

**TECH**  
CONTROLLERS  
**EU-G-X Wireless**  
**Electric Actuator**



# TECH CONTROLLERS EU-G-X Wireless Electric Actuator User Manual

[Home](#) » [TECH CONTROLLERS](#) » TECH CONTROLLERS EU-G-X Wireless Electric Actuator User Manual 

## Contents

- 1 [TECH CONTROLLERS EU-G-X Wireless Electric Actuator](#)
- 2 [Product Usage Instructions](#)
- 3 [DESCRIPTION](#)
- 4 [TECHNICAL DATA](#)
- 5 [INSTALLING THE CONTROLLER AND FIRST CALIBRATION](#)
- 6 [REGISTRATION](#)
- 7 [REPLACING THE BATTERY](#)
- 8 [ADDITIONAL FUNCTIONS](#)
- 9 [ALARMS](#)
- 10 [WARRANTY CARD](#)
- 11 [FAQ](#)
- 12 [Documents / Resources](#)
  - 12.1 [References](#)

**TECH**  
CONTROLLERS

## TECH CONTROLLERS EU-G-X Wireless Electric Actuator



## Specifications

- **Power supply:** A – 48.6 B – 82.7 C – 47.6 mm
- **Dimensions:** A – 48.6 B – 82.7 C – 47.6 mm

## **Product Usage Instructions**

### **Registration**

To register the actuator in a specific zone, follow these steps:

1. Select the option to register in the main controller (refer to its instruction manual).
2. Briefly press the communication button on the actuator.
3. Observe the indicator LED:
  - If the LED flashes red 2 times, the registration process was successful.
  - If the LED flashes red 1 time, press the registration button on the head again.
  - If the LED is lit red, an error occurred, and registration must be repeated.

### **Replacing the Battery**

To replace the battery, follow these steps:

1. Remove the cover of the actuator.
2. Remove the old batteries.
3. Press the communication button to release residual electricity.
4. Insert new batteries of the same brand.
5. The actuator will return to the assembly position. Calibrate or wait for 30 minutes.

### **Installing the Controller and First Calibration**

To install the actuator with a valve, follow these steps:

1. If using a Danfoss valve, use the appropriate adapter according to the diagram provided.
2. Follow the steps for replacing the battery if needed.
3. Calibrate or wait for 30 minutes after battery replacement.

## **SAFETY**

Before using the device for the first time the user should read the following regulations carefully. Not obeying the rules included in this manual may lead to personal injuries or controller damage. The user's manual should be stored in a safe place for further reference. In order to avoid accidents and errors it should be ensured that every person using the device has familiarized themselves with the principle of operation as well as security functions of the controller. If the device is to be sold or put in a different place, make sure that the user's manual is there with the device so that any potential user has access to essential information about the device.

The manufacturer does not accept responsibility for any injuries or damage resulting from negligence; therefore, users are obliged to take the necessary safety measures listed in this manual to protect their lives and property.



- Installation should be carried out by a person holding appropriate electrical qualifications.
- The device is not intended for use by children.
- The actuator may not be used contrary to its intended purpose.

We are committed to protecting the environment. Manufacturing electronic devices imposes an obligation of providing for environmentally safe disposal of used electronic components and devices. Hence, we have been entered into a register kept by the Inspection For Environmental Protection. The crossed-out bin symbol on a product means that the product may not be disposed of to household waste containers. Recycling of wastes helps to protect the environment. The user is obliged to transfer their used equipment to a collection point where all electric and electronic components.



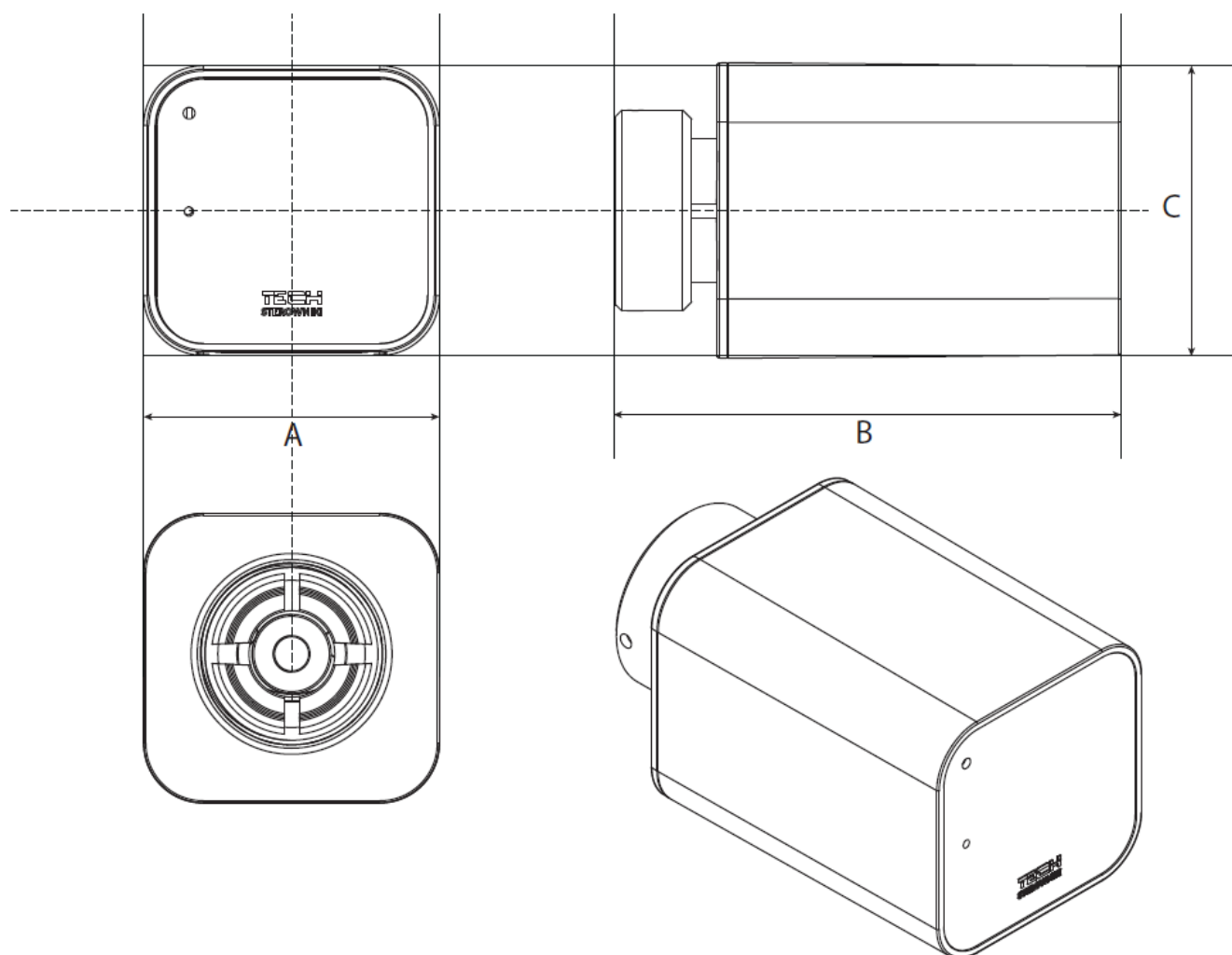
The pictures and diagrams are for illustration purposes only. The manufacturer reserves the right to introduce some changes.

## DESCRIPTION

The EU-G-X device is a modern wireless thermostatic actuator designed for installation on radiator valves. It allows for convenient and effective temperature control in individual heating zones within the building. The actuator control system allows for optimal thermal comfort and promotes significant energy savings. This type of actuator can operate with both heating and cooling systems. The device is compatible with controllers equipped with wireless communication, e.g. Sinum, EU-L-4 WiFi, EU-L-8e, EU-L-9r, EU-WiFi 8s, etc. control units.

## TECHNICAL DATA

Power supply	2xAA 1.5V batteries – Alkaline
Operating frequency	868MHz
Locking ring	M30x1,5
Dimensions	A – 48,6    B – 82,7    C – 47,6 mm



## INSTALLING THE CONTROLLER AND FIRST CALIBRATION

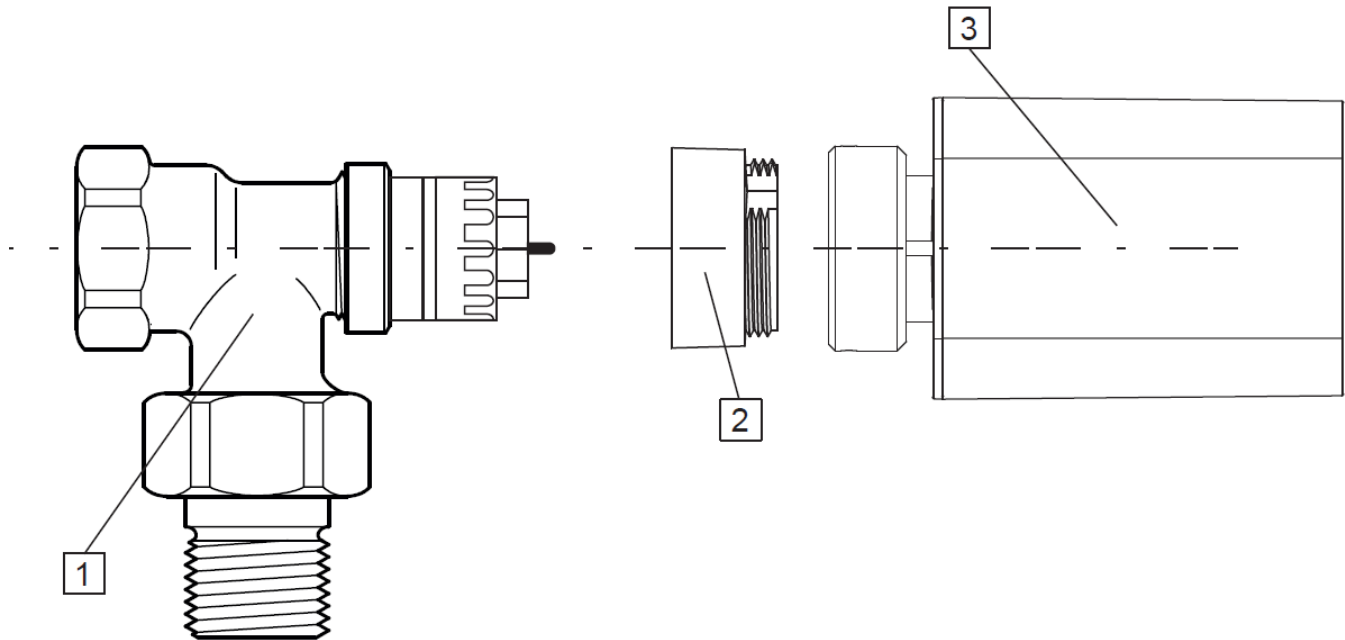
Follow these steps while installing the device:

1. Before starting the device – check that the radiator valve is not damaged (stuck, etc.). Use a hard tool to push the valve plunger at the radiator several times. If it does not move – replace the valve. If it works – the device can be installed. If the valve is not checked before hand and it has failed to properly operate, the Tech Sterownik company will not guarantee the correct operation of the device.
2. Installing the battery and preparing for calibration – after inserting the battery, the actuator will start adopting the assembly position, which will facilitate screwing the device on the valve. Once the actuator is in the assembly position, it will keep this for 30 minutes. After this time, the calibration will start automatically.
3. Screwing the actuator onto the radiator valve and calibration – after screwing the actuator onto the valve, to start manual calibration, hold the communication button with the included instrument for 3 flashes of

the LED.

The LED flashes 2 times – the calibration process was carried out correctly.

The actuator can be mounted with any valve. If installed with a Danfoss valve, use the appropriate adapter according to the diagram below.



1. Danfoss RA-N or RTD-N valve
2. Danfoss RA-N or RTD-N adapter
3. EU-G-X actuator

## REGISTRATION

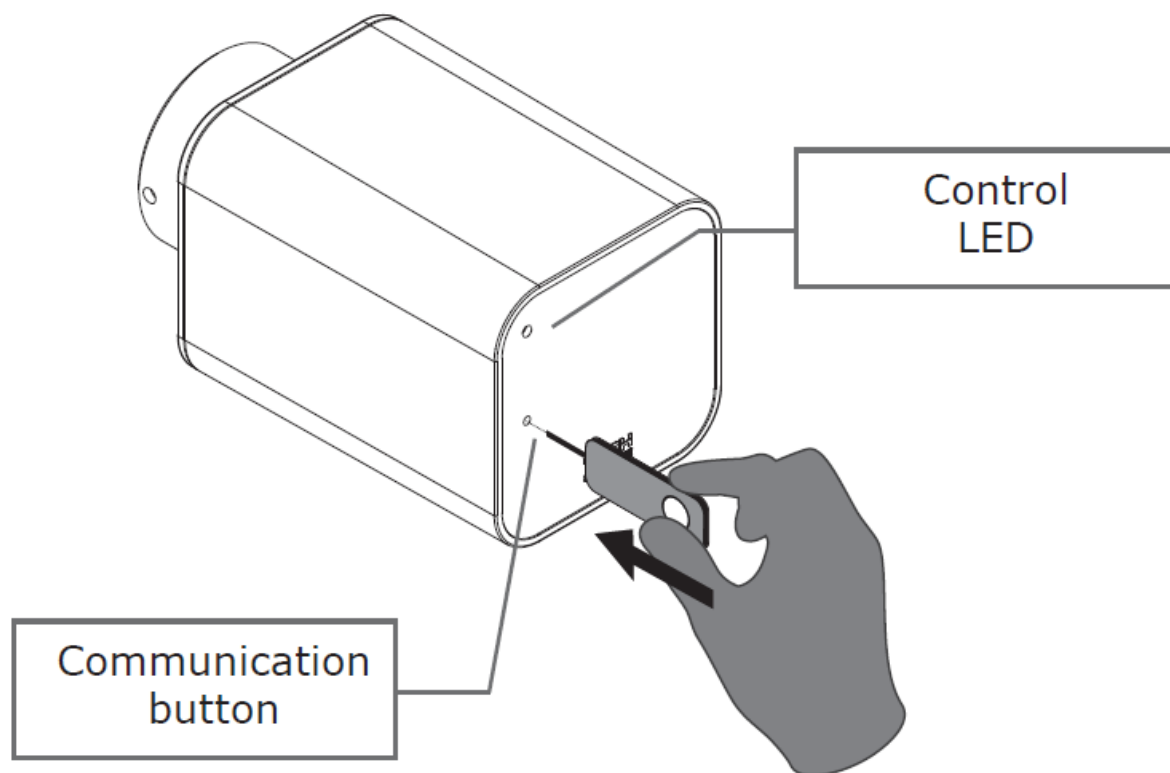
To register the actuator in a specific zone, select the option to register in the main controller (please refer to its instruction manual), and then briefly press the communication button.

After releasing the button, observe the indicator LED:

- if the LED flashes red 2 times – the registration process was carried out correctly
- if the LED flashes red 1 time – press the registration button on the head again
- if the LED is lit red – registration error – the registration must be repeated

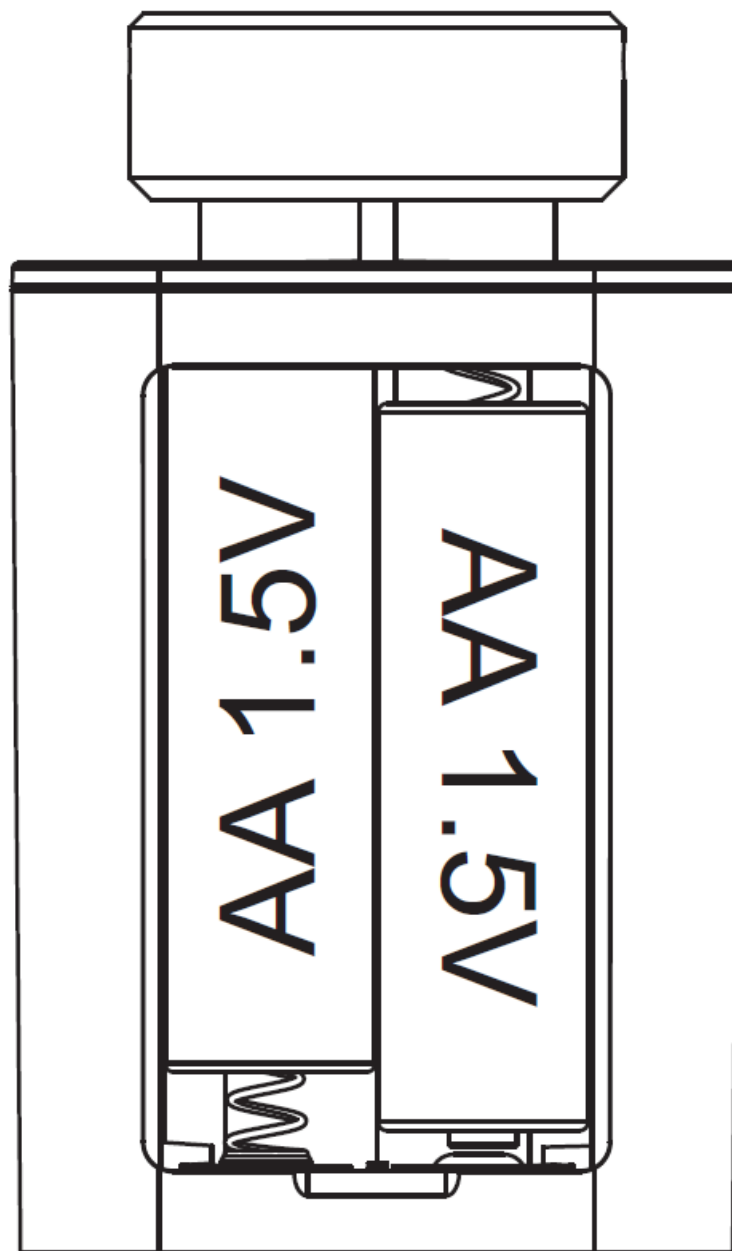


Registration is possible while in the mounting position before installing the valve or after calibrating the actuator on the valve.



Use the tool included in the kit to register.

## REPLACING THE BATTERY



1. Remove the cover
2. Remove the batteries
3. Press the communication button in order to release the residual electricity
4. Insert new batteries
5. The actuator will return to the assembly position. Subsequently, calibrate or wait 30 minutes (See: Installing the Controller and Calibrating items 2 and 3).



If the actuator indicates a battery level of 0 or 1% in the master controller (depending on the type of master controller), be prepared to replace the battery.

Always use two new batteries of the same brand. If two different batteries are installed or ones with different charge levels, the Tech Sterowniki company does not guarantee the correct operation of the actuator.

## ADDITIONAL FUNCTIONS

### Connectivity test

In order to check the connection with the main controller, press the communication button and hold it until the control light flashes twice. Release the button and observe the control light:

- if the LED flashes red 2 times – it indicates successful communication
- if the LED is lit red – there is no connection with the main controller.

Connectivity test enables the user to identify the controller and the zone in which a given actuator is registered. The main controller displays appropriate message.

### RECALIBRATION

- It is possible to manually initiate recalibration. To do this, hold the communication button for 3 flashes of the LED. During this calibration, the actuator will not stop in the mounting position – the actuator therefore must be mounted on the radiator valve.

### CORRECTIVE CALIBRATION

- In the event of an error at the actuator, it enters the corrective calibration. The actuator may perform 3 such tests. After successful calibration, this error will disappear.
- The calibration can be interrupted by holding the registration button down for 3 subsequent LED flashes. The exit from the corrective calibration will be then signalled by a longer LED flash. After this, manual calibration can be called up.
- If the corrective calibration does not remove the error, attempt should be made to perform it manually (Recalibration) by holding the registration button down for 3 subsequent LED flashes or by removing the batteries. After removing the batteries and holding the registration button, the actuator will return to its factory setting.



If the errors persist, try replacing the batteries with new ones, as they can already be discharged. See: Replacing the battery.

### ALARMS

Errors in the operation of the EU-G-X actuator will be displayed on the main controller.

Error	Description	Possible causes
-------	-------------	-----------------



After the correct first calibration of the head on the valve, any subsequent error during normal operation (except for error #4) can be corrected by corrective calibration (please refer to the section Additional functions – Corrective calibration).

Please wait 30 min. first, as the error may disappear during this time, and the actuator will resume correct operation.

<b>#1</b>	<p>Calibration error 1</p> <p>Bolt retraction to mounting position took too long.</p>	<p>Locked/damaged actuator piston. Check the assembly and recalibrate the actuator.</p>
<b>#2</b>	<p>Calibration error 2</p> <p>Bolt maximally extended as it did not meet any resistance during extension.</p>	<ul style="list-style-type: none"> <li>• actuator was not screwed properly onto the valve</li> <li>• the actuator was not fully tightened onto the valve</li> <li>• actuator movement was excessive, or non-standard valve encountered</li> <li>• motor load measurement failure occurred Check the assembly and recalibrate the actuator.</li> </ul>
<b>#3</b>	<p>Calibration error 3</p> <p>Bolt extension too short. The bolt met resistance too early during the calibration process.</p>	<ul style="list-style-type: none"> <li>• valve movement was too small, or a non-standard valve encountered</li> <li>• motor load measurement failure</li> <li>• motor load measurement inaccurate due to low battery charge Check the assembly and recalibrate the actuator.</li> </ul>
<b>#4</b>	<p>Actuator feedback communication error.</p> <p>No communication with the actuator for an hour is considered an error. The actuator is then set to 10% open</p> <p>The error will reset after a data package is received.</p>	<ul style="list-style-type: none"> <li>• master controller disabled</li> <li>• poor signal or no signal originating from the master controller</li> <li>• defective RC module in the actuator</li> </ul>
<b>#5</b>	<p>Battery low</p> <p>The actuator will detect battery replacement after voltage rises and launch calibration</p>	<p>battery depleted</p>
<b>#7</b>	<p>Actuator blocked</p>	<ul style="list-style-type: none"> <li>• while changing the opening of the valve, excessive load was encountered Recalibrate the actuator.</li> </ul>

## WARRANTY CARD

TECH STEROWNIKI II Sp. z o.o. company ensures to the Buyer proper operation of the device for the period of 24 months from the date of sale. The Guarantor undertakes to repair the device free of charge if the defects occurred through the manufacturer's fault. The device should be delivered to its manufacturer. Principles of conduct in the case of a complaint are determined by the Act on specific terms and conditions of consumer sale and amendments of the Civil Code (Journal of Laws of 5 September 2002).

**CAUTION!** THE TEMPERATURE SENSOR CANNOT BE IMMERSSED IN ANY LIQUID (OIL ETC). THIS MAY RESULT IN DAMAGING THE CONTROLLER AND LOSS OF WARRANTY! THE ACCEPTABLE RELATIVE HUMIDITY OF THE CONTROLLER'S ENVIRONMENT IS 5÷85% REL.H. WITHOUT THE STEAM CONDENSATION EFFECT.

THE DEVICE IS NOT INTENDED TO BE OPERATED BY CHILDREN.

Activities related to setting and regulation of the controller parameters described in the Instruction Manual and parts wearing out during normal operation, such as fuses, are not covered by warranty repairs. The warranty does not cover damages arising as a result of improper operation or through the user's fault, mechanical damage or damage created as a result of fire, flood, atmospheric discharges, overvoltage or short-circuit. The interference of an unauthorized service, wilful repairs, modifications and construction changes cause the loss of Warranty. TECH controllers have protective seals. Removing a seal results in the loss of Warranty.

The costs of unjustifiable service call to a defect will be borne exclusively by the buyer. The unjustifiable service call is defined as a call to remove damages not resulting from the Guarantor's fault as well as a call considered unjustifiable by the service after diagnosing the device (e.g. damage of the equipment through the fault of the client or not subject to Warranty), or if the device defect occurred for reasons lying beyond the device.

In order to execute the rights arising from this Warranty, the user is obliged, at his own cost and risk, deliver the device to the Guarantor along with a correctly filled-in warranty card (containing in particular the sale date, the seller's signature and a description of the defect) and sales proof (receipt, VAT invoice, etc.). The Warranty Card is the only basis for repair free of charge. The complaint repair time is 14 days.

When the Warranty Card is lost or damaged, the manufacturer does not issue a duplicate.

## EU DECLARATION OF CONFORMITY

Hereby, we declare under our sole responsibility that EU-G-X manufactured by TECH STEROWNIKI II Sp. z o.o., head-quartered in Wieprz Biała Droga 31, 34-122 Wieprz, is compliant with Directive 2014/53/EU of the European parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment, Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products as well as the regulation by the MINISTRY OF ENTREPRENEURSHIP AND TECHNOLOGY of 24 June 2019 amending the regulation concerning the essential requirements as regards the restriction of the use of certain hazardous substances in electrical and electronic equipment, implementing provisions of Directive (EU) 2017/2102 of the European Parliament and of the Council of 15 November 2017 amending Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (OJ L 305, 21.11.2017, p. 8).

For compliance assessment, harmonized standards were used:

PN-EN IEC 60730-2-9 :2019-06 art. 3.1a Safety of use

PN-EN 62479:2011 art. 3.1 a Safety of use

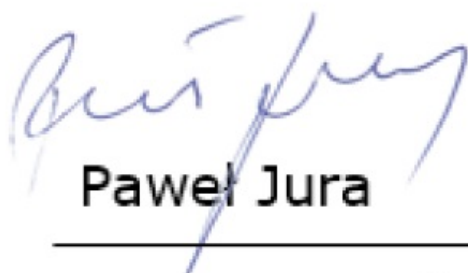
ETSI EN 301 489-1 V2.2.3 (2019-11) art.3.1b Electromagnetic compatibility

ETSI EN 301 489-3 V2.1.1:2019-03 art.3.1 b Electromagnetic compatibility

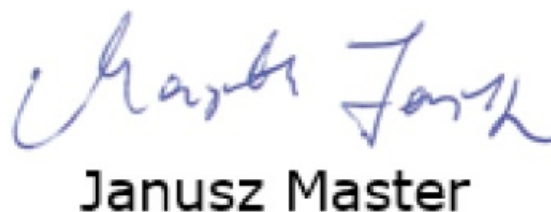
ETSI EN 300 220-2 V3.2.1 (2018-06) art.3.2 Effective and coherent use of radio spectrum

ETSI EN 300 220-1 V3.1.1 (2017-02) art.3.2 Effective and coherent use of radio spectrum

EN IEC 63000:2018 RoHS.



Paweł Jura



Janusz Master

---

Prezesi firmy

#### Contact

#### Central headquarters

ul. Biata Droga 31, 34-122 Wieprz

#### Service

ul. Skotnica 120, 32-652 Bulowice

- **phone:** +48 33 875 93 80
- **e-mail:** [serwis@techsterowniki.pl](mailto:serwis@techsterowniki.pl)

#### FAQ

- **Q: What should I do if I lose the Warranty Card?**
  - **A:** If you lose the Warranty Card, the manufacturer does not issue a duplicate. Contact customer service for further assistance.
- **Q: How do I know when to replace the batteries in the actuator?**
  - **A:** If the actuator indicates a battery level of 0 or 1% in the master controller, be prepared to replace the batteries with two new ones of the same brand.

#### Documents / Resources



**[TECH CONTROLLERS EU-G-X Wireless Electric Actuator](#)** [pdf] User Manual  
EU-G-X, EU-G-X Wireless Electric Actuator, Wireless Electric Actuator, Electric Actuator, Actuat  
or

References

- [User Manual](#)

**Manuals+.** [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.