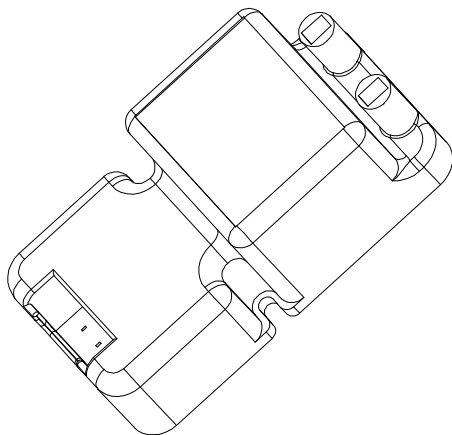


# IGNITION TRANSFORMERS Type TSM



## DESCRIPTION

The capacitive-discharge ignition transformers type TSM are generally used for the ignition of premix gas burners for condensing boilers.

Despite their small dimensions, these transformers are provided with a high ignition power, and they also incorporate a filter against conducted interference.

The transformers can be fitted to the flame control and safety devices which are provided with an output at a specified mains voltage for the control of the ignition transformer, such as the BRAHMA control boxes type CM32PR, MT11/MT31, MT191/MT391, as well as the microcontroller-based control boxes type DM...PR.

## TECHNICAL DATA

– Operating voltage upon request	220-240V / 50-60Hz 110-120V / 50-60Hz
– Operating temperature range	-20°C +60°C
– Protection degree	IP00
– Recommended distance between the electrodes:	3÷5 mm
– Max. supply cable length	1 m
– Max. ignition cable length	2 m
– Weight	140gr
– Output peak voltage	15kV
– Output peak current with short circuit secondary	250mA <sub>p</sub>
– Output effective current with short circuit secondary	2,85mA <sub>RMS</sub>
– Spark frequency	200Hz
– Duty cycle in 2 minutes	50%

## OVERALL DIMENSIONS

The transformers can be fixed using 2,9mm screws type UNI 6954 AB or DIN 7981 B. The figure below shows the main overall dimensions including the fixing wheel base.

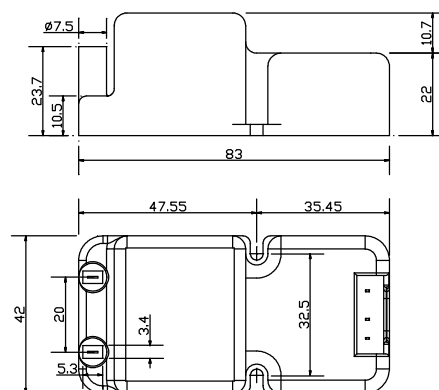


Fig. 1

## CONNECTION

The power supply connection of the ignition transformer occurs by means of Stelvio 3-way connectors; the high voltage part is connected by means of 2,8X0,5 fast-on connectors. The following figures show the connectors and the wiring diagram.

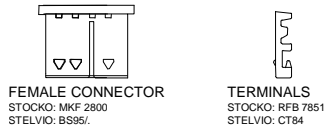


Fig. 2

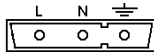


Fig. 3

Some control boxes, like for example types MT..., are prearranged to work with one electrode only for both ignition and flame detection. In such cases, the wiring diagram changes as follows:

## Connection diagrams (monoelectrode)

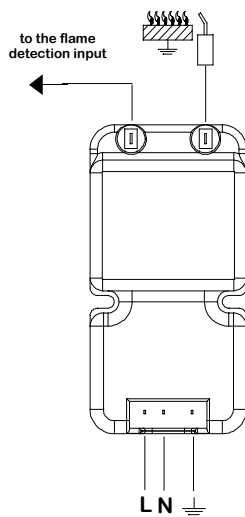


Fig. 4

## INSTALLATION

- Connect and disconnect the ignition transformer only after switching off power supply.
- Respect the applicable national and European standards (e.g. EN 60355-1 / EN 50165 / EN 61558-1-2-3) regarding electrical safety.
- Make sure the earth of the transformer and the earth of the electrical system are well connected. The device can be mounted in any position.
- Avoid placing high voltage cables close to other cables.
- Make sure the protection degree is suitable to the system.
- Reduce the ignition cable length to a minimum (this reduces stray capacitance and the possibility that the ignition cable acts like an antenna transferring interference to the nearby cables).
- Make ignition cables follow a separate path close to ground planes (this reduces the influence of interference on the remaining electrical wires).
- Arrange a single earth centre, thus preventing earth conductors from creating ring paths.

## Connection diagrams (bielectrode)

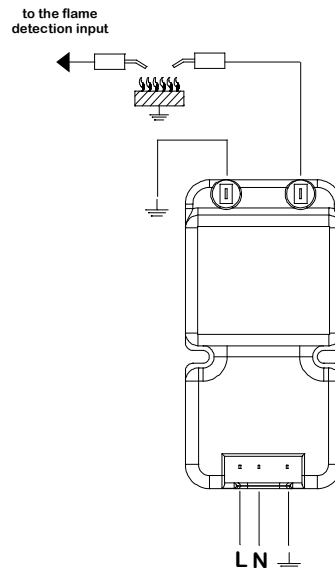


Fig. 5