

ABB i-bus® KNX

Blind/Roller Shutter Actuators with travel detection and manual operation x-fold, 230 V, MDRC JRA/S x.230.5.1, 2CDG 110 12x R0011



JRA/S 8.230.5.1

2CDC 071 018 S0011

The 2-fold, 4-fold and 8-fold Blind/Roller Shutter Actuators are used to automatically control independent 230 V AC drives, for positioning blinds, roller shutters, awnings and other shading products via ABB i-bus® KNX. The devices are also used, for example, to control doors, windows and ventilation flaps. The travel times of the drives are automatically determined via end position detection and stored.

The output contacts are mechanically interlocked, so that voltage cannot be applied to both contacts at the same time.

The outputs can be directly controlled on the device using the manual push buttons. The LEDs on the front of the device signal the status of the outputs. The devices do not require an auxiliary voltage.

Individual outputs can be copied or exchanged to reduce the programming effort.

The Blind/Roller Shutter Actuator is a modular installation device for installation in the distribution board on 35 mm mounting rails. The connection to the ABB i-bus® is implemented via bus connection terminals.

Technical data

| | | | | |
|---------------------------------------|--|---|-----------|-----------|
| Supply | Operating voltage | 21...30 V DC, via KNX | | |
| | Current consumption KNX | < 12 mA | | |
| | Power consumption KNX | maximum 250 mW | | |
| Outputs | JRA/S Type | 2.230.5.1 | 4.230.5.1 | 8.230.5.1 |
| | Number of outputs UP/DOWN | 2* | 4 | 8 |
| | | (mutually mechanically interlocked) | | |
| | | * independent outputs, each with up to 2 drives operating in parallel. | | |
| | U_N rated voltage | maximum 230 V AC, 45 ... 65 Hz | | |
| | I_N rated current | 6 A | | |
| | Current detection for travel detection | > 300 mA | | |
| | Maximum switching current | 6 A (AC1/AC3) at 230 V AC or 6 A (AC1/AC3) at 400 V AC | | |
| | Minimum switching current | 100 mA at 5 V or 10 mA at 10 V or 1 mA at 24 V | | |
| | Leakage loss per device at max. load | < 2 W | < 2 W | < 4 W |
| Connections | Drives (terminals output A...X) | 2 universal head screw terminals per output (UP/DOWN) | | |
| | Phase L1...L3 (terminal U_N) | 2 or 4 universal head screw terminals single-core 0.2...6 mm ² , stranded 0.2...4 mm ² | | |
| | Screw terminal conductor cross-section | Flexible with ferrules without/with plastic sleeves 0.25...4 mm ² | | |
| | Tightening torque | maximum 0.6 Nm | | |
| | ABB i-bus® KNX | Bus connection terminal (black/red), 0.8 mm Ø, single-core | | |
| Operating and display elements | Button/LED | For assignment of the physical address | | |
| | Button and LED | For toggling between manual operation/ operation via ABB i-bus® and displays | | |
| | Buttons and LEDs | For control (move UP/DOWN, slat OPEN/ CLOSE) of the output and status display | | |
| Enclosure | IP 20 | To EN 60 529 | | |
| Safety class | II, in the installed state | To EN 61 140 | | |

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| | | | | |
|-------------------------------------|--|------------------------------------|-----------|-----------|
| Isolation category | Overvoltage category | III to EN 60 664-1 | | |
| | Pollution degree | 2 to EN 60 664-1 | | |
| KNX safety extra low voltage | SELV 24 V DC | | | |
| Temperature range | Operation | -20 °C...+45 °C | | |
| | Storage | -25 °C...+55 °C | | |
| | Transport | -25 °C...+70 °C | | |
| Ambient conditions | Maximum air humidity | 93 %, no condensation allowed | | |
| Design | Modular installation device (MDRC) | Modular installation device, Pro M | | |
| | Dimensions (H x W x D) in mm; JRA/S Type | 2.230.5.1 | 4.230.5.1 | 8.230.5.1 |
| | – Height | 90 | 90 | 90 |
| | – Width | 72 | 72 | 144 |
| | – Depth | 64.5 | 64.5 | 64.5 |
| | Mounting width in space units (modules at 18 mm) | 4 | 4 | 8 |
| | Mounting depth | 64.5 | 64.5 | 64.5 |
| Weight without packaging | JRA/S Type | 2.230.5.1 | 4.230.5.1 | 8.230.5.1 |
| | Weight in kg | 0.2 | 0.25 | 0.45 |
| Installation | On 35 mm mounting rail | To EN 60 715 | | |
| Mounting position | As required | | | |
| Housing/colour | Plastic housing, grey | Halogen free | | |
| Approvals | KNX to EN 50 090-1, -2 | Certification | | |
| CE mark | In accordance with the EMC guideline and low voltage guideline | | | |

| Device type | Application | Maximum number of communication objects | Maximum number of group addresses | Maximum number of associations |
|-----------------|---|---|-----------------------------------|--------------------------------|
| JRA/S 2.230.5.1 | Blind/Roller Shutter 2f 230V Travel Detection M/...* | 69 | 255 | 255 |
| JRA/S 4.230.5.1 | Blind/Roller Shutter 4f 230V Travel Detection M/...* | 129 | 255 | 255 |
| JRA/S 8.230.5.1 | Blind/Roller Shutter 8f 230V Travel Detection M/...* | 249 | 255 | 255 |

* ... = current version number of the application. **Please observe the software information on our homepage for this purpose.**

Note

For a detailed description of the application see “Blind/Roller Shutter Actuators JRA/S” product manual. It is available free-of-charge at www.abb.com/knx.

The ETS and the current version of the device application are required for programming.

The current version of the application is available for download on the internet at www.abb.com/knx. After import in the ETS, it is available in the ETS under *ABB/Blind/Switch*.

The device does not support the closing function of a KNX device in the ETS. If you inhibit access to all devices of the project with a *BCU code*, it has no effect on this device. Reading out data and programming is still possible.

Important

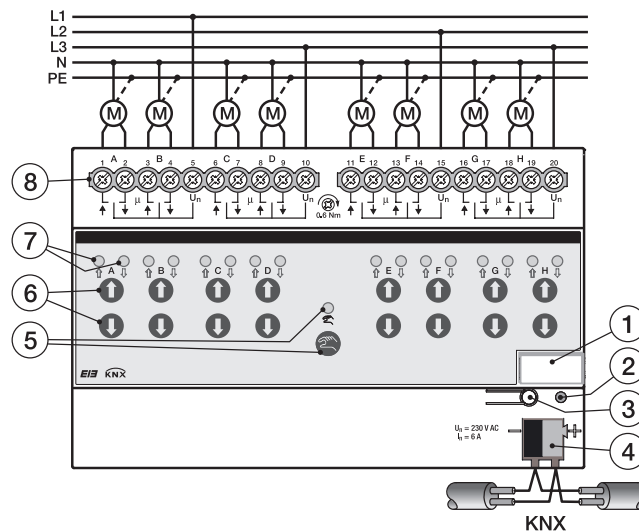
When electronic drives are used, the closed circuit current may not exceed 150 mA, as otherwise the automatic travel detection function may not function correctly. In this case, the travel times for the drives must be determined manually and entered into the ETS parameters.

Electronic drives with soft start or soft stop are not suitable for the control via JRA/S.

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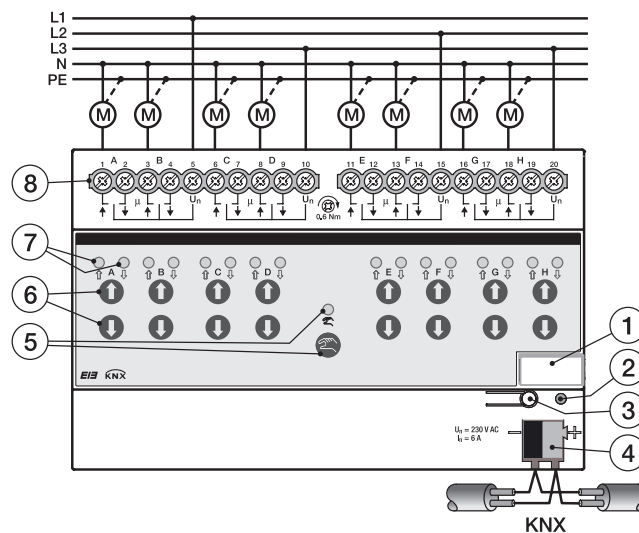
Connection schematics JRA/S x.230.5.1

Connection to the blind and roller shutter drives



2CDC 072 036 F0010

Connection to ventilation flaps

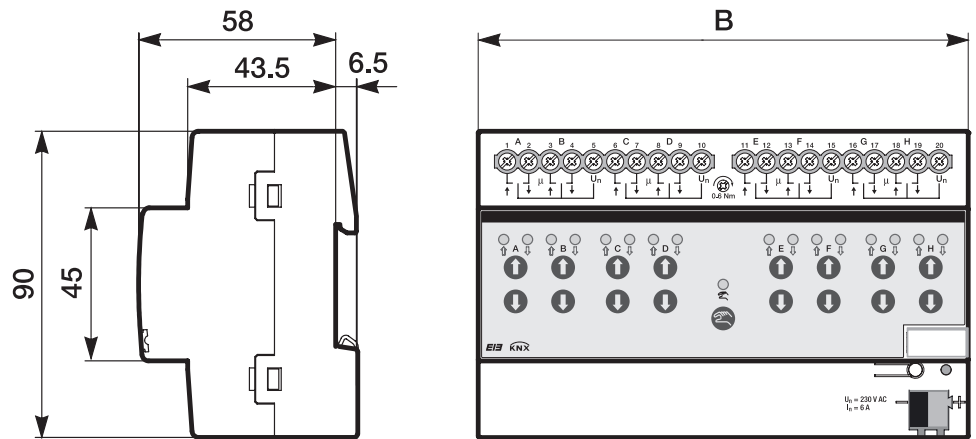


2CDC 072 034 F0010

- 1 Label carrier
- 2 LED ●
- 3 Button
- 4 Bus connection terminal ABB i-bus® KNX
- 5 Button and LED
- 6 Button (2 per output)
- 7 LEDs (2 per output, yellow)
- 8 Screw terminals (UP/DOWN, Phase L)

ABB i-bus® KNX Blind/Roller Shutter Actuators with travel detection and manual operation x-fold, 230 V, MDRC JRA/S x.230.5.1, 2CDG 110 12x R0011

Dimension drawing JRA/S x.230.5.1



2CDC 072 070 F0010

| | JRA/S 2.230.5.1 | JRA/S 4.230.5.1 | JRA/S 8.230.5.1 |
|---|-----------------|-----------------|-----------------|
| B | 72 | 72 | 144 |