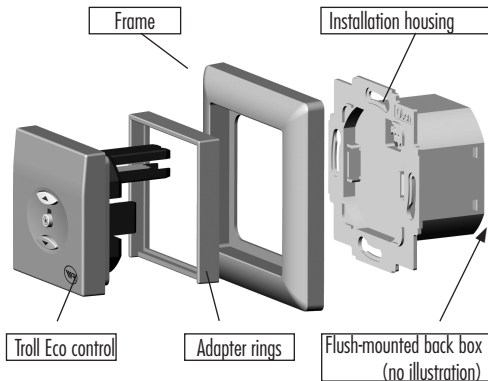


6.3 Installation configuration



6.4 Light sensor connection

The light sensor plugs in on the bottom part of the operating unit.



6.5 Correct position of the light sensor

Secure the light sensor to the window pane using the suction cup. Select the position of light sensor, as the position to which your roller shutter should be lowered if the limiting value (too much sun) is reached.

NOTE

Avoid damaging the light sensor or the sensor cable.

- ◆ Release the light sensor from the window by pulling the suction cup pulling grip and never the sensor lead.
- ◆ Do not severely bend or kink the sensor cable.

7. Setting the sun sensitivity

Set the limiting brightness value at which your roller shutter should be lowered.

Importing the current brightness value as the limiting value:

1. **4 s press**
The sun LED switches on to confirm successful import.

NOTE If the current brightness value is outside the measuring range, the sun LED flashes quickly and the limiting value is automatically adjusted to the measuring range limit.

Note the sun LED meanings:

- LED OFF = Automatic solar function OFF
- LED ON = Automatic solar function ON
- LED flashes slowly = the automatic solar function is active.
- LED flashes quickly = when setting the sensitivity, the brightness falls outside the measurement range.

Switching the automatic solar function on/off:

1. **Switch the automatic solar function on/off**

8. Manual control

1. **manual UP and STOP**
2. **manual DOWN and STOP**

8.1 Remote control with external pushbuttons

It is possible to operate the Troll with an external pushbutton or another control unit.

Press external (▲) UP button the roller shutter moves upwards
touch the External (▲) UP key the roller shutter stops

or

Press external (▼) DOWN key direction of rotation changes

The same applies to the DOWN (▼) direction.

NOTE

If necessary, you can connect several Trolls in parallel to a manual pushbutton control and use it to operate them. To do this, the tubular motors are synchronized using internal switching logic upon every switching process.

9. Dismounting



There is a risk of fatal electric shocks.

Observe the safety instructions as previously described under electrical connection.

1. **Switch off the mains (at the fuse box or consumer unit).**
2. **Pull the Troll Eco operating unit out of the installation housing.**
3. **Unscrew the installation housing from the flush-mounted back box and pull out carefully.**
4. **Disconnect the Troll Eco.**
5. **Re-close the back box and secure the connecting cable against unintentional contact.**

10. Technical specifications

Nominal voltage:	230 V / 50 Hz
Switching capacity:	8 (4) A
Protection class:	II
Standby consumption:	< 0.5 w
Extension inputs:	2
Extension input switching voltage:	230 V / 50 Hz / 1 mA
Cable size:	3 x 1.5 mm ²
Sensitivity to sunlight:	2000 - 20000 Lux
Mounting type:	Flush mounting
Dimensions:	
- 2606-UW/-AL	55 x 55 x 12.8 mm
- 2607-UW/-AL	50 x 50 x 15.2 mm
Installation depth:	34 mm
Permissible ambient temperature:	0 to 40 °C

Installation and operating instructions

Troll Eco incl. Light Sensor

Item numbers: 2606-UW / 2606-AL / 2607-UW / 2607-AL
Item numbers as of 2012:
3155 09 12 / 3155 09 22 / 3150 09 12 / 3150 09 22



VBD 573-1-EN (01.12)

Warranty conditions

RADEMACHER Geräte-Elektronik GmbH provides a 24-month warranty for new systems that have been installed in compliance with the installation instructions. All construction faults, material defects and manufacturing defects are covered by the warranty.

The following are not covered by the warranty:

- ◆ Incorrect fitting or installation
- ◆ Non-observance of the installation and operating instructions
- ◆ Improper operation or wear and tear
- ◆ External influences, such as impacts, knocks or weathering
- ◆ Repairs and modifications by third party, unauthorised persons
- ◆ Use of unsuitable accessories
- ◆ Damage caused by unacceptable excess voltage (e.g. stroke of lightning)
- ◆ Operational malfunctions caused by radio frequency overlaps and other such radio interference

RADEMACHER shall remedy any defects, which occur within the warranty period free of charge either by repair or by replacement of the affected parts or by supply of a new replacement unit or one to the same value. There is no general extension of the original warranty period by delivery of a replacement or by repair as per the terms of the warranty.

RADEMACHER

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Telefax +49 2872 933-253
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* 14 ct/minute on a German landline operated by DT AG/
Mobile charges max. cents/minute (Germany only)

1. General safety instructions



The use of defective equipment can lead to personal injury and damage to property (electric shocks, short circuiting).

- ◆ Never use defective or damaged equipment. Please contact our Customer Service department in the event of faults.

2. Correct usage

You must only use the Troll Eco...

...for connection and control of a tubular motor for roller shutters and blinds. The flush-mounted installation can be made directly alongside the tubular motor box.

Operating conditions

- ◆ Only use the Troll Eco in dry rooms.
- ◆ A 230V/50 Hz power supply, together with a site-provided isolating device (fuse, MCB), must be available at the installation location.
- ◆ The roller shutters or blinds must be smooth running and should not stick.

Adjusting the end stops

Prior to commissioning, the two end stops of your tubular motor must be correctly set.

3. Incorrect use

IMPORTANT

Do not install the Troll Eco inside the roller shutter box or outside.

- ◆ Constructional changes to the Troll Eco are not allowed.
- ◆ Use for purposes other than those previously mentioned and the connection of other consumers is not permitted.

4. Functional description

The Troll Eco is a straightforward tubular motor control with integrated automatic solar function. It can replace existing roller shutter switches and be fitted in conventional switch boxes. The tubular motor electrical connection takes place directly at the Troll. In addition, the device is equipped with an extension input for connection of a central controller, e. g. Troll Comfort or an external pushbutton.

Similarly parallel connection of several Trolls is possible.

4. Functional description

Troll Eco operating modes

◆ Manual control

- using the operating keys
- using an external pushbutton

◆ Automatic operation

- automatic solar function
- external central control (e. g. using Troll Comfort)

Manual control

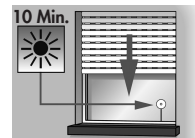
You can open/close and then once more stop the roller shutter using the (▲) UP - and (▼) DOWN buttons.

Automatic solar function

Used in conjunction with the light sensor, the automatic solar function provides you with light-dependent control. To do this, the light sensor is secured to the window pane and then plugged into the Troll.

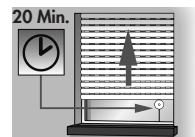
The automatic solar function makes possible automatic moving up and down of the roller shutter once a limiting value is exceeded. The roller shutter end position can be freely selected by changing the light sensor position.

4. Functional description



Automatic lowering

Once the daylight exceeds the limiting value, the shutter blind is lowered, after approximately 10 minutes, as far as the light sensor.



Automatic clearing

After approx. 20 minutes, the roller shutter is automatically raised a small amount to enable the sensor. If the sun continues to shine the roller shutter remains in this position. If the brightness decreases it returns to the upper end stop.

If the solar program is activated, it is interrupted by:

- ◆ manual control
- ◆ operation via the extension inputs, e. g. using an external manual pushbutton control

Afterwards, the sun program is once again ready for use.

5. Before installation

IMPORTANT



During both installation and dismantling of the Troll Eco there is a risk of fatal electric shocks.

Observe the safety instructions for electrical connection in section 8.

You will need the following tools:

- ◆ Crosshead screwdriver
- ◆ Wire cutters

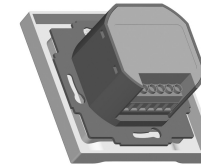
The Troll Eco is intended for flush mounting, You also require:

- ◆ 1 x 58 mm back box as per DIN 49073 (we recommend a deep box)
- ◆ 1 x frame, enclosed

IMPORTANT

Installation and electrical connection of the controller...

...may only be carried out with the enclosed installation housing. The connecting terminals are located on the bottom side of the installation housing.



6. Installation and electrical connection



Safety instructions

There is a risk of fatal electric shocks.

- ◆ The electrical connection and all work on electrical systems must only be carried out by a qualified electrician in accordance with the connection instructions in these operating instructions.
- ◆ Carry out all installation and connection work only in an isolated, zero-volts state.
- ◆ Disconnect all phases of the mains power supply cable and secure it to prevent any reconnection.
- ◆ Check the system for a zero-voltage status.
- ◆ Prior to connecting, compare the information about voltage/frequency on the device with those of the local electrical grid operator.



Incorrect wiring may lead to short-circuits and destruction of the device.

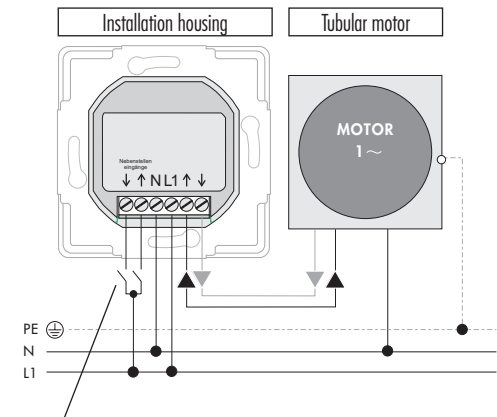
- ◆ Observe the sequence of connector pin assignments in the wiring diagram.
- ◆ Observe all the electrical connection specifications in the operating instructions of your tubular motor.



6.1 Installation procedure

1. Switch off the mains (at the fuse box or consumer unit).
2. Route the power cable to the switch box.
3. Make the electrical connection according to the wiring diagram (see section 6.2).
4. Insert the installation housing in the box and screw in place.
5. Push the frame and operating unit on to the installation housing (see figure, section 6.3).
6. Reconnect the mains power.
7. Carry out rotation direction test.
Change over the two motor connections for UP and DOWN if the rotation direction is incorrect.

6.2 Wiring diagram



Extension inputs

External pushbutton control or external control unit.



Risk of fatal electric shock.

There is a 230 V/50 Hz mains voltage supply at the extension inputs and **not** a low safety voltage. Use only mains voltage rated pushbuttons and wiring.