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KNX SERIES

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INDEX FOR SECTION

KNX SERIES

Vitrum Interfaces EU KNX Series
Datasheet

Aesthetic component

GLASS COLLECTION

cod. 11E01000.90001.00

cod. 11E02000.90001.00

cod. 11E03000.90001.00

cod. 11E04000.90001.00

cod. 11E06000.90001.00

Main features

- 1, 2, 3, 4, 6 buttons command device - KNX programmable
- Touch control based on capacitive technology - KNX programmable
- Hand proximity detection - KNX programmable
- Acoustic feedback signal when button touched - KNX programmable
- RGB back light on button - KNX programmable (colour and intensity)
- Access to local semplified setup menù: program button on the back or combination of key sequence on face plate
- KNX switch functions: on-off, dimmer (quick and slow ramp), shutters

Electrical scheme

Bus + suppl KNX 29 Vdc
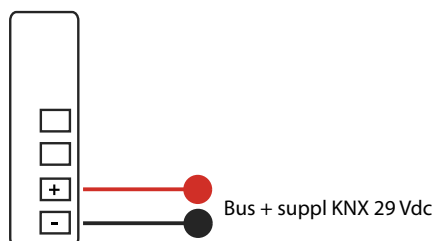
Electronic module

cod. 0KE010020

cod. 0KE020020

cod. 0KE030020

cod. 0KE040020

cod. 0KE060020

Mechanical and aesthetics specifications

Aesthetic component - GLASS COLLECTION
- Dimensions: 126x95 mm
- Thickness (visible outside wall):   8mm
- Button diameter: - 38 mm (1 button)
                                                       - 16 mm (2,3,4,6 buttons)
- Weight: 130 g.
- Back light diameter: 42 mm (1 button)
                                                       18 mm (2, 3, 4, 6 buttons)

Electronic module
- Fitting wall or plasterboard 3 modules Box (EU 503)
- Dimensions: 115x84 mm
- Weight: 98 g.

Technical specifications

General info
- Power feed: Bus KNX 29 Vdc
- Energy consumption: <1,5watt
- IP Class: IP 20
- Storage temperature: -40°/+55C°
- Storage humidity: 10% - 93%
- Operating temperature: -10C°/+45°C
- Operating humidity   20% - 90%
- Raccomanded cable for wiring:
                                              - belden YE00820
                                              - belden YE00906

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Vitrum Interfaces BS KNX Series
Datasheet

Aesthetic component

GLASS COLLECTION

cod. 11B01000.90001.00

cod. 11B02000.90001.00

cod. 11B04000.90001.00
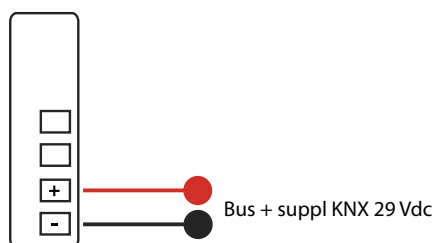
Electronic module

cod. 0KB010020
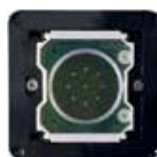
cod. 0KB020020

cod. 0KB040020

Main features

- 1, 2, 4 buttons command device - KNX programmable
- Touch control based on capacitive technology - KNX programmable
- Hand proximity detection - KNX programmable
- Acoustic feedback signal when button touched - KNX programmable
- RGB back light on button - KNX programmable (colour and intensity)
- Access to local semplified setup menù: program button on the back or combination of key sequence on face plate
- KNX switch functions: on-off, dimmer (quick and slow ramp), shutters

Mechanical and aesthetics specifications

Aesthetic component - GLASS COLLECTION
- Dimensions: 95x95 mm
- Thickness (visible outside wall):   8mm
- Button diameter: - 38 mm (1 button)
                                                        - 16 mm (2, 4 buttons)
- Weight: 95 g.
- Back light diameter: 42 mm (1 button)
                                                     18 mm (2, 4 buttons)

Electronic module
- Fitting wall or plasterboard two modules british Box
- Dimensions: 86x86 mm
- Weight: 90 g.

Electrical scheme

Bus + suppl KNX 29 Vdc

Technical specifications

General info
- Power feed: Bus KNX 29 Vdc
- Energy consumption: <1,5watt
- IP Class: IP 20
- Storage temperature: -40°/+55C°
- Storage humidity: 10% - 93%
- Operating temperature: -10C°/+45°C
- Operating humidity   20% - 90%
- Raccomanded cable for wiring:
                                            - belden YE00820
                                            - belden YE00906

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Vitrum Interfaces EU Clima Control KNX Series
Datasheet

Aesthetic component

GLASS COLLECTION
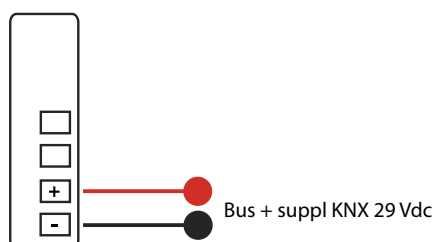

Main features

- Electronic thermostat with a large easy display to read current room temperature and the set-point
- The front wheel selector offer a user friendly interface to change the temperature set-point
- Two additional buttons for toggling the "eco mode" and one used for cycling through different choice of fan speed
- Touch control based on high sensitive capacitive technology
- Display for displaying the temperature
- Hand proximity detection - KNX prog rammable
- Acoustic feedback signal when button touched - KNX programmable
- RGB back light on button - KNX programmable (colour and intensity)
- Access to local semplified setup menù: program button on the back or combination of key sequence on face plate

Electrical scheme

Bus + suppl KNX 29 Vdc

Electronic module

Mechanical and aesthetics specifications

Aesthetic component - GLASS COLLECTION
- Dimensions: 126x95 mm
- Thickness (visible outside wall): 8mm
- Button diameter: 42 mm
- Weight: 130 g.
- Back light diameter: 44 mm

Electronic module
- Fitting wall or plasterboard 3 modules Box (EU 503)
- Dimensions: 115x84 mm
- Weight: 98 g.

Technical specifications

General info
- Power feed: Bus KNX 29 Vdc
- Energy consumption: <1,5watt
- IP Class: IP 20
- Storage temperature: -40°/+55C°
- Storage humidity: 10% - 93%
- Operating temperature: -10C°/+45°C
- Operating humidity 20% - 90%
- Raccomanded cable for wiring:

    - belden YE00820
    - belden YE00906

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Vitrum Interfaces BS Clima Control KNX Series
Datasheet
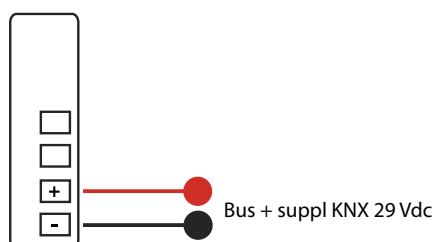
Aesthetic component

GLASS COLLECTION

Main features

- Electronic thermostat with a large easy display to read current room temperature and the set-point
- The front wheel selector offer a user friendly interface to change the temperature set-point
- Two additional buttons for toggling the "eco mode" and one used for cycling through different choice of fan speed
- Touch control based on high sensitive capacitive technology
- Display for displaying the temperature
- Hand proximity detection - KNX prog rammable
- Acoustic feedback signal when button touched - KNX programmable
- RGB back light on button - KNX programmable (colour and intensity)
- Access to local semplified setup menù: program button on the back or combination of key sequence on face plate

Electrical scheme

Bus + suppl KNX 29 Vdc

Electronic module

Mechanical and aesthetics specifications

Aesthetic component - GLASS COLLECTION
- Dimensions: 95x95 mm
- Thickness (visible outside wall):   8mm
- Button diameter: 38 mm
- Weight: 95 g.
- Back light diameter: 42 mm

Electronic module
- Fitting wall or plasterboard one gang british embedding box
- Dimensions: 86x86 mm
- Weight: 90 g.

Technical specifications

General info
- Power feed: Bus KNX 29 Vdc
- Energy consumption: <1,5watt
- IP Class: IP 20
- Storage temperature: -40°/+55C°
- Storage humidity: 10% - 93%
- Operating temperature: -10C°/+45°C
- Operating humidity   20% - 90%
- Raccomanded cable for wiring:

                                     - belden YE00820
                                     - belden YE00906

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Alimentatore 160 mA
cod. 0KD010020

CE

Product and Applications Description

The power supply unit 0KD010020 provides the system power necessary for the instabus EIB. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed) and/or via the bus connection block located on the front side.

The integrated choke prevents the data telegrams from shortcircuiting on the bus line. When the built-in reset switch is operated (operation > 20s), the bus devices are returned to their initial state.

For each bus line, at least one power supply unit 0KD010020 is needed. Up to two power supply units may be attached to a single bus line.

A second unit is not required unless the supply voltage at a bus device is less than 21 V. The cable length between the two power supply units must be at least 200 m.

When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit 0KD010020 should be arranged near these bus devices. The distance between power supply unit 0KD010020 and any of its bus devices must not exceed 350 m.

The power supply unit 0KD010020 has a voltage and current regulation and is therefore short-circuit proof. Short power failures can be bridged with a backup interval of approximately 200 ms.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit 0KD010020's power supply line.

The power supply unit 0KD010020 can supply DC 30 V power from an additional pair of terminals (yellow-white).

The OKD010020 does not require any application programs

Input voltage
• rated voltage: AC 100.240 V, 50...60Hz Rated power intake approx. 24 VA

Output voltage
• rated voltage: DC 30 V
• safety extra low voltage (SELV)
• permissible range: DC 28 ... 31 V

Output current
• rated current : 160 mA
Backup interval
160 mA 0KD010020
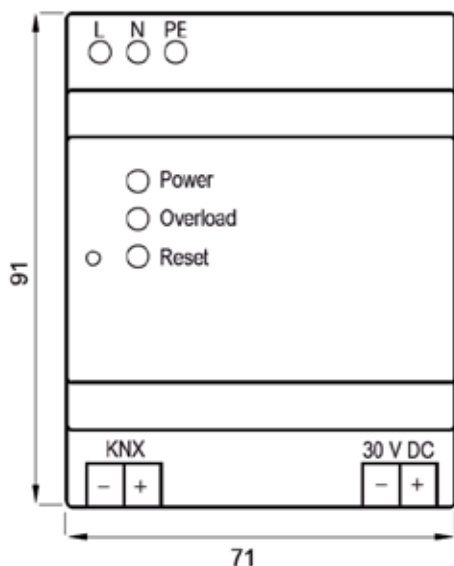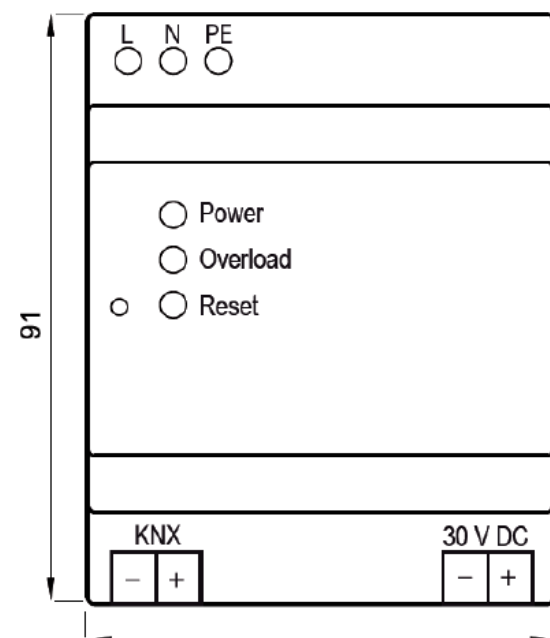   on input voltage failure: approx. 200 ms at rated current

Connections
• mains connection: max 2,5 mm2 cross sections
• bus line: pressure contacts on data rail, screwless extra low voltage terminal (red.black) Ø 0,6 ... 0,8 mm
• output voltage (no choke): screwless extra low voltage terminal (yellow-white) Ø 0,6 ... 0,8 mm

Physical specifications
• dimensions: DIN-rail mounted device, width: 4 SU (1 SU = 18 mm)
• weight: approx. 240 g

Electrical safety
• protection (according to EN 60529): IP 20 Environmental specifications
• ambient temperature operating: - 5 ... + 45 °C
• storage temperature: - 25 ... + 70 °C
• relative humidity (non-condensing): 5 % to 93 %

Power Supply Unit 320 mA
cod. 0KD010024

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CE

Product and Applications Description

The power supply unit 0KD010024 provides the system power necessary for the instabus EIB. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed) and/or via the bus connection block located on the front side.

The integrated choke prevents the data telegrams from shortcircuiting on the bus line. When the built-in reset switch is operated (operation > 20s), the bus devices are returned to their initial state.

For each bus line, at least one power supply unit 0KD010024 is needed. Up to two power supply units may be attached to a single bus line.

A second unit is not required unless the supply voltage at a bus device is less than 21 V. The cable length between the two power supply units must be at least 200 m.

When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit 0KD010024 should be arranged near these bus devices. The distance between power supply unit 0KD010024 and any of its bus devices must not exceed 350 m.

The power supply unit 0KD010024 has a voltage and current regulation and is therefore short-circuit proof. Short power failures can be bridged with a backup interval of approximately 200 ms.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit 0KD010024's power supply line.

The power supply unit 0KD010024 can supply DC 30 V power from an additional pair of terminals (yellow-white).

The 0KD010024 does not require any application programs

Input voltage
• rated voltage: AC 100.240 V, 50...60Hz
Rated power intake
approx. 24 VA

Output voltage
• rated voltage: DC 29 V
• safety extra low voltage (SELV)
• permissible range: DC 28 ... 31 V

Output current
• rated current : 320 mA 0KD010024
• short-circuit current: 0KD010024 limited to 1,0 A

Backup interval on input voltage failure: approx. 200 ms at rated current

Connections
• mains connection, screwless plug-in terminals: strip insulation for 9..10 mm permissible conductor types/cross sections:
•   0,5 ... 3,3 mm² (AWG 12) single core
•   0,5 ... 2,5 mm² plain flexible conductor
•   0,5 ... 3,3 mm² (AWG 12) stranded conductor
•   0,5 ... 3,3 mm² (AWG 12) flexible conductor with terminal pin, crimped on gas tight
• bus line: pressure contacts on data rail, screwless extra low voltage terminal (red.black) Ø 0,6 ... 0,8 mm
• output voltage (no choke) : screwless extra low voltage terminal (yellow-white) Ø 0,6 ... 0,8 mm

Physical specifications
• dimensions: DIN-rail mounted device, width: 4 SU (1 SU = 18 mm)
• weight: approx. 240 g

Electrical safety
• protection (according to EN 60529): IP 20

Environmental specifications
• ambient temperature operating: - 5 ... + 45 °C
• storage temperature: - 25 ... + 70 ° C
• relative humidity (non-condensing): 5 % to 93 %

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Power Supply Unit 640 mA
cod. 0KD010021

Product and Applications Description

The power supply unit 0KD010021 provides the system power necessary for the instabus EIB. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed) and/or via the bus connection block located on the front side.

The integrated choke prevents the data telegrams from shortcircuiting on the bus line. When the built-in reset switch is operated (operation > 20s), the bus devices are returned to their initial state.

For each bus line, at least one power supply unit 0KD010021 is needed. Up to two power supply units may be attached to a single bus line.

A second unit is not required unless the supply voltage at a bus device is less than 21 V. The cable length between the two power supply units must be at least 200 m.

When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit 0KD010021 should be arranged near these bus devices. The distance between power supply unit 0KD010021 and any of its bus devices must not exceed 350 m.

The power supply unit 0KD010021 has a voltage and current regulation and is therefore short-circuit proof. Short power failures can be bridged with a backup interval of approximately 200 ms.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit 0KD010021's power supply line.

The power supply unit 0KD010021 can supply DC 30 V power from an additional pair of terminals (yellow-white).

The OKD010021 does not require any application programs

Input voltage
• rated voltage: AC 100.240 V, 50...60Hz Rated power intake approx. 24 VA

Output voltage
• rated voltage: DC 29 V
• safety extra low voltage (SELV)
• permissible range: DC 28 ... 31 V

Output current
• rated current : 640 mA
• short-circuit current: limited to 1,0 A

Backup interval
on input voltage failure: approx. 200 ms at rated current

Connections
• mains connection, screwless plug-in terminals: strip insulation for 9 ... 10 mm
permissible conductor types/cross sections:
- 0,5 ... 3,3 mm2 (AWG 12) single core
- 0,5 ... 2,5 mm2 plain flexible conductor
- 0,5 ... 3,3 mm2 (AWG 12) stranded conductor
- 0,5 ... 3,3 mm2 (AWG 12) flexible conductor with terminal pin, crimped on gas tight
• bus line: pressure contacts on data rail, screwless extra low voltage terminal (red.black) Ø 0,6 ... 0,8 mm
• output voltage (no choke) : screwless extra low voltage terminal (yellow-white) Ø 0,6 ... 0,8 mm
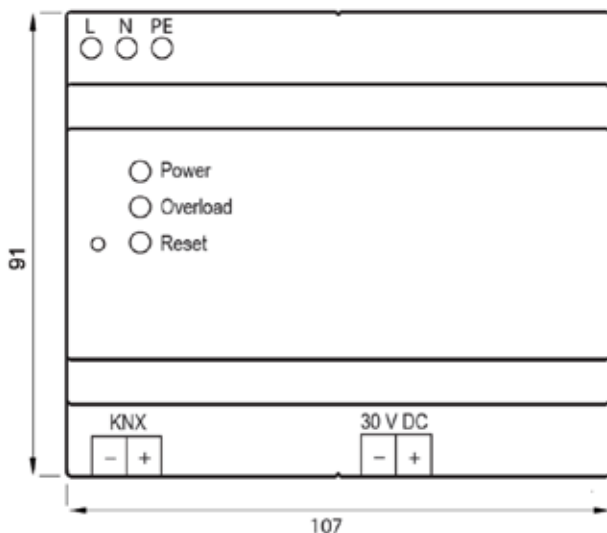
Physical specifications
• dimensions: DIN-rail mounted device, width: 6 SU (1 SU = 18 mm)
• weight: approx. 240 g

Electrical safety
• protection (according to EN 60529):   IP 20

Environmental specifications
• ambient temperature operating: - 5 ... + 45 °C
• storage temperature: - 25 ... + 70 °C
• relative humidity (non-condensing):   5 % to 93 %

Line Coupler BUS line KNX
cod. 0KD010000

Product and Applications Description

This device is a product of the KNX/EIB instabus-KNX/ EIB system and complies with KNX directives. Detailed technical knowledge obtained in KNX/EIB training courses is a prerequisite to proper understanding.
0KD010000 can be used as a line coupler to connect a line to a main line or as a backbone coupler to connect a main line to a backbone line.
0KD010000 supports long messages (up to 250 bytes) and provide a configurable special function activating by a frontal button which is very useful in commissioning / installing phase or during system tuning.
Planning, installation and commissioning of the unit is effected by means of KNX-certified software.

Technical Specifications

The coupler connects two instabus KNX/EIB data lines and ensures the electrical (galvanic) separation of these lines from one another.
The definite functions of the device are defined by addressing and parameterization.

Line coupler LK: Physical address X.0.0
Connection of a main line (HL) with an area line (BL). Alternatively with or without filter function. The coupler belongs logically to the subordinate line.

Area coupler BK: Physical address X.0.0
Connection of a main line with an area line. Alternatively with or without filter function. The coupler belongs logically to the subordinate line.

Amplifier V: Physical address X.Y.Z
Handling and repetition of telegrams on a line, no filter function. Division of a line into max. 4 independent line segments => max. 3 line amplifiers connected in parallel per line (FIG. C). Each line segment requires a separate power supply (SV) including a choke (DR)

Supply from bus KNX/EIB: 21 - 30 V DC
approx 30 mA from primary line approx 5 mA from secondary line.

Connection:
KNX/EIB instabus terminal for superordinate and subordinate line.

Fitting: Snap-fastening on DIN rail

Ambient temperature:	-5 °C ... +45 °C
Storage temperature.:	-20 °C ... + 60 °C
Relative Humidity:	max 93% not condensing

Electrical Safety:
Type of protection:	IP 20 in acc. with EN 60529
Safety class:	III in acc. With EN 61140

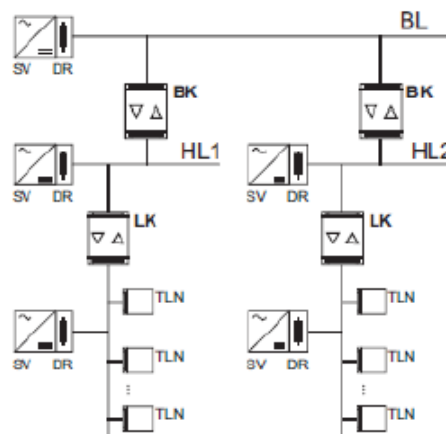Device complies with EN 50090-2-2 and IEC 60664-1

Installation width:	36 mm (2 modules)

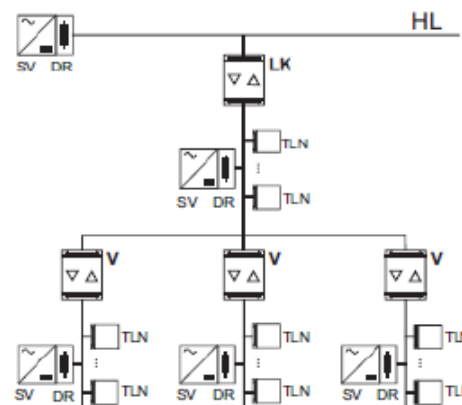|	
Weight: Approx.	66 g

Terminals, connections and command/visualisation elements

Schematics of an instabus KNX/EIB system
Use as area and line coupler (BK and LK)

Use as line coupler LK and amplifier V

(TLN = bus subscriber, DR = choke, SV = KNX/EIB power supply)
Each line requires a separate power supply.

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Line Coupler BUS line KNX
cod. 0KD010000

LED DESCRIPTION

LED Bus Stat Main green
Off: main line error
On: main line ok

LED Bus Stat Main red
On: manual overwrite active

LED Bus Stat Sub green
Off: sub line error or not connected
On: sub line ok

LED Traffic Main green
Blinking: bus traffic on main line
Off: no traffic on main line

LED Traffic Sub green
Blinking: bus traffic on sub line
Off: no traffic on sub line

LED Traffic Main red
Blinking: transmission error on main line

LED Traffic Sub red
Blinking: transmission error on
sub line

LED Group Address
Routing of group telegrams
Off: main and sub different
Green: filter table active
Green and red: route all
Red: block

LED Physical Address
Routing of physical addressed telegrams
Off: main and sub different
Green: filter table active
Green and yellow: route all
Yellow: block

FUNCTION BUTTON

Long press (3 sec)
Switch to manual override.
Default function is set with main line and (sub) line parameter.
Manual override functionality is configured in "General parameters".

LED Bus Stat Main red
On: manual override active
Off: default configuration active

Location/Function of the Display and Operating elements
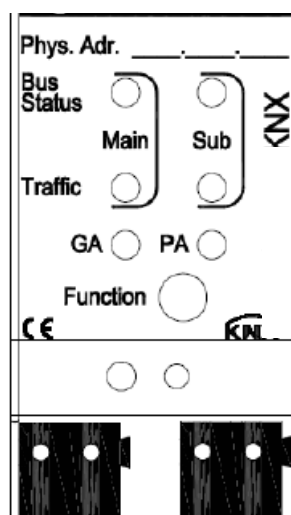
1. LED Bus Stat Main
2. LED Bus Stat Sub
3. LED Traffic Main
4. LED Traffic Sub
5. LED GA (Group Address)
6. LED PA (Physical Address)
7. Function button
8. Programming LED
9. Programming button
10. KNX-Bus connection:
Main line
11. KNX-Bus connection:
Sub line

Mounting and Wiring hintselements

1 The device is snap-fastened on the DIN rail until the latch is heard to engage, with the connecting terminals pointing downwards.
2 The PRIMARY line is connected with the lefthand terminal This terminal supplies power to the device electronics so that it is possible to report a bus voltage failure of the subordinate via the PRIMARY line.
3 The secondary line is connected to the right-hand terminal
4 Load the physical address into the push-button from the ETS via the KNX bus.
5 Complete the required configuration settings in the ETS, and transfer the configuration via EIB into the coupler.

IMPORTANT
• This device must be installed only by a qualified electrician.
• Install in conformity to SELV installation rules.
•The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Transformer 230V-12/15 VAC (max. 6 devices)
Transformer 230V-12/24 VAC (max. 12 devices)
cod. 0KD010022 e 0KD010023

CE

Product and Applications Description

The products 0KD010022 and 0KD010023 are range of transformer modules for continuous use.
The entire series has double insulation between primary and secondary circuit.

Technical Specifications

• **Primary voltage:** 230 Vac. ± 10%
• Frequency: 50/60 Hz
• **Class of Operation:** II
• **Housing:** Self-extinguishing Thermoplastic Material
• **Operating Temperature Continuous:** +115 ° C (according to IEC216) Section-Max Cables: 4mm ^{2}
• **Inspection and testing of Dielectric strength:** 3.75 KV
• **Compliance Standards**: 73/23 / EEC mod.da 93/68 / EEC (low voltage)89/336 / EEC mod.da 92/31 / EEC and 93/68/EEC(EMC) is declared in reference to the following Standards: CEI EN 60742 Safety (95)

Notes for connecting auxiliary power supply

Auxiliary power for this product can be supplied from the following product from eelectron:

Code	Description	N° of pluggable touch panels
0KD010022	**Power supply DIN 12V DC / 15W**	6
0KD010023	**Power supply DIN 12V DC / 24W**	12

Mounting and Wiring hints

Device is intended to be used indoor in dry places.

IMPORTANT
• This device must be installed only by a qualified electrician.
• Install in conformity to SELV installation rules.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Terminals, connections and command/visualisation

2 Moduli
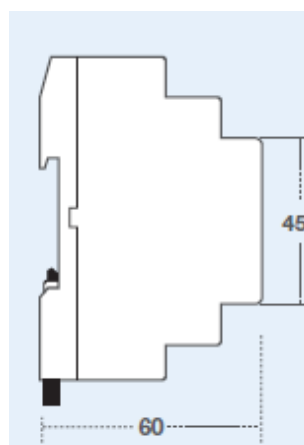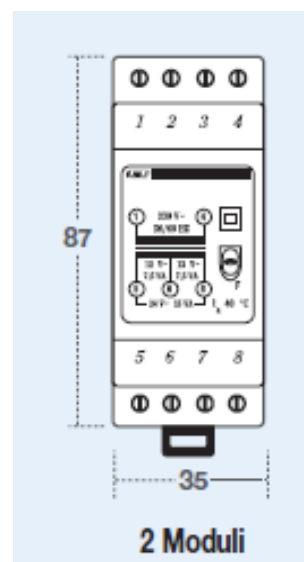
Universal Module 4 Output with Manual Control
cod. 0KD040020

Product and Applications description

0KD040020 is a Din Rail 4 output 16A - 230V AC actuator and can be used to:
• Control up to 4 independent loads / lights
• Control up to 2 independent blind / roller shutters with mechanical end position

Device is intended to be installed on DIN rail.

ETS Application Program

Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 60
This is the maximum number of associations between communication objects and group addresses the device is able to store.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 7 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via bus EIB/KNX cable 21..32V DC
• Current consumption ≤ 10 mA
• Max Current consumption during switching (30 ms): 14mA
Outputs
• 16 A cos φ 1 - 230 V AC
• 8 A cos φ 0.6 - 230 V AC
• Minimum switching current: 10mA
Pure resistive loads: max 16 A
Incandescent lamps: max 10 A
Motors e motor reduction: max 10 A
Fluorescent lamps with electronic transformer: max 4 A
Fluorescent lamps: (max 140 μF) max 3A (700W)
Physical specifications and Dimensions
• Plastic enclosure: PA6
• Dimensions: (alt. x larg. x prof.): 90 x 71 x 58 mm
• Weight (approx): 200 g
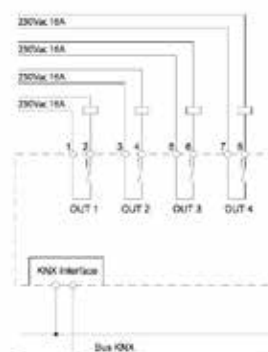• Installation: Din Rail
• Din rail width: 4 modules
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1): III
• Bus: safety voltage SELV
• Meets EN 50491-3
Electromagnetic compatibility
Compliant with EN 50491-5-1 and EN 50491-5-2
Environmental specifications
• According to EN 50491-2
• Ambient temperature during operation: 0°C + 45°C
• Storage temperature: - 20 °C + 55 °C
• Relative humidity: max 90 %

Terminal and connections

SCREW TERMINALS:
1. COM OUT 1
2. OUT 1 contact relay 1
3. COM OUT 2
4. OUT2 contact relay 2
5. COM OUT 3
6. OUT3 contact relay 3
7. COM OUT 4
8. OUT4 contact relay 4

PROGRAMMING:
30. ETS programming led
31. ETS programming switch

Output Configuration for Shutter

Canale Channel	Uscita / Funzioni Output / Function		Uscita / funzioni Output / Function	
OUT 1/2	OUT 1	▲ (su) ▲ (up)	OUT 2	▼ (giù) ▼ (down)
OUT 3/4	OUT 3	▲ (su) ▲ (up)	OUT 4	▼ (giù) ▼ (down)

Installation Instructions

WARNING: Device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorised installer.
• Device must be installed in a location that is accessibleonly to qualified installers
• The applicable safety and accident prevention regulationsmust be observed.
• Device must not be opened. Any faulty device should bereturned to manufacturer.
• For planning and construction of electric installations, therelevant guidelines, regulations and standards of the respectivecountry are to be considered.
• KNX bus allows you to remotely send commands to thesystem actuators. Always make sure that the execution ofremote commands do not lead to hazardous situations,and that the user always has a warning about which commandscan be activated remotely.
• Relays are always switched opened before deliveringbut , it is possible during transportation, they get closed.It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts
• Before configuring the device using ETS, the output channels are configured for shutter management in order to avoid improper control of this type of load. Frontal button are configured to switch the relay with logical interlock.

Universal Module 4 Output
cod. 0KD040021

Product and Applications description

The DIN RAIL 4 Output Module 0KD040021 is an EIB/KNX DIN rail mounting device useful to interface loads (e.g. lamps) for any kind of applications. Device 4 outputs on board can be configured:
• Each output can be configured independently for load control (R1 to R4)
• Each output can be configured independently for ON / OFF or continuous switching (PWM) for Electric valves (solenoid actuators) (EV1 to EV4)
• Outputs can be configured in pairs for the management of roller shutters and blinds; up to 2 channels (Channels A to B)
• Outputs can be configured in pairs for management of Motor Reductor or for solenoid valves with 3-point control or for ventilating grille; up to 2 channels (Channels A to B)
Device is intended to be installed on DIN rail.

Application Program

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to memorize.

Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.

Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. inputs) and receiving communication objects (i.e. outputs)
If you want, on the same device, add a group address linked to a transmission communication object (input) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 13 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via Bus EIB/KNX   21..32V DC
• Current consumption   ≤ 10 mA

Outputs
• 16 A cos φ 1 - 230 Vac
• 8 A cos φ 0.6 - 230 Vac
• Minimum switching current: 10mA

Resistive loads: max 16 A Mmmm
Incandescent lamps: max 10 A
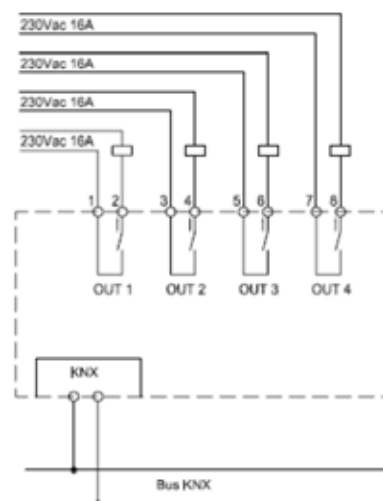Motors e motor reduction units: max 10 A
Fluorescent lamps with electronic transformer: max 4A
Fluorescent lamps (max 140 μF) max 3A (700W)

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: -20 + 55°C
• Relative Humidity (not condensing): max 90 %

Wiring Diagram

Physical specifications and Dimensions
• Housing: plastic
• Dimensions: (W x H x D):: 70 x 90 x 58 mm
• Mounting width: 4 (1 SU=17,5mm)
• Weight: ca. 200 g.
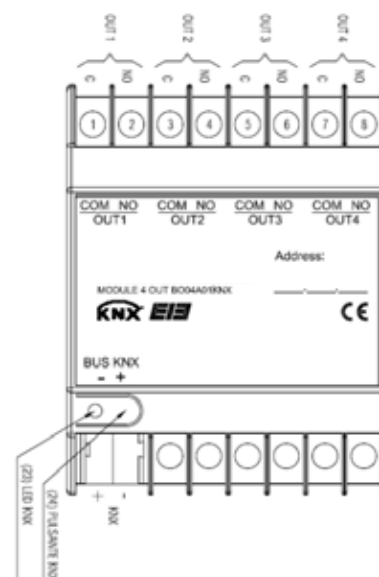• Installation: On 35mm mounting DIN rail (EN 60715)

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage - SELV
• Compliant to EN50491-3

Electromagnetic compatibility
Compliant to: EN50491-5-1, EN50491-5-2
CE Mark
In accordance with the EMC and low voltage guidelines

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Universal Module 4 Output
cod. 0KD040021

SCREW TERMINALS:
1 COM OUT 1
2 OUT 1 NO contact relay 1
3 COM OUT 2
4 OUT2 NO contact relay 2
5 COM OUT 3
6 OUT3 NO contact relay 3
7 COM OUT 4
8 OUT4 NO contact relay 4

PROGRAMMING:
23 ETS programming led
24 ETS programming switch

Output Configuration for Shutter

Channel	Output / Function		Output / Function	
CH A	OUT 1	▲ (up)	OUT 2	▼ (down)
CH B	OUT 3	▲ (up)	OUT 4	▼ (down)

Output Configuration for Motor Reduction Driver

Channel	Output / Function		Output / Function	
CH A	OUT 1	Close	OUT 2	Open
CH B	OUT 3	Close	OUT 4	Open

Installation Instructions

Device must be used for permanent indoor installations in dry locations within distribution boards or wall boxes.
• The prevailing safety rules must be heeded.
• Device must be mounted and commissioned by an authorised installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, relevant guidelines and regulations of the respective country are to be considered.
• Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts
• Before configuring the device using ETS, the output channels are configured for shutter management in order to avoid improper control of this type of load. Frontal button are configured to switch the relay with logical interlock.

Mounting and Wiring hints

General Description
The device configuration (KNX physical address assignment) is done by pressing the programming push button located on the front of the housing.

Connecting bus cables
Connect each single KNX/EIB bus core inside the terminal block observing bus polarity; slip the bus connection into the guide slot placed on the front side of this device and press the block down to the stop.

Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life.
The user must take the warn product to a sorted waste center, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

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Universal Module 8 Output with Manual Control
cod. 0KD080020

Descrizione del prodotto e del suo funzionamento

0KD080020 is a Din Rail 8 output 16 A - 230 V AC actuator and can be used to:
• Control up to 8 independent loads / lights
• Control up to 4 independent blind / roller shutters withmechanical end position

Device is intended to be installed on DIN rail.

Application Program ETS

Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is able to store.
Maximum number of associations: 60
This is the maximum number of associations between communication objects and group addresses the device is able to store.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 7 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via bus EIB/KNX cable 21..32V DC
• Current consumption ≤ 10 mA
• Max Current consumption during switching (30 ms): 14mA
Outputs
• 16 A cos φ 1 - 230 V AC
• 8 A cos φ 0.6 - 230 V AC
• Minimum switching current: 10mA
Pure resistive loads: max 16 A
Incandescent lamps: max 10 A
Motors e motor reduction: max 10 A
Fluorescent lamps with electronic transformer: max 4 A
Fluorescent lamps: (max 140 µF) max 3A (700W)
Physical specifications and Dimensions
• Plastic enclosure: PA6
• Dimensions: (W xH x D): 90 x 71 x 58 mm
• Weight: ca: 200 g
• Installation: Din Rail
• Din rail width: 4 modules
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1): III
• Bus: safety voltage SELV
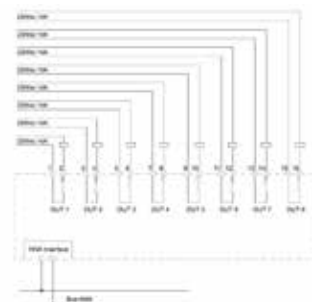• Meets EN 50491-3
Electromagnetic compatibility
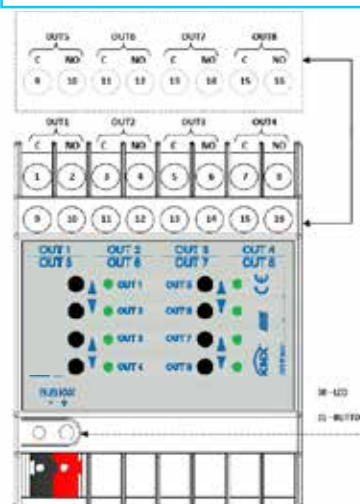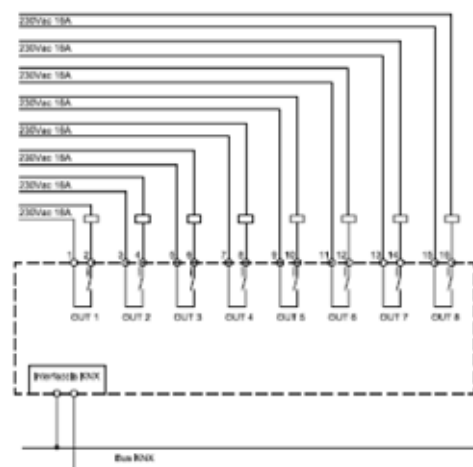Compliant with EN 50491-5-1 and EN 50491-5-2
Environmental specifications
• According to EN 50491-2
• Ambient temperature during operation: 0°C + 45°C
• Storage temperature: - 20 °C + 55 °C
• Relative humidity: max 90 %

CE Mark
In accordance with the EMC and low voltage guidelines

Terminal and connections

SCREW TERMINALS:
1. COM OUT 1
2. OUT 1 contact relay 1
3. COM OUT 2
4. OUT2 contact relay 2
5. COM OUT 3
6. OUT3 contact relay 3
7. COM OUT 4
8. OUT4 contact relay 4
9. COM OUT 5
10. OUT3 contact relay 5
11. COM OUT 6
12. OUT3 contact relay 6
13. COM OUT 7
14. OUT3 contact relay 7
15. COM OUT 8
16. OUT3 contact relay 8
PROGRAMMING:
30. ETS programming led
31. ETS programming switch

Output Configuration for Shutter

Channel	Output / Function		Output / Function	
OUT 1-2	OUT 1	▲ (su) ▲ (up)	OUT 2	▼ (giù) ▼ (down)
OUT 3-4	OUT 3	▲ (su) ▲ (up)	OUT 4	▼ (giù) ▼ (down)
OUT 5-6	OUT 5	▲ (su) ▲ (up)	OUT 6	▼ (giù) ▼ (down)
OUT 7-8	OUT 7	▲ (su) ▲ (up)	OUT 8	▼ (giù) ▼ (down)

Installation Instructions

WARNING: Device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorised installer.
• Device must be installed in a location that is accessible only to qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
• **Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts**
• **Before configuring the device using ETS, the output channels are configured for shutter management in order to avoid improper control of this type of load. Frontal button are configured to switch the relay with logical interlock.**

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Universal Module 8 Output
cod. 0KD080021

CE

Product and Applications description

The DIN RAIL 8 Output Module 0KD080021 is an EIB/KNX DIN rail mounting device useful to interface commands (e.g. push buttons) or loads (e.g. lamps) for any kind of applications.
Device 8 outputs on board can be configured:
• Each output can be configured independently for load control (R1 to R8)
• Each output can be configured independently for ON / OFF or continuous switching (PWM) for Electric valves (solenoid actuators) (EV1 to EV8)
• Outputs can be configured in pairs for the management of roller shutters and blinds; up to 4 channels (Channels A to D)
• Outputs can be configured in pairs for management of Motor Reductor or for solenoid valves with 3-point control or for ventilating grille; up to 4 channels (Channels A to D)
• Fan Coil Actuator for 2/4 pipes systems for Heating / Cooling with 3 speed motors) (uses relay from 1 to 5)
Device is intended to be installed on DIN rail.

Application Program

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to memorize.

Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.

Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. inputs) and receiving communication objects (i.e. outputs)
If you want, on the same device, add a group address linked to a transmission communication object (input) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 13 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via Bus EIB/KNX   21.32V DC
• Current consumption   ≤ 10 mA

Outputs
• 16 A cos φ 1 - 230 Vac
• 8 A cos φ 0.6 - 230 Vac
• **Minimum switching current: 10mA**

Resistive loads: max 16 A Mmmm
Incandescent lamps: max 10 A
Motors e motor reduction units: max 10 A
Fluorescent lamps with electronic transformer: max 4A
Fluorescent lamps (max 140 μF)   max 3A (700W)

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: -20 + 55°C
• Relative Humidity (not condensing): max 90 %

Wiring Diagram

Physical specifications and Dimensions
• Housing: plastic
• Dimensions: (W x H x D):: 70 x 90 x 58 mm
• Mounting width: 4 (1 SU=17,5mm)
• Weight: ca. 200 g.
• Installation: On 35mm mounting DIN rail (EN 60715)

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
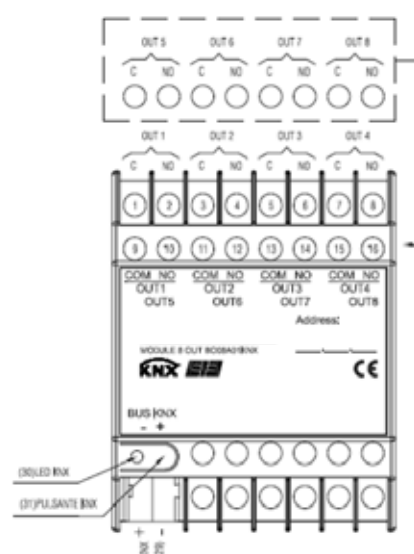• Bus: Safety extra low voltage - SELV
• Compliant to EN50491-3

Electromagnetic compatibility
Compliant to: EN50491-5-1, EN50491-5-2
CE Mark
In accordance with the EMC and low voltage guidelines

Terminals and connections

Universal Module 8 Output
cod. 0KD080021

SCREW TERMINALS:
1 COM OUT 1
2 OUT 1 NO contact relay 1
3 COM OUT 2
4 OUT2 NO contact relay 2
5 COM OUT 3
6 OUT3 NO contact relay 3
7 COM OUT 4
8 OUT4 NO contact relay 4
9 COM OUT 5
10 OUT 5 NO contact relay 5
11 COM OUT 6
12 OUT 6 NO contact relay 6
13 COM OUT 7
14 OUT 7 NO contact relay 7
15 COM OUT 8
16 OUT 8 NO contact relay 8

PROGRAMMING:
30 ETS programming led
31 ETS programming switch

Output Configuration for Shutter

Channel	Output / Function		Output / Function	
CH A	OUT 1	▲ (up)	OUT 2	▼(down)
CH B	OUT 3	▲ (up)	OUT 4	▼(down)
CH C	OUT 5	▲ (up)	OUT 6	▼(down)
CH D	OUT 7	▲ (up)	OUT 8	▼(down)

Output Configuration for Motor Reduction Driver

Channel	Output / Function		Output / Function	
CH A	OUT 1	Close	OUT 2	Open
CH B	OUT 3	Close	OUT 4	Open
CH C	OUT 5	Close	OUT 6	Open
CH D	OUT 7	Close	OUT 8	Open

Output Configuration for Fan Coil Actuator

Output	2 pipes	4 pipes
OUT 1	Valve Heat /Cool NO	Valve Heating
OUT 2	Valve Heat /Cool NC	Valve Cooling
OUT 3	Speed 1	
OUT 4	Speed 2	
OUT 5	Speed 3	

Installation Instructions

Device must be used for permanent indoor installations in dry locations within distribution boards or wall boxes.
• The prevailing safety rules must be heeded.
• Device must be mounted and commissioned by an authorised installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, relevant guidelines and regulations of the respective country are to be considered.
• Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts
• Before configuring the device using ETS, the output channels are configured for shutter management in order to avoid improper control of this type of load. Frontal button are configured to switch the relay with logical interlock.

Mounting and Wiring hints

General Description
The device configuration (KNX physical address assignment) is done by pressing the programming push button located on the front of the housing.

Connecting bus cables
Connect each single KNX/EIB bus core inside the terminal block observing bus polarity; slip the bus connection into the guide slot placed on the front side of this device and press the block down to the stop.

Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life.
The user must take the warn product to a sorted waste center, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

Universal Module 12 Output with Manual Control
cod. 0KD120020

Product and Applications description

0KD120020 is a Din Rail 12 output 16 A - 230 V AC actuator and can be used to:
• Control up to 12 independent loads / lights
• Control up to 6 independent blind / roller shutters with mechanical end position

Device is intended to be installed on DIN rail.

ETS Application Program
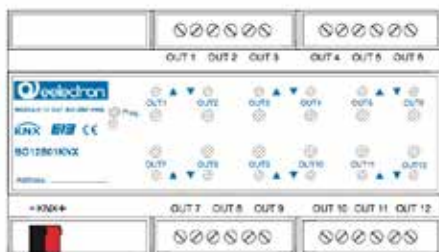
Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is able to store.
Maximum number of associations: 60
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 7 group addresses of this kind for the whole device.

Channel	Output / Function		Output / Function	
OUT 1/2	OUT 1	▲ (su) ▲ (up)	OUT 2	▼ (giù) ▼ (down)
OUT 3/4	OUT 3	▲ (su) ▲ (up)	OUT 4	▼ (giù) ▼ (down)
OUT 5/6	OUT 5	▲ (su) ▲ (up)	OUT 6	▼ (giù) ▼ (down)
OUT 7/8	OUT 7	▲ (su) ▲ (up)	OUT 8	▼ (giù) ▼ (down)
OUT 9/10	OUT 9	▲ (su) ▲ (up)	OUT 10	▼ (giù) ▼ (down)
OUT 11/12	OUT 11	▲ (su) ▲ (up)	OUT 12	▼ (giù) ▼ (down)

Technical Specifications

Power Supply
• Via bus EIB/KNX cable 21..32V DC
• Current consumption ≤ 10 mA
• Max Current consumption during switching (30 ms): 15mA
Outputs
• 16 A cos φ 1 - 230 V AC
• 8 A cos φ 0.6 - 230 V A

• Minimum switching current: 10mA
Pure resistive loads: max 16 A
Incandescent lamps: max 10 A
Motors e motor reduction: max 10 A
Fluorescent lamps with electronic transformer: max 4 A
Fluorescent lamps: (max 140 μF) max 3A (700W)
Physical specifications and Dimensions
• Plastic enclosure: PPO
• Dimensions: (W xH x D): 90 x 159 x 58 mm
• Weight: ca: 350 g
• Installation: Din Rail
• Din rail width: 9 modules
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1): III
• Bus: safety voltage SELV
• Meets EN 50491-3
Electromagnetic compatibility
Compliant with EN 50491-5-1 and EN 50491-5-2
Environmental specifications
• According to EN 50491-2
• Ambient temperature during operation: 0°C + 45°C
• Storage temperature: - 20 °C + 55 °C
• Relative humidity: max 90 %

CE Mark
According to EMC guideline
and low voltage directive

Installation Instructions

WARNING: Device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorised installer.
• Device must be installed in a location that is accessible only to qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
• Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts
• Before configuring the device using ETS, the output channels are configured for shutter management in order to avoid improper control of this type of load. Frontal button are configured to switch the relay with logical interlock.

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DIN Module 4 Input / 4 Output
cod. 0KD040030

Product and Applications description

The DIN RAIL 4 Input / 4 Output Module 0KD040030 is an EIB/KNX DIN rail mounting device useful to interface commands (e.g. push buttons) or loads (e.g. lamps) for any kind of applications.
The device is equipped with 4 binary inputs (potential free) and 4 binary relay outputs suitable for capacitive loads.
Inputs can be connected to conventional switching devices, e.g. push buttons, switches, floating contacts, for switching functions with pulse edge evaluation (e.g. rising or falling edge, toggle, etc...). Inputs can be configured with ETS SW, as output channels to drive LED in synoptic monitoring panels.
Inputs can be used to for on/off commands, dimming, shutter control, scene recall and control; outputs include switching function, scene recall and control logic function.
Outputs can act as interlocked channels; this function can be used to drive fan coils with 2-pipe / 3 speed or 4-pipe / 2 speed.
Device is intended to be installed on DIN rail.
The device configuration for commissioning in terms of physical address, group addresses and parameters is done with ETS (Engineering Tool Software) through a download of the Application Program.

Technical Specifications

Power Supply
• Via Bus EIB/KNX
• Current consumption < 15 mA

Inputs
• 4 potential free contacts (dry contacts only)
• Input signal current at close contact = 0,5mA per channel
• Maximum cable leght: 30m

Channels used as input
• Signal voltage Vn - 12 V DC (internally generated)

Channels used as output (for LED output)
• Input signal current = 0,5mA per channel

Outputs
• Number: 4 relays
16 A cos φ 1 - 230 Vac
8 A cos φ 0.6 - 230 Vac

Resistive loads:	**max 16 A Mmmm**
Incandescent lamps:	**max 10 A**
Motors e motor reduction units:	**max 10 A**
Fluorescent lamps:	**max 2 A**
Fluorescent lamps electronic transf.:	**max 6 A**
Fluorescent lamps: (max 140 µF)	**max 3 A (700W)**

Wiring diagram
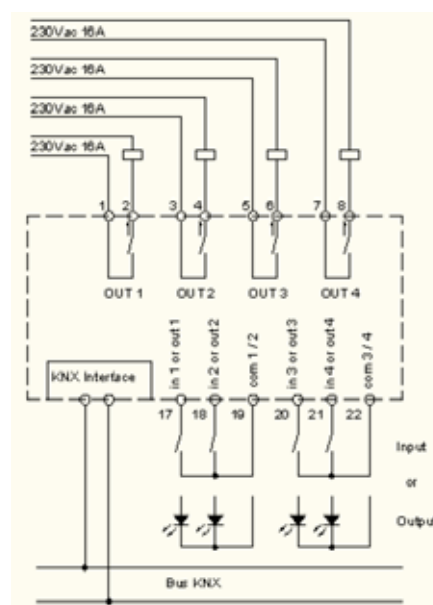
Physical specifications and Dimensions
• Housing: plastic
• Dimensions: (W x H x D):: 70 x 90 x 58 mm
• Mounting width: 4 (1 SU=17,5mm)
• Weight: ca. 180 g.
Installation: On 35mm mounting DIN rail (EN 60715)

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage - SELV
• Compliant to EN 50090-2-2

Electromagnetic compatibility
Compliant to: EN 50081-1, EN 50082-2 e EN 50090-2.2

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: - 20 + 55 °C
• Relative Humidity: max 90 % not condensing

CE Mark
In accordance with the EMC and low voltage guidelines

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DIN Module 4 Input / 4 Output
cod. 0KD040030

Terminals and connections

SCREW TERMINALS:
1 COM OUT 1
2 OUT 1 NO contact relay 1
3 COM OUT 2
4 OUT2 NO contact relay 2
5 COM OUT 3
6 OUT3 NO contact relay 3
7 COM OUT 4
8 OUT4 NO contact relay 4

17. IN 1 free potential contact or output led 1
18. IN 2 free potential contact or output led 2
19. COM1/2 common for inputs or outputs 1 and 2
20. IN 3 free potential contact or output led 3
21. IN 4 free potential contact or output led 4
22. COM3/4 common for inputs or outputs 3 and 4

Bus terminal connector block :
- Negative - Black
+ Positive - Red

Programming:
23 ETS programming led
24 ETS programming switch

Installation Instructions

Device must be used for permanent indoor installations in dry locations within distribution boards or wall boxes.

WARNING
• The prevailing safety rules must be heeded.
• Device must be mounted and commissioned by an authorised installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Mounting and Wiring hints

General Description
The device configuration (KNX physical address assignment) is done by pressing the programming push button (24) located on the front of the housing.

Connecting bus cables
• Connect each single KNX/EIB bus core inside the terminal block observing bus polarity.
• Slip the bus connection block into the guide slot placed on the front side of this device and press the block down to the stop.

Mounting DIN-rail devices (see next figure)
• Slide the device (B1) onto the DIN-rail (B2) and swivel back the device until the slide clicks into the rail firmly.

Dismounting DIN-rail devices (see next figure)
• Press down the slide (C3) with a screw-driver, click it into place by a slight pressure and swivel the device (C1) from the DIN-rail (C2).

!
FLUORESCENT LAMPS
max 140 µF
max 700W

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Universal DIN rail Module 4 inputs / outputs
cod. 0KD040031

Product and Applications description

The DIN RAIL 4 Input / 4 Output Module 0KDO40031 is an EIB/KNX DIN rail mounting device useful to interface commands (e.g. push buttons) or loads (e.g. lamps) for any kind of applications.

The device is equipped with 4 binary inputs (potential free) and 8 binary relay outputs 16A-230V AC. Inputs can be connected to conventional switching devices, e.g. push buttons, switches, floating contacts, for switching functions with pulse edge evaluation (e.g. rising or falling edge, toggle...). Inputs can be configured with ETS SW as output to drive Leds. Inputs can be used for on/off commands, dimming, shutter control, scene recall and control; outputs include switching function, scene recall and control logic function.

Device 4 outputs on board can be configured:
• Each output can be configured independently for load control (OUT 1 ÷ 4)
• Each output can be configured independently for ON / OFF or continuous switching (PWM) for Electric valves (solenoid actuators) (OUT 1 ÷ 4)
• Outputs can be configured in pairs for the management of roller shutters and blinds; up to 2 channels (Channels A ÷ B)
• Outputs can be configured coupled for management of Motor Reductor or for solenoid valves with 3 point control or for ventilating grille; up to 2 channels (Channels A ÷ B)

Device is intended to be installed on DIN rail in cabinet for low voltage distribution.

Application Program ETS

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to store.
Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to store.

Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. inputs) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (input) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 13 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via bus EIB/KNX   21..32V DC
• Current consumption   ≤ 10 mA

Input
• Number: 4 potential free contacts or led output
• Maximum cable lenght: ≤ 20m

Channels used as input
• Reading voltage: 3,3 V DC

Channels used as output (for LED output)
• Max. current < 0,5mA per channel

Outputs
• 16 A cos φ 1 - 230 V AC
• 8 A cos φ 0.6 - 230 V AC
• **Minimum switching current: 10mA**

Resistive loads: max 16A
Incandescent lamps: max 10 A
Motors e motor reduction units: max 10 A
Fluorescent lamps with electronic transformer: max 6 A
Fluorescent lamps (max 140 µF)   max 3A (700W)

Output configuration for shutter

Canale Channel	Uscita / Funzioni Output / Function		Uscita / funzioni Output / Function	
CH A	OUT 1	▲ (su) ▲ (up)	OUT 2	▼ (giù) ▼ (down)
CH B	OUT 3	▲ (su) ▲ (up)	OUT 4	▼ (giù) ▼ (down)

Output configuration for Motor Reduction Driver

Canale Channel	Uscita / Funzioni Output / Function		Uscita / funzioni Output / Function	
CH A	OUT 1	Chiude Close	OUT 2	Apre Open
CH B	OUT 3	Chiude Close	OUT 4	Apre Open

Physical specifications and Dimensions
• Plastic enclosure: PA6
• Dimensions: (W x H x D): 71 x 90 x 58 mm
• Weight: ca. 340 g
• Installation: DIN rail / 4 Modules

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage SELV
• Compliant to EN50491-3

Electromagnetic compatibility
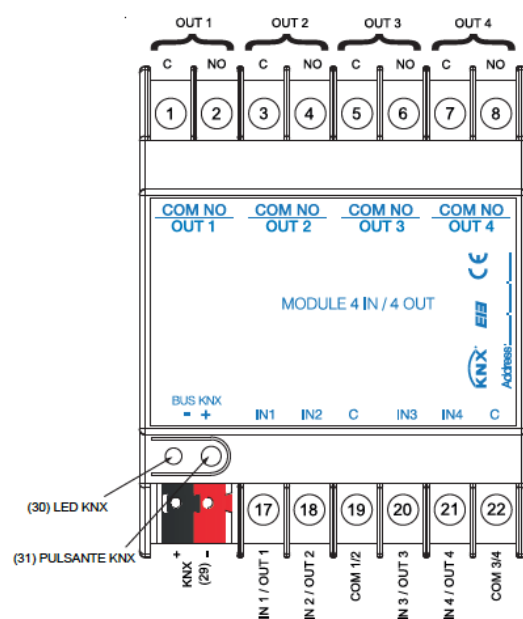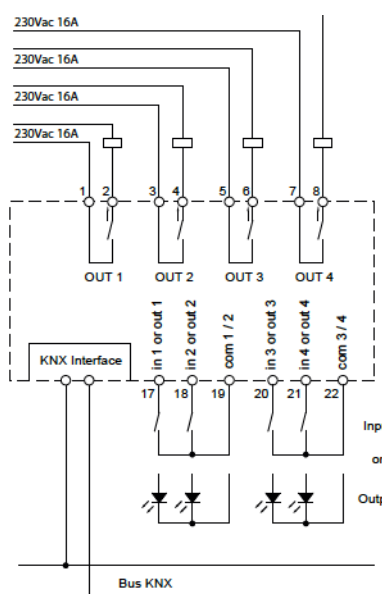Compliant to: EN50491-5-1, EN50491-5-2

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: - 20 °C + 55 °C
• Relative Humidity (not condensing): max 90 %

CE Mark
In accordance with the EMC and low voltage guidelines

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Universal DIN rail Module 4 inputs / outputs
cod. 0KD040031

Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life.
The user must take the warn product to a sorted waste center, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

Terminals and connections

SCREW TERMINALS:
1. COM OUT 1
2. OUT 1 contact relay 1
3. COM OUT 2
4. OUT2 contact relay 2
5. COM OUT 3
6. OUT3 contact relay 3
7. COM OUT 4
8. OUT4 contact relay 4
17. IN 1 free potential contact or output led 1
18. IN 2 free potential contact or output led 2
19. COM1/2 common for inputs or outputs 1 / 2
20. IN 3 free potential contact or output led 3
21. IN 4 free potential contact or output led 4
22. COM3/4 common for inputs or outputs 3 / 4
29. Bus terminal connector block:
Negative = Black / Positive = Red

PROGRAMMING:
30. ETS programming led
(30) LED KNX 31. ETS programming button

Installation Instructions

Device must be installed keeping a minimum distance of 4 mm between electrical power line (mains 230V) and red/black bus connector or bus cable
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorised installer.
• Device must be installed in a location that is accessible only to qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
• Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts.

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Din Module 8 Input / 8 Output Module with Manual Control

cod. 0KD080030

Product and Applications description

The DIN RAIL 8 Input / 8 Output Module 0KD080030 is an EIB/KNX DIN rail mounting device useful to interface commands (e.g. push buttons) or loads (e.g. lamps) for any kind of applications.

The device is equipped with 8 binary inputs (potential free) and 8 binary relay outputs.

Inputs can be connected to conventional switching devices, e.g. push buttons, switches, floating contacts, for switching functions with pulse edge evaluation (e.g. rising or falling edge, toggle, etc...). Inputs can be configured with ETS SW, as output channels to drive LEDs in synoptic monitoring panels.

Inputs can be used to for on/off commands, dimming, shutter control, scene recall and control; outputs include switching function, scene recall and control logic function. Relay from 5 to 8 are equipped with tab and can be switched manually.

Device is intended to be installed on DIN rail.

The device configuration for commissioning in terms of physical address, group addresses and parameters is done with ETS (Engineering Tool Software) through a download of the Application Program.

Application Program

Maximum number of group addresses: 44

This is the maximum number of different group addresses the device is able to memorize.

Maximum number of associations: 69

This is the maximum number of associations between communication objects and group addresses the device is able to memorize.

Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. inputs) and receiving communication objects (i.e. outputs)

If you want, on the same device, add a group address linked to a transmission communication object (input) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 20 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via Bus EIB/KNX
• Current consumption < 15 mA

Inputs
• Number: 8 potential free contacts
• Input signal current at close contact = 0,5mA per channel
• Maximum cable leght: 30m

Channels used as input
• Signal voltage Vn - 12 V DC (internally generated)

Channels used as output (for LED output)
• Input signal current = 0,5mA per channel

Outputs
• Number: 8 relays
16 A cos φ 1 - 230 Vac
8 A cos φ 0.6 - 230 Vac

Resistive loads: max 16 A Mmmm
Incandescent lamps: max 10 A
Motors e motor reduction units: max 10 A
Fluorescent lamps electronic transf.: max 6 A
Fluorescent lamps: (max 140 μF) max 3 A (700W)

Wiring diagram

Physical specifications and Dimensions
• Housing: plastic
• Dimensions: (W x H x D):: 70 x 90 x 58 mm
• Mounting width: 4 (1 SU=17,5mm)
• Weight: ca. 200 g.
Installation: On 35mm mounting DIN rail (EN 60715)

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage - SELV
• Compliant to EN 50090-2-2

Electromagnetic compatibility
Compliant to: EN 50081-1, EN 50082-2 e EN 50090-2.2

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: - 20 + 55 °C
• Relative Humidity: max 90 % not condensing

CE Mark
In accordance with the EMC and low voltage guidelines

Din Module 8 Input / 8 Output Module with Manual Control
cod. 0KD080030

Terminals and connections
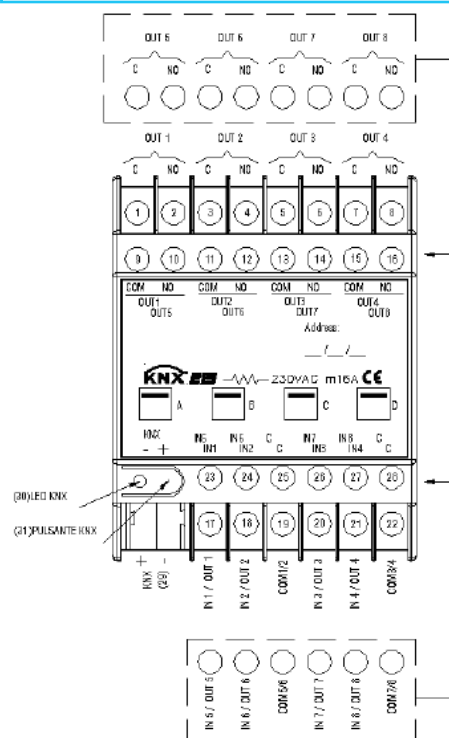
Screw Terminals:
1. COM OUT 1
2. OUT 1 NA contact relay 1
3. COM OUT 2
4. OUT2 NA contact relay 2
5. COM OUT 3
6. OUT3 NA contact relay 3
7. COM OUT 4
8. OUT4 NA contact relay 4
9. COM OUT 5
10. OUT 5 NA contact relay 5
11. COM OUT 6
12. OUT 6 NA contact relay 6
13. COM OUT 7
14. OUT 7 NA contact relay 7
15. COM OUT 8
16. OUT 8 NA contact relay 8
17. IN 1 free potential contact or output led 1
18. IN 2 free potential contact or output led 2
19. COM1/2 common for inputs or outputs 1 and 2
20. IN 3 free potential contact or output led 3
21. IN 4 free potential contact or output led 4
22. COM3/4 common for inputs or outputs 3 and 4
23. IN 5 free potential contact or output led 5
24. IN 6 free potential contact or output led 6
25. COM5/6 common for inputs or outputs 5 and 6
26. IN 7 free potential contact or output led 7
27. IN 8 free potential contact or output led 8
28. COM7/8 common for inputs or outputs 7 and 8
Bus terminal connector block :
- Negative - Black
+ Positive - Red
Programming:
30. ETS programming led
31. ETS programming switch

Installation Instructions

Device must be used for permanent indoor installations in dry locations within distribution boards or wall boxes.

WARNING
• The prevailing safety rules must be heeded.
• Device must be mounted and commissioned by an authorised installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Mounting and Wiring hints

General Description
The device configuration (KNX physical address assignment) is done by pressing the programming push button (24) located on the front of the housing.

Connecting bus cables
• Connect each single KNX/EIB bus core inside the terminal block observing bus polarity.
• Slip the bus connection block into the guide slot placed on the front side of this device and press the block down to the stop.

Mounting DIN-rail devices (see next figure)
• Slide the device (B1) onto the DIN-rail (B2) and swivel back the device until the slide clicks into the rail firmly.

Dismounting DIN-rail devices (see next figure)
• Press down the slide (C3) with a screw-driver, click it into place by a slight pressure and swivel the device (C1) from the DIN-rail (C2).

!
FLUORESCENT LAMPS

max 140 µF
max 700W

Universal DIN Module 8 Input / 8 Output
cod. 0KD080031

Product and Applications description

The DIN RAIL 8 Input / 8 Output Module 0KD080031 is an EIB/KNX DIN rail mounting device useful tointerface commands (e.g. push buttons) or loads (e.g. lamps) for any kind of applications. The device is equipped with 8 binary inputs (potential free) and 8 binary relay outputs. Inputs can be connected to conventional switching devices, e.g. push buttons, switches, floating contacts, for switching functions with pulse edge evaluation (e.g. rising or falling edge, toggle...). Inputs can be configured with ETS SW, as output to drive Leds. Inputs can be used to for on/off commands, dimming, shutter control, scene recall and control; outputs include switching function, scene recall and control logic function.

Device 8 outputs on board can be configured:
• Each output can be configured independently for load control (R1 to R8)
• Each output can be configured independently for ON / OFF or continuous switching (PWM) for Electric valves (solenoid actuators) (EV1 to EV8)
• Outputs can be configured in pairs for the management of roller shutters and blinds; up to 4 channels (Channels A to D)
• Outputs can be configured in pairs for management of Motor Reductor or for solenoid valves with 3-point control or for ventilating grille; up to 4 channels (Channels A to D)
• Fan Coil Actuator for 2/4 pipes systems for Heating / Cooling with 3 speed motors) (uses relay from 1 to 5).

Device is intended to be installed on DIN rail.

Application Program

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.

Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. inputs) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (input) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 13 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via Bus EIB/KNX
• Current consumption ≤ 10 mA

Inputs
• Number: 8 potential free contacts
• Input signal current at close contact = 0,5mA x ch.
• Maximum cable leght: ≤ 20m
Channels used as input
• Signal voltage Vn – 3,3 V DC
Channels used as output (for LED output)
• Input signal current < 0,5mA per channel

Outputs
• 16 A cos φ 1 - 230 Vac
• 8 A cos φ 0.6 - 230 Vac
• **Minimum switching current: 10mA**

Resistive loads:	max 16 A Mmmm
Incandescent lamps:	max 10 A
Motors e motor reduction units:	max 10 A

Wiring Diagram

Physical specifications and Dimensions
• Plastic enclosure: PA6
• Dimensions: (W x H x D): 71 x 90 x 58 mm
• Mounting width: 4 (1 SU=17,5mm)
• Weight: ca. 200 g
• Installation: On 35mm mounting DIN rail (EN 60715)

Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage SELV
• Compliant to EN50491-3

Electromagnetic compatibility
Compliant to: EN50491-5-1, EN50491-5-2

Environmental specifications
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: - 20 °C + 55 °C
• Relative Humidity (not condensing): max 90 %

CE Mark
In accordance with the EMC and low voltage guidelines

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Universal DIN Module 8 Input / 8 Output
cod. 0KD080031

Terminals and connections

SCREW TERMINALS:
1. COM OUT 1
2. OUT 1 contact relay 1
3. COM OUT 2
4. OUT2 contact relay 2
5. COM OUT 3
6. OUT3 contact relay 3
7. COM OUT 4
8. OUT4 contact relay 4
9 COM OUT 5
10 OUT 5 NA contact relay 5
11 COM OUT 6
12 OUT 6 NA contact relay 6
13 COM OUT 7
14 OUT 7 NA contact relay 7
15 COM OUT 8
16 OUT 8 NA contact relay 8
17. IN 1 free potential contact or output led 1
18. IN 2 free potential contact or output led 2
19. COM1/2 common for inputs or outputs 1 / 2
20. IN 3 free potential contact or output led 3
21. IN 4 free potential contact or output led 4
22. COM3/4 common for inputs or outputs 3 / 4
29. Bus terminal connector block:
    Negative = Black / Positive = Red

PROGRAMMING:
30 ETS programming led
31 ETS programming switch

Output Configuration for Shutter

Channel	Output / Function		Output / Function	
CH A	OUT 1	▲ (up)	OUT 2	▼(down)
CH B	OUT 3	▲ (up)	OUT 4	▼(down)
CH C	OUT 5	▲ (up)	OUT 6	▼(down)
CH D	OUT 7	▲ (up)	OUT 8	▼(down)

Output Configuration for Motor Reduction Driver

Channel	Output / Function		Output / Function	
CH A	OUT 1	Close	OUT 2	Open
CH B	OUT 3	Close	OUT 4	Open
CH C	OUT 5	Close	OUT 6	Open
CH D	OUT 7	Close	OUT 8	Open

Output Configuration for Fan Coil Actuator

Output	2 pipes	4 pipes
OUT 1	Valve Heat /Cool NO	Valve Heating
OUT 2	Valve Heat /Cool NC	Valve Cooling
OUT 3	Speed 1	
OUT 4	Speed 2	
OUT 5	Speed 3	

Installation Instructions

Device must be installed keeping a minimum distance of 4 mm between electrical power line (mains 230V) and red/black bus connector or bus cable
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorised installer.
• Device must be installed in a location that is accessible only to qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
• Relays are always switched opened before delivering but , it is possible during transportation, they get closed. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts.

Mounting and Wiring hints

General Description
The device configuration (KNX physical address assignment) is done by pressing the programming push button located on the front of the housing.
Connecting bus cables
Connect each single KNX/EIB bus core inside the terminal block observing bus polarity; slip the bus connection into the guide slot placed on the front side of this device and press the block down to the stop.

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Inwall 3 Input / 2 Output Module (Relays 10A)
cod. 0KF030010

Product and Applications description

0KF030010 module includes:
• 2 digital inputs
• 1 analog input
• 2 relay output (bistable)

Digital inputs are intended to be connected to free potential contacts and can interface sensors, traditional buttons, etc; they can be used to on/off commands, dimming, shutter con-trol, scene recall and control, sequences of 3 objects.

Analog input, can manage one temperature probe (with On/Off threshold) or one thermostats to control heating and cooling equipments, valves, 2 and 4 pipes fan coils; etc..

Analog input, alternatively to the temperature sensor, can manage a Infrared Receiver (IRX) in order to forward to the bus up to 8 channel coming from a Infrared Remote Control (IRC) with on/off commands, scenes, sequences of 2 objects, dimmer and shutter.

Outputs include switching function with timed delays, stair-case function, scene recall, lock or logic function.
• Each output can be configured independently for load control (2 independent channels)

Device 2 outputs on board can be configured:
• Each output can be configured independently for ON / OFF or continuous switching (PWM) for Electric valves (solenoid actuators) (2 independent channels)
• Outputs can be configured in pairs for the management of roller shutters and blinds; (1 channel)

The device is equipped with KNX communication interface.

Application Program

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.
Caution: each transmission object has usually associated a single group address. If you want to associate to a transmission communication object other addresses in addition to the first, please note that you can add a maximum of 13 group addresses of this kind for the whole device.

Technical Specifications

Power Supply
• Via bus EIB/KNX cable
• Voltage 21..30V DC
• Current Consumption EIB/KNX < 10mA

Digital Input
• For free potential contacts (dry contacts)
• Max. length of Connecting Cable: ≤ 30 m (twisted cable)
• Voltage Scanning: 3,3 V DC (internally Generated)
• AWG24 cables with 1800 mm length

Analog Input for temperature probe
• For NTC temperature probe eelectron code
• TS01A01ACC (range from -20°C to +100°C)
• TS01B01ACC (range from -50°C to +60°C)
• Max. length of Connecting Cable: ≤ 20 m (twisted cable)

Outputs
• 10 A cos φ 1 - 230 Vac
• 3 A for motors and motor reductors

• Max capacitance @230V: 21μF	5.000 cycles
• Incandescent lamps max load: 1500W	50.000 cycles
• Fluorescent lamps max load: 6 x18W	25.000 cycles
• Halogen lamps max load: 500W	50.000 cycles
• Gas discharge lamps max load: 200W	25.000 cycles

Control Elements
• EIB/KNX Red LED and button

Mechanical Specifications

• Case: plastic (Nylon)
• Dimensions: (Diameter x Height.): 52 x 28 mm
• Weight: approx. 50 g

Electrical Diagram
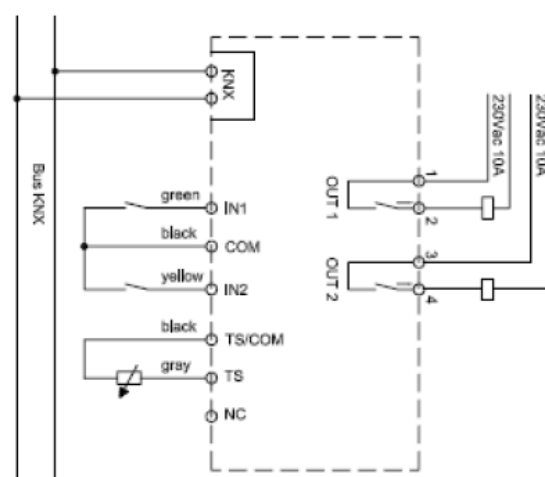
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 00
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1): III
• Bus: safety voltage SELV DC 21…31 V dc
• Meets EN 50491-3

EMC Requirements
• Complied with EN 50491-5-1 and EN 50491-5-2

Terms of use
• According to 50491-2
• Ambient temperature during operation: -5 °C + 45 °C
• Storage temperature: - 20 °C + 55 °C
• Relative humidity: max 90%

CE Mark
According to EMC guideline and low voltage directive

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Inwall 3 Input / 2 Output Module (Relays 10A)
cod. 0KF030010

CE

Terminals and connections

SCREW TERMINALS:
1. COM OUT 1
2. OUT 1 contact relay 1
3. COM OUT 2
4. OUT2 contact relay 2
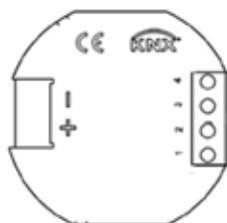
Wired Connectors:

1. GREEN	IN 1 free potential contact
2. BLACK	COMMON IN 1 , IN 2
3. YELLOW	IN 2 free potential contact
4. BLACK	IN TEMPERATURE SENSOR
5. GREY	IN TEMPERATURE SENSOR
6. --	NOT USED

Bus terminal:
                Negative = Black / Positive = Red

Output Configuration for Shutter

Out / Function / Terminals			Out / Function / Terminals		
OUT 1	▲ (up)	1/2	OUT 2	▼(down)	3/4

Installation Instructions

The device may be used for permanent indoor installations in dry locations within wall box mounts.

WARNING

• Device must be installed keeping a minimum distance of 4mm between electrical power line (mains) and input ca-bles or red / black bus cable .
• The device must be installed in a location that is accessible only to qualified installers
• The prevailing safety rules must be heeded.
• The device must be mounted by an authorised installer.
• The applicable safety and accident prevention regula-tions must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the re-spective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

For temperature probes see page 13.

HEADQUARTERS
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DIN Module Fancoil Controller Unit 0-10V
cod. 0KD010050

Product and Applications description

The Fan Coil Unit Controller is used to control fan coil units, floor heating or switch actuators. Depending on the design of the device, fan coil units are used in 2-pipe or 4-pipe systems. It controls up to 3 fan speeds (Relay or 0-10V outputs) as well as heating or cooling valves (Proportional or electrothermal valve) respectively. The mode of control is based on two-step control or a time-discrete PI controller with setpoint/actual value comparison. The valves and the fan can be regulated directly by devices via the closed loop of this controller. When the Fan Coil Unit Controller is used in floor heating, it can control up to seven channel. All of the floor heating channel control is used a time-discrete PI controller with setpoint / actual value comparison.

The following functions can be set in different functions:
1. Five channel 10A relay outputs
2. Two channel 0-10V DC outputs
3. Fan speed: High, Medium, Low
4. HVAC working mode: Heating, Cooling
5. HVAC op. mode: Standby, Comfort, Night, Frost protection
6. Fan speed and Valve status report
7. Seven local temperature sampling
8. BUS temperature sampling
9. Local temperature report
10. Seven channel floor heating outputs
11. Five control mode each floor heating channel
12. Seven channel output independently
13. Channel statistics total ON time
14. Channel state response
15. Channel state after bus voltage failure and recovery
16. Staircase light
17. Delay
18. PWM control output

Device is intended to be installed on DIN rail in cabinet for low voltage distribution

Application Program ETS

Maximum number of group addresses: 254
This is the maximum number of different group addresses the device is able to store.
Maximum number of associations: 254
This is the maximum number of associations between communication objects and group addresses the device is able to store.

Technical Data

Power Supply
• Via bus EIB/KNX 21..30V DC
• Dynamic current consumption < 20 mA
• Static current consumption < 5 mA
Temperature Input
• Local sensor digital sensor
Max 7 sensors
Max cable length 50m
• Via KNX 1 or 2 group object
Outputs
• 5 relays outputs 10 A cos φ 1 - 230 V AC
• 2 analog ouputs 0-10V DC 10mA / channel
Connections
• EIB/KNX Bus Terminal
0.8 mm Ø, single core
• Load circuits Screw terminal slotted head
0.2...4 mm² multi- core
0.4...6 mm² single-core
Physical specifications and Dimensions
• Plastic enclosure: Flame-retarded nylon
• Dimensions: (W x H x D): 72 x 90 x 66 mm

• Weight: ca. 200 g
• Installation: DIN rail / 4 Modules
Electrical Safety
• Pollution degree: 2 (according to IEC 60664-1)
• Protection class IP 20 (according to EN 60529):
• Safety Class III (according to IEC 61140)
• Over voltage category III (according to IEC 664-1)
• Bus: Safety extra low voltage SELV
• Compliant to EN50491-3
Electromagnetic compatibility
Compliant to: EN50491-5-1, EN50491-5-2
Environmental
• According to EN 50090-2.2
• Operative temperature: 0°C + 45°C
• Storage temperature: - 20°C + 55°C
• Relative Humidity (not condensing): max 90 %
CE Mark
In accordance with the EMC and low voltage guidelines

Terminal and connections

SCREW TERMINALS:
1. Output 0-10V DC
2. Input Temperature sensor
3. KNX/EIB black/red terminal
4. System Green LED
5. Output relays for heating and cooling valves or general purpose
6. Output relays for Fan speed or general purpose
PROGRAMMING:
7. ETS Programming Button and Red LED
TEMPERATURE SENSOR:
Order code: 0KD010050
• DIGIT TEMP Yellow cable
• COM Red cable
• COM Black cable

Installation Instructions

Device must be installed keeping a minimum distance of 4 mm between electrical power line (mains - 230V) and red / black bus connector or bus cable
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorized installer.
• Device must be installed in a location that is accessible
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

DIN Module Fancoil Controller Unit 0-10V
cod. 0KD010050

Terminals and connections
Terminali e connessioni

Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. An efficient sorted waste collection of the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

Single-phase Digital Energy meters - Direct connection 63A
cod. 0KD010M10

Product and Applications description

• This Energy-meter provides the essential measurement capabilities required to monitor a single phase electrical installation.
• 0.25-5 (63) A, Class B, 230 VAC 50 Hz, -25 °C ... +55 °C, 4 Quadrants, 2 Tariffs.
• Active Energy Class B (according to EN-50470) and Reactive Energy Class 2
• Direct connected (up to 63 A)
• LCD display and 3 push-button keys (to read Energies, V, I, PF, F, P, Q and to configure some parameters)
• 1 push botton and 1 LED dedicated to KNX.
• Display with 8 digits.
• Self supplied (by the input voltage itself).
Device is intended to be installed on DIN rail.
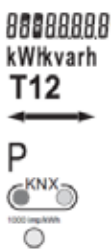
Display

8888888.8	Energy value
kWh kvarh	kWh / kvarh display
T12	Running tarif, called tarif
← →	Energy export (received)
	Energy import (delivered)
P	Energy value "Partial"
KNX	Push botton and LED dedicatet to KNX
	Metrological LED

Commands

Scroll Key: This key is used to scroll pages and to modify parameters value. Its pushing is accepted only if it is shorter than 1.5 second..

OK key: This key is used alone to enable a new menu function or to confirm a parameter value during its modification. Its pushing is accepted only if shorter than 1.5 seconds

ESC key: This key is used alone to exit from a sub-menu, to cancel a parameter modification or to go back to the main page. In these cases, its pushing is accepted only <1.5 seconds

A long pushing (>1.5 seconds) of the "ESC key" is used in the Partial Energy Registers Pages to reset their values.

A long pushing (>5 seconds) is used in the Main Energy Registers Pages to reset their values

Device Switch-on and Main Page

Main Page:
This page appears not only at device switch on, but also in case for 30 seconds no key is pushed. The value is the sum of 2 registers:
Imported Act. Energy Tariff T1 + Imported Act. Energy Tariff T2. (or, alternatively, the sum of the Exported ones).

Main Menu
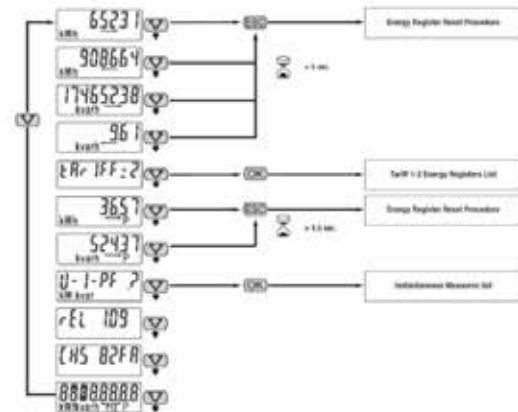
Tariff 1-2 Energy Register List Instantaneous Measurement List
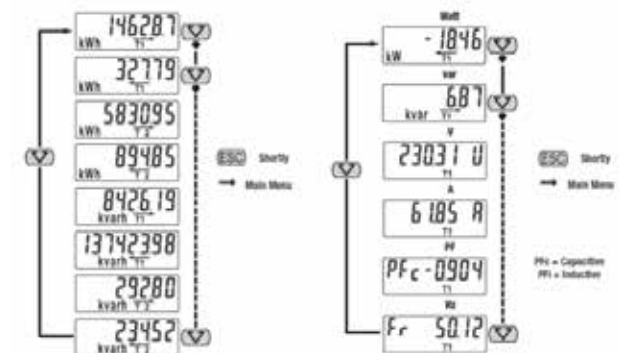
Energy Register Reset Procedure

Diagnostic Message

Error Condition
If the display shows these messages, the meters has got a malfunction and must be replaced.

Wiring Diagram

Single-phase Digital Energy meters - Direct connection 63A
cod. 0KD010M10

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Technical Specifications

- Housing	DIN 43880	DIN	2 Module
- Mounting	EN 60715	35 mm	DIN rail
- Depth		mm	70
- Weight		g	175
Operating features			
- Connection	to single-phase network	n° wires	2
- Storage of energy values and config.	Internal flash memory	-	yes
- Tariff	for active and reactive energy	n° 2	T1 / T2
Measuring features (according to EN 50470-1, EN 50470-3)			
- Reference Voltage Un		VAC	230
- Reference Current (Iref)		A	5
- Minimum Current (Imin)		A	0.25
- Maximum Current (Imax)		A	63
- Starting Current (Ist)		A	0.015
- Reference Frequency (fn)		Hz	50
- Number of phases (number of wires)		-	1 (2)
- Accuracy	Active Energies (accor. to EN 50470-3) and Active Powers	Class	B
	Reactive Energies (accor. to EN 62053-23) and Reactive Power	Class	2
Supply Voltage and Power Consumption			
- Operating Supply Voltage range		V	92 ... 276
- Maximum Power Dissipation (Voltage circuit)		VA (W)	<2 (1)
- Maximum VA burden (Current circuit) @ Imax		VA	<1
- Voltage Input Waveform		-	AC
- Voltage impedance		MΩ	1
- Current impedance		mΩ	<20
Overload capability			
- Voltage	continuous	VAC	276
	Temporary (1 s)	VAC	300
- Current	continuous	A	63
	Temporary (10 ms)	A	1890
Measuring Features			
- Voltage range		VAC	92 ... 276
- Current range		A	0.015 ... 63
- Frequency range		Hz	45 ... 65
- Measured Quantities		-	V, A, kWh, kVARh, PF, Hz, kW, kVAR
Display features			
- Display type	LCD backlighted	-	6.2 +3
	Energy digits dimension	mm	6 x 3
- Active Energy	6 digits + 2 decimal digits	min. max. kWh	0.01 ... 999999.99
- Reactive Energy	6 digits + 2 decimal digits	min. max. kvarh	0.01 ... 999999.99
- Voltage	3 digits + 2 decimal digits	V	92.00 ... 276.00
- Current	2 digits + 2 decimal digits	A	0.00 ... 63.00
- Power factor	1 digits + 3 dec. digits + capac./induc. indic.	-	0.000 ... 1.000
- Frequency	2 digits + 2 decimal digits	Hz	45.00 ... 65.00
- Active Power	2 digits + 2 decimal digits with sign	kW	0.00 ... 17.40
- Reactive Power	2 digits + 2 decimal digits with sign	kVAR	0.00 ... 17.40
- Running Tariff	1 digit	-	T1 / T2
- Display refresh period		s	1
Optical metrological LED			
- Front mounted red LED (meter constant) proportional to active imp/exp Energy		p/kWh	1000
Safety			
- Protective class		Class	II
- AC voltage test (EN 50470-3, 7.2)		kV	4
- Degree of pollution		-	2
- Operational voltage		V	300
- Impulse voltage test		1.2/50 µs- kV	6
- Housing material flame resistance	UL 94	Class	V0
Embedded communication			
- Physical interface		-	KNX terminal

According with EN 50470-1, EN 50470-3, EN 62053-23 e EN 62053-31

CE

- Isolation class		-	SELV circuit
Tariff			
- Tariff 1		-	open contact
- Tariff 2		VAC	230 ±20%
- Input impedance		kΩ	224
Connection terminals			
- Screwdriver for mains terminals	head with Z +/-	POZIDRIV	PZ2
- Screwdriver for tariff terminals	slotted head	mm	0.8 x 3.5
- Terminal capacity main current paths	solid wire min. (max)	mm²	1.65 (33)
	stranded wire with sleeve min. (max)	mm²	1.65 (33)
- Terminal capacity for tariff	solid wire min. (max)	mm²	1 (4)
	stranded wire with sleeve min. (max)	mm²	1 (2.5)
Environmental conditions (storage)			
- Temperature range		°C	-25 ... +70
Environmental conditions (operating)			
- Temperature range		°C	-25 ... +55
- Mechanical environment		-	M1
- Electromagnetic environment		-	E2
- Installation	Indoor	-	yes
- Altitude (max.)		meter	<2000
- Humidity	yearly average, not condensing	-	<75%
	on 30 days per year (not condensing)	-	<95%
- IP rating		-	IP51(-)/IP40

(*) The metering equipment must be installed inside a cabinet with IP rating IP51 or better.

Avvertenze per l'installazione

IMPORTANTE

Il dispositivo deve essere installato mantenendo una distanza minima di 4mm tra le linee in tensione non SELV (230V) e i cavi collegati agli ingressi o al bus EIB/KNX.

- L'apparecchio deve essere impiegato per installazione in ambienti chiusi e asc.
- Il dispositivo deve essere installato in posizione accessibile solo agli installatori qualificati
- L'apparecchio deve essere installato e messo in servizio da un installatore abilitato.
- Devono essere osservate le norme in vigore in materia di sicurezza e prevenzione antinfortunistica.
- L'apparecchio non deve essere aperto. Eventuali apparecchi difettosi devono essere fatti pervenire alla sede competente.
- Il bus KNX permette di inviare comandi da remoto agli attuatori dell'impianto. Verificare sempre che l'esecuzione di comandi a distanza non crei situazioni pericolose e che l'utente abbia sempre segnalazione di quali comandi possono essere attivati a distanza.

Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. An efficient sorted waste collection of the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

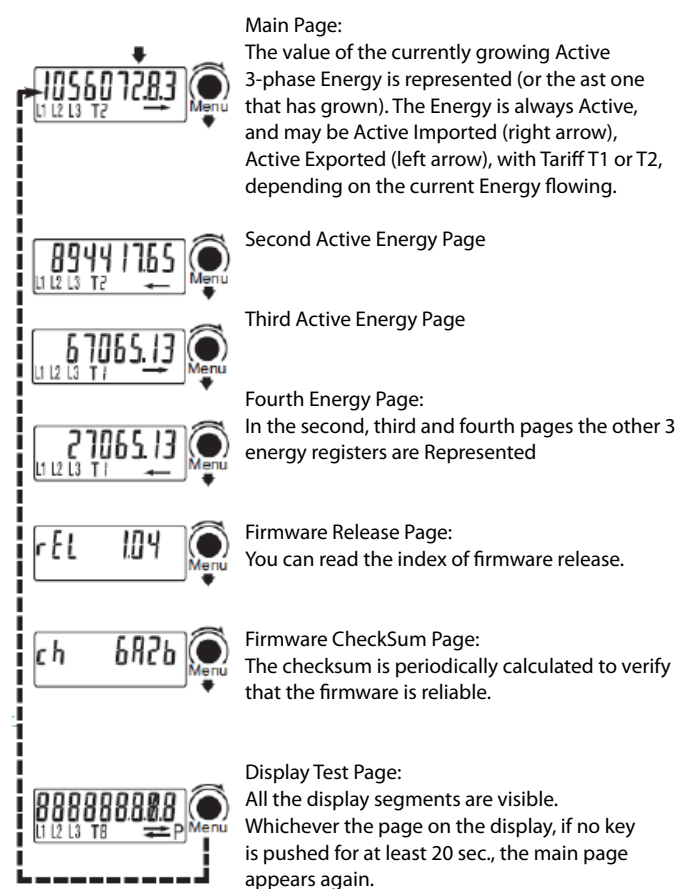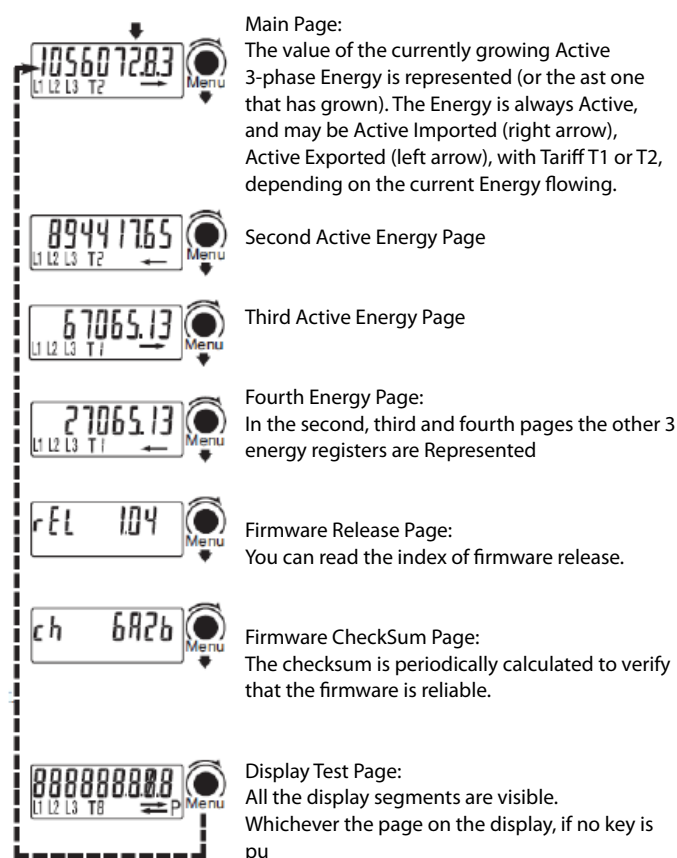# Three-phase Digital Energy meters - Direct connection 63A
cod. 0KD030M10

Product and Applications description

• This Energy-meter provides the essential measurement capabilities required to monitor a three phase electrical installation.
• Direct connected (up to 63 A)
• LCD display and 3 push-button keys (to read Energies, V, I, PF, F, P, Q and to configure some parameters)
• 1 push botton and 1 LED dedicated to KNX.
• Display with 8 digits.
• Self supplied (by the input voltage itself).

Device is intended to be installed on DIN rail.

Display

Main Page:
The value of the currently growing Active 3-phase Energy is represented (or the ast one that has grown). The Energy is always Active, and may be Active Imported (right arrow), Active Exported (left arrow), with Tariff T1 or T2, depending on the current Energy flowing.

Second Active Energy Page

Third Active Energy Page

Fourth Energy Page:
In the second, third and fourth pages the other 3 energy registers are Represented

Firmware Release Page:
You can read the index of firmware release.

Firmware CheckSum Page:
The checksum is periodically calculated to verify that the firmware is reliable.

Display Test Page:
All the display segments are visible. Whichever the page on the display, if no key is pushed for at least 20 sec., the main page appears again.

Partial Counter

Partial Active Energy Counters:
By pushing the "Partial key" partial active energy counters are readable in the main,second, third and fourth pages (i.e. for monthly energy consumption).

These counters are resettable, see the energy reset section. By pushing the "Partial key" in any of the four pages, you go back to the Main menu
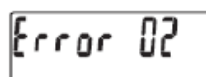
Diagnostic messages

One or more missing phase:
In case one or more phase is not detected, the correseponding icon disappears from the bottom row of the display. E.G. L2 is not detected.

Phase sequence error:
When the three phases are not in the correct zero-crossing sequence this message appears and the icons L1 and L2 blink. To make this message to disappears, you can keep pushed the "Menu key" for at least 4 seconds.

Error condition:
When the display shows the message "Error 2 or Error 3", the meter has got a malfunction and must be replaced.

KNX Application and Address programming

Once the metering equipment is installed, in order to have KNX correctly working, the KNX application (.WD4) and the address writing are required to be downloaded.

On the top right corner of the metering equipment front, there are a LED and a push button key dedicated to the KNX address downloading. When you turn on the metering equipment, the LED should remain OFF. Also, if you push the KNX key without connecting the KNX bus to the metering equipment or if the KNX external interface is not powered, the LED remains OFF.

To prepare the KNX communication, proceed in the following way:
1) With the power supply totally disconnected, connect both mains and KNX plug-in connector
2) Turn on the metering equipment
3) Launch the KNX programming tools in a personal computer and connect the computer to the meter by means of a KNX interface.
4) Select the operation (application downloading/ address writing/application downloading & address writing)
5) If the selected operation involves the address writing, push the KNX when required by the tool.
6) The KNX LED will turn ON

7) Once the operation is completed, the LED will switch OFF

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Three-phase Digital Energy meters - Direct connection 63A

cod. 0KD030M10

Display

888888.88.8	Energy Value
T8	Running tarif
L1 L2 L3	Energy line (L1-2-3)
P	Energy value „Partial"
⇌	Energy Import
1000 imp/kWh ○	Energy Export Metrological LED
⊙⊙	CT Indicator

Push - Buttons

KNX	KNX address writing
Partial	Command button for "Partial" reading selection
Menu	Menu key for reading selection

Installation Instructions

Device must be installed keeping a minimum distance of 4 mm between electrical power line (mains - 230V) and red / black bus connector or bus cable
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorized installer.
• Device must be installed in a location that is accessible
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
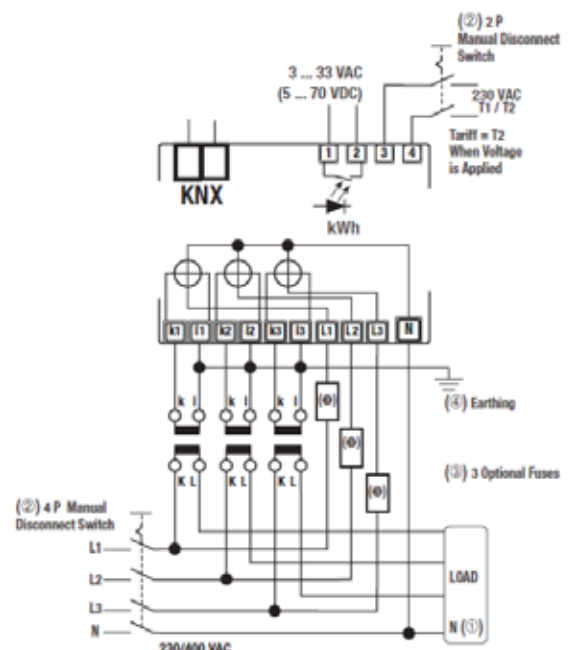
Energy Reset
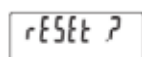
In all pages representing an Energy value, a pressure of 20 sec. of the "Menu key" allows to enter in the zeroing menu, consequently on the display "see image aside" appears. The key must be released. In order to confirm the operation and get back to default visualization, push it again for 4 seconds, otherwise after 4 sec., the reset will have no effect.

Wiring Diagram
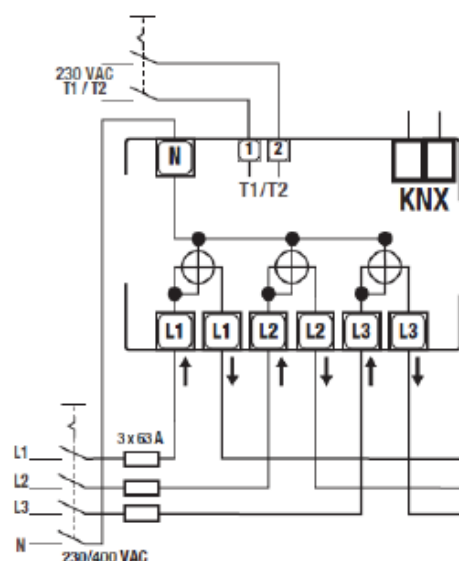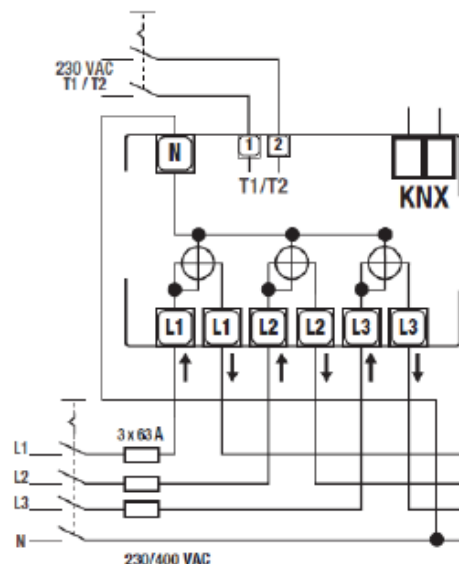
Neutral wire must be connected to the meter

Dimension   Sealable terminal covers
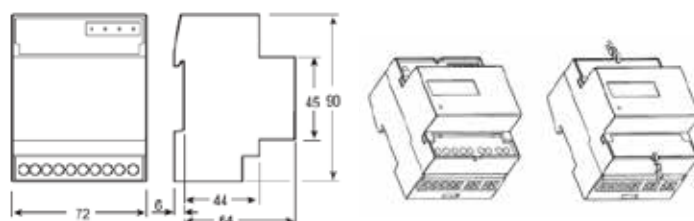
Three-phase Digital Energy meters - TA connected
cod. 0KD030M20

Product and Applications description

This Energy-meter provides the essential measurement capabilities required to monitor a three phase electrical installation.
three-phases digital energy meter with connection by CT .../1 A up to 2000/1 A or by CT .../5 A up to 10.000/5 A 0.01-1(6) A 2 tariffs inbuilt KNX communication 1 S0 pulse output proportional to Active Imported KWh

Device is intended to be installed on DIN rail.

Main Menù

Main Page:
The value of the currently growing Active 3-phase Energy is represented (or the ast one that has grown). The Energy is always Active, and may be Active Imported (right arrow), Active Exported (left arrow), with Tariff T1 or T2, depending on the current Energy flowing.

Second Active Energy Page

Third Active Energy Page

Fourth Energy Page:
In the second, third and fourth pages the other 3 energy registers are Represented

Firmware Release Page:
You can read the index of firmware release.

Firmware CheckSum Page:
The checksum is periodically calculated to verify that the firmware is reliable.

Display Test Page:
All the display segments are visible. Whichever the page on the display, if no key is pu

Partial Counter

Partial Active Energy Counters:
By pushing the "Partial key" partial active energy counters are readable in the main,second, third and fourth pages (i.e. for monthly energy consumption).

These counters are resettable, see the energy reset section. By pushing the "Partial key" in any of the four pages, you go back to the Main menu

Diagnostic messages

One or more missing phase:
In case one or more phase is not detected, the correseponding icon disappears from the bottom row of the display. E.G. L2 is not detected.

Phase sequence error:
When the three phases are not in the correct zero-crossing sequence this message appears and the icons L1 and L2 blink. To make this message to disappears, you can keep pushed the "Menu key" for at least 4 seconds.

Error condition:
When the display shows the message "Error 2 or Error 3", the meter has got a malfunction and must be replaced.

Pulse rate limit

Pulse output setting
The maximun number of pulses per kWh (Pulse constant) that the meter can generate through S0 ouputs is limited by the CT ratio and by the ON time of the pulse.
The relationship is:

$$\text{Max S0 Pulse Costant} = \frac{724368}{CT_{ratio} * (ON_{time} [msec]+30 \text{ msec})}$$

For example, if in your installation you need a CT ratio of 1000/5 = 200 and a ON pulse time of 70 ms, the maximum Pulse constant that you can select is:

$$\text{Max S0 Pulse Costant } (CT_{ratio} = 200, ON_{time} = 70 \text{ msec}) = \frac{724368}{200*(70+30)} \cong 36$$

You can always modify the CT ratio and the pulse ON time as you prefer; in case the Pulse Constant is too high for your selections, it is automatically adjusted to the maxmum allowed value.

Modifiable Parameters

As above mentioned, the following parameters are modifiable:
CT Primary Winding and CT Secondary Winding, On-Time and Pulse costant.
For example, in the CT Primary Winding page:

Start (⬇) key kept pushed for 4 seconds The value starts to blink.

Push Start, Down key to decrease,Up key to increase. Push the "Menu key" to confirm, otherwise after 8 seconds the modification will be lost.

Three-phase Digital Energy meters - TA connected
cod. 0KD030M20

KNX Application and Address programming

Once the metering equipment is installed, in order to have KNX correctly working, the KNX application (.WD4) and the address writing are required to be downloaded.

On the top right corner of the metering equipment front, there are a LED and a push button key dedicated to the KNX address downloading. When you turn on the metering equipment, the LED should remain OFF. Also, if you push the KNX key without connecting the KNX bus to the metering equipment or if the KNX external interface is not powered, the LED remains OFF.

To prepare the KNX communication, proceed in the following way:
1) With the power supply totally disconnected, connect both mains and KNX plug-in connector
2) Turn on the metering equipment
3) Launch the KNX programming tools in a personal computer and connect the computer to the meter by means of a KNX interface.
4) Select the operation (application downloading/ address writing/application downloading & address writing)
5) If the selected operation involves the address writing, push the KNX when required by the tool.
6) The KNX LED will turn ON

7) Once the operation is completed, the LED will switch OFF

Display
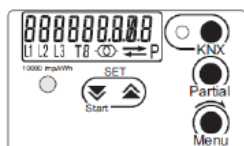
888888.88.8	Energy Value
T8	Running tarif
L1 L2 L3	Energy line (L1-2-3)
P	Energy value „Partial"
⇄	Energy Import
1000 imp/kWh	Energy Export Metrological LED
⊙⊙	CT Indicator

Push - Buttons

KNX address writing

Command button for "Partial" reading selection

Menu key for reading selection

Energy Reset
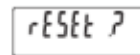
In all pages representing an Energy value, a pressure of 20 sec. of the "Menu key" allows to enter in the zeroing menu, consequently on the display "see image aside" appears. The key must be released. In order to confirm the operation and get back to default visualization, push it again for 4 seconds, otherwise after 4 sec., the reset will have no effect.

rESEt ?

Wiring Diagram

The Energy Meter has OVERVOLTAGE CATEGORY III (according to IEC 62052-31 that refers to IEC-60664-1 Ed. 2.0:2007), hence its direct connection to the Public Electricity
Grid is not allowed. The Energy Meter is intended for INDOOR installation only (according to EN 50470-1 and IEC 62052-31).
The Energy Meter must be installed on a DIN-rail and inside a cabinet with a protection degree (IP rating) equal to (or better than) IP51.
Direct connection of currents inputs to the Energy Meter is NOT ALLOWED: external CTs insertion with proper insulation level are mandatory.

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Three-phase Digital Energy meters - TA connected
cod. 0KD030M20

Alternative wiring diagram, with only 2 external CTs.
To be used only under the following conditions:
• The load is 3 wires (no neutral) and there is no current leakage (I1 - I2 - I3 = 0)
• Only 3-phase measures (Σ Power and Energies) are meaningful.
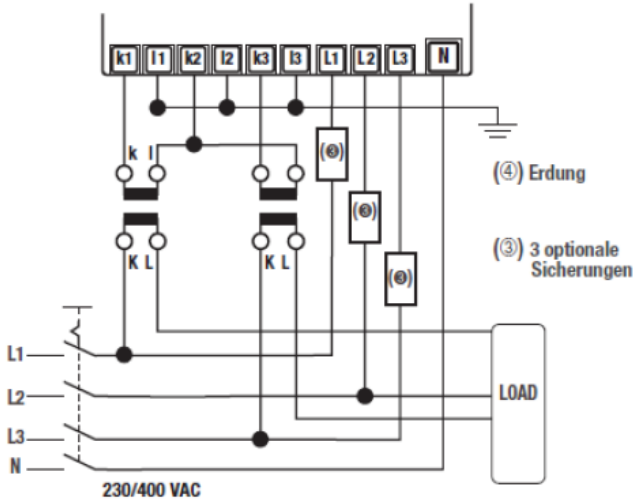
(1) The connection of the Neutral Wire to the "N" terminal of the Energy Meter is mandatory.
Its connection to the Load is optional, but, in the case, only 3-phase measures (Powers and Energies) are meaningful, while measures referred to L1, L2, and L3 are meaningless.
(2) These manual disconnect switches are mandatory for safe installing operation. Their purpose and location must be easily evident to installation personnel
(3) These fuses are not mandatory, they are recommended to protect the line, not the device itself.
Use >= 6 A fast (F) or >= 1 A delayed (T).
(4) Earthing of secondary windings of CTs is governed by the laws in force in the Countries where the device is installed.
Current transformers must not be operated with open terminals since dangerous high voltages might occur which may result in personal injuries and property damage; furthermore, in this case the transformers are exposed to thermal overload.

Installation Instruction

WARNING
Device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.

    Device may be used for indoor installations in dry locations.
    Device must be mounted by an authorised installer.
    Device must be installed in a location that is accessible only to qualified installers
    The applicable safety and accident prevention regulations must be observed.
    Device must not be opened. Any faulty device should be returned to manufacturer.
    For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
    KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

Technical Data

In compliance with CLC/TR 50579 , EN 62059-32-1, EN 50470-1, EN 50470-3

Dimension   Sealable terminal covers

3 x 300W DIN Rail Dimmer Module
cod. 0KD030040

Product and Applications description

The 3 channel Dimmer Module is designed to interface variable lighting with bus KNX/EIB and allow dimming of incandes-cent loads low voltage LV halogen (230 V), extralow voltage halogen (12V or 24V ELV) with electronic or ferromagnetic

transformer, fluocompact dimmable light with builtin supply, dimmable 230 V LED lamp with builtin supply, or very low voltage dimmable LED lamp (ELV 12 V or 24 V) with electronic transformer.

This product is a universal dimmer with automatic load control and built-in teaching feature for more efficiently fluocompact and 230 V LED lamp adjustment.

The product has also an "override" mode, which allows to select the desired dimming mode.

The outputs number depends on switch 7 position.

Technical Specifications

Power supply from EIB/KNX bus
• Voltage	21..30V DC
• Current consumption from EIB/KNX	< 2,3 mA

Power supply from mains:
• Voltage	230V ~ 50/60 Hz
• Consumption without load	0,7W
• Power dissipation	5,8W

Connections
EIB/KNX: 2 bus terminal 0,8mmØ

Loads and power supply :

0,75 mm²   2,5 mm²
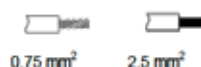
Load type / rated output

Incandescent or halogen lamps - 230V
C1	C1 / C2	C1 / C2 / C3	
900 W	600 W	300 W	
-	300 W	300 W	
-	-	300 W	

Halogen lamps (12/24V) via ferromagnetic transformer suitable for dimming (The transformer shouldn't be used with less than 75 % of its nominal load)
C1	C1 / C2	C1 / C2 / C3	
900 VA	600 VA	300 VA	
-	300 VA	300 VA	
-	-	300 VA	

Halogen lamps (12/24V) with electronic transformer
C1	C1 / C2	C1 / C2 / C3	
900 VA	600 VA	300 VA	
-	300 VA	300 VA	
-	-	300 VA	

Dimmable fluocompact lamps
C1	C1 / C2	C1 / C2 / C3
1 x 210 W	1 x 120 W	1 x 60 W
-	1 x 60 W	1 x 60 W
-	-	1 x 60 W

Dimmable LED lamps
C1	C1 / C2	C1 / C2 / C3
210 W	120 W (15 lamps)	60 W 60 W 60 W
(15 lamps)	60 W (8 lamps)	(8 lamps/output)

The efficiency of the transformer has to be taken into account to calculate the max. number of controlled lamps .

Standards
• Protection class IP 30 (according to EN 60529):
• Compliant to EN60950 and ETSI301 489-1 and 301 489-3
• Safety Class II according EN 61140
• EIB / KNX

Environmental specifications
• Operative temperature: -5°C ÷ + 45 °C
• Storage temperature: -20°C ÷ + 70 °C
• Relative Humidity: max 90 %

Physical specifications and Dimensions
• Dimensions 6 DIN modules
• Weight: ca. 300 g.
• Installation: DIN rail (EN 60715)
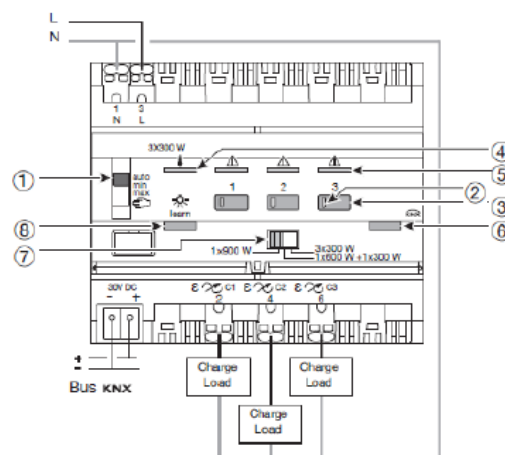
1. **Switch auto / min / max / manual**
2. **Status led**
3. **Local push button**
4. **Led indicator of overheating protection**
5. **Led indicator of overload protection / short circuit**
6. **ETS programming push button and led**
7. **Selector for output number configuration**
8. **Override dimming mode**

Load teaching

Load teaching (product already connected to the mains and bus) allows to detect load characteristics in order to control it more effectively (in particular, CFL and LED lamps) :
• with a KNX push button configured for dimming, give 5 short presses (5 ON, 5 OFF or 5 ON/OFF) followed by a long press until the load switches off
• press the pushbutton shortly once to start the teaching procedure. This operation lasts for about 30 s. and makes the lighting level vary.
After the process has ended, the load switches on to the maximum level and flickers once to signal teaching completion.
Depending on the connected load, the minimum lighting level can be modified.

Setting of the minimum and maximum dimming values

1. Set the min or max dimming value by acting either way:
• setting switch 1 in position **"manual"** and acting on push-button 3 (a long pressure allows dimming until the desired lighting level is reached, while a short pressure switches lighting on/off). Set the switch into position min or max as desired, or,
• setting switch 1 in position min or max as desired and set the desired level using a communication pushbutton connected to the output (need to perform the configuration via ETS before)
2. Record the value set by pressing push-button 3 for more than 3 seconds. Led 2 flicker twice to confirm the recording.
Note 1: If the minimal or maximum values are set out of range, led 2 will flicker after the recording request.
Note 2 : These limits can also be programmed via ETS.

3 x 300W DIN Rail Dimmer Module
cod. 0KD030040

CE

Test and start up

Switch auto / min / max / manual (1) and local control pushbuttons (3)
When switch **1** is in position **"manual"**, pushbuttons 3 can be used to control output (a long pressure allows dimming until the desired illumination level is reached, while a short pressure switches lighting on/off).
Use the position **"auto"** of switch **1** in operation mode or for configuring the product.
In position "auto" of switch **1**, pushbutton **3** is inactive and the output is controlled by telegrams received from bus KNX/EIB.
Status led
Indicators **2** indicate the state of the corresponding outputs: indicator on = actuated load, indicator flashing for 5 s = no load connected.
ETS programming push button and led
Press lighted pushbutton **6** to carry out the physical addressing of the product or to check bus presence: indicator on = the bus is present and the product is in physical addressing state.
Protection against overheating, overload and short-circuit
Indicator **4** indicates an overheating condition when switched on in a fixed position: As the power available is reduced, it is recommended to reduce the load and/or to improve dissipation conditions.

Indicator **5** signals a short circuit when flashing or an overload condition when switched on in a fixed position: in such cases, the dimmer reduces automatically the power available and no longer controls its load, as required.
It is then necessary to check wiring and/or to decrease the load.

Dimming mode override

To access this function, the product must already be con-nected to the mains and the bus.

Colors	Modes
YELLOW	Fluocompact
PURPLE	Capacitive loads (CFL)
BLUE	Inductive loads
RED	LED load
GREEN	Load teaching (CFL+LED)
WHITE	Factory reset (automatic mode)

• Give one long press on button 8 until the status indicator lamps flash
• select the channel for which you wish to change the dimmer mode by pressing on button3
• perform short repeat pressure for selecting the desired dimming mode :
! On "Yellow" mode validation, lighting can be disturbed for a short time. The dimmer adjusts its characteristics to the connected lamps
• perform extended pressure on button 8 to confirm the selected mode, the indicator luminous will stop flickering.
If no action is occurs within 2 minutes after extended pressure has ended, the product returns to the previous dimming mode. If the validated mode is not compatible with the con-nected load, the dimmer will return automatically to the "factory" mode.

Displaying the current dimming mode

A single press on button 8 followed by a press on button 3 of the channel concerned, allows the current dimmer mode to be consulted.

Selection of the number of outputs

Selection of the numbers of outputs is configurable through switch 7, as described below:
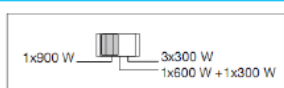
When the switch is in this position the dimmer manage only one load (C1) with a maximum rated power of 900W
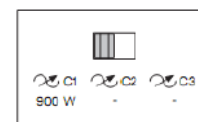
When the switch is in this posi-tion the dimmer manage two loads: the first (C1) with a max-imum rated power of 600W, the second (C2) with a maximum rated power of 300W.
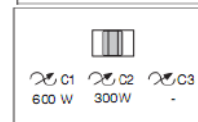
When the switch is in this position the dimmer manage three loads: C1, C2, C3 everyone with a maximum rated power of 300W.
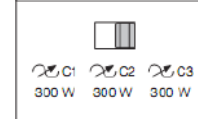
Mounting and Wiring hints

Device is intended to be used indoor in dry places.
WARNING:
• When several dimmers are installed side by side, it is recommended to improve dissipation conditions (i.e. leaving some space between 2 devices)
• This device must be installed only by a qualified electrician.
• Install in conformity to SELV installation rules.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

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DIN Rail 3 Out Dimmer Module 1-10V
cod. 0KD030041

Product and Applications description

Dimmer used to control lighting circuits via a 1/10V connection, acting upon remote control dimmers or electronic ballasts.
Device is intended to be installed on DIN rail.
The device configuration for commissioning in terms of physi-cal address, group addresses and parameters is done with ETS (Engineering Tool Software) through a download of the Application Program.

Application program

Maximum number of group addresses: 254
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 255
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.

Technical Specifications

Power supply from EIB/KNX bus
- Voltage   29V DC
- Current consumption from EIB/KNX   < 5 mA

Power supply from mains:
- Voltage   230V ~ 50/60 Hz
- Consumption without load   5W

Connections
EIB/KNX: 2 bus terminal 0,8mmØ

Loads and power supply :

1 mm2 —> 6 mm2   1,5 mm2 —> 10 mm2

Load type / rated output

230 V~	Incandescent Lamps	2300W
230 V~	Halogen Lamps	2300 W
12V DC 24V DC	Conventional Transformer	1500 VA
12V DC 24V DC	Electronic Transformer	1500W
1/10 V	Electronic Ballasts	1000W
1/10 V	Electronic Ballasts	50mA MAX

The efficiency of the transformer has to be taken into account to calculate the max. number of controlled lamps .

Standards
- Protection class IP 30 (according to EN 60529):
- Compliant to EN 60950 and ETSI 301 489-1 and ETSI 301 489-3
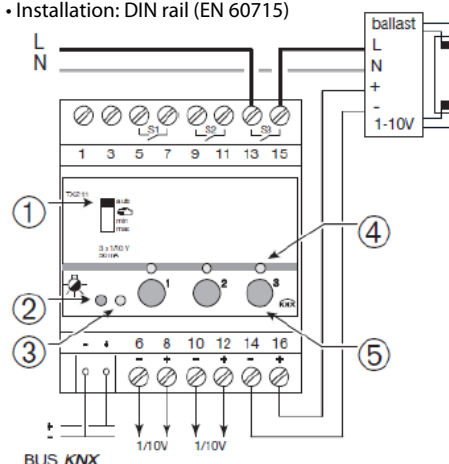- Safety Class II according EN 61140
- EIB / KNX

Environmental specifications
- Operative temperature: 0°C ÷ + 45 °C
- Storage temperature: -20°C ÷ + 70 °C
- Relative Humidity: max 90 %

Physical specifications and Dimensions
- Dimensions 4 DIN modules
- Weight: ca. 300 g.
- Installation: DIN rail (EN 60715)

Setting of the minimum and maximum dimming values

These values are set by the output and are independent.
1. Set dimming minimum or maximum value by: setting switch 1 at position Manu and using pushbutton 5 of desired channel (a long pressure brings lighting up to the desired setting, a short pressure switches lighting On /Off). Set switch 1 in position min or max according to requirement, or by setting switch 1 at position Auto and using a communication pushbutton connected to the selected output to get the desired value (Set configuration beforehand via ETS).
2. Memorize the chosen value by holding the pushbutton 5 of the desired output for more than 3 seconds. Storage of value is confirmed by a double flashing of the LED 4 associated to the output.
Note 1: If dimmer minimal or maximum value is set out of limits, LED 4 associated with the channel will flicker after BP 5 of the desired channel is released.
Note 2: These limits can also be programmed directly via interface ETS.

Mounting and Wiring hints

While switch 1 is in menu position, BP 5 can be used to control the connected load for on/off or dimming position. LED 4 displays the state of the channel: switched on = the channel is currently in use. While switch 1 is in auto position, BP 5 is inactive. LED 4 indicates the state of the channel. LED 3 switches on and displays the presence of the bus after pressing BP 2. While switch 1 is in auto position, one LED 4 flickers and signals loading of wrong application software. Physical addressing is done by using BP 2 and signalled by LED 3 switch-on. Device is intended to be used indoor in dry places.
IMPORTANT
- This device must be installed only by a qualified electrician.
- Install in conformity to SELV installation rules.
- The applicable safety and accident prevention regulations must be observed.
- The device must not be opened. Any faulty devices should be returned to manufacturer.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

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Universal Dimmer 1 Channel 700W
# MASTER & SLAVE
cod. 0KD010010 e 0KD010011

Product and Applications description

0KD010010 is a KNX power dimmer 1-channel acting as a Master Dimmer to which you can connect up to two Slave Modules (cod. 0KD010011) with identical characteristics to the Master power dimmer and connected to it by a local two wires bus.
Device installation diagram:

3 Channel configuration (Master + 2 Slave)

Slaves modules are optional
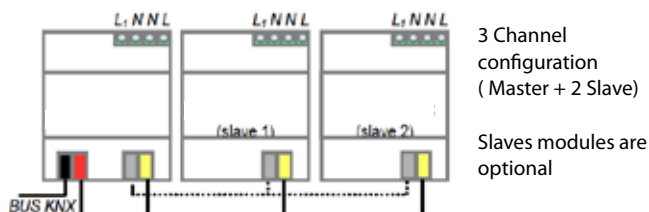
Dimmer 0KD010010 can be used in one of the following configurations:
• Trailing Edge: The dimmer turns off part of the final part of the waveform of the input voltage resulting in reduced lamp output.
This load regulation is used for resistive or capacitive loads (typically halogen lamps with electronic transformer or incandescent lamps)
• Leading Edge: The dimmer turns off part of the initial part of the waveform of the input voltage, resulting in reduced lamp output.
This load regulation is used for inductive loads (typically ferromagnetic transformers or toroidal)
The three channels are independent and can therefore operate on different phases of the same three phase systems respecting the limit of 230Vac between phase and neutral.
The product is intended for installation on DIN rail in electrical distribution cabinets.

ETS Application Program

Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 60
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 7 group addresses of this kind for the whole device.
ETS programming of the Master device can be performed without slave modules (can be connected later), and without the mains voltage.

Technical Specifications

Power Supply
From EIB/KNX bus (1) 21...32V DC
Current consumption from KNX (1) ≤ 10mA
From mains (2) 230Vac 50/60 Hz
When output is OFF (2) 1W max.
Dissipated power (2) 1.2 % of load nominal power
(1) = REFERRED TO 0KD010010 MASTER CHANNEL ONLY
(2) = REFERRED TO BOTH 0KD010010 MASTER AND 0KD010011 SLAVE MODULES
Connections
• Power supply / load cable: max 2,5 mm2 – AWG 14
• Local bus length: max. 2 m. between 2 mod.

Allowed loads

LOAD TYPE	MAX POWER / VOLTAGE	MODE
Incandescent or halogen lamps	20÷700 W, 230V~ 50/60Hz,	RC
Ferromagnetic transformer suitable for dimming with secondary winding closed on resistive load (Halogen lamps 12/24V)	20÷700 VA, 230V~ 50/60Hz,	L (3)
Electronic transformers with secondary winding closed on resistive load (Halogen lamps 12/24V)	20÷700 VA, 230V~ 50/60Hz,	RC
Dimmable LED lamps	230V~ max. 160W (4)	L
Compact Fluorescent Lamps (ESL/CFL)	230V~ max. 160W (4)	L

(3) DO NOT CONNECT THE TRASFORMER WITHOUT CONNECTING THE LAMP ON THE SECONDARY WINDING TO AVOID OVERVOLTAGE THAT MAY CAUSE DAMAGING TO THE DEVICE
(4) FOR LED LAMPS OR ESL, THE CORRECT OPERATION STRICTLY DEPENDS FROM THE LAMP USED; SO THERE IS NO GUARANTEE IN ADVANCE THE PROPER OPERATION OF THIS KIND OF LAMPS, EVEN IF THEY ARE DECLARED AS DIMMERABLE.

Mechanical data
• Plastic enclosure PPO - HFFR
• Installation: DIN Rail
• Dimensions: 4 Modules
• Weight (approx.): 230 g.
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1) III
• Bus (safety voltage) SELV
• Compliant to EN50491-3
EMC compatibility
• Compliant to EN50491-5-1, EN50491-5-2
Environmental characteristics
• Compliant to EN 50491-2
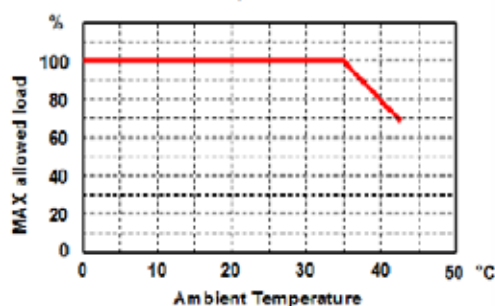• Ambient temperature (Fig.1): 0 to + 45°C
• Storage temperature: - 20 to +55 °C
• Relative humidity (not condensing): 90% max.

CE MARK
In accordance with the EMC and low voltage guidelines

Fig. 1 – Maximum allowed load compared to ambient temperature:

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Universal Dimmer 1 Channel 700W
MASTER & SLAVE
cod. 0KD010010 e 0KD010011

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Visual and command elements

LED 1 (L1)	DESCRIPTION	SYMBOL
Short blink	Normal operating mode	COM OK ☀
Always ON	Slave: local bus not connected Master: local bus or KNX bus not connected	NO COM ●
Always OFF	Mains (230V) not present	NO AC ○

LED 2 (L2)	DESCRIPTION	SYMBOL
ON / OFF	OUT ON / OUT OFF	○ ● OUT
Slow Blink	Load not connected	NO LOAD
Blink	ALARM (overvoltage or overcurrent or over temperature)	⚠

LOAD TYPE SETTING (MASTER AND SLAVE MODULES) – PROG LOAD

The load type setting can be done by ETS parameter or manually with the procedure here described. It is also possible to perform an automatic recognition of the load type on the device. To perform the manual/ automatic load type setting on the device, ETS parameter "Manual local setting" must be selected.
Press button P1 for at least 5sec to enter load programming mode: (PROG LOAD); LED L1 and L2 show actual setting: L1 ON means resistive and capacitive loads, L2 ON means inductive loads.

On every press on P1 (SET LOAD) LED L1 and L2 changes as follows:
L1 ON (Resistive and capacitive) --> L2 ON (Inductive) --> L1 ON + L2 ON (Automatic load recognition)

After 5sec from the last button press, device exit this manual setting mode and the last set mode is saved in memory. If the selected mode is "Automatic load recognition" the recognition procedure start immediately, during this procedure it is possible to see the load switched ON and OFF; after this, the identified mode is saved in memory and can be changed manually by repeating the procedure.

SLAVE ADDRESS SETTING (SLAVE MODULES) - PROG ADDR

The address setting is only for slave modules.
WARNING: ADDRESS SETTING MUST BE DONE BEFORE ETS DOWNLOAD.
If you want to change the slave address local buttons must be set as "enabled"
The module 0KD010010 (Master) can work with a maximum of two additional modules 0KD010011 (Slave); an address is assigned to each slave: 1 (slave 1) or 2 (slave 2). The procedure described here should be performed only on module 0KD010011 (Slave).

To assign the address, press simultaneously buttons P1 and P2 for at least 10s: the module enters the address setting mode (PROG ADDR) and LEDs L1 and L2 show the current setting: L1 ON means slave 1 L1, L2 on means slave 2. Each press of P2 (SET ADDR) changes the slave address and light up alternately L1 and L2, corresponding to the addresses 1 and 2. After 5s from the last button is pressed, the module leaves the assignment mode and save the address.

WARNING: set a different address for the 2 slave modules in order to avoid undesired behaviour at the outputs.

AUTOMATIC IDENTIFICATION OF MAINS FREQUENCY

CE

Every time devices are powered on they automatically recognize if the power-line frequency is 50Hz or 60Hz; LEDs L1 and L2 flash alternately for a few seconds; at the end of the procedure only one LED remains on indicating the detected frequency (L1 = 50Hz, L2 = 60Hz)
WARNING: The automatic recognition of power-line frequency is performed only if the load is connected.

Installation instructions

WARNING: device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.
• Device may be used for indoor installations in dry locations.
• Only an authorised installer shall install the device.
• Device must be installed and commissioned only by qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

Universal Dimmer 4 Output x 300W
cod. 0KD040040

Product and Applications description

0KD040040 is a KNX universal power dimmer 4-channels with automatic identification of load type and with settable parameters to optimize control of different lamps like LED, incandescent and halogen, CFL dimmable lights, low voltage lamps with electronic or ferromagnetic transformer.
Device installation diagram:
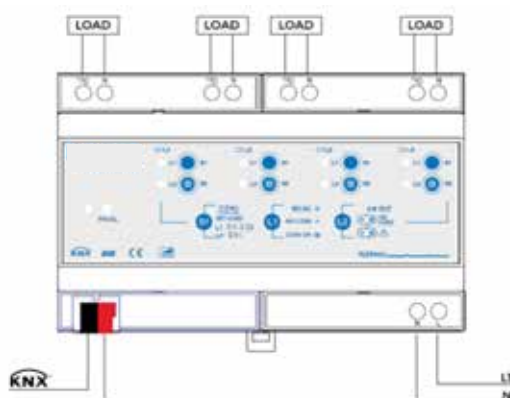
Each channel of 0KD040040 can be used in one of the following configurations:
• Trailing Edge: The dimmer turns off part of the final part of the waveform of the input voltage resulting in reduced lamp output. This load regulation is used for resistive or capacitive loads (typically halogen lamps with electronic transformer or incandescent lamps).
• Leading Edge: The dimmer turns off part of the initial part of the waveform of the input voltage, resulting in reduced lamp output. This load regulation is used for inductive loads (typically ferromagnetic transformers or toroidal).
Product is intended for installation on DIN rail in electrical distribution cabinets and in vertical position with the bus connector on the bottom side as shown in figure; it is recommended to ensure adequate dissipation conditions in free air.

ETS Application Program

Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 60
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs)
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of 7 group addresses of this kind for the whole device.
ETS programming can be performed before installation in field without connecting the device to the mains voltage.

Technical Specifications

Power Supply

From EIB/KNX bus	21...32V DC
Current consumption from KNX	≤ 10mA
From mains (2)	230VAC 50/60 Hz
When output is OFF	4W max. (1W x channel)
Dissipated power	6.8W max (1.7W x channel)

Connections

• Power supply / load cable: max 4 mm2 – AWG 11

Allowed loads

LOAD TYPE	MAX POWER / VOLTAGE	MODE
Incandescent or halogen lamps	300 W, 230V~ 50/60Hz,	RC
Ferromagnetic transformer suitable for dimming with secondary winding closed on resistive load (Halogen lamps 12/24V)	200 VA, 230V~ 50/60Hz,	L (1)
Electronic transformers with secondary winding closed on resistive load (Halogen lamps 12/24V)	300 VA, 230V~ 50/60Hz,	RC
Dimmable LED lamps	230V~ max. 60W (2)	L (3)
Compact Fluorescent Lamps (ESL/CFL)	230V~ max. 60W (2)	L

(1) DO NOT CONNECT THE TRASFORMER WITHOUT CONNECTING THE LAMP ON THE SECONDARY WINDING TO AVOID OVERVOLTAGE THAT MAY CAUSE DAMAGING TO THE DEVICE.
(2) FOR LED LAMPS OR ESL, THE CORRECT OPERATION STRICTLY DEPENDS FROM THE LAMP USED; SO THERE IS NO GUARANTEE IN ADVANCE THE PROPER OPERATION OF THIS KIND OF LAMPS, EVEN IF THEY ARE DECLARED AS DIMMERABLE.
(3) DIMMABLE LED LAMPS WITH INTERNAL TRANSFORMER CAN BE DETECTED AND DRIVEN ALSO IN RC MODE.

Mechanical data
• Plastic enclosure PC/ABS FR
Installation: DIN Rail
• Dimensions: 8 Modules
• Weight (approx.): 230 g.
Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1) III
• Bus (safety voltage) SELV
• Compliant to EN50491-3
EMC compatibility
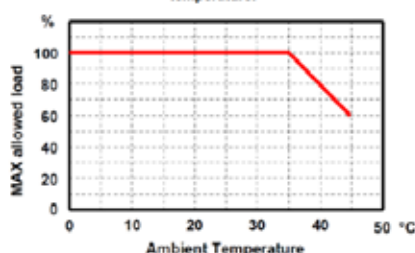• Compliant to EN50491-5-1, EN50491-5-2
Environmental characteristics
• Compliant to EN 50491-2
• Ambient temperature (Fig.1): 0 to + 45°C
• Storage temperature: - 20 to +55 °C
• Relative humidity (not condensing): 90% max.
CE MARK
In accordance with the EMC and low voltage guidelines

Fig. 1 – Maximum allowed load compared to ambient temperature:

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Universal Dimmer 4 Output x 300W
cod. 0KD040040

Visual and command elements

LED 1 (L1)	DESCRIPTION	SYMBOL
Short blink	Normal operating mode	COM OK
Always ON	Error (internal bus no OK)	NO COM
Always OFF	Mains (230V) not present	NO AC

LED 2 (L2)	DESCRIPTION	SYMBOL
ON / OFF	OUT ON / OUT OFF	OUT
Slow Blink	Load not connected	NO LOAD
Blink	ALARM (overvoltage or overcurrent or over temperature)	

LOAD TYPE SETTING – PROG LOAD

The load type setting can be done by ETS parameter or manually with the procedure here described. It is also possible to perform an automatic recognition of the load type on the device. To perform the manual/automatic load type setting on the device, ETS parameter "Manual local setting" must be selected.

Press button P1 for at least 5sec to enter load programming mode: (PROG LOAD); LED L1 and L2 blink together for 1 second then show actual setting: L1 ON means resistive and capacitive loads, L2 ON means inductive loads.

On every press on P1 (SET LOAD) LED L1 and L2 changes as follows: L1 ON (Resistive and capacitive) L2 ON (Inductive) L1 ON + L2 ON (Automatic load recognition).

After 5sec from the last button press, device exit this manual setting mode and the last set mode is saved in memory; exit from LOAD PROG mode is shown by the simultaneous blinking of LEDs L1 and L2 for 1 second. If "Automatic load recognition" mode is selected the recognition procedure start immediately, during this procedure it is possible to see the load switched ON and OFF; after this, the identified mode is saved in memory and can be changed manually by repeating the procedure.
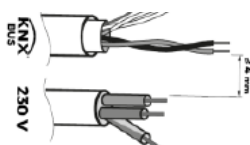
AUTOMATIC IDENTIFICATION OF MAINS FREQUENCY

Every time devices are powered on they automatically recognize if the power-line frequency is 50Hz or 60Hz; LEDs L1 and L2 flash for a few seconds; at the end of the procedure only one LED remains on indicating the detected frequency (L1 = 50Hz, L2 = 60Hz).
WARNING: The automatic recognition of power-line frequency is performed only if the load is connected.

Installation instructions

WARNING: device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and EIB/KNX red / black bus connector.

• Device may be used for indoor installations in dry locations.
• Only an authorised installer shall install the device.
• Device must be installed and commissioned only by qualified installers.
• The applicable safety and accident prevention regulations must be observed.

• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
• Device must be installed in vertical position respecting top and bottom side as indicated in the drawing.
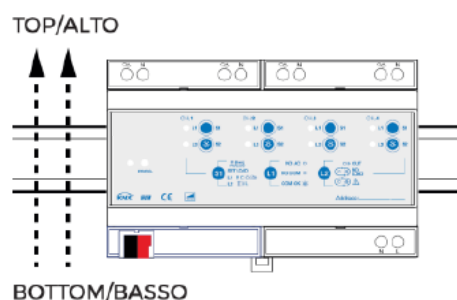
Disposal

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life.
The user must take the warn product to a sorted waste center, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.

Inwall 2IN-2OUT and 4IN-4OUT LED Module
cod. 0KF020010 e 0KF040010

Product and Applications description

Device 0KF040010 includes 4 digital inputs for dry
contacts and 4 outputs for LEDs.
0KF020010 includes the same software functions of 0KF040010 with 2
inputs and 2 LEDs outputs.
These devices are extremely compact size (only 34 x 34 x 11 mm) and can
also be used in installations where the inwall space available is reduced.
The digital inputs can interface sensors, traditional buttons, etc; the 4 low
voltage output channels can drive LEDs for synoptic panels or switches.
For each input channel the following functions are available:
• Sending telegrams of closing / opening contact
• Sending telegrams of short / long press
• Dimming control
• Blinds / venetians control
• Scene control
• 3 commands sequences with short / long press
• 3 command sequences with toggling
• Step by step on/off combinations over 2 or 3 objects
• Pulse counter on rising and/or falling edge
• Enable / disable object for each input
Outputs can drive low voltage LED; if possible use high-efficiency LED

Device is equipped with KNX communication interface.

ETS Application Program

Maximum number of group addresses: 53
This is the maximum number of different group addresses the device is
able to store.
Maximum number of associations: 60
This is the maximum number of associations between communication
objects and group addresses the device is able to memorize.
Caution: there is a limit to the number of associations that can be created,
on the same device, between transmission communications objects (i.e.
output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to
a transmission communication object (feedback) to a receiving
communication object (output) which already has a different group
address associated, please note that you can add a maximum of 8 group
addresses of this kind for the whole device.
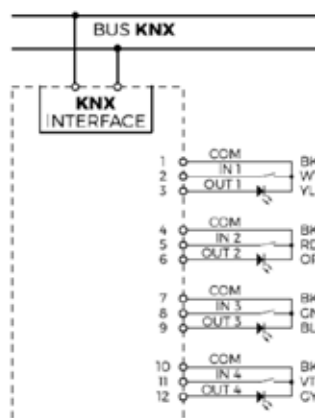
schema cablaggio 0KF040010   schema cablaggio 0KF020010
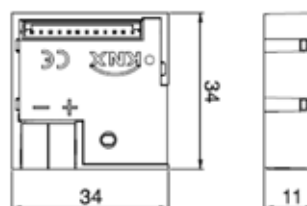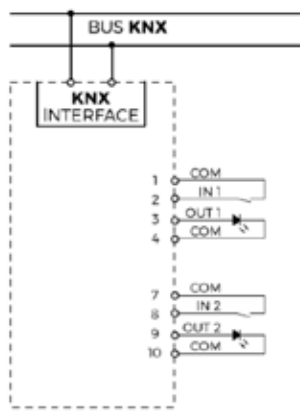
Technical Specifications

Power Supply
Via bus EIB/KNX   21..31V DC
Current consumption   < 5 mA
Control Elements
EIB/KNX red LED and button
Connections
12 cable connector AWG24
EIB/KNX terminal
Inputs
Number: 6 – 4 – 2
Maximum cable length: ≤ 10m (twisted cable)
Reading voltage: 3,3V
Outputs
Number: 4-2
Current / voltage for leds   0,5mA / 3,3V
Mechanical data
Plastic enclosure: PC / ABS
Installation: flush mounted wall box
Dimensions: 34 x 34 x 11 mm
Weight with package (approx.):   38 g.
Environmental Specification
According to EN 50491-2
Ambient temperature during operation: -5 °C + 45 °C
Storage temperature: - 20 °C + 55 °C
Relative humidity (not condensing):   max. 90%

Electromagnetic compatibility
Compliant with EN 50491-5-1 and EN 50491-5-2
Electrical Safety
Degree of pollution (according to EN 60664-1):
Degree of protection (according to EN 60529):
Safety Class (according to IEC 1140):
Overvoltage class (according to IEC 664-1):
Bus: safety extra low voltage SELV DC 21…31 V DC
Compliant with EN 50491-3
CE Mark
According to EMC guideline and low voltage directive

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Inwall 4IN digital/4IN analogic - 4OUT LED Module
cod. 0KF040020

Product and Applications description

0KF040020 module includes 4 digital inputs to interface free potential contacts; 4 analog / digital inputs for free potential contacts or temperature sensors and 4 led outputs.
Digital inputs can interface sensors, traditional buttons, etc; 4 led output channels at low voltage can drive LED for synoptics panels or switches.
Inputs 5 ÷ 8, set as analog inputs, can enable up to 2 temperature probes (with On/Off threshold) and 2 thermostats to control heating and cooling equipments, valves, 2 and 4 pipes fan coils; etc..
The device is equipped with appropriate communication interface with the bus type TP1 (twisted pair) KNX European standard, according CEI EN 50090.

ETS Application Program

Maximum number of group addresses: 50
This is the maximum number of different group addresses the device is able to memorize.
Maximum number of associations: 63
This is the maximum number of associations between communication objects and group addresses the device is able to memorize.
Caution: there is a limit to the number of associations that can be created, on the same device, between transmission communications objects (i.e. output feedback) and receiving communication objects (i.e. outputs).
If you want, on the same device, add a group address linked to a transmission communication object (feedback) to a receiving communication object (output) which already has a different group address associated, please note that you can add a maximum of13 group addresses of this kind for the whole device.

Technical data

Power Supply
Via bus EIB/KNX cable
• Voltage 21..32V DC
• Current consumption EIB/KNX ≤ 10 mA
Digital Input 1 - 2 - 3 - 4
• For free potential contacts (dry contacts)
• Max. length of Connecting Cable: ≤ 30 m (twisted cable)
• Voltage Scanning: 3,3 V DC (internally Generated)
• AWG24 cables with 180 mm length
Digital Input 5 - 6 - 7 - 8
• For free potential contacts (dry contacts)
• Max. length of Connecting Cable: ≤ 10 m (twisted cable)
• Voltage Scanning: 3,3 V DC (internally Generated)
• 6 poles terminal with screws.
Analog Input 5 – 6 – 7 - 8
• For NTC temperature probe eelectron code:
• 0KA000000 (range from -20°C to +100°C)
• 0KA000001 (range from -50°C to +60°C)
• Max. length of Connecting Cable: ≤ 20 m (twisted cable)
• 6 poles terminal with screws.
Digital Led Output 9 – 10 – 11 -12
• 4 outputs for drive led – Max 0,3 mA
• AWG24 cables with 180 mm length
Control Elements
• EIB/KNX Red LED and button
• Bus: tensione di sicurezza SELV DC 21..31 V DC
Mechanical Data
• Case: plastic/nylon
• Protection class: II in accordance with EN 61140
• Dimensions: (width x height. X depth.): 43 x 36 x 24 mm
• Weight: approx. 35 g

Electrical Safety
• Degree of pollution (IEC 60664-1): 2
• Degree of protection (EN 60529): IP 20
• Protection class (according to IEC 1140): III
• Overvoltage class (according to IEC 664-1): III
• Bus: tensione di sicurezza SELV DC 21..31 V DC
• Meets EN 50090 and IEC 664-1: 1992
EMC Requirements
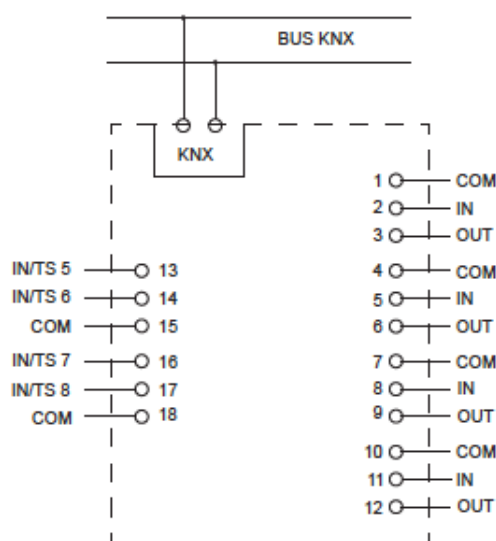• Complied with EN 50081-1, EN 50082-2 and EN 50090-2.2
Terms of use
• According to EN 50090-2.2
• Ambient temperature during operation: 0 °C + 45 °C
• Storage temperature: - 20 °C + 55 °C
• Relative humidity: max 90%
CE Mark
According to EMC guideline and low voltage directive

For Temperature Probes see page 13.

Indicators and Control Elements

WIRED CONNECTORS:
1. BLACK — Common IN/OUT 1
2. WHITE — IN 1
3. YELLOW — OUT 1
4. BLACK — Common IN/OUT 2
5. RED — IN 2
6. ORANGE — OUT 2
7. BLACK — Common IN/OUT 3
8. GREEN — IN 3
9. BLUE — OUT 3
10. BLACK — Common IN/OUT 4
11. VIOLET — IN 4
12. GREY — OUT 4
13. - — IN / Temperature sensor 5
14. - — IN / Temperature sensor 6
15. - — Common 5-6
16. - — IN / Temperature sensor 7

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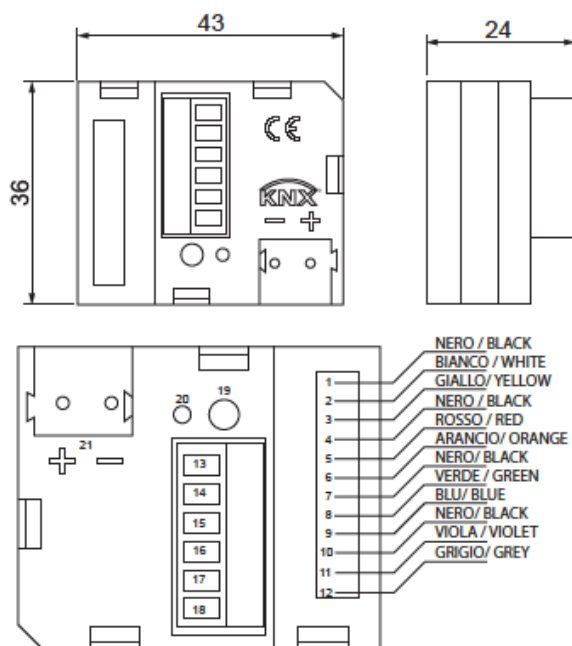20154 • Milano IT
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17. -	IN / Temperature sensor 8
18. -	Common 7-8
19. -	ETS Programming switch
20. -	ETS Programming LED
21. -	EIB/KNX Connector
-	BLACK Bus Negative
+	RED Bus Positive

Installation Instructions

The device may be used for permanent indoor installations in dry locations within wall box mounts.

WARNING

• Device must be installed keeping a minimum distance of 4mm between electrical power line (mains) and input cables or red / black bus cable .

• The device must not be connected to 230V cables.

• The prevailing safety rules must be heeded.

• The device must be mounted and commissioned by an authorised installer.

• The applicable safety and accident prevention regulations must be observed.

• The device must not be opened. Any faulty devices should be returned to manufacturer.

• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

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Temperature probe (int-ext)
cod. 0KA000000 e 0KA000001

(int/ext)
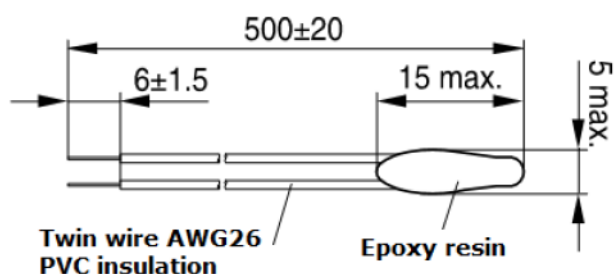
Dimensions in millimetres.
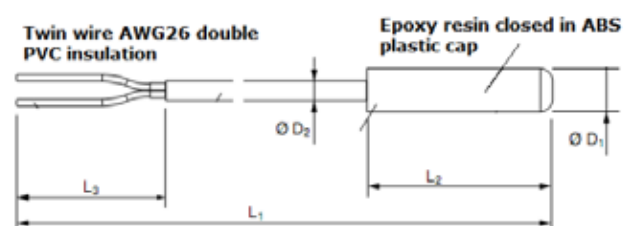**Warning**: keep at least 6 mm from all live parts
NTC resistance tolerance: ± 3%
Measure range   -20°C ÷ +100°C
Cable: 2 wire single insulation
Cable colour: Black
NTC colour: Black

D1 = 9 mm D2 = 4 mm L2 = 49 mm L1 = 1250 mm

Warning: keep at least 3 mm from all live parts
NTC resistance tolerance: ± 2%
Measure range   -50°C ÷ +60°C
Cable: 2 wire double insulation
Cable colour: White
NTC colour: White

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Inwall Presence and Brightness sensor for ceiling

cod. 0KD010S10

Product and Applications description

The device is a presence and motion detector with integrated brightness sensor. The device communicates via KNX. It is designed for ceiling mounting.

Commissioning / Factory default

After the device is connected to the bus voltage, the sensor must first "Restart", i.e. the motion sensor will be initialized.

Factory default
In the delivered state, the parameter Operating Mode is set to setting mode.
While the device is in "Setting Mode", the integrated programming LED displays the PIR sensor state. (flashes briefly with motion).

Programming mode
A short push of learning button (< 2 s) enables the programming mode. This will be indicated by a continuous light at the programming mode LED. A second push disables this mode.

Behavior after programming
The behavior of the device after programming with the ETS is dependent on the configuration. The description of the features, parameters and objects is in the application program description (APB) of the device.

Location / Function of the Display and Operating Elements

A1 Device
A2 Fixing clamps
A3 Detector lens
A4 Learning button
A5 Shade
A6 Bus terminal
A7 Design ring
A8 Programming mode LED behind lens
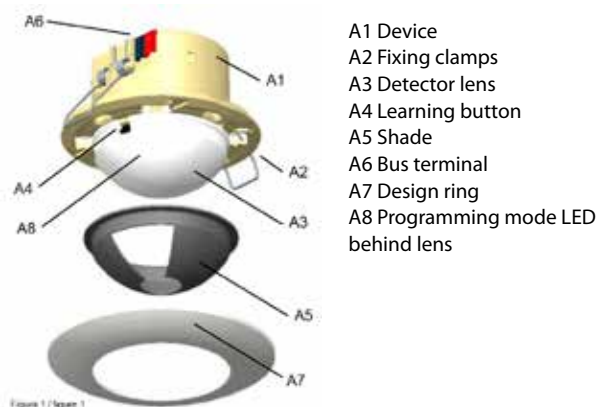
Figure 1 / figura 1

Mounting and Connecting

DANGER
When connecting the device, it should be ensured that the device can be isolated.
The device must not be opened.
The device is intended for ceiling mounting.
Recommended mounting height: 2.4m – 3.0m
There are the following options for this:
(see figure 2):

Figura 2 / figure 2

- Mounting in an UP socket with screw fixing
- Mounting with fixing claws in suspended ceiling

Connecting the detector
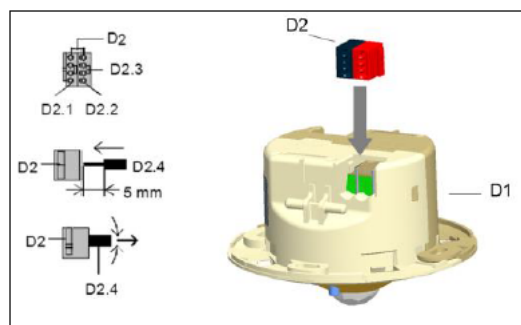(see figure 3)

Figura 3 / figure 3

D1 Device
D2 Bus terminal
D2.1 (-) Terminal (grey)
D2.2 (+) Terminal (red)
D2.3 Test contact
D2.4 Bus line wire

Connecting:
Plug wires into the bus terminal. Ensure you have stripped the insulation back!
Push the bus terminal on the plug in the device (see figure 3)

Disconnecting:
Separate the bus terminal from the device (use a screwdriver if necessary)
Separate the wires from the bus terminal by turning.

Mounting

Installation in UP socket using screws
(see figure 4)
E1 Device
E2 Socket fixing screws
E3 UP socket Depth: min. 40 mm, 60 mm
The device is secured with fixing screws in the UP socket. The device can be installed offset by 90° with the additional fixing holes.

Note:
Fixing clamps must not be mounted!

Mounting the fixing clamps for mounting the device in suspended ceilings
(see figure 5)
G1 Device
G2 Fixing clamp
Extend the fixing claws slightly and push over the lugs on the device.
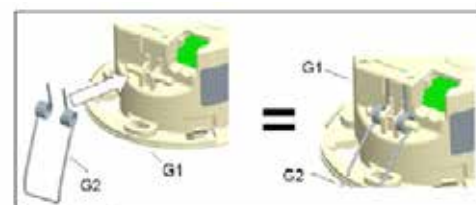

Figura 4 / figure 4

Figura 5 / figure 5

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Inwall Presence and Brightness sensor for ceiling
cod. 0KD010S10

Installation in suspended ceilings with fixing clamps
(see figure 6)
F1 Suspended ceiling (max. thickness of the suspended ceiling: 30mm)
F2 Fixing clamps
F3 Device
Press the fixing clamps together (see figure 6) and push the device into the opening (Ø 60mm - 65 mm) with the fixing clamps in front.
The fixing clamps hold the device on the ceiling.
Max. thickness of the suspended ceiling: 30mm
Caution:
When dismounting the device hold it where the two housing parts are joined together. Otherwise, the fixing clamps may hit your fingers.
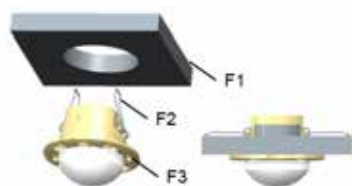
Figura 6 / figure 6

Cutting the shade
(see figure 7)
If the detection range of the motion sensor must be reduced, a shade can be used.
The shade is cut out in the wanted sectors with a knife.
Caution:
Do not cut out the mounted shade! Only cut out the dismounted shade!

Figura 7 / figure 7

Mounting / Dismounting the shade
(see figure 8)
Put the shade H2 over the lens of the device H1and fix it with the design ring H3.
Note:
The learning button be reached only partly when the shade is mounted.
Mounting the design rings
(see figure 8)
The design ring H3 is clipped on to the device H1 from below, until the snaplock hooks on the design cover engage on the outer edge of the device with an audible click.
Dismounting the design ring
The design ring is dismounted by pulling downwards. Use a screwdriver to help with this operation.
Caution: Be careful when handling the screwdriver. There is a risk of scratching the ceiling or the design cover. Accordingly, be gentle while working
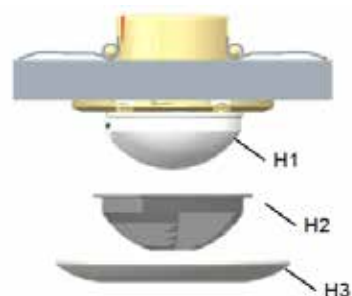

Figura 8 / figure 8

Installation notes

Detection range
The detection range is divided in following areas:
Detection of a person
a) sitting in working desk height (0.8m)
b) walking straight to the detector
c) walking across the detector
d) Area of the brightness measuring in working desk height (0.8m)
Table 1 shows the maximum reachable diameter in meter of the different areas for different installation heights (M).

Mounting site
Brightness measurement in particular
The daylight measurement determines an average brightness value in the room, which can differ from the brightness on the worktop. You should therefore avoid mounting sites with extreme light ratios.
If the detector is fitted near lights with a high proportion of indirect light, the artificial light level at the detector mounting point must not exceed the wanted nominal lighting level in the room. This can be compensated by increasing the separation between the light cone and the detector. For constant lighting control, direct artificial light on the detector should be avoided.
It is recommended to orientate the learning button of the device to the window, if possible. With increasing mounting height the sensitivity of the brightness measuring is reduced. Especially at mounting height > 3.0m a test application on site is recommended.

Presence-motion detection in particular:
Normally, the switching pattern is determined by people in the detector's catchment area.
In exceptional cases, however, it can be switched on inadvertently through "outside factors". Accordingly, potential "sources of interference" should be corrected during planning or before mounting.

Basics:
The PIR - sensor reacts to temperature differences.
The lower the temperatures difference between the ambient temperature and the moving object, the less sensitive the analysis. In other words, moving objects will not then be detected as efficiently and the catchment area is restricted.

Note:
• There must be an unobstructed line of sight to the person in the catchment area. People behind walls, etc. (including glass) cannot be detected!
• Obstacles such as party walls, plants or shelves can limit the catchment area.
• Hanging lights cause shadows in the catchment area if they are mounted in the immediate vicinity of the presence detector.
Interference factors to be avoided:
• Rapid temperature changes in the vicinity of the detector, caused by fan heaters being switched on or off, fans, etc., simulate motion.
• Lights being switched on or off in the immediate catchment area (mainly incandescent and halogen lamps) simulate motion.
• Moving objects such as machines, robots, hanging posters, falling flower petals, hot paper from laser printers, animals, etc.
• The mounting site must not be exposed to vibrations or motion.

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Inwall Presence and Brightness sensor for ceiling
cod. 0KD010S10

Technical data

Power supply
via bus line
Current drain approx. 10 mA

Connections
Bus terminal

Mechanical specifications
Dimensions (see figure 10)
Weight: approx. 62g

Presence detection
Type: Passive infrared (PIR)
288 sectors for detection

Range: see figure 9 / table 1

Brightness measurement
Type: Contrast measurement

Electrical safety
Protection class (to EN 60529): IP 20

Environmental specifications
Ambient temperature in operation: -5°C ... +45°C
Storage temperature: -20°C ... +70°C
Relative humidity (non-condensing):   5% to 93%

Installation notes

• Device must be installed keeping a minimum distance of 4 mm between electrical power line (mains - 230V) and red / black bus connector or bus cable
• Device may be used for indoor installations in dry locations.
• Device must be mounted by an authorized installer.
• Device must be installed in a location that is accessible only to qualified installers.
• The applicable safety and accident prevention regulations must be observed.
• Device must not be opened. Any faulty device should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

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Presence and Brightness sensor for ceiling

cod. 0KD010S20

Product and Applications description

0KD010S20 is a KNX occupancy detector with integrated function of motion detection and light sensor.
Three operation mode are available:
• Automatic or semi-automatic mode with daylight depending constant light control or switching output
• Slave mode
• Occupancy independent dimming regulating mode

Other characteristics:
• Up to three additional switching channels for lights or HVAC devices – daylight dependent or not
• Threshold values and follow-up times can be changed for all channels using communication objects
• Burn-in function with adjustable burn-in time from 1 to 100 hours, activatable via communication object, in order to profit from the entire operating time of the controlled lamps
• Activatable motion LED, deactivatable via ETS parameter or communication object

Motion Detection:
0KD010S20 uses passive infrared system which registers heat movements.
• The presence detector should be installed so that the main direction of movement is always tangential.
• For detecting very small movements (for example a person working on PC) it is recommended to install 0KD010S20 directly above the desk.
• Avoid sources of interferences as : Radiators; Ventilation system or fan coils or equipments blowing warm air; Lamps very close to detection area to avoid optical feedback.

Light Sensor:
0KD010S20 measures light value (LUX) and provide data to the KNX bus; then this value can be used to switch lights on when the occupancy detector detects a motion and the light value is below a a target value. This data can also be used to set a dimming value to a dimmer in order to maintain a target light value.

Technical data

Power Supply:
Via bus EIB/KNX cable
• Voltage   21..30V DC
• Current Consumption EIB/KNX 10mA

Control Elements
• Red LED and button EIB/KNX for programming the physical address

Mechanical Data
• Case: UV and shock resistant polycarbonate
• Dimensions: (height. x diameter.)
0KD010S10 :   65 x 80 mm
0KD010S20 :   50 x 97 mm
• Degree of protection: IP20
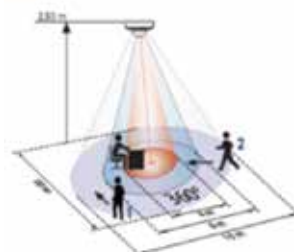
Electrical Safety & CE Mark
• According to EMC guideline2004/108/EC and low voltage directive 2006/95/EC
• KNX certificate

Terms of use
• Ambient temperature: - 25 °C + 55 °C
• Storage temperature: - 25 °C + 55 °C
• Relative humidity: max 90% not condensing

Coverage Range
■ Walking across
■ Walking towards
■ Seated activity

Installation Instructions

The device may be used for permanent indoor installations in dry locations within wall box
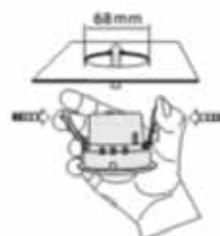mounts.

WARNING
• The device must not be connected to 230V cables
• The prevailing safety rules must be heeded.
• The device must be mounted and commissioned by an authorized installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and
standards of the respective country are to be considered.

Mounting

The device configuration (KNX physical address assignment) is done by pressing the programmingpush button located in the front side of the housing. Please take care during installation toleave connection wires long enough in order to remove the device easily from the wall box .

0KD010S20 is designed especially for suspended ceilings; a rounded hole of 68mm in the ceiling is request for installation. Spring clips must be opened before inserting.

0KD010S20

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DIN Module USB-KNX Interface
cod. 0KD010003

CE

Applications area

This interface is for establish a bidirectional connection between a PC and the EIB/KNX installation bus. The USB connector has a galvanic separation from the EIB/KNX bus. Both ETS (Engineering Tool Software) versions ETS3 or later and some Visualization tools support this interface.
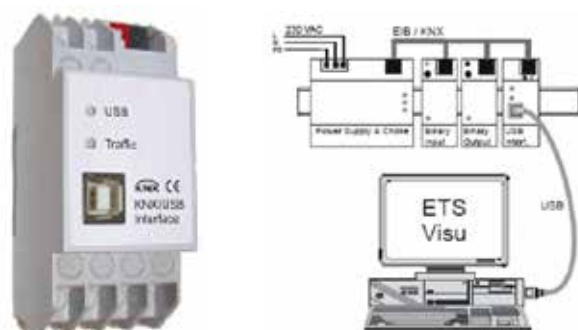
Applications Programs

Requires no application programs.

Technical Specifications

Electrical Safety
• Protection (acc. EN 60529): IP 20
• Bus safety extra low voltage SELV DC 24 V

EMC requirements
• Complies with EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2

Environmental requirements
• Ambient temp. operating: - 5 ... + 45 °C
• Ambient temp. Non-op.: - 25 ... + 70 °C
• Rel. humidity (non-condensing): 5 % … 93 %

Certification
• EIB/KNX

CE norm
• Complies with the EMC regulations (residential and functional buildings) and low voltage directive

Physical specifications
• Housing: Plastic
• DIN rail mounted device, width: 36 mm
• Weight: approx. 100 g
• Fire load: approx. 1000 kJ

Indicators
• Signal-LED (green) for USB-Connection
• Signal-LED (yellow) for Communication

Power supply
• The part of circuit for communication over USB is supplied by the connected PC / Laptop, correct operation is signalled by the green LED (USB).
• Power consumption: < 200 mW
• The part of circuit for communication over EIB/KNX is supplied by EIB/KNX bus.
• Power consumption: < 300 mW

Connectors
• EIB/KNX connection terminal
• USB: USB connector type B
• Wire length max. 5 m

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DIN Module Router PoE IP-KNX
cod. 0KD010002

Applications area

The KNXnet/IP router allows forwarding of telegrams between different lines through a LAN (IP) as a fast backbone.
In addition this device is suited to connect a PC to the KNX/EIB network e.g. for ETS programming.
The IP address can be obtained by a DHCP server or by manual configuration (ETS) respectively.
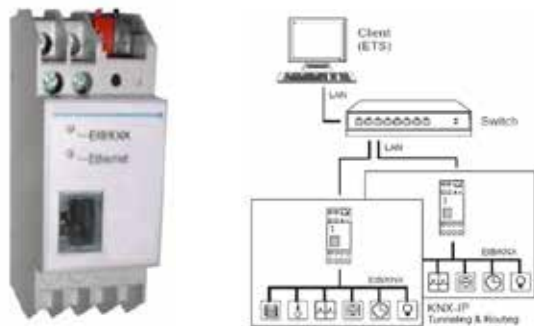
This device works according to the KNXnet/IP specification using the core, the device management, the tunneling and the routing part.
The KNX IP Router has a filter table and is able to buffer up to 150 telegrams.

Technical Specifications

Electrical Safety
• Protection (acc. EN 60529): IP 20
• Bus safety extra low voltage SELV DC 24 V
EMC requirements
• Complies with EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2
Environmental requirements
• Ambient temp. operating: - 5 ... + 45 °C
• Ambient temp. Non-op.: - 25 ... + 70 °C
• Rel. humidity (non-condensing): 5 % … 93 %
Certification
• EIB/KNX
CE norm
• Complies with the EMC regulations (residential and functional buildings) and low voltage directive
Physical specifications
• Housing: Plastic
• DIN rail mounted device, width: 36 mm
• Weight: approx. 100 g
• Fire load: approx. 1000 kJ
Operating controls
• Learning key for EIB/KNX
Indicators
• Learning-LED (red)
• Signal-LED (green) for EIB/KNX
• Signal-LED (green) for LAN
Ethernet
• 10BaseT (10Mbit/s)
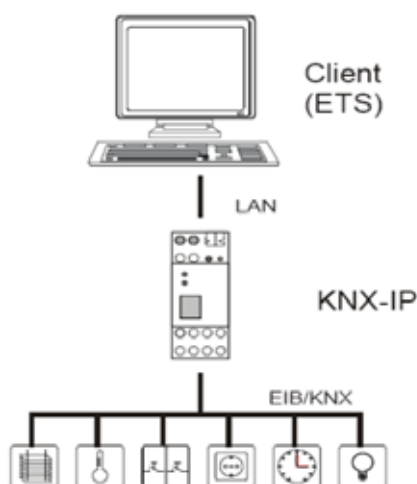• Supported internet protocols ARP, ICMP, IGMP, UDP/IP and DHCP
Power supply
• External supply 12-24V
• Alternative: Power-over-Ethernet
• Power consumption: < 800 mW

Connectors
• EIB/KNX connection terminal
• LAN RJ-45 socket
• Screw connector for power supply

CE

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DIN Module IP-KNX Interface
cod. 0KD010001

Descrizione del prodotto e suo funzionamento

The KNXnet/IP-Interface is used to connect a PC to the KNX/EIB network. The connection is made through LAN (IP).
The IP address can be obtained by a DHCP server or by manual configuration (ETS) respectively.

Il dispositivo è progettato per essere installato su barra DIN in scatole per la distribuzione in bassa tensione.

Dati Tecnici

Electrical safety
• Protection (EN 60529): IP 20
• Safety extra low voltage SELV DC 24 V

EMC requirements
• Complies with EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2

Environmental requirements
• Ambient temp. operating: - 5 ... + 45 °C
• Ambient temp. Non-op.: - 25 ... + 70 °C
• Rel. humidity (non-condensing): 5 % ... 93 %

Certification
• EIB/KNX

Physical specifications
• Housing: Plastic
• Rail mounted device
• Width: 36 mm
• Weight: approx. 100 g
• Fire load: approx. 1000 kJ

Operating controls
• Learning key for EIB/KNX

Indicators
• Learning-LED (red)
• Signal-LED (green) for EIB/KNX
• Signal-LED (green) for LAN

Ethernet
•10BaseT (10Mbit/s)
•Supported internet protocols ARP, ICMP, IGMP, UDP/IP and DHCP

Power supply
• External supply 12-24V
• Alternative: Power-over-Ethernet
• Power consumption: < 800 mW

Connectors
• EIB/KNX connection terminal
• LAN RJ-45 socket
• Screw connector for power supply

This device works according to the IP/ KNXnet specification using the core, the device management und the tunneling part.

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DIN Module Gateway KNX-DMX 512 Interface
cod. 0KD010G10

Active Principle and Application Area

The KNX-DMX Gateway is an Interface between the KNX bus and the DMX bus.

It combines elements of building automation with a multitude of lighting and special effects devices for every need.

Active Principle and Application Area

The KNX-DMX Gateway is unidirectional, receives data telegrams on the KNX bus and transmits the data onto the DMX512 bus. The interface allows the DMX512 actuators to communicate via the KNX bus using the full range of the channel.

The KNX-DMX Gateway contains 8 adjustable sequence positions within the whole channel range. Individual scenes with all 512 channels can be saved and retrieved using KNX group addresses. This function allows all channels to be connected simultaneously to one single object without causing any undo load on the KNX bus.

The sequences are saved internally and can be retrieved even after a power outage. (A sequence can only be saved 10000 times during the lifetime of the device. The automatic save function should not be set for short intervals.) The set value in sequence 8 is also "on" for all channels when using 1 bit objects.

The KNX-DMX Gateway is ready to use and can be positioned to the main group addresses with an S1 rotary switch. It is not necessary to project via the ETS.

The KNX-DMX Gateway has 1556 objects with three types of telegrams available:

DPT 1.001 (1bit; switch) single channel
DPT 1.001(1bit; switch) save sequence and retrieve
DPT 3.007 (4bit; relative dimming) single channel
DPT 5.001 (1byte; show value) single channel

The S2 rotary switch adjusts the transition period from one preset brightness to the next, 15 (F) being immediate, 0 a time period of 1 second from 0% to 100%.

The S3 rotary switch automatically sets the dimming function (s.u.) parameters, 0 is no automatic dimming, otherwise dimming time = 1.5 sec * switch value (S3 = 1 .. 15 (F)) in increments of 1% (dimming value 0111b or 1111b).

The rotary switch settings will be prompted when starting and can be readjusted during operation by using the T1 button.

Necessary requirements are a KNX bus, DMX 512 bus and a power supply.

The KNX-DMX Gateway in REG casing IP20 is available in sizes of 6 units. Firmware upgrades can be done with ArcSuite via USB port.
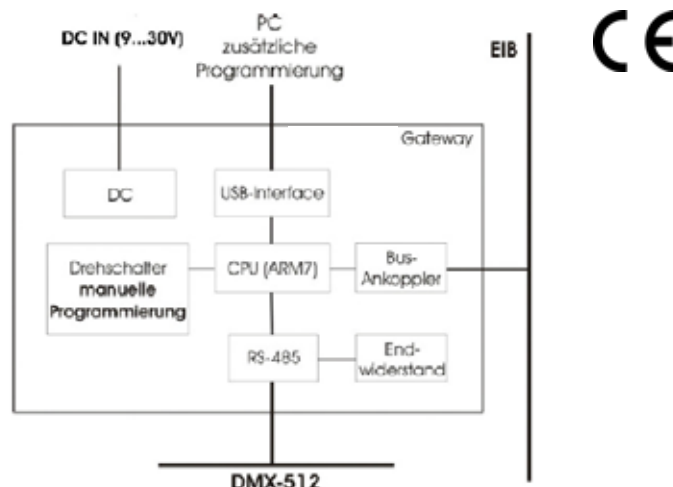
Automatic Dimming Function

Automatic dimming function can be switched on or off for all channels using an object, or can be parameterized by S3 when booting up. Thereby the properties are controlled when a dimming telegram (DPT 3.007) appears.

• Automatic function Off (S3 = 0)

A dimming object (4 bit) value range +7 .. -7 singularly reduces or increases the DMX value percentagewise.

Appropriate for MicroVis dimming function (Standard 6% per rotary click) or similar rotary device.

• Automatic function On (S3 <> 0)

A uniquely transmitted dimming setting is repeated during a time period (dimmer repetition) until it reaches a value of 0 or 100% or until it is manually stopped. When 100% is transmitted, the preset value 'in dimming curve" is used (basic setting 1%).

This function allows the integration of the KNX-Gateway for an installation with standard key buttons. A standard key button transmits a 100% upward or downward command in dimming function when pushed and held and a stop command when let go. A dimming setting can thus be set. The dimming time period can be adjusted separately using either the parameter repetition or the dimmer curve.

The basic setting after booting up is 1% dimming. The repetition rate is controlled by the rotary switch S3 and gives a dimming time result of circa 1.5 sec * switching value (S3 = 1 .. 15 (F)).

Address Diagram

The KNX-DMX Gateway is a master device in the DMX bus. It possesses an internal data memory and constantly transmits the data at a DMX rate of 250k baud to all 512 DMX channels. When receiving valid KNX telegrams the values in the memory are changed.

The transfer of the KNX telegram is preconfigured so that individual programming is not necessary. The KNX data points are managed in 3 address rooms. That means that switching or dimming can be accessed on every channel.

The group addresses diagram must be set up using the S1 rotary switch before initial operation (voltage supply). Changes become effective after a reboot. The main group addresses from 0 – 15 are set up with the 16 stage rotary switch. The middle and lower group addresses are set by the predetermined address rooms (see table 1). The DPT 5.001 allocates the first 512 address on the KNX bus. After that the DPT 1.001 and DPT 3.007. Finally, the sequence commands, a test function and dimming parameters are coded.

DIN Module Gateway KNX-DMX 512 Interface
cod. 0KD010G10

Group Address Allocation Lower Group (bi-level KNX Address Room)

Set Channel Value: with DPT 5.001 1 byte value (0 .. 100%)
Addresses 0 - 511
To set a 1 byte value, use the lower group addresses 0-511 which correspond to the channels 1-512 on the DMX bus.

Switch Channel Value: with DPT 1.001 1 bit value (switch)
Addresses 512 - 1023
Using a switch, this function can be used to switch every channel separately. When the value is 0 the channel is switched off (0), when it is 1 the saved value in sequence 8 is accessed and transmitted to the DMX512 bus.
Every DMX channel can be independently switched.
Before the values are transmitted, there must be defined values saved in Sequence 8. This is the case for default settings at the time of delivery (255 for all channels). To reset the default settings use either the defined value with DPT 5.001 (group address x/0-511) or the function "Central On" (group address x/1552) all values to 255. Then save this to Sequence 8 (group address x/1551). This establishes a maximum value for every channel.

Dimming Channel: with DPT 3.007: 4 bit Value (Dimming)
Addresses 1024 - 1535

Table 1:
Possible Dimming Value as 4 bit Object:
0 = Stop
1 = 100% down
2 = 50% down
3 = 25% down
4 = 12% down
5 = 6% down
6 = 3% down
7 = 1% down
8 = Stop
9 = 100% up
10 = 50% up
11 = 25% up
12 = 12% up
13 = 6% up
14 = 3% up
15 = 1% up

Using the automatic dimming function affects the performance when a dimming telgram is received.

Choose Sequence: with DPT 1.001 1 bit Value (Switch)
Addresses 1536 - 1543
A complete sequence with 512 channels can be output via the DMX bus.
All previously saved values are displayed on channels 1-512.
There is a choice of 8 sequences at the addresses 1536-1543.
The default value at the time of delivery is 255 for sequence 8 and 0 for sequences 1-7.

Save Sequence: with DPT 1.001 1 bit Value (Switch)
Addresses 1544-1551
Here the current DMX values can be saved in one of the 8 sequences. The current brightness will be saved.
There is a choice of 8 sequences at the addresses 1544-1551.

Central On: with DPT 1.001 1 bit Value (Switch)
Address: 1552
All 512 channels display 100% when a 1 is transmitted and 0% when a 0 is transmitted.

Dimmer Repetition Rate: with DPT 5.001 1 byte Value (0 .. 250)
Address: 1553
Set repetition rate parameters
The repetition rate affects the dimming time. At increments of 1%, a dimming time of 1.5 sec * is achieved.
Standard settings can be set using S3 (1 .. 15 (F)).
Suggested values are 2-40.

Downwards Dimming Curve: with DPT 3.007 4 bit Value (Dimming)
Address: 1554
Set dimming down to 100%.
When the automatic dimming function is chosen, the command "0001b" (100% dim down) is received and the programmed dimming setting will be repeated (see Repetition Rate Object 1553) until 0 has been reached or until it is manually stopped.
Standard setting "0111b" = -1%
Possible dimming values as 4 bit object, see table 1

Upwards Dimming Curve: with DPT 3.007 4 bit Value (Dimming)
Address: 1555
Set dimming up to 100%.
When the automatic dimming function is chosen, the command "1001h" (100% dim up)is received and the programmed dimming setting will be repeated (see Repetition Rate Object 1553) until 255 has been reached, or until it is manually stopped.
Standard setting "1111b" =+1%
Possible dimming values as 4 bit object, see table 1

Activate Automatic Dimming: with DPT 1.001 1 bit Value (Switching)
Address: 1556
Automatic Dimming
Standard setting 0 if S3=0, otherwise 1
0 = automatic dimming switches off, no repetition of dimming.
1= automatic dimming switches on, repetition of dimming.

Initial Operation

Circuit Points
Clamp RS485 /DMX (Bild1)

1 DMX specific mass (0V)
2 DMX Data - (B)
3 DMX Data + (A)

Clamp DC IN (9...30V)
1 - DC 0V
2 + DC 9-30V

Clamp KNX BUS
Switch on the voltage supply.
The group addresses are coded by S1 when the DC voltage in KNX-DMX Gateway is switched on. Soft-start (slow start-up to protect lights) can be adjusted using S2 and S3 sets the dimming function.

DIN Module Gateway KNX-DMX 512 Interface
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Turning the rotary switch afterwards has no Effect unless restarting the device or pushing the T1-Button. When pushing the T1.
Button you can switch all DMX-Channels simultaneously on/off.

The prog-button on the mainboard inputs the physical addresses via a dummy application into the ETS.
The Jumper J1 (120R TERM) times the RS485 Bus with 120 Ohm load resistance in its initial state.
The KNX bus is galvanically separated from the DMX 512 bus!
The power supply is galvanically separated from the DMX 512 bus and the KNX bus.

Technical Specifications

Measurements: 107x75x31mm
Degree of Protection: I IP20
Mounting: modular device with 92 mm
Surrounding Temperature: -5 °C to 45 °C
Control Element: 3 x 16 staged rotary switch, 1 x Push Button (User) , 2 x LED (User), 1 x EIB-Push Button + LED

KNX Connection: KNX clamp block
KNX Power Supply: 20 - 32V DC, approx. 150 mW
DMX Connection: 3 screw clamps 0.8mm²

KL1 GND, KL2 Data – (B) , KL3 Data+ (A)

Load Resistance DMX512: 120 Ohm via Jumper

Forth Programming: USB Slot and PC Software ArcSuite (Only Forth Users, for additional tools)

Power Supply: 9-30V DC, 100mA, internal galvanically separated 2 screw clamps

KL1 - GND,
KL2 - +V

DMX512 Bus: RS485 - 250Kbaud, incl. galvanic separation

DMX512 log

Please note the DMB512 specific connecting configurations (bus connection, number of receiving slaves, bus topology)

Table 1 Group Addresses Diagram (three stages)

KNX 3 Level Structure				DMX512	Sequence	KNX-DMX Gateway	
Main Groups	MG	UG	Value	Channel Nr.	Nr.	Function	Detail
0-15 (51)	0	0-255	0 .. 255	001-256	-	DPT 5.001 transmits 1byte value (Absolute value)	
0-15 (51)	1	0-255	0 .. 255	257-512	-	DPT 5.001 transmits 1byte value (Absolute value)	1 Byte value is stored into the corresponding DMX-Channel directly.
0-15 (51)	2	0-255	0 / 1	001-256	-	DPT 1.001 value transmission (Switch)	When a 1 is received the value stored in sequence nr. is sent to the corresponding DMX-Channel. When a 0 is received the DMX-Channel is turned off.
0-15 (51)	3	0-255	0 / 1	257-512	-	DPT 1.001 value transmission (Switch)	
0-15 (51)	4	0-255	-7 .. +7	001-256	-	DPT 3.007 value transmission (Dimming)	Relatively lighter or darker dimming than the current level. See description below.
0-15 (51)	5	0-255	-7 .. +7	257-512	-	DPT 3.007 value transmission (Dimming)	
0-15 (51)	6	0-7	0 / 1	All Channels	0-7	DPT 1.001 value transmission (Switch) access saved sequences	The selected sequence values of all 512 channels are transmitted on the DMX512 bus.
0-15 (51)	6	8-15	0 / 1	All Channels	0-7	DPT 1.001 value transmission (Switch) save new sequence	All current DMX- values in channels 1-512 are stored in the selected sequence position.
0-15 (51)	6	16	0 / 1	All Channels	-	DPT 1.001 value transmission (Switch) all channels central on	All 512 channels display 100% when 1 is transmitted, 0% when 0 is transmitted.
0-15 (51)	6	17	0 .. 255	All Channels	-	DPT 5.001 value transmission, repetition rate parameters	Repetition rate of 10msec is multiplied with this value default 3.
0-15 (51)	6	18	0 .. 7	All Channels	-	DPT 3.007 value transmission, set downward dimming curve	Dim down repetition value. Default 15=1%, see table
0-15 (51)	6	19	0 .. 7	All Channels	-	DPT 3.007 value transmission, set upward dimming curve	Dim up repetition value. Default 15=1%, see table
0-15 (51)	6	20	0 / 1	All Channels	-	DPT 1.001 value transmission (Switch) deactivate automatic dimming	Disables automatic dimming when value = 0

Table 1 Group Addresses Diagram (three stages)

KNX 2 Level Structure			DMX512	Sequence	KNX-DMX Gateway	
Main Groups	Subgroups	Value	Channel Nr.	Nr.	Function	Detail
0-15 (51)	000 - 511	0 .. 255	001-512	-	DPT 5.001 1byte value transmission (absolute value)	1 Byte value is stored into the corresponding DMX-Channel directly.
0-15 (51)	511 - 1023	0 .. 255	001-512	-	DPT 1.001 value transmission (Switch)	When a 1 is received the value stored in sequence Nr. 8 is sent to the corresponding DMX-Channel. When a 0 is received the DMX-Channel is turned off.
0-15 (51)	1024 - 1535	-7 .. +7	001-512	-	DPT 3.007 value transmission (Dimming)	Relatively lighter or darker dimming than the current level. See text.
0-15 (51)	1536 - 1543	0 / 1	All Channels	0-7	DPT 1.001 value transmission (Switch) access saved sequences	The selected sequence values of all 512 channels are transmitted on the DMX512 bus.
0-15 (51)	1544 - 1551	0 / 1	All Channels	0-7	DPT 1.001 value transmission (Switch) save new sequences	All current DMX values in channels 1-512 are stored in the selected sequence position.
0-15 (51)	1552	0 / 1	All Channels	-	DPT 1.001 value transmission (Switch) all channels central on	All 512 channels display 100% when 1 is transmitted, 0% when 0 is transmitted.
0-15 (51)	1553	0 .. 255	All Channels	-	DPT 5.001 value transmission, repetition rate parameters	Repetition rate of 10msec is multiplied with this value default 3.
0-15 (51)	1554	0 .. 7	All Channels	-	DPT 3.007 value transmission, set downward dimming curve	Dim down repetition value. Default 15=1%, see table
0-15 (51)	1555	0 .. 7	All Channels	-	DPT 3.007 value transmission, set upward dimming curve	Dim up repetition value. Default 15=1%, see table
0-15 (51)	1556	0 / 1	All Channels	-	DPT 1.001 value transmission (Switch) deactivate automatic dimming	Disables automatic dimming when value = 0.

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DIN Module DALI Gateway
cod. 0KD010G20

Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons. Serious injuries, fire or property damage possible. Please read and follow manual fully.
**Danger of electric shock. Always disconnect before carrying out work on the devise or load. At the same time, take into account all circuit breakers that supply dangerous voltage to the device or load.**
Danger of electric shock. Device is not suitable for disconnection from supply voltage.
The DALI control voltage is a functional extra-low voltage (FELV). On installing, ensure safe isolation between KNX and DALI.
These instructions are an integral part of the product, and must remain with the end customer.

Device components
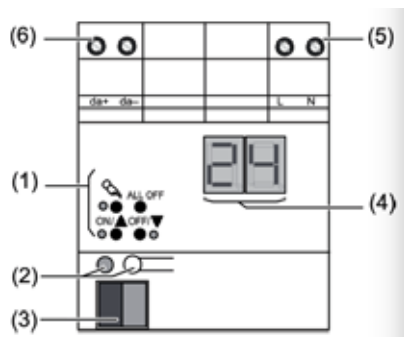
(1) Button field for manual operation
(2) Programming button and LEDs
(3) KNX connection
(4) Display of DALI devices or DALI group
(5) Connection for mains supply
(6) DALI output

Function

System information
This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.
The function 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.
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Planning, installation and commissioning of the device are carried out with the aid of KNXcertified software. Full functionality with KNX commissioning software version ETS3.0f onwards.
An updated version of the product database, technical descriptions and conversion programs and other auxiliary programs are available on our Internet website.
Intended use
• Controlling of luminaires and other applications with DALI operating device in KNX installations e.g. electronic ballast
• Installation on DIN rail according to EN 60715 in distribution boxes.
Product characteristics
• Control of up to 64 DALI devices in up to 32 groups
• Individual, group or central addressing
• Suitable for operation in emergency lighting systems
• 16 light scenes
• Effect control for dynamic lighting effects or colour games

• Read out DALI device state via KNX, e.g. brightness or luminaire error
• Manual operation of the DALI groups
• Restraint
• Feedback of switching state and brightness value in bus and manual mode
• Collective feedback
• Central switching function
• Disabling function for each DALI group
• Separate ON and OFF delay
• Staircase lighting timer with run-on time
• Corridor function: when combined with motion detectors, reduced continuous lighting, if no motion is detected
• Online or offline project planning of the DALI devices with ETS plug-in
• Short circuit protection
• Surge protection
• Overload protection
• Operating hours counter
• Signal of the global switching status of the DALI devices, e.g. to switch off the mains voltage of the DALI devices to avoid standby losses
• An individual DALI device can be exchanged during operation without software.
• Delivery state: construction site mode, the DALI groups can be operated using button field. All DALI devices are controlled jointly.
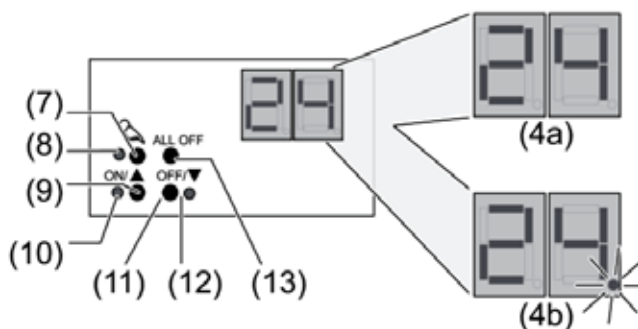
Operation

Operating elements

(4) Display of DALI number (1...64)
  (4a) DALI group
  (4b) Individual DALI devices
(7) Button ✎ – Manual operation
(8) LED ✎ – On: Continuous manual mode active
(9) **ON/▲** button – switch on or increase brightness
(10) LED **ON/▲** – On: DALI device or group switched on, brightness 1...100 %
(11) **OFF/▼** button – switch off or reduce brightness
(12) LED **OFF/▼** – On: DALI device or group switched off, brightness 0 %
(13) **ALL OFF** button – Switch off all DALI devices

In operation with the button field the device distinguishes between a short and a long press.
• Short: pressing for less than 1 second
• Long: Pressing for between 1 and 5 seconds

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DIN Module DALI Gateway
cod. 0KD010G20

Operating modes
• Bus operation: Operation via push-button sensors or other bus devices
• Short-term manual operation: Manual operation locally with button field, automatic return to bus operation.
• Continuous manual mode: Exclusively manual operation on the device
No bus operation is possible in manual mode.
• No manual mode is possible in case of bus failure.
• After a bus failure and restoration the device switches to bus operation.
• After a power failure and restoration the device switches to bus operation.
• The manual mode can be disabled in ongoing operation via a bus telegram.

Switching on the temporary manual control

Operation using the button field is programmed and not disabled.
■ Press the ✎ button briefly.
  Display (4) shows **01**, LED ✎ remains off.
  - or -
  Display (4) shows **bc**: all connected DALI devices are controlled jointly.
ℹ After 5 seconds without a button-press, the device returns automatically to bus operation.

Switching off temporary manual operation
The device is in short-term manual mode.
■ No button-press for 5 seconds.
  - or -
■ Press ✎ button briefly as many time as necessary until the device leaves the short-time manual mode.
  The display (4) is off.

Switching on permanent manual control
Operation using the button field is programmed and not disabled.
■ Press the ✎ button for at least 5 seconds.
  LED ✎ is illuminated, display (4) shows **01**, continuous manual mode is switched on.
  - or -
  Display (4) shows **bc**: all connected DALI devices are controlled jointly.

Switching off permanent manual control
The device is in continuous manual mode.
■ Press the ✎ button for at least 5 seconds.
  LED ✎ is off, display (4) is off, bus operation is switched on.

Operating DALI devices
The device is in continuous or short-term manual mode.
■ Press ✎ button briefly as many times as necessary until the display shows the desired DALI number.
  The LEDs **ON/▲** and **OFF/▼** indicate the status.
■ Operate output with **ON/▲** or **OFF/▼** button.
  Short: switch on/off.
  Long: dim brighter/darker.
  Release: Stop dimming.
  The LEDs **ON/▲** and **OFF/▼** indicate the status.
ℹ Short-term manual operation: after running through all of the available DALI numbers, the device exits manual mode after another brief press.
ℹ The display (4) firstly shows the numbers of the available DALI groups (4a), followed by the individual addresses of the DALI devices (4b).

**Switch off all DALI devices**
The device is in continuous manual mode.
■ Press the **ALL OFF** button.
 All DALI devices switch off.

Disabling individual DALI devices or groups
The device is in continuous manual mode.
■ Press ✎ button briefly as necessary until the display shows the desired DALI number.
  Status display via LEDs **ON/▲** and **OFF/▼**.
■ Press **ON/▲** and **OFF/▼** buttons simultaneously for at least 5 seconds.
  The selected DALI number flashes in the display (4).
  DALI device or group is blocked.
■ Activate bus mode (see section Deactivating permanent manual control).
ℹ DALI devices blocked via manual operation can be operated in manual mode.

Unblocking a DALI device or group
The device is in continuous manual mode.
■ Press ✎ button briefly as many times as necessary until the display (4) flashes the desired DALI number.
■ Press **ON/▲** and **OFF/▼** buttons simultaneously for at least 5 seconds.
  DALI device or group is enabled.
  The display (4) no longer flashes.
■ Activate bus mode (see section Deactivating permanent manual control).

Fitting and electrical connection

⚠ **DANGER!**
Electrical shock when live parts are touched.
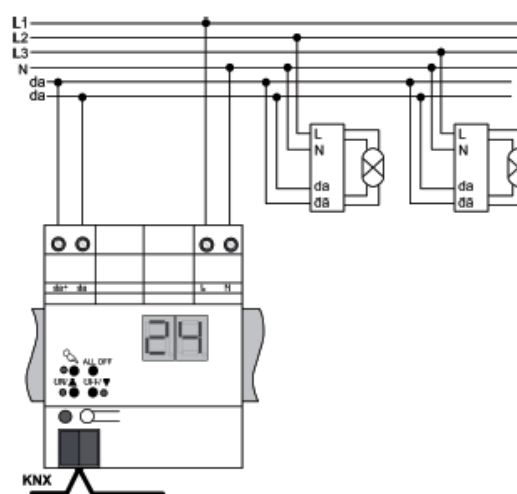Electrical shocks can be fatal.
Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

Fitting the device
Observe the temperature range. Ensure adequate cooling.
• Mount device on DIN rail. Output terminals must be at the top.

Connecting the device

Control cable: appropriate type, cross-section and routing for the specifications for 250 V cables. DALI and mains voltage wires can be run together in a cable, e.g. NYM 5x1.5 mm².
• DALI participants from some manufacturers have expanded functions and can e.g. be controlled via mains voltage on the DALI connection. When existing DALI installations are refitted, remove all corresponding operator controls.
• The DALI control voltage is a functional extra-low voltage (FELV). When performing installation, perform the installation in such a way that when an area is disconnected the lines carrying both the DALI and also the mains voltage are disconnected.
• Connect device as shown in the connection example (Figure 3). 5/9 - DALI gateway
• If multiple miniature circuit breakers supply dangerous voltages to the device or load, couple the miniature circuit breakers or label them with a warning, to ensure disconnection is guaranteed.
• Connect bus line with connecting terminal.
• DALI devices can be connected to various phase conductors.

Operation in emergency lighting systems
The device can be used in decentrally-powered or in centrally-powered emergency lighting systems.
In decentrally-powered emergency light systems, emergency luminaires with individual batteries and special DALI devices are used.
• Observe the number of DALI devices in the emergency luminaires used.
Emergency lighting systems with a central safety supply are required in buildings larger than 2000 m². Depending on the scope of functions of the system, only the emergency luminaires are supplied by the central safety

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supply (Figure 4), or the KNX system and DALI gateway are also supplied (Figure 5). In the latter case, in emergency operation, the DALI gateway can transmit the appropriate fault messages to a central system and other DALI gateways in the system.
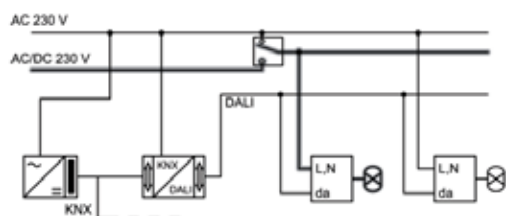

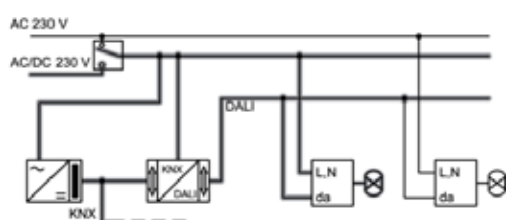Figure 4: Emergency luminaires supplied through a central safety supply

Figure 5: Emergency luminaires, KNX system and DALI gateway supplied through a central safety supply

Installing the cover
It is necessary to install a cover to protect the bus connection against hazardous voltages in the connection area.
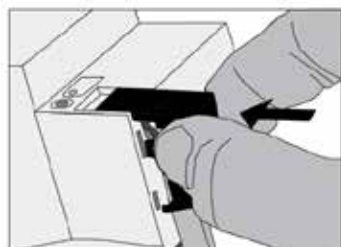
Figure 6: Installing the cover
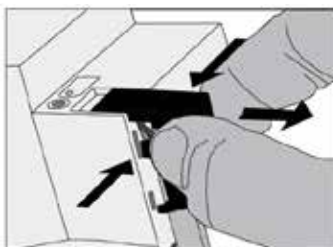
Figure 7: Removing the cover

• Route the bus line towards the rear.
• Install cover on top of the bus terminal so that it snaps into place (Figure 6).
• Press the cover to the side and pull it off (Figure 7).

Installing the cover
It is necessary to install a cover to protect the bus connection against hazardous voltages in the connection area.

Commissioning

Load the address and the application software
• Switch on mains voltage.
• Switch on the bus voltage.
• Assign physical address and note on the device label.
• Commission DALI system using commissioning software.
• For more detailed information on commissioning of the DALI system, see the technical product information for this device.
• Load the application software into the device.
• No programming is possible if no mains voltage is connected.

Technical data

Supply	
Rated voltage	AC 110 ... 240 V ~
Mains frequency	50 / 60 Hz
Rated voltage DC	DC 110 ... 240 V
Power loss	max. 3 W
Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
DALI	
DALI rated voltage	DC 16 V (typical)
Number of DALI subscribers	max. 64
DALI transmission rate	1.2 kbit/s
DALI protocol	EN 62386
Cable type	Sheathed cable 230 V, e,g. NYM
DALI cable length	
with Ø 1.5 mm²	max. 300 m
with Ø 1.0 mm²	max. 238 m
with Ø 0.75 mm²	max. 174 m
with Ø 0.5 mm²	max. 116 m
Housing	
Fitting width	72 mm / 4 modules
Connection of power supply and DALI	
Connection mode	Screw terminal
single stranded	0.5 ... 4 mm²
finely stranded without conductor sleeve	0.5 ... 4 mm²
Finely stranded with conductor sleeve	0.5 ... 2.5 mm²
KNX	
KNX medium	TP
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Power consumption KNX	typical 150 mW
Connection type for bus	Connection terminal

Troubleshooting

Display shows "Er", connected DALI devices have no function, no operation possible
Cause: Mains voltage on DALI cable.
Installation error. Disconnect device and connected DALI devices from mains voltage and disconnect bus voltage. Correct installation.
Display shows "bc" in manual mode, control of individual luminaires not possible.
Cause: The device has not been programmed or is programmed to "Broadcast".
Check the device status. If necessary, program the device and put DALI system into operation.
Individual DALI devices have no function
Cause 1: Load is defective, e.g. lamp.
Exchange load.
Cause 2: DALI device is defective.
Exchange defective device.
Switch on voltage.
Press ✎ and ALL OFF buttons together for at least 10 seconds.
The device detects the exchanges DALI device and loads in the necessary data. The display (4) shows LE.
• Simultaneous exchange of multiple DALI devices is only possible with commissioning software and project data.

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None of the DALI groups can be operated.
Cause 1: All DALI groups disabled via bus or manual operation.
Cancel disabling.
Cause 2: Continuous manual mode switched on.
Switching off permanent manual control
Cause 3: Application software has been stopped, programming LED is flashing.
Perform reset: Disconnect device from bus, switch on again after approx. 5 seconds.
Cause 4: Application software missing or faulty.
Check programming and correct.

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Touch Panel 3,5"
cod. 0KE010T10 e 0KE010T11

Product and application description

The touch panel is equipped with a 3,5 inches coloured display; dimming, status, values, lighting, shutters and timers are controlled and password protected when needed. Using the embedded temperature sensor and the embedded room temperature controller function is possible to manage valves, fancoil or other HVAC equipments. RGB coloured Led or lights are controlled with dedicated control elements and a proper KNX interface (DMX, 1-10V and DALI available); The device includes a number of pre-programmed logic including control of electrical loads with automatic power-off priority, (this feature is available in combination with eelectron KNX power measuring device).

The panel 3.5 "Touch has an LED for status display (eelecta series) and a buzzer to give sound signals with alarm function. Available in various colours and finishes is based on Linux OS but can be programmed using only ETS without any additional SW.

Device is equipped with KNX communication interface.

ETS Application program

Main features
• 6 display pages, each with up to 8 control elements
• for each element up to 4 KNX objects used
• wide range of control elements: pushbuttons / switches (with status report), slide controllers, +/- push button for value settings (set points etc.)
• elements for dimming with switching function shutter/blinds controller, clock timer, timer etc.
• 6th display page for alarm objects
• each page and each control element can be protected by password
• various user interfaces, layouts and standby options selectable on the device
• the device includes a thermostat with a temperature probe to manage the following main functions:

> • control algorithm PI or P: 2-point on / off; PWM; Continuous monitoring / control fan coil 2 and 4 pipes.
> • different modes: automatic HVAC / HVAC Manual
> • functions for managing a window contact or forcing in comfort
> • ability to manage via the data bus from an additional sensor temperature

Technical data

Alimentazione

Alimentazione ausiliaria: 9 ..32V DC
Corrente assorbita: typ 55 mA @ 24V DC

Bus EIB/KNX 21..31V DC
Corrente assorbita da EIB/KNX: < 5 mA

Elementi di comando e visualizzazione
1 led bianco di segnalazione (serie eelecta) 1 buzzer per segnalazioni acustiche Pulsante e led EIB/KNX

Terminali e connessioni
Connettore wago nero/grigio per connessione bus EIB/KNX Connettore wago bianco/giallo per connessione ausiliaria

Technical data

Power Supply
Auxiliary supply:	9 ..32 V DC
Current Consumption:	typ 55 mA @ 24V DC
Via bus EIB/KNX cable	21..31V DC
Current Consumption EIB/KNX	< 5 mA

Control and visualization elements
1 white signalling led (eelecta series)
1 buzzer for acoustic signalling
EIB/KNX Red LED and button
Connections and terminals
Wago red/grey to connect to EIB/KNX bus
Wago white/yellow to connect to aux supply
Mechanical data
Plastic parts:	PC / ABS
Installation:	wall box:
	2 or 3 modules Italian
	German box
	Swiss box
Dimensions - eelecta:	112 x 110 x 48 mm apx.
Dimensions - 3025:	112 x 112 x 48 mm apx.
Weight (depends from code):	250 .. 300 g.

Environmental Specification
According to EN 50491-2
Ambient temperature during operation:	-5 °C + 45 °C
Storage temperature:	- 20 °C + 55 °C
Relative humidity (not condensing):	max. 90%

Electromagnetic compatibility
Compliant with EN 50491-5-1 and EN 50491-5-2
Electrical Safety
Degree of pollution : (according to EN 60664-1)	2
Degree of protection: (according to EN 60529)	IP20
Safety Class : (according to IEC 1140)	III
Overvoltage class: I (according to IEC 664-1)	III

Bus: safety extra low voltage SELV DC 21…31 V DC
Compliant with EN 50491-3

Installation Instructions

Device must be installed keeping a minimum distance of 4mm between electrical power line (mains) and input cables or red / black bus cable .
• The device must not be connected to 230V cables
• The prevailing safety rules must be heeded.
• The device must be mounted by an authorized installer.
• The applicable safety and accident prevention regulations must be observed.
• The device must not be opened. Any faulty devices should be returned to manufacturer.
• For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
• KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

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Functionalities

	Installation	Outputs	Relè Rating	Digital Inputs	Load Control	Shutter Control	Fancoil 2 Pipes 3/2/1 speed	Fancoil 4 Pipes 2/1 speed	Fancoil 4 Pipes 3 speed	Electric Valve	Motor Reductor Driver
0KD040021	DIN RAIL 4 modules	4	16A		○	○				○	○
0KD080021	DIN RAIL 4 modules	8	16A		○	○	○	○	○	○	○
0KD120020	DIN RAIL 9 modules	12	16A		○	○					
0KD080020	DIN RAIL 4 modules	8	16A		○	○					
0KD040020	DIN RAIL 4 modules	4	16A		○	○					
0KD040030	DIN RAIL 4 modules	4	16A	4	○		○	○			
0KD040031	DIN RAIL 4 modules	4	16A	4	○	○				○	○
0KD080030	DIN RAIL 4 modules	8	16A	8	○						
0KD080031	DIN RAIL 4 modules	8	16A	8	○	○	○	○	○	○	○
0KD030040	DIN RAIL 6 modules	3 (300W)									
0KD030041	DIN RAIL 4 modules	3 (1-10V)									
0KD010010	DIN RAIL 4 modules	1 (700W)									
0KD010011	DIN RAIL 4 modules	1 (700W)									
0KD040040	DIN RAIL 8 modules	4 (300W)									
0KF020010	INWALL	2	2								
0KF040010	INWALL	4	4								
0KF040020	INWALL	4	4	4							
0KF030010	INWALL	2	10A	3	○	○				○	

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