

Figure 2: Connection assignment of control cable (example)

red (RD)	KNX +
black (BK)	KNX -
green (GN)	Input 1 (push-button, switch, contact, dew/leakage sensor)
yellow (YE)	Input 2 (push-button, switch, contact, dew/leakage sensor)
white (WH)	Input 3 (push-button, switch, contact, dew/leakage sensor, NTC temperature sensor)
brown (BN)	COM inputs 1...3

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The function of this device depends upon the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer's product database.

The device can be updated. Firmware can be easily updated with the Jung ETS Service App (additional software).

The device is KNX Data Secure capable. KNX Data Secure offers protection against manipulation in building automation and can be configured in the ETS project. Detailed specialist knowledge is required. A device certificate, which is attached to the device, is required for safe commissioning. During mounting, the certificate must be removed from the device and stored securely.

Planning, installation and commissioning of the device are carried out with the aid of the ETS, version 5.7.3 and above.

Intended use

- Operating in KNX systems
- Switching electrical loads via relay contacts with common reference potential
- Switching of electrically-driven Venetian blinds, roller shutters, awnings and similar hangings
- Reading in switching states of installation switches or push-buttons and other potential-free contacts at inputs 1...3
- Signal evaluation of dew and leakage sensors at inputs 1...3 (see accessory).
- Acquisition of temperature values via NTC temperature sensor at input 3 (see accessories)
- Mounting in appliance boxes according to DIN 49073

Product characteristics

- Outputs can be operated via KNX telegrams or extension inputs
- Three extension inputs for connecting potential-free contacts or dew/leakage sensors. NTC temperature sensor can be connected to input 3.

Switch actuator, 2-gang / blinds actuator, 1-gang

- Supply via KNX, no additional power supply necessary
- KNX Data Secure compatible
- Updateable with Jung ETS Service App

Characteristics switch operation

- Operation as NO or NC contacts
- Feedback function
- Logic and restraint function
- Central switching functions with collective feedback
- Time functions: switch-on delay, switch-off delay, staircase lighting timer with run-on time
- Scene function
- Operating hours counter

Characteristics blinds operation

- Suitable for AC motors 110...230 V
- Operating modes "Venetian blind with slats", "Roller shutter/awning", "Venting louver/roof window"
- Blind/shutter position directly controllable
- Slat position directly controllable
- Feedback of movement status, blind/shutter position and slat position
- Forced position through higher-level controller
- Safety function: 3 independent wind alarms, rain alarm, frost alarm
- Sun protection function with heating/cooling operation
- Disabling function (lock-out protection)
- Scene function

Characteristics extension inputs

- Switching operating function
- Dimming operating function (incl. colour temperature dimming)
- Shutter/Venetian blinds operating function
- Value transmitter operating function (1-byte, 2-byte, 3-byte and 6-byte incl. RGBW and colour temperature presets)
- Scene extension operating function
- 2-channel operation operating function
- Controller extension operating function
- Disabling functions
- Debounce time adjustable

Logic function characteristics

- Logic gates
- Transformer (conversion)
- Disabling element
- Comparator
- Limit value switch

4 Information for electrically skilled persons



DANGER!

Mortal danger of electric shock.

Disconnect the device. Cover up live parts.

4.1 Fitting and electrical connection



DANGER!

When connecting the bus/extensions and mains voltage wires in a shared appliance box, the KNX bus line may come into contact with the mains voltage.

This endangers the safety of the entire KNX installation. People at remote devices may also receive an electric shock.

Do not place bus/extensions and mains voltage terminals in a shared connection compartment. Use an appliance box with a fixed partition wall or separate appliance boxes.

Connecting and fitting the device

In secure operation (preconditions):

- Secure commissioning is activated in the ETS.
- Device certificate entered/scanned or added to the ETS project. A high resolution camera should be used to scan the QR code.
- Document all passwords and keep them safe.

Mounting in suitable appliance box (recommendation: electronic device box with partition). Observe cable routing and spacing (Figure 3)!

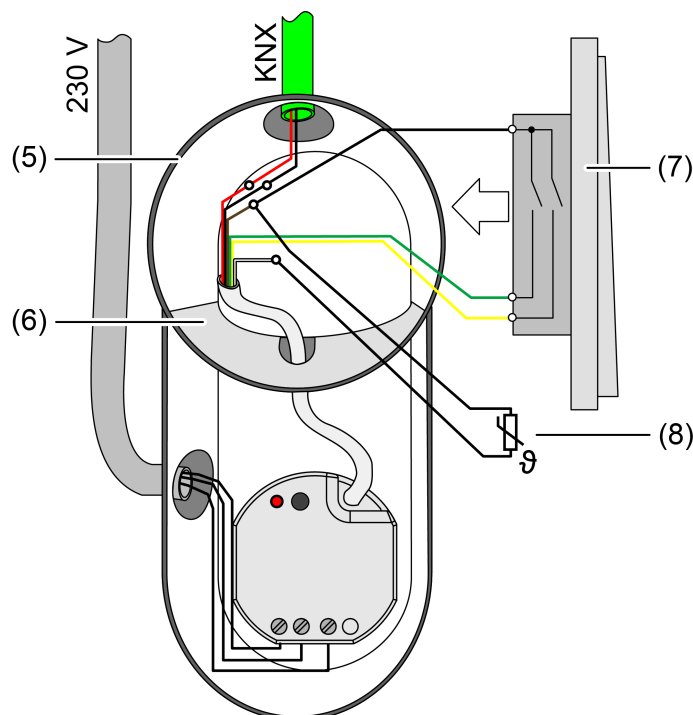


Figure 3: Mounting example in electronic device box with partition wall, series push-button and NTC temperature sensor

- (5) Appliance box
- (6) Partition
- (7) potential-free contacts (e.g. series push-button)
- (8) NTC temperature sensor (optional)

Switch actuator, 2-gang / blinds actuator, 1-gang

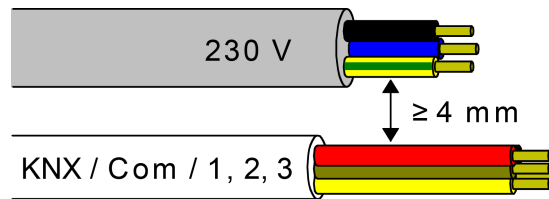


Figure 4: Cable spacing

Minimum spacing between the mains voltage and bus/extension wires: 4 mm (Figure 4)

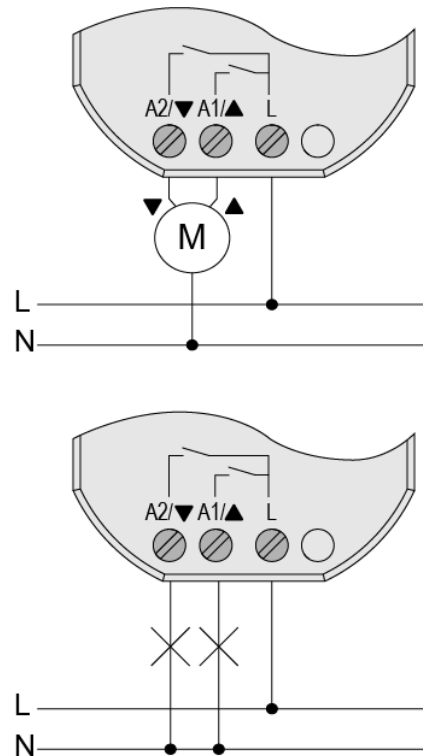


Figure 5: Connection of load

Observe ambient temperature. Ensure adequate cooling.

- Connect the device to KNX with the correct polarity.
- Connect load as shown in the connection example (Figure 5).
- If required, connect potential-free contacts or dew/leakage sensors to inputs 1...3, or NTC temperature sensors to input 3 (Figure 2).
- Install the device in the appliance box.
- In secure operation: The device certificate must be removed from the device and stored securely.

i The COM reference potential must not be connected together with COM connections of other devices!

4.2 Commissioning

Commissioning the device



NOTICE!

Incorrect load control due to undefined relay state at delivery.

Risk of destruction of connected drive motors.

During commissioning, before switching on the load, ensure that all relay contacts are open by applying the KNX bus voltage. Observe commissioning sequence!

- Switch on the KNX bus voltage.
- Wait about 10 s.
- Connect the load circuit.

i Delivery state: The output is set as a blind output. Operation of the blind output possible via input 1 (UP) and input 2 (DOWN). Input 3 has no function.

Function of Inputs in the as-delivered state

Input	Push-button (NO contact)	Function
1	Press briefly (< 0.4 s)	Stop
1	Press briefly (< 0.9 s)	Adjusting the slats UP
1	Press for a long time (> 0.9 s)	Raise
2	Press briefly (< 0.4 s)	Stop
2	Press briefly (< 0.9 s)	Adjusting the slats DOWN
2	Press for a long time (> 0.9 s)	Lower
3	---	---

Load physical address and application program

- For switched loads, configure the outputs as a switching output.
- For Venetian blind operation, configure the outputs as a Venetian blind output.
- In Venetian blind operation: measure blind/shutter and slat travel times and enter them in the parameter setting.
- Press the programming button.
The programming LED lights up.
- Load physical address and application program using the ETS.

Safe-state mode

The safe state mode stops the execution of the loaded application program.

i Only the system software of the device is still functional. ETS diagnosis functions and programming of the device are possible.

Activating the safe-state mode

- Switch off the bus voltage or disconnect the device from the KNX.
- Wait about 10 s.
- Press and hold down the programming button.
- Switch on the bus voltage or connect the device to KNX. Release the programming button only after the programming LED starts flashing slowly.
The safe-state mode is activated.

Switch actuator, 2-gang / blinds actuator, 1-gang

With a new brief press of the programming button, the programming mode can be switched on and off as usual also in the safe-state mode. If Programming mode is active, the programming LED stops flashing.

Deactivating safe-state mode

- Switch off bus voltage (wait approx. 10 s) or carry out ETS programming.

Master reset

The master reset restores the basic device setting (physical address 15.15.255, firmware remains in place). The device must then be recommissioned with the ETS.

During secure operation: A master reset deactivates device security. The device can then be recommissioned with the device certificate.

Performing a master reset

Precondition: The safe-state mode is activated.

- Press and hold down the programming button for > 5 s.
The programming LED flashes quickly.

The device performs a master reset, restarts and is ready for operation again after approx. 5 s.

Restoring the device to factory settings

Devices can be reset to factory settings with the Jung ETS Service App. This function uses the firmware contained in the device that was active at the time of delivery (delivery state). Restoring the factory settings causes the devices to lose their physical address and configuration.

5 Technical data

Ambient conditions

Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Dimensions (W × H × D)	48 x 50 x 28 mm

KNX

KNX medium	TP256
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Current consumption KNX	5 ... 18 mA
Connection mode KNX	Connection terminal on control cable

Outputs

Connection mode	Screw terminals
Switching voltage	AC 250 V ~
Switching current per device	Σ 16 A
Fluorescent lamps	Σ 16 AX
Switch-on current 200 μs	max. 800 A
Switch-on current 20 ms	max. 165 A

Power consumption per output

Ohmic load	3000 W
Capacitive load	max. 16 A (140 μF)
Motors	1380 VA
Incandescent lamps	2300 W

Switch actuator, 2-gang / blinds actuator, 1-gang

HV halogen lamps	2300 W
HV-LED lamps	max. 400 W
LV halogen lamps with electronic transformers	1500 W
LV halogen lamps with inductive transformer	1200 VA
Compact fluorescent lamps uncompensated	1000 W
Compact fluorescent lamps parallel compensated	1160 W (140 µF)

Reduction of switching current per device (referred to Σ 16 A)

per 5 °C in excess of 35 °C	-10%
when installed in wooden or dry construction walls	-15%
when installed in multiple combinations	-20%

Clampable conductor cross-section

single stranded	0.5 ... 4 mm ²
Finely stranded without conductor sleeve	0.5 ... 4 mm ²
Finely stranded with conductor sleeve	0.5 ... 2.5 mm ²
Connection torque screw terminals	Max. 0.8 Nm

Inputs

Control cable (preterminated)	YY6x0.6
Input type	Potential-free
Number	3
Total length of extension device cable	max. 10 m
Cable type (preferably)	J-Y(St)Y
Poll voltage, extension inputs	approx. 5 V

6 Accessories

External sensor	FF7.8
Condensation sensor	BTS01
Leakage sensor	LES01

7 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

BLUMOTIX SRL - Via Bedazzo n. 2 - 48022 - Lugo (RA) Phone: +39 0522 48022 - Fax: +39 0522 48023