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Product Data-sheet

AUTOMATION EXPANSION MODULE

ETH-I42TR

V. 03_21.01.20

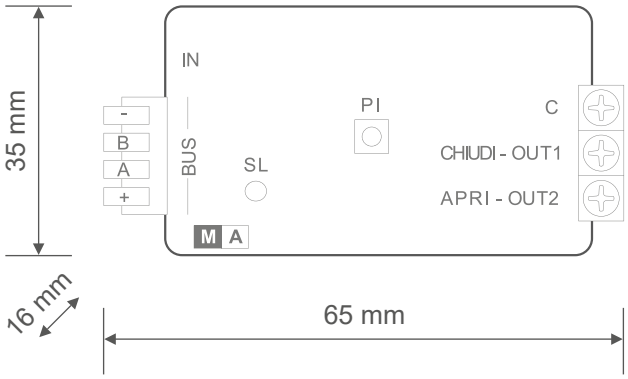
1. Description

ETH-I42TR is a compact module for installations in wall boxes or shutter cases which allow the control of up/down automations with internal limit switch.

4 Inputs (digital)
They allow acquiring and sending, through the BUS, digital ON-OFF signals (cleaned contacts, buttons, switches).

2 Triac outputs (digital)
The two outputs are with triac technology and allow closing the circuits powered with voltages of maximum 230V~. The outputs are "in exchange" interlocked and they can be used to drive the motors for automations (e.g. shutter up/down).

2. Dimensions



3. Technical specifications

- Voltage: 12V ⎓ ±15%
- Absorption: 40-60 mA
- Connections: removable screw terminals
- Operating temperature: from +5 to +50°C
- Protection class: IP20
- Configurable inputs:
  > Digital voltage 12V ⎓, Analog 0-5/0-10V ⎓
  > Impedance 12KΩ
- Outputs:
  > 2 outputs with triac technology only for 230V loads.
  1.5A ~ 300VA discontinuous loads (e.g. up/down) cosφ = (0.5/1)
- Dimensions: 35 x 16 x 65 mm (HxDxL)
- Weight: 38 gr.

4. Warnings

- The installation and maintenance must be performed only by qualified personnel.
- Before every maintenance operation and before accessing the internal parts of the unit, cut the power supply.
- Properly protect the outputs against overloads and shortcircuits.
- Check the absorption of the loads connected to the outputs within the limits indicated in section “tecnhincal specifications”.
- Separate the power circuit cables (category I circuits) from the signal circuit cables (category 0 circuits).
- In the case of installation of several modules in the same box, the controllable loads of each module must be reduced so that their sum does not exceed for each box the values reported in the chapter “technical specifications”.

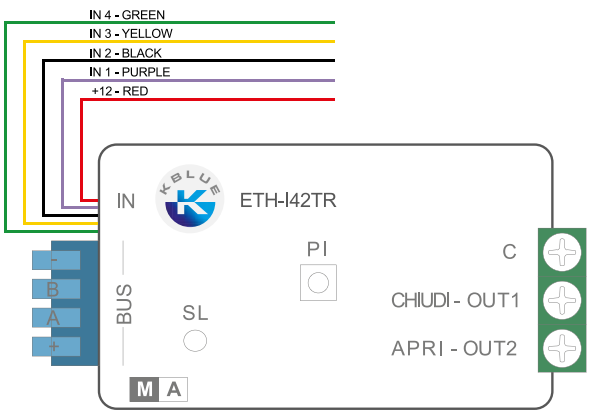
5. Module connection

BUS
Use 4 conductor signal cable (e.g. 2x0.75 + 2x0.22) to connect the device to the BUS.
In ideal conditions, the maximum lenght of the BUS is of 1 km. In case of power failures along the 12V⎓ line of the BUS, it is necessary to add an additional feeder.

INPUTS/OUTPUTS
For the connection of inputs, it is enough to use a cable with the section of 0.5 mm^2, while for the outputs, a cable proper to the load should be used (max. section 2.5 mm^2).
In case of routes higher than 5 m or in disturbed environments, use a screened cable for the connection of inputs, connecting the screen to the GND terminal from the module.
Do not exceed the 25 m distances between the cleaned control contact and the module input.

6. IN/OUT terminal details

The blue terminal is dedicated to the BUS2 connection.
The 3-pole green terminal is reserved for connecting the outputs.
The inputs signals must be connected to the conductors available following the colouring below:
IN1 (purple)
IN2 (black)
IN3 (yellow)
IN4 (green)
+12V⎓ (red)



7. Module configuration

In the front part of the module, there is an addressing button (PI). For information on the procedure, please refer to the installer manual of the programming software.
ETH-I42TR can be configured for a manual/automatic operation by means of the front selector.

ON - automatic

OFF - manual

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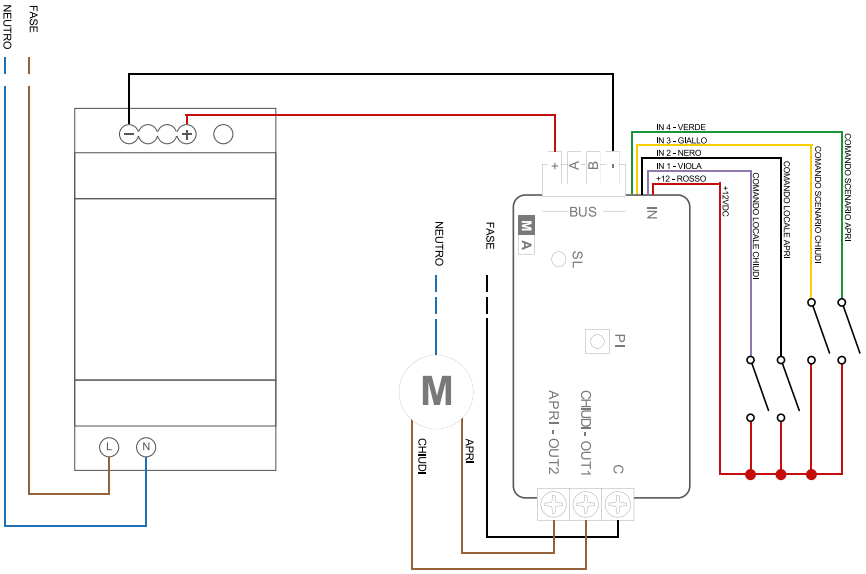
AUTOMATIC
The input functions are defined by the **ETHprog** programme.

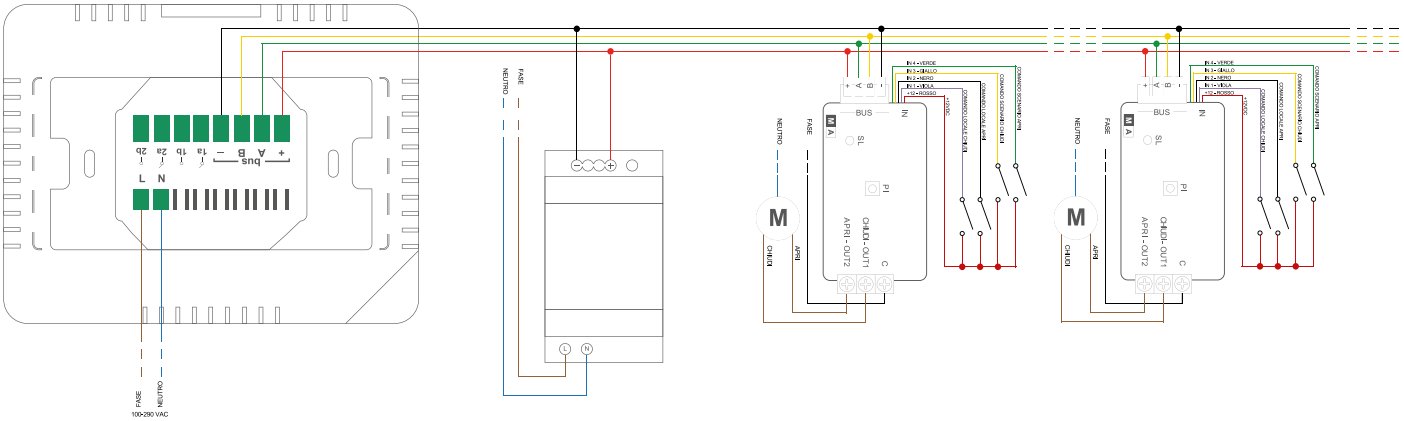
MANUAL
In this mode, the module contains inside the functions to manage the shutter with the following pre-programmed actions:

LOCAL CLOSING	OUT1 enabled from impulse IN1
LOCAL OPENING	OUT2 enabled from impulse IN2
LOCAL/BUS SCENARIO CLOSING	IN3
LOCAL/BUS SCENARIO OPENING	IN4
LOCAL STOP	IN1, IN2 (with an active output)
BUS SCENARIO STOP	IN3, IN4

The scenario controls can be enabled directly from the Kblue My Therm application.
In this mode the module can work autonomously, requiring only the connection of the power supply voltage; if you wish to connect several modules, in order to use the scenario functions, simply interconnect the various modules with the BUS cable, and therefore with signals 12V, GND, A and B.

8. Manual connection diagram





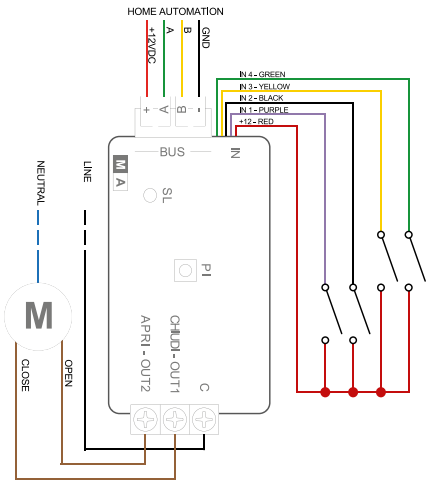
An example of a connection in manual mode of **ETH-I42TR** is shown in the figure.
In this mode, the scenarios can be controlled not only by the individual modules, but also by the WiFi programmable thermostat (**ETH-WI-THTERM-RR/RA**) and the Kblue MyTherm app.
The buttons connected to inputs 1 and 2 can be programmed for the local automation control while inputs 3 and 4 can manage scenario controls.
Shutter work time configuration (30 s by default)

1. Bring the shutter to the limit switch using the IN1 button.
2. Holding pressed the PI (Addressing button) for 2 s to access the time storage procedure.
3. Open the shutter pressing continuously on IN2. Upon the release of the control, the time used will be stored, which could range between 2s<T<180s.

Delay time configuration activated from BUS control (0s). Allow defining the delay to activate the scenario opening/closing control received from BUS.

4. Activate the time storage procedure as reported in the previous paragraph.
5. Hold IN3 pressed for a period of time equal to the time you want to store. If the hold is less than 1s, value 0 will be saved. The maximum value is equal to 30 s.

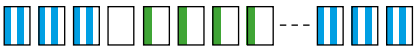
9. Automatic connection diagram



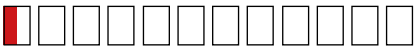
An exampleof an automatic connection of **ETH-I42TR** is shown in the figure.

10. LED indicators

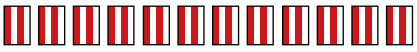
To reduce consumption during normal operation, the LEDs are off. In case of anomalies or pressure from the PI the indicators are activated for 5 minutes.
In the front part a multicolour LED (SL) is installed to indicate the various status listed below.



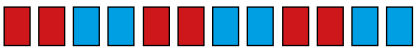
MANUAL ADDRESSING
Keep pressing the addressing button and power the device.
The process begins with a sequence of 1/4s blue flashes. Count the number of 1/4s green flashes and release the button when you reach a number equal to the address you want to set. The process is successful with a new sequence of 1/4 s blue flashes.



BOOT PHASE START UP
A single 1/s flash indicated the presence of correct firmware.



BOOT PHASE START UP
A fast 1/4s red flash indicates the presence of incorrest firmware.



BOOT PHASE START UP
Red and blue alternating flashing for 2s indicates no firmware present.

INTERNAL MEMORY ERROR
A blue/red flash of 1/2s indicates an error in the internal memory of the device.

Safety warning
The installation, commissioning and the regular maintenance of the product must be made by professionally qualified personnel, in compliance with national regulations and/or local requirements.
The qualified installer must take all necessary measures, including the use of personal protection equipment, in order to ensure his/her own protection and the protection of third parties.
The incorrect installation can cause damages to persons, animals or things for which Kblue s.r.l. cannot be held liable.

Packaging disposal
Cardboard boxes: selective collection of paper. Plastic and bubble-wrap bags: selective collection of plastic.

Product disposal
At the end of its lifespan, the product must be collected separately from other waste. However, the user should hand over the device, at the end of its lifespan, to proper selective electronic and electric waste collection centres or s/he should hand it over to the reseller upon the purchase of a new equivalent device, at a one to one ratio.
The abusive disposal of the product by the user entails the application of sanctions pursuant to the Legislative decree 152/2006.

Other information
For further information, please refer to the website www.kblue.it or contact the technical service: +39 0445 315055 int. 2 | assistenza@kblue.it
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