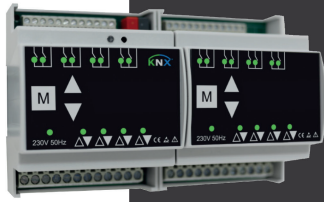


3059 001 GB 1018 A00

MC KNX 4



MC KNX 4
MC KNX 4 EXT

Art.-no.: 01078100
Art.-no.: 01078120

Shutter actuator for 4 sunshade device drives.

Installation and Operating Instructions

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1.2 Foreseeable misuse

Any use for a purpose other than the above mentioned purpose is improper. The risk of improper use or misuse is borne solely by the operator. All types of claims due to damage arising from improper use are excluded.

1.3 Personnel's qualification

Improper use can cause considerable personal injury and material damage!

All tasks for installation, connection and commissioning must be carried out exclusively by a qualified electrician.

A qualified electrician is able to carry out work on electrical installations due to her/his professional training, knowledge, and experience as well as knowledge of the relevant standards and regulations. She/he can identify and avoid possible dangers.

The qualified electrician is trained for the specific place of employment in which she/he is working and is aware of the relevant standards and regulations.

1.4 Signage

Symbol	Meaning
	General warning
	Electrostatic discharge
	CE label

1. Basic safety instructions



DANGER!
Danger of life!

There is a risk of life when touching live parts.
 – All tasks must be carried out exclusively by qualified personnel.
 – Disconnect all power supplies before starting work.



CAUTION!
Material damage!

Incorrect wiring and configuration of the device can lead to damage up to total failure.
 – Ensure that the supply voltage corresponds to the specifications from the technical data for the device.
 – Ensure that all external devices like push buttons and motors are connected correctly according to the wiring diagrams.
 – Refer to technical documentation of the motor manufacturer for notes on required settings such as relais switching times.
 – Refer to the software-helpfile for details on the configuration.

1.1 Intended use

The motor control units are intended to control drives for blinds, awnings, large louvre blades, roller shutters, windows, light domes, etc. within the specified limits.

Any other use or extended use is considered to be improper.

2. Product description

Art.-no.	Article description	
01078100	MC KNX 4	Hauptmodul (inkl. Busanschlussklemme)
01078120	MC KNX 4 EXT	Erweiterungsmodul (inkl. Steckverbinder)

The motor control units are designed for the control of 230VAC drives with 2 end switches for blinds, awnings, large louvre blades, roller shutters, windows, light domes, etc. in a KNX bus system.

An extension module can be connected to the main module via the included plug connector.

Each module has 4 motor outputs and inputs for the connection of 4 conventional blind switches or 8 potential-free contacts.

Each channel can be controlled individually via the KNX bus and operating states, position and fault messages for the connected drives/blinds can be transmitted.

3. Declaration of conformity



This product complies with the essential requirements. The Declaration of Conformity concerning this product is available on our website: www.vestamatic.com

4. Technical data

General		
Operating temperature:	°C	dry rooms (free of condensation) +5 °C bis +45 °C pollution index 2
Mounting:		DIN rail 35 mm or equivalent
Dimensions (W × H × D):	mm	72 × 90.5 × 62 (4 SU)
Weight:	g	200
Binary inputs:		8
Motor outputs:		4

NOTE!
The connection and the wiring of the local operation units and the KNX bus must be carried out according to the current SELV requirements.

Connection data		
Supply voltage:	VAC	230 ± 10 %
	Hz	50
Cable:		2 wires (single or fine wire)
Wire cross-section:	mm ²	2.5
Terminal tightening torque:	Nm	0.4
Fuse protection:	A	10
IP class:	IP	20
Electrical protection class:		III

Motor connection (outputs)		
Motor type:	VAC	230
	A	max. 2.5 (2 end switches)
Cable:		2 wires (single or fine wire)
Wire cross-section:	mm ²	2.5
Terminal tightening torque:	Nm	0.4

Local operation (inputs)		
Voltage:	VDC	12
Current:	mA	2
Cable:		3 wires (single or fine wire)
Wire cross-section:	mm ²	1.5
Terminal tightening torque:	Nm	0.25
Cable length:	m	max. 100
Operation via:		push button or switch potential-free contact

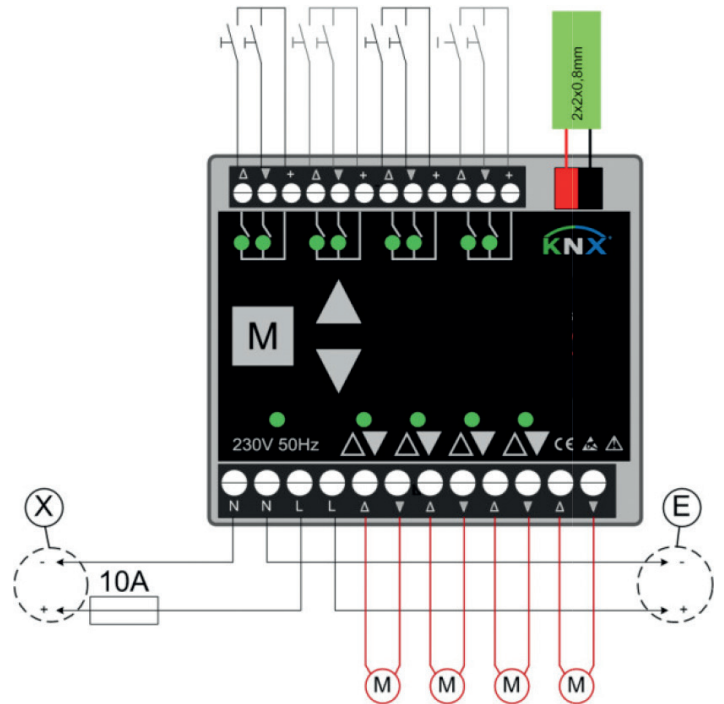
KNX		
Bus connector:	mm	Ø 0.5 ... 0.8 (single wire)
Bus cable:		according to KNX standard

5. Installation / Mounting

To mount the main module proceed as follows:
– Place the main module on the DIN rail in the desired position and lock in.

To mount the extension module proceed as follows:
– Disconnect all power supplies from the main module (supply voltage and KNX bus voltage).
– Mount the supplied connector on the left side of the extension module.
– Remove the protective sticker on the right side of the main module.
– Place the extension module on the DIN rail on the right side of the main module.
– Push the extension module to the left against the main module – ensure that the connector is inserted precisely into the main module.
– Lock in the extension module to the DIN rail.
– Secure the two modules against disconnection using the supplied connector.

5.1 Electrical connection – Overview



Wiring diagram

X Power
E to extension module (optional)

Motor

Connect motors as follows:

Motor connection terminals	Destination
Δ / ▽	“UP / DOWN” Motor 1
Δ / ▽	“UP / DOWN” Motor 2
Δ / ▽	“UP / DOWN” Motor 3
Δ / ▽	“UP / DOWN” Motor 4

NOTE!
If the direction of rotation is incorrect (test via test buttons) adjust the motor connection.

KNX-Bus

Connect the KNX bus connector to the KNX bus.

Supply voltage

Connect supply voltage to the motor control unit as follows:

Power	
L	Phase 230VAC
N	Neutral conductor

Device coupling (optional)

The electrical connection between main and extension module is made via the connectors on the sides of the devices (see chapter 5, “Installation”).

Local operation

NOTE!
It is possible to connect one push button to several local operation inputs.
This push button may only be connected within a device combination (main + extension module).

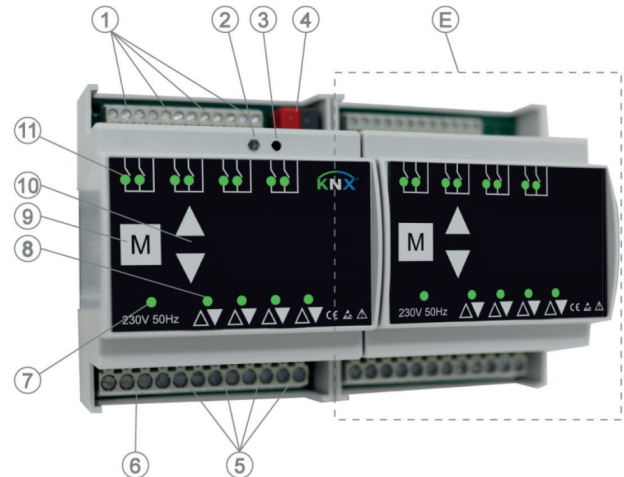
Local operation inputs	Destination
Δ	Push button “UP”
▽	Push button “DOWN”
+	Push button

5.2 Configuration

- The configuration of the motor control unit is done via ETS from version 4.0 of KNX-Association.

6. Design and function

6.1 Complete overview



Location of control and display elements

- | | |
|---|---------------------------------------|
| 1. Push button local operation- (UP/DOWN/+) | 7. Status display ready for operation |
| 2. Programming LED | 8. Status display motor output |
| 3. Programming button | 9. Test button "M" |
| 4. KNX bus connector | 10. Test buttons (UP/DOWN) |
| 5. Motor connection terminals | 11. Status display local operation |
| 6. Connection terminal supply voltage | E Extension module |

5.3 Commissioning / Test run

For commissioning of the motor control unit proceed as follows:

- Check the condition of the device and the tight attachment of the terminals and connections.
- Switch on the supply voltage.
- Check supply voltage and status display on the device.
- Check function and direction of rotation by means of test buttons – if the direction of rotation is incorrect, adjust the motor connection.
- Check the local operation – if the function is reversed, correct the local operation connection.
- Move blinds, awnings, large louvre blades, roller shutters, windows, light domes, etc. into a safe end position.
- Mount all protective covers.
- Maintain system documentation and, if necessary, affix labels and/or signs.

6.2. Control and display elements

Status display ready for operation

- Lights continuously "GREEN" when the device is ready for operation.

Programming button

- Activates/deactivates the programming mode (supply voltage and KNX bus voltage must be available).

Programming LED

- Lights continuously "RED" when the programming mode is activated.

Test button "M"

- Used to select a motor output for direct operation via the test buttons UP/DOWN (test mode).
If a motor output is in test mode, the corresponding status LED lights continuously "GREEN".
- By briefly pressing the "M" button all 4 channels are switched to the test mode.
- Each additional operation switches through the individual channels 1, 2, 3 and 4.
- After 6 operations all channels are in normal mode again.
- Additionally the "M" button can be used to reset the device (for further information see chapter 8., "Troubleshooting").

Test buttons UP / DOWN

- To control the motor outputs in test mode.
- Short key press (< 0.4 s) > step / stop.
- Long key press (> 0.4 s) > movement command end position.
- Additionally the test buttons UP/DOWN can be used to re-learn the motor runtimes (for further information see chapter 8., "Troubleshooting").

Status display motor output

- LED is off = channel is in normal-/automatic mode.
- LED flashes "GREEN" = automatic lock is active (for further information see software-helpfile).
- LED lights continuously "GREEN" = channel is in test mode, control via test buttons is activated.
- LED flashes "RED" = security lock is active (for further information see software-helpfile).
- LED lights continuously "RED" > Motor error (for further information see chapter 8., "Troubleshooting").

Status display local operation

- The corresponding LED (UP/DOWN) lights "GREEN" as long as the button of the local operation is pressed.

6.3. Local operation

The local operation can be installed as push button or switch. If no adjustments have been made in the ETS configuration, the functionality is according to the table beside:

Function	Control
"Upper end position"	long key press "UP" (> 0.4s)
"Lower end position"	long key press "DOWN" (> 0.4s)
"Shading position"	long key press "DOWN" (> 0.4s), immediately followed by short key press "DOWN" (< 0.4s)
"STOP"	short key press in opposite direction of current movement (< 0.4s)
"Move slats"	short key press when stationary (< 0.4s)

7. Operation

7.1 Manual operation

The manual operation is done via the local operation inputs of the motor control unit by means of push buttons or switches (see chapter 6.3, „Local operation“) and/or via the KNX system (see software-helpfile).

7.2 Automatic operation

Automatic operation is performed according to the parameters specified in the ETS configuration. The control command received via the KNX bus are considered.

8. Troubleshooting



NOTE!

If the listed troubleshooting procedures do not lead to the desired result, please contact the customer service.

Fault	Rectification
<ul style="list-style-type: none"> Motor error – Status LED for the corresponding motor lights continuously “RED”. 	<ul style="list-style-type: none"> Check motor connection, motor cable, and motor.
<ul style="list-style-type: none"> Device does not communicate via KNX. 	<ul style="list-style-type: none"> Check supply voltage (LED ready for operation must light continuously „GREEN“). Check KNX bus voltage (programming LED can be switched on and off via the programming button).
<ul style="list-style-type: none"> No local/manual commands are executed. 	<ul style="list-style-type: none"> Check whether the corresponding output is in test mode (status LED for the output lights continuously “GREEN”) – press the “M” button several times to exit the test mode (all status LEDs of the outputs do not light continuously “GREEN”). Check whether a security lock is active (status LED for the output flashes “RED”) – the triggering and reset conditions for a security lock are defined in the ETS configuration by the system integrator. Check local operation inputs and/or KNX communication.
<ul style="list-style-type: none"> No central/automatic commands are executed. 	<ul style="list-style-type: none"> Check whether the corresponding output is in test mode (status LED for the output lights continuously “GREEN”) – press the “M” button several times to exit the test mode (all status LEDs of the outputs do not light continuously “GREEN”). Check whether a security lock is active (status LED for the output flashes “RED”) – the triggering and reset conditions for a security lock are defined in the ETS configuration by the system integrator. Check whether an automatic lock is active (status LED for the output flashes “GREEN”) – the triggering and reset conditions for an automatic lock are defined in the ETS configuration by the system integrator. Check the KNX communication.

9. Re-learn motor runtimes

If runtimes have been learned incorrectly, or if the runtimes have changed considerably (e.g. by a motor change), the stored runtimes can be deleted and re-learned.

- Switch motor output to test mode by pressing test button “M” (status LED of the output is permanently “GREEN”).
- Press the buttons “UP” and “DOWN” simultaneously for at least 5s, ⇨ the runtimes will be re-learned during the next position movement.

Reset the device to the factory setting

A reset must be carried out for resetting the device to the factory setting.



NOTE!

The reset will clear the entire configuration.

- Press test button “M” (on the main or on the extension module) for at least 10s (all status displays of the motor outputs flash alternately “RED” and “GREEN”).
- Press test button “M” again within 10s and keep it pressed for at least 10 more seconds (all status LEDs of the motor outputs light continuously “RED”).
- Press test button “M” again within 10s and keep it pressed for at least 10 more seconds (the device is reset to factory settings).
- The restart of the device is shown by flashing the status LEDs of inputs and motor outputs.

10. Maintenance

The device is maintenance free.

11. Warranty

Principally, the General Terms and Conditions of the manufacturer, Vestamatic GmbH apply. The terms and conditions are part of the sales documents and handed over to the operator upon delivery. Liability claims for personal or material damages are excluded when they can be attributed to one or more of the following causes:

- Unintended use of the product.
- Opening of the product by the customer.
- Improper installation, commissioning, or operation of the product.
- Non-compliance with the technical specifications.
- Non-observance of the safety provisions and instructions of the Operating Instructions.
- Operation of the product with improperly installed connections, defective safety devices or improperly installed safeguards.
- Modifications to the product.

12. Disposal of waste

The disposal of electrical equipment and batteries in household waste is strictly forbidden.



The symbol (dustbin crossed out, in line with WEEE Appendix IV) indicates separate collection of electrical and electronic products in EU countries. Do not dispose of the device or battery in your household waste. Ask your town or local council about the return and collection systems available in your area to dispose of this product.

13. Service/Contact

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