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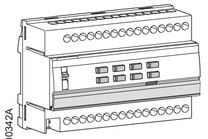

6LE000342A

TP RF 230V Bus 30V

TYM6..
Output 16A C-Load adapted / shutter/blind

TXM6..
Output 16A C-Load adapted / shutter/blind

Safety instructions

Electrical equipment may only be installed and assembled by a qualified electrician in accordance with the relevant installation standards, guidelines, regulations, directives, safety and accident prevention regulations of the country.

Failure to comply with these installation instructions may result in damage to the device, fire or other hazards.

Hazard due to electric shock. Disconnect before working on the device or load. Take into account all circuit breakers that supply dangerous voltages to the device or load.

Hazard due to electric shock. The device is not suited for safe disconnection of the mains supply.

Hazard due to electric shock on the SELV/PELV installation. Not suitable for switching SELV/PELV voltages.

Connect one motor per output only.

Use drives with mechanical or electrical final position switches only. Check final position switches for correct adjustment. Observe motor manufacturer's data. The device could get damaged.

Do not connect any three-phase motors. The device could get damaged.

Observe the motor manufacturer's data regarding change-over time and max. switch-on time (ED).

These instructions are an integral component of the product and must be retained by the end user.

Design and layout of the device

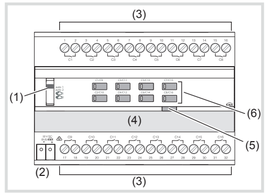

Fig. 1: Example device variant 16/8gang

(1) Slide switch **auto1/auto2**/☜1/☜2
(2) KNX bus connection terminal
(3) Connections of loads
(4) Labelling field
(5) Illuminated programming button
(6) Operation button for manual operation for each pair of outputs with status LED

With variants 20/10gang the basic design corresponds to the 16/8gang device variant.

Function

System information

This device is a product of KNX system and corresponds to the KNX guidelines. Detailed specialised knowledge obtained from KNX training courses is required for understanding. The planning, installation and commissioning of the device is carried out with the help of KNX-certified software.

Systemlink commissioning:

The function of the device is software-dependent. The software is to be taken from the product database. You can find the latest version of the product database, technical descriptions as well as conversion and additional support programmes on our website.

Easylink commissioning:

The function of the device is configuration-dependent. The configuration can also be done using devices developed specially for simple setting and start-up.

This type of configuration is only possible with devices of the easylink system. Easylink stands for easy, visually supported start-up. Preconfigured standard functions are assigned to the in/outputs by means of a service module.

Functional description

The device receives telegrams from sensors or other controllers via the KNX installation bus and switches electrical loads with its independent relay contacts. The devices are particularly suitable for capacitive loads and are designed for high making currents.

Correct use

- Switch electrical loads of 230 V AC with potential-free contacts.
- Switching electrically operated motors of 230 V AC for blinds, shutters, awnings and similar hangings.
- Mounting on DIN rail according to DIN EN 60715 in the distribution box.

Product characteristics

- manual activation of the outputs on the device possible, building site operation
- Status display of the outputs on the device
- Scene function
- Forced position by higher-level controller
- Connection of various external conductors possible.

Functions in switch operation:

- Time switching functions

Functions in roller shutter/blind operation:

- Position can be started directly
- Slat position directly controllable
- Feedback of operating state, shutter position and slat adjustment
- 3 Alarms

Operation

Manual operation switch on/off

Bus voltage supply is present.

- Push switch (1) to position ☜1/☜2.

  Manual operation is switched on, the outputs can be controlled using the operation buttons (6) independently of each other.

  ☜1 activates the control of the outputs **C1** .. **C8** (16gang) resp. **C1** .. **C10** (20gang).

  ☜2 activates the control of the outputs **C9** .. **C16** (16gang) resp. **C11** .. **C20** (20gang).

During manual operation, the controller is deactivated via the KNX bus.

Systemlink commissioning:
Depending on the programming, the manual operation is activated permanently or for a time period configured via the application software. If the manual operation is blocked via the application software, no activation takes place.

Or:

- Move switch (1) to position **auto1/auto2**.

  The manual operation is switched off. Operation takes place solely via the KNX bus. The output adopts the position predefined by the bus controller. The switching status is displayed via the status LED of the operation button (6).

  auto 1 displays the status of the outputs **C1** .. **C8** (16gang) resp. **C1** .. **C10** (20gang). **auto 2** displays the status of the outputs **C9** .. **C16** (16gang) resp. **C11** .. **C20** (20gang).

Operating outputs in manual operation

Operation takes place per output by briefly pressing the operation button repeatedly (table1).

CAUTION!

Risk of destruction due to simultaneous pressing of the buttons for UP and DOWN if a motor is connected when the motor is in unprogrammed state!

Motors, hangings and the device may be destroyed!

Always only press one button in manual operation for unprogrammed devices.

Status	Behaviour when button pressed briefly
Switching operation	
Load is switched off. Status LED of the button (6) is off.	Switch ON the connected load. Status LED of button (6) lights up.
Load is switched on, status LED of the button (6) lights up.	Switch OFF the connected load. LED goes out.
Roller shutter/blind operation	
Output is in standby, status LED of the button (6) is off.	Movement operation starts. Status LED of the button (6) lights up. If the roller shutter/blind is in final position, the button opposite must be pressed to move the shutter/blind.
Output active, status LED of the button (6) lights up.	Movement operation stops, LED goes out.

Table 1: Manual operation

Information for electricians

Installation and electrical connection

DANGER!

Touching live parts can result in an electric shock!

An electric shock can be lethal!

Disconnect the connecting cables before working on the device and cover all live parts in the area!

CAUTION!

Impermissible heating if the load of the device is too high!

The device and the connected cables may get damaged in the connection area!

Do not exceed the maximum current carrying capacity!

CAUTION!

Risk of destruction if parallel connection of several motors on one output!

Final position switches could fuse together. Motors, hangings and the device may be destroyed!

Only connect one motor per output!

Installing the appliance

Observe temperature range. Provide sufficient cooling.

- Mount device onto DIN rail in accordance with DIN EN 60715.

Connect device

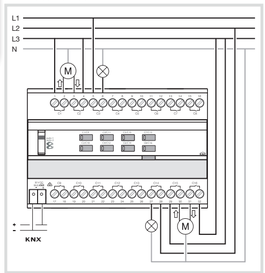

Fig 2: Device connection

- Connect bus cable via connecting terminal (2).

Connecting loads to be switched

The output is configured as switching output.

- Connect load to the outputs of the device according to figure (figure 2).

Connecting blind drives

The two adjacent relay outputs **C1**/**C2**, **C3**/**C4**, **..** each form a blind output for blind drives. Each left relay output **C1**, **C3**, **C5**, **..** is designated for the UP direction, and each right relay output **C2**, **C4**, **C6** **..** is designated for the DOWN direction. In manual operation, the blind is moved UP and DOWN using the corresponding operation buttons.

Two outputs are configured as blind output.

- Connect drives according to figure (figure 2). While doing so, use the same phase (external conductors).

Start-up

Systemlink: Loading physical address and application software

The switch for manual operation (1) is in position **auto1/auto2**.

- Switch on bus voltage.
- Press programming button (5).

  The button lights up.

The button does not light up, no bus voltage is present.

- Load the physical address into the device.

  Status LED of the button goes out.
- Load application software.
- Note down the physical address on the labelling field (4).

Easylink:

Information on the system configuration can be taken from the extensive description of the service module easylink.

Start up the device.

- Switch on mains voltage on the outputs.

Determine operation time and slat adjusting time

In blind/roller shutter operation, the operation time for positioning the sunshade is important. The position is calculated based on the operation time. The slat adjusting time for slat blinds, determined by the design, is part of the total operation time. The opening angle of the slats is therefore set as operation time between opened and closed position.

The operation time for UP is normally longer than the operation time for DOWN and must be measured separately if necessary

- Measure UP and DOWN operation time of the hanging.
- Measure slat adjusting time between OPEN and CLOSED.
- Enter measured values into the parameter setting – **running time**... or **slat step time**.

Functional test

The functionality of the outputs is displayed via the status LED of the operation button (6).

☜**1/auto 1** displays the status of the outputs **C1** .. **C8** (16gang) resp. **C1** .. **C10** (20gang).

☜**2/auto 2** displays the status of the outputs **C9** .. **C16** (16gang) resp. **C11** .. **C20** (20gang).

Appendix

Technical data

Supply voltage KNX	DC 21…32 V SELV
Breaking capacity	µ16A AC1 230V~
Incandescent lamps	2300 W
HV halogen lamps	2300 W
Conventional transformers	1500 VA
Electronic transformers	1500 W
Fluorescent lamps: - without ballast - with electronic ballast (mono/duo) - with conv. ballast, parallel circuit	 1000 W 20 x 36 W 1000 W, 130 µF
Energy-saving/LED lamps	25 x 18 W
Switching current at cos Φ = 0.8	max. 16 A
Minimum switching current 230 V AC	100 mA
Interlock time for changing direction of travel	software-dependent
Operating altitude	max. 2000 m
Degree of contamination	2
Surge voltage	4 kV
Degree of protection of housing	IP 20
Degree of protection of housing under front panel	IP30
Impact protection	IK 04
Overvoltage class	III
Operating temperature	-5° ... +45°C
Storage/transport temperature	-20 … +70 °C
Maximum switching cycle rate at full load	6 switching cycle/minute
Connection capacity screw terminals rigid flexible, with conductor sleeve	 0.5 mm²… 6 mm² 0.5 mm²… 4 mm²
max. tightening torque	0.5 Nm
Screw print type	PZ1
Standards	EN50491-3 ; EN60669-2-1

Variants 16/8gang

Power dissipation	max. 20 W
Permissible highest current strength per device	max. 176 A
Own consumption on the KNX bus: - typical - in standby	 5 mA 3 mA
Dimension	8 TE, 8 x 17.5 mm

Variants 20/10gang

Power dissipation	max.25 W
Permissible highest current strength per device	max. 200 A
Own consumption on the KNX bus: - typical - in standby	 5 mA 3 mA
Dimension	10 TE, 10 x 17.5 mm

Troubleshooting

Manual operation not possible

Cause 1: Switch (1) not moved to ☜1/☜2.

Move switch to ☜1/☜2.

Cause 2: Manual operation has not been enabled (systemlink).

Enable manual operation via application software.

Bus operation is not possible

Cause: Bus voltage is not present.

Check bus connection terminals for correct polarity.

Check bus voltage by briefly pressing the programming button (5), red LED lights up if bus voltage is present.

Cause 2 : Manual operation is active. Switch (1) is in position ☜1/☜2.

Move switch (1) to position **auto1/auto2**.

Shutters/blinds do not move to the final position

Cause: Operation time for the shutters/blinds set incorrectly.

Check operation times. Measure again and reprogram if necessary.

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