

KNX RF-MSG-ST Radio Actuator

Technical specifications and installation instructions

Item number 70711



1. Description

The **KNX RF-MSG-ST** is a radio actuator for KNX radio (KNX RF). The actuator controls one drive (blind, shutter, awning or window). The **KNX RF-MSG-ST** uses the KNX RF S standard.

Functions:

- 1 connection for 230 V-drive (STAK3)
- Reception of the control signal via radio KNX RF
- **Retransmitter function** (from version 1.1): Forwarding of all received KNX RF telegrams. These can be received by KNX RF participants with the same domain address. This allows the range of the KNX RF signal to be increased
- **Automatic runtime measurement** of the drives for positioning (incl. fault reporting object)
- **Position feedback** (movement position, also slat position for shutters)
- **Position storage** (movement position) via 1-bit object (storage and call-up e.g. via buttons)
- **Scene control** for movement position with 16 scenes per drive (also slat position for shutters)
- **Blocking objects and alarm reports** have different priorities, so safety functions always take precedence (e.g. wind block)
- **Manual or automatic priority setting** via time or communication object
- **Brief time limit** (movement command blocked) and **2 movement limits**

Configuration is made using the KNX software as of ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on www.elsner-elektronik.de.

1.0.1. Scope of delivery

- Actuator
- Magnet for teaching procedure (telescopic rod)

1.1. Technical Data

Housing	Plastic
Protection category	IP 54*
Dimensions	approx. 149 x 37 x 26 (B x H x T, mm)
Weight	approx. 140 g
Ambient temperature	Operation -20...+55°C, storage -30...+85°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	230 V AC
Input	STAS3 plug (230 V)
Output	STAK3 coupling, loadable to max. 4 A / 230 V AC
Frequency range	868.0...868.6 MHz
Transmission power	max. 25 mW

*The **Radio actuator KNX RF-MSG-ST** should be installed in a protected area despite a high protection category because water can enter in via the connectors. Please observe the instructions in Chapter *Connection*.

The product conforms with the provisions of EU directives.

2. Installation and start-up



Installation, testing, operational start-up and troubleshooting should only be performed by a qualified electrician.



DANGER!
Risk to life from live voltage (mains voltage)!

- Inspect the device for damage before installation. Only put undamaged devices into operation.
- Comply with the locally applicable directives, regulations and provisions for electrical installation.
- Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

2.0.1. Safety advice



WARNING!

Risk of injury caused by components moved automatically!

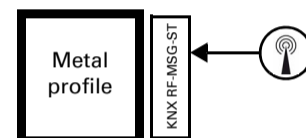
If the wireless connection between the control unit and the wireless actuator is interrupted, connected devices can no longer be operated.

- For that reason do not connect drives to the wireless actuator which could be hazardous to human life!

2.1. Notes on wireless equipment

When planning facilities with devices that communicate via radio, adequate radio reception must be guaranteed. The range will be limited by legal regulation and structural circumstances. Avoid sources of interference and obstacles between receiver and transmitter, that could disturb the wireless communication. Those would be for example:

- Walls and ceilings (especially concrete and solar protection glazing).
- Metal surfaces next to the wireless participants (e. g. aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitters (e.g. wireless headphones), which transmit on the same frequency. Please maintain a minimum distance of 30 cm between wireless transmitters for that reason.



The antenna symbol on the housing shows the position of the antenna in **KNX RF-MSG-ST**. This side must not be positioned directly on metal surfaces or objects. Other-

2.2. Connection

The radio module is connected between the appliance and the power supply. It may only be connected to flexible lines using STAK/STAS connectors. The connectors must be locked using the locking bow.



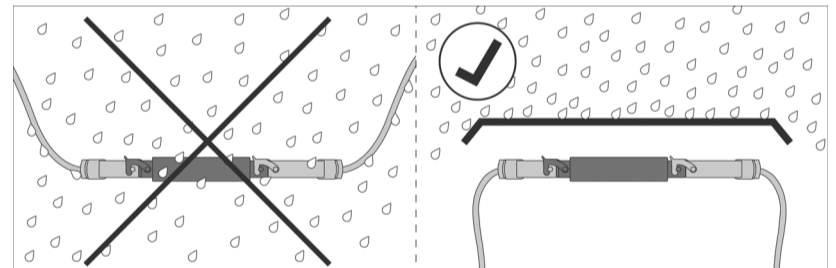
Do not expose to continuous sun radiation to avoid overheating.

The housing is not UV-resistant.

- Assemble the device in a protected area (e. g. in the box for the blinds/marquee/shutters in a construction profile beneath the roof tiles or in a housing).



No water may run along the supply line and device because water can enter in via the connectors.



- Assemble the device in a protected area (e. g. in the box for the blinds/marquee/shutters in a construction profile beneath the roof tiles or in a housing).
- Lay the supply lines out and down from the device.



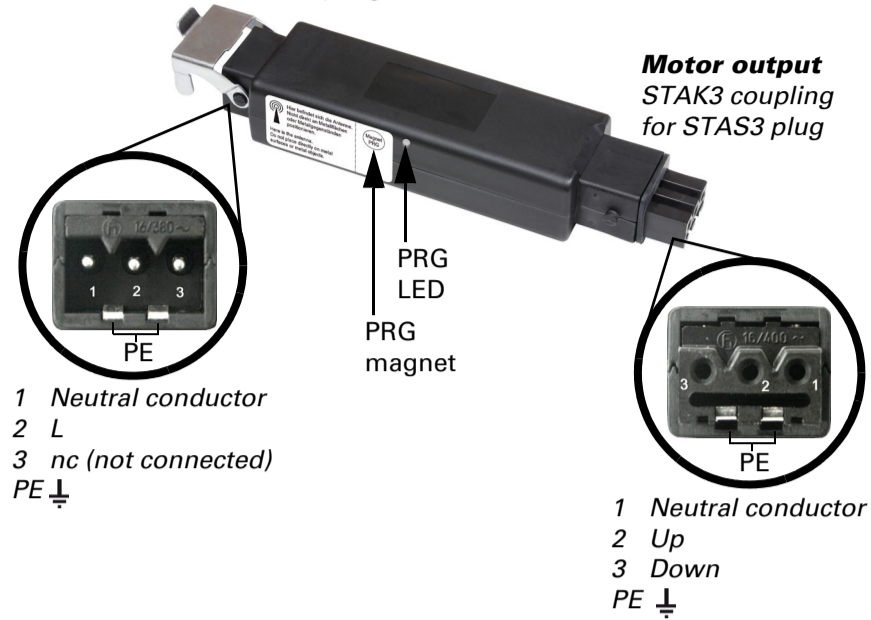
No vibrations!

- Assemble the device in a place that is free of vibrations.

2.2.1. Device Design

Inout mains voltage

STAS3 slot for STAK3 coupling

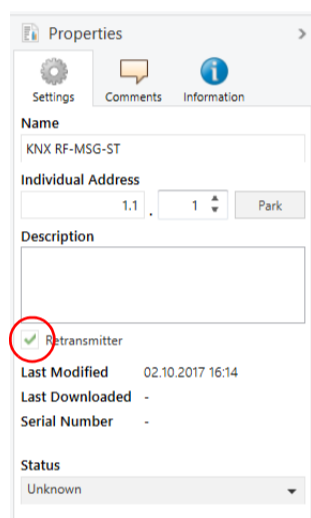


2.3. Establish radio connection

The device is integrated into the KNX system with a media coupler or a KNX RF USB stick. (For further information see the corresponding manual/data sheet.)

1. Start the programming mode of the KNX RF-MSG with the enclosed magnet (telescopic rod). The programming LED lights up.

2.4. Activate retransmitter function



If the device is set up as a retransmitter, it transmits all received KNX RF telegrams. These can be received by KNX RF participants with the same domain address. As a result, the radio range of a KNX RF system can be increased.

The function must be activated in the ETS in the property window of the device by ticking the box "Retransmitter".

2.5. Notes on mounting and commissioning

Device must not be exposed to water (rain). This could result in the electronic being damaged. A relative air humidity of 95% must not be exceeded. Avoid bedewing.

3. Address the device on the bus

The equipment is delivered with the bus address 15.15.255. A different address can be programmed in the ETS by overwriting the address 15.15.255 or by holding a magnet on the PRG magnet.

4. Disposal

Observe legal regulations and do not dispose of with household waste!

5. Conformity

The radio equipment type **KNX RF-MSG-ST** complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the internet address <https://www.elsner-elektronik.de/en/knx-rf-msg-st.html>