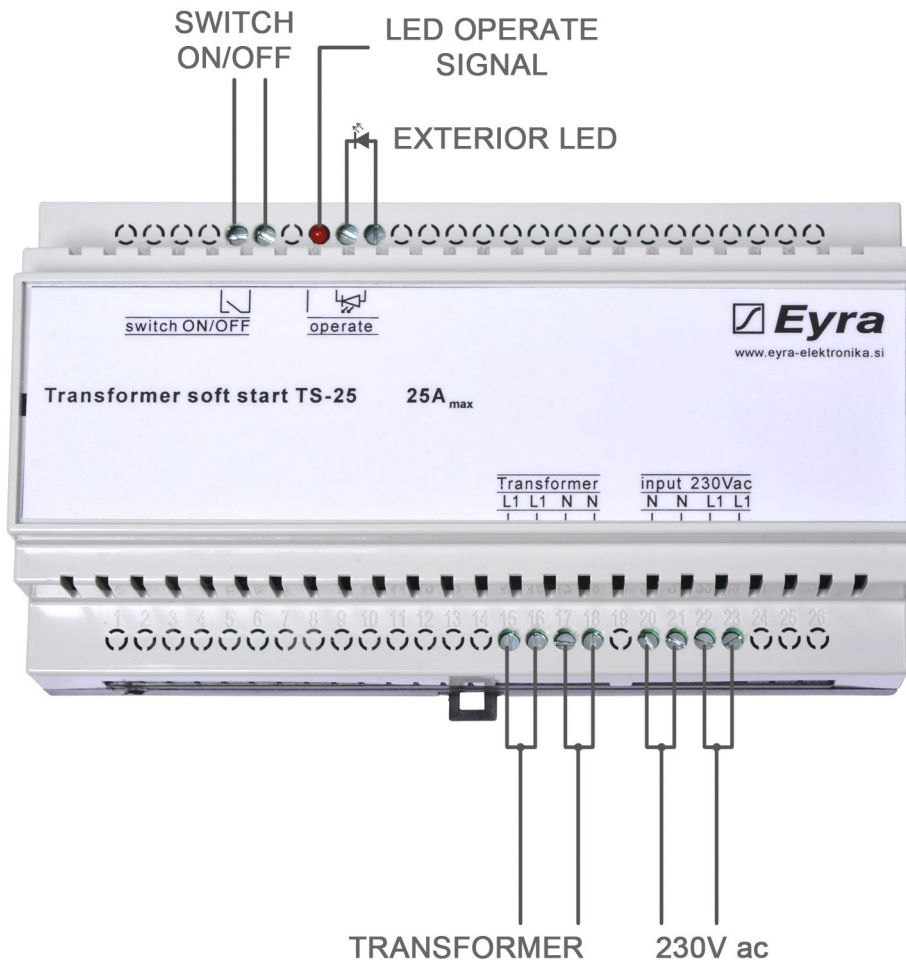
The system is designed to allow soft start even at full load of the transformer secondary winding.

SOFT START DELAY SETTING

Using the DIP switch, the soft start delay is set to 2, 5, 10 and 20 sec. This delay applies to the **sudden on / off / on effect**, which can also occur in the event of a power failure. Set the transformer power to 2 or 5 seconds for lower power and 10 or 20 seconds for higher power..

DELAY SETTING:	DS2	DS1
2 sek	OFF	OFF
5 sek	OFF	ON
10 sek	ON	OFF
20 sek	ON	ON

CONNECTION SCHEME



TECHNICAL DATA

Transformer soft start TS-10 and TS-25	
Input voltage:	195V..250V 50..60Hz
Max input / output current:	10A for TS-10 and 25A for TS-25
Own use:	3W
Ambient temperature:	0..35st C
Delay switching on delay:	100ms _{max}
Device shutdown delay:	100ms _{max}
Cold start current:	23A
Transformer power:	for TS-10 2.2kVA _{max} for TS-25 5kVA _{max}
Operation mode	the microcontroller controls on and off
Signalizacija	LED, additional output for LED 5mA-wires max 50cm
ON/ OFF	with an external 250Vac / 1A switch
Dimensions:	Modulo 9 D:105mm Š:85mm V:60mm
Weight	300g

SERVICE AND WARRANTY

Eyra elektronika d.o.o.
 Gabrje pri Stični 45, SI-1295 Ivančna Gorica, Slovenija

Tel.++386 (0)1 7869-037 Fax++386 (0)1 7869-038
 e-mail: info@eyra-elektronika.si <http://www.eyra-elektronika.si>

GUARANTEE STATEMENT

Guarantee conditions:

1. The guarantee is valid for 24 months from the date of sale.
2. The guarantee repairs are carried out exclusively by an authorized service center.
3. The guarantee applies only to the charger, and not to any other device connected to this module.
4. The guarantee and liability does not include any fees, postal costs, damages and any costs related to the failure of this device.
5. The guarantee does not apply to batteries, mechanical damage or lightning strikes.
6. The guarantee does not apply if the device was mounted or used in violation of the instructions.
7. The guarantee does not apply if an unauthorized person interferes with the device.
8. If, during the guarantee period the device is not repaired within 45 days from the date of receipt in our service center, we are obliged to replace it with a new one.
9. The guarantee period shall be extended for the period of repair.
10. The original invoice must be submitted for the enforcement of the guarantee.

Seller :

company:	
.....	
name and surname of the seller:	
.....	
signature of the seller:	
.....	
date of sale:	stamp:
.....	