

## Operating Instructions 4-channel analog output module



### 1. Safety instructions



#### Attention!

- **Electrical equipment must be installed and fitted only by qualified electricians and in strict observance of the applicable accident prevention regulations.**
- **Failure to observe any of the installation instructions may result in fire or other hazards.**
- **Do not connect electronic ballasts or electronic transformers with 1-10 V control input to the outputs.**
- **Do not connect external voltages to the outputs. Connected components must ensure safe separation from other voltages.**
- **Do not connect the GND terminals with terminals of the same designation in the KNX/EIB device (risk of irreparable damage).**

### 2. Function

- The analog output module enlarges a 4-channel KNX/EIB analog output by four analog outputs which can be parameterized by means of software.
- Received data are converted into the following output signals: 0...1 V DC, 0...10 V DC, 0...20 mA DC or 4...20 mA DC.
- With these analog output signals, actuators used for heating, ventilation and air conditioning purposes are enabled to adapt their output variables in acc. with informations received from the bus and to be used within control processes.
- The output variables can be subject to forced control.

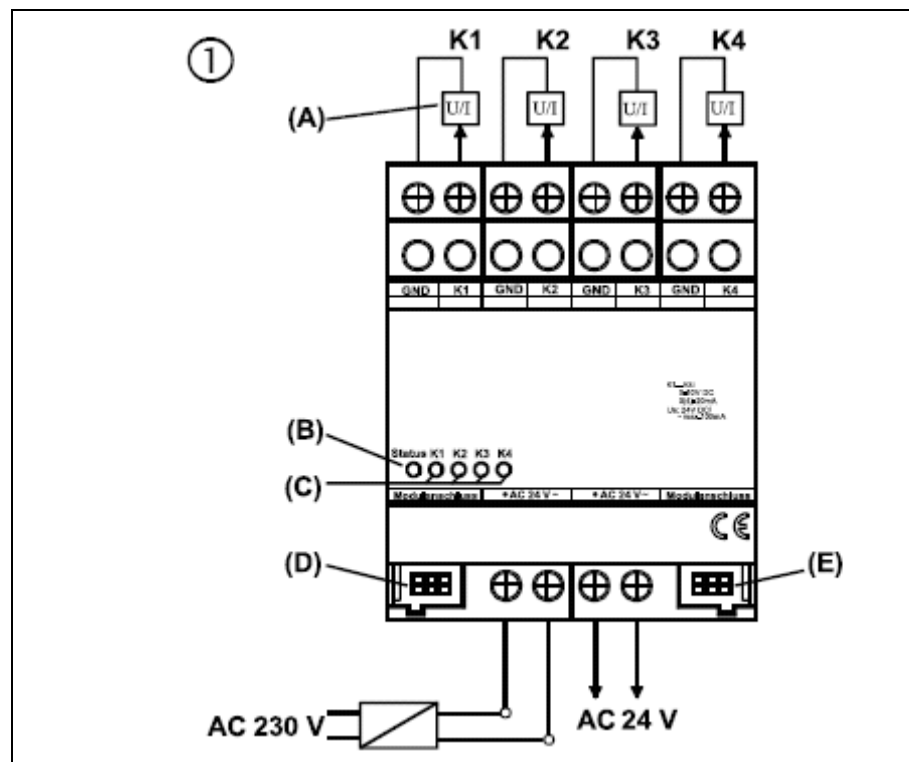
- The module data as such and the forced-control instructions are evaluated in the KNX/EIB analog output
- The analog output module is connected to the KNX/EIB device by means of a system connector supplied with the device.
- Non used outputs can be deactivated.
- Voltage outputs are monitored for short-circuits.
- The output state is indicated by status LED.

### 3. Installation

The device is snap-fastened on a DIN rail 35 x 7,5 mm as per EN 50022. **The analog output module is connected to a KNX/EIB analog output only by means of a 6-pole system connector (supplied with the analog output module).**

The analog output module needs an external 24 V DC power source Ref. no. WSSV10. This unit can also supply the connected KNX/EIB analog output or other devices. For easy connection, there are two pairs of internally connected power supply terminals (marked by a dot “•”).

#### 3.1. Wiring diagramm



## 4. Connection

- GND : reference potential for outputs K1 ... K4  
K1 ... K4 : analog outputs  
AC 24 V : external supply voltage  
(A) : e.g. analog controlling elements, etc.  
(B) : status LED of the analog output module, red  
(C) : status LEDs of the four analog outputs, yellow  
(D) : system connector, 6-pole, for module connection  
(E) : system connector, 6-pole, for future extensions



### ATTENTION!

The GND terminals must not be connected with the terminals of the same designation of an KNX/EIB analog output (risk of irreparable damage!).

### 4.1. Connectable analog actuators



#### SAFETY WARNINGS

- Do NOT connect electronic ballasts or electronic transformers with 1-10 V control input to the outputs.
- Do NOT connect external voltages to the outputs. Connected components must ensure safe separation from other voltages.

- Current outputs may be loaded with 500  $\mu$  max.
- Voltage outputs must be loaded with 1 k $\Omega$  min.
- The GND terminals of outputs K1...K4 are internally connected.
- In the event of a short-circuit between a voltage output K1 ... K4 and GND, the respective output is deactivated.

### 4.2. Installation of analog output module

During the installation of an analog output module the following basic rules must be observed:

- An analog output module can be replaced (e.g. in case of defect) while the system is in operation (disconnect voltage supply from module!). After the replacement, the analog output makes a reset after abt. 25 s. This action re-initializes all outputs of the analog output and of the connected analog output module and resets them to their original state.
- Removal or addition of modules without adapting the project and subsequent downloading into the analog output is not permitted as this will result in system malfunctions.

## 5. Status LED

### 5.1. Device status

Commissioning of the module

- On : Module ready for operation (self-test O.K).
- Quickly blinking : Module initialization in progress
- Slowly blinking : Module not configured (in KNX/EIB device)
- Off : Module initialized and in operation
- Precondition: LED must have been on beforehand!

Normal operation

- On : Module not ready for operation (fault)
- Off : Modul initialized and in operation.
- Precondition: LED must have been on beforehand!

Slowly blinking = 1/s; quickly blinking = 2/s

#### **Output signals K1 ... K4 (yellow):**

- LED off : output signal is equal to zero
- LED on : output signal is greater than zero

## 6. Technical Data

### Power supply

Supply voltage :	AC 24 V $\pm$ 10 %
Current consumption :	120 mA max.
Current consumption at system connector :	6 mA

Ambient temperature : -	5 °C ... +45 °C
Storage/transport temp. :	-25 °C ... +70 °C

### Humidity

Ambient/storage/transport :	93 % r.h. max., no condensation
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Protective system :	IP 20 as per EN 60529
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Installation width :	4 modules / 72 mm
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Weight :	approx. 155 g
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### Connections

Outputs, power supply :	screw terminals
single-wire :	0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>
stranded wire (without ferrule) :	0.34 mm <sup>2</sup> to 4 mm <sup>2</sup>
stranded wire (with ferrule) :	0.14 mm <sup>2</sup> to 2.5 mm <sup>2</sup>

Connection with KNX/EIB device : 6-pole system connector

### Analog outputs

Number :	4
Evaluable sensor signals :	0 ... 1 V DC, 0 ... 10 V DC, 0 ... 20 mA DC, 4 ... 20 mA DC
Voltage signal load :	> 1 k $\Omega$
Current signal load :	< 500 $\Omega$

**Subject to technical modifications.**

## 7. Guarantee

Our products are under guarantee within the scope of the statutory provisions.

**Please return the unit postage paid to our central service department giving a brief description of the fault:**

ALBRECHT JUNG GMBH & CO. KG

Service-Center

Kupferstr. 17-19

D-44532 Lünen

Service-Line: +(49) 23 55 . 80 65 51

Telefax: +(49) 23 55 . 80 61 65

E-Mail: mail.vka@jung.de

### General equipment

Service-Line: +(49) 23 55 . 80 65 55

Telefax: +(49) 23 55 . 80 62 55


E-Mail: mail.vkm@jung.de

### KNX equipment

Service-Line: +(49) 23 55 . 80 65 56

Telefax: +(49) 23 55 . 80 62 55

E-Mail: mail.vkm@jung.de

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