Transformer controller with full motor protection- TSW MCB

INSTALLATION AND OPERATING INSTRUCTIONS
NOa

It is important for safety reasons, that you read and observe these instructions fully before proceeding.

■ RECEIPT

Please check delivery immediately on receipt for accuracy and damage. If damaged, please notify carrier immediately. In case of delayed notification, any possible claim may be void.

■ STORAGE

The storage area must be free of water, vibration and temperature variations.

Damages due to improper storage, transportation or installation are not liable for warranty.

■ OPERATION/USE

The 1-phase controller is designed to be used in combination with an electric motor which is suitable for speed control by means of a transformer.
The controller can regulate the speed of the motor in 5 steps.
Several ventilators (also with motors of different ratings) may be connected to one controller. However, the total load current must not exceed the nominal output current of the controller.
Terminals NK-LK give a 230 V output in all positions except "0". This is, for example, for opening electric dampers.

Important
Motor(s) for connection to the controller must be suitable for transformer reduced voltage speed control. The nominal voltage of the controller must be suitable for the electrical supply to which it will be connected.

– Maximum current
The controller has a variable maximum current rating at differing voltage settings. Therefore, the controller needs to be correctly matched to the fan. If the fan / controller combination is not recommended in the Helios catalogue, refer to the diagram overleaf for correct selection (if not observed the unit may overheat).

■ MOUNTING OF THE CONTROLLER

The maximum admissible ambient temperature during operation is +40° C. The controller must be mounted vertically onto a solid surface, alternatively, it may be mounted to a solid horizontal surface.
The controller must not be mounted upside down. The cable entries should point down. It must not be mounted directly under, or onto the ceiling. To ensure adequate cooling, a minimum distance of 5 cm is required around the controller.

■ INSTALLATION OF THE CONTROLLER

Remove the cover of the controller.
Mounting holes are provided on the inside back panel of the enclosure. On some of the plastic enclosures the mounting holes should be opened by knocking out the membrane covering the mounting hole.
For the ease of mounting, the mounting plate (inside) may be removed from the enclosure. The controller enclosure should be mounted using corrosion resistant screws or bolts as required. Once secured in position, the mounting screws or bolts should be sealed to maintain the IP-rating of the enclosure.

■ ELECTRICAL CONNECTION

All electrical connections are to be carried out in accordance with the relevant wiring diagram and are only to be carried out by a qualified electrician. All relevant safety regulations, national standards and norms are to be adhered to. The installation and operation instructions for the fans are also to be observed.
Attention: All work must be carried out with the equipment fully isolated from the power supply.

Switch off the mains supply! The controller should be wired in accordance with the wiring diagram supplied with the controller and markings on the terminals.
The earth-wire (green/yellow) of the electrical supply and of any equipment connected to the controller must be connected to the terminals marked PE.

■ CONNECTIONS

– Valve- or servomotor
A valve- (close off flap) or servomotor may be connected to terminals 1 and 2. A 230 V
(max. load 2 A) supply is available at these terminals, when the controller is switched on. If connection to external devices is not used, terminals 2 and 1
must not be linked together !
Note: the 230 V output on "1" is disconnected with the switch is in the "0" position and when the unit is tripped.

– Motor thermal switch "TK"
The normally closed contacts of the thermal switch (from the motor) should be connected to terminals marked "TK".
Should the thermal switch contacts open due to motor overheating, the supply to the motor will be switched off and the green indicator light goes off.

Once all wiring to the controller has been completed, check that connections have been made to the correct terminals and that all connections are secure. Finally replace the cover and ensure the securing screws are tight to prevent ingress of dirt and moisture.

■ OPERATION

Check that TK's have been wired correctly into TK Terminals.
Check speed setting dial is in Position 1
Check the mains supply voltage (nominal, tolerance +6%, -10%).
Switch on the mains power supply to the TSW MCB Controller.
Check the Internal MCB is in the on Position.
Press Green Activation Button this should Light Up.
Check the Voltage output in every Position (See Technical data.)
In case of Failure Check the safety breaker inside the enclosure.
Deactivate by pressing Green Button.
Return Speed to Position 1.

■ MAINTENANCE

The controller needs no specific maintenance. The housing may be cleaned using a moist cloth. It must not be hosed down.

■ Wiring diagram

TSW MCB