

TECHNICAL DATA

ABB i-bus[®] KNX

SAH/S 8.6.7.1

Switch/Shutter Actuator



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Product description

The Switch/Shutter Actuator is a modular installation device in proM design. The device is designed for installation in electrical distribution boards and small housings for rapid mounting on a 35-mm mounting rail (to EN 60715).

The device possesses mutually independent switching relays with which the following functions can be implemented:

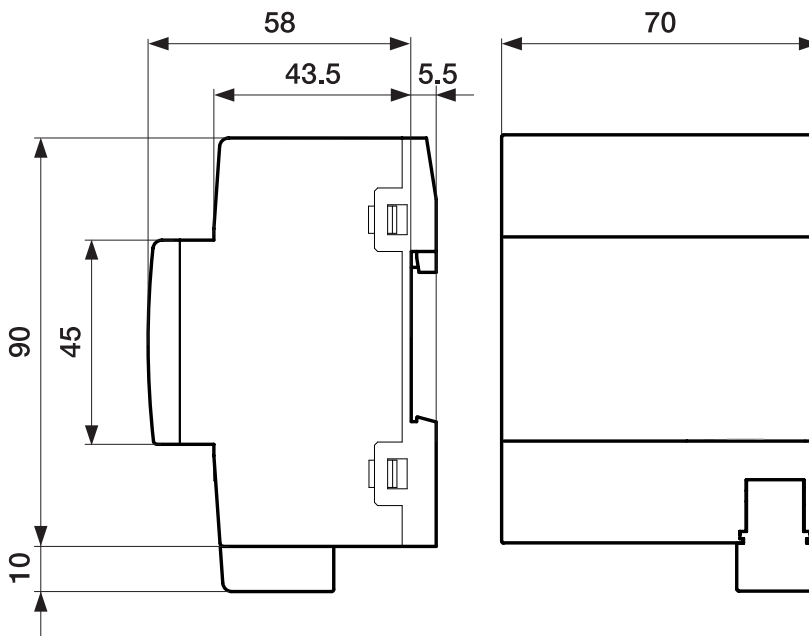
- Switching electric consumers (individually)
- Activation of 230 V AC blind and shutter drives (in pairs)

The device does not possess any mutually electromechanically interlocked output contacts.

The device is provided with bus voltage via the ABB i-bus® KNX. The connection to the ABB i-bus® KNX is implemented using the bus connection terminal. The consumers are connected at the outputs using screw terminals (terminal designation on the housing).

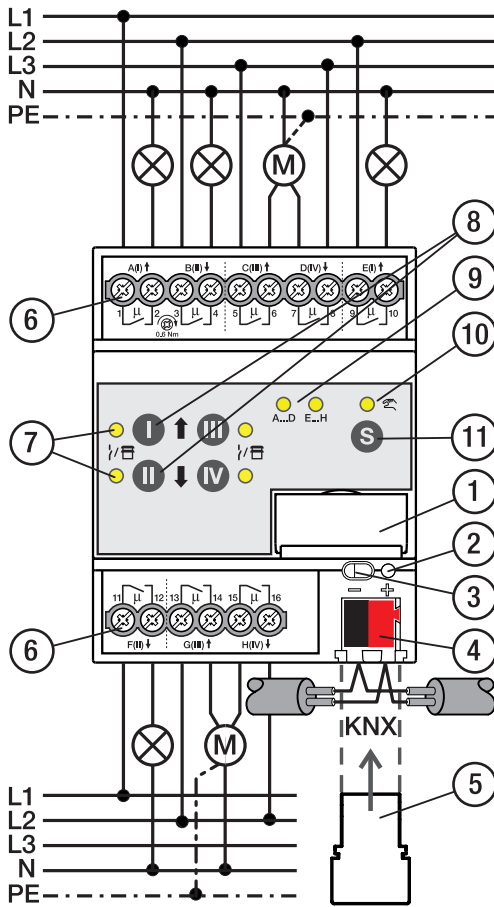
Manual operation mode permits on-site operation of the device using a membrane keypad.

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Dimension drawing



2CDC072033F0015

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Connection diagram



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Legend

- | | |
|--|--|
| 1 Label carriers | 7 Output status LED (yellow) |
| 2 Programming LED | 8 Output button |
| 3 Programming button | 9 Groups LED (yellow) |
| 4 Bus connection terminal | 10 Manual operation LED (yellow) |
| 5 Cover cap | 11 S button (manual operation / select output) |
| 6 Load circuit, two screw terminals each | |

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General technical data

| | | |
|--|------------------------------------|---|
| Supply | Bus voltage | 21 ... 32 V DC |
| | Current consumption, bus | < 12 mA |
| | Power loss, bus | Max. 250 mW |
| | Power loss, device | 2.5 W |
| Connections | KNX | Ø 0.8 mm single core (via bus connection terminal) |
| Connection terminals | Screw terminal | Screw terminal with universal head (PZ 1) |
| | | 0.2 ... 4 mm ² stranded, 2 × (0.2 ... 2.5 mm ²) |
| | | 0.2 ... 6 mm ² single core, 2 × (0.2 ... 4 mm ²) |
| | Ferrule without plastic sleeve | 0.25 ... 2.5 mm ² |
| | Ferrule with plastic sleeve | 0.25 ... 4 mm ² |
| | TWIN ferrules | 0.5 ... 2.5 mm ² |
| | Ferrule contact pin length | Min. 10 mm |
| | Tightening torque | Max. 0.6 Nm |
| Degree of protection and protection class | Degree of protection | IP 20 to EN 60529 |
| | Protection class | II to EN 61140 |
| Isolation category | Overvoltage category | III to EN 60664-1 |
| | Pollution degree | II to EN 60664-1 |
| | Fire classification | Flammability V-0 as per UL94 |
| | SELV | KNX safety extra low voltage |
| Temperature range | Operation | -5 ... +45 °C |
| | Transport | -25 ... +70 °C |
| | Storage | -25 ... +55 °C |
| Ambient conditions | Maximum air humidity | 95 %, no condensation allowed |
| Design | Modular installation device (MDRC) | Modular installation device |
| | Design | proM |
| | Housing/color | Plastic, gray |
| Dimensions | Dimensions | 90 × 70 × 63.5 mm (H × W × D) |
| | Mounting width in space units | 4 modules |
| | Mounting depth | 63.5 mm |
| Mounting | 35 mm mounting rail | To EN 60715 |
| | Mounting position | Any |
| | Weight (net) | 0.272 kg |
| Approvals | KNX certification | To EN 50090-1, -2 |
| | CE marking | In accordance with the EMC and Low Voltage Directives |

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Device type

| | | |
|--------------------|-----------------------------------|---|
| Device type | Switch/Shutter Actuator | SAH/S 8.6.7.1 |
| | Application | Switch/Shutter 8f 16 A / ... |
| | | ... = current version number of the application |
| | Maximum number of group objects | 282 |
| | Maximum number of group addresses | 1,000 |
| | Maximum number of assignments | 1,000 |

i Note
Observe software information on the website → www.abb.com/knx.

i Note
The device supports the locking function of a KNX device in ETS. If a BCU code was assigned, the device can be read and programmed only with this BCU code.

Output, rated current 6 A

| | | |
|---------------------------|---|------------------------------|
| Rated values | Number of outputs | 8 switch / 4 shutter |
| | U _n Rated voltage | 230 V AC (50/60 Hz) |
| | I _n Rated current | 6 A |
| | Maximum current per device | 8 × 6 A |
| Switching currents | AC3 operation (cos φ= 0.45) to EN 60947-4-1 | 6 A / 230 V AC |
| | AC1 operation (cos φ= 0.8) to EN 60947-4-1 | 6 A / 230 V AC |
| | Fluorescent lighting load according to EN 60669-1 | |
| | minimum switching current at 12 V AC | 100 mA |
| | minimum switching current at 24 V AC | 100 mA |
| Service life | DC switching capacity, resistive load, at 24 V DC | 6 A |
| | Mechanical service life | > 10 ⁶ cycles |
| | Electrical endurance of switching contacts according to IEC 60 947-4-1: | |
| | AC1 (240 V/cos φ=0.8) | > 10 ⁵ cycles |
| | AC3 (240 V/cos φ=0.45) | > 6 × 10 ³ cycles |
| Switching times | AC5a (240 V/cos φ=0.45) | |
| | Maximum output relay position changes per minute if all relays are switched. | 15 |
| | Maximum output relay position changes per minute if only one relay is switched. | 120 |

Note
 The switching times apply only after the bus voltage has been applied to the device for at least 30 seconds. The typical relay delay is approx. 20 ms.

Output, lamp load 6 A

| | | |
|---|---|---------|
| Lamps | Incandescent lamp load | 1,200 W |
| Fluorescent lamps | Uncompensated | 800 W |
| | Parallel compensated | |
| | DUO circuit | |
| Low-voltage halogen lamps | Inductive transformer | 800 W |
| | Electronic transformer | 1,000 W |
| | Halogen 230 V | 1,000 W |
| Dulux lamp | Uncompensated | 800 W |
| | Parallel compensated | 800 W |
| Mercury-vapor lamp | Uncompensated | |
| | Parallel compensated | |
| Switching capacity (switching contact) | Maximum peak inrush current I _p (150 ms) | 200 A |
| | Maximum peak inrush current I _p (250 ms) | 160 A |
| | Maximum peak inrush current I _p (600 ms) | 100 A |
| Number of ballasts (T5/T8, single element) | 18 W (ABB ballast 1 × 18 SF) | 10 |
| | 24 W (ABB ballast T5 1 × 24 CY) | 10 |
| | 36 W (ABB ballast 1 × 36 CF) | 7 |
| | 58 W (ABB ballast 1 × 58 CF) | 5 |
| | 80 W (Helvar EL 1 × 80 SC) | 3 |
| Energy-saving lamps | LED lamps | 250 W |
| Rated motor power | | 1,380 W |

Note
 The device features independent switching relays that are linked by software to control the shutters. The contacts are not mutually electromechanically interlocked.

i Note

The peak inrush current I_p is the typical ballast load current that results during switching. Using the peak inrush current I_p , it is possible to calculate the maximum number of switchable ballasts at the Switch Actuator output for the various ballast types. The number of ballasts specified in the table can be only a sample guide value.

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Ordering details

| Description | MB | Type | Order no. | Packaging unit [pcs.] | Weight 1 pc. (gross) [kg] |
|----------------|----|---------------|--------------------|-----------------------|---------------------------|
| Switch/Shutter | 4 | SAH/S 8.6.7.1 | 2CDG 110 244 R0011 | 1 | 0.272 |



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