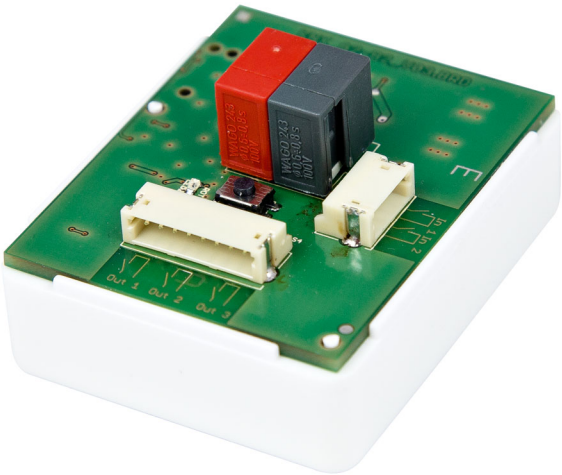
KNX A3-B2
Door Operator Control Module

Item number 70391



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Installation and Adjustment

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This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

Clarification of signs used in this manual

Safety advice.

Safety advice for working on electrical connections, components, etc.

DANGER! ... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.

WARNING! ... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.

CAUTION! ... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.

ATTENTION! ... indicates a situation which may lead to damage to property if it is not avoided.

ETS In the ETS tables, the parameter default settings are marked by underlining.

1. Safety and operating instructions

Installation, testing, operational start-up and troubleshooting should only be performed by an authorised electrician.

CAUTION!
Live voltage!

- Inspect the device for damage before installation. Only put undamaged devices into operation.
- Comply with the locally applicable directives, regulations and provisions for electrical installation.
- Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.
Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.
Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

For information on installation, maintenance, disposal, scope of delivery and technical data, please refer to the installation instructions.

2. Description

The **Door operator control module KNX A3-B2** has three outputs for door control and two binary inputs.

Functions:

- **3 outputs** for door operation (impulse or dead-man mode)
- **2 binary inputs** for the bus functions switches, toggle switches, blinds, shutters, marquees, windows, dimmers, 8 but encoders, temperature encoders, brightness encoder, scenes

3. Commissioning

Configuration is made using the KNX software as of ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on **www.elsner-elektronik.de**.

After the bus voltage has been applied, the device will enter an initialisation phase lasting approx. 5 seconds. During this phase no information can be received or sent via the bus.

3.1. Addressing the equipment

The equipment is delivered with the bus address 15.15.250. Another address can be programmed using the ETS.
For this purpose there is a button with a control LED on the unit.

4. Transmission protocol

Units:

Time in seconds
Dimming in percent
Temperature in 0.1°C
Brightness in kLux

4.1. List of all communications objects

EIS types:

1 1 / 0 switch
5 Floating decimal value
6 8-bit value

Abbreviation flags:

R Reading
W Writing
C Communication
T Transmission

No.	Text	Function	DPT	Length (byte)	Flags
0	Output 1 - Impulse [In Defined Open/Close/Stop mode: Output 1+2 - Impulse (1=open | 0=close)]	Input	1.001	1	RC
1	Output 2 - Impulse	Input	1.001	1	RC
2	Output 3 - Impulse [In Defined Open/Close/Stop mode: Output 3 - Impulse (1 or 0)]	Input	1.001	1	RC
11	Input 1 Extended	Input/Output	1.008	1	RWCT
12	Input 1 Short	Output	1.010	1	R CT
13	Input 1 Switching	Input/Output	1.001	1	RWCT
14	Input 1 Relative dimming	Input/Output	3.007	1	RWCT
15	Input 1 Encoder 8 bit	Output	5.*	1	R CT
16	Input 1 Encoder Temperature	Output	9.001	2	R CT
17	Input 1 Encoder Brightness	Output	9.004	2	R CT
18	Input 1 Scene	Output	18.001	1	R CT
19	Input 2 Extended	Input/Output	1.008	1	RWCT
20	Input 2 Short	Output	1.010	1	R CT
21	Input 2 Switching	Input/Output	1.001	1	RWCT

No.	Text	Function	DPT	Length (byte)	Flags
22	Input 2 Relative Dimming	Input/Output	3.007	1	RWCT
23	Input 2 Encoder 8 bit	Output	5.*	1	R CT
24	Input 2 Encoder Temperature	Output	9.001	2	R CT
25	Input 2 Encoder Brightness	Output	9.004	2	R CT
26	Input 2 Scene	Output	18.001	1	R CT
27	Software version	Readable	217.001	2	R C

5. Parameter setting

The parameter defaults are underlined.

5.1. General settings

Set themaximum telegram rate:

Maximum message rate	1 • 2 • 5 • 10 • 20 messages per second

5.2. Door operator

You define the operating mode for the outputs in the **Door operation** menu.

Operating mode	• Defined Open/Close/Stop • Impulse mode • Dead-man mode

If only one door is connected to the three outputs (two- or three-button operation, output 1 = open, output 2 = close, if needed output 3 = stop), select *Defined Open/ Close/Stop* mode or *Impulse mode.*
If a door is connected to each output (single-button operation), select *Impulse mode* or *dead-man mode.*

Defined Open/Closed: (1 door)

The outputs 1 and 2 react to the object (are assigned to the object) *Output 1+2 - Impulse*. If the object value is 1, then output 1 receives an impulse (closes for 1s). If the object value is 0, then output 2 receives an impulse (closes for 1 s).

Output 3 is asigned to the object *Output 3 - Impulse*. The output reacts as soon as an object has been received (no matter which value).

Select whether output 3 is a normally closed or normally open contact (duration of opening/closing 1 second).

Operating mode	**Defined Open/Closed/Stop**
Allows control of one door	

When receiving "Output 1 + 2 - Impulse" when object value = 1	Output 1 Impulse
When receiving "Output 1 + 2 - Impulse" when object value = 0	Output 2 Impulse
When receiving "Output 3 - Impulse" when object value = 0 or 1	Output 3 Impulse
Output 3 relay contact	normally closed • normallly open

Impulse mode: (1, 2 or 3 doors)

Output 1 reacts to the (is assigned to the object) *Output 1 - Impulse* and receives an impulse (closes for 1 s) when the object value is 1.
Output 2 reacts to the (is assigned to the object) *Output 2 - Impulse* and receives an impulse (closes for 1 s) when the object value is 1.
Output 3 reacts to the (is assigned to the object) *Output 3 - Impulse* and receives an impulse (closes for 1 s) when the object value is 1.

No further settings can be made for the outputs.

Operating mode	**Impulse mode**
Allows control of up to three doors	
When receiving "Output 1 - Impulse" when object value = 0	nothing
When receiving "Output 1 - Impulse" when object value = 1	Output 1 Impulse
When receiving "Output 2 - Impulse" when object value = 0	nothing
When receiving "Output 2 - Impulse" when object value = 1	Output 2 Impulse
When receiving "Output 3 - Impulse" when object value = 0	nothing
When receiving "Output 3 - Impulse" when object value = 1	Output 3 Impulse

Dead-man mode: (2 doors)

Output 1 react to the object (is assigned to the object) *Output 1 - Impulse*. At value = 1, the output closes; at value 0, it opens.

Output 2 react to the object (is assigned to the object) *Output 2 - Impulse*. At value = 1, the output closes; at value 0, it opens.

Output 3 react to the object (is assigned to the object) *Output 3 - Impulse* and gets an impulse (closes for 1 second) at object value 1.

In addition, monitoring can be set. After the monitoring period, the object is set to 0 (unless a new 1 signal is received), i.e. the output is opened:

Operating mode	**Dead-man mode**
Allows control of one or two doors	
When receiving "Output 1 - Impulse" when object value = 1	Output 1 closed
When receiving "Output 1 - Impulse" when object value = 0	Output 1 open
When receiving "Output 2 - Impulse" when object value = 1	Output 2 closed
When receiving "Output 2 - Impulse" when object value = 0	Output 2 open
Monitoring the control objects use	no • yes
Monitoring period for objects in seconds	1...60; 2

5.3. Input 1 / 2

You define the function of the two inputs in the "Input 1" or "Input 2" menu. The inputs are independent of the outputs.

Bus function	• Switch • Changeover switch • Blind • Roller blind • Awning • Window • Dimmer • 8-bit encoder • Temperature encoder • Brightness encoder • Scenes

Input as switch:

If a button with switch function is assigned to the input, select the bus function "Switch" and specify which value is sent when pressing/releasing the button and when it will be sent.

Function	**Switch**
Command when pressing the button	• send 0 • send 1 • do not send telegram
Command when releasing the button	• send 0 • send 1 • do not send telegram

Send value	• no change • for change to 1 • for change to 0 • for change and cyclical • for change to 1 and cyclical • for change to 0 and cyclical
Cycle *(if sent cyclical)*	5 s • 10 s • 30 s • 1 min • 2 min • 5 min • 10 min • 20 min • 30 min • 1 h • 2 h

Input as changeover switch:

If a button with switch function is assigned to the input, select the bus function "Changeover Switch" and specify if the button should switch when pressed/released.

Function	**Changeover Switch**
Command when pressing the button	• Switching • do not send telegram
Command when releasing the button	• Switching • do not send telegram

Input to shutter, blinds, awning or window control:

If the input to the drive control is used via the bus, select the bus function "shutter", "awning", "blinds" or "window" and specify the button function and control mode.

Function	**Shutter / blinds / awning / window**	
Button function	Up • Down Up • Down • Up/ Down On • Off • On/Off Open • Closed • Open/Closed	(shutter) (blinds) (awning) (window)
Control mode*	• Standard • Standard inverted • Comfort mode • Dead man's switch	

Input as dimmer:

If the input is used as a dimmer, select the bus function "Dimmer" and specify the button function, time interval (switching/dimming) and if requested, the repeat interval for a long button press.

Function	**Dimmer**
Button function	brighter • darker • brighter/darker
Time between switching and dimming (in 0.1 s)	1...50; 5
Repeat the dimm command	no • yes

Repeat the dimm command for a long button press *(if dimm command is repeated)*	every 0.1 s • every 2 sec; every 0,5 sec
Dim by *(if dimm command is repeated)*	1,50% • 3% • 6 % • 12,50% • 25% • 50%

Input 8 bit encoder:

If the input is to be used as an 8bit encoder, select the "8 bit encoder" bus function and specify which value will be sent.

Function	**8 bit encoder**
Value	0...255

Input as temperature encoder:

If the input is used as a temperature encoder, then choose the bus function "Temperature encoder" and specify which value between -30°C and +80°C will be sent. By sending a temperature value, the target value of the temperature control may be changed for example.

Function	**Temperature encoder**
Temperature in 0.1°C	-300...800; 200

Input as brightness encoder:

If the input is assigned and shall be used as a brightness encoder (e.g. threshold value of a sun sensor), select "brightness encoder" and specify which value will be sent.

Function	**Brightness encoder**
Brightness in klux	0...100; 20

Input for scene control:

If scenes are called and saved with the input, then choose the "Scenes" bus function and specify the saving, time difference (call/save) and scene number.

Function	**Scenes**
Button operation	• without saving • with saving
Time between calling and saving in 0.1 seconds *(only if selected "with saving")*	1...50; 10
Scene No.	0...127

Control modes for drive control

Standard:

If briefly operated, the drive will move incrementally or stops. If operated longer, the drive will move up to the end position. The time difference between "short" and "long" is set individually.

Control mode	**Standard**
Behavior during button operation: short = stop/increment long = Up or Down	
Time between short and long in 0.1 seconds	1...50; 10

Standard inverted:

When pushed shortly, the drive moves up to the end position. When pushed for longer, the drive moves incrementally or stops. The time difference between "short" and "long" and the repeat interval is set individually.

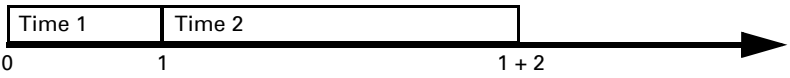
Control mode	**Standard inverted**
Behavior during button operation: short = Up or Down long = Stop/Step	
Time between short and long in 0.1 seconds	1...50; 10
Repeat the step command for a long button press	every 0.1 s • every 2 sec; every 0.5 sec

Comfort mode:

In the **comfort mode** actuating the button briefly, a bit longer and long will trigger different responses of the drive. The time intervals are set individually.

Short actuation (shorter than Time 1): The drive is positioned step-wise and stopped.
Holding it slightly longer (longer than Time 1, but shorter than Time 1+2): Drive running. Drive stops when the button is released.
Long holding (release after Time 1+2 runs out): Drive moves independently to the end position. The movement can be interrupted by a short tap.

Fig. 1
Time interval comfort mode diagram



Point in time 0: *Actuate of button, start of time 1*
Release before time 1 expired: *step (or stop if drive is moving)*
Point in time 1: *End of time 1, start of time 2 Moving command*

Release after time 1 expired but before time 2 expires:	*Stop*
Release after time 1 + 2 expired:	*Move into end position*

Control mode	**Comfort mode**
Behavior during button operation: Button is pushed and released before time 1 expired = stop/step held longer than time 1 = Up or Down released between time 1 and 1-2= stop released after time 1 +2 = no more stop	
Time 1	0.0s ... • 2 s; 0.4 s
Time 2	0 s • 2 s; 2 s

Dead man's switch:

The drive moves as soon as the button is actuated and stops as soon as the button is released.

Control mode	**Dead man's switch**
Behavior during button operation: Push button = Up or Down command Release button = Stop command	

Questions about the product?

You can reach the technical service of Elsner Elektronik under
Tel. +49 (0) 70 33 / 30 945-250 or
service@elsner-elektronik.de

We need the following information to process your service request:

- Type of appliance (model name or item number)
- Description of the problem
- Serial number or software version
- Source of supply (dealer/installer who bought the device from Elsner Elektronik)

For questions about KNX functions:

- Version of the device application
- ETS version used for the project

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