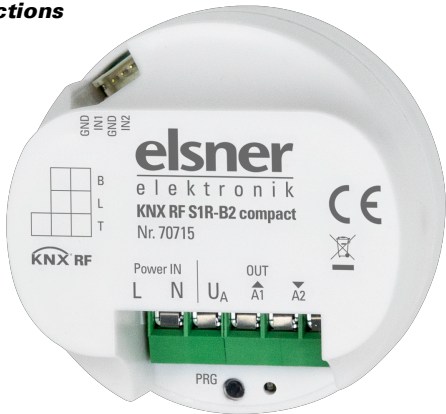


KNX RF S1R-B2 compact

Multifunctional Radio Actuator

Technical specifications and installation instructions

Item number 70715



1. Description

The **Radio Actuator KNX RF S1R-B2 compact** has got a multifunctional output which can connect to either a drive with Up/Down control (blind, awning, shutter, window) or two switchable devices (On/Off for light and ventilation). Because the output is designed to be free of potential, other systems can also be controlled, e.g. via the manual switch input on a motor control unit.

The application offers numerous options for blocking and priority definitions (e.g. manual-automatic). Scenes can be saved and called up via the bus (scene control with 16 scenes).

2 digital inputs are available for the connection of binary contacts. A pushbutton, for example, can be connected here.

Functions:

- Free of potential **multifunctional output** for a **drive** (shading, window) or connection of two **switchable devices** (light, fan)
- 2 binary inputs**
- 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)
- Parameters for taking drive and mechanics **downtimes** into account
- Scene control** for movement position with 16 scenes (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 ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on **www.elsner-elektronik.de** in the “Service” menu.

1.0.1. Scope of delivery

- Actuator
- Connection line for inputs

1.1. Technical specification

Housing	Plastic
Colour	White
Assembly	Flush-mounted (socket installation)
Protection category	IP 20
Dimensions	Diameter approx. 52 mm, depth approx. 29 mm
Weight	approx. 80 g
Ambient temperature	Operation -20...+70°C, storage -30...+85°C
Ambient humidity	5...80% RH, non-condensing
Operating voltage	230 V AC, 50 Hz
Output	1 x output, free of potential with 2 connections for drive up/down or 2 devices, power supply U up (A1) down (A2) Output load capacity: 5 A, maximum 270 V AC/30 V DC
Inputs	2x digital, maximum cable length 10 m
Data output	KNX +/- bus connector terminal
BCU type	Integrated microcontroller
PEI type	0
Group addresses	max. 254
Assignments	max. 254
Communication objects	86

The product is compliant with the provisions of EU guidelines.

2. Installation and start-up

2.1. Installation notes



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



- DANGER!**
Risk to life from live voltage (mains voltage)!
- There are unprotected live components within the device.
- VDE regulations and national regulations are to be followed.
 - Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
 - Do not use the device if it is damaged.
 - Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled 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.



- 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!

2.2. 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.

2.3. Connection

The **Radio Actuator KNX RF S1R-B2 compact** is installed in a flush-mounted socket.

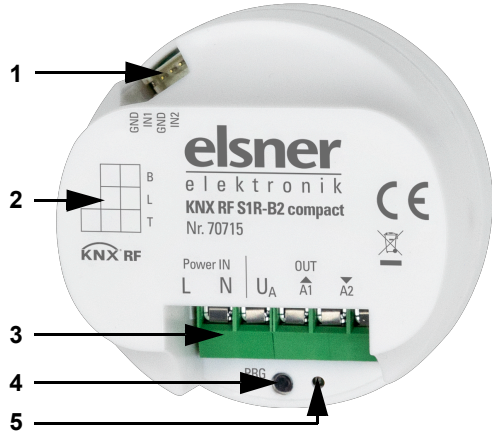


Fig. 1

- Digital inputs: Slot for connection cable
- Labelling field
- Connector for operating „Power IN“ 230 V AC, 50 Hz, L/N and for drive/consumers „OUT“ (free of potential):
U_A: voltage, maximum 270 V AC
up/A1: motor upwards or consumer 1 switching
down/A2: motor downwards or consumer 2 switching
- Programming button (recessed)
- Programming LED (recessed)

The connection to the **KNX data bus** is made via radio (KNX RF). The device is integrated into the KNX system via a KNX RF USB stick or via a media coupler (refer to the relevant manual/data sheet).

Connect the **operating voltage** (230 V AC, 50 Hz) to the “Power IN” L/N terminals.

Connect **the drive or the loads** to the “OUT” U_A/A1/A2 terminals. The output is free of potential and supplied with voltage U_A.

To connect the **digital inputs** (fig. 1 no. 1) use the attached cable. The cables for the inputs can be extended to up to 10 m.



- Follow the guidelines and standards for SELV electric circuits while installing and cable laying of the inputs!**

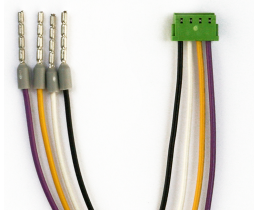
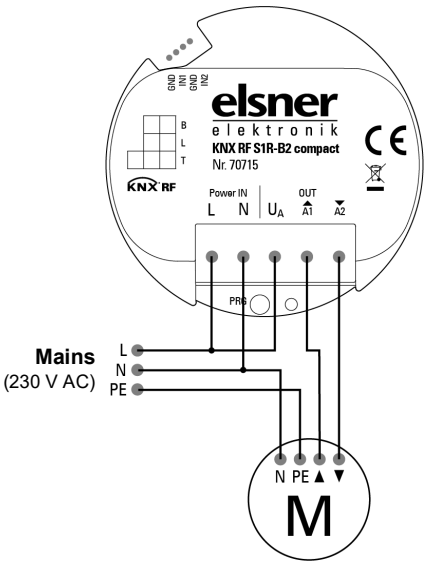


Fig. 2

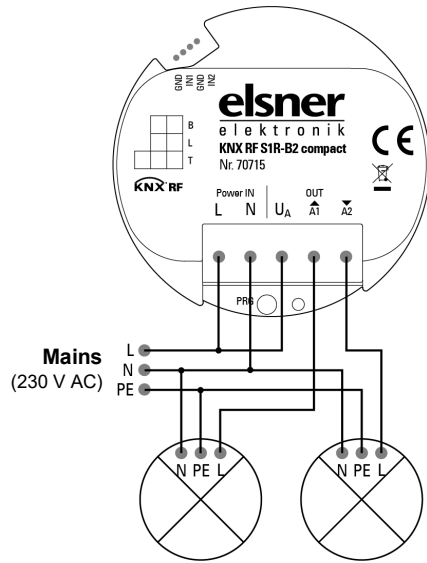
Breakout cable for digital inputs:
Input 1: black (GND) / white
Input 2: yellow (GND) / violet

2.3.1. Connection examples output

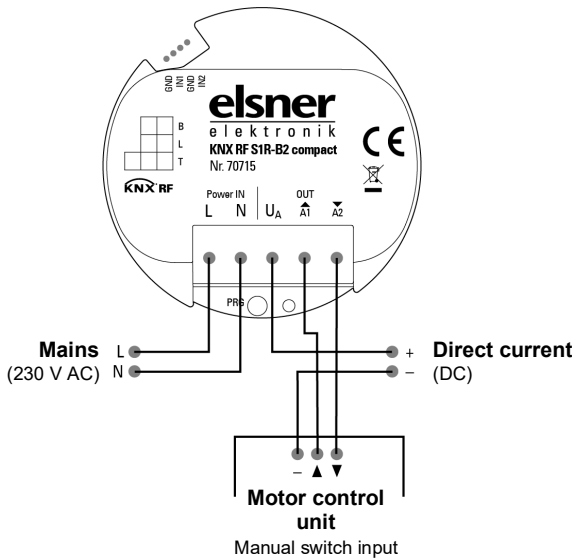
Drive 230 V AC:



Two consumer loads 230 V AC:



Control of an external motor control unit with 24 V DC:



2.4. Instructions for assembly and operational start-up.

Never expose actuators to water (e.g. rain) or dust. This can damage the electronics. You must not exceed a relative air humidity of 80%. Avoid condensation.

After the bus voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

For KNX devices with safety functions (e.g. wind or rain blocks), it is important to set up periodical monitoring of the safety objects. The optimal ratio is 1:3 (example: if the weather station sends a value every 5 minutes, the actuator must be configured for a monitoring period of 15 minutes).

3. Addressing of the device at the bus

The device is supplied with the bus address 15.15.255. You can program another address into the ETS by overwriting the 15.15.255 address or by teaching via the programming button.