KNX: the Standard for home and building automation

KNX technology is the standard technology of the Gewiss range for Home and Building Automation. Since 2004, KNX technology has represented European Standard EN50090 for home and building automation and, in late 2006, it became the world Standard ISO/IEC 14543.
KNX is an open standard, sustained by more than 420 manufacturers (from 39 different countries) who are leaders in the domestic and commercial sectors, with an overall range that exceeds 10,000 devices, for a total of over 20 million nodes installed throughout the world!

Configuration

The Gewiss KNX products for Building Automation must be configured - in compliance with the Standard - via a PC using the ETS configuration software, sold by the KNX association.

Functions

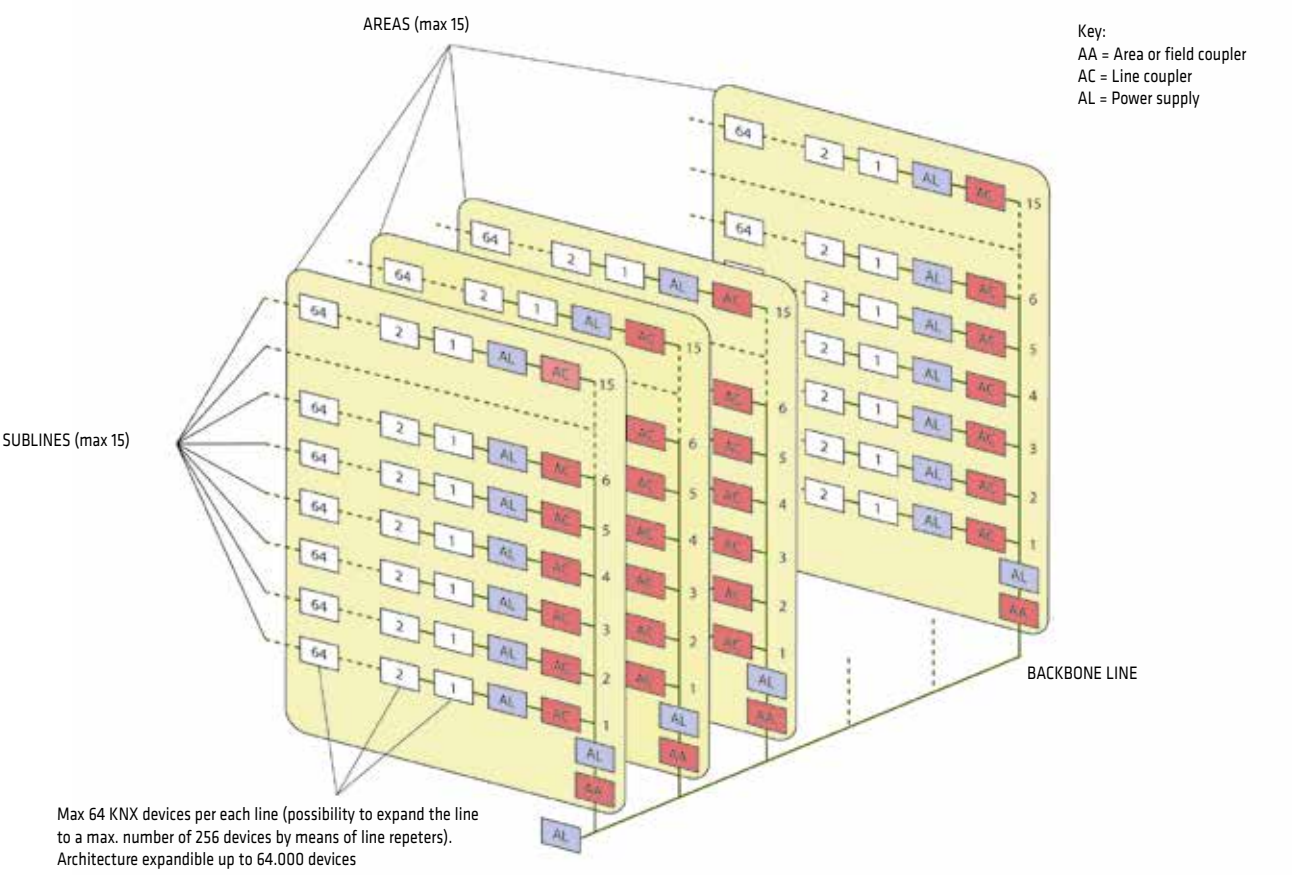
The functions that can be created with the range of Gewiss KNX products are: control of lights and roller shutters, temperature control, energy control, burglar alarm, remote supervision and control of the whole system, both in local or by remote, via internet, through the SMART GATEWAY app, for smartphone and tablet.

The system

The KNX automation system is a event piloted distributed intelligence system ensuring maximum power, flexibility and simplicity when creating all Home and Building Automation functions.
It is more simple than traditional electrical systems because of the way the devices are connected: each device is connected in parallel to the BUS cable, from which it gets the power needed for functioning and through which the exchange of information is carried out (commands and states) with the other devices in the system.
The KNX system is a SELV system, which means that it guarantees maximum safety for users who access the functions it contains: for example, pressing push-buttons to command lights, or adjusting a thermostat to modify the temperature.
The KNX BUS cable is a twisted and shielded cable, ensuring great immunity to system disturbances. There are two different types of KNX BUS cable: with one or two pairs. When a cable has two pairs, the second pair is used as a supplementary pair, e.g. to distribute a supplementary power supply when the one distributed by the main pair (along with the data signal) is not enough.
Automation is achieved by decentralising the intelligence elaboration capacity to the single devices, unlike what happens in centralised systems (e.g. a PLC) where there is a single central unit which all the functions refer to. This considerably increases system reliability - in fact, a fault in a device compromises only those functions carried out by that device, while all the other devices go on working as usual.

Architecture and conformation

The KNX BUS system consists of areas connected to each other by a Main Backbone Line. In each area there is a Main Line from which several Sublines branch out, and to which the devices (sensors, actuators, push-buttons, etc.) are connected.



The Main Area Lines are connected to the Main Backbone Line through special devices called Area (or Field) Couplers, while the Sublines are connected to the Main Lines through Line Couplers.
The functions of the Area (or Field) Coupler and the Line Coupler are carried out by a single device called a Line/Field Coupler. This device, when appropriately configured, can act also as simple Repeater.
Each line must include a BUS power supply unit to send power to the connected devices.
The following are the limitations that must be observed for each line (Backbone, Main and Sublines):

- Total length: max. 1000m, summing up all the cable segments comprising the line (the total length can be exceeded using repeaters).
- The maximum length of the line between the BUS power supply unit and the furthest BUS device must not exceed 350m.
- The maximum length of the line between two BUS devices is 700m.
- Number of power supply units on the same line: max 2.
- Distance (measured along the cable) between two power supply sources for the same line: min 200m.

The couplers electrically isolate the various parts of the system in order to prevent a single electrical malfunction from compromising the functions of the whole system.
The couplers also act as "filters" for the messages (data packages) transmitted by the single devices, in order to avoid the useless transmission of messages to the whole network, which would limit the communication capacity (or band), of the system.
The function of the couplers is therefore of vital importance when the KNX network is very extensive. The couplers give the system a high level of electrical and functional reliability and allow simultaneous and independent communication on different lines or areas.
The Lines (Backbone Line, Area Main Line and Sublines) need not respect any installation restrictions, and so can be laid in any conformation: linear, star, tree and mixed, without needing line terminators.
A KNX BUS system can even be comprised of a single line, which is typical for small systems (e.g. in an apartment or a house).

Transmission technique and BUS access

The data transmission between the BUS devices is through telegrams using techniques which make the use of resistances for line terminations unnecessary and which make possible any network conformation.
Data transmission on the BUS line is symmetric, the single bytes are transmitted by imposing a potential difference between the two BUS cables without reference to ground and, in this way, the system is immune to the external disturbances which commonly act on two wires.
Each device can transmit on the BUS independently from all other devices, so overlapping can occur and for this reason a special access procedure to the BUS ensures that no data is lost and that the BUS is always in operation.

Selecting the devices

The selection of the devices needed to create a KNX system must obviously be made according to the functional system specifications.
There are system devices which don't carry out automation functions but which are needed to create the network infrastructure.
These devices must be considered as listed below, in relation to the extension and size of the network:

- Power supply units: each line must have at least one power supply unit and the size of the power supply unit must be selected according to the number of devices connected to the line.
- Line/Field couplers: there should be one coupler for each Subline and for each area.
- KNX/USB or KNX/IP: used to configure the system via PC.

Configuring the devices

The KNX BUS devices require configuration. The configuration is carried out with a PC (e.g. a laptop), using the ETS software (EIB Tool Software). Access to the devices is typically through USB serial interface. The configuration consists of initialising the internal parameters of the devices so that they carry out the required functions. This configuration phase is also called the Start Up.
The ETS software can be purchased from the KNX association (www.knx.org). For any information, you can also contact the Konnex Italia association (www.konnex.it). This software need be purchased once only, and there is no limit to the number of systems that can be started up. The Gewiss database, needed by ETS for the configuration of all the KNX products, is available free of charge from the Gewiss website (www.gewiss.com), where it is automatically updated with new products as soon as they come onto the market.

Installation

The Lines (Backbone Line, Area Main Line and Sublines) of the KNX BUS system can be laid in any conformation (linear, star, tree, loop, mixed), exactly like an electrical network. For each line however, the prescribed distances (as indicated above) must always be respected.
For every system, it is important to check that no loops are formed within a single line or between different lines.
The KNX BUS devices can be installed in the distribution boards and assembled on DIN busbars, or flush- or wall-mounted, or else directly incorporated into the final service (e.g. in a lamp).

Detailed description of the functions and application programs of the devices

A detailed description of the KNX devices is published on the Gewiss website (www.gewiss.com), where the following documents are available:

- Instruction sheets: describe installation procedures and list all the electrical and size characteristics.
- Technical Manual: describes all the functions, and the parameters that condition their behaviour.

SYSTEM DEVICES

POWER SUPPLIES		
	GW 90 709	**GW 90 710**
Maximum current supplied	320mA	640mA
Max. no. of BUS devices which can be powered	The max no. of devices that can be powered is calculated on the basis of their consumption	The max no. of devices that can be powered is calculated on the basis of their consumption
Input power supply voltage	230V ac +6%/-10%, 50Hz	230V ac +6%/-10%, 50Hz
Output voltage	30V dc +/- 2V	30V dc +/- 2V
No. of DIN modules	4	4
Operating temperature	-5÷45 °C	
Connection to the BUS	Via coupling terminal, 2 pin Ø 1mm	
Common specifications	- Protection against short circuiting - Coil to suppress disturbances from the integrated power supply line - Push-button to reset the connected BUS devices - LED lights signalling the operating status and the exceeding of the maximum supplied current	

Reference standards:
Low Voltage Directive 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC, EN50090-2-2


GW 90 709


GW 90 710

INTERFACES FOR PC				
	GW 90 706 U KNX/USB stick interface	**GW 90 706 B KNX/USB interface**	**GW A9 707 KNX/IP router**	**GW A9 705 KNX/IP interface**
Power supply	Via the USB port of the PC	Via the USB port of the PC	Via KNX Bus	Via KNX Bus
PC type of connection	A-type USB connector	B-type USB port	RJ45 LAN port - 10Mbit/s	RJ45 LAN port - 10Mbit/s
No. of DIN modules	-	1	1	1
Display elements	Green LED: USB connection Green LED: data traffic	Green LED: connection to PC Yellow LED: data traffic	Green/red LED: KNX signal Green/red LED: LAN signal Red LED: programming phase	Green/red LED: KNX signal Green/red LED: LAN signal Red LED: programming phase
No. of connections at the same time	1	1	5	5
Length of the connection cable to the PC	A-type male-female USB extension (15cm length)	5m max.	-	-
Notes	For the connection of a PC with a USB port to the KNX bus	For the connection of a PC with a USB port to the KNX bus	The KNX/IP network router also allows telegrams to be sent between different lines, via a LAN (IP) acting as a quick backbone line. To be configured with ETS	For the connection of a PC via LAN to the KNX bus. To be configured with ETS
Operating temperature	-5÷45 °C			
Connection to the BUS	Removable screw terminals	Via coupling terminal, 2 pin Ø 1mm		

Reference standards:
Low Voltage Directive 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC, EN50090-2-2, EN61000-6-2, EN61000-6-3


GW 90 706 U


GW 90 706 B


GW A9 707


GW A9 705

For technical information contact the Technical Assistance Service or visit gewiss.com

COMMAND DEVICES

KNX 2- and 4-channel contacts interface

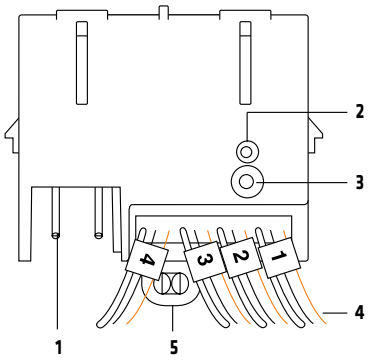
The device is configured with the ETS software to implement the functions shown in the table.

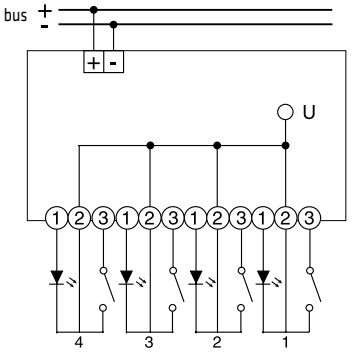
MAIN FUNCTIONS	
Inputs management / Object transmission on the BUS	**Dimmer command**
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte) with 8 communication objects and timed intervals	with single or double push-button
	with stop telegram or cyclical send
brief / prolonged contact closure management with command transmission (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte)	with sending of light value (0% - 100%)
	Impulse count
activation / blocking of inputs	on rise/descent fronts, or both
Scenes	meter of 1 byte, 2 byte, 4 byte
scenes management with object, 1 byte	transmission on variation and/or cyclical (value counted on the BUS)
sending of scenes memorisation commands	overflow indication on the BUS
management of scene sequence	**Multi-pressing/contact closure**
Priority commands	management of contact closure with consecutive (max.4) pressing operations (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte)
sending of priority commands	
Command of roller shutters/curtains	**Control of output LED**
with single or double push-button	5 light effects for each LED
	Switchover sequences
	with objects of 1 bit on BUS (from 2 to 8)

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 727

GW 90 721 A





Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN 50428, EN50090-2-2

1. BUS terminals
2. LED for programming physical address
3. Button key for programming physical address
4. Connection cables
5. Fixing slot

(1) White cable
(2) Black cable
(3) Orange cable

TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Current absorbed by BUS	5mA max + 1mA for every LED connected (max. total 9mA)
Contact scanning voltage	3.3V DC
LED outputs	Voltage: 3.3V DC max current: 1mA
Control elements	1 miniature button key for programming physical address
Display elements	1 red LED for programming physical address
Contact connection	AWG26 fitted cables - length 300mm
Extension of connection cables	max length 10m (twisted cable)
Dimensions (LxHxD)	38x38x13mm (38x38x19mm with rib)
Operating temperature	-5 to +45°C
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

KNX 8-channel ac/dc voltage input module - DIN rail

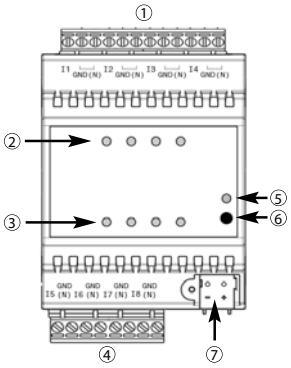
The module allows you to connect up to 8 push-buttons or live input contacts (24..48Vdc or 24..230Vac) and to send the relative commands to actuators devices via the KNX BUS. The module is powered via the BUS line, and has 8 LEDs for signalling the input status.
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Inputs management / Object transmission on the bus	**Dimmer command**
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte) with 8 communication objects and timed intervals	with single or double push-button
	with stop telegram or cyclical sending
brief/prolonged contact closure management with command transmission (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte)	with sending of the light intensity value (0%..100%)
	Impulse count
activation/blocking of inputs	on rise/descent fronts, or both
Scenes	meter of 1 byte, 2 byte, 4 byte
scenes management with object, 1 byte	transmission on variation and/or cyclical (value counted on the bus)
sending of scenes memorisation commands	overflow signalling on the bus
management of scene sequence	**Multi-pressing/contact closure**
Priority commands	management of contact closure with consecutive (max.4) pressing operations (1 bit, 2 bit, 1 byte, 2 byte, 3 byte, 4 byte, 14 byte)
sending of priority commands	**Switching sequences**
Roller shutters/curtains command	with 1 bit objects on bus (from 2 to 8)
with single or double push-button	

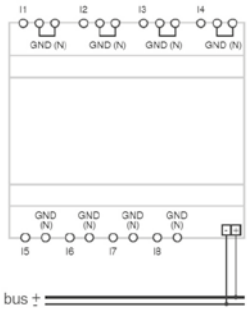
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 729

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2



1. Input 1...4
2. Input status LED 1...4
3. Input status LED 5...8
4. Input 5...8



5. LED for programming physical address
6. Button key for programming physical address
7. Bus terminals

TECHNICAL DATA	
Power supply	Via KNX BUS 29V dc SELV
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address
Display elements	8 amber LED for input status signalling 1 red LED for programming physical address
Inputs	Input contact voltage: 24..48Vdc or 24..230Vac Max distance for contact connection: 100m
Operating temperature	-5 ÷ +45 °C
Dimensions	4 DIN modules
Electric connections	Extractable screw terminals, max cable section: 4mm^2
Connection to the BUS	Coupling terminal, 2 pin Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

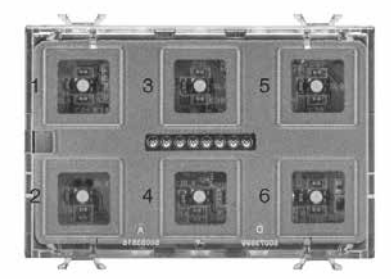
KNX 6-channel push-button panel module with interchangeable symbols - flush-mounting

The device is configured with the ETS software to implement the functions shown in the table.

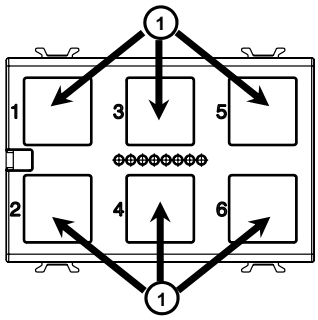
MAIN FUNCTIONS	
Fronts management / Sequence commandsa	with sending of the percentage position (0%-100%)
fronts management touch/release with sequence sending (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte)	**Dimmer command**
brief/prolonged touch management with command transmission	with single or double push-buttons
activation/blocking of channels	with stop telegram or cyclical send
Scenes	with sending of the light intensity value (0%-100%)
scenes management with object, 1byte	**Multiple touch**
sending of scenes memorisation commands	management of multiple touches on consecutive pressing operations (max. 4) with sending of commands
Priority commands	**Switchover sequences**
sending of priority commands	with 1 bit objects on bus (from 2 to 8)
Commands of roller shutters/curtains	**Control of the output RGB LEDs**
with single or double push-button	5 lighting effects for each RGB LED, and colour selection

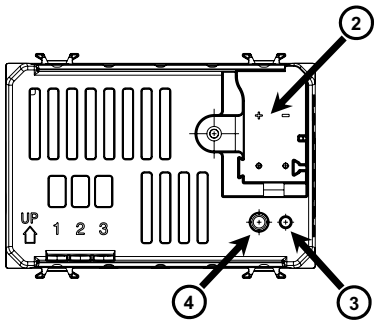
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

The device has 6 RGB LEDs for night-time localisation and display of the controlled load status. The device is provided with a buzzer for touch signalling, and a proximity sensor whose function is to increase the level of backlight when the user approaches the glass plate.
To be completed with the ICE Touch KNX glass plates, italian standard, white (GW 16 946 CB), natural beige (GW 16 946 CL), black (GW 16 946 CN), titanium (GW 16 946 CT) or with the test plate (GW 16 950) for commissioning. The plates have 6 capacitive touch areas.
Each channel can be personalised using a set of adhesive icons (included in the package)



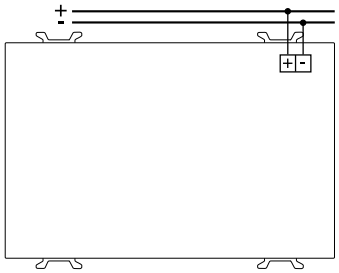
GW A9 421





Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50491, EN60669-2-5

1. Configurable RGB LEDs for status and night-time localisation
2. Bus terminals
3. LED for programming physical address
4. Button key for programming physical address

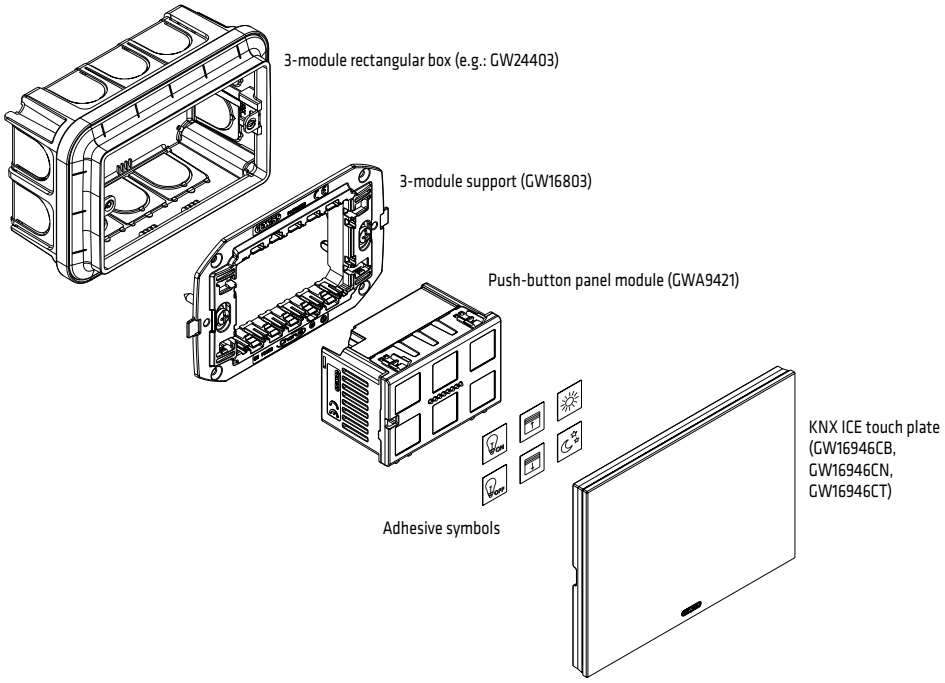


GW 16 946 CB

GW 16 946 CL

GW 16 946 CT

GW 16 946 CN



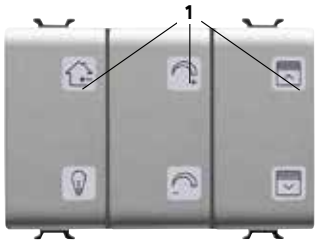
TECHNICAL DATA	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by bus	25mA max
Control elements	1 miniature button key for programming physical address
Display elements	6 touch command areas with configurable RGB LED backlight 1 red LED for programming physical address
Operating temperature	-5 ÷ +45 °C
Dimensions	3 ChoruSmart modules
Connection to the bus	Coupling terminal, 2 pin Ø 1mm

KNX 6-channel push-button panel with interchangeable symbols - flush-mounting

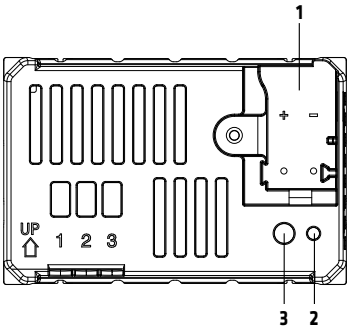
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Fronts management/sequence commands	**Command of roller shutters/curtains**
fronts management with sending of commands (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte)	with single or double push-button
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte) with 8 communication objects and timed intervals	with sending of the percentage position (0%-100%)
brief/prolonged touch management	**Dimmer command**
channel enabling/blocking	with single or double push-button
Scenes	with stop telegram or cyclical send
scenes management with object, 1 byte	with sending of light value (0% - 100%)
sending of scenes memorisation commands	**Control of output LED**
Priority commands	5 brightness effects for each LED and colour selection
sending of priority commands	**Switchover sequences**
	with 1 bit objects on bus (from 2 to 8)

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

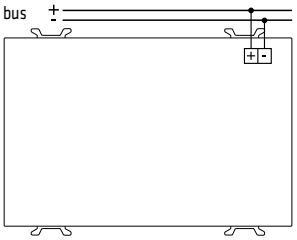


GW10783A - GW12783A - GW13783A - GW14783A - GW15783A



Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN 50491, EN 60669-2-5

1. LED for status and night-time localisation
2. BUS terminals
3. LED for programming physical address
4. Button key for programming physical address



1. Bus terminal
2. LED for programming physical address
3. Button key for programming physical address

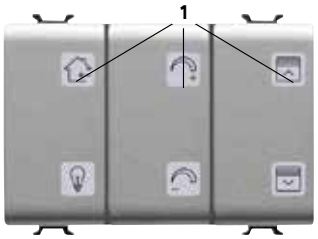
TECHNICAL DATA	
Power supply	Via KNX BUS 29V dc SELV
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address 6 commands to be completed with push buttons
Display elements	1 red LED for programming physical address 6 amber/blue LED for signalling of the commanded load or for night-time localisation
Operating temperature	-5 ÷ +45 °C
Dimensions	3 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

KNX 6-channel push-button panel with interchangeable symbols + On/Off actuator - flush-mounting

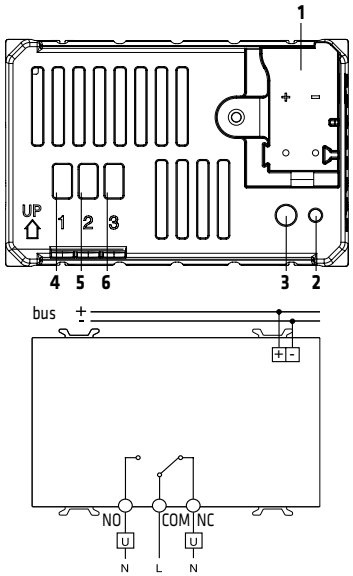
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Push-button panel	**Roller shutter actuator**
Fronts management/sequence commands	**Switchover**
fronts management with sending of commands (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte)	parameterisation of output behaviour (NO/NC)
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte) with 8 communication objects and timed intervals	timing of stair raiser lights, with the possibility to set the duration of the timing via BUS
brief/prolonged touch management	timing of the stair raiser lights, with switch-off pre-warning function
channel enabling/blocking	activation/deactivation delay
Scenes	flashing
scenes management with object, 1 byte	**Scenes**
sending of scenes memorisation commands	storage and activation of 8 scenes (value 0-63) for each output
Priority commands	enabling/disabling of scene storage from BUS
sending of priority commands	**Priority commands**
Command of roller shutters/curtains	parameterisation of the output relay value at the end of the forcing
with single or double push-button	**Shutdown command**
with sending of the percentage position (0%-100%)	parameterisation of the shutdown item value and output relay value at the end of the forcing
Dimmer command	**Logic functions**
with single or double push-button	AND/NAND/OR/NOR logic operation with command element (switchover, timed switchover, delayed switchover, flashing) and the result of the logic operation
with stop telegram or cyclical send	use of the logic operation result to enable the command element (switchover, timed switchover, delayed switchover, flashing, scene)
with sending of light value (0% - 100%)	AND/NAND/OR/NOR/XOR/XNOR logic operations up to 4 logic inputs
Control of output LED	**Output status**
5 brightness effects for each LED and colour selection	the sending on the BUS can be parameterised
status signalling function for local actuator	**Safety functions**
Switchover sequences	regular monitoring of the input item
with 1 bit objects on bus (from 2 to 8)	**Other functions**
On/off actuator local command	parameterisation of output behaviour upon failure and resetting of voltage supply on BUS
with on/off command, stair raiser lights, activation/deactivation delay, flashing, scene, priority command or block	parameterisation of behaviour of local command push-buttons
	parameterisation of input objects priority

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.



GW10784A - GW12784A -GW13784A - GW14784A - GW15784A



Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN 50491, EN 60669-2-5

1. Bus terminal
2. LED for programming physical address
3. Button key for programming physical address
4. NO output
5. Common
6. NC output

TECHNICAL DATA	
Power supply	Via KNX BUS - 29V dc SELV
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address - 6 commands to be completed with push buttons
Display elements	1 red LED for programming physical address 6 amber/blue LED for signalling of the commanded load or for night-time localisation
Output contacts	1 NO/NC 10A(AC1) 230V ac - Incandescent lamps (230V ac): 1500W - Halogen lamps (230V ac): 1500W Loads controlled from electronic transformers: 600VA - Uncompensated fluorescent loads: 400VA - Energy saving lamps (compact fluorescent): 8x23W For compensated fluorescent lamps and all other loads not indicated here, you are advised to use a support relay.
Operating temperature	-5 ÷ +45 °C
Dimensions	3 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

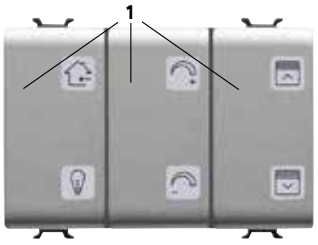
For technical information contact the Technical Assistance Service or visit gewiss.com

KNX 6-channel push-button panel with interchangeable symbols + Roller shutter actuator - flush-mounting

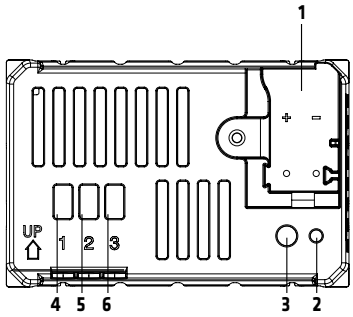
The device is configured with the ETS software to implement the functions shown in the table.

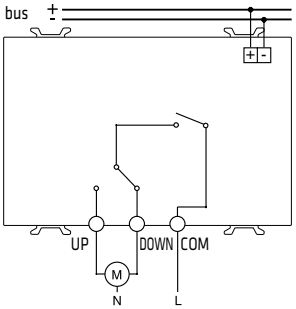
MAIN FUNCTIONS	
Push-button panel	**Roller shutter actuator**
Fronts management/sequence commands	**Command functions**
fronts management with sending of commands (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte)	management of rise/descent/stop movements
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte, 4 byte, 14 byte) with 8 communication objects and timed intervals	slat adjustment
brief/prolonged touch management	movement command in relative position (0% - 100%), also for slat
channel enabling/blocking	automatic adjustment of slat position
Scenes	**Scenes**
scenes management with object, 1 byte	storage and activation of 8 scenes (value 0-63)
sending of scenes memorisation commands	enabling/disabling of scene storage from BUS
Priority commands	**Priority commands**
sending of priority commands	parameterisation of the output relay value at the end of the forcing
Command of roller shutters/curtains	**Blocking commands**
with single or double push-button	parameterisation of position at end of blocking
with sending of the percentage position (0%-100%)	**Alarms**
Dimmer command	management of alarm position (up to 3 sensors) and periodical monitoring of input objects
with single or double push-button	management of rain alarm and ice alarm
with stop telegram or cyclical send	AND/NAND/OR/NOR/XOR/XNOR logic operations up to 4 logic inputs
with sending of light value (0% - 100%)	**Status information**
Control of output LED	parameterised sending on BUS
5 brightness effects for each LED and colour selection	signalling of last movement performed
status signalling function for local actuator	signalling of position (0% - 100%) and slat position
Switchover sequences	**Other functions**
with 1 bit objects on bus (from 2 to 8)	parameterisation of output behaviour upon failure and resetting of voltage supply on BUS
	Automatic mode
	Autonomous movements to protect against direct sunlight, to keep heat the environment, etc.

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.



GW10785A - GW12785A - GW13785A - GW14785A - GW15785A





Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/35/EU

1. Bus terminal
2. LED for programming physical address
3. Button key for programming physical address
4. Relay output (UP)
5. Relay output (DOWN)
6. Common

TECHNICAL DATA	
Power supply	Via KNX BUS - 29V dc SELV
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address - 6 commands to be completed with push buttons
Display elements	1 red LED for programming physical address 6 amber/blue LED for signalling of the commanded load or for night-time localisation
Output contacts	6A - 230V ac Motors and gear motors, in compliance with EN60669-2-1
Operating temperature	-5 ÷ +45 °C
Dimensions	3 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

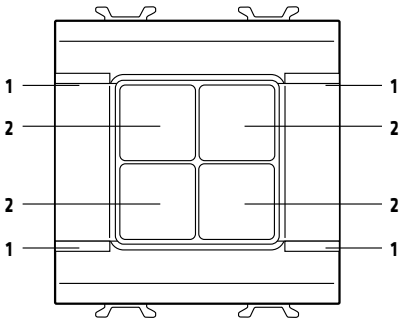
KNX 4-channel push-button panel - flush-mounting

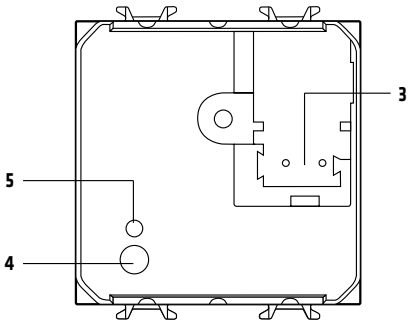
The device is configured with the ETS software to implement the functions shown in the table.

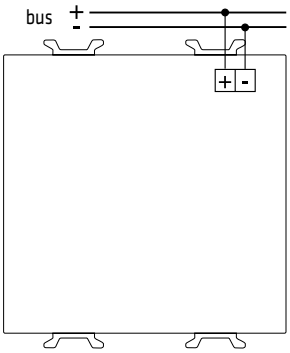
MAIN FUNCTIONS	
Inputs management / Object transmission on the BUS	**Command of roller shutters/curtains**
fronts management with sending of commands (1 bit, 2 bit, 1 byte, 2 byte)	with single or double push-button
fronts management with sending of sequences (1 bit, 2 bit, 1 byte, 2 byte) with 4 communication objects and timed intervals	**Dimmer command**
	with single or double push-button
brief / prolonged pressing management with command transmission (1 bit, 2 bit, 1 byte, 2 byte)	with stop telegram or cyclical send
	with sending of light value (0% - 100%)
activation / blocking of push-buttons	**Control of output LED**
Scenes	ON/OFF mode
scenes management with object, 1 byte	flashing mode
sending of scenes memorisation commands	**Switchover sequences**
management of scene sequence	with objects of 1 bit on BUS (from 2 to 5)
Priority commands	
sending of priority commands	

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW10782 - GW12782 - GW13782
GW14782 - GW15782







Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2

1. LED for status and night-time localisation
2. Command push-button
3. BUS terminals
4. LED for programming physical address
5. Button key for programming physical address

TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Current absorbed by BUS	max. 8mA
Control elements	1 miniature button key for programming physical address 4 command button keys
Display elements	1 red LED for programming physical address 4 green LEDs for signalling output status 4 amber LEDs for night-time localisation
Operating temperature	-5 to +45°C
Dimensions	2 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

SENSORS

KNX IR light-sensitive movement detector - flush-mounting

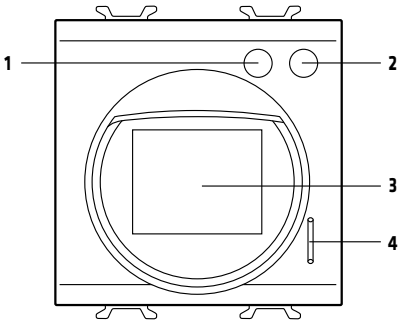
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Movement detection conditioned by light, or unconditioned	Activation of sending commands on object BUS
Sending of commands (1 bit / 1 byte) on start and/or end of movement operation	Up to 4 auxiliary switchover blocks
Local adjustment of light threshold or via ETS parameter	Parameterised safety pause
Activation/deactivation of operation via BUS	Light-sensitive sensor function

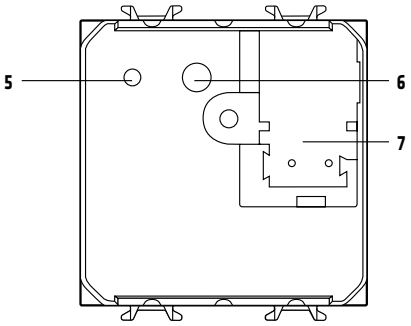
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

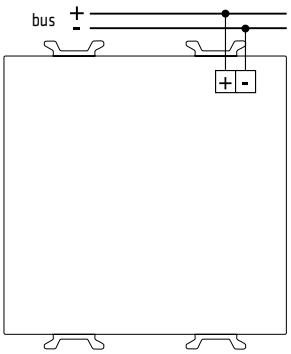
GW10786 - GW12786 - GW13786
GW14786 - GW15786

Reference standards:
Low Voltage Directive2014/35/EU
Electromagnetic Compatibility Directive
2014/30/EU, EN50428, EN50090-2-2



1. Potentiometer for adjusting light sensitivity
2. Potentiometer for adjusting cycle time
3. IR and light-sensitive sensors
4. Movement detection LED
5. LED for programming physical address
6. Button key for programming physical address
7. BUS terminals





TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Current absorbed by BUS	max. 5mA
Control elements	1 miniature button key for programming physical address
Display elements	1 red LED for programming physical address 1 green LED for movement detection
Measuring elements	1 PIR sensor (λ = 5-14 µm) 1 light-sensitive sensor (10-500 lux)
Configuration elements	1 rotary potentiometer for adjusting light-sensitive sensor 1 rotary potentiometer for adjusting cycle time
IR sensor cover	Max. distance: 10m Vertical cover: 30°, adjustable Horizontal cover: 105°, adjustable
Operating temperature	-5 to +45°C
Dimensions	2 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

KNX PRESENCE DETECTOR	
	GW A9 531A
Installation	Ceiling (IP20) Height 2 - 6 m
Connection to the BUS	BUS terminal for insertion without screws
Presence detection	360° control; Range of action in tangential approach: 4m if height 2m, 8m if height 6m. In radial approach the above values are reduced by about 50%.
Movement detection	360° control; Range of action in tangential approach: 10m if height 2m, 16m if height 6m. In radial approach the above values are reduced by about 50%.
Luminosity control	5 .. 2000 lux
Power absorbed by BUS	0,4W
Power supply	From BUS
Operating temperature	-20°C ÷ +40°C
MAIN FUNCTIONS	
Constant luminosity control (in combination with dimmer actuators)	•
Activation depending solely on luminosity	•
Activation depending on luminosity and movement	•
Timing of OFF function	•

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50491

GW A9 531 A

ACTUATORS

KNX 1-channel 16A actuator - flush-mounting

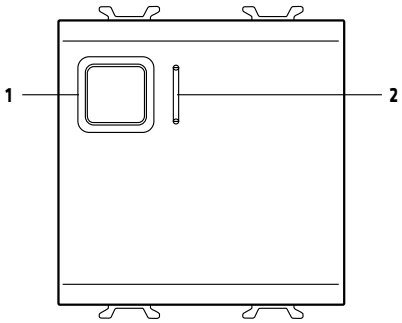
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Switchover	**Logic functions**
timing of stair lights, with possibility to set the duration of the timing via BUS	logic operation AND/NAND/OR/NOR with command object and result of logic operation
timing of stair lights with switch-off pre-warning function	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 4 logic inputs
delayed activation/deactivation	**Output status**
flashing	parameterised sending on BUS
Scenes	**Safety function**
memorisation and activation of 8 scenes (value 0 - 63)	periodical monitoring of input object
activation/deactivation of memorisation of scenes from BUS	**Other functions**
Priority commands	parameterisation of output behaviour with voltage fall/reset on BUS
parameterisation of the output relay value at the end of the forcing	parameterisation of behaviour of local command button key
Blocking commands	parameterisation of priorities among input objects
parameterisation of blocking object value and output relay value at the end of the blocking	

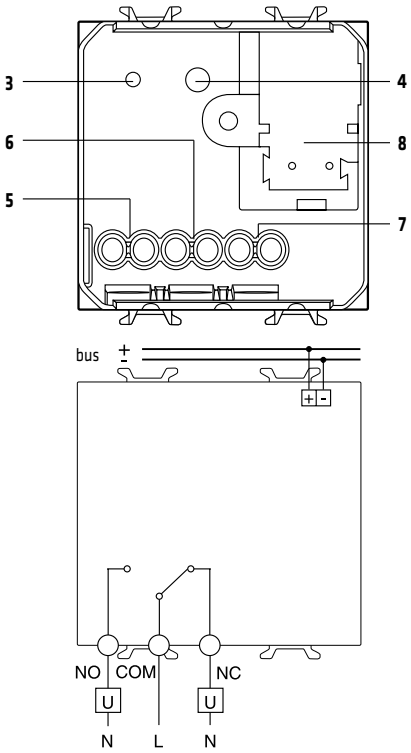
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW10796 - GW12796 - GW13796
GW14796 - GW15796

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2



1. Local command push-button
2. LED for output status and night-time localisation
3. LED for programming physical address
4. Button key for programming physical address
5. NO output
6. Common
7. NC output
8. BUS terminals



TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Current absorbed by BUS	max. 5mA
Control elements	1 miniature button key for programming physical address / 1 push-button for local relay command (the push-button works only when the bus voltage is available)
Display elements	1 red LED for programming physical address 1 green LED for signalling output status / 1 amber LED for night-time localisation
Output contact	1 NO/NC 16A (AC1) / 230V ac Incandescent lamps (230V ac): 1500W - Halogen lamps (230V ac): 1500W. Loads piloted from electronic transformers: 600VA - Uncompensated fluorescent lamps: 400VA - Energy saving lamps (compact fluorescent): 8x23W. Use a support relay for the compensated fluorescent lamps and for all loads that are not indicated.
Operating temperature	-5 to +45°C
Dimensions	2 ChoruSmart modules
Section of load cables	max. 4mm^2
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

KNX 4-channel 10A and 16A actuators - from DIN rail

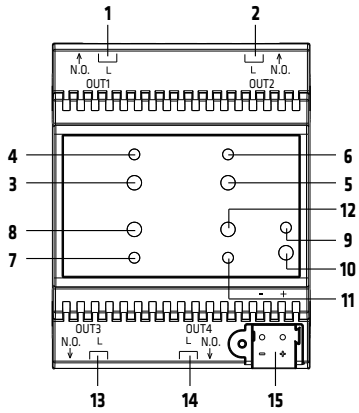
The devices are configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Switchover	**Safety function**
parameterisation of output behaviour (NO/NC)	periodical monitoring of input object
timing of stair lights, with possibility to set the duration of the timing via BUS	**Logic functions**
timing of stair lights with switch-off pre-warning function	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 4 logic inputs
delayed activation/deactivation	logic operation AND/NAND/OR/NOR with command object (switching, timed switching, delayed switching, flashing) and result of logic operation
flashing	result of the logic operation used to enable command object (switching, timed switching, delayed switching, flashing, scenario)
Scenes	**Output status**
memorisation and activation of 8 scenes (value 0..63) for each output	parameterised sending on BUS
activation/deactivation of memorisation of scenes from BUS	**Other functions**
Priority commands	parameterisation of output behaviour with voltage fall/reset on BUS
parameterisation of the output relay value at the end of the forcing	parameterisation of behaviour of local command button keys
Blocking commands	parameterisation of priorities among input objects
parameterisation of blocking object value and output relay value at the end of the blocking	

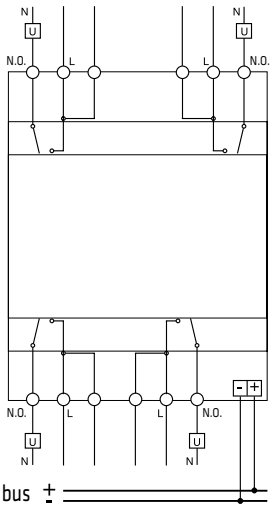
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet

GW 90 741

GW 90 740 A



1. Output relay 1
2. Output relay 2
3. Relay 1 local command button
4. Relay 1 status LED
5. Relay 2 local command button
6. Relay 2 status LED
7. Relay 3 status LED
8. Relay 3 local command button
9. LED for programming physical address
10. Button key for programming physical address
11. Relay 4 status LED
12. Relay 4 local command button
13. Output relay 3
14. Output relay 4
15. Bus terminals



Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2

TECHNICAL DATA		
	GW 90 741	**GW 90 740 A**
Power supply	Via KNX BUS - 29V dc SELV	
Current absorbed by BUS	10mA max	
Control elements	1 miniature button key for programming physical address 4 push-buttons for local relay command (the push-buttons work only when the bus voltage is available)	
Display elements	1 red LED for programming physical address 4 green LEDs for signalling output status	
Output contacts	4 NA 10A(AC1) 230V ac Incandescent lamps (230V ac): 1500 W Halogen lamps (230V ac): 1500 W Loads piloted from electronic transformers: 600 VA Uncompensated fluorescent lamps: 400 VA Energy saving lamps (compact fluorescent): 8x23W Use a support relay for the compensated fluorescent lamps and for all loads that are not indicated.	4 NA 16AX 230V ac Incandescent lamps (230V ac): 3000 W Halogen lamps (230V ac): 3000 W Loads piloted from toroidal transformers: 3000 W Loads piloted from electronic transformers: 2000 W Energy saving lamps (compact fluorescent): 80x23W Max. switchover current 16A (AC1), 16AX (140µF ref. EN 60669-1) fluorescent loads with maximum surge current 400A (200µs).
Operating temperature	-5 ÷ +45°C	
Dimensions	4 DIN modules	
Dimension of load cables	2.5mm² max	
Connection to the BUS	Coupling terminal, 2 pins	

For technical information contact the Technical Assistance Service or visit gewiss.com

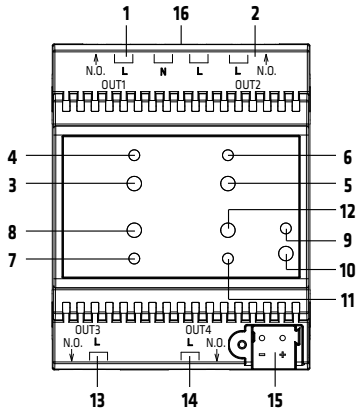
KNX 4-channel 16AX actuator with manual command - from DIN rail

The device is configured with the ETS software to implement the functions shown in the table.

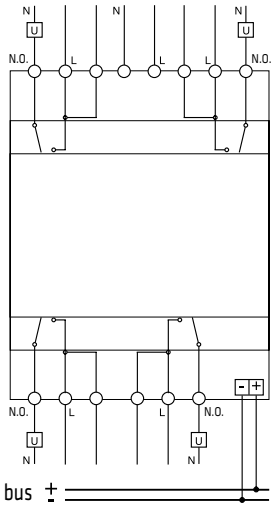
MAIN FUNCTIONS	
Switchover	**Safety function**
parameterisation of output behaviour (NO/NC)	periodical monitoring of input object
timing of stair lights, with possibility to set the duration of the timing via BUS	**Logic functions**
timing of stair lights with switch-off pre-warning function	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 4 logic inputs
delayed activation/deactivation	logic operation AND/NAND/OR/NOR with command object (switching, timed switching, delayed switching, flashing) and result of logic operation
flashing	result of the logic operation used to enable command object (switching, timed switching, delayed switching, flashing, scenario)
Scenes	**Output status**
memorisation and activation of 8 scenes (value 0..63) for each output	parameterised sending on BUS
activation/deactivation of memorisation of scenes from BUS	**Other functions**
Priority commands	parameterisation of output behaviour with voltage fall/reset on BUS
parameterisation of the output relay value at the end of the forcing	parameterisation of behaviour of local command button keys
Blocking commands	parameterisation of priorities among input objects
parameterisation of blocking object value and output relay value at the end of the blocking	

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 742



1. Output relay 1
2. Output relay 2
3. Relay 1 local command button
4. Relay 1 status LED
5. Relay 2 local command button
6. Relay 2 status LED
7. Relay 3 status LED
8. Relay 3 local command button
9. LED for programming physical address
10. Button key for programming physical address
11. Relay 4 status LED
12. Relay 4 local command button
13. Output relay 3
14. Output relay 4
15. Bus terminals
16. Auxiliary 230V ac



Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2

TECHNICAL DATA	
Power supply	Via KNX BUS 29V dc SELV - Auxiliary power supply 230V ac
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address 4 push-buttons for local relay command (the push-buttons work also when the bus voltage is down)
Display elements	1 red LED for programming physical address 4 green LEDs for signalling output status
Output contacts	4 NA 16AX 230V ac Incandescent lamps (230V ac): 3000 W Halogen lamps (230V ac): 3000 W Loads piloted from toroidal transformers: 3000 W Loads piloted from electronic transformers: 2000 W Energy saving lamps (compact fluorescent): 80x23W Max. switchover current 16A (AC1), 16AX (140µF ref. EN 60669-1) fluorescent loads with maximum surge current 400A (200µs).
Operating temperature	-5 ÷ +45°C
Dimensions	4 DIN modules
Dimension of load cables	2.5mm² max
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

KNX 1-channel 6A roller shutter actuator - flush-mounting

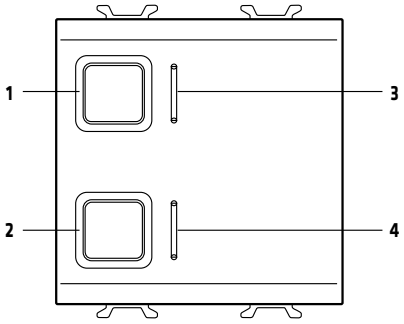
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
Command functions	**Alarms**
management of rise/descent/stop movements	management of alarm position (up to 3 sensors) and periodical monitoring of input objects
slat adjustment	**Status information**
movement command in relative position (0% - 100%)	parameterised sending on BUS
automatic adjustment of slat position	signalling of last movement performed
Scenes	signalling of position (0% - 100%)
memorisation and activation of 8 scenes (value 0 - 63)	**Other functions**
activation/deactivation of memorisation of scenes from BUS	parameterisation of behaviour with voltage fall/reset on BUS
Priority commands	
parameterisation of position at end of forcing	
Blocking commands	
parameterisation of position at end of blocking	

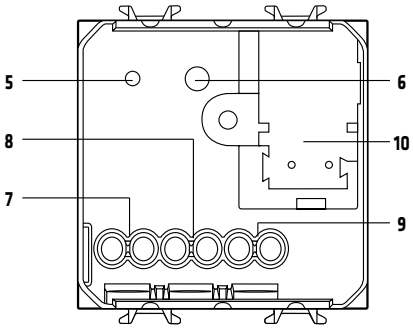
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

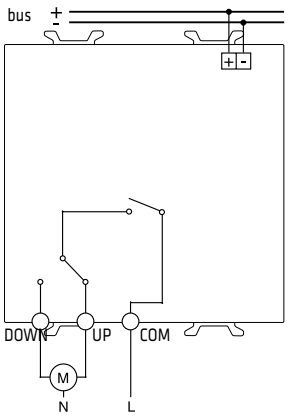
GW10797 - GW12797 - GW13797
GW14797 - GW15797

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2



1. Local command push-button 1 (UP)
2. Local command push-button 2 (DOWN)
3. LED for output status (UP) and night-time localisation
4. LED for output status (DOWN) and night-time localisation
5. LED for programming physical address
6. Push-button for programming physical address
7. Relay output (DOWN)
8. Relay output (UP)
9. Common
10. BUS terminals





TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Current absorbed by BUS	max. 8mA
Control elements	1 miniature button key for programming physical address 2 push-buttons for local relay command
Display elements	1 red LED for programming physical address 2 green LEDs for signalling output status / 2 amber LEDs for night-time localisation
Output contacts	6A - 230V AC Motors and gear motors, in compliance with EN60669-2-1
Operating temperature	-5 to +45°C
Dimensions	2 ChoruSmart modules
Dimension of load cables	max. 4mm²
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

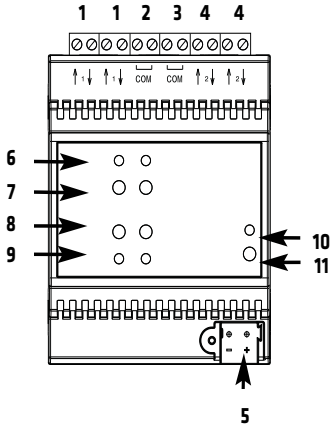
KNX 2- and 4-channel 6A roller shutter actuators - from DIN rail

The devices are configured with the ETS software to implement the functions shown in the table.

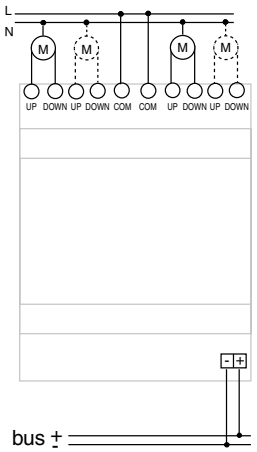
MAIN FUNCTIONS	
Command functions	**Status information**
management of rise/descent/stop movements	parameterised sending on BUS
slat adjustment	signalling of last movement performed
movement command in relative position (0% - 100%)	signalling of position (0% - 100%)
adjustment command for slat position (0% - 100%)	signalling of slat position (0% - 100%)
automatic adjustment of slat position	**Automatic operation**
Priority commands	parameterisation of relative position and slat position for protection against solar irradiation
parameterisation of position at end of forcing	parameterisation of relative position and slat position for temperature adjustment function
Blocking commands	activation/deactivation of automatic operation from BUS
parameterisation of position at end of blocking	selection of automatic operation mode (protection against solar irradiation/temperature adjustment function) from BUS
Alarms	selection of type of temperature adjustment function (room heating/cooling) from BUS
management of wind alarm and alarm end position (up to 3 sensors) and periodical monitoring of input objects	**Other functions**
management of rain alarm and alarm end position (1 sensor) and periodical monitoring of input objects	parameterisation of behaviour with voltage fall/reset on BUS
management of ice alarm and alarm end position (1 sensor) and periodical monitoring of input objects	parameterisation of stroke limits for roller shutters/Venetian blinds
parameterisation of priorities amongst weather alarms	activation/deactivation of stroke limits from BUS
Scenes	setting of higher or lower stroke limit from BUS
memorisation and activation of 8 scenes (value 0..63)	execution of automatic calibration
activation/deactivation of memorisation of scenes from BUS	parameterisation of behaviour of local command button keys

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 856



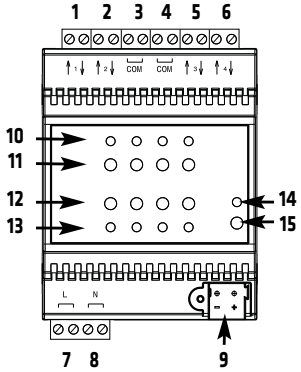
1. CHANNEL 1 output relay
2. Common (CHANNEL 1)
3. Common (CHANNEL 2)
4. CHANNEL 2 output relay
5. Bus terminals
6. CHANNEL 1 and 2 (UP) LED output status
7. CHANNEL 1 and 2 (UP) local command buttons
8. CHANNEL 1 and 2 (DOWN) local command buttons
9. CHANNEL 1 and 2 (DOWN) LED output status
10. LED for programming physical address
11. Button key for programming physical address



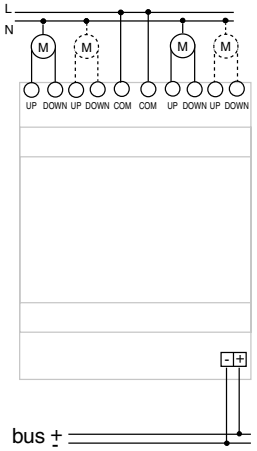
Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2, EN60669-2-1

ATTENTION: When making the parallel connection of several motors, always use support or insulation relays.

GW 90 857



1. CHANNEL 1 output relay
2. CHANNEL 2 output relay
3. Common (CHANNEL 1 - CHANNEL 2)
4. Common (CHANNEL 3 - CHANNEL 4)
5. CHANNEL 3 output relay
6. CHANNEL 4 output relay
7. Auxiliary power supply (PHASE)
8. Auxiliary power supply (NEUTRAL)
9. Bus terminals
10. CHANNEL 1,2,3 and 4 (UP) LED output status
11. CHANNEL 1,2,3 and 4 (UP) local command buttons
12. CHANNEL 1,2,3 and 4 (DOWN) local command buttons
13. CHANNEL 1,2,3 and 4 (DOWN) LED output status
14. LED for programming physical address
15. Button key for programming physical address



For technical information contact the Technical Assistance Service or visit gewiss.com

TECHNICAL DATA		
	GW 90 856	**GW 90 857**
Power supply	Via KNX BUS 29V DC SELV	
Current absorbed by BUS	max. 10mA	
Control elements	Button key for programming physical address 4 push-buttons for local command	Button key for programming physical address 8 push-buttons for local command
Display elements	1 red LED programming physical address 4 green LEDs (status indicator)	1 red LED programming physical address 8 green LEDs (status indicator)
Output contacts	4 NO of 8A (cos φ=1) - 250V AC Motors and gear motors: 6A in compliance with EN60669-2-1	8 NO of 8A (cos φ=1) - 250V AC Motors and gear motors: 6A in compliance with EN60669-2-1
Dimension of load cables	max. 4mm^2	
Dimensions	4 DIN modules	
Operating temperature	-5 to +45°C	
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm	

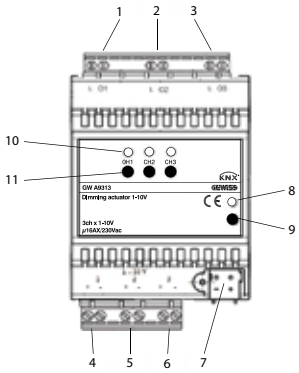
KNX 3-channel dimmer actuator 1-10V - from DIN rail

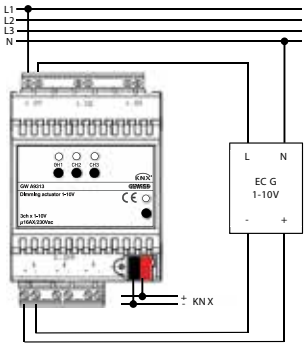
The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
ON/OFF switching	**Lockout function**
setting the degree of light intensity for the execution of the ON switchover command	parameterisation of the lockout activation value, behaviour when lockout is active, and behaviour when lockout is deactivated
Relative brightness regulation	setting the lockout object value upon download and upon bus voltage reset
parameterisation of the maximum and minimum adjustment threshold	**Slave mode for control from bus service**
parameterisation of the relative adjustment speeds between 0% and 50%, and between 50% and 100%	setting the monitoring time and dimmer behaviour in safe operating mode
Absolute brightness regulation	parameterisation of the slave mode value upon download and upon voltage reset
setting the mode for reaching the required light intensity (via a ramp or jump to that value)	**Logic functions**
parameterisation of the ramp adjustment speed 0% - 100%	logic operation AND/NAND/OR/NOR with command object and result of logic operation
Scenes	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 8 logic inputs
memorising and activating 8 scenes (value 0-63)	Setting the NOT operation on the 8 inputs
enabling/disabling of scene learning from bus	setting the mode for reaching the required light intensity (via a ramp or jump to that value)
Priority command (forcing)	parameterisation of the ramp adjustment speed 0% - 100%
setting the degree of light intensity with forcing activation ON	the delay at switch-on and switch-off
setting the forcing status upon bus voltage reset	**Other functions**
Timed switchover (stair riser light)	parameterisation of the regulation characteristic
parameterisation of light value during timing	parameterisation of the output behaviour upon failure and reset of bus voltage
setting the activation time	setting the transmission of information concerning the ON/OFF status and the current light intensity percentage value
setting the pre-warning time	setting the transmission of information concerning overloads
parameterisation of behaviour when a timed activation command is received with timing already active	setting the transmission of information concerning the absence of a 230V voltage (with bus voltage present)
setting the stair raiser light activation time from the bus	enabling the channel counter for counting the period the channel is on or off
	setting the local button key operation

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW A9 313





Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50491, EN60669-2-5

1. Screw terminals for the relay contacts of the power supply to ballast, channel 1
2. Screw terminals for the relay contacts of the power supply to ballast, channel 2
3. Screw terminals for the relay contacts of the power supply to ballast, channel 3
4. Screw terminals for the control voltage 1-10V canale 1
5. Screw terminals for the control voltage 1-10V canale 2
6. Screw terminals for the control voltage 1-10V canale 3
7. Bus terminals
8. LED for programming
9. Button key for programming physical address
10. LED for programming physical address
11. Push-buttons for local channel command

TECHNICAL DATA	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by bus	20mA max
Control elements	1 miniature button key for programming physical address 3 push-buttons for local channel command
Display elements	1 red LED for programming physical address 3 channel status LEDs
Actuation elements	3 relays 16 AX with NO potential free contact
Corrente max di commutazione	16A (AC1) 16AX (140uF ref. EN60669-1) fluorescent loads with maximum surge current 400A (200us)
Maximum power for load type **- Incandescent and halogen lamps (230Vac)** **- Loads controlled by toroidal transformers** **- Loads controlled by electronic trasnformers** **- Low consumption lamps (compact fluorescent lamps)**	 3000W 3000W 2000W 80x23W
Load capacity per channel 1-10V	Max. 100mA
Operating temperature	-5 ÷ +45 °C
Dimensions	4 DIN modules
Connection to the bus	Coupling terminal, 2 pin Ø 1mm

KNX 1- and 2-channel universal dimmer actuator - from DIN rail

The device is configured with the ETS software to implement the functions shown in the table.

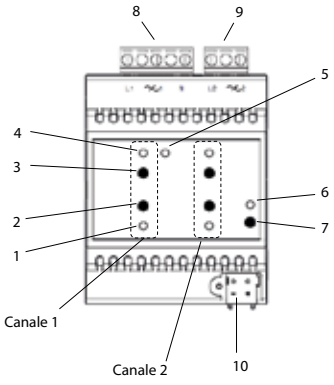
MAIN FUNCTIONS	
ON/OFF switchover	**Lockout functions**
setting the degree of light intensity for the execution of the ON switchover command	parameterisation of the lockout activation value, behaviour when lockout is active, and behaviour when lockout is deactivated
Relative light adjustment	setting the lockout object value upon download and upon bus voltage reset
parameterisation of the maximum and minimum adjustment thresholds	**Slave mode for control from bus device**
parameterisation of the relative adjustment speeds between 0% and 50%, and between 50% and 100%	setting the monitoring time and dimmer behaviour in safe operating mode
Absolute light intensity regulation	parameterisation of the slave mode value upon download and upon voltage reset
setting of the mode for reaching the required light intensity value (via a ramp or jump to that value)	**Logic function**
parameterisation of the ramp regulation speed 0% - 100%	logic operation AND/NAND/OR/NOR with command object and result of logic operation
Scenes	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 8 logic inputs
storage and activation of 8 scenes (value 0-63)	setting of the NOT operation on 8 inputs
enabling/disabling of scene learning from bus	setting the mode for reaching the required light intensity (via a ramp or jump to that value)
Priority command (forcing)	parameterisation of the ramp regulation speed 0% - 100%
setting the degree of light intensity with forcing ON activation	setting the delay for switch-on and switch-off
setting the forcing status upon bus voltage reset	**Other functions**
Timed switchover (stair raiser light)	parameterisation of the output behaviour upon failure and reset of BUS voltage
parameterisation of light value during timing	setting of transmission of information concerning the ON/OFF status and the current light intensity percentage value
setting the activation time	setting of transmission of information concerning overloads
setting the pre-warning time	setting of transmission of information concerning 230V voltage absence (with BUS voltage present)
parameterisation of behaviour when a timed activation command is received with timing already active	enabling of channel counter for calculating the channel ON/OFF period
setting the stair raiser light activation time from the bus	setting the local button key operation

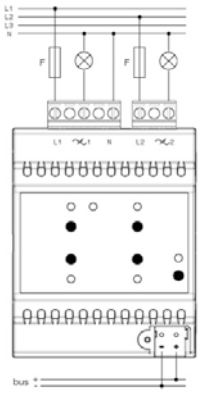
Informazioni di dettaglio sui programmi applicativi e sulle modalità di installazione sono disponibili sul Manuale Tecnico e sul libretto di istruzioni del prodotto.

GW A9 301

GW A9 302

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive
2014/30/EU, EN50428, EN60669-2-5, EN50090-2-2





1. LED signalling the type of load
2. Push-buttons for selecting the type of load
3. Push-buttons for local channel command
4. LED for channel status
5. LED for fault signalling
6. LED for programming physical address
7. Button key for programming physical address
8. Terminal for connecting channel 1
9. Terminal for connecting channel 2
10. Bus terminals

TECHNICAL DATA		
	GW A9 301 (1 channel)	**GW A9 302 (2 channels)**
Power supply	Via KNX bus 29V dc SELV	
Current absorbed by bus	10mA max	
Control elements	1 miniature button key for programming physical address Push-buttons for local channel command Push-buttons for selecting the type of load	
Display elements	1 red LED for programming physical address LED for channel status LED signalling the type of load LED for fault signalling	
Rated voltage	230Vac (±10%), 50/60Hz	
Output power (per each channel) **- 230Vac incandescent and halogen lamps** **- Low voltage halogen lamps with electronic transformers** **- Low voltage halogen lamps with ferromagnetic transformers** **- 230Vac LED lamps with dimmer function** **- CFL lamps with dimmer function**	 10-500W 10-500VA 10-500VA 3-150W 5-150W	 10-300W 10-300VA 10-300VA 3-75W 5-75W
Operating temperature	-5 ÷ +45 °C	
Dimensions	4 DIN modules	
Electric connection	Screw terminals, max. cable section 2.5 mm^2	
Connection to the bus	Coupling terminal, 2 pin Ø 1mm	

KNX dimmer actuators for LED - from DIN rail

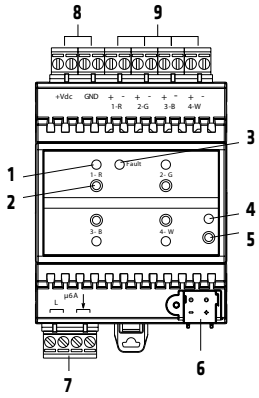
The devices are configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
ON/OFF switching (*)	parameterisation of behaviour when a timed activation command is received with timing already active
setting the degree of light intensity corresponding to the ON switching command	setting the stair raiser light activation time from the BUS
setting the delay for switch-on and switch-off	**Blocking function (*)**
RGB[W] relative brightness control (*)	parameterisation of the block activation value, behaviour when the block is active and behaviour when the block is deactivated
parameterisation of the maximum and minimum adjustment thresholds	setting the blocking object value upon download and upon BUS voltage reset
parameterisation of the relative adjustment speeds between 0% and 50%, and between 50% and 100%	**Logic function**
RGB[W] absolute brightness control (*)	logic operation AND/NAND/OR/NOR with command object and result of logic operation
setting the mode for reaching the required light intensity (via a ramp or jump to that value)	logic operations AND/NAND/OR/NOR/XOR/XNOR up to 4 logic inputs
parameterisation of the ramp adjustment speed 0% - 100%	setting the NOT operation on the 4 inputs
Scenes (*)	**Other functions**
memorising and activating 8 scenes (value 0 - 63)	parameterisation of the output behaviour upon failure and reset of BUS voltage
enabling/disabling of scene learning from BUS	setting the transmission of information concerning the ON/OFF status and the current light intensity percentage value
Colour sequences	setting the transmission of information concerning overheating, auxiliary voltage failure or polarity inversion
execution of preconfigured colour sequences (e.g: strobe, rainbow, blinking, etc.)	setting the transmission of information concerning the absence of auxiliary voltage (with BUS voltage present)
setting of reproduction speeds, initial colour and number of repetitions	setting PWM frequencies
Priority command (forcing) (*)	setting output current values (CCD version) for each channel
setting the degree of light intensity with forcing ON activation	setting local button key operation
setting the forcing status upon BUS voltage reset	
Timed switchover (stair raiser light) (*)	
parameterisation of light value during timing	
setting the activation time	
setting the pre-warning time	

(*) for each individual channel and 4 channels at the same time.
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

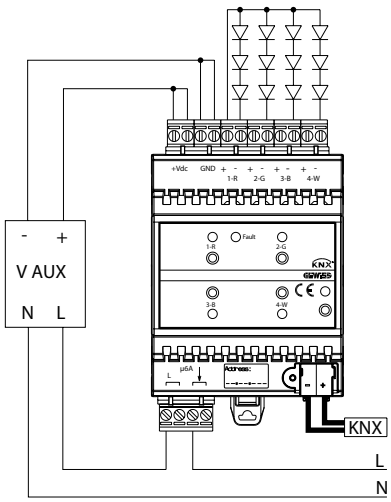
GW 90 764

GW 90 765



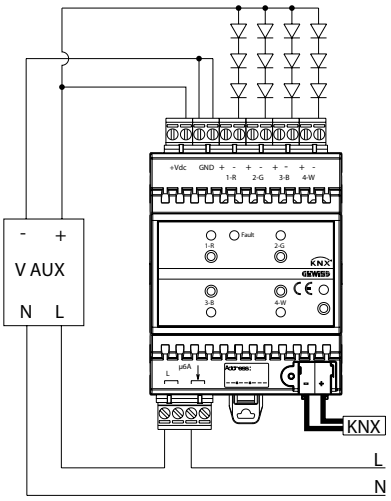
1. Channel status LED
2. Channel test push-button
3. Fault signalling LED
4. LED for programming physical address
5. Button key for programming physical address
6. Bus terminals
7. Relay contact terminals for LED power supply
8. LED auxiliary power supply terminals
9. Output channel terminals

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive
2014/30/EU, EN50428, EN50090-2-2, EN61347-1, EN61347-2-13

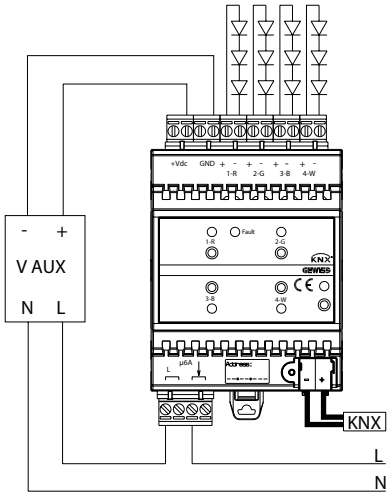


Wiring 1:
with common anode connected
to the dimmer

GW 90 764 - CVD type



Wiring 2:
with common anode connected directly
to the LED auxiliary power supply



GW 90 765 - CCD type

For technical information contact the Technical Assistance Service or visit gewiss.com

TECHNICAL DATA		
	GW 90 764	**GW 90 765**
Power supply	Via KNX BUS 29V DC SELV	
Current absorbed by BUS	max. 10mA	
Auxiliary power supply	12...24Vdc	12...48Vdc
Control elements	Button key for programming physical address 4 front output test button keys	
Display elements	1 red LED for programming physical address 1 red fault signalling LED 4 two-toned output status signalling LEDs (1 for each channel)	
Maximum output current	Max 4A (the maximum current for the channel is determined based on the type of wiring performed and the effective number of channels used)	from 300mA to 700mA for each output channel
Actuation elements	6A relay contact for controlling the mains voltage of the LED auxiliary power supply	
	4 PWM outputs with constant voltage control	4 PWM outputs with constant current control
Dimensions	4 DIN modules	
Operating temperature	-5 to +45°C	
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm	

COMBINED DEVICES

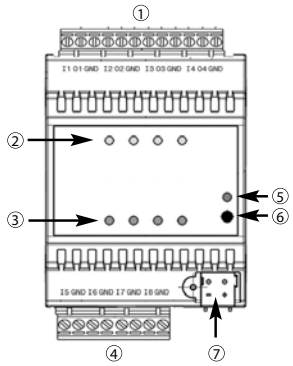
KNX 8-channel (4 digital + 4 universal) input module - from DIN rail

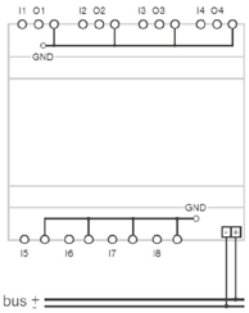
The module has 4 digital inputs for connecting push-buttons or conventional potential-free contacts and 4 universal inputs configurable to act as digital inputs for connecting push-buttons or conventional potential-free contacts, analogue inputs (0..20mA, 4..20mA, 0..10V, 0..1V), digital inputs for measurement devices with S0 interface, inputs for NTC probe sensors that can be used for controlling the same number of thermoregulation areas. The module has also 4 PWM digital output channels for LEDs (3.3V) to signal the status of the commanded load. The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
DIGITAL INPUTS	
Binary inputs for potential-free contacts	command of dimmer with single push-button (cyclical sending or stop command)
command/sequence fronts	command of roller shutters with single push-button
switching sequences	command of dimmer with combined inputs (cyclical sending or stop command)
impulse count	command of roller shutters with combined inputs
multiple pressure management	scenes
UNIVERSAL INPUTS	
Binary inputs for potential-free contacts (all the channels)	setting of threshold values, with signalling of exceeded threshold and hysteresis management
command/sequence fronts	thresholds can be set via bus
switching sequences	**Analogue inputs (all the channels)**
impulse count	inputs 1/2 -> current measurement 0..20 mA or 4..20 mA
multiple pressure management	inputs 3/4 -> voltage measurement 0..10 V or 0...1 V
command of dimmer with single push-button (cyclical sending or stop command)	transmission of the measured value on the bus, with any necessary conversion scale/ percentage value
command of roller shutters with single push-button	setting of threshold values, with signalling of exceeded threshold and hysteresis management
command of dimmer with combined inputs (cyclical sending or stop command)	threshold can be set via bus
command of roller shutters with combined inputs	**Thermostats (max 4) for controlling the same number of temperature adjustment areas, with inputs for NTC temperature sensors (all the channels)**
scenes	measurement of temperature value from external NTC probe sensors (GW10800 or GW1x900)
Digital inputs for measurement devices with S0 interface (all the channels)	
measurement and conversion of the input value from energy meters (KWh or Wh), instantaneous power (KW or W), water (volume in m3) or gas (volume in m3)	
setting of threshold values, with signalling of exceeded threshold	
threshold can be set via bus	
Inputs for NTC temperature sensors (all the channels)	
measurement of temperature value from external NTC probe sensors (GW10800 or GW1x900)	
OUTPUTS FOR LEDs 3.3V (SIGNALLING THE STATUS OF THE LOAD)	
PWM digital outputs for LEDs 3.3V (all the channels)	management of status or inverted status (night-time signalling)
signalling of communication object status on specific bus	management of % of light intensity via PWM control

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 728





Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU,
EN50428, EN60669-2-5, EN50090-2-2

1. Universal inputs/outputs
2. LED for status of universal inputs
3. LED for status of digital inputs
4. Binary inputs
5. LED for programming physical address
6. Button key for programming physical address
7. Bus terminals

TECHNICAL DATA	
On/Off switching	Via KNX bus 29V dc SELV
timed activation/delayed activation/ delayed deactivation	10mA max
flashing	1 miniature button key for programming physical address
scene management	8 amber LEDs for input status signalling 1 red LED for programming physical address
blocking commands	Digital input reading voltage: 3.3V dc Max distance for connection of potential-free contacts: 50m S0 interface reading voltage: 8-10V dc
On/Off forcing	Digital output command voltage: 3.3V dc
safety functions	-5 ÷ +45 °C
logic functions for a single channel	4 DIN modules
Connessione elettriche	Extractable screw terminals, max cable section: 4 mm^2
Connessione al bus	Coupling terminal, 2 pin Ø 1mm

KNX 4-channel 10A actuator + 4 universal inputs - from DIN rail

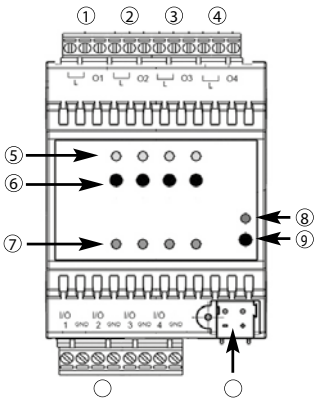
The module has 4 relay 10A output channels and 4 universal input channels that can be configured as inputs for push-buttons or conventional potential-free contacts, analogue inputs (0..20mA, 4..20mA, 0..10V, 0..1V), digital inputs for measurement devices with S0 interface (max 1), inputs for NTC probe sensors (max 2) that can be used for controlling the same number of thermoregulation areas. The 4 universal input channels can also be configured as PWM outputs for LEDs (3.3V) for signalling the status of the loads. The device is configured with the ETS software to implement the functions shown in the table.

MAIN FUNCTIONS	
RELAY OUTPUT CHANNELS	
Relay outputs	blocking commands
On/Off switching	On/Off forcing
timed activation/delayed activation/delayed deactivation	safety functions
flashing	logic functions for a single channel
scene management	
UNIVERSAL INPUTS	
Binary inputs for potential-free contacts (all the channels)	setting of threshold values, with signalling of exceeded threshold and hysteresis management
command/sequence fronts	thresholds can be set via bus
switching sequences	**Analogue inputs (all the channels)**
impulse count	inputs 1/2 -> current measurement 0..20 mA or 4..20 mA
multiple pressure management	inputs 3/4 -> voltage measurement 0..10 V or 0...1 V
command of dimmer with single push-button (cyclical sending or stop command)	transmission of the measured value on the bus, with any necessary conversion scale/ percentage value
command of roller shutters with single push-button	setting of threshold values, with signalling of exceeded threshold and hysteresis management
command of dimmer with combined inputs (cyclical sending or stop command)	threshold can be set via bus
command of roller shutters with combined inputs	**Thermostats (max 2) for controlling the same number of temperature adjustment areas, with inputs for NTC temperature sensors (channels 1 and 3)**
scenes	measurement of temperature value from external NTC probe sensors (GW10800 or GW1x900)
Digital inputs for measurement devices with S0 interface (channel 2 only)	**PWM digital outputs per LEDs 3.3V (all the channels)**
measurement and conversion of the input value from energy meters (KWh or Wh), instantaneous power (KW or W), water (volume in m3) or gas (volume in m3)	signalling of communication object status on specific bus
setting of threshold values, with signalling of exceeded threshold	management of status or inverted status (night-time signalling)
threshold can be set via bus	management of % of light intensity via PWM control
Local command inputs for relay outputs (all the channels)	
command of the corresponding relay output	
setting of monostable (toggle) or bistable command	
Inputs for NTC temperature sensors (all the channels)	
measurement of temperature value from external NTC probe sensors (GW10800 or GW1x900)	

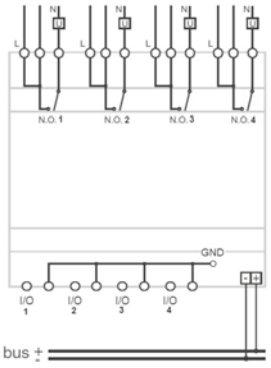
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW 90 730

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN60669-2-5, EN50090-2-2



1. Output relay 1
2. Output relay 2
3. Output relay 3
4. Output relay 4
5. Relay status LED
6. Relay command button



7. Input status LED
8. LED for programming physical address
9. Button key for programming physical address
10. 4 universal inputs
11. Bus terminals

TECHNICAL DATA	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by bus	10mA max
Control elements	1 miniature button key for programming physical address 4 buttons for local relay command
Display elements	4 amber LEDs for input status signalling 4 green LEDs for signalling output status 1 red LED for programming physical address
Inputs	Digital input reading voltage: 3.3V dc Max distance for connection of potential-free contacts: 50m S0 interface reading voltage: 8-10V dc
Outputs	Digital output command voltage: 3.3V dc 4 relays with NO potential-free contact
Output contacts (relays)	4 NO 10A 230V ac Incandescent lamps (230V ac): 1500W Halogen lamps (230V ac): 1500W Loads controlled by electronic transformers: 600VA Uncompensated fluorescent loads: 400VA Energy-saving lamps (compact fluorescent): 8x23W
Operating temperature	-5 ÷ +45 °C
Dimension	4 DIN modules
Electric connection	Extractable screw terminals, max cable section: 4 mm^2
Connection to the bus	Coupling terminal, 2 pin Ø 1mm

TEMPERATURE ADJUSTMENT

KNX timed thermostat/programmer with humidity management - flush-mounting

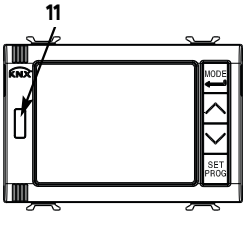
The KNX flush-mounting timed thermostat with humidity management is used to automatically manage (on a weekly basis) a humidification/dehumidification system alongside a temperature adjustment system, or to interact with the temperature adjustment system and the causes of humidity formation. The temperature and humidity are adjusted by commanding - on a KNX BUS - the KNX actuators that control the heating or cooling elements, including the fan coils and the humidification/dehumidification elements. The timed thermostat can work in "autonomous" control mode, to autonomously manage the temperature adjustment system (or parts of it); when combined with the KNX flush-mounting thermostats (GW 10 795 H - GW 12 795 H - GW13794H - GW1479H - GW15794H), it can work in "Master" control mode to create multi-area temperature adjustment systems. The hourly profiles are defined on a weekly basis. An independent hourly profile can be programmed for each day of the week, with a 15 minute resolution and without any limit to the daily variations. If an hourly profile is configured to control the HVAC or Setpoint mode of a KNX flush-mounting temperature adjustment probe (GW 10 799 - GW 12 799 - GW13799 - GW14799 - GW15799 - GW 10 799 H - GW 12 799 H - GW13799H - GW14799H - GW15799H), the profile parameters can be visualised.
The device is configured with the ETS software to implement the functions shown in the table.

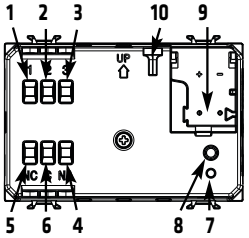
MAIN FUNCTIONS	
Temperature control	**Underfloor probe**
with 2 points, with ON/OFF commands or continuous adjustment (0% - 100%)	setting of threshold value for floor temperature alarm
PI control with PWM commands or continuous adjustment (0% - 100%)	**Temperature control for specific zones**
Control of fan coil speed	with transmission of the operating mode towards Slave thermostats
with distinct speed selection commands (ON/OFF)	with transmission of set point towards Slave thermostats
with continuous adjustment (0% - 100%)	with local selection of operating mode and setpoints
Operating mode setting	**Scenes**
from BUS, with distinct objects of 1 bit (OFF, ECONOMY, PRECOMFORT, COMFORT, AUTO)	memorisation and activation of 8 scenes (value 0 - 63)
from BUS with objects of 1 byte	**Hourly profiles**
Temperature measurement	up to 12 hourly profiles: 2 for use as a timed thermostat and 10 for use as an hourly programmer
with built-in sensor	**Other functions**
combined built-in sensor/KNX temperature adjustment probe/external temperature sensor with definition of the relative weight	setting of set point (OFF, ECONOMY, PRECOMFORT, COMFORT, AUTO) from BUS
calculation of the dew temperature	setting of type (heating/cooling) from BUS
setting of 1 threshold associated with the dew point temperature, with BUS commands sent when the threshold is exceeded and restored	setting of date and time from BUS
Measuring relative humidity	transmission of date and time on BUS
relative humidity measurement received from an external KNX sensor	status information (mode, type) and temperature measurement transmitted on BUS
estimate of relative humidity in the point where the timed thermostat is installed	management of status information deriving from the commanded actuator
setting of up to 5 relative humidity thresholds, with BUS commands sent when the threshold is exceeded and restored	management of the windows status signalling for temporarily switching off the timed thermostat
calculation of specific humidity	auxiliary input for fronts management, brief/prolonged operation, dimmer with single pushbutton, roller shutters with single push-button, scenes and window contact
indication of the thermal well-being status	auxiliary output for controlling the timed thermostat solenoid valve for heating/cooling or used as a general output for executing On/Off commands, timed commands, priority commands and scene management

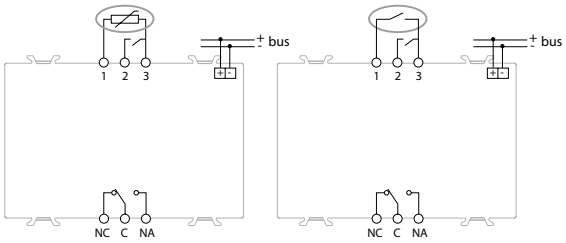
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

NOTE: the device does not have a built-in humidity sensor, so the relative humidity value must be obtained from an external KNX sensor (eg: GW 1x 762 H).

GW10794H - GW12794H - GW13794H
GW14794H - GW15794H







with external temperature probe sensor

with potential-free contact

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2

1. Input for external temperature sensor
2. Auxiliary input for potential-free contact
3. Common for inputs
4. NO output
5. NC output
6. Common for outputs
7. LED for programming physical address
8. Button key for programming physical address
9. Bus terminal
10. Fixing screw
11. Light intensity sensor

TECHNICAL DATA	
Power supply	Via KNX bus 29 V dc SELV
Backup power supply	2 alkaline batteries 1.5V AAA (to be hosted in the removable part) for updating date/time in the event of an interruption in the BUS voltage
Current absorbed by BUS	10mA
Control elements	1 miniature button key for programming physical address 4 frontal push-buttons
Display elements	RGB color display with light intensity sensor for backlight regulation 1 red LED for programming physical address
Output contacts	1 NA/NC 5A (cosφ=1) 250V ac Incandescent and halogen lamps (230V ac): 500W Halogen lamps commanded by electronic transformers: 100W Halogen lamps commanded by ferromagnetic transformers: 200VA Compact fluorescent lamps: 3x23W Motors and gear motors: 100W For all loads not indicated here, you are advised to use a support relay
Inputs	1 input for potential-free contact (max. cable length 10m) 1 input for external temperature probe sensor (e.g. GW 10 800 - type NTC 10K)
Operating temperature	-5 ÷ +45 °C
Dimensions	3 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

KNX thermostat - flush-mounting

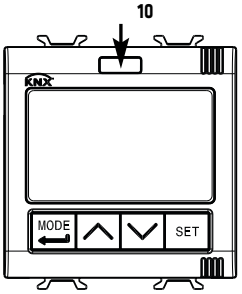
The KNX flush-mounting thermostat with humidity management is used to manage a humidification/dehumidification system alongside a temperature adjustment system, or to interact with the temperature adjustment system and the causes of humidity formation. The temperature and humidity are adjusted by commanding - on a KNX BUS - the KNX actuators that control the heating or cooling elements, including the fan coils and the humidification/dehumidification elements. The thermostat can work in "autonomous" control mode, to autonomously manage the temperature adjustment system (or parts of it); when combined with the KNX flush-mounting timed thermostat (GW 10 794 H - GW 12 794 H - GW13794H - GW14794H - GW15794H), it can work in "Slave" control mode to create multi-area temperature adjustment systems. The thermostat allows you to visualise and independently modify the operating parameters of up to 4 KNX flush-mounting temperature adjustment probes (GW 10 799 - GW 12 799 - GW13799 - GW14799 - GW15799 - GW 10 799 H - GW 12 799 H - GW13799H - GW14799H - GW15799H). The device is configured with the ETS software to implement the functions shown in the table.

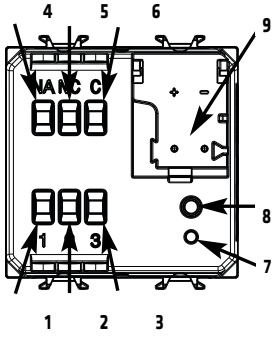
MAIN FUNCTIONS	
Temperature control	**Underfloor probe**
with 2 points, with ON/OFF commands or continuous adjustment (0% - 100%)	setting of threshold value for floor temperature alarm
PI control with PWM commands or continuous adjustment (0% - 100%)	**Temperature control for specific zones**
Control of fan coil speed	(in slave mode): with the operating mode received by the master device, and the use of a local setpoint
with distinct speed selection commands (ON/OFF)	(in slave mode): with the setpoint value received by the master device and differential value for local temperature
with continuous adjustment (0% - 100%)	(in autonomous mode): with local selection of operating mode and setpoints
Operating mode setting	(in autonomous mode): with local selection of operating setpoint
from BUS, with distinct objects of 1 bit (OFF, ECONOMY, PRECOMFORT, COMFORT)	**Scenes**
from BUS with objects of 1 byte	memorisation and activation of 8 scenes (value 0 - 63)
Operating setpoint setting	**Other functions**
from BUS with objects of 2 byte	setting of set point (OFF, ECONOMY, PRECOMFORT, COMFORT) from BUS
Temperature measurement	setting of type (heating/cooling) from BUS
with built-in sensor	setting of date and time from BUS
combined built-in sensor/KNX temperature adjustment probe/external temperature sensor with definition of the relative weight	status information (mode, type) and temperature measurement transmitted on BUS
calculation of the dew temperature	management of status information deriving from the commanded actuator
setting of 1 threshold associated with the dew point temperature, with BUS commands sent when the threshold is exceeded and restored	management of the windows status signalling for temporarily switching off the thermostat
Measuring relative humidity	auxiliary input for fronts management, brief/prolonged operation, dimmer with single pushbutton, roller shutters with single push-button, scenes and window contact
relative humidity measurement received from an external KNX sensor	auxiliary output for controlling the thermostat solenoid valve for heating/cooling or used as a general output for executing On/Off commands, timed commands, priority commands and scene management
estimate of relative humidity in the point where the thermostat is installed	
setting of up to 5 relative humidity thresholds, with BUS commands sent when the threshold is exceeded and restored	
calculation of specific humidity	
indication of the thermal well-being status	

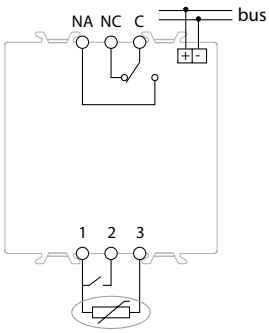
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

NOTE: the device does not have a built-in humidity sensor, so the relative humidity value must be obtained from an external KNX sensor (eg: GW 1x 762 H).

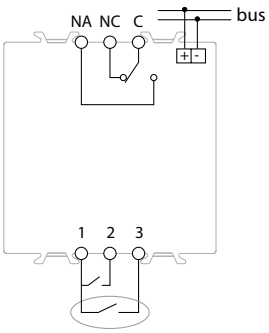
GW10795H - GW12795H - GW13795H
GW14795H - GW15795H







with external temperature probe sensor



with potential-free contact

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/35/EU, EN50428, EN50090-2-2

1. Common for inputs
2. Auxiliary input for potential-free contact
3. Input for external temperature sensor
4. NO output
5. NC output
6. Common for outputs
7. LED for programming physical address
8. Button key for programming physical address
9. Bus terminals
10. Light intensity sensor

TECHNICAL DATA	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by BUS	10mA
Control elements	1 miniature button key for programming physical address 4 frontal push-buttons
Display elements	RGB color display with light intensity sensor for backlight regulation 1 red LED for programming physical address
Output contacts	1 NA/NC 5A (cosφ=1) 250V ac Incandescent and halogen lamps (230V ac): 500W Halogen lamps commanded by electronic transformers: 100W Halogen lamps commanded by ferromagnetic transformers: 200VA Compact fluorescent lamps: 3x23W Motors and gear motors: 100W For all loads not indicated here, you are advised to use a support relay
Inputs	1 input for potential-free contact (max. cable length 10m) 1 input for external temperature probe sensor (e.g. GW 10 800 - type NTC 10K)
Operating temperature	-5 ÷ +45 °C
Dimensions	2 ChoruSmart modules
Connection to the BUS	Coupling terminal, 2 pins

KNX temperature sensor - flush mounting

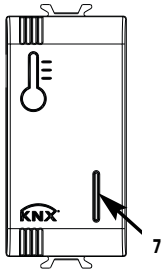
The KNX flush-mounting temperature sensor is used, with the aid of a KNX timed thermostat (GW 10 794 H - GW 12 794 H - GW 13 794 H - GW 14 794 H - GW15794H) or a KNX thermostat (GW 10 795 H - GW 12 795 H - GW 13 795 H - GW 14 795 H - GW 157 95 H), to manage the temperature of the environment where it is installed (or of another environment when used with an external temperature probe sensor). The sensor is not equipped with its own visualisation and command elements, so it must be used with a KNX device (e.g. a KNX thermostat or a KNX timed thermostat) that can control its parameters (HVAC or Setpoint mode and operating type). The device is configured with the ETS software to implement the functions shown in the table.

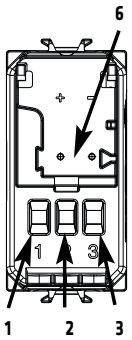
MAIN FUNCTIONS	
Temperature control	**Underfloor probe**
with 2 points, with ON/OFF commands or continuous adjustment (0% - 100%)	setting of threshold value for floor temperature alarm
PI control with PWM commands or continuous adjustment (0% - 100%)	**Temperature control for specific zones**
Control of fan coil speed	with the operating mode received by the master device, and the use of a local setpoint
with distinct speed selection commands (ON/OFF)	with the setpoint value received by the master device and differential value for local temperature
with continuous adjustment (0% - 100%)	
Operating mode setting	**Scenes**
from BUS, with distinct objects of 1 bit (OFF, ECONOMY, PRECOMFORT, COMFORT)	memorisation and activation of 8 scenes (value 0 - 63)
from BUS with objects of 1 byte	**Other functions**
Operating setpoint setting	setting of set point (OFF, ECONOMY, PRECOMFORT, COMFORT) from BUS
from BUS with objects of 2 byte	setting of type (heating/cooling) from BUS
Temperature measurement	status information (mode, type), measured temperature and current setpoint on the BUS
with built-in sensor, with KNX temperature sensor or with temperature probe sensor	auxiliary input for fronts management, brief/prolonged operation, dimmer with single pushbutton, roller shutters with single push-button, scenes and window contact
mixed, with definition of relative weight	

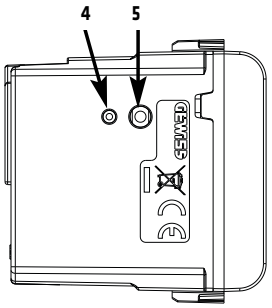
Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

GW10799 - GW12799 - GW13799
GW14799 - GW15799

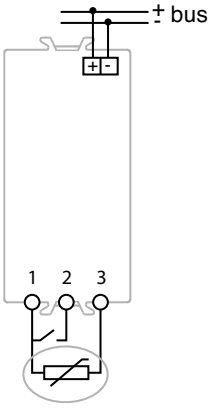
Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2



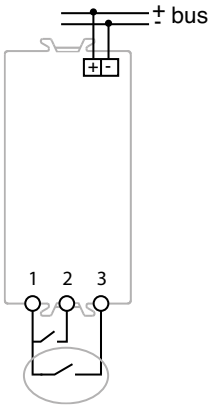




1. Common for inputs
2. Auxiliary input for potential-free contact
3. Input for external temperature sensor (otherwise: input for potential-free contact)
4. LED for programming physical address
5. Button key for programming physical address
6. Bus terminal
7. Signalling LED



With external temperature sensor



With potential-free contact

MAIN FUNCTIONS	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by BUS	5mA
Control elements	1 miniature button key for programming physical address
Display elements	1 frontal LED for signalling 1 red LED for programming physical address
Inputs	1 input for potential-free contact (max. cable length 10m) 1 input for external temperature probe sensor (e.g. GW 10 800 - type NTC 10K)
Operating temperature	-5 ÷ +45 °C
Dimensions	1 ChoruSmart module
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

KNX temperature/humidity sensor - flush mounting

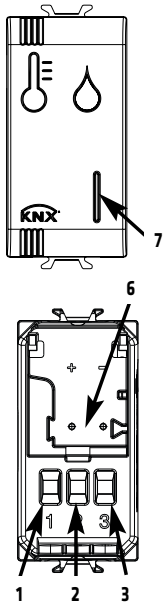
The KNX flush-mounting temperature sensor with integrated temperature/humidity sensor is used, with the aid of a KNX timed thermostat (GW 10 794 H - GW 12 794 H - GW 13 794 H - GW 14 794 H - GW 15 794 H) or a KNX thermostat (GW 10 795 H - GW 12 795 H - GW 13 795 H - GW 14 795 H - GW 15 795 H), to manage the temperature of the environment where it is installed (or of another environment when used with an external temperature/humidity sensor). The device is not equipped with its own visualisation and command elements, so it must be used with a KNX device (e.g. a KNX thermostat or a KNX timed thermostat) that can control its parameters (HVAC or Setpoint mode and operating type). The device is configured with the ETS software to implement the functions shown in the table.

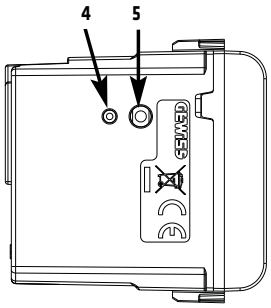
MAIN FUNCTIONS	
Temperature control	with the setpoint value received by the master device and differential value for local temperature
with 2 points, with ON/OFF commands or continuous adjustment (0% - 100%)	**Scenes**
PI control with PWM commands or continuous adjustment (0% - 100%)	memorisation and activation of 8 scenes (value 0 - 63)
Control of fan coil speed	**Measuring relative humidity**
with distinct speed selection commands (ON/OFF)	with a built-in sensor
with continuous adjustment (0% - 100%)	mixed built-in sensor / external humidity sensor with definition of the relative weight
Operating mode setting	setting of up to 5 relative humidity thresholds, with BUS commands sent when the threshold is exceeded and restored
from BUS, with distinct objects of 1 bit (OFF, ECONOMY, PRECOMFORT, COMFORT)	estimate of relative humidity in the cold point, on the basis of the additional temperature measurement
from BUS with objects of 1 byte	calculation of the dew temperature
Operating setpoint setting	**Other functions**
from BUS with objects of 2 byte	setting of set point (OFF, ECONOMY, PRECOMFORT, COMFORT) from BUS
Temperature measurement	setting of type (heating/cooling) from BUS
with built-in sensor, mixed built-in sensor / KNX temperature adjustment sensor / external temperature probe sensor with definition of the relative weight	status information (mode, type), measured temperature and current setpoint on the BUS
Underfloor probe	auxiliary input for fronts management, brief/prolonged operation, dimmer with single pushbutton, roller shutters with single push-button, scenes and window contact
setting of threshold value for floor temperature alarm	
Temperature control for specific zones	
with the operating mode received by the master device, and the use of a local setpoint	

Detailed information on the application programmes and installation modes is available in the Technical Manual and the product instructions booklet.

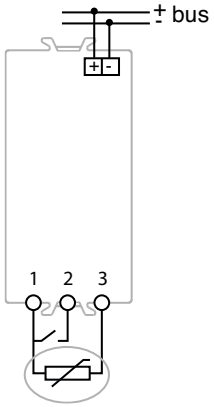
GW10799H - GW12799H - GW13799H
GW14799H - GW15799H

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN50090-2-2

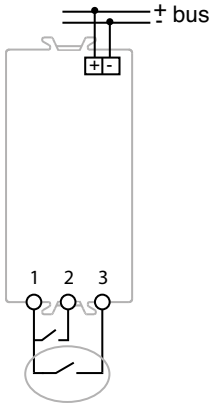




1. Common for inputs
2. Auxiliary input for potential-free contact
3. Input for external temperature sensor (otherwise: input for potential-free contact)
4. LED for programming physical address
5. Button key for programming physical address
6. Bus terminal
7. Signalling LED



With external temperature sensor



With potential-free contact

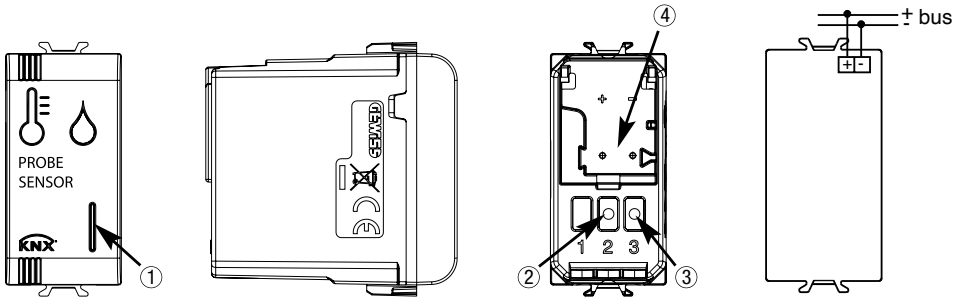
MAIN FUNCTIONS	
Power supply	Via KNX bus 29V dc SELV
Current absorbed by BUS	5mA
Control elements	1 miniature button key for programming physical address
Display elements	1 frontal LED for signalling 1 red LED for programming physical address
Inputs	1 input for potential-free contact (max. cable length 10m) 1 input for external temperature probe sensor (e.g. GW 10 800 - type NTC 10K)
Operating temperature	-5 ÷ +45 °C
Dimensions	1 ChoruSmart module
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

For technical information contact the Technical Assistance Service or visit gewiss.com

KNX/Easy temperature/humidity sensor - flush mounting

With the KNX/Easy flush-mounting temperature/humidity probe sensor with integrated temperature and humidity sensor, the temperature and humidity figures of the room where it is installed can be measured and sent by BUS.
The device offers:
- temperature detection (measured, maximum, minimum);
- 4 temperature thresholds;
- calculation of the dew temperature;
- relative humidity detection (measured, maximum, minimum);
- 4 relative humidity thresholds;
- calculation of specific humidity;
- indication of the thermal well-being status.

The sensor is powered from the bus line. It has a front signalling LED and can be configured with both ETS and Easy Controller sw.



GW10762H - GW12762H - GW13762H
GW14762H - GW15762H

Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50090-2-2, EN50428

1. Signalling LED
2. LED for programming physical address
3. Button key for programming physical address
4. Bus terminal

TECHNICAL DATA	
Power supply	Via KNX BUS 29V dc SELV
Current absorbed by BUS	10mA max
Control elements	1 miniature button key for programming physical address
Display elements	1 signalling LED 1 red LED for programming physical address
Measuring elements	Temperature - Measurement range: 0 °C ...+45 °C Relative humidity - Measurement range: 10-95%
Operating temperature	-5 ÷ +45 °C
Dimensions	1 ChoruSmart module
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

KNX/Easy Thermo ICE thermostats - flush mounting

The KNX/Easy ICE thermostat - flush mounting with humidity control is used to manage a humidification/dehumidification system in parallel to a temperature adjustment system or to act on the temperature adjustment system in order to intervene on the causes of the formation of humidity. The temperature and humidity are adjusted by commanding - on a KNX BUS - the KNX actuators that control the heating or cooling elements (including the fan coils), and the umidification/dehumidification elements.
The thermostat can operate in "stand alone" control mode to autonomously manage the temperature adjustment system (or parts of it), whereas in combination with a master device (e.g.: a KNX timed thermostat) it is possible to operate in "slave" control mode and implement multizone temperature adjustment systems.

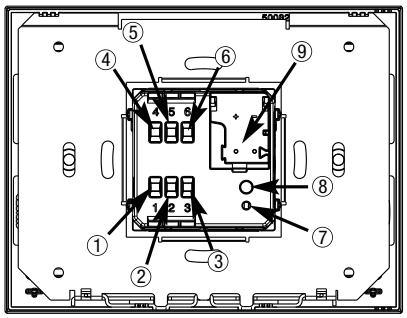
The device manages the temperature on three levels (Teconomy, Tprecomfort, Tcomfort) with 4 operating modes (OFF / ECONOMY / PRECOMFORT / COMFORT), both in heating and cooling. Locally or via bus it is possible to select 2 control stages: single stage with 2 points (ON/OFF command or 0%/100%), proportional PI (PWM type control or continuous) or fan coil (max. 3 speeds); dual stage with 2 points (ON/OFF command or 0%/100%). Includes 1 input for a potential-free contact (for the window contact function, or as a general input with command function on the bus) and 1 input for the external temperature NTC probe sensor (e.g. protection for floor-mounting heating) or, alternatively, as a second input for a potential-free contact.

The thermostat is equipped with a white LED backlit display with sensitive rear-projected areas on a glass plate. The device requires an external AC/DC power supply 12-24V and has an integrated sensor for detecting the room temperature (whose value is sent on the bus with a frequency that can be parameterised or following a temperature change) and a proximity sensor for activating back-lighting when a user approaches the device. The thermostat can be configured with ETS or Easy Controller sw.

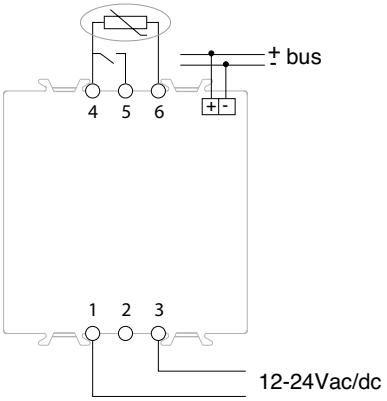
Reference standards:
Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive 2014/30/EU, EN50428, EN60669-2-5

GW 16 974 CB - GW 16 974 CN - GW 16 974 CT

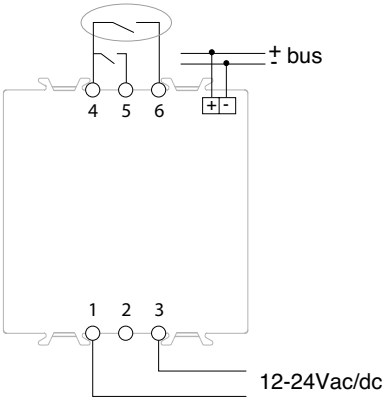
NOTE: the device does not have a built-in humidity sensor, so the relative humidity value must be obtained from an external KNX sensor (eg: GW 1x 762 H).



1 - AC/DC power supply 12-24V
2 - Not used
3 - AC/DC power supply 12-24V
4 - Common wire for inputs
5 - Auxiliary input for potential-free contact
6 - Input for external temperature probe sensor (alternatively: auxiliary input for potential-free contact)
7 - LED for programming physical address
8 - Button key for programming physical address
9 - Bus terminals



With external temperature probe sensor



With potential-free contact

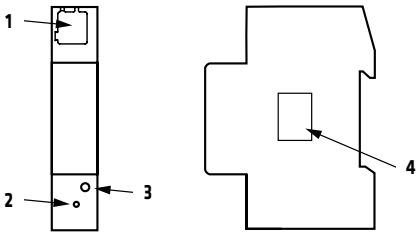
TECHNICAL DATA	
Power supply	12-24Vac/dc - max. 500mA Via KNX BUS 29V dc SELV
Current absorbed by BUS	10mA
Control elements	3 touch buttons 1 circular touch slider 1 button key for programming physical address
Display elements	LED backlit display 1 red LED for programming physical address
Inputs	1 input for window contact function or as potential-free contact (cable length max. 10m) 1 input for temperature external sensor (es: GW 10 800), type NTC 10K or as potential-free contact
Measuring elements	1 integrated temperature sensor
Temperature adjustment range	+5 ÷ +40°C
Dimension of glass plate (BxHxP)	123x95x11 mm
Mounting	In 3-gang rectangular, square or round flush-mounting boxes
Fixing support	In metal (included)
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

ENERGY CONTROL

KNX interface for energy meters - from DIN rail

The GW90876 KNX interface allows you to send (via KNX BUS) the energy and power measurements taken by the single-phase GWD6801, GWD6802 and three-phase energy meters GWD6807, GWD6809 . The KNX interface is coupled with the measuring devices via an optical interface (IR port).
The functions available with the energy meters are:
- the transmission of values relating to active energy imported and exported (Wh or KWh),
- the transmission of the active power value (W),
- the transmission of values relating to reactive energy imported and exported (for three-phase meters only)
- the transmission of the reactive power value (for three-phase meters only)
- the transmission of status bytes,
- the reset of the energy meters.

GW 90 876



GW 90 876 + GW D6 801

Reference standards:
EN60664-1, EN50090-2-2, EN61000-6-2, EN61000-6-3, EN61000-4-2

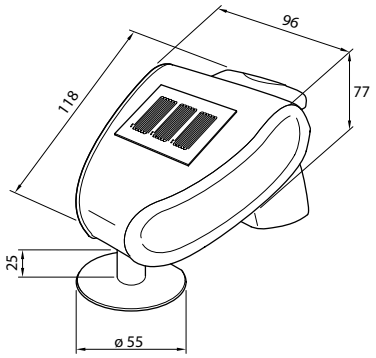
1. KNX terminal
2. Button key for programming
3. Red LED for programming
4. IR port

TECHNICAL DATA	
Power supply	Via KNX BUS 29V DC SELV
Type of interface	2 IR optical ports (Tx, Rx)
Operating temperature	0 - 55°C
Dimensions	1 DIN module
Connection to the BUS	Coupling terminal, 2 pins Ø 1mm

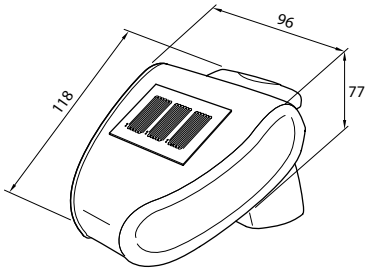
WEATHER SENSORS

WEATHER STATION		
		GW 90 800
Power supply		24V AC/DC, max. 100mA (e.g. GW 96 322)
Current absorbed by BUS		max. 8mA
Assembly		Wall / pole
Protection		IP44
Characteristics of built-in sensors		
	Rain sensor	Heater: approx. 1.2W
	Temperature sensor	Measurement range: from -40°C to +80°C
	Light intensity sensor	Measurement range: from 0 lux to 150000 lux
	Wind sensor	Measurement range: from 0 m/s to 70 m/s
		The station is also equipped with a GPS receiver to determine the position, date and time
Main functions		Actions are executed on the basis of logic operations between the measured values. Cyclical monitoring of sensor parameters, with the sending of the values to the BUS. Possibility to control complex systems (e.g. greenhouses).
Dimensions (LxHxD)		96 x 77 x 118mm
Ambient temperature		-30°C to 50°C
Connection to the BUS		Coupling terminal, 2 pins Ø 1mm

GW 90 800 Weather station

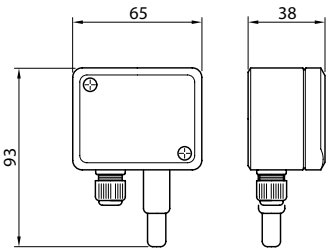


WEATHER SENSORS				
		GW 90 883	**GW 90 884**	**GW 90 885**
Type		Wind and rain sensor	Light intensity sensor	Temperature sensor
Power supply		230V ac, 20mA	Via KNX bus 29V dc SELV	Via KNX bus 29V dc SELV
Current absorbed by BUS		8mA	10mA	5,5mA
Dimensions (LxHxD)		96x77x118mm	96x77x118mm	65x93x38mm
Assembly		Wall / pole	Wall / pole	Wall
Protection		IP44	IP44	IP65
Characteristics of built-in sensors				
	Rain sensor	Heater: approx. 1,2W		
	Wind sensor	Measurement range: 0...70m/s		
	Light intensity sensor		Measurement range: 0...150000lux	
	Temperature sensor			Measurement range: -40...+80°C
Connection to the BUS		Coupling terminal, 2 pins Ø 1mm	Coupling terminal, 2 pins Ø 1mm	Coupling terminal, 2 pins Ø 1mm



GW90883 Wind and rain sensor
GW90884 Light intensity sensor

GW90885 Temperature sensor



COMPLEMENTARY ITEMS

INTERFACES		
	GW 90 871	**GW 90 872 A**
Type	KNX/DMX Gateway	KNX/DALI 64/16 IP Gateway
Auxiliary power supply	9-30V DC, 100mA	110-240V AC - 50/60Hz, 100mA
Current absorbed by KNX BUS	max. 5mA	10mA max
Connection to the KNX BUS	Coupling terminal, 2 pins Ø 1mm	Coupling terminal, 2 pins Ø 1mm
Connections	DMX BUS - 3-screw terminal	DALI BUS - 2-screw terminal Power supply - 3-screw terminal
Dimensions (LxHxD)	107 x 75 x 31mm	4 DIN modules
Applications	One-way interface able to receive the KNX BUS commands and retransmit them towards the devices on the DMX BUS. The interface manages up to 512 DMX channels	Interface able to control (via KNX BUS) up to 64 lamps managed with the DALI protocol

GW90871 KNX/DMX Gateway

GW90872A KNX/DALI Gateway