



บริษัท เอดีดี เฟอร์เนส จำกัด ADD FURNACE CO.,LTD.

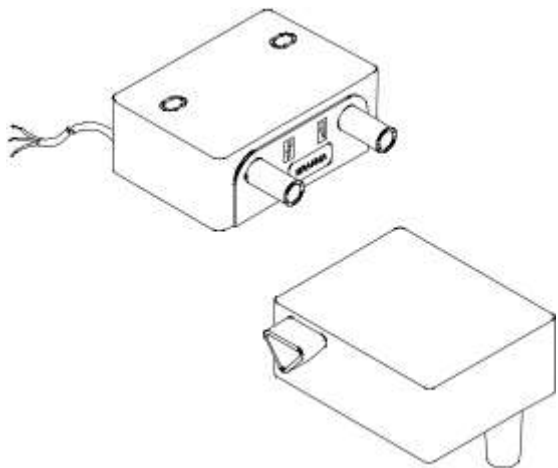
44 ซอยบรมราชชนนี 70 ถนนบรมราชชนนี แขวงศาลาธรรมสพน์ เขตทวีวัฒนา กรุงเทพฯ 10170

โทร: 02-888-3472 โทร(ออกแบบ): 08-08-170-170 แฟกซ์: 02-888-3258

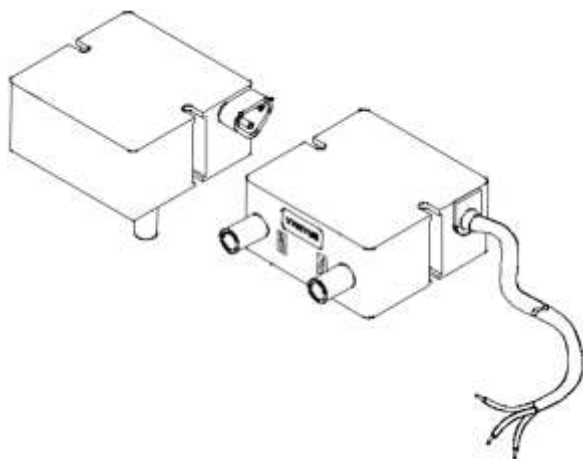
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ELECTRONIC IGNITION TRANSFORMERS FOR NON- PERMANENT OPERATION

TC....A. Series



TD....A. Series



DESCRIPTION

These ranges of electronic ignition transformers are characterized by extremely limited overall dimensions and are particularly suitable to equip forced draught burners for gas and light or heavy oil, for civil and industrial applications.

The working principle is based on a high frequency electronic oscillator; the voltage it generates is then increased by using a transformer with ferrite nucleus, reaching in this way output voltage values up to 15 kV.

All types can be supplied with filter to minimize the emission of electromagnetic interference. In this way this series of electronic transformers is in compliance with the EMC directive 89/336/EEC without the use of external filters.

The transformers of this series can also be supplied for permanent operation (100% duty cycle). For further information see relevant data sheets (TC....S. and TD....S.).


FEATURES

Followings are the main features of these ranges of transformers:

- available with inbuilt EMC filter;
- 50% duty cycle in 2 minutes;
- limited weight and overall dimensions;
- high efficiency and ignition power;
- low consumption;
- single-pole or double-pole high voltage output;
- different fixing and connecting systems;
- inbuilt protection against short circuit;
- **in oil and gas burners, the safety of ignition transformers depends on the control unit.**

APPROVALS

- The transformers comply with the essential requirements of the "Low Voltage Directive (LVD) 73/23/EEC", as they are approved by **IMQ** according to the product standards EN 61558-1:1997 + A1:1998 + A11:2003 and EN 61558-2-3:2000.

Type	Voltage	Certificate no. 
TC1...A.	220-240 V 50/60 Hz	CA04.03569
TD1...A.	110-120 V 50/60 Hz	CA04.03824
TC2...A.	220-240 V 50/60 Hz	CA04.03570
TD2...A.	110-120 V 50/60 Hz	CA04.03823

The transformers are also provided with "CB TEST CERTIFICATE No. IT-3904" stating their compliance with the international standards IEC 61558-1 (ed. 1) + am1 and IEC 61558-2-3 (ed. 1).



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TECHNICAL DATA

	TC1...A - TC1...AF TD1...A - TD1...AF		TC2...A - TC2...AF TD2...A - TD2...AF	
	110-120	220-240	110-120	220-240
Number of poles	1		2	
Output peak voltage kV (1)	15		2x12	
Rated output voltage kV (4)	5.9	8	2 x (2.9 ÷ 3.4)	2 x (3.8 ÷ 4.3)
Output peak current mA (2)	45		55	
Rated output current mA (2)	20	25	27	30
Output voltage frequency kHz (1)	6		6	
Output voltage frequency kHz (2)	10		10	
Consumption VA (3)	45		55	

- (1) No-load output and 30 pF load.
- (2) Short circuit output.
- (3) 10 mm spark gap.
- (4) No-load output.

- **Supply voltage:** 220-240 V 50/60 Hz
on request: 110-120 V 50/60 Hz
- **Protection fuse according to EN 60127:** F1A 250 V
- **Duty cycle:** 50 % in 2 minutes
- **Operating temperature range:** -10 ... +60 °C
- **Protection degree:** IP00
- **Winding class:** H
- **Recommended distance between the electrodes:** 3÷5 mm
- **Max. ignition cable length:** 1.5 m
- **Standard supply cable length:** 560 mm
- **Weight:** TC series 420 g approx.
TD series 360 g approx.

CONSTRUCTION

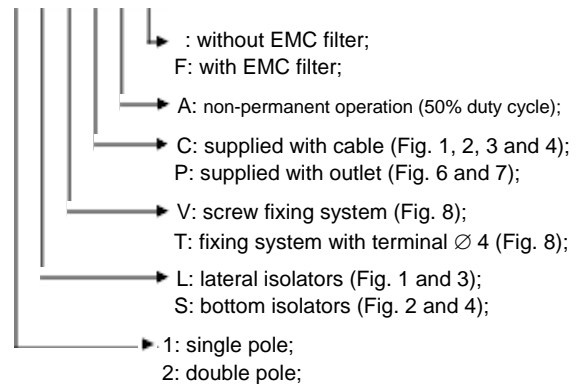
The working principle based on the use of a high frequency electronic oscillator has enabled to develop a device with limited dimensions and weight, but with high ignition power.

The electronic circuit and the transformer with ferrite nucleus are bathed in a special kind of resin with very good thermal conductivity and a specific coefficient of expansion, which ensures high resistance to temperature variations and to the overload due to protracted working.

An inbuilt varistor protects the device from possible voltage transients in the mains supply.

The transformers of these series are available in different versions as regards the number of poles, the position of the isolators, the type of connection, the power supply connection and the availability of an EMC filter; on this subject, see the following scheme:

TC/TDXXXXAX



For instance, the designation TC2LVPAF indicates that the transformer belongs to the TC series, is provided with two lateral isolators, screw fixing system, power supply with outlet, EMC filter and is for non-permanent operation.



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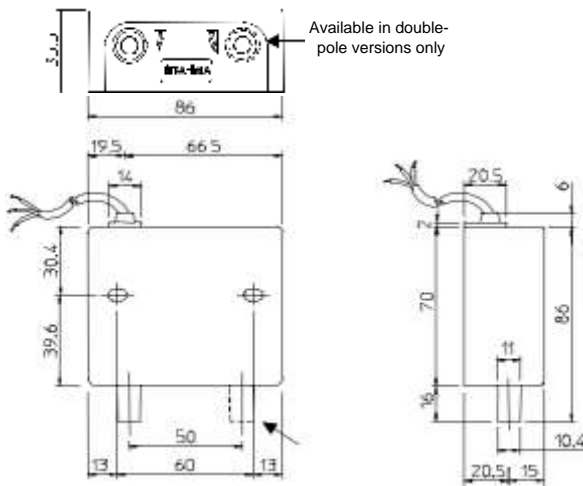
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OVERALL DIMENSIONS

The TD series differs from the TC series for its more reduced overall dimensions; Fig. 1, Fig. 2, Fig. 3 and Fig. 4 show the main dimensions of both transformer series.

To fix the transformers, screws type M4 or M5 should be used (in the transformers of the TC series, the oval holes enable a variation of the fixing wheel base between 57 mm and 64 mm).

TC1L – TC2L



2/4

Available in double-pole versions only

Fig. 1

TC1S – TC2S

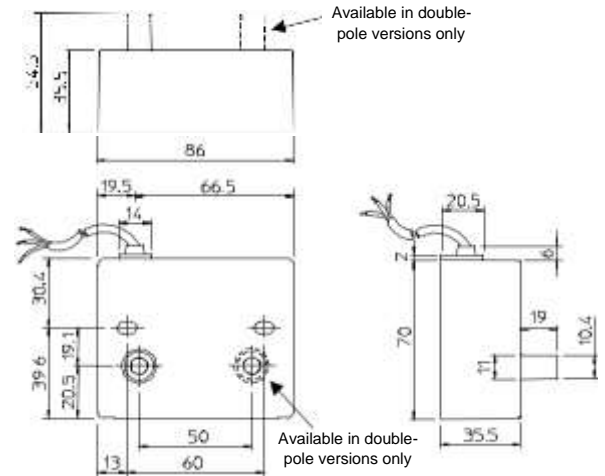


Fig. 2

3409_r02



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TD1L - TD2L

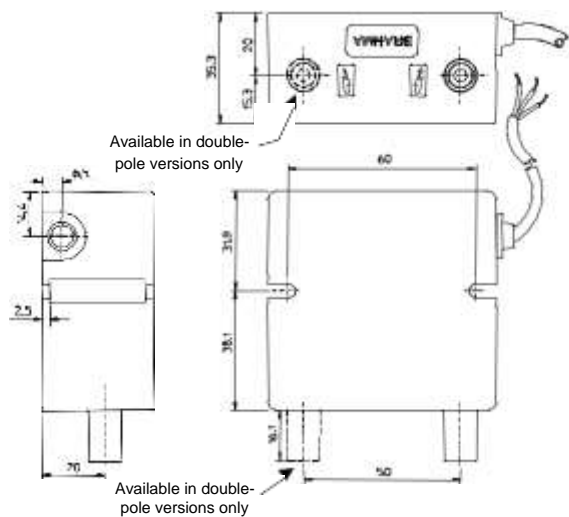


Fig. 3

TD1S - TD2S

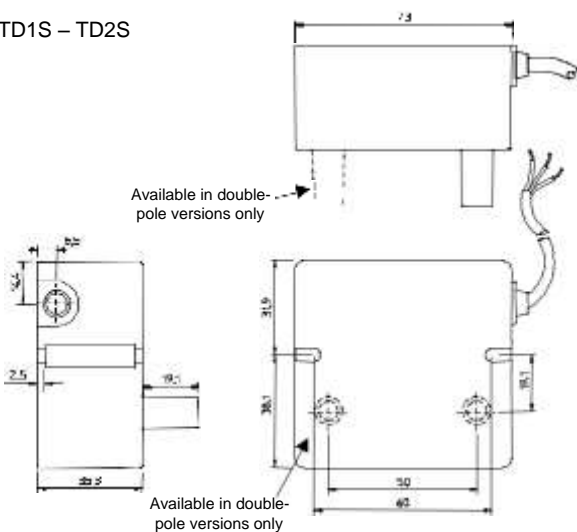
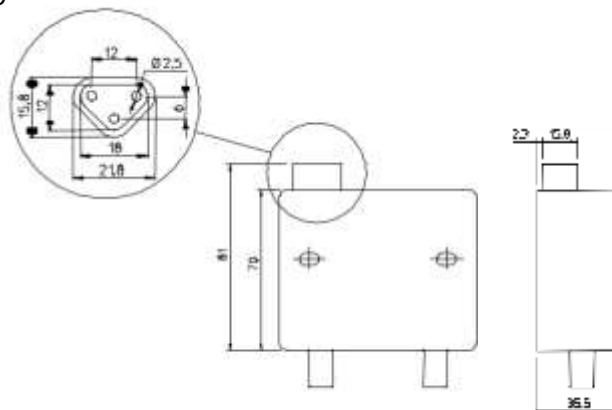


Fig. 4

TC



CONNECTION

These ranges of ignition transformers have been developed in order to be used with control boxes of our own production, which can be mounted on the ignition devices by means of fixing screws type M4x45, as shown in Fig. 5.

All transformers can be supplied with cable or supply outlet; see, for instance, Fig. 6 and Fig. 7, which show the dimensions of a transformer provided with supply outlet (with laterals isolators).

TC

TD

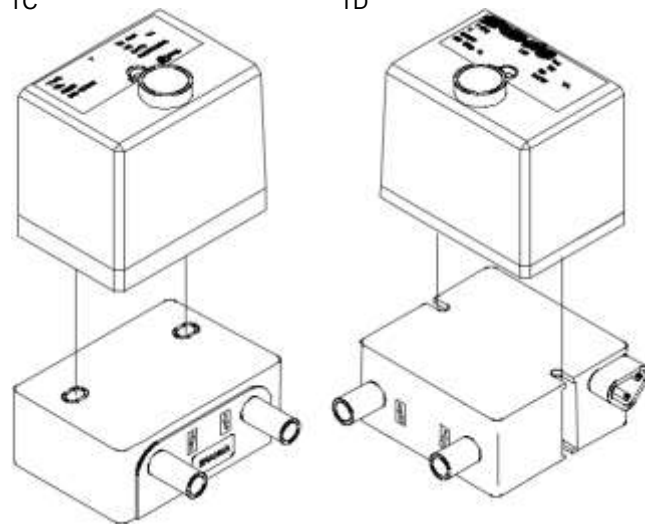


Fig. 5



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Fig. 6

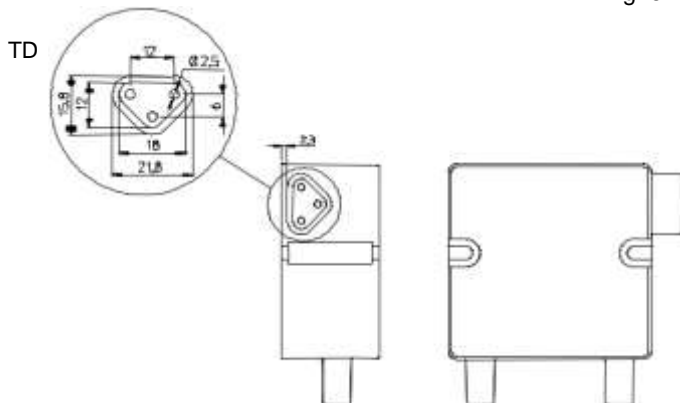
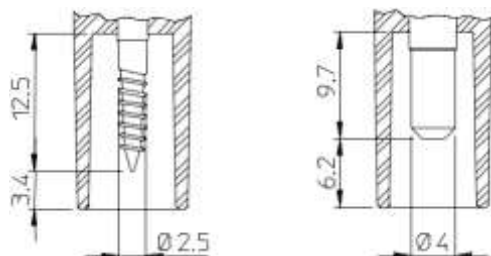


Fig. 7

The connection of high voltage cables can be of two types, according to the terminals used inside the isolators: connections can be carried out by means of a screw or a cylindrical terminal with 4 mm diameter, as shown in Fig. 8. All connectors, including the ones complete with cable, can be supplied on request.



Type "V"

Type "T"

Fig. 8

INSTALLATION



- Caution! There might be dangerous voltages.
- Connect and disconnect the ignition transformer only after interrupting the mains supply.
- Respect the applicable national and European standards (e.g. EN 60355-1 / EN 50165) regarding electrical safety.
- Make sure that the earth of the ignition transformer and the earth of the electrical system are well connected.
- The device can be mounted in any position.
- Avoid putting high voltage cables next to other cables.
- Ensure a protection degree suitable to the application.