**ROLLER BLIND CONTROLLER**

**STR-3D**

**PURPOSE**

STR-3D controller is designed to control roller blinds (up-down) or other objects (e.g. gates) that are driven with single-phase alternating current electric motor with momentary switch (eg. bell).

**ACTION**

The controller can operate as a stand-alone device (for opening/closing of a single roller blind), but it is also possible to combine controllers into groups to control multiple roller blinds. Roller blind motor starts after momentary passing of the N signal to one of the control inputs. The motor activates for the user-programmed time that allows to fully lift or lower the roller blind. Controller power is indicated by the green U LED light. Motor operation and direction of rollers' movements is indicated by the corresponding red or green LED. Roller blind can be stopped on the user-selected level (incomplete opening or closing of the roller blind).

**CONTROL**

Controller control inputs are divided into two groups: local control and central control.

**Local control**

Depending on how you connect the controller, it can operate in one or two local keys mode.

**TWO LOCAL KEYS**

Each direction of movement has its own local key. Short press (<0.5 sec) switches on the roller blind to move in a given direction for as long as the key is pressed (this allows for example to adjust the tilt of slats).

**ONE LOCAL KEY**

Local control input Down is connected permanently to the N line. Local control input Up is connected to a key that alternately switches the roller blind to move up or down. Short press (<0.5 sec) switches on the blind for a programmed time. Pressing the key when the roller blind is already in motion causes the roller blind to stop. Long press (>0.5 sec) switches on the roller blind to move in a given direction for as long as the key is pressed (this allows for example to adjust the tilt of slats).

**Note!**

Memory of direction applies both to local and central control. For example, if the controller carries out a Central – Up command, then the next press of a local key will move the roller blind down.

**Central control**

The controller always works with two central control inputs. Central control allows the roller blinds to move only in the desired direction. Roller blind will stop only after a preset time or by pressing any of the local control keys. If during the execution of one center control command another one is issued with the instruction to move in the opposite direction, the roller blind will stop at first and after 1.5 sec will then start to move in the opposite direction. Time of roller blind activation can be randomly delayed in the central controller (up to 1 sec) to minimize the current surge in the grid in case of simultaneous activation of multiple controllers.

**Note!**

Central key - Down can also close and lock the roller blind in the closed position. If the Central key - Down key is pressed and left in the ON position, the controller will close the roller blind and will not allow for its opening until the Central key - Down is released (other inputs will then be locked). This function allows you to lock the roller blinds e.g. when the alarm is armed or when the rainfall (if the additional STR-R rain sensor is used) or too strong wind (if the additional STR-W wind sensor is used) is detected.

**INSTALLATION**

1. Disconnect the power supply.
2. Mount the controller on the rail in the distribution box.
3. Connect the controller accordingly to the selected scheme of operation.

**Note!**

The controllers can be powered from any phase of the mains (also in the case of a multiple controllers operating under common central control). It is important to retain a common N line and to control inputs by the level of the neutral N line.

**Test run**

1. Place the blind in the outmost top or bottom position.
2. Press and hold (for approx. 4 sec) the PROG key until the green U LED begins to flash slowly. The controller is now ready for programming.
3. Short press the local control Up or Down key (in the opposite direction to the current position of the roller blind). The controller starts the motor and begins to measure out the time.
4. After the time has been measured out, press any of the local control keys. The roller blind motor will stop and the controller will save the elapsed time in non-volatile memory and then exit the programming mode.

**Note!**

1. If during the first 30 seconds of the learning mode (slow flashing of U LED) the time measuring will not start (the PROG key is pressed or the roller blind is activated from the local control input), the controller will exit the learning mode.
2. The controller is designed to measure time span shorter than 15 min. Attempting to set the controller for longer span will result in exit from the learning mode.
3. The controller learning mode can be started only when the roller blind motor is turned off.

**SCHEDULING TIME OF ACTIVATION**

Time of activation can be programmed upon the assumed time of roller blind operation or by activating the roller blind for the test run.

**Scheduling for the specified time**

1. Press and hold (for approx. 4 sec) the PROG key until the green U LED will begin to flash slowly. The controller is now ready for programming.
2. Short press PROG key - the controller starts to measure out the activation time, which is indicated by rapid flashing of U LED.
3. After the time has been measured out, press the PROG key again. The controller will save the elapsed time in non-volatile memory and then exit the programming mode, which is indicated by the constant U LED light.

**TECHNICAL DATA**

- **Power input**
  - 100-265V/50-60Hz
- **Contact**
  - 8A/250V (AC-1)
- **Power consumption**
  - standby 0.15W
  - on 0.6W
- **Control**
  - N line neutral level
  - activation time (programmed) from 1 sec to 15 min.
  - working temperature (without vapor condensation) -15÷50°C
- **Indicators**
  - green LED
  - operation and movement direction
  - 2 red LED
  - terminal 2.5mm² screw terminals
  - tightening torque 0.4Nm
  - dimensions 1 module (18mm)
  - mounting on TH-35 rail
  - protection level IP20

**DESCRIPTION OF INPUTS/OUTPUTS**

- **N**
- **Up**
- **Down**
- **U**
- **N**
- **L**
- **3**
- **1**
- **4**
- **6**
- **11**
- **N**
- **7**
- **9**
- **10**
- **12**
- **D**
- **180922**
Example of wiring -- two local key mode

Example of wiring -- one local key mode

Example of group control

Example of extended control divided into additional groups of roller blinds