



Original instructions EN

# Installation and operating instructions for actuators of type: YYGL

Models: YYGL35REX-10/17, YYGL35REX-13/14, YYGL45REX-20/15



The REX drive is an InelSmart system device. The drive can operate in 4 modes: external roller shutter (default), internal roller shutter, ZIP screen, blind. The operating modes can be set with the TSTX remote control or in the InelSmart app. The unit is equipped with a radio receiver with return channel. The information sent via the return channel allows full control of the device. The radio link operates at 868.30 MHz.

The drive is manufactured in three versions:

- YYGL35REX-10/17 (N-10REX)
- YYGL35REX-13/14 (N-13REX)
- YYGL45REX-20/15 (N-20REX)



## 1. Safety instructions

### 1.1 Basic guidelines

The drive with overload function is handed over in a condition for safe installation and operation, provided that all instructions in the operating manual and the valid safety and accident prevention regulations are observed.

Only qualified and authorised persons should work on the installation and repair of electrical equipment.

Alterations or modifications to the drive are not permitted. Warranty repairs may only be carried out by the manufacturer. Only original spare parts and accessories are to be used for post-warranty repairs. The operational safety of the delivered drive is only guaranteed when used in accordance with the manufacturer's specifications. The limit values specified in the technical data may not be exceeded under any circumstances.

### 1.2 Supplementary safety provisions

When installing, commissioning, maintaining the drive, observe important regulations for safety and accident prevention. The following regulations require special attention:

- Fire regulations.
- Accident prevention regulations.

### 1.3 General comments on hazards and safety measures

The specified notes are general guidelines when using INEL devices in combination with other devices. These indications must be strictly adhered to when installing and operating the devices.



**CAUTION** Warning of possible damage to the drive, roller shutter, roller shutter box, façade, etc. if the appropriate precautions are not taken:



**Danger** - means that there is a risk to the life and health of the user if appropriate precautions are not taken:

Before installing the actuator and setting the end positions, check the fixing of all screw connections.

- Before switching on, it is necessary to check that the permissible device voltage is compatible with the local supply voltage.
- The applicable safety and accident prevention regulations must be observed.
- A circuit breaker that allows safe disconnection of the power supply (e.g. a fuse disconnecter) should be used, installed so that all connections can be easily disconnected.
- Wires and cables should be checked regularly for insulation damage and conductor continuity.
- If the cables are found to be damaged, the damaged cables must be replaced after the power supply has been switched off immediately.

### 1.4 Warning

- Don't let children play with the controls.
- Keep remote control devices out of the reach of children.
- Watch the blind moving and keep people away until it is fully open or closed.
- Roller shutter users should be trained and instructed how to operate the roller shutter and the dangers associated with its use. People can be considered trained if the employer, administrator or owner has allowed them to operate the roller shutter and has instructed them on how to use it.

## 2. Assembly instructions

### 2.1 Safety rules

- Installation of the drive must only be carried out by suitably qualified persons.
- The weight of the roller shutter must not exceed the load capacity of the drive as indicated in the selection table (at the end of these instructions).
- The proper way of laying the cable (loop facing downwards) further protects the drive from possible water damage.
- Do not drill holes in the motor housing.
- Protect the motor from contact with any fluid.
- Avoid crushing, hitting the motor and protect the motor from falling.

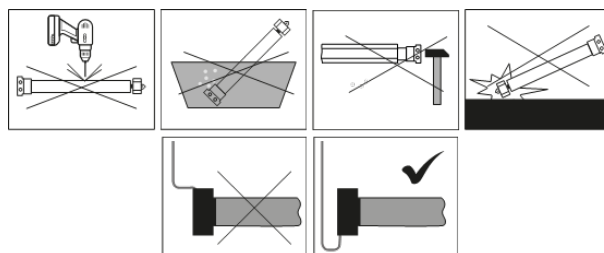


Figure 1

## 2.2 Assembly of the drive

- Attach the mounting bracket (A) to the side of the roller shutter box, connect the adapter (D) to the motor drive ring.
- Place the take-up (E) on the motor axis and secure it with the pin (F), then slide the entire drive into the winding tube (G).
- Connect the winding tube and the drive carrier with screws or rivets (H)

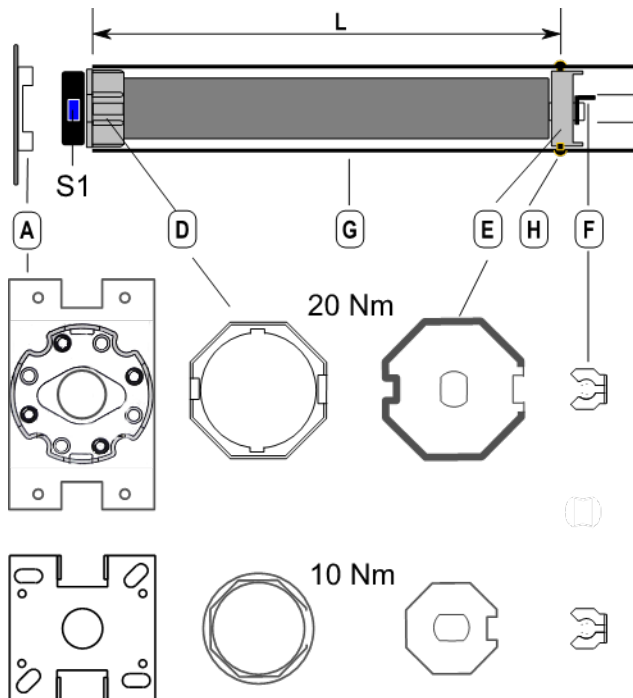


Figure 2

**ATTENTION** The motor is equipped with an internal thermal switch that allows the roller shutter to operate continuously for approximately 4 minutes. After this time, the temperature inside the motor exceeds the permissible value, which causes the power supply to be cut off. Re-operation of the roller shutter is possible after the motor has cooled down (this takes several to several minutes).

## 2.3 Electrical connection



**MAKE ALL CONNECTIONS ONLY WHEN THE SUPPLY VOLTAGE IS SWITCHED OFF!**



**Poor installation of the roller shutter causes unwanted motor stops.**

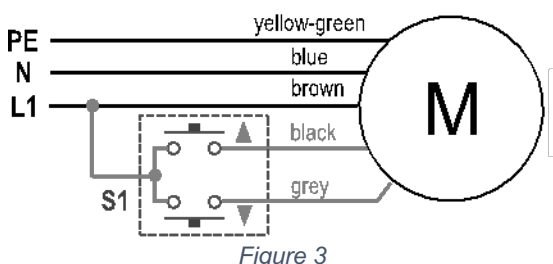


Figure 3

The use of the S1 button is optional. This button allows you to manually control the movement of the roller shutter directly up and down. Pressing and releasing the "up" button will raise the roller shutter and it will stop when the "up" or "down" button is pressed and released.

We recommend the use of a pushbutton with no hold (such a pushbutton returns to its rest position when the pressure is released) In this version of the actuator, the L1 phase must be connected to the S1 button. When the S1 pushbutton will not be used, the black and grey wires should be insulated and left unconnected or connected to the neutral N wire.

## 3. Start-up and configuration of the drive in the InelSmart system

To start up and configure the drive, follow the steps listed below in sequence.

- Power up the actuator and add this device to the InelSmart system.  
The registration of the actuator into the system, its configuration and how to control it is described in the manuals of: the PIL-99TSTX, PIL-01DLX, PIL-05DLX remote controls and the InelSmart control panel.  
If the device is not detected during the automatic search, press button S1 on the motor head for approx. 1 second (see Fig. 2).
- Select the drive mode: external blind (default), internal blind, ZIP screen, blind.
- Check the direction of movement of the roller shutter and if it is opposite to the directions on the remote control, change it (see point 4)
- Set the end positions (see section 5).

## 4. Reversal of traffic direction

If it is necessary to change the direction of movement of the roller shutter (the movement of the roller shutter is opposite to the directions on the remote control)

- Change direction on the PIL-99TSTX remote control or in the InelSmart app from the motor settings.

OR

- On the PIL-01DLX or PIL-05DLX remote control, press the ▲ and ▼ keys simultaneously, the motor will make a short up-down movement, then press STOP. The motor will make a short up-down movement. This operation must be performed 2 times.

**NOTE** When the direction of movement is changed, the end positions will be erased if they were previously set

## 5. Setting the end positions

### 5.1 Setting the end positions using the TSTX remote control or in the InelSmart app

The procedure for setting the end positions is started in the REX motor settings with its operating mode selected. Follow the messages displayed on the screen.

For the external roller shutter, you can select the automatic or manual procedure, for the other modes only the manual procedure

The programming procedure can only be carried out automatically if hanger locks and stoppers are used in the bottom rail. The stoppers should be placed as close as possible to the guides to improve comfort. A sill must be fitted in the window and the length of the sill should be matched to the length of the guides.

**Before activating/programming the drive, check the condition of the armouring, guides, roller shutter box and whether a window sill is fitted the window sill is installed!**

The roller shutter box and the guides should be free of dirt and ensure free movement of the roller shutter armour along its entire length. Dirt from building materials or guides that are too tight can cause damage to the drive and roller shutter, which is not covered by the guarantee.

#### NOTE

When the upper end position is set in automatic (overload) mode, the stoppers exert pressure on the roller shutter box causing a rather loud noise. These effects can be minimised by mounting the stoppers as close to the roller shutter guides as possible. However, if the noise is still unacceptable then the automatic mode should be abandoned and the upper end position programmed in manual mode.

#### Hanger-block installation instructions

The length of the hanger and the roller blind must be selected so that the hanger presses the first lamella of the armour down the guide. Choose the hanger length according to the hanger manufacturer's recommendations.



## 5.2 Setting the end positions using the remote control PIL-01DLX or PIL-05DLX

With the PIL-01DLX or PIL-05DLX remote control, the end positions for all REX drive modes can only be set by manual procedure.

#### NOTE

Always start the programming procedure by setting the upper end position.

If the end positions are set in the reverse order, the motor control may be blocked. To solve the problem, restore the factory settings (see section 6) and then carry out the programming procedure again.

#### UPPER END POSITION

##### Upper end position at the desired point

- Press and release the ▲ button on the remote control.
- Press the STOP button of the remote control at the desired upper end position. Using the remote control's louvre mode, this position can be corrected.
- To confirm the upper end position, press the STOP key on the remote control. The roller shutter will confirm the stored upper end position by making two sequences of short down - up movements.
- At this point, proceed to programming the lower end position.

#### LOWER END POSITION

##### Lower end position at the desired point:

- Press and release the ▼ button on the remote control.
- Press the STOP button at the desired lower end position. Using the louvre mode of the remote control, this position can be corrected.
- To confirm the lower end position, press the STOP key on the remote control. The roller shutter will confirm the saving of this position by making three sequences of short up-down movements.
- Press and release the key ▲ of the remote control, the roller shutter will start moving to the upper end position, where it will confirm the end of programming

## 6. Return to factory mode

Reset the drive to factory mode by pressing and holding the S1 button on the head for 6 seconds. All settings will be erased, including registered remote controls and end positions.

## 7. Drive mode operation

### External roller shutter

Obstacle detection only works during downward movement. During upward movement, the drive stops when reduced speed is detected. If the roller shutter stops unexpectedly (due to an obstacle), the drive will move in the opposite direction to the previous roller shutter movement.

In order to remove the armour's tension while allowing the obstacle to be removed.

Stopping the motor half a turn before the top stop blocks upward movement. To unlock the possibility of movement, drive downwards at least half a turn.

Stopping the motor half a turn before the lower end position blocks downward movement. To unlock the possibility of movement, drive upwards at least half a turn.

### Zip roller blind

Obstacle detection only works during downward movement. During upward movement, the drive stops when reduced speed is detected. In the event of unexpected stopping of the roller shutter (due to an obstacle), the drive will make a 3-fold attempt to overcome the obstacle (withdrawal and downward movement again). In case of failure, the motor will perform a return movement to the upper end position.

In the upper end position, the motor will stop when an overload is detected and perform a short reversal to loosen the material.

Stopping the motor half a turn before the top stop blocks upward movement. To unlock the possibility of movement, drive downwards at least half a turn.

Stopping the motor half a turn before the lower end position blocks downward movement. To unlock the possibility of movement, drive upwards at least half a turn.

### Internal roller blind

The motor responds to overload in both directions, obstacle detection is disabled.

In the upper end position, the motor will stop when an overload is detected and perform a short reversal to loosen the material.

Stopping the motor half a turn before the top stop blocks upward movement. To unlock the possibility of movement, drive downwards at least half a turn.

Stopping the motor half a turn before the lower end position blocks downward movement. To unlock the possibility of movement, drive upwards at least half a turn.

### Blind

The motor responds to overload in both directions, obstacle detection is disabled.

Only in this mode can the motor move towards the end position from the end zone. This allows the fins to rotate at the end position.

## 8. Problem solving

**Problem:** Motor does not respond to commands

**Cause:** Thermal protection has tripped.

**Solution:** Wait 10 to 20 minutes.

**Problem:** The motor rotates in a direction that is not in line with the commands from the remote control.

**Cause:** Motor mounted backwards.

**Solution:** Reverse the direction of movement of the motor using the remote control PIL-99TSTX / PIL-01DLX / PIL-05DLX / InelSmart app.

**Problem:** Spontaneous motor stop.

**Cause:** Locking of the armour in the guides.

**Solution:** Check the roller shutter guides and the slats of the armouring.

## 9. Technical data

	YYGL 35REX-10/17	YYGL 35REX-13/14	YYGL 45REX-20/15
<b>Power supply</b>	230 V 50Hz	230 V 50Hz	230 V 50Hz
<b>Torque</b>	10 Nm	13 Nm	20 Nm
<b>Power</b>	126 W	126 W	156 W
<b>Speed</b>	17 rpm.	14 rpm.	15 rpm.
<b>Degree of protection</b>	IP 44	IP 44	IP 44
<b>Continuous operating time</b>	4 min.	4 min.	4 min.
<b>Motor length</b>	555 mm	555 mm	530 mm
<b>Mass</b>	1.55 kg	1.55 kg	2.0 kg

## 10. Motor selection table

		Roller blind length [m]			
		1,5	2,0	2,5	3
Torque [Nm]	Winding tube diameter [mm]	Permissible weight of roller shutter for the above lengths [kg].			
10	Φ = 40	20	19	18	17
13	Φ = 40	28	26	24	22
20	Φ = 60	42	40	38	36

The above figures are estimates - they depend on many factors (correct installation, armour friction coefficient, weather conditions and others).

## 11. Handling of waste equipment



It is forbidden to place used equipment together with other waste. Dispose of in a specially designated place. The household plays an important role in the waste equipment recycling system. By properly separating waste, including waste equipment and batteries, households ensure that waste equipment does not end up in municipal waste but in a specially designated place and, after recycling, can be used as a raw material for reuse.



Przedsiębiorstwo Informatyczno-Elektroniczne INEL Sp. z o.o., ul. Mostowa 1, 80-778 Gdańsk, as manufacturer of the product, hereby declares that the drive described in this manual and used in the manner specified herein complies with the essential requirements of the relevant EU directives, in particular Directive 2006/42/EC and Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at [www.inel.gda.pl](http://www.inel.gda.pl).