

## ISOLATION TRANSFORMER

“Dalap TRS - 230V/12V”



### STORAGE AND TRANSPORTATION

The transformer should be stored in manufacturer packaging in closed and aired room without the acid and other steams having a harmful effect on the materials and isolation at temperature from +5°C to +40°C and relative air humidity of no more than 80 % (at T = 25°C).

The transformer in the manufacturer transport container can be transported by any kind of transport in covered vehicles.

Transportation of the transformer should be carried out according to the handling stamps on the packaging.

### MANUFACTURER'S GUARANTEES

The transformer TRS - 230V/12V corresponds to requirements of GOST 30030-93 (MEK 742-83) “Isolation Transformers and Safe Isolation Transformers. Technical Requirements”, DNAOP 0.00-1.32-01” Rules of the Electrical Installation Structure. Electrical Equipment of the Special Installations”, Rules of the Technical Operation of Electrical Installations”.

The manufacturer, Joint-Stock Company "Dalap", guarantees normal work of the transformer for 12 months from the date of sale through the retail trading network provided transportation, storage, installation and operation rules are complied with. The guarantee does not apply to the products with signs of the mechanical damages. In case of malfunction in transformer work because of the manufacturer within The warranty period, the consumer has the right for the transformer replacement. In the absence of sale date mark, the warranty period is estimated from the date of manufacturing.

**ACCEPTANCE CERTIFICATE** The isolation transformer TRS -

230V/12V is recognized to be serviceable

Sale date

Manufacturing date

SELLER

Approval mark

V32EN -01

### PURPOSE

The isolation transformer TRS - 230V/12V, called hereinafter " the transformer", is intended for the household fans power supply of ultra-low secure voltage 12 V / 50 Hz , in which the motor's power does not exceed 16 W

### BASIC TECHNICAL CHARACTERISTICS

Supply voltage 220-240 V, 50 Hz.

Target voltage 12 V, 50 Hz.

Maximal load power, no more 25 VA (load current no more than 2 A).

The transformers belong to devices of the Class II insulation by type of protection against electric-shock hazard.

Overall dimensions of the transformer, no more 91x58x62 mm.

Overall dimensions of the protective terminal box, no more 110x40x40 mm.

Weight, no more - 0,8 kg.

Protection Class concerning dust and moisture (except for the terminal blocks) IP40.

Transformer operation conditions +10°C up to +40°C and relative humidity of no more than 75 %.

The ambient air should contain no explosive and corrosive impurities.

### SAFETY REQUIREMENTS

The maintenance and installation should be carried out by the person who has the admission to the independent work with the electrical installations up to 1000 V and has studied this manual.

**Attention!** The transformer input circuit is under network potential. The transformer installation and connection should be made only after its disconnection from the network system..

#### Forbidden!

- To operate the defective transformer,
- To make alterations to the scheme,
- To transfer the energized transformer,
- To operate the transformer with a damaged isolation of network cable and output cables ,
- To connect and disconnect output cables if the transformer is turned on,
- To overload the transformer electrically.

#### Not allowed!

- Water ingress in design elements of the transformer,
- No explosive and corrosive impurities should be present in air.

### DELIVERY SET

The delivery set contains: Isolation transformer TRS

230V/12V ready-assembled with protective terminal box, certificate,

- spare safety fuse 0,25 A / 250 V,

- packing box.

## TRANSFORMER STRUCTURE

Appearance with the overall and connection dimensions (specified in millimeters) is shown on fig. 1.

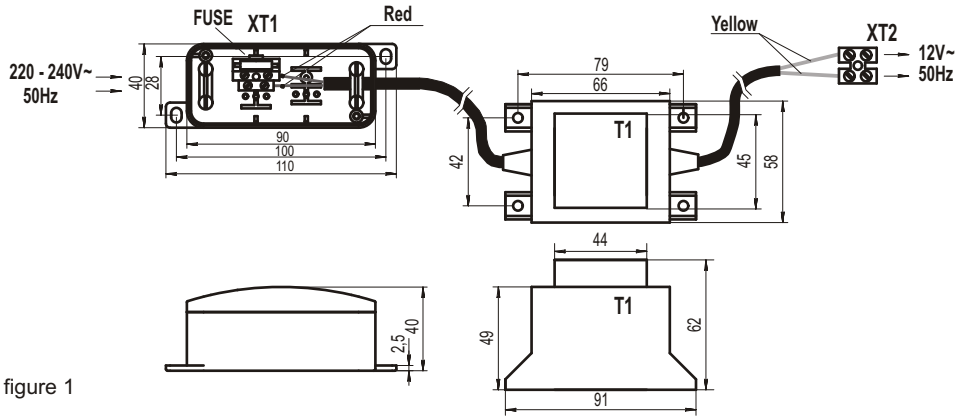


figure 1

For protection against overloads, the transformer has replaceable fuse FUSE integrated in the input terminal block XT1. For the safety grounds, the terminal block XT1 is mounted in the protective terminal box. The output terminal block XT2 serves for connection of the fan with safe supply voltage of 12 V.

## INSTALLATION AND OPERATION INSTRUCTIONS

The transformer with terminal box should be installed inside the room in a zone not subject to influence of the raised humidity.

At that, it is not allowed in the course of installation and operation:

- Ingress of splashes, rain drops,
- Direct solar light,
- Installation near to heating devices, other sources of heat.

The fire safety requirements should be observed during installation and operation.

Connection to the electric power network should be carried out by one of two ways:

By means of an electric cable equipped with the standard plug for connection to the corresponding socket integrated in the fixed wiring,

Through the switch with contact gaps at least 3 mm on all poles integrated in the fixed wiring.

Regulator connection to the electric power network should be carried out according to schemes shown on fig. 2, 3, where:

Q1 - the external switch integrated in the fixed wiring,

XT1 - input terminal block with the integrated safety fuse in protective terminal box,

XF1 - socket integrated in the fixed wiring,

M1 - standard plug,

T1 - the transformer,

XT2 - output block for connection of the fan with supply voltage of 12 V,

B - fan with supply voltage of 12 V

Transformer, protective terminal box as well as output terminal block and downlead should be reliably fixed on the basis of an insulation material

**(The wood structure is not considered to be a reliable insulator).**

The terminal block XT2 should be protected against dust and moisture. It is not allowed, to place and fix the terminal block XT2 on the conducting basis. If the transformer is placed in a box, the sufficient ventilation should be provided in order to except its overheat.

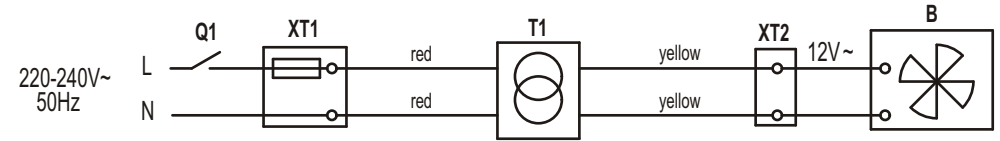


figure 2

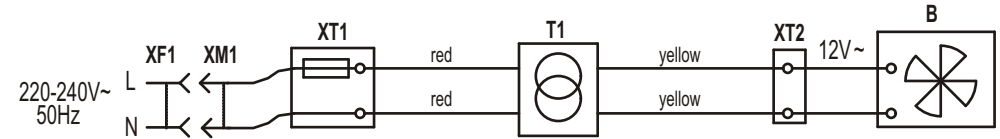


figure 3

## TYPICAL MALFUNCTIONS AND METHODS OF THEIR ELIMINATION

The transformer starts to work right after voltage supply on its input. If the device does not work, you should execute the malfunctions diagnostics, using table 1.

MALFUNCTION	PROBABLE REASON	ELIMINATION METHOD
The fan connected to the transformer, does not work.	There is no voltage in the network.	Check up the network voltage. At its absence, take measures on restoration of the network functioning .
	The electric contact in the terminal block clips of the transformer or fan is broken.	Renew the electric connection in the terminal block clips of the transformer or fan.
	The safety fuse has blown because of an overload or short circuit on the transformer output.	Eliminate the reason of the transformer overload or short circuit on its output. Replace the safety fuse.
	Fan malfunction.	Renew the fan efficiency or replace it.

table 1

In order to replace the safety fuse you should:

- Disconnect voltage of the transformer power supply;
- Open the protective terminal box (having unscrewed previously the two screws located on the box cover);
- Take out the safety fuse holder from the terminal block XT1 (see fig. 1), replace the safety fuse with the spare one,
- Put the safety fuse holder into place;
- Close the protective terminal box cover, screw up the 2 screws, connect the power supply voltage.