GB

TOUCH ELECTRONIC COMMUTATOR WITH RELAY OUTPUT 442TC51 "HIDDEN" INSTALLATION

INTRODUCTION

The electronic commutator with relay output 442TC51 is a command with incorporated touch sensor for the control of motorized shutters. It can be controlled locally and from various points with NO buttons. It allows to select a monostable or timed operating mode. Provided with LED for Identification In the dark, must be installed "hidden" on the back of the finishing front plates.

TECHNICAL FEATURES

- Dimension: 1x S44 "hidden" module
- Protection Degree: IP40
- Terminal board with 6 terminals accessible on the back side
- Power supply voltage: 230 Vac 50 Hz
- Variation allowed: -15% +10%
- Max absorption: 23,1 mA @ 230 Vac (0,4 W)
- Sensitive front area: the entire front of the device (see fig. 1 area A1)
- Output: nr. 2 monostable interblocked relays with NO contacts internally connected to the phase
- Type of controlled loads in alternate current:

- resistive load (cosφ 1): 5 A @ 250 Vac
- motor load 2 A @ 230 Vac

- Controls:

- resting the finger gently on the plate on the entire front of the device (see fig. 1)

- from various points with touch buttons for remote control (442TC05) or NO push buttons connected to phase.

- Status memory: the last motion condition is stored in the memory so that the next control is always actuated in the opposite direction respect to the previous even in case of power failure between the two controls. Note: when the power comes available after a shortage, the non moving condition of the shutter is granted.
- Front Led (L1) for locating in the dark (see fig. 1): when the hand approaches, the led emits a brighter light. Note: should the led light be bothersome, we suggest applying the blue sticker from the set (code ETI16, ETI16B or ETI16GR) on the front of the device (back of the plate).
- Possibility to set the output mode: monostable or timed (see programming paragraph)
- Possibility to set the sensitivity of the device: at the touch of the plate or at a distance of 4mm from the plate itself (see PROGRAMMING paragraph)
- Temporary inhibition function to allow cleaning of the plate (see PLATE CLEANING paragraph)
- Acoustic signal when entering/quitting the temporary inhibition state.

PROGRAMMING

There are 2 two-positions DIP switches on the side (see fig. 1) to program the device.

Sensitivity

It is possible to set the sensitivity of the device, in other words the distance from the front of the plate where there is the identification of the control, acting on the first switch:
- position ON: identification at 4mm from the plate (maximum sensitivity)
- position OFF: identification at the touch of the plate (minimum sensitivity)

Note: it is advisable to set minimum sensitivity when installing two or more controls close to each other.

Operating methode

The operating method of the device, monostable or timed, can be set acting on the second switch:
- position ON: monostable operation
- position OFF: timed operation (see also TIMER SETTINGS)

TIMER SETTINGS

The device comes with a preset timer of 30 seconds. The set can be modified within a range between 5 and 90 seconds as follows:

1. Measure the time needed for a complete upward motion of the shutter;
2. Set Sw1 and Sw2 to OFF;
3. Set the device in temporary inhibition state (see also PLATE CLEANING) holding the finger on the front area A1 for 15s.
4. Set the Sw1 switch ON, the device will enter learning mode. It will beep 2 times and the blue LED L1 will start blinking with a 1s period (0.5s ON - 0.5s OFF);
5. Hold the finger on the front area A1 for the time measured before at point 1: the contact of one of the relays will close, when removing the finger from the front area the device will store in the memory the new time. In case of errors while setting the time repeat the procedure from point 2;
6. To exit the learning mode set Sw1 switch to OFF. The device will enter in the normal operating state, it will beep 2 times and the blue LED L1 will stay continuously ON.

OPERATE THE DEVICE

Monostable (SW2 ON)

Rest the finger over the front area to operate an up/down command: the corresponding relay will keep its contact close until the finger is kept on the front area A1, with a time limit of 3 minutes, after that the relay will anyhow open the contact. A further rest will correspond to a command in the opposite direction. The opening/closing of the relay contact is always interrupted when removing the finger from the front area A1. The same behaviour can be achieved acting on an external NO push button connected to the input terminal P.

Timed (Sw2 OFF)

A quick touch on the front area correspond to a complete up/down command: the corresponding relay will keep the contact close for the set time. A further quick touch will correspond to a complete down/up command in the opposite direction. The ascent/descent can be stopped anytime touching back the front area A1. The same behaviour can be achieved acting on an external NO push button connected to the input terminal P.

PLATE CLEANING

In order to clean the front plate without continuously activating the output, it is possible to temporarily inhibit the operation of the device by placing a finger near area A1 (see fig. 1) for a time of 15 seconds after which the device will beep 4 times. Removing the finger within 1 second the device will enter the inhibition state, marked by LED L1 blinking during 15 seconds, before automatically returning to the normal operating mode. When quitting the inhibition state the device beeps 4 times.

If the finger is not removed after the first sequence of beeps the device will remain in the normal operating mode.

Note: apply the plate with the device powered is equivalent to hold the finger on the sensitive area. The LED L1 will remain for 3 minutes at high intensity after which the device will run a recalibration of the area A1 marked by a beep and after the L1 will return to low intensity and the device will operate again in normal mode.

It is hence suggested to apply the plate before powering the device.

INSTALLATION

The commutator must be installed on the back of the finishing plates, in rectangular or square boxes or round boxes Ø 60mm

WEATHER CONDITIONS

Temperature and relative humidity of reference: 25 °C Rel. H 65%
Operating environment temperature field: between -5 °C and +35 °C
Maximum relative humidity: 90% at 35 °C
Max altitude: 2000 m a.m.s.l.

NORM COMPLIANCE

CEI EN 60669-2-1

CONNECTION DIAGRAM (fig. 2)

The supply circuit (L-N) must be protected against overloads by a rapid fuse with high break power.

Figure 1

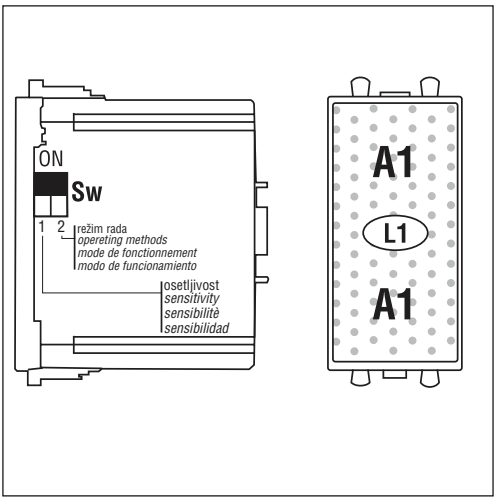
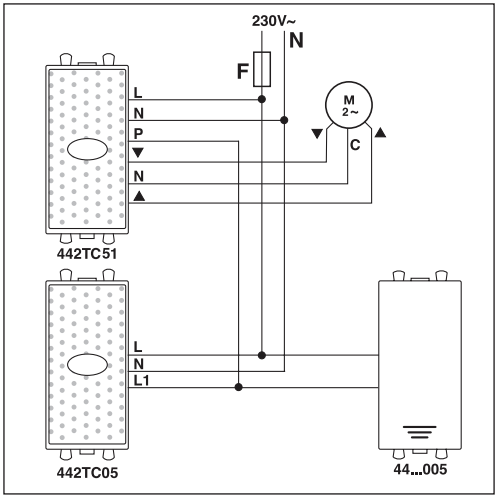


Figure 2



Legend
M: motor with integrated limit switch
F: fuse type F 2,5A H 250V~

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IMPORTANT NOTES:

• Products should be sold in their original packaging. Otherwise, the retailer and/or installer is obliged to follow, as well as to communicate to the user, the instructions for use which are supplied with the product and/or are published on the website www.ave.it as well as in the current product catalog.
• AVE products are installation products
• Products must be installed by trained professionals in compliance with the installation regulations
• Once the product is unpacked, make sure that the appliance is undamaged. Do not use the appliance if there is any doubt, but contact a qualified technician
• Even before unpacking, the appliance should be handled with care and stored in a dry place at temperatures between –5°C and +40°C
• Before carrying out any maintenance on the appliance, cut off the mains power
• Special attention should be paid to the preparation of the cable terminals to be inserted into the appliance terminals so as to maintain sufficient isolation distance between contacts
• When tightening the terminal screws, special care should be taken to avoid overheating which could start a fire or damage the cables.
• The product must be used in dry, dust-free areas
• Suitable products must be used in any other conditions
• There is a risk of electric shock or malfunction of the device if not handled properly.
• Install products and accessories according to the prescriptions in the catalogue and the instructions sheet and in compliance with specific standards and rules
• Warranty certificate for a specific product, which specifies the warranty period and conditions in accordance with local regulations, is issued by the seller at the moment of sale of product

The manufacturer's warranty: The 5 year warranty applies only to damaged or malfunctioning products caused by manufacturer's negligence, taking into account the rights and obligations prescribed by law (art. 1490, 1512 C.C., DL 24/2002, Directive 1999/44/CE, art. 1519 C.C.). The defect must be notified within 2 month from the date it was discovered. Five years are intended from the date of delivery of the product to the final customer.