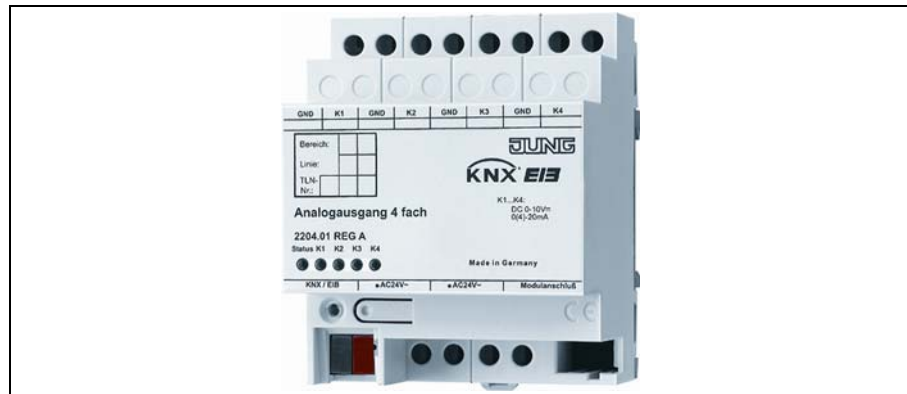# Operating Instructions
Analogausgang 4fach

1.1. Safety instructions

⚠️

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 an analog output module (risk of irreparable damage).

1.2. System information

This device is a product of the KNX/EIB system and complies with KNX directives.

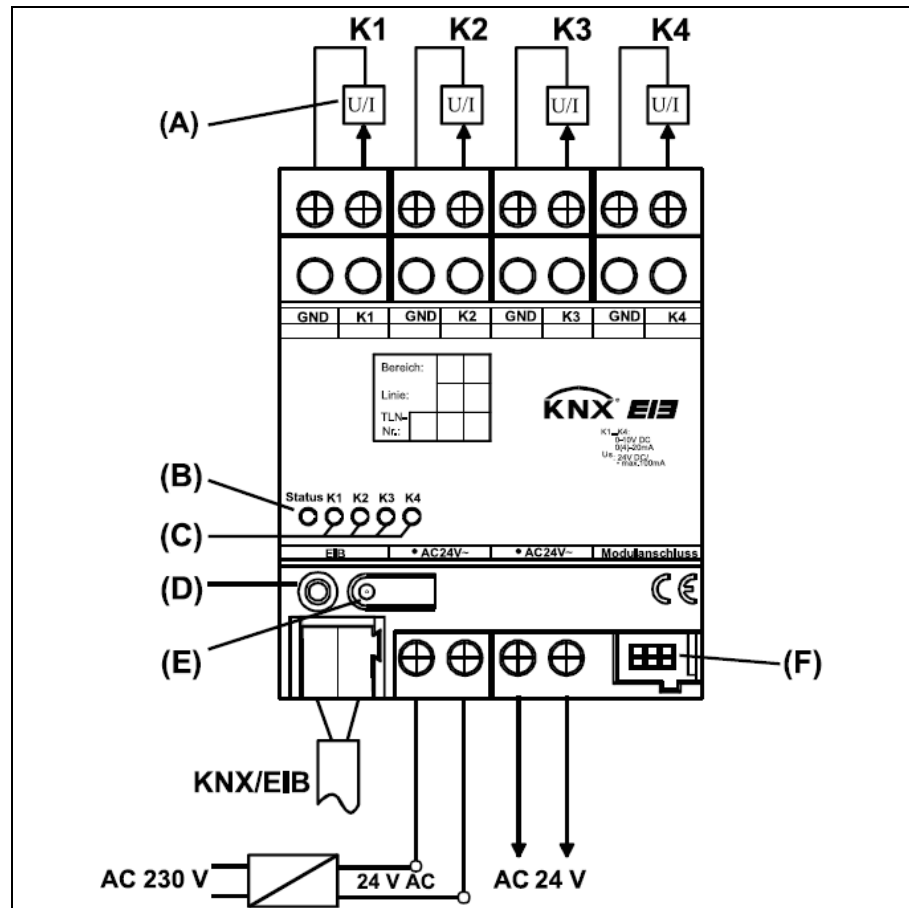Detailed technical knowledge obtained in training courses is a prerequisite to proper understanding.

The functionality 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.

Planning, installation and commissioning of the unit is effected by means of KNX-certified software.

An updated version of the product database and the technical descriptions are available in the Internet at www.jung.de

1.3. Connection

GND : reference potential for outputs K1 ... K4

K1 ... K4 : analog outputs

KNX : KNX-connecting terminal

AC 24 V : external supply voltage

(A) : e.g. analog controlling elements, etc..

(B) : status LED, tri-coloured (red, orange, green)

(C) : status LEDs of the four analog outputs (yellow)

(D) : programming LED

(E) : programming button

(F) : system connector, 6-pole for connection of an analog output module

1.4. Function

The KNX/EIB analog output has 4 analog outputs and converts KNX/EIB-telegrams (1-byte and 2-byte telegrams) into analog output signals.

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 outputs are software-parameterized for voltage or current signals.

Voltage outputs: 0...1 V DC 0...10 V DC

Current outputs: 0...20 mA DC 4...20 mA DC

Spannungsausgänge werden auf Kurzschluss überwacht.

After initial activation, the analog output performs a module scan (status LED: "Orange / On").

As a new decive is not projected by default, the status LED thereafter switches to "Red / Flashing fast".

A connected analog output module signals its ready-for-operation status by switching its status LED to "Flashing fast".

After loading a project into the analog output the status LED switches to "Green / On", and the module switches its status LED off.

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

Connectable analog actuators

- Current outputs may be loaded with 500 Ω max.
- Voltage outputs must be loaded with 1 kΩ 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.
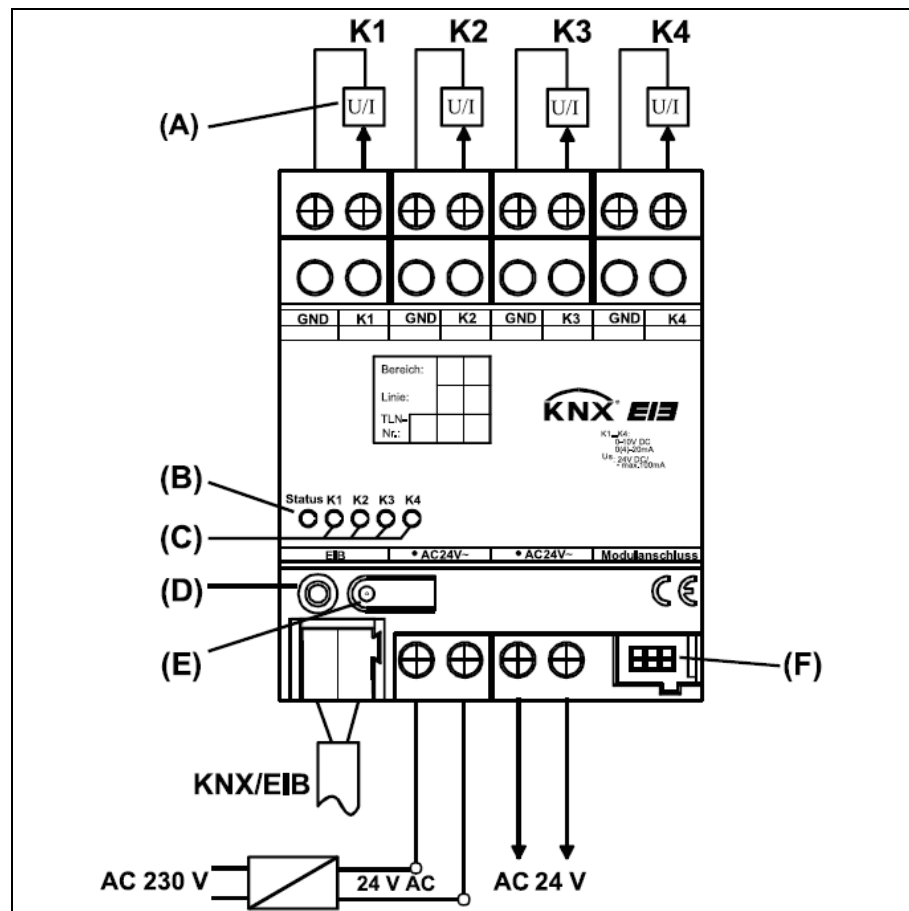
Installation

The device is snap-fastened on a DIN rail 35 x 7,5 mm as per EN 50022.

The device can only be connected to an analog output module by means of a 6-pole system connector (supplied with the analog output module).

The KNX/EIB analog output needs an external 24 V DC power source Art. no. WSSV10.

This unit can also supply a connected analog output module or other devices..

For easy connection, there are two pairs of internally connected power supply terminals (marked by a dot "•").

GND : reference potential for outputs K1 ... K4

K1 ... K4 : analog outputs

KNX : KNX/EIB connecting terminal

AC 24 V : external supply voltage

(A) : e.g. analog controlling elements, etc.

(B) : status LED, tri-coloured (red, orange, green)

(C) : status LEDs of the four analog outputs (yellow)

(D) : programming LED

(E) : programming button

(F) : system connector, 6-pole for connection of an analog output module

1.5. Commissioning

After initial activation, the analog output performs a module scan (status LED: "Orange / On").

As a new decive is not projected by default, the status LED thereafter switches to "Red / Flashing fast". A connected analog output module signals its ready-for-operation status by switching its status LED to "Flashing fast".

After loading a project into the analog output the status LED switches to "Green / On", and the module switches its status LED off.

1.6. Device status (tri-coloured red, orange, green):

OFF :	no power supply
Orange/ON:	module scan via analog outpu
Orange/quickly blinking:	Scan Analogausgangsmodul
Red/slowly blinking:	error: undervoltage at module connection
Red/quickly blinking:	error: no project configuration / false parameters
Green/slowly blinking:	address assignment, module completed, configuration OK
Green/quickly blinking:	parameter download into module
Green/ON:	module scan completed, everything OK

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

2. Appendix

2.1. Technical Data

Power supply	
Supply voltage:	AC 24 V ±10 %
Current consumption :	max. 308 mA
KNX/EIB voltage:	21 - 32 V DC
KNX/EIB power consumption:	typ. 150 mW
Ambient temperature :	93 % r.h. max., no condensation
Storage/transport temp.:	-25 °C bis +70 °C
Humidity	
Ambient/storage/transport:	max. 93% r. F., no condensation
Protective system:	IP 20 as per EN 60529
Installation width :	4 TE / 72 mm
Weight:	approx. 180 g
Analogausgangsmodul 4fach	Art.-Nr.:2204.01 REGAM

Connections
Outputs, power supply   : screw terminals
single-wire   : 0.5 mm2 to 4 mm2
stranded wire (without ferrule) : 0.34 mm2 to 4 mm2
stranded wire (with ferrule)   : 0.14 mm2 to 2.5 mm2
KNX/EIB   : connecting and branch terminal
Analog output module   : 6-pole system connector

Analog inputs
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 kΩ
Current signal load : < 500 Ω
Analog output module supply : DC 24 V via system bus,
80 mA max.

Subject to technical modifications.

3. Acceptance of 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: 0 23 55 . 80 65 51
Telefax: 0 23 55 . 80 61 89
E-Mail: mail.vki@jung.de

Generel equipment

Service-Line: 0 23 55 . 80 65 55
Telefax: 0 23 55 . 80 62 55
E-Mail: mail.vkm@jung.de

KNX equipment

Service-Line: 0 23 55 . 80 65 56
Telefax: 0 23 55 . 80 62 55
E-Mail: mail.vkm@jung.de

CE The CE-sign is a free trade sign addressed exclusively to the authorities and does not include any warranty of any properties.