

Thea IQ



Smart Building Automation Systems

Thea IQ



- **Controller**
 - Output
 - Input
 - HVAC
 - Time Switch
 - System Devices
- **Flush Mount**
 - Switch Sensor
 - Sensor
- **Equipment**
 - Input
 - Sensor
 - Remote
 - Panels

V:KO



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KNX

Product overview of the KNX range from Thea IQ



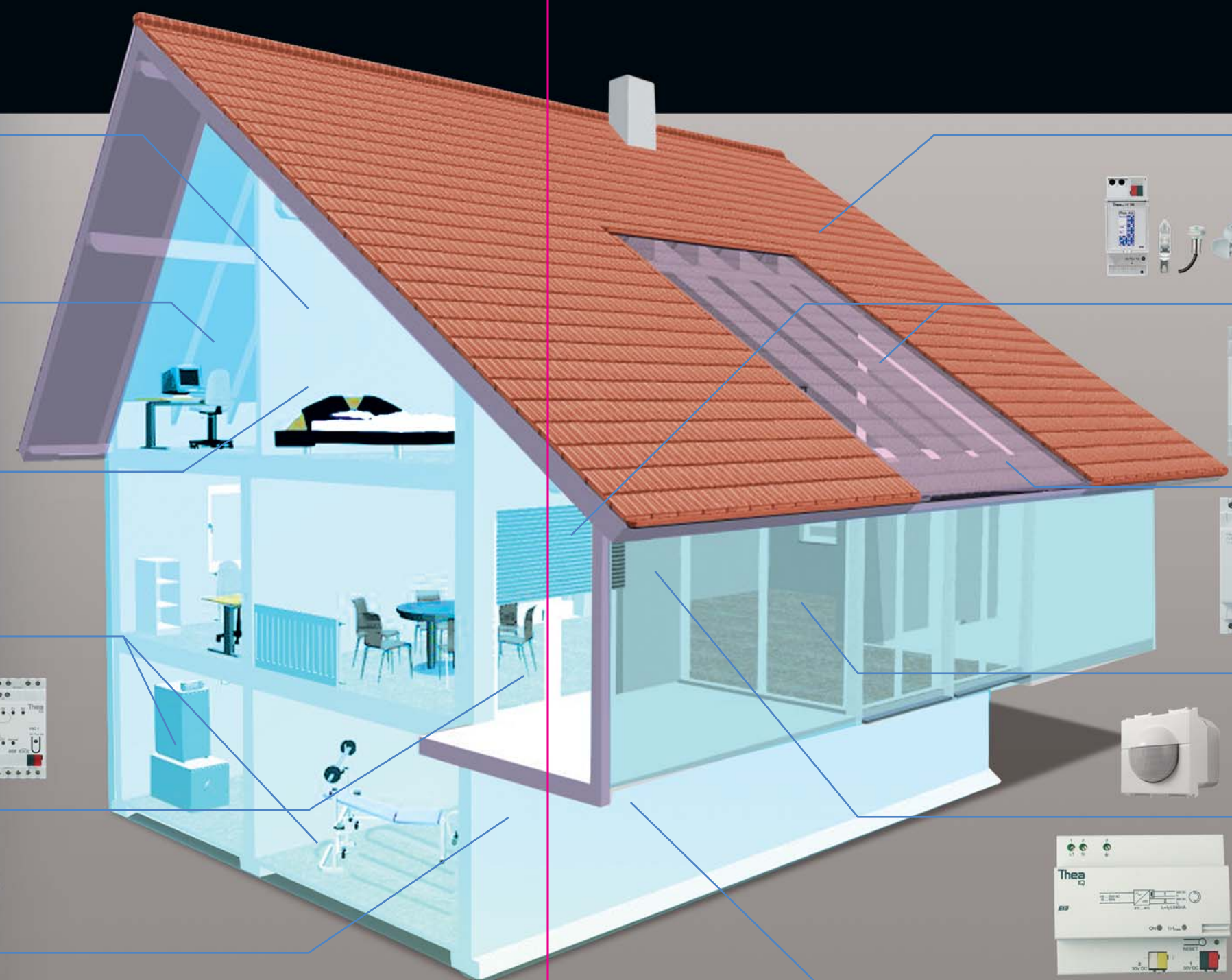
Thea IQ offers everything for the distribution system. Big choice. Top quality.

All that is needed for switching and dimming lighting, for controlling blinds, for controlling radiators and underfloor heaters, for controlling processes according to time or daylight. Thea IQ simply has every thing for the distribution system along with the matching system components.

<p>TSR 644S</p> <p>16 channel yearly time switch with 4 astronomical channels and the possibility for PC based programming</p>	<p>TSR 612S</p> <p>2 channel weekly time switch</p>	<p>GIS 1</p> <p>brightness sensor with 3 thresholds or 4 scenes</p>	<p>RSA 4S</p> <p>4 channel switching actuator, 16A</p> <p>and</p> <p>RSA 4C load or high switch-on currents and capacitive loads</p>	<p>RSE 4S</p> <p>4 channel expansion unit, 16 A for the extension to 12 channels</p> <p>and</p> <p>RSA 4C load or high switch-on currents and capacitive loads</p>	<p>DSA 2</p> <p>2 channel Universal dimming actuator, 2 x 300 W/VA or 1 x 500 W/VA</p> <p>DSE 2</p> <p>2 channel dimming extension module to max. 6 channels</p>	<p>DSB 2</p> <p>Performance extension for DSA 2 and DSE 2 for doubling the dimming power, 2 x 600 W/VA or 1 x 1.000 W/VA</p>	<p>SSA 2</p> <p>2 channel base module 1-10 V</p> <p>and</p> <p>SSE 2</p> <p>2 channel extension module</p>	<p>JSA 4 24VDC</p> <p>4-channel blind actuator for DC motors</p>
<p>RSA 8</p> <p>8 channel switching actuator, 10 A or 4 channel blind actuator</p>	<p>RSE 8</p> <p>8 channel extension unit, 10 A or 4 channel blind actuator for JSA 4 or RSA 8</p>	<p>HSA 4</p> <p>4 channel heating actuator for valve actuators</p>	<p>USB 1</p> <p>Interface</p>	<p>LSC 1</p> <p>Line coupler</p>	<p>JSE 4S</p> <p>Relay outputs for 4 drives</p>	<p>PSS 1</p> <p>Power supply 640 mA</p>	<p>BSA 6</p> <p>6-way binary input</p>	



Product overview of the KNX range from Thea IQ



EIB Switch sensor

TSA 2x1, TSA 4x2, TSA 8x4
EIB Switch sensors
▶ page 46-49



Time switch

TSR 644S
4 channels quartz-controlled
▶ page 44-45



Room thermostat

Thea IQ Room Thermostat
Room temperature controller,
Fan Coil thermostat
▶ page 50 - 53



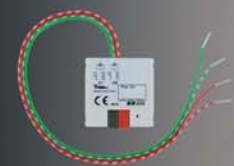
Heating/Cooling

HSA 4, HST 6, FSC 1
Heating actuator, Heating
actuator for floor heating,
Fan Coil actuator,
▶ page 4-7, 8-11, 12-15



Binary input

Thea IQ Binary Input,
BSA 6, BSE 6,
2-WAY/4-WAY/6-WAY
▶ page 16-19, 68-71



Touch Panels

Thea IQ PC Touch CE
Thea IQ PC Touch KNX
Thea IQ PC Touch XP
▶ page 58-63



Sensors

GIS 1, Weather station
1-20.000 Lux, Combination
device
▶ page 74-79



Blinds/Shutters

JSA 4S + JSE 4S
4 - 12 channels
▶ page 32-35



Switching/Dimming

RSA 4S + RSE 4S,
SSA 2 + SSE 2, DSA 2 + DSE 2
Switching actuators, Dimming
actuators, binary inputs
▶ page 20-31



Light control

Thea IQ Motion detector,
Motion sensor,
Remote control
▶ page 54-57, 72-73



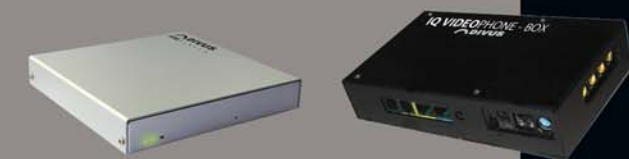
System devices

PSS 1/2/3 Power supply,
USB 1 USB interface,
LSC 1 Line coupler,
▶ page 40-43



Touch panel accessories

Thea IQ videophone box
and Thea IQ KNX server
▶ page 64-67



Switching actuators of the IQMIX series

RSA 4S, RSE 4S, RSA 4C load, RSE 4 C load

Almost anything is possible – the modular concept for switching electrical products on and off



The IQMIX series is a series of devices, consisting of base modules (e. g. RSA 4S or RSA 4C load) and extension modules (e. g. RSE 4S or RSE 4C load). To one basis module of this series, up to 2 extension modules of this series can be connected.

Every channel of these switching actuators has an LED for displaying what state the switch is in and a handswitch with the On/Off/bus positions. The switching actuators can adopt a parameterized state within 1 second after the return of mains power and are therefore suited for use in units in accordance with VDE 0108. The properties of the basic functions of switching, delay switching and pulse function can be set by means of parameters.

The following can also be parameterized: no. per channel links, contact type (contact breaker/ contact maker) along with the activation upon central commands such as steady-On, steady-Off, central switching and storing/calling scene.

- RSA 4S (base module)
 - 4-channel switching actuator
- RSE 4S (extension module)
 - 4-channel switching actuator
- RSA 4C load (base module)
 - 4-channel switching actuator
- RSE 4C load (extension module)
 - 4-channel switching actuator

Advantages

- The free combination of switching, dimming, control of blinds and heating, as well as binary inputs, all increase flexibility and reduce system costs
- There are even hand switches for dimming modules; they make the installation easier
- Extensions reduce the channel price considerably



RSA 4C load base module, 4 channels



RSE 4S extension module, 4 channels

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Characteristics

- Switching power 16 A, extendable to 12 channels
- Feedback object for each channel
- Central objects with and without priority
- Switching functions: On/Off, pulse, On/Off-delay, stairway light with pre-warning in accordance with DIN 18015-2
- Logical operations: Disable, AND, Enable, OR
- Calling and storing scenes
- Adjustable reaction to bus failure
- Adjustable reaction to the return of bus or mains activity
- Hand switch with On, Off, bus, switching also without bus voltage

Technical data: RSA 4 S/RSE 4S

Supply voltage provided by the current net
Operating voltage: 230 V AC \pm 10%, 50 Hz
Power consumption: 2.5 VA

Supply voltage provided by the KNX net (base module only)
Power consumption: max. 10 mA (incl. 2 upgrades)
Connection: Bus terminal

Output number: 4 closing contacts
Type of contact: floating
Rated voltage: 230 V AC, 50 to 60 Hz
Rated current: 16 A/250 V AC, $\cos \phi = 1$
10 A/250 V AC, $\cos \phi = 0.6$
Switching of different phases: possible
Switching SELV: possible if all 4 channels of a SELV module can switch

Switching capacity
Ohmic load: 3.680 W
Capacitive load: max. 42 μ F
Incandescent lamp load: 2.300 W
HV halogen lamp load: 2.300 W
Fluorescent lights
Uncompensated: 26 x 40 W, 20 x 58 W, 10 x 100 W
Parallel compensated: 10 x 40 W (4.7 μ F),
20 x 58 W (7.0 μ F), 2 x 100 W (18 μ F)
Dual switch (KVG): 10 x (2 x 58 W),
5 x (2 x 100 W)

Technical data: RSA 4C load/

RSE 4C load
Supply voltage provided by the current net
Operating voltage: 230 V AC \pm 10%, 50 Hz
Power consumption: 2.5 VA

Supply voltage provided by the KNX net (base module only)
Power consumption: max. 10 mA (incl. 2 upgrades)
Connection: Bus terminal

Number of outputs: 4 closing contacts
Type of contact: floating
Rated voltage: 230 V AC, 50 to 60 Hz
Rated current: 16 A/250 V AC, $\cos \phi = 1$
10 A/250 V AC, $\cos \phi = 0.6$
Switching of different phases: possible
Switching SELV: possible if all 4 channels of a SELV module can switch
Housing: 45 x 72 x 60 cm (4 modules)

Switching capacity
Ohmic load: 3.680 W
Capacitive load: max. 200 μ F
Incandescent lamp load: 3.680 W
Fluorescent lights
uncompensated: 3.680 W
parallel compensated: 2.500 W/200 μ F
Dual switch: 3.680 W

Order no:
RSA 4S KNX 90990001
RSE 4S KNX 90990002

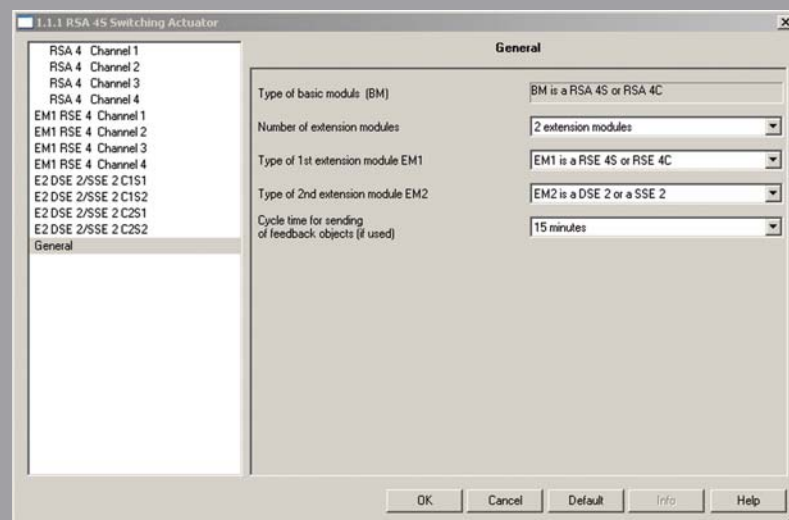
Order no:
RSA 4C load KNX 90990005
RSE 4C load KNX 90990006

Application software RSA 4S, RSE 4S, RSA 4C load, RSE 4C load

0	BM RSA 4 Channel 1	Switch ON/OFF	1 bit
4	BM RSA 4 Channel 1	Feedback	1 bit
5	BM RSA 4 Channel 2	Switch ON/OFF	1 bit
9	BM RSA 4 Channel 2	Feedback	1 bit
10	BM RSA 4 Channel 3	Switch ON/OFF	1 bit
14	BM RSA 4 Channel 3	Feedback	1 bit
15	BM RSA 4 Channel 4	Switch ON/OFF	1 bit
19	BM RSA 4 Channel 4	Feedback	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, JSA 4S and SSA	1 Byte

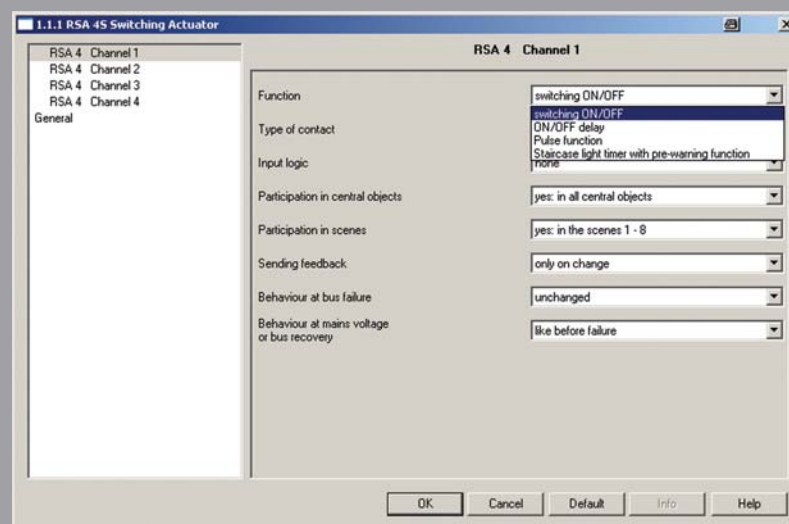
➤ Every channel has its own feedback object. The various channels can be assigned to the central objects. In this regard, a central steady On/Off has a higher priority. By means of the scene object, scenes are taught in and called up.

- 104 group addresses
- 105 possible associations
- 68 objects



➤ Selection of the extension modules. The base module can be extended by up to 2 extension modules. The function of the extension module (switching/dimming actuator) can simply be set via parameters.

- Advantage:**
- Inexpensive extension modules reduce the channel price
 - The unlimited combination of switching and dimming actuators reduces the system costs



➤ Switching functions. You may select from the following switching functions:

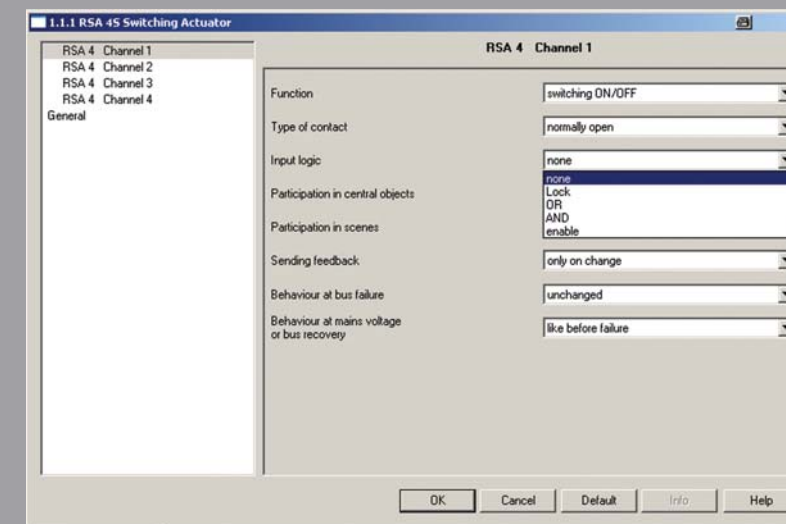
- Switch On/Off
- Delay On/Off
- Pulse function
- Automatic stairway lighting with pre-warning function

- Advantage:**
- Extensive switching functions possible on all channels

Central switching. Every channel can involve central objects with priority (central steady-On, central steady-Off) as well as without priority (central switching).

- Advantage:**
- Less need of group addresses
 - Forced guidance by means of priority switches.

Application software RSA 4S, RSE 4S, RSA 4C load, RSE 4C load

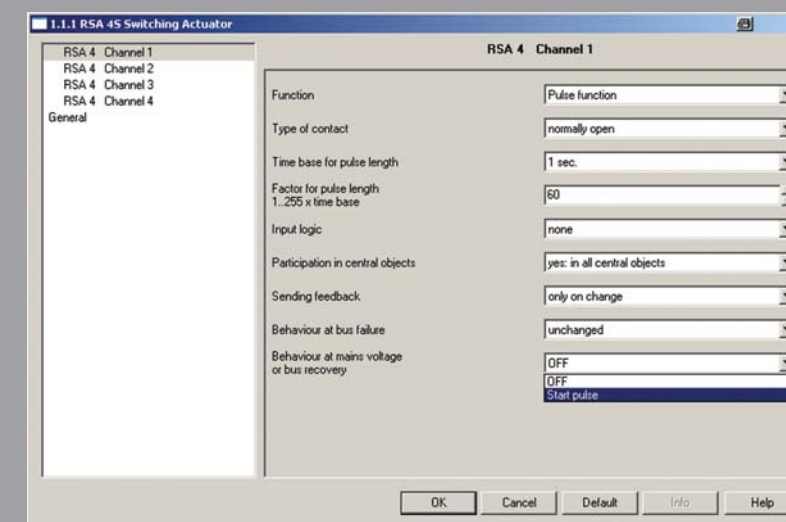


➤ Logical operations. An array of logical operations can be selected on every channel:

- Disable
- OR
- AND
- Enable

- Advantage:**
- Variety of application options of the actuators

You can choose how the system should react when the bus fails and when the bus/mains is restored. This permits the actuators to be used in units in accordance with VDE 0108.



➤ Contact type. The contact can be parameterized as:

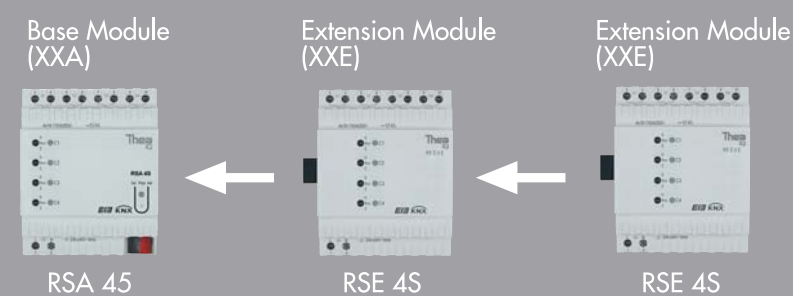
- CONTACT BREAKER

or

- CONTACT MAKER

for the functions "Switch On/Off" and "Pulse function".

The time functions can be set to determine if the pulse should start again after the bus/mains is reactivated.



➤ Combination options of the IQMIX series

- 1st row: switching 12 channels
- 2nd row: switching 12 channels C-Load
- 3rd row: dimming 6 channels

All combination options see page 88

Universal dimming actuators of the IQMIX series DSA 2, DSE 2, DSB 2

Comfort everywhere – the dimming actuators that allow you to dim all incandescent lighting



The IQMIX series is a series of devices, consisting of base modules (e. g. DSA 2) and extension modules (e. g. DSE 2). A total of 2 extension modules of this series can be connected to one base module of this series.

The universal dimmer DSA 2 is a device for serial installation. By means of both outputs, it can dim or switch a group of electrical devices such as, e. g. incandescent lights, high-voltage halogen lamps as well as low-voltage halogen lamps with conventional or electronic transformers connected upstream.

If a dimming channel of a base or extension module is connected in parallel with a DSB 2 channel the power doubles.

Advantages

- Allowing for any combination of switching and dimming helps in attaining a very convenient channel price
- Up to 6 x dimming through extensions
- There are hand switches even for dimming modules; they make the installation easier

DSA 2 (base module)

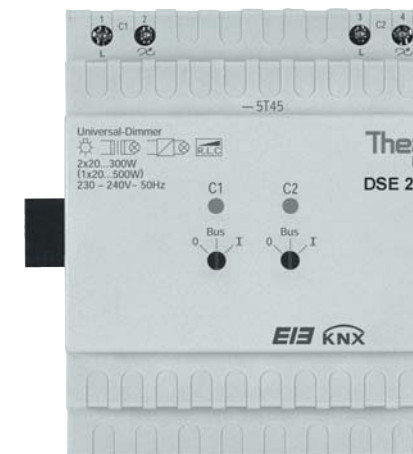
- Universal-Dimmer

DSE 2 (extension module)

DSB 2 "Booster" (power extension)



DSA 2 base module



DSE 2 extension module



DSB 2 "Booster" power extension by parallel connection

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Characteristics

- Dimming power each base and extension module:
2 x 300 W/VA or 1 x 500 W/VA with the following combination options:

6 x 300 W/VA
4 x 300 W/VA + 1 x 500 W/VA
2 x 300 W/VA + 2 x 500 W/VA
3 x 500 W/VA

- By using the dimming booster DSB 2, the dimming power of each device can be doubled to:
2 x 600 W/VA or 1 x 1.000 W/VA
- Central objects with and without priority
- Automatic load detection
- Diagnosis and feedback objects
- Adjustable reaction to bus failure
- Adjustable reaction to the return of bus remains activity
- Hand switch for On, Off, bus, switching also without bus voltage
- Dimming extensions can be combined with the switching base module any way you want

Technical data

Supply voltage provided by the current net

Voltage: 230 V AC, 50 Hz

Own power requirement: < 0.5 VA

Supply voltage provided by the KNX net (base module only)

Power consumption: max. 10 mA (incl. 2 upgrades)

Connection: Bus terminal

Output

Channels per module: 2

Lamp types: Incandescent, low voltage and high voltage lamps

Minimum load: 10 W/VA

Maximum load

Symmetrical: 2 x 300 W/VA

Unsymmetrical: 1 x 500 W/VA

Example for unsymmetrical load:

1 x 400 and 1 x 100 W/VA

Cable length dimmer load: max. 100 m

Circuit protection: automatic circuit-breaker Characteristics B 16 A

Clamp cross section: solid 0.5 mm²

Ø 0.8 up to 4 mm² strand with cable end sleeve

0.5 mm² up to 2.5 mm²

Admissible ambient temperature: -5 °C ... +45 °C

Protection class: II when installed correctly

Protection type: IP 20 in accordance with EN 60529

Device standard: EN 60669

Housing: 45 x 72 x 60 mm (4 modules)

Order numbers:

DSA 2 KNX 90990007

DSE 2 KNX 90990008

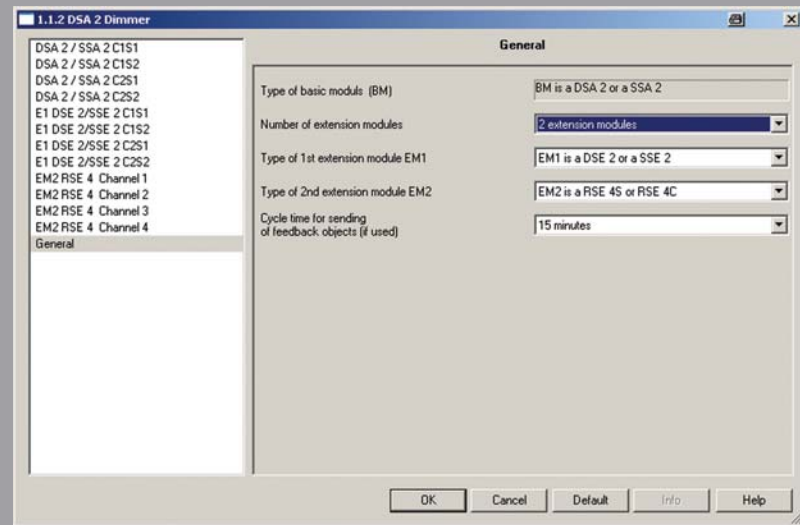
DSB 2 KNX 90990045

Application software DSA 2, DSE 2, DSB 2

0	BM DSA 2 / SSA 2 Channel 1	Switch ON/OFF	1 bit
1	BM DSA 2 / SSA 2 Channel 1	brighter / darker	4 bit
2	BM DSA 2 / SSA 2 Channel 1	dimming value	1 Byte
3	BM DSA 2 / SSA 2 Channel 1	Soft switch	1 bit
10	BM DSA 2 / SSA 2 Channel 2	Switch ON/OFF	1 bit
11	BM DSA 2 / SSA 2 Channel 2	brighter / darker	4 bit
12	BM DSA 2 / SSA 2 Channel 2	dimming value	1 Byte
13	BM DSA 2 / SSA 2 Channel 2	Soft switch	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, SSA 4S and SSA	1 Byte

Each channel can be actuated with 1 bit, 4 bit and 1 byte. An additional switching option is available using the "Soft switching" object; by this means, a previously set time sequence can be called. The various channels can be assigned to central objects. In this case, "Central steady On/Off" has a higher priority. By means of the scene object, scenes are stored and called up.

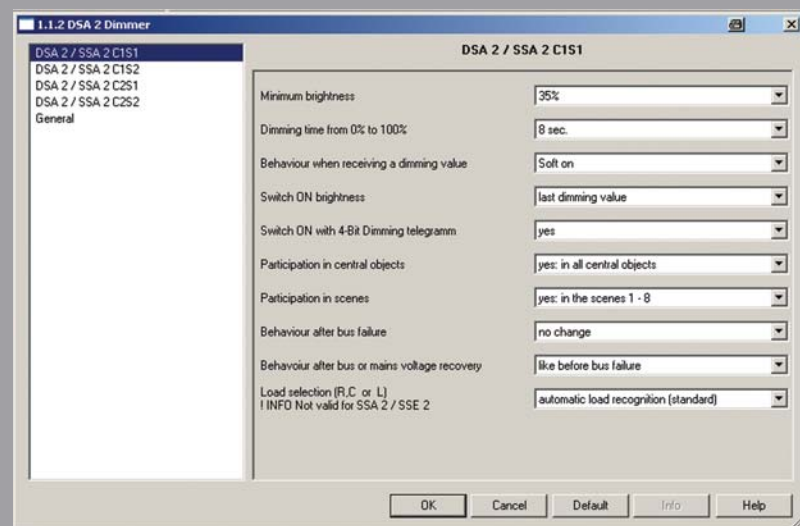
- 104 group addresses
- 105 possible associations
- 68 objects



Selection of the extension modules
The base module can be extended by up to 2 extension modules. The type of the extension module (switching/dimming actuator) can simply be created via parameters.

Advantage:

- Extension of the channels reduces the channel price
- The unlimited combination of switching and dimming actuators reduces the system costs



Dim settings
The dimming range can be limited by setting a minimum brightness. Furthermore, it can be set if a dimming value is approached or jumped to. The switch-on brightness defines how the light is to act when switched on.

Advantage:

- The optional settings allow the customer to program dimming behavior according to his individual wishes.

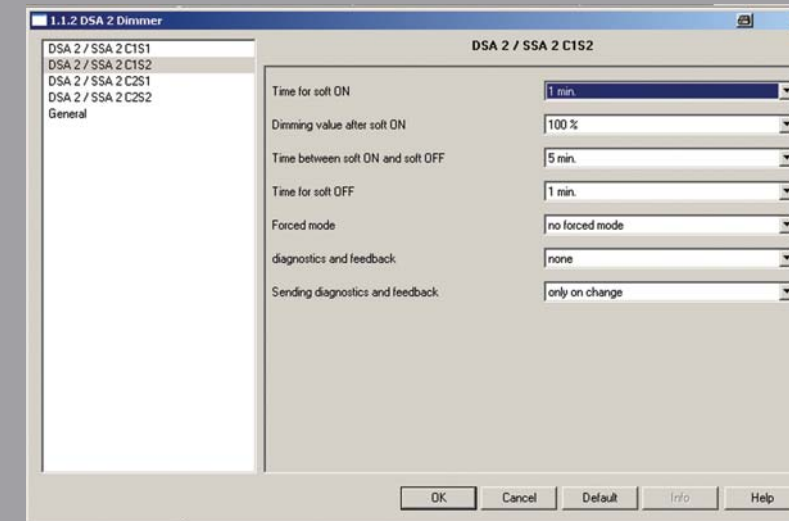
Central switching

Every channel can involve central objects with priority (central steady-On, central steady-Off) as well as without priority (central switching).

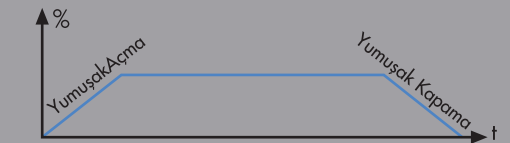
Advantage:

- Less need of group addresses
- Forced guidance by means of priority switches

Application software DSA 2, DSE 2, DSB 2

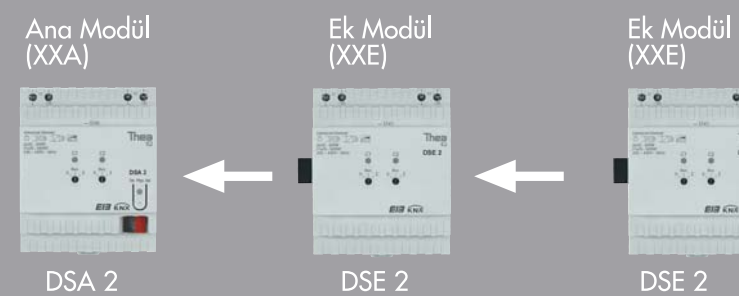


Dimmer settings
A dimming time sequence can be defined by means of soft switching, e.g., can be slowly dimmed up over the period of one hour.



Feedback object

Every channel can signal back the dimming value (1 byte) and the status (On/Off). Various diagnosis objects are also available.



Combination options of the IQMIX series
• Any combination allowed up to a maximum of 2 modules in addition to the base module, any of these can be selected as well.

All combination options see page 88

Control device for 1-10 V EVG of the IQMIX series SSA 2, SSE 2

A comfortable atmosphere is provided by dimming actuators that can be used to dim fluorescent lamps.



The IQMIX series is a series of devices comprising basic modules (e. g. SSA 2) and upgrade modules (e. g. SSE 2). Up to 2 upgrade modules can be connected in series to the basic modules in this series.

- The SSA 2 control device is a rail mounted device. In combination with electronic upstream devices (EVGs) it enables the switching and dimming of lighting circuits. The SSA 2 is a 2 channel device and can be upgraded to 6 channels using upgrade modules. They have one switch output (relay contact) per channel for switching the electronic series devices and the corresponding 1 – 10 V control inputs.

Advantages

- The free combination of switching, dimming, control of blinds and heating, as well as binary inputs, all increase flexibility and reduce system costs
- Via upgrade to 6-way dimming.
- With manual operation and, thereby, easy installation.

SSA 2 series (base module)

- 1 – 10 V control device for dimmable electronic series devices

SSE 2 (extension module)



SSA 2 Base module



SSE 2 (Extension module)

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Characteristics

- 2 channels per base and extension module.
- 2 switch outputs (relay contacts) for 230 V (resistive load) and one 1 – 10 V output per channel.
- Zero-cross switching without relays.
- Central objects with and without priority.
- Diagnosis and feedback objects.
- Response on bus failure configurable.
- Response to power restoration can be configured.
- Manual switch for On, Off, Bus, switching without bus voltage.
- Dimmer upgrades can also be combined with basic switch module as required.

Technical Data

Mains power supply

Voltage: 230 V AC, $\pm 10\%$, 50 Hz

Power take up: < 1.5 VA

Power supply from the bus (base module only)

Power supply: < 10 mA (incl. 2 upgrades)

Bus connection: KNX bus terminal input

Signal voltage: 1 – 10 V

Signal current: max. 100 mA per channel

Output

Type of contact: NO contact, floating relay contacts

Nominal voltage: 230 V AC, $\pm 10\%$, 50 Hz

Maximum current: 16 A/AC-1; 10 A/AC-3

Switching capacity: 2500 W resistive load; 1100 W (140_F) capacitive load; type-dependent fluorescent lamps with EVG (due to varying switch-on peaks)

Maximum load: 3 A, $\cos \varphi = 1$

Permitted operating temperature: $-5\text{ }^{\circ}\text{C} \dots +45\text{ }^{\circ}\text{C}$

Protection class: II subject to correct installation

Protection rating: IP 20 in accordance with EN 60529

Housing: 45 x 72 x 60 mm (4 modules) Order numbers:

Order numbers:

SSA 2 KNX 90990009

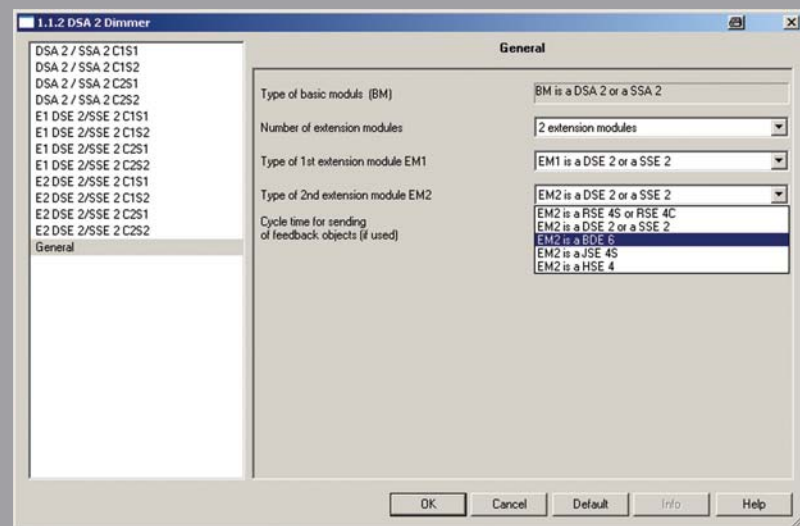
SSE 2 KNX 90990010

Application software SSA 2, SSE 2

0	BM DSA 2 / SSA 2 Channel 1	Switch ON/OFF	1 bit
1	BM DSA 2 / SSA 2 Channel 1	brighter / darker	4 bit
2	BM DSA 2 / SSA 2 Channel 1	dimming value	1 Byte
3	BM DSA 2 / SSA 2 Channel 1	Soft switch	1 bit
10	BM DSA 2 / SSA 2 Channel 2	Switch ON/OFF	1 bit
11	BM DSA 2 / SSA 2 Channel 2	brighter / darker	4 bit
12	BM DSA 2 / SSA 2 Channel 2	dimming value	1 Byte
13	BM DSA 2 / SSA 2 Channel 2	Soft switch	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, JSA 4S and SSA	1 Byte
64	Central controller Safety 1	For JSA(E) 4S	1 bit
65	Central controller Safety 2	For JSA(E) 4S	1 bit
66	Central controller Safety 3	For JSA(E) 4S	1 bit
67	Central up/down	For JSA(E) 4 S	1 bit

Each channel can be activated with 1bit, 4 bit and 1 byte. Switching is also possible via the "soft switch" object that enables the user to call up a previously set timescale. Central objects can be allocated to the different channels. Here, "central continuously On/Off" has a higher priority. The scene object allows scenes to be learnt and called up.

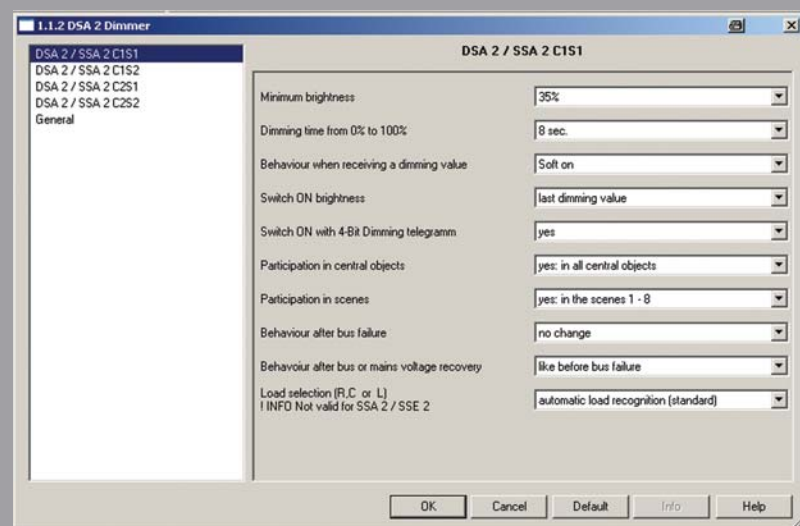
- 104 group addresses
- 105 possible associations
- 68 objects



Selection of upgrade modules
The basic module can be expanded by adding up to 2 upgrade modules. The type of upgrade module (switching, dimming, blinds or heating actuator or binary input) can be created easily using the parameters.

Advantage:

- Upgrading the channels reduces the channel price
- The combination of various functions in any order reduces the system costs



Dimmer settings
The dimming range can be limited with minimal brightness. Furthermore, settings can be made as to whether a dimming value is dimmed or on immediately. The switch-on brightness defines the behaviour once the the light is switched on.

Advantage:

- Various settings can be made to program the dimming value to meet individual customer needs.

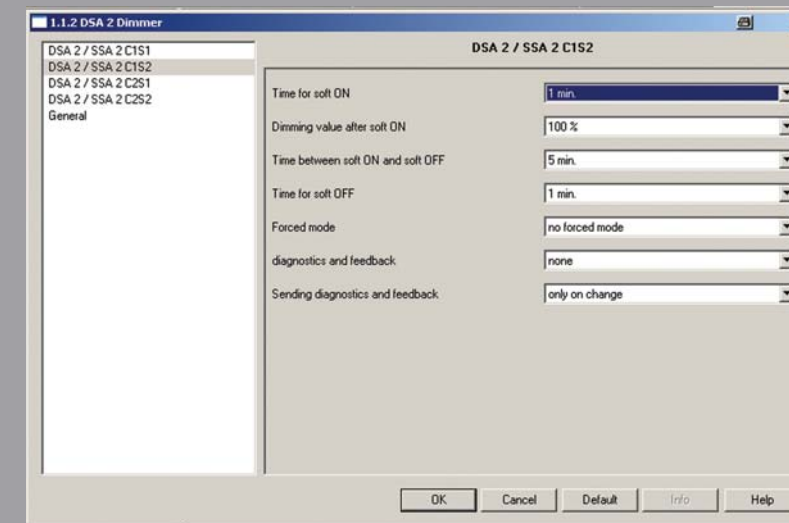
Central switching

Each channel can take part in central objects with priority (central continuously On, central continuously Off) as well as with central objects with out priority (central switching).

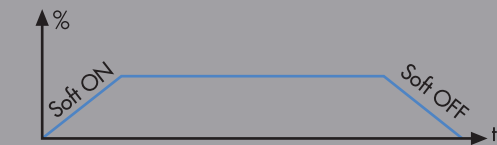
Advantage:

- Saving group addresses.
- Forced mode via priority switch.

Application software SSA 2, SSE 2

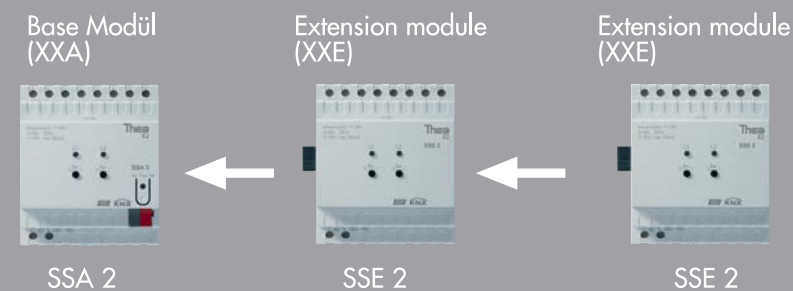


Dimmer settings
Soft switching can be used to set a dimming timescale, e.g. Dimming up slowly for an hour is possible.



Feedback object

Each channel can feed back the dimming value (1 byte) and the status (On/Off). Furthermore, various diagnosis objects are available.



Combination options of the IQMIX series

- Can be combined as required for up to a maximum 2 modules in addition to the module and they can be selected as required.

For all of the combination options, see pages 88

4–12 channel blinds actuator of the IQMIX series JSA 4S, JSE 4S

The ideal solution for blinds, shutters and awnings



The IQMIX series is a collection of devices consisting of base modules (e. g. JSA 4S) and extension modules (e. g. JSE 4S). Up to 2 upgrade modules can be connected in series to the basic modules in this series.

The phase sequence and runtime of motors can be controlled per channel. The manual switches operate UP/DOWN actions. The relays switching status are displayed via LEDs.

Advantages

- The free combination of blinds and heating controls, switching, dimming as well as binary inputs all increase flexibility and reduce system costs
- Modular upgrading for 4 to 12 blinds
- Copy function for fast configuration
- Manual operation on device, e. g. for installation test of drives possible without bus voltage
- LED output status display
- Simple input of runtimes
- Central UP/DOWN object
- 3 safety objects provide a façade-based response
- Flexible reaction to safety telegrams: Individually adjustable for each drive for start and end of the safety status
- Selectable response in event of bus failure as well as with the return of bus/mains voltage
- Feedback of drive positions for building visualisation

JSA 4S (base module)

- Relay outputs for 4 drives
- Suitable for the control of drives for blinds, shutters, awnings and skylights

JSE 4S (extension module)

- Relay outputs for 4 drives
- Mixed use of drive and switch functions possible as required



JSA 4S Base module
JSA 4S KNX



JSE 4S Extension module
JSE 4S KNX

Characteristics

- Drive controls for controlling blinds, shutters and various solar and visual protective devices and for skylights as well as ventilation flaps
- 4 output channels each with a floating UP and a floating DOWN contact
- Manual UP and DOWN key for each channel
- LED UP and DOWN display for each channel

Technical Data

Operating voltage: 230 VAC

Power consumption: 2,5 A

Power supply from the bus (JSA 4S only)

Power draw: <10mA (2 extension modules included)

Bus connection:

Output: 4

Contact material:

Type of contact: NO

Switching capacity: 3 A

Permissible ambient temperature: -5C...+45C

Protection class: II

Protection rating: IP 20

Housing: 45x72x60

Order numbers:

JSA 4S KNX 90990015

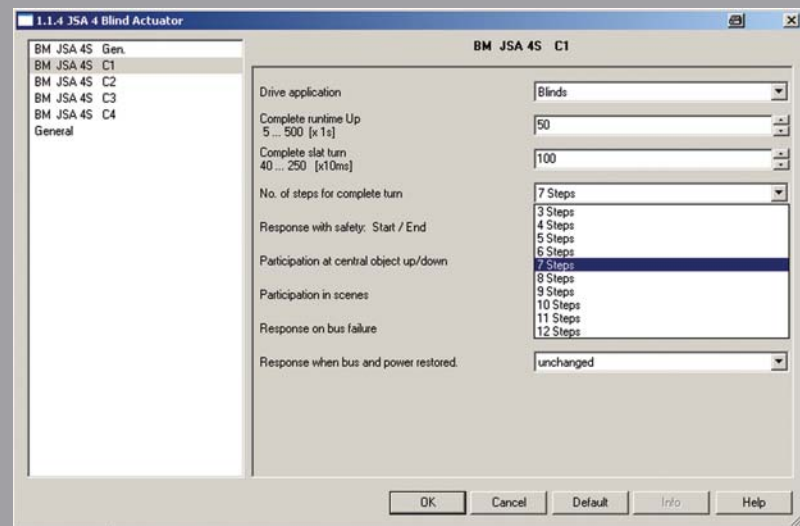
JSE 4S KNX 90990016

Application software JSA 4S, JSE 4S

0	BM JSA 4S C1	Up / Down	1 bit
1	BM JSA 4S C1	Step / Stop	1 bit
2	BM JSA 4S C1	% Height	1 Byte
3	BM JSA 4S C1	% Slats	1 Byte
4	BM JSA 4S C1	Lock obj. % height and % slats	1 bit
5	BM JSA 4S C2	Up / Down	1 bit
6	BM JSA 4S C2	Step / Stop	1 bit
7	BM JSA 4S C2	% Height	1 Byte
8	BM JSA 4S C2	% Slats	1 Byte
9	BM JSA 4S C2	Lock obj. % height and % slats	1 bit
10	BM JSA 4S C3	Up / Down	1 bit
11	BM JSA 4S C3	Step / Stop	1 bit
12	BM JSA 4S C3	% Height	1 Byte
13	BM JSA 4S C3	% Slats	1 Byte
14	BM JSA 4S C3	Lock obj. % height and % slats	1 bit
15	BM JSA 4S C4	Up / Down	1 bit
16	BM JSA 4S C4	Step / Stop	1 bit
17	BM JSA 4S C4	% Height	1 Byte
18	BM JSA 4S C4	% Slats	1 Byte
19	BM JSA 4S C4	Lock obj. % height and % slats	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, JSA 4S and SSA	1 Byte
64	Central controller Safety 1	For JSA(E) 4S	1 bit
65	Central controller Safety 2	For JSA(E) 4S	1 bit
66	Central controller Safety 3	For JSA(E) 4S	1 bit
67	Central up/down	For JSA(E) 4 S	1 bit

Every channel can be used as required either as a blinds channel, as shutters channel or as general drive channel. Central object 63 (call up/save scenes) and safety objects 64 to 66 as well as central UP/DOWN object 67 are available as central objects.

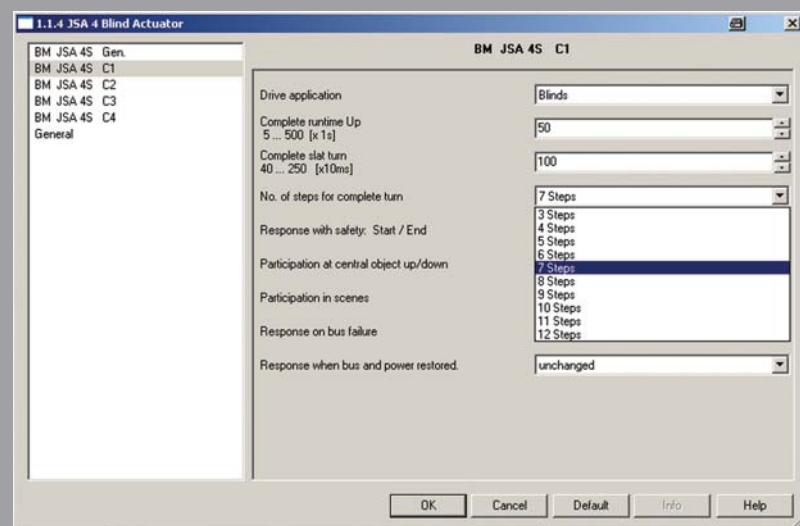
- 104 group addresses
- 105 possible associations
- 68 possible objects



Selection of upgrade modules
The basic module can be expanded by adding up to 2 upgrade modules. The type of upgrade module (switching, dimming, blinds or heating module or binary input) can easily be created using the parameters.

- Advantages:**
- upgrading the channels reduces the channel price
 - Any combination of various functions can reduce the system costs

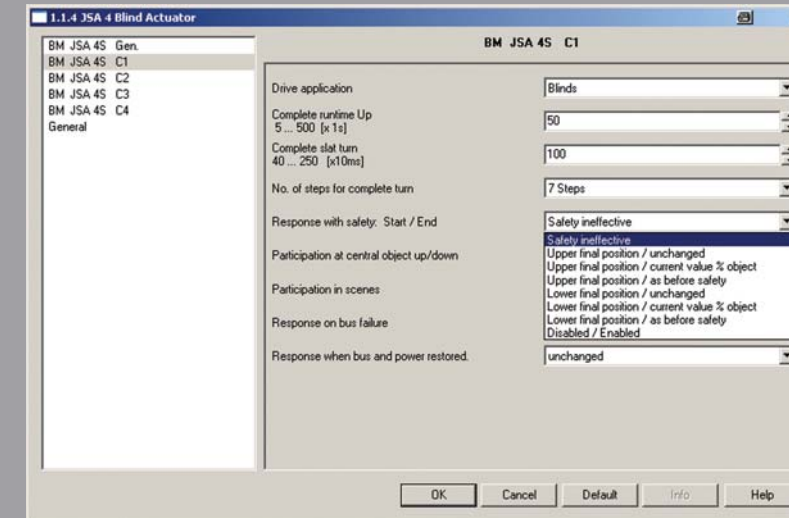
See pages 88 for possible combinations.



Blinds drive
For the blinds drive the runtime fully "Up", the time for the turning the slats and the steps required to completely turn the slats is selected. The desired number of steps (step number) to fully turn the slats can be set as required.

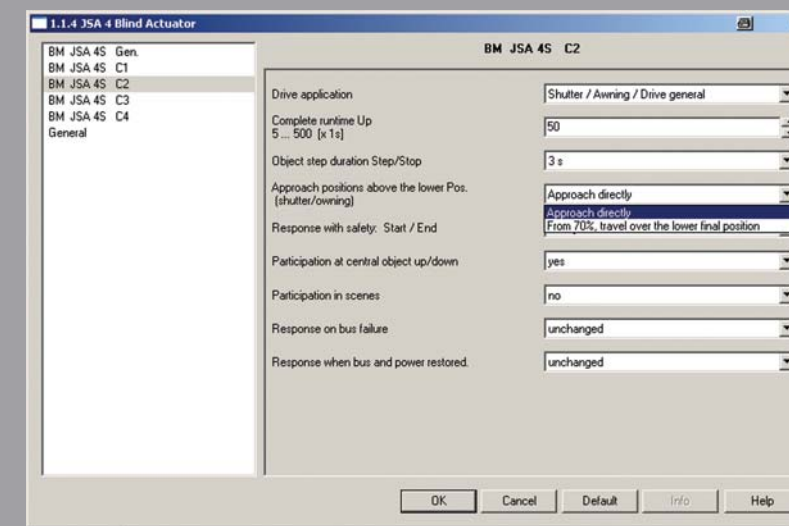
- Advantages:**
- Simple input of curtain runtimes

Application software JSA 4S, JSE 4S

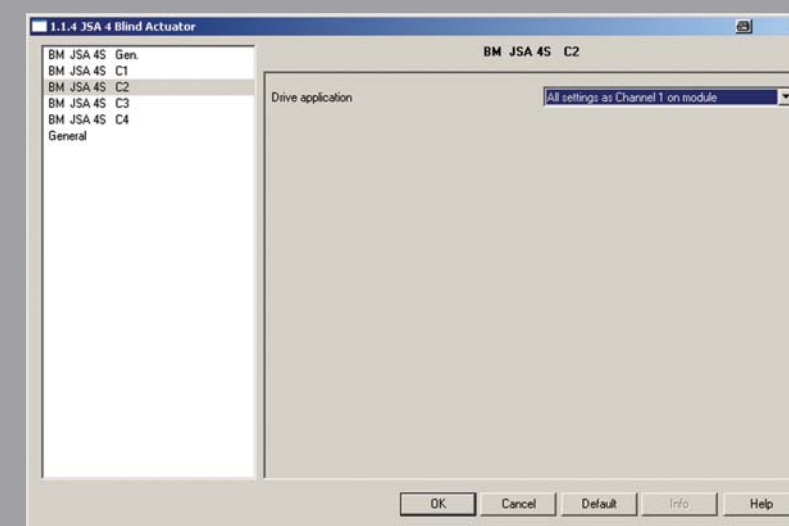


Blinds drive
Set responses can be configured for the safety objects. Selectable response in event of bus failure as well as in the event of return of bus/mains voltage.

- Advantages:**
- Flexible safety functions



Shutters / awnings / general drives
Runtime and step duration of Step/Stop object can be selected for blinds/awnings/general drives. If required, the lower position can always be achieved even if 70 % of the traverse has been completed, e. g. to tension awning material in awnings.



Copy function
The configuration settings for channels 2 to 4 can simply be copied from channel 1

Advantages:

- Quick and easy installation

4–16-channel-blind/switching actuators RSA 8, RSE 8



Thea
IQ

Saving costs – through switching actuators that can also accurately control the blinds



Flexible use means that each channel can be used selectively to switch consumers on and off (Switching function), or the phase sequence and runtime of motors can be controlled (Blindsfunction). The manual switches are used for Up/Down and for switching On/Off.

Advantages

- Manual operation on the unit without connection to a bus.
- Irrespective of where the blind is situated, the requested position is reached:
 - slip correction during travel from bottom to top
 - the end position is not exceeded
- Random combination of drive/switching action (RSA 8, RSE 8).
- The drive parameters can be set independent for each channel.
- Expandability reduces channel costs.
- Behaviour adjustable for bus/main failure.
- Three safety objects (display by LED).
- Easy-to-operate product database.

RSA 8 (base unit)

- Relay outputs for 4 drives or
- 8 switching channels or
- random mixed operation of drive and switching functions

RSE 8 (extension unit)

- Relay outputs for 4 drives or
- 8 switching channels or
- random mixed operation of drive and switching functions
- Expansion unit for RSA 8

integrated bus coupler

Switch state display

Operating on-site



channels with high switching capacity
10 A/250 V AC,
cos ϕ =1 and
6 A/250 V AC,
cos ϕ =0.6

Characteristics

- Modular expandability from four to eight blinds or from eight to sixteen switching outputs
- Capability of addressing blind (including louver) or shutter positions directly for:
 - canvas blinds, blinds, shutters and several sun and sight protections
 - skylights and ventilation flaps
- Optimised repeatability of the programmed louver position
- The wide range of switching functions is ideal for:
 - shading, lighting and heating of green houses and conservatories
 - lighting of buildings, staircases
 - delayed on or off switching of groups of lights
 - short or long pulses for schoolyard bells or toilet flushing and ventilation
- In case of extensions of HSA 8 with RSE 8 only switching channels are possible, no drive control

Technical data:

RSA 8, RSE 8
 Operating voltage: 230 V/240 V \pm 10 %
 Rated frequency: 50 Hz
 Product consumption: max. 4 VA
 Current consumption of bus (only RSA 8): \leq 8 mA
 Contact material: Ag SnO₂
 Type of contact: closing contact, floating
 Switching capacity: 10 A 250 V AC, cos ϕ = 1,
 6 A 250 V AC, cos ϕ = 0.6
 Incandescent lamp load: 1400 W/VA
 Halogen lamp load: 1400 W/VA
 Permissible ambient temperature: -5 °C ... +45 °C
 Class of protection: II after correct installation
 Degree of protection: IP 20 (EN 60529)
 Standard housing: 45 x 105 x 60 mm (6 modules)

Order numbers:

RSA 8 KNX 90990043
 RSE 8 KNX 90990044

Application software RSA 8, RSE 8

0	Up / down	Drive 1 up / down	1 Bit
1	Step/stop blind	Drive 1 Step/stop	1 Bit
2	Height [%]	Drive 1 height	1 Byte
3	Slats [%]	Drive 1 slats	1 Byte
4	Auto comfort	Drive 1 auto comfort	1 Bit
5	ON/OFF	Channel 2.1 switch	1 Bit
6	Feedback	Channel 2.1 state	1 Bit
7	ON/OFF	Channel 2.2 switch	1 Bit
8	Feedback	Channel 2.2 state	1 Bit
9	Inhibit channels 2.1 and 2.2	Inhibit channels 2.X"	1 Bit
40	Security 1	Central priority 1	1 Bit
41	Security 2	Central priority 2	1 Bit
42	Security 3	Central priority 3	1 Bit
43	Up / down	Drives central	1 Bit
44	Forced up/down	Drives central priority	2 Bit
45	Switch permanent	Central permanent ON	1 Bit
46	Switch permanent	Central permanent OFF	1 Bit

➤ 1 blind or 2 switching outputs can optionally be selected per channel.
The various channels can be assigned to central objects.

- 85 group addresses
- 85 possible associations
- 47 objects

➤ The function of the channels
The channels can be used as desired for blinds/roller shutters or as switching output (e.g., for lighting).
Per channel: 1 drive or 2 switching outputs.

- Advantage:**
- Flexible use of the channels
 - Saves bus users and reduces system costs

➤ Blind/shutter drive
The running time, the turning of the slats and the stepping pace is chosen on the basis of how the blinds/shutters are hung.
Besides safety objects many can be specified that define a certain behaviour.
You can choose how the system should react when the bus fails and when the bus/mains is restored.

- Advantage:**
- Simple indication of time
 - Flexible safety functions

Application software RSA 8, RSE 8

➤ Actuation in general
Even with common drives, positions can be approached accurately (height/angle of slat). When adjusting height, the slat angle can be adopted again, if so desired.
The slip page compensation of the drives carries out an automatic adjustment while traveling from down to up allowing a desired position to be approached from both directions contemporarily.
Advantage:

- Exact positioning

➤ Switching functions
You may select from the following switching functions:

- Switching On/Off
- Automatic stairway lighting with pre-warning function in accordance with DIN 18015-2
- Pulse function
- Delay On/Off

Central switching
The relay can be switched with priority by being entered in a central steady-On or steady-Off object. You can choose the reaction when the bus fails and when the bus/mains is restored.

- Advantage:**
- Extensive switching functions possible on all channels

➤ Stairway light function

- Simple entry of the stairway light time
- You can select the maximum number of switching pulses to be added up. This allows the operating time to be set from every button (e.g. cleaning week).

Universal binary inputs of the IQMIX series BSA 6, BSE 6

Total flexibility – binary inputs for connecting all of your voltages



The IQMIX series is a range of devices comprising basic modules (e.g. BSA 6) and extension module (e.g. BSE6). Up to 2 extension modules can be connected in series to the basic modules in this series.

Each input of the binary inputs has an LED for status display on the input. After a bus failure the inputs are polled again, which means that the current state is always displayed. Thanks to the multi-voltage input and the auxiliary supply for floating inputs the device can be used in all kinds of applications.

Advantages

- The free combination of switching, dimming, control of blinds and heating, as well as binary inputs, all increase flexibility and reduce system costs
- Upgrades enable up to 18 inputs
- Low cost upgrade modules reduce the channel price
- Multi-voltage inputs and auxiliary supply for floating inputs make it possible to solve all applications with a single device
- LEDs for status display of the outputs

BSA 6 basic module

BSE 6 extension module



Thea
IQ

Characteristics

- Multi-voltage input 8–250 V AC/DC
- Auxiliary supply for floating inputs of device supplied
- All inputs can be operated with different voltages
- 6 LEDs for displaying the status at the input
- Max. cable length per input 100 m
- Up to 2 output objects per channel
- Disable object for each channel
- Adjustable response after restoration of the bus supply
- Software functions: Switch/key, dimming, blinds, valuator, counter
- Binary input modules can also be combined as desired with all switching, heating, dimming and blind actuators of the IQMIX series

Technical Data

Bus power supply (base module only)

Power consumption: < 10 mA (incl. 2 upgrades)

Connection: bus terminal

Inputs

Quantity: 6

Average current consumption of inputs: ≤ 3 mA

Voltage range: 8–250 V AC/DC

Max. line length: 100 m

Permissible ambient temperature: –5 °C ... +45 °C

Protection class: II subject to correct installation

Protection rating: IP 20 in accordance with EN 60529

Housing: 45 x 72 x 60 mm (4 modules)

Cable cross section: solid 0.5 mm²

∅ 0.8 up to 4 mm² strand with cable end sleeve

0.5 mm² up to 2.5 mm²

Power unit for auxiliary supply

Voltage: 230 V AC, ± 10 %, 50 Hz

Power consumption: 2.5 VA

Output voltage: approx. 18 V~/ 20 mA

Order numbers:

BSA 6 KNX 90990011

BSE 6 KNX 90990012



BSA 6 Ana modül



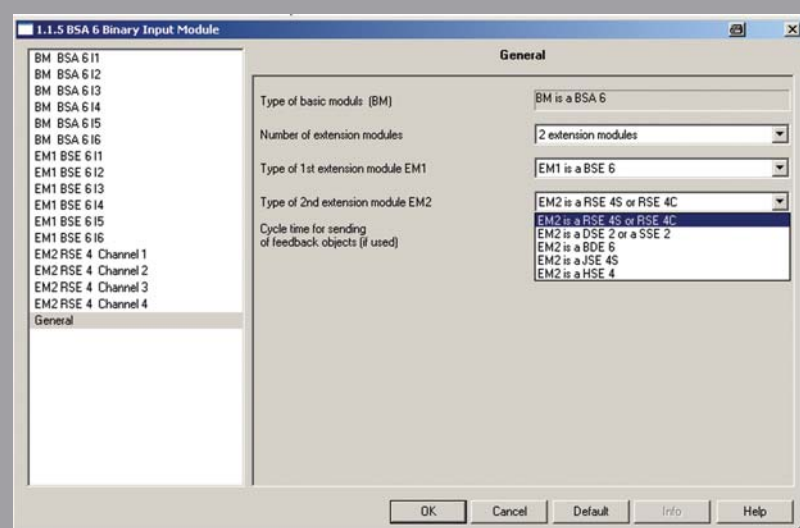
BSE 6 Yükseltme modülü

Application software BSA 6, BSE 6

0	BM BSA 6 Channel 1	Switch ON/OFF	1 bit
1	BM BSA 6 Channel 1	Lock	1 bit
2	BM BSA 6 Channel 1	Lock	1 bit
3	BM BSA 6 Channel 2	Switch ON/OFF	1 bit
4	BM BSA 6 Channel 2	Lock	1 bit
5	BM BSA 6 Channel 3	Switch ON/OFF	1 bit
6	BM BSA 6 Channel 3	Lock	1 bit
7	BM BSA 6 Channel 4	Switch ON/OFF	1 bit
8	BM BSA 6 Channel 4	Lock	1 bit
9	BM BSA 6 Channel 5	Switch ON/OFF	1 bit
10	BM BSA 6 Channel 5	Lock	1 bit
11	BM BSA 6 Channel 6	Switch ON/OFF	1 bit
12	BM BSA 6 Channel 6	Lock	1 bit
13	BM BSA 6 Channel 6	Lock	1 bit
14	BM BSA 6 Channel 6	Lock	1 bit
15	BM BSA 6 Channel 6	Lock	1 bit
16	BM BSA 6 Channel 6	Lock	1 bit
17	BM BSA 6 Channel 6	Lock	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, JSA 4S and SSA	1 Byte

Depending on its function, each channel has 1–2 output objects, e.g. ON/OFF switches or blind UP/DOWN and blind STEP/STOP. Each channel has its own disable object. The central objects 60–63 are not used in this device.

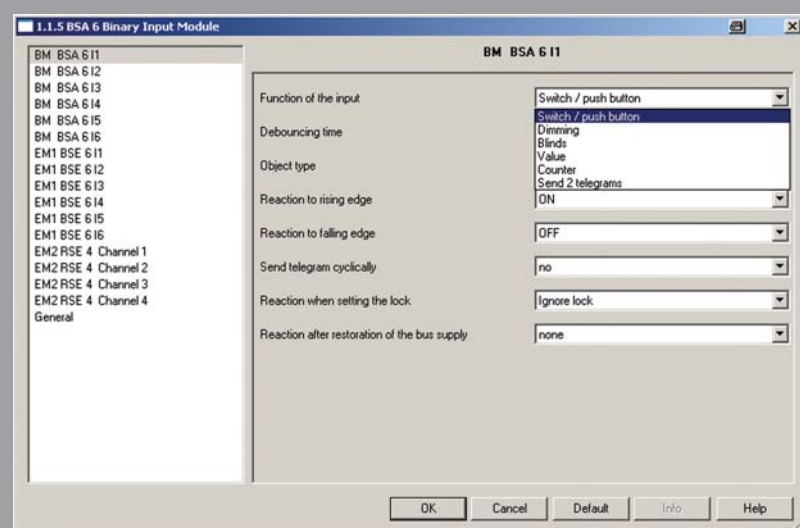
- 104 group addresses
- 105 possible associations
- 68 objects



Selection of upgrade modules
The basic module can be expanded by adding up to 2 upgrade modules. The type of upgrade module (switching, dimming, blinds or heating actuator or binary input) can be created easily using the parameters.

- Advantages:**
- Upgrading the channels reduces the channel price
 - Combination of various functions in any way desired reduces the system costs

For all of the combination options, see page 88.



Binary input functions
The following functions are available at each input:

- Switch/key
- Dimming
- Blinds
- Regulator
- Counter
- Send 2 messages

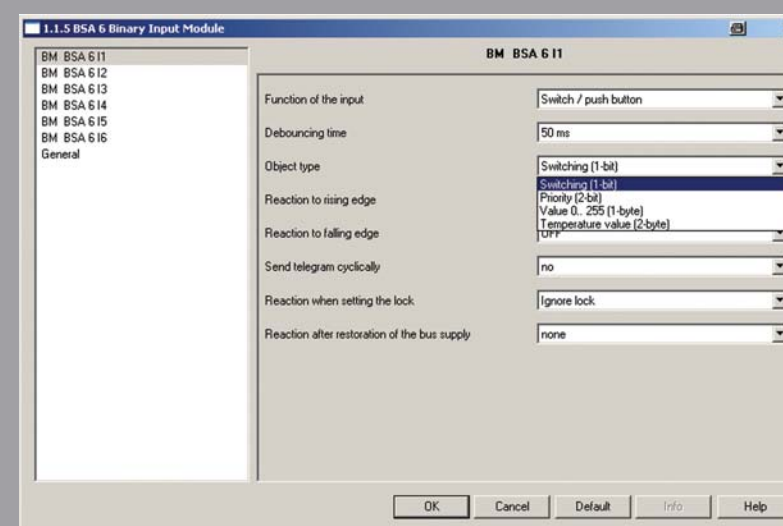
- Advantages:**
- Extensive functions possible on all channels
 - Disable object

Various responses can be parameterized for each channel for when the disable is set:

- Ignore disable
- No response when the disable is set
- Response the same as after rising edge
- Response the same as after falling edge

- Advantages:**
- The disable object can be used flexibly in a number of ways for each channel

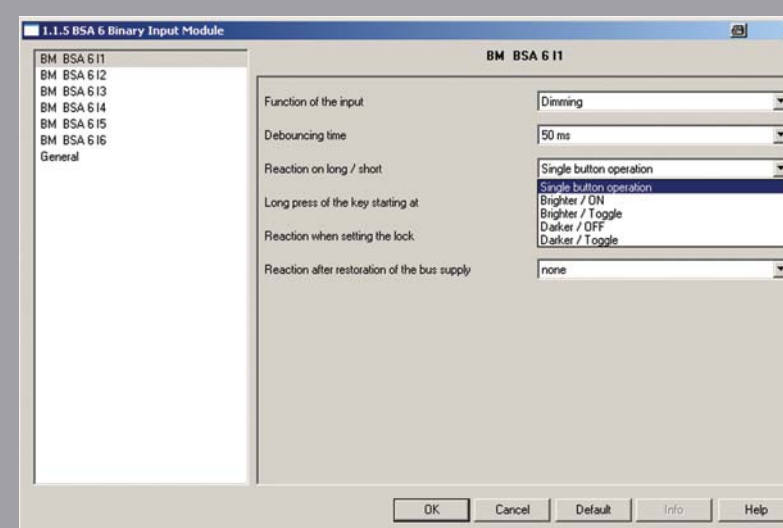
Application software BSA 6, BSE 6



Switch/key function
The following object types are available:

- Switching (1-bit)
- Priority (2-bit)
- Value (1-byte)
- Temperature value (2-byte)

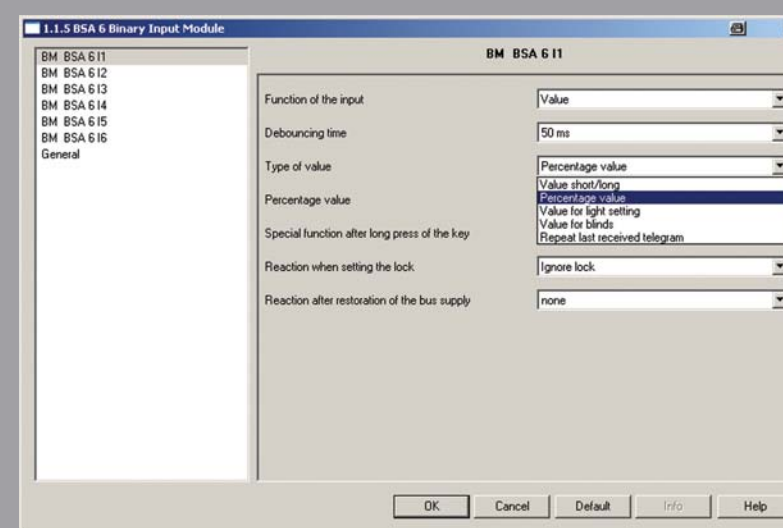
- Advantages:**
- The various object types mean that a connected switch/key can have an extensive range of uses



Dimming function
If the function „dimming“ is selected at the input, it is possible to parameterize various responses to long and short keystrokes:

- Single-surface operation
- Brighter (long keystroke)/ON (short keystroke)
- Brighter/Toogle
- Darker/OFF
- Darker/Toogle

- Advantages:**
- Diverse dimming control options



Valuator function
With the valuator function it is possible to create various parameterizations:

- Valuator short/long (various values for short/long keystroke)
- Percentage valuator (percentage value is set)
- Valuator for light setting (setting number is sent)
- Valuator for blinds (height and latin %issent)
- Repeat last message received

In addition, there are special functions for a long keystroke, such as:

- Send another value
- Save light setting
- etc.

- Advantages:**
- Diverse and flexible use of the inputs
 - Additional functions of the inputs are

- Blinds
- Counter (event counter, comparison counter)
- Send 2 messages

Heating actuators of the IQMIX series HSA 4, HSE 4



Small and silent – the new heating actuators with pump control



The IQMIX series is a range of devices comprising of basic modules (e.g. HSA 4) and upgrade modules (e.g. HSE 4). Up to 2 extension modules can be connected in series to the base modules in this series.

The heating actuators control thermal positioning actuators based on the control variable of the room temperature controller, and make it possible to integrate a boiler control. It is also possible to control a circulation pump directly via the actuator.

Avantajları Advantages

- HSA 4 (base module)
- 4-channel heating actuator
- HSE 4 (extension module)
- 4 channel upgrade module (for expansion up to 12 heating channels)

- The free combination of switching, dimming, control of blinds and heating, as well as binary inputs, all increase flexibility and reduce system costs
- Upgrades enable up to 12 heating channels
- Low cost extension modules reduce channel price
- Pump control directly by the actuator
- By determining the largest control variable for all channels and sending it to the boiler control it is possible to adjust the feed temperature, thus achieving energy savings up to 30%
- Easy start-up via manual switch,



HSA 4 (base module)
• 4-channel heating actuator



HSE 4 (extension module)
• 4 channel upgrade module (for expansion up to 12 heating channels)

Characteristics

- Silent semiconductor switch
- 4 floating outputs 24–250 V AC
- Up to 5 positioning actuators per channel
- 4 LEDs for the status display
- 4 ON/OFF/BUS rotary switches
- Continuous or switching control variable selectable
- Compulsory object for each channel
- Emergency program in case of bus and message failure
- Summer operation (prevents unwanted heating in summer) and valve protection
- Pump control directly by the actuator
- Minimum and maximum control variables are adjustable, generating various responses to falling below or exceeding the control variables (individually selectable)
- Determining the maximum control variables for all channels to integrate the boiler control

Technical Data

Operating voltage: 230 V/240 V, Å} 10 %, 50 Hz
Power consumption: max. 2.5 VA

Bus power supply (base module only)
KNX power supply: max. 10 mA (incl. 2 upgrades)
Connection: Bus terminals

Output: Triac
Quantity: 4
Switching capacity: 0.5 A
Up to 5 thermal positioning actuators per output

Cable cross section: solid 0.5 mm²
Ø 0.8 up to 4 mm² strand with cable end sleeve
0.5 mm² up to 2.5 mm²

Permissible ambient temperature:
–5 °C ... +45 °C

Protection class:
II subject to correct installation
Protection rating: IP 20 in accordance with EN 60529
Housing: 45 x 72 x 60 mm (4 modules)

Order numbers:

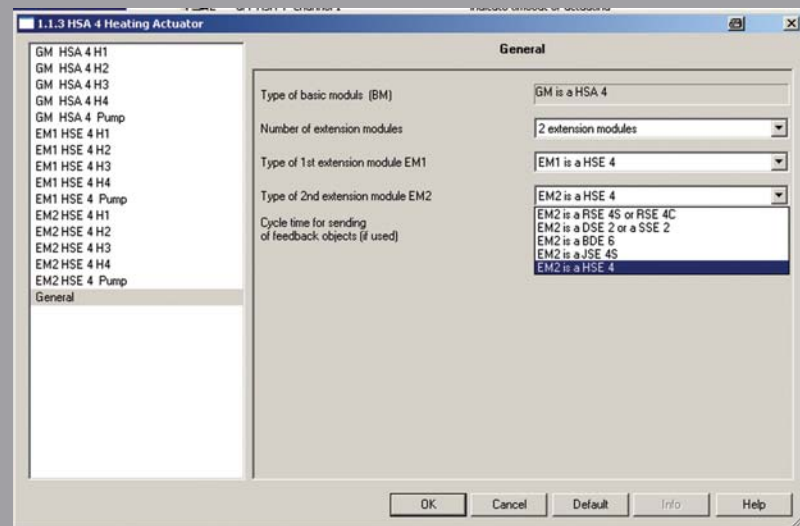
HSA 4 KNX 90990013
HSE 4 KNX 90990014

Application software HSA 4, HSE 4

0	GM HSA 4 Channel 1	Continuous actuating value	1 Byte
1	GM HSA 4 Channel 1	forced operation	1 bit
2	GM HSA 4 Channel 1	Indicate timeout of actuating	1 bit
3	GM HSA 4 Channel 2	Continuous actuating value	1 Byte
4	GM HSA 4 Channel 2	forced operation	1 bit
5	GM HSA 4 Channel 2	Indicate timeout of actuating	1 bit
6	GM HSA 4 Channel 3	Continuous actuating value	1 Byte
7	GM HSA 4 Channel 3	forced operation	1 bit
8	GM HSA 4 Channel 3	Indicate timeout of actuating	1 bit
9	GM HSA 4 Channel 4	Continuous actuating value	1 Byte
10	GM HSA 4 Channel 4	forced operation	1 bit
11	GM HSA 4 Channel 4	Indicate timeout of actuating	1 bit
12	GM HSA 4 Summer operation	Summer operation ON/OFF	1 bit
13	GM HSA 4 highest actuating value	Highest actuating value HSA 4	1 Byte
14	GM HSA 4 Pump	Pump ON/OFF	1 bit
60	Central continuous ON	for RSA 4S, DSA 2 and SSA 2	1 bit
61	Central continuous OFF	for RSA 4S, DSA 2 and SSA 2	1 bit
62	Central switching	for RSA 4S, DSA 2 and SSA 2	1 bit
63	Access/save scene	RSA 4S, DSA 2, JSA 4S and SSA	1 Byte

➤ A continuous or switching control variable can be selected for each channel. There is also an object for compulsory operation available for each channel. If a channel is in the emergency program, e.g. because of failure of a thermostat, this fact can also be reported on the bus. Additionally an object for direct control of the pump is now available. The largest of all of the control variables can be used to integrate the boiler control.

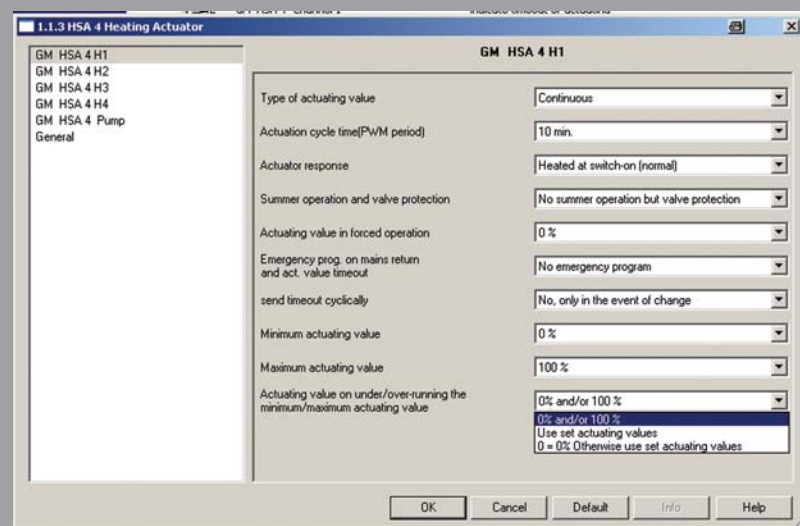
- 104 group addresses
- 105 possible associations
- 64 objects



➤ Selection of upgrade modules
The basic module can be expanded by adding up to 2 upgrade modules. The type of upgrade module (switching, dimming, blinds or heating actuator or binary input) can be created easily using the parameters.

- Advantages:**
- Upgrading the channels reduces the channel price
 - Combination of various functions in any way desired reduces the system costs

For all of the combination options, see pages 88.

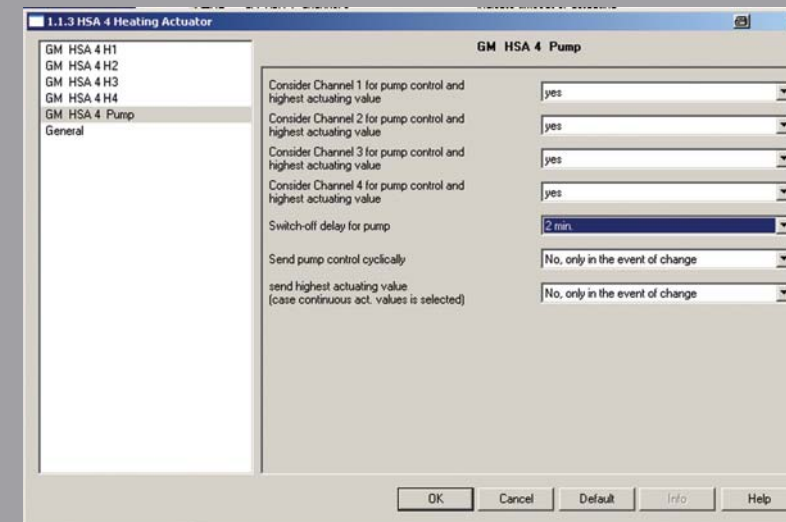


➤ Pulse width modulation
The control variable is converted within the PWM period (Pulse Width Modulation) into on and off cycles.

- Advantages:**
- The continuous regulator can send a value to the heating actuator, which is processed immediately by the actuator
 - Improved room temperature Limiting the control value

By limiting the maximum control variable it is possible to prevent continuous pressure from being exerted on the wax cartridge of the thermal positioning actuator. This increases the service life of the thermal drive. Limiting the minimum control variable can be used for the base temperature in underfloor heating systems, or to suppress very short cycles, for example.

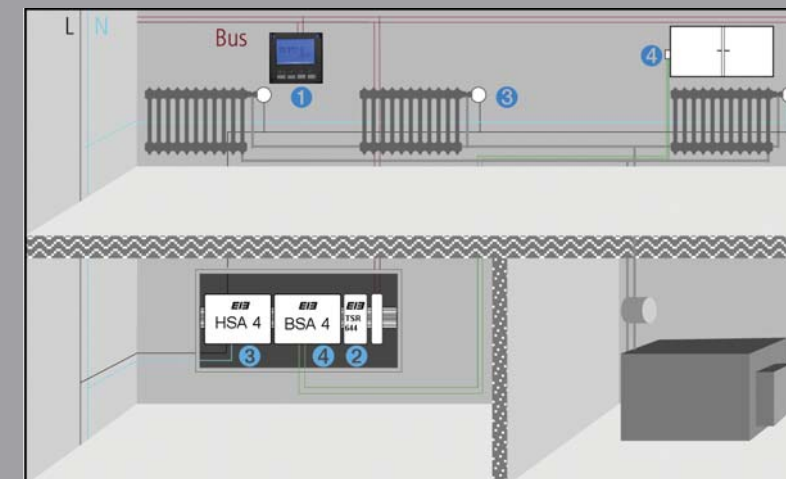
Application software HSA 4, HSE 4



➤ Pump control and largest control variable
Each channel can be optionally be taken into account in the pump control and when determining the „largest control variable“. The recirculation pump is switched on when a channel issues a heat requirement. By determining the largest control variable for all channels and sending it to the boiler control it is possible to adjust the feed temperature, thus achieving energy savings up to 30%

- Advantages:**
- Energy-saving use of the heating system

Application example for HSA 4 with BSE 6 binary input



- Application example
Individual room control with radiator/ convector heating
- 1 Temperature controller TheaIQ Room Thermostat is installed in each room and connected to the bus
 - 2 An KNX timer enables needs-driven temperature control using weekly or yearly programs, e.g. for schools, offices, etc.
 - 3 HSA 4 heating actuator controls the thermal Thea IQ actuators on the radiators
 - 4 Optional: window monitoring, i.e. prevention of unwanted heating when a window is open

Heating actuators with triacs for floor heating HST 6, HST 12



Simple to install – the heating actuator for the heating circuit distributor



Actuator KNX

Thea IQ actuators can substitute the thermostats most commonly used on radiators. In the case of under floor heating, the Thea IQ actuators are mounted on the valves of the heat distributor.

The house is suitable for the mounting of heating circuit distributors with triacs enabling noiseless switching of the actuating drives. The heating actuators (HST 6 / HST 12) optimise the efficiency when using room temperature controllers together with thermic actuating drives and enable the integration of a boiler control.

Advantages

- Ideal design for mounting in the heating circuit distributor
- Touchable protection low voltage (SELV)
- Convenient and uncomplicated wiring through screwless terminal block technology
- By determining the greatest correcting variables of all channels and sending them to the boiler control, the forward flow temperature can be adapted

HST 6

- 6 channel heating actuator for controlling of thermic actuating drives

HST 12

- 12 channel heating actuator for controlling of thermic actuating drives



HST 6/12

Characteristics

- Easy wiring of the drives (24 V)
- Mounting directly on the wall or on the rail in the heating circuit distributor
- Plug at the transformer for easy installation
- Connection of up to 13 thermic actuating drives (24 V) and power supply through built-in transformer
- Continuous and switching controller output can be chosen
- Compulsory mode via object
- Summer mode omits undesired heating in summer (valve protection in the summer mode can be chosen)
- Emergency mode in case of bus or sensor failure – Behaviour in case of failure adjustable
- Cyclic checking of the controller output (for determination of the maximum controller output)
- Treating of the continuous controller output
- Automatic releasing of the thermal actuators after switching on
- Determination of the max. correcting variable to be considered by the boiler control

Technical Data

Operating voltage: 230 V AC/24 V DC
 Max. power consumption: 50 W
 Protection: T 2 A
 Max. number of drives: 13
 Heating programs optional: 2
 Dimensions H/B/L: 70 x 75 x 302 mm
 Weight: 1700 g
 Protection class: II after correct installation
 Degree of protection: IP 20 (EN 60529)
 Massive power: 0.5 – 1.5 mm²
 Flexible power*: 1.0 – 1.5 mm²
 *wires of the drives can be used with end sleeves for strands, mounted ex works

Order no:

HST 6 KNX 90990046
 HST 12 KNX 90990047

Application software HST 6, HST 12

0	value [%]	actuating value channel 1	1 Byte
1	value [%]	actuating value channel 2	1 Byte
2	value [%]	actuating value channel 3	1 Byte
3	value [%]	actuating value channel 4	1 Byte
4	value [%]	actuating value channel 5	1 Byte
5	value [%]	actuating value channel 6	1 Byte
12	ON / OFF	forced mode channel 1	1 Bit
13	ON / OFF	forced mode channel 2	1 Bit
14	ON / OFF	forced mode channel 3	1 Bit
15	ON / OFF	forced mode channel 4	1 Bit
16	ON / OFF	forced mode channel 5	1 Bit
17	ON / OFF	forced mode channel 6	1 Bit
24	ON / OFF	summer mode	1 Bit
25	value [%]	highest actuating value of all channels	1 Byte
26	1 = yes, 0 = no	timeout of actuating value signal chan. 1	1 Bit
27	1 = yes, 0 = no	timeout of actuating value signal chan. 2	1 Bit
28	1 = yes, 0 = no	timeout of actuating value signal chan. 3	1 Bit
29	1 = yes, 0 = no	timeout of actuating value signal chan. 4	1 Bit
30	1 = yes, 0 = no	timeout of actuating value signal chan. 5	1 Bit
31	1 = yes, 0 = no	timeout of actuating value signal chan. 6	1 Bit

Optionally, a permanent or switching correcting variable can be selected per channel.

- 66 possible group addresses
- 66 possible associations
- 38 objects

Selection via parameters, regardless if 6- or 12-channel devices are used.

The failure of a correcting variable can be transmitted by bus. For valve protection during summer operation, the valve is flushed (opened) once a day.

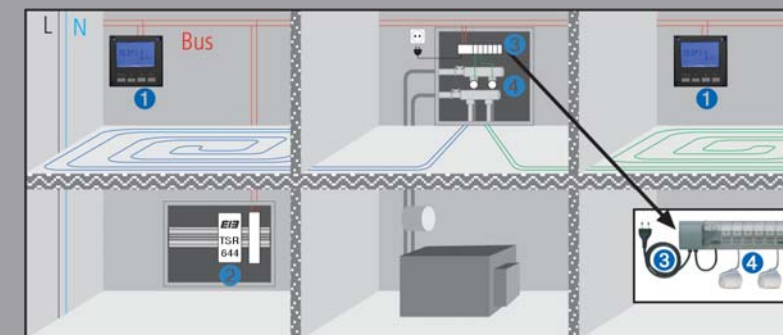
The correcting variable is transformed into On and Off cycles within the PWM period (Pulse, Width Modulation). This prevents variations in temperature as in the case of using switching actuators.

Advantage:

- The continuous controller can send the value to the heating actuator for immediate elaboration
- Better room comfort control

Application software HST 6, HST 12

Limiting the correcting variable
Limiting the maximum correcting variable prevents a continual pressure to be placed upon the wax cartridge of the thermal actuator. The service life of the thermal drive is thereby increased. Limiting the minimum correcting variable enables a quick adjustment of the desired temperature in heating operation.



Single room regulation with floor heating

- 1 Temperature regulator RAM 713 S is mounted in every room and connected to the bus
- 2 KNX timer enables temperature control as needed by means of weekly or yearly programs, e.g., for schools, offices, practices...
- 3 Heating actuator HST 6 for heating circuit distributor controls the
- 4 Thermal actuator in the heating circuit distributor

Fan coil actuator FSC 1

Ideal control for fan coil units or fan coil systems FSC 1



FSC 1 is a fan coil actuator suitable for operation on the KNX. FSC 1 controls the fan coil with up to 3 fan stages. It also controls the heating and cooling valve, whereby 2-way and 3-way valves can be actuated. An additional relay allows the selective control of an electric heater bank or an electric cooler bank. 2-pipe systems and 4-pipe systems are supported.

FSC 1 has 2 free-floating inputs for window contacts and monitoring humidity. The window contact input can be reconfigured as a temperature sensor.

Advantages

- On-site operation for set-up on the device
- LED output status display
- Up to max. three fan stages
- Fan motor protection by locking the fan stages
- Floating switching contact for cooler or heater bank
- For 2-way and 3-way valves
- Window contact can be connected
- Condensate detector can be connected
- Adjustable response to bus failure and restoration of the bus/mains power
- Suitable for 2 and 4-pipe heating systems
- Keys for function check during set-up
- Feedback signal for heating, cooling, fan stage etc.
- With emergency program
- With dew point alarm (object)
- Input E1 can be used for temperature sensor
- Adjustment of setpoint value for cooling in relation to external temperature

FSC 1
FSC 1 actuator, for 1-3-stage
control of fan coil units



Thea
IQ



FSC 1 Fan-coil modülü

Characteristics

The operating state is displayed via 9 LEDs:

- 3 LEDs (red) for displaying the fan stage
- 1 red LED for displaying heating mode
- 1 blue LED for displaying cooling mode
- 1 red LED for displaying additional relay ON
- 2 red LEDs for displaying input 1 and/or input 2 closed
- 1 red LED for displaying manual mode

FSC 1 has 2 keys for easier set-up.
One key selects various fan stages.
The other key enables toggling between heating and cooling modes.

Technical Data

Supply voltage provided by the current net
Operating voltage: 230 V, $\pm 10\%$, 50 Hz
Power draw from the mains: max. 3 VA

Bus power supply
Bus power draw: max. 10 mA
Bus connection: Bus terminal

Outputs

Valves (triacs switching capacity):
0.5 A (24–230 V AC)

Switching capacity, additional relay: 16 A

Switching capacity, ventilator relay: 8 A

Response in the event of bus failure: adjustable

Permissible ambient temperature:

$-5 - +45\text{ }^{\circ}\text{C}$

Protection class: II provided it is correctly installed

Protection rating: IP 20 in accordance with EN 60529

Standard housing: 45 x 72 x 60 mm (4 modules),
installation on DIN top hat rail

Order numbers:

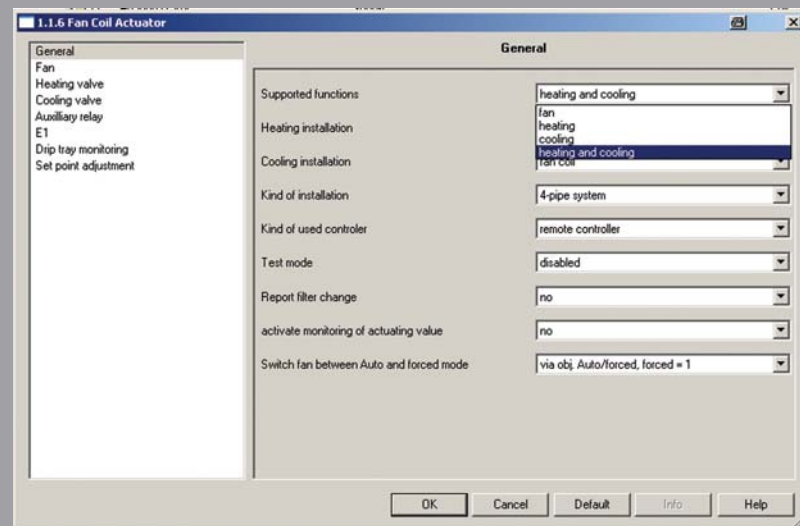
FSC 1 KNX 90990025

Application software FSC 1

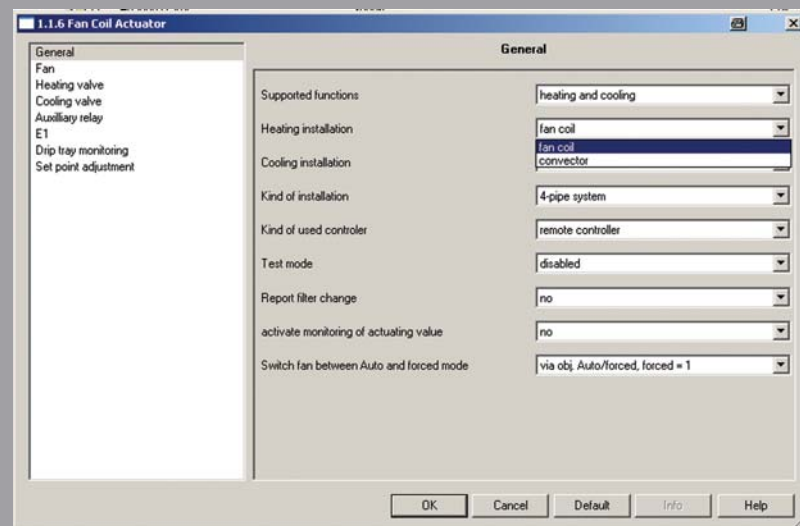
0	Actuating value heating	receive	1 Byte
1	Actuating value cooling	receive	1 Byte
2	Heating status	report	1 bit
3	Cooling status	report	1 bit
4	Fan step	report	1 Byte
5	Auxiliary relay	Switching	1 bit
6	Lock additional ventilation	1 = lock	1 bit
7	Fan lock	1 = lock	1 bit
8	Forced fan step	fan control with % value	1 Byte
9	Limitation of fan step in %	0=fan OFF 1...100%=max.step	1 Byte
10	Fan off	report	1 bit
11	Fan step 1	report	1 bit
12	Fan step 2	report	1 bit
13	Fan step 3	report	1 bit
14	Status of window contact at E1	report	1 bit
15	Manual mode	receive: forced=1, auto=0	1 bit

- Objects for functions including:
 - Number of fan stages, switching thresholds
 - Basic settings available for heating and cooling valves etc.

- 64 group addresses
- 64 possible associations
- 28 possible objects

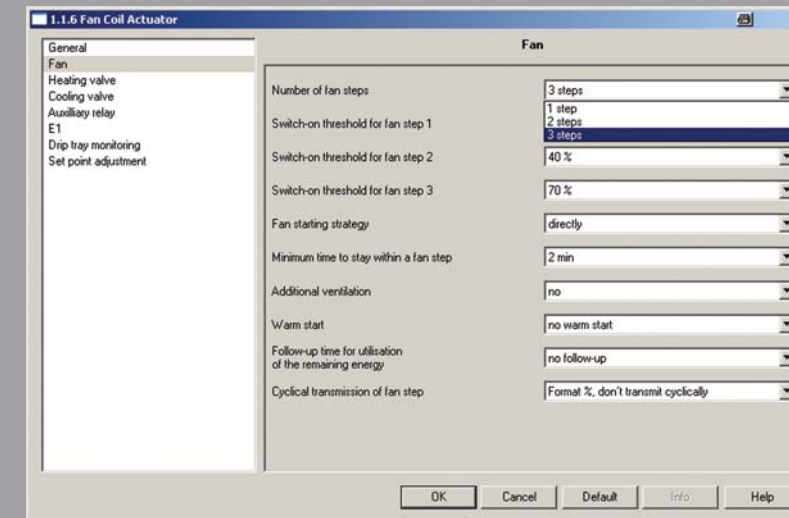


- Functions
 - “Heating”, “Cooling”, “Venting” and “Heating and venting” functions can be configured. The functions adjust automatically to the “Supported function” and “Control type” parameters as well as “General” parameters.

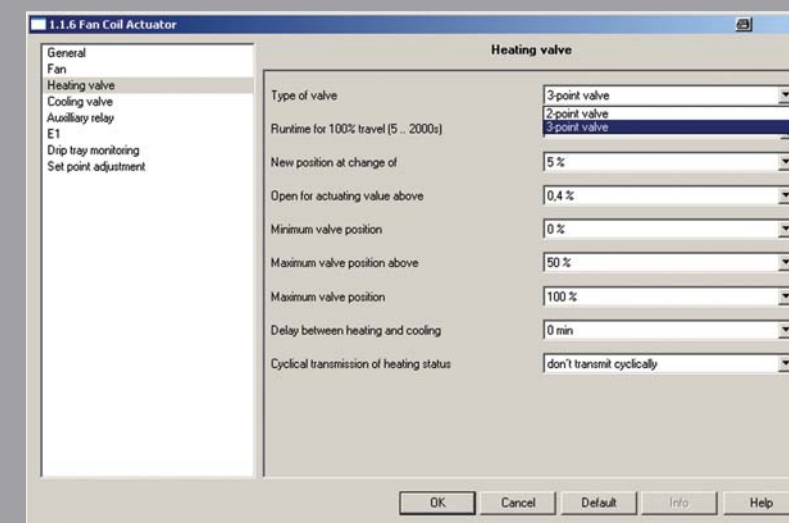


- System types heating system/cooling system “Fan coil” or “Convector” can be selected as heating and as cooling systems.

Application software FSC 1



- Fan stages
 - The number of fan stages can be set to a maximum of 3 levels.
 - The switching thresholds can be configured. The minimum duration of a fan stage can also be adjusted.



- Selection of valve type
 - 2-way valves can be configured for standard positioning drives (open/closed) or 3-way valves for linear motorised positioning drives.

4 channel yearly time switch TSR 644S



Thea
IQ

Reliable and versatile – complex time functions securely under control



Ideal KNX time switch for objects in which complex time functions are required.

Possible applications

- Time and date synchronization of other bus users (e.g. KNX secondary clock, control systems etc.)
- Time-dependent switching of lighting, heating, blinds, alarm systems, electrical door openers, water flushing device in toilet facilities, irrigation systems, movement of water in swimming pools etc.
- Time controlled dimming of path lighting (e.g. hotels, hospitals, schools)
- Scene control of lighting with simultaneous switching and dimming (e.g. cinemas, theatre, other functional buildings)
- Time-dependent definition of different temperature stages for single-room control systems (e.g. Thea IQ room thermostat)
- Time-dependent forced control (ON and/or OFF has precedence) of consumers by priority messages
- Random switching for absence control

TSR 644S

Quartz controlled with time/data transmission to the bus



TSR 644S

Characteristics

- Switching, valuator device, temperature, receive time and date
- 8 possible group addresses
- 8 possible associations
- On each of the 4 channels, the following types of message can be selected:
 - Switching message (1 bit)
 - Priority message (2 bit)
 - Dim and/or value message (8 bit)
 - Temperature message (16 bit)
 - Random message in EIS 5 format (16 bit)
 - Cyclical transmission selectable
 - Clock can be set via time and data messages

Scene with switching, valuator device, priority

- 10 possible group addresses
- 10 possible associations

Switching, priority, dim and/or value message can be transmitted on 4 channels. A scene with max. 4 objects can be controlled with the 4th channel.

- Via holiday object (blocked object) the switching program of the clock can be suppressed
- Cyclical transmission selectable

Technical Data

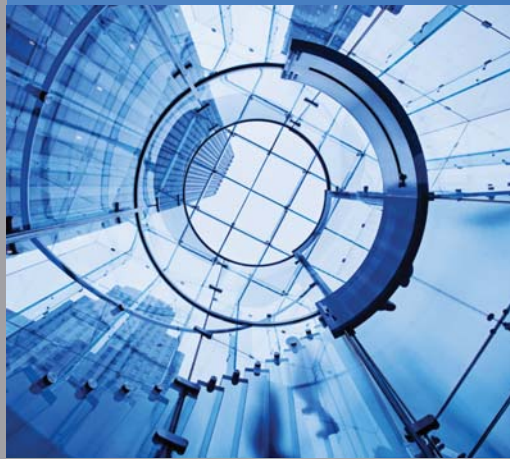
- Operating voltage: bus voltage
- Channels: 4
- Memory locations: 324 (free block formation)
- Automatic program: Day, week, year and pulse program
- Special program: 9 week programs
- Summer/winter time adjustment: automatic
- Power consumption: < 10 mA
- Power reserve: 1.5 years (lithium battery exchangeable)
- Captive hinged cover, tamper proof
- Housing: 45 x 105 x 60 mm (6 modules)

Order numbers

TSR 644S KNX 90990024

System devices

Simple and dependable – system devices for the programming and supply voltage of your KNX system



Power supply 640 mA

The KNX voltage supply generates and monitors the KNX system voltage by means of the integrated reactor. The bus line is decoupled from the KNX voltage supply. The connection to KNX is made with a bus terminal. When the reset button is pressed, a reset is triggered for 20 seconds (regardless of how long the button remains pressed). The bus line is enabled and the bus users connected to this bus line are reset to the basic status. If a longer reset is needed, the bus terminal must be disconnected from the supply voltage. A 30 V DC auxiliary voltage output is provided by an additional terminal.

Power supply 320 mA

The 320 mA voltage supply generates and monitors the KNX system voltage, via the BUS output, it supplies a bus line with max. 32 instabus users without any additional KNX reactor. The 30 V DC output is without reactance and makes possible the supply of a further line (e.g., mainline) by means of a separate KNX reactor, to be installed separately, as well as a line coupler.

Alternatively, this output can be used for the supply of further functional devices (e.g., auxiliary voltage for binary inputs). The load can be distributed to the outputs as desired; the total nominal current must not be exceeded, however. The mounting of the REG is done on a 35 mm mounting rail.

- Connection of the bus lines via KNX terminals, no data bus required
- Switch for resetting the bus line
- Colored LED for displaying operation, overload, overvoltage and reset

Power Supply 160 mA

The 160mA voltage supply generates and monitors the KNX system voltage, via the BUS output, it supplies a bus line with max. 16 instabus users without any additional KNX reactor.

The mounting of the REG is done on a 35 mm mounting rail.

- Connection of the bus lines via KNX terminals, no data bus required
- Switch for resetting the bus line
- Colored LED for displaying operation, overload, overvoltage and reset

PSS 1 Power supply
640 mA

PSS 2 Power supply
320 mA

PSS 3 Power supply
160 mA

Thea
IQ



PSS 1 EIB power supply 640 mA

PSS 2 EIB power supply 320 mA

PSS 3 EIB power supply 160 mA

Technical Data

Power supply 640 mA

Power supply: 230 V AC, 50...60 Hz

Voltage range: 195...255 V AC, 45...65 Hz

Power consumption: max. 45 VA

Dissipation: max. 6 W

Outputs:

EIB-output: 1 line with integrated reactor

EIB nominal voltage: 30 V DC ± 2 V, SELV

Auxiliary voltage output: 1 (without reactance)

Auxiliary voltage, nominal value: 30 V DC ± 2 V, SELV

Nominal current (total): 640 mA, short-circuit proof (sum of KNX and 30 V outputs)

Short-circuit current: max. 1.4 A

Mains failure ride-through interval:

min. 200 ms

Operating temperature range: -5 °C ... $+45$ °C

Degree of protection: IP 20 according to EN 60 529

Housing: 90 x 108 x 64 mm

Technical Data

Power supply 320 mA

Nominal AC voltage: 161 to 264 V AC, 50/60 Hz

Output BUS (with reactance)

Voltage: 28 to 31 V DC

max. bus cable length: 350 m for each output with reactance

Output 30 VDC (without reactance)

Voltage: 28 to 31 V DC

Nominal current: max. 320 mA for both outputs (I1 + I2).

Can be distributed as desired, shortcircuit proof

Permissible ambient temperature:

-5 °C ... $+45$ °C

Degree of protection: IP 20 according to EN 60 529

Installation width: 72 mm (4 modules)

Technical Data

Power Supply 160 mA

Power supply: 230 V AC, 50...60 Hz

Voltage range: 195...255 V AC, 45...65 Hz

Power consumption: <8 VA

Dissipation: < 3 W

Outputs:

EIB-output: 1 line with integrated reactor

EIB nominal voltage: 30 V DC ± 2 V, SELV

Nominal current (total): max. 160 mA. Can be

distributed as desired, short-circuit proof

Permissible ambient temperature:

-5 °C... $+45$ °C

Degree of protection:

IP 20 according to EN 60 529

Installation width: 72 mm (4 modules)

Order numbers:

Power supply 640 mA 90990027

Power supply 320 mA 90990026

Power supply 160 mA 90990049

System devices

Simple and dependable – system devices for the programming and supply voltage of your KNX system



USB interface USB 1

- The USB interface enables communication between a PC and the KNX system being programmed. The data transmission is indicated by the KNX LED and the USB LED. The USB can be used with ETS3 V1.0 and later.

Line Coupler LSC 1

The line coupler is used in larger installations to connect KNX lines or areas. The lines/ areas are electrically isolated from each other. At the same time, it is possible to filter out messages in order to reduce the message traffic in a line. The line coupler has bus connection terminals for the mainline and subordinate line. The linecoupler can also be used within a line as a line amplifier (repeater).

USB Interface

LSC 1 Line Coupler



Thea IQ

CONTROLLER / SYSTEM DEVICES



USB 1 interface LSC 1

Technical Data: USB 1

Power Supply : KNX
Power Consumption : <10mA
Installation Width : 2 Modules
Operation Temperature : -5C...+45C
Protection Rating : II
Protection Class : IP20



Line coupler KNX

Technical Data: LSC 1

Power Supply : KNX
Power Consumption : <10mA
Installation Width : 2 Modules
Operation Temperature : -5C...+45C
Protection Rating : II
Protection Class : IP20

Order Numbers:

USB 1 interface LSC 1 90990028
Line coupler KNX 90990029

EIB Switch Sensors



Technical Data

Power Supply: Bus Voltage
 Ambient temperature: -5°C ... +45°C
 Current Draw From Bus Voltage: max. 10 mA
 Connection: Bus terminal

Order Numbers:

Thea IQ OTO ANH 2x1 9099XX19
 Thea IQ OTO ANH 4x2 9099XX20
 Thea IQ OTO ANH 8x4 9099XX21
 (XX=00 Opaque White)
 (XX=02 Smoked)
 (XX=04 Metallic White)
 (XX=06 Black)
 (XX=08 Claret Red)
 (XX=10 Golden)
 (XX=12 Bronze)



Switch Sensors with EIB interface



The KNX switch sensors TheaIQ OTO ANH 2x1 / 4x2 / 8x4 execute switching, dimming, blinds and recall/save light scene functions over EIB line..



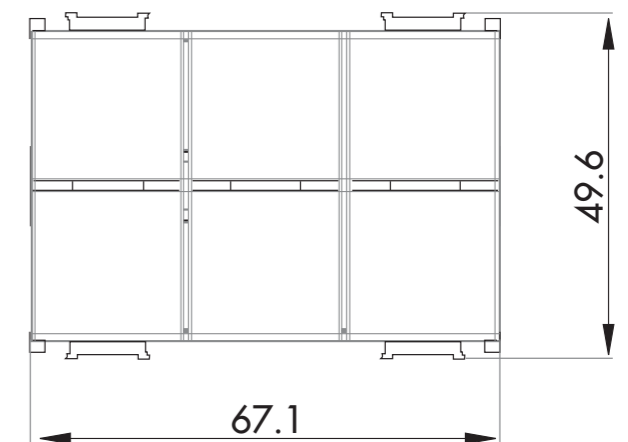
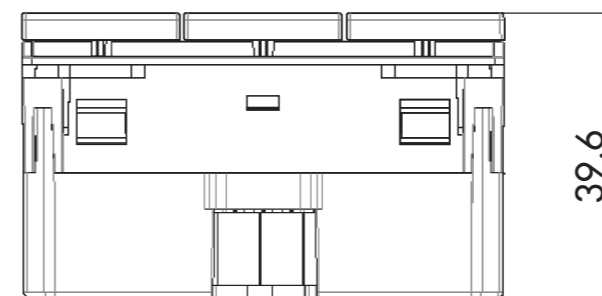
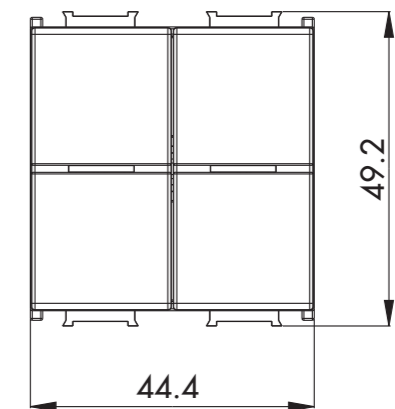
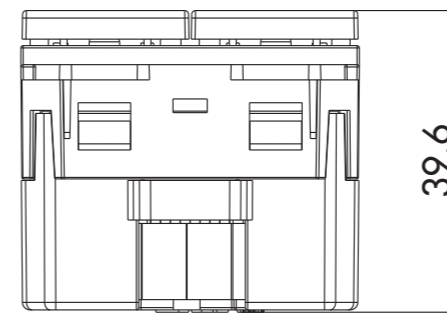
Characteristics

- Each fold execute switching, dimming, blinds and recall/save light scene functions individually.
- Each fold has its own LED to show status of object that bind in to.
- Folds can be configured via ETS as control two 1 bit objects.
- User cansendtemperature, priority, percentage, HVAC operation mode value via TheaIQ OTO ANH buttons.
- User can save own scene functions by press 3-4 seconds if fold is programmed as recall/save light scene.
- All TheaIQ OTO ANH can be located in to all series of Thea Optima and Sistema.

THEA IQ OTO ANH 2X1
 THEA IQ OTO ANH 4X2
 THEA IQ OTO ANH 8X4



Thea IQ OTO ANH

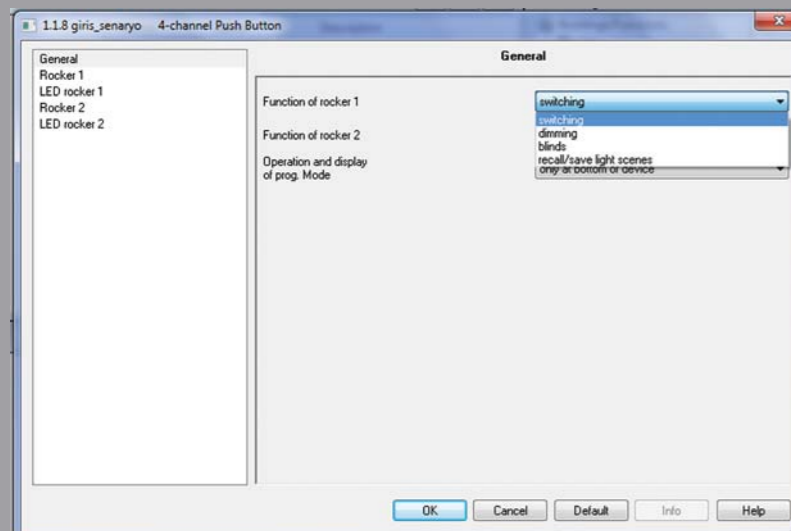


FLUSH MOUNT / SWITCH SENSOR

Application Software TSA 2x1, TSA 4x2, TSA 8x4

0	Rocker 1, blinds	Step / Stop	1/0/1	1 bit
1	Rocker 1, blinds	UP / DOWN	1/0/0	1 bit
2	Rocker 1, LED	Drive LED		1 bit
3	Rocker 2, blinds	Step / Stop	1/0/4	1 bit
4	Rocker 2, blinds	UP / DOWN	1/0/3	1 bit
5	Rocker 2, LED	Drive LED		1 bit
6	Rocker 3, blinds	Step / Stop	1/0/7	1 bit
7	Rocker 3, blinds	UP / DOWN	1/0/6	1 bit
8	Rocker 3, LED	Drive LED		1 bit
9	Rocker 4, blinds	Step / Stop	3/0/1	1 bit
10	Rocker 4, blinds	UP / DOWN	3/0/0	1 bit
11	Rocker 4, LED	Drive LED		1 bit

➤ According to its function every channel has 1-2 output objects, e. g. switches ON/OFF or blinds UP/DOWN and blinds STEP/STOP. Each channel has its own disable object.

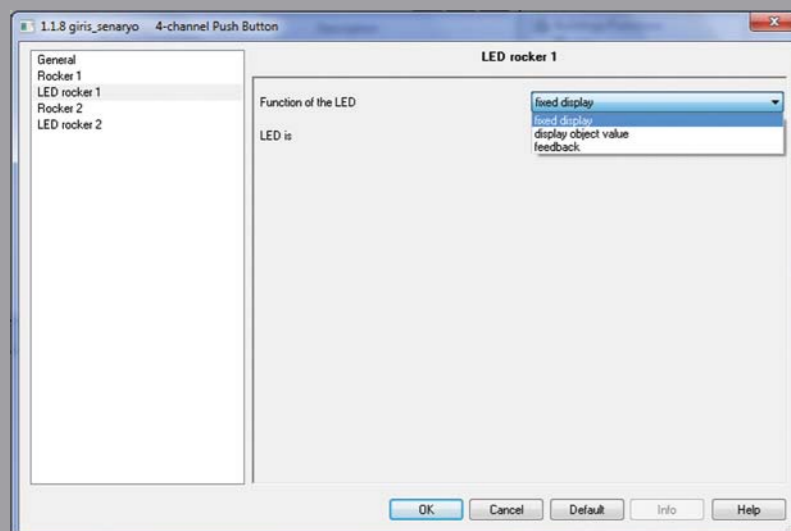


➤ Binary input functions
The following functions are available at each input:

- Switch/key
- Dimming
- Blinds
- Scene

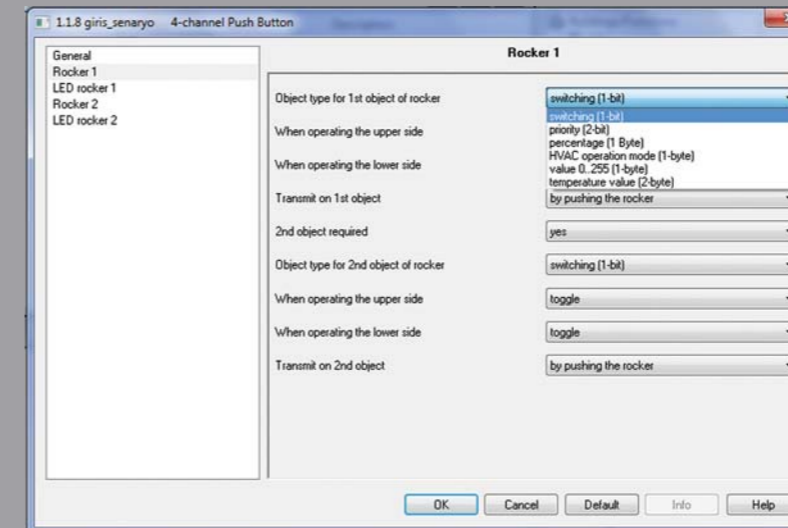
Advantage:

- Extensive functions possible on all channels



➤ LED control
Inputs can be reconfigured to LED outputs.

Application Software TSA 2x1, TSA 4x2, TSA 8x4

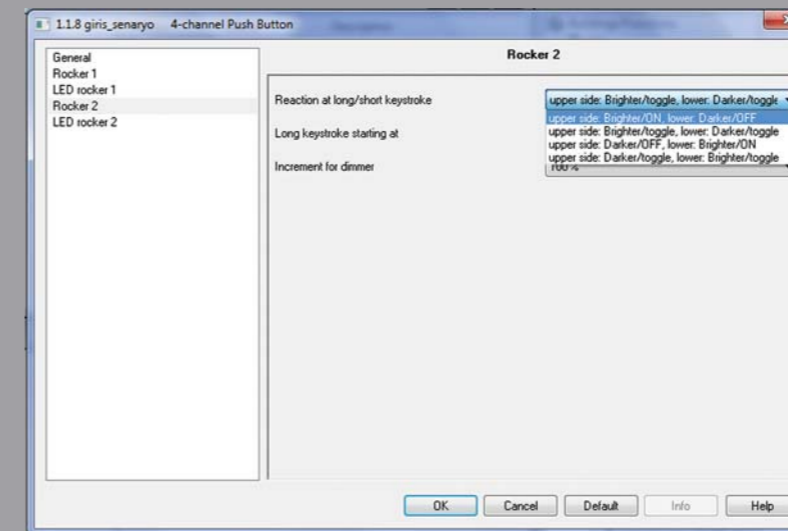


➤ On/Off Switching Functions

- Switching
- Priority
- Percentage
- HVAC operation mode
- Value 0...255
- Temperature value

Advantage:

- Different functions can be operable with two different objects per each channel.

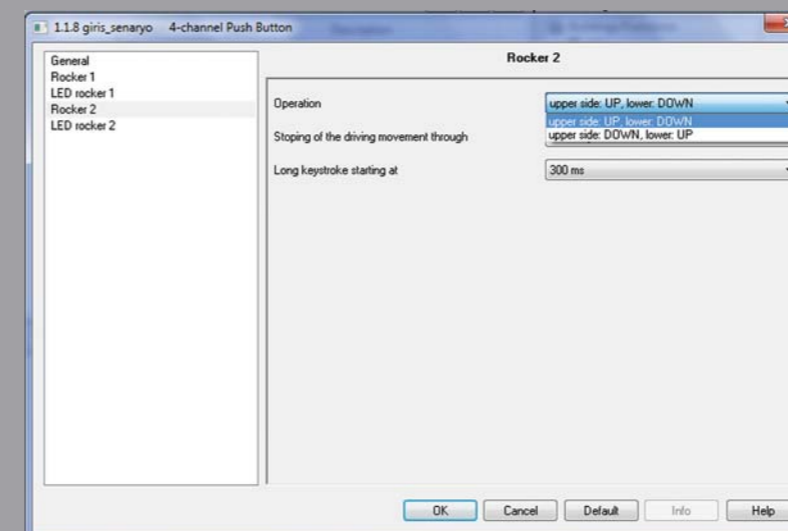


➤ Dimming function
If the function 'dimming' is selected at the input, it is possible to configure various responses to long and short keystrokes:

- Single-surface operation
- Brighter (long keystroke)/ON (short keystroke)
- Brighter/BY
- Darker/OFF
- Darker/BY

Advantage:

- Diverse dimming functions



➤ Blinds control
Setting of desired behaviour via long and short key depression.

Individual room thermostat Thea IQ Room Thermostat



Thermostat is ideal for public rooms

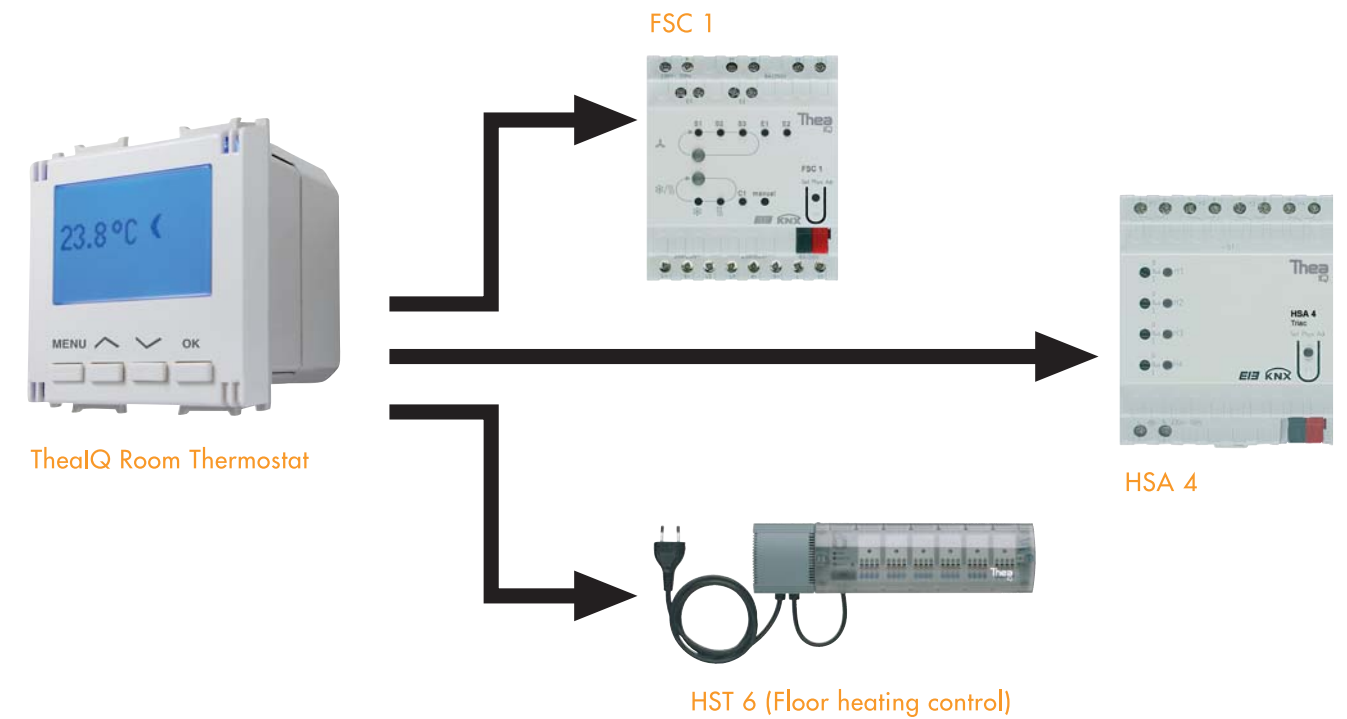


- Thea IQ digital room thermostat is an individual room controller for wall installation with integrated bus coupler.
- Thea IQ digital room thermostat can be located in to all series of Thea sistema and optima.

Thea IQ Room Thermostat
Individual room thermostat for
controlling heating actuators and
fan coil units.

Advantages

- User can use Thea IQ digital room thermostat with all Thea optima and sistema series.
- User can control heating/cooling systems by using Thea IQ digital room thermostat easily.
- Thea IQ digital room thermostat has a LCD that shows all functions, actual temperature and also date information.
- Behavior can be selected on restoration of bus power



Characteristics

- Thea IQ digital room thermostat can be used as a continuous or two point control.
- Continuous PI control can be configured for 2 stage heating (basic and additional stage, e.g. underfloor heating and radiators) or for heating and cooling (radiators and cooling surfaces).
- Objects for night operation, presence, window/frost
- LCD shows the user which functions are being carried out by the thermostat.
- User can change operation mode and set temperature via pressing buttons
- Measurable temperature range -20°C...+60°C,

Technical Data

Operating voltage: Bus Voltage
Setting range: 6 °C ... 42 °C
Permitted operating temperature: -5°C ... +45 °C
Bus connection: KNX bus terminal
Behaviour on restoration of bus power: adjustable
Protection class: II
Protection rating: IP 20
Dimensions: 44,4 x 49,1 x 37,9 mm

Order numbers:

Thea IQ Digital Room Thermostat 9099XX23
(XX=00 Opaque White)
(XX=02 Smoked)
(XX=04 Metallic White)
(XX=06 Black)
(XX=08 Claret Red)
(XX=10 Golden)
(XX=12 Bronze)

FLUSH MOUNT / SENSOR

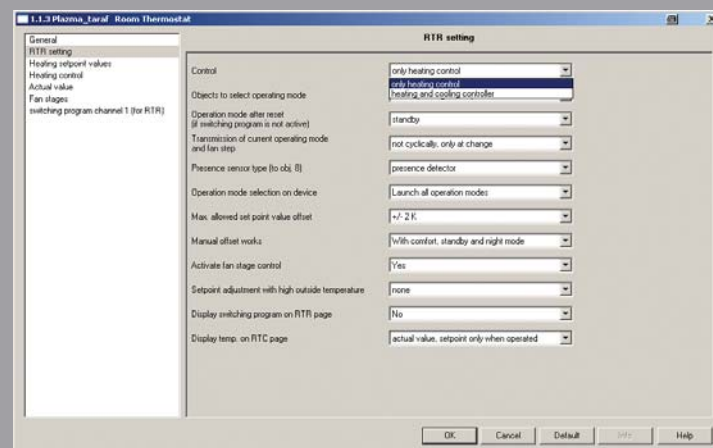
Application software Thea IQ Room Thermostat

10	Base set point value	Define set point temperature	2 Byte
11	Manual set point value offset	Send/receive manual offset	2 Byte
13	Current set point value	indicate current set point val	2 Byte
14	Actual value	Transmit actual value	2 Byte
16	Sensor failure	Report sensor failure	1 bit
17	Preselection of operating mode	Preselection of operating mode	1 bit
18	Presence	Input of presence signal	1 bit
19	window state	input for window contact	1 bit
10	Operation mode of switching program	Report internal operation mode	1 Byte
11	Lock switching program channel 1	Lock switching program = 1	1 bit
12	Current operating mode	indicate current operating mod	1 Byte
13	2 point heating actuating value	transmit current actuating val	1 bit
20	Operation mode scene	Scenes 1-16 = 0 ...15	1 Byte
22	fan step	send/receive	1 Byte
23	Fan, forced/auto	1 = forced / 0 = auto	1 bit
24	Time	Receive time	3 Byte
26	Time query	Send time and date	1 bit
27	Outside temperature	Receive outside temperature	2 Byte
28	Backlit LCD	Switching ON/OFF	1 bit

➤ The setpoint and actual values can also be sent via objects. “Operating mode/ presence/window status” or “Comfort/night/frost protection” can be selected as operating mode objects.

The three binary inputs enable the control of blinds as well as the switching of dimmers or lights.

- 20 group addresses.
- 20 associations.
- 18 objects.



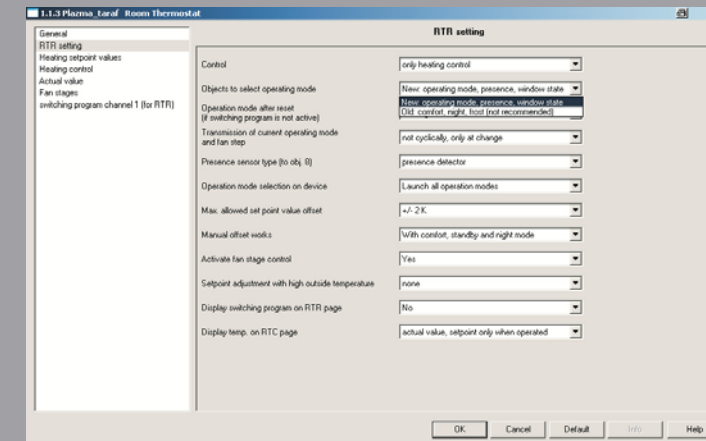
➤ Settings
The default setting is heating control only. The following control functions are available to the user:

- Heating control only
- Heating and cooling
- 2-stage heating with switching additional stage
- 2-stage heating with continuous additional stage

Advantage:

Thanks to its wide range of control functions, the Thea IQ room thermostat can be used in practically any area of application.

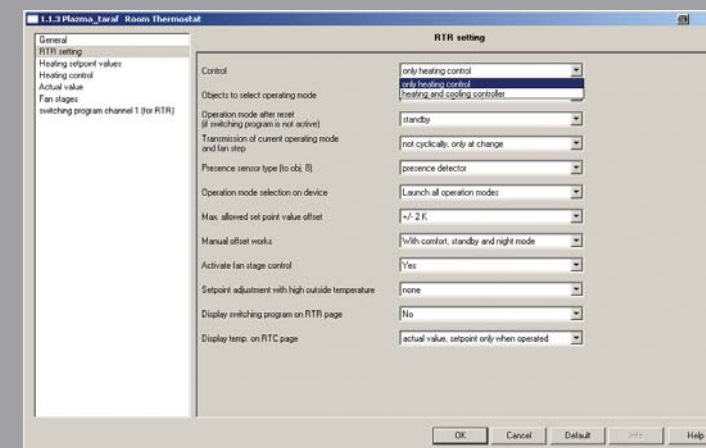
Application software Thea IQ Room Thermostat



➤ Heating control
The control parameters are set automatically by selecting system type (radiator or underfloor heating). However, experts can set the proportional band and integrated time.

Advantage:

- Easy configuration via system type
- User-defined settings allow customer-specific adjustments



➤ Operating mode
Thea IQ room thermostat supports the old objects for setting the operating modes:

- Comfort
- Night/Standby
- Frost protection

As well as the new objects:

- Operating mode pre-selection
- Presence
- Window status

Advantage:

Users can, as usual, connect group addresses or use the benefits of the new objects.

Presence detectors Thea IQ PSD 180, Thea IQ PSD 360

Presence detector for wall and ceiling installation, suitable for large rooms



Presence detector for large-area applications in classrooms, offices and public areas.

- Automatic control of lighting and HVAC
- "Genuine daylight measurement"
- Light output
- Lighting control with light threshold value and self-learning run-on time
- Choice of fully or semi-automatic operation
- Presence output for HVAC control with run-on time

Advantages

- Manual override: Lighting can be manually controlled at any time
- Genuine daylight measurement
- THEA IQ PSD 180 can be located in to all series of Thea optima and sistema

Accessories

For THEA IQ PSD 360 use EIB/KNX bus coupler (90090954)

THEA IQ PSD 180

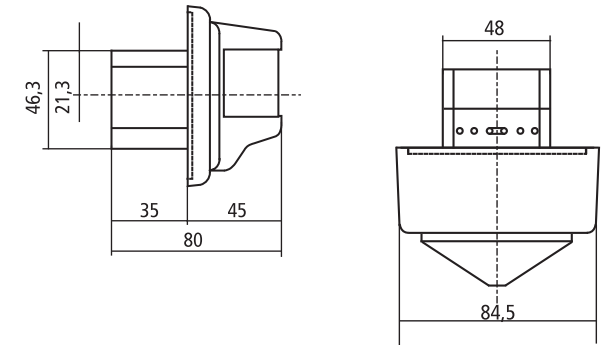
- Passive infra-red sensor for wall installation
- Detection range 180°

THEA IQ PSD 360

- Passive infra-red sensor for ceiling installation
- Square detection range 360°



THEA IQ PSD 180



THEA IQ PSD 360

Characteristics

- The switching behaviour of the presence detector is controlled by presence and light.
- The lighting switches on with darkness and presence and off with sufficient light or absence.
- Fully or semi-automatic: In "Fully automatic" mode the light switches on and off automatically according to presence and light. In "Semi-automatic" mode it must be switched on manually and switches off automatically.
- The presence detector has "Genuine light measurement" and is only suitable for switching fluorescent lamps (FL/PL).
- THEA IQ PSD 180 detects moving bodies in radius of approx. 5m.
- Presence output for HVAC control : Switching behaviour is only controlled by presence.
- Master/slave parallel switching: Several detectors can be connected with each other to increase the detection area. The master controls lighting and HVAC. All other detectors merely provide presence information as slaves.
- Master or slave operating mode is selected via configuration.
- Master/master parallel switching: Several detectors can be connected with each other to control several lighting groups.

- Every master controls its lighting group according to its own light measurements. Presence is detected by all the detectors.
- Test operating mode checks the detection range and configuration.
- The parameters are set by ETS or potentiometer.

Technical Data

Genuine daylight measurement:

Approx. 100-1600 lux can be deactivated.

Light run-on time: 30 s - 20 min

Presence run-on time: 30 s - 60 min

Mounting plate: 70 x 70 mm

Connection: Bus terminal

Size of flush-mounted socket: Socket Ø 55 mm (NIS, PMI)

Ambient temperature: +5°C ... +45°C

Protection rating: IP 20, class II

THEA IQ PSD 180

Detection range: 160° horizontal

Recommended installation height:

Approx. 1.2 m-2 m

Range: <10 m

THEA IQ PSD 360

Detection range: 360° horizontal, 120° vertical

Recommended installation height: 2.0 m- 3.5 m.

Max. range: max. 8 x 8m at a height of 2.5 m
max. 10 x 10 m at a height of 3.5 m

Order numbers:

TheaIQ PSD 180 9099XX22

(XX=00 Opaque White)

(XX=02 Smoked)

(XX=04 Metallic White)

(XX=06 Black)

(XX=08 Claret Red)

(XX=10 Golden)

(XX=12 Bronze)

TheaIQ PSD 360 90990031

KNX Bus Coupler Required ,

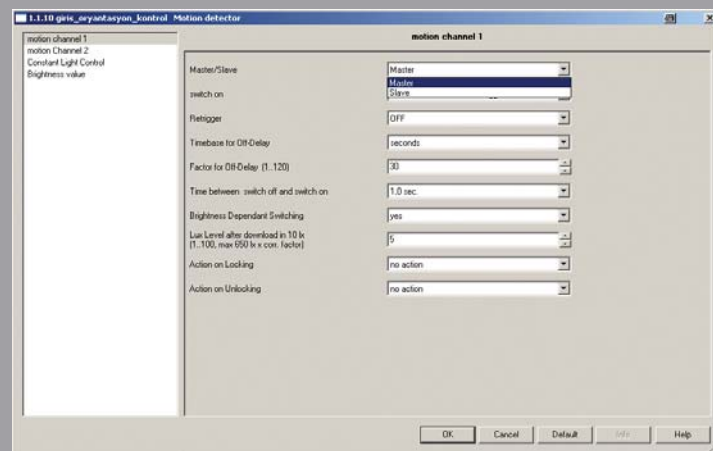
Flush-mounted installation 90090954

Application software Thea IQ PSD 180, Thea IQ PSD 360

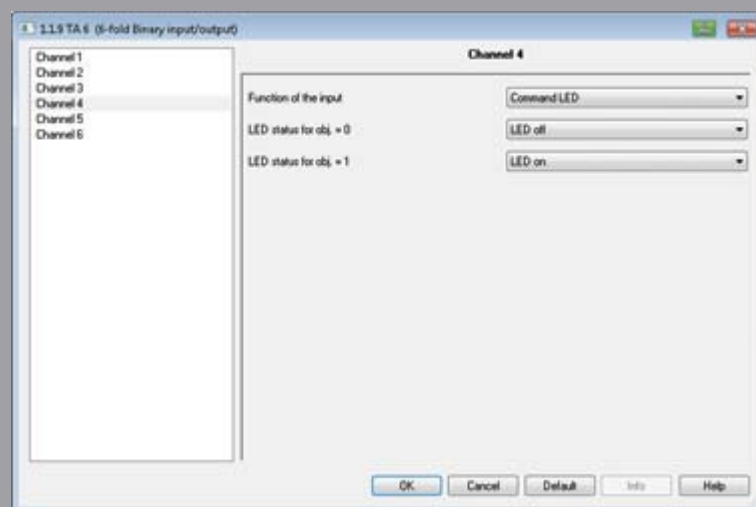
0	motion 1	Switch on motion	1 bit
1	PIR-Locking 1	PIR-Locking	1 bit
2	Master-Trigger	Input/Output	1 bit
3	recall/save lux level 1	\$01 = recall / \$81 = save	1 Byte
4	Lux Level for motion 1	Setpoint Lux Level	2 Byte
5	Constant Light Control	Dimming	4 bit
6	Locking of Constant-Light Control	Constant-Light Control Locking	1 bit
7	Lux Level for Constant Light Control	Setpoint Lux Level	2 Byte
8	recall/save lux level for light control	\$01 = recall / \$81 = save	1 Byte
9	Brightness value	Brightness value	2 Byte
10	Test Mode	Input	1 bit
11	motion 2	Switch on motion	1 bit
12	PIR-Locking 2	PIR-Locking	1 bit
13	recall /save actual lux level 2	\$01 = recall / \$81 = save	1 Byte
14	Lux Level for motion 2	Setpoint Lux Level	2 Byte

➤ TheaIQ PSD 180 has a set point lux level and PIR locking object;

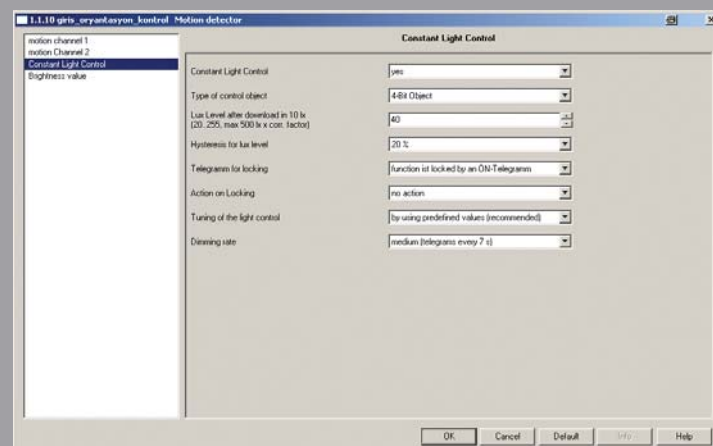
- 15 group address
- 15 possible associations
- 15 object



➤ Operating mode
 Master in individual switching mode: Presence detector works as independent device. Master in parallel switching mode: to extend the detection range additional detectors are connected as "slaves" to a "master in parallel switching mode".
 Slave: Slaves are used to extend the detection range. They supply exclusive presence information to the master.

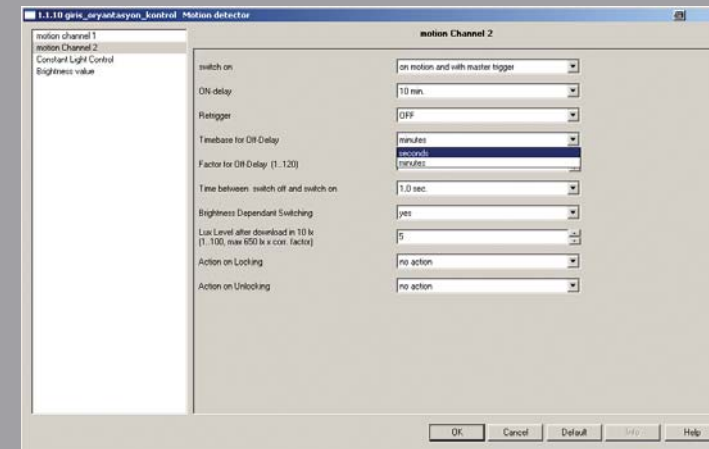


➤ Light switch output active/inactive
 Light switch output active: Presence detector operates lighting group dependent on the presence of persons and natural daylight.
 Light switch output inactive: The presence detector is not used for lighting control.

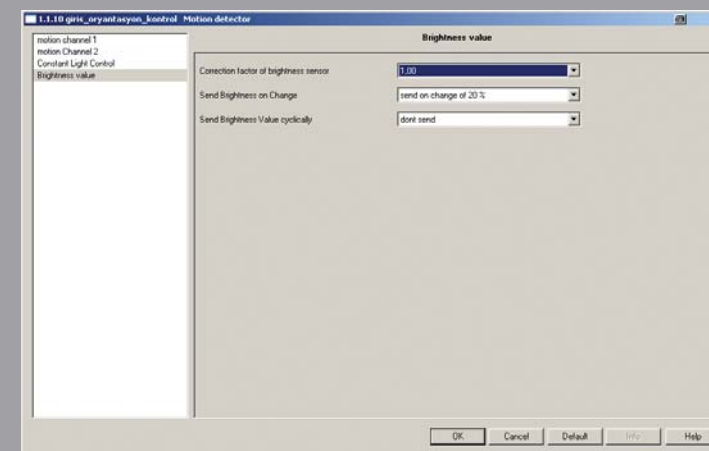


➤ Switching or constant light control
 Switching (ON/OFF)
 The light output sends an ON telegram on recognition of movement and insufficient light. An OFF telegram is sent on completion of the run-on time or in case of sufficient light.
 Constant light control
 On recognition of movement and insufficient light the light output controls the lighting to a set lighting set point value and keeps it constant with variations in daylight. A second light output can also be controlled with a brightness fill-in.

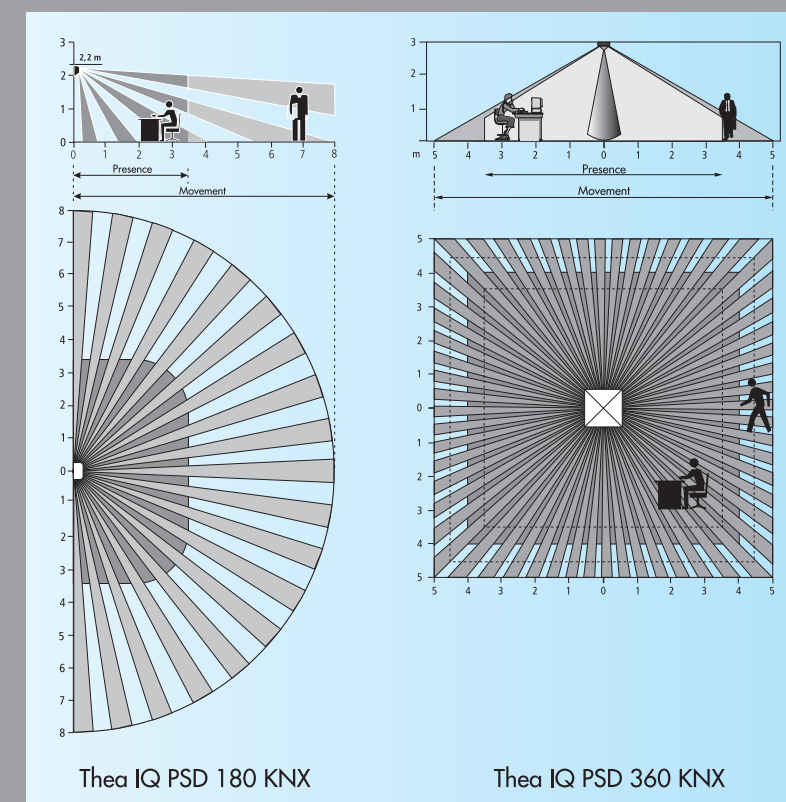
Application software Thea IQ PSD 180, Thea IQ PSD 360



➤ Time base for off delay
 Each channel has its own off delay function. Delay time can be changed as minute or second and has range between 1 to 120. Delay time is restarted in every new movement if retrigger function is selected.



➤ Brightness value
 With using correction factor of brightness value, measurement value of lux can be corrected sensitively. Brightness value can sent to the bus by changing or cyclically



➤ Detection range

Thea IQ PSD 360 KNX		
Installation height	Seated persons	Moving persons
2.0 m	4.5 m x 4.5 m	6.0 m x 6.0 m ± 0.5 m
2.5 m	6.0 m x 6.0 m	8.0 m x 8.0 m ± 0.5 m
3.0 m	7.0 m x 7.0 m	9.0 m x 9.0 m ± 0.5 m
3.5 m	8.0 m x 8.0 m	10 m x 10 m ± 1 m
4.0 m	-	11 m x 11 m ± 1 m

Universal binary inputs for flush-mounted boxes Thea IQ Binary Input 2-WAY, Thea IQ Binary Input 4-WAY, Thea IQ Binary Input 6-WAY

Small, compact binary inputs for connecting to conventional keys and switches



The key interfaces Thea IQ Binary Input 2-WAY, Thea IQ Binary Input 4-WAY and Thea IQ Binary Input 6-WAY are binary input/output devices. The devices can be installed in combination with conventional keys/switches in flush-mounted boxes. This allows all switching programs to be integrated in KNX systems.

- Free choice of functions: Switch/sensor, dimming, blinds, valuator.

Advantages

- 2, 4 to 6 way touch sensors offer optimum adaptability to the project
- Very compact design of housing
- Grooves on the side of the housing to allow more space for the switch/key clamps
- Disable objects selectable or available
- Behaviour can be selected on restoration of bus power
- Configuration similar to BSA 6 and BSE 6

Thea IQ Binary Input 2-WAY

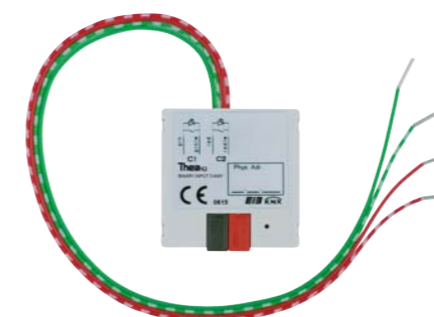
- 2-way sensor interface

Thea IQ Binary Input 4-WAY

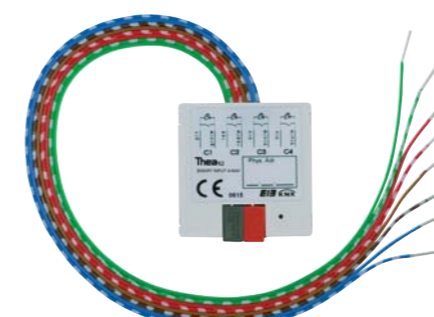
- 4-way sensor interface

Thea IQ Binary Input 6-WAY

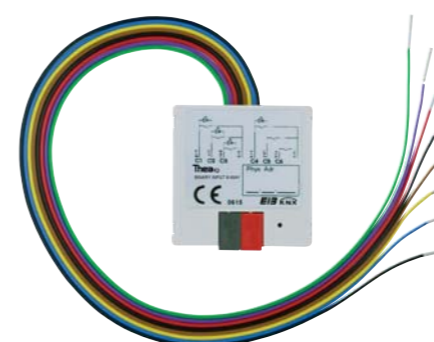
- 6-way sensor interface



Thea IQ Binary Input 2-WAY
2-way sensor interface



Thea IQ Binary Input 4-WAY
4-way sensor interface



Thea IQ Binary Input 6-WAY
6-way sensor interface

Characteristics

Thea IQ Binary Input 2-WAY

- 2-way sensor interface with two inputs for connecting to up to 2 floating contacts
- 4-pole cable connection
- Colour coding of wiring pairs
- Inputs can be reconfigured to outputs for connecting LED (with communication object) display of ON/OFF.

Thea IQ Binary Input 4-WAY

- 4-way sensor interface with four inputs for connecting to up to 4 floating contacts
- 8-pole cable connection
- Colour coding of wiring pairs
- Inputs can be reconfigured to outputs for connecting LED (with communication object) display of ON/OFF.

Thea IQ Binary Input 6-WAY

- 6-way sensor interface with six inputs for connecting to up to 4 floating contacts
- 8-pole cable connection
- Colour coding of wiring pairs
- 4 inputs can be reconfigured to outputs for connecting LED (with communication object) display of ON/OFF

Technical Data

Power supply: Bus voltage
Permitted operating temperature: $-5\text{ }^{\circ}\text{C} \dots +45\text{ }^{\circ}\text{C}$
Current draw from bus voltage: max. 10 mA
Bus connection: Bus terminal
Protection class: II
Protection rating: IP 20
Dimensions: L x W x H 37 x 37 x 10 mm
Output with LED configuration: Low current 1 mA (LED 1 mA types)
Contact voltage: 3.3 V
Contact current: 0.5 mA
Behaviour on restoration of bus power: adjustable
Max. interface extension: 5 m

Order numbers:

Thea IQ Binary Input 2-WAY KNX 90990035
Thea IQ Binary Input 4-WAY KNX 90990036
Thea IQ Binary Input 6-WAY KNX 90990037

Application software Thea IQ Binary Input 2-WAY, Thea IQ Binary Input 4-WAY, Thea IQ Binary Input 6-WAY

0	Channel 1 switching	Switch ON/OFF	1 bit
2	Channel 1 lock	lock	1 bit
3	Channel 2 switching	Switch ON/OFF	1 bit
5	Channel 2 lock	lock	1 bit
6	Channel 3 switching	Switch ON/OFF	1 bit
8	Channel 3 lock	lock	1 bit
9	Channel 4 switching	Switch ON/OFF	1 bit
11	Channel 4 lock	lock	1 bit
12	Channel 5 switching	Switch ON/OFF	1 bit
14	Channel 5 lock	lock	1 bit
15	Channel 6 switching	Switch ON/OFF	1 bit
17	Channel 6 lock	lock	1 bit

➤ According to its function every channel has 1–2 output objects, e.g. switches ON/OFF or blinds UP/DOWN and blinds STEP/STOP. Each channel has its own disable object.

- 20 group addresses
- 20 possible associations
- 18 objects

➤ Binary input functions
The following functions are available at each input:

- Switch/key
- Dimming
- Blinds
- Valuator
- LED control

Advantage:

- Extensive functions possible on all channels

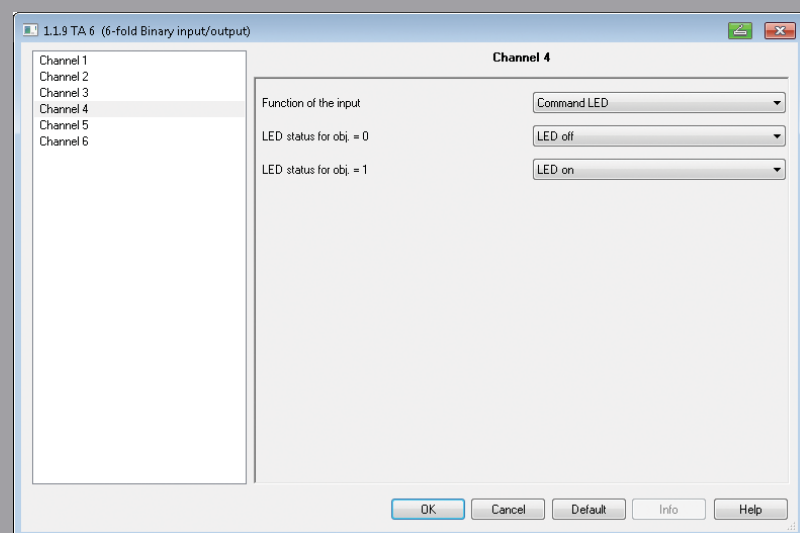
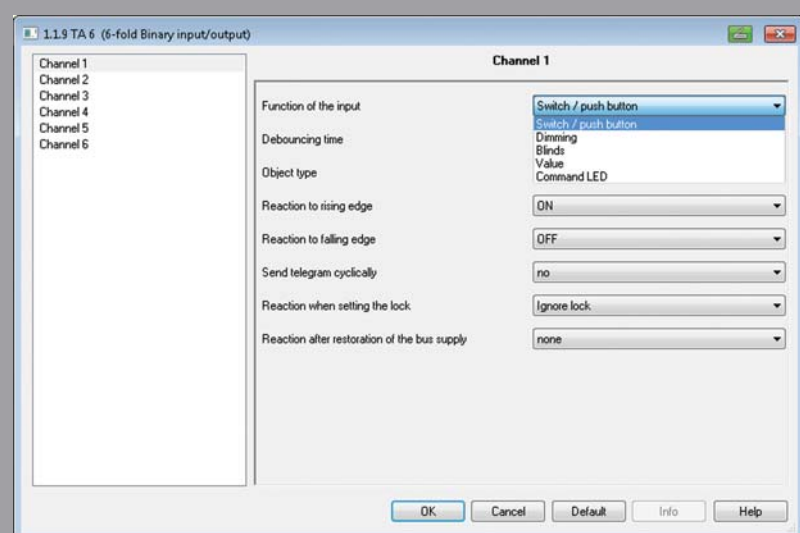
Disable object

Various responses can be configured for each channel for when the lock is set:

- Ignore lock
- No response when the lock is set
- Response the same as after rising edge
- Response the same as after falling edge

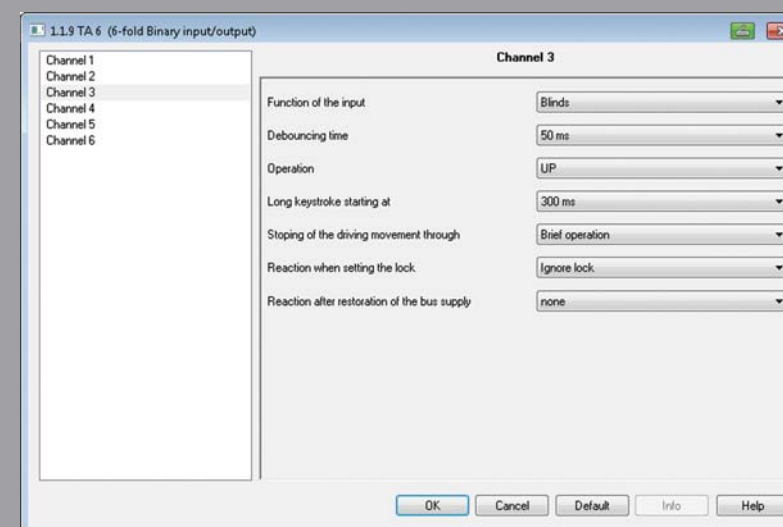
Advantage:

- The disable object can be used flexibly in a number of ways for each channel

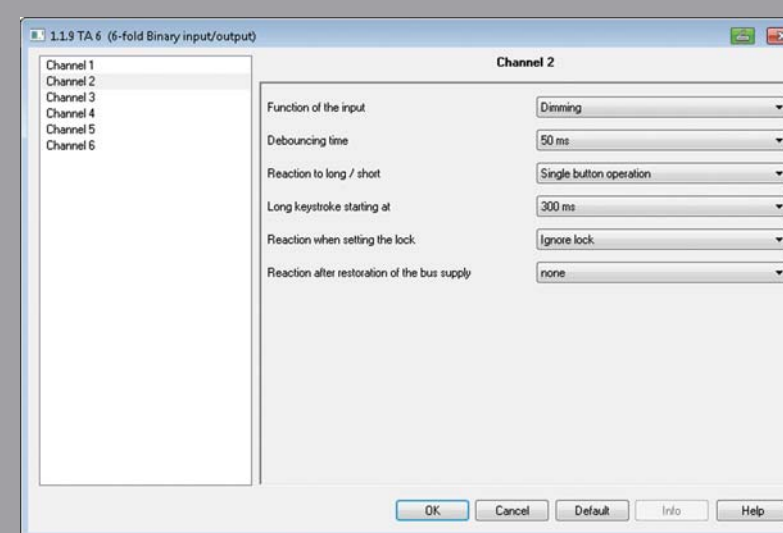


➤ LED control
Inputs can be reconfigured to LED outputs.

Application software Thea IQ Binary Input 2-WAY, Thea IQ Binary Input 4-WAY, Thea IQ Binary Input 6-WAY



➤ Blinds control
Setting of desired behaviour via long and short key depression.

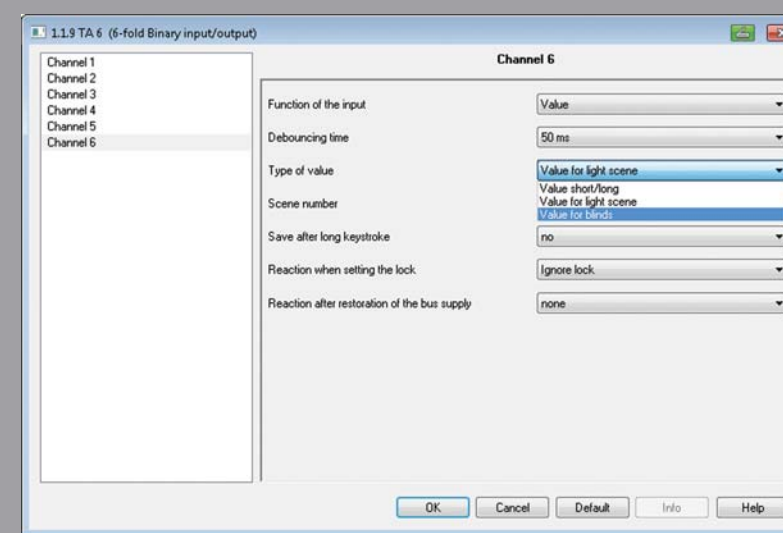


➤ Dimming function
If the function "dimming" is selected at the input, it is possible to configure various responses to long and short keystrokes:

- Single-surface operation
- Brighter (long keystroke)/ON (short keystroke)
- Brighter/BY
- Darker/OFF
- Darker/BY

Advantage:

- Diverse dimming functions



➤ Valuator function
Various configuration types can be created using the valuator function:

- Valuator short/long (various values for short/long keystroke)
- Percentage valuator (percentage value is sent)
- Valuator for light setting (scene number is sent)
- Valuator for blinds (height and slat values sent in %)

Repeat last telegram received

In addition, there are special functions for a long keystroke, such as:

- Send another value
- Save light setting
- etc.

Advantages

- Diverse and flexible use of the inputs

3 channel brightness sensor GIS 1

When comfort is called for – the intelligent lighting control



Characteristics

- Brightness sensor with 4 scenes
 - Measuring range 1–100 lux or 100–20.000 lux-selectable
 - Measuring range can be divided into 4 areas by 3 steps
 - Each subdomain can be allocated a light scene from 3 switching objects and 1 dim object
 - Adjustable special scene, retrievable via the holiday object
- Brightness sensor with 3 thresholds
 - 3 integrated triggers
 - Adjustable threshold between 1 and 20.000 lux
 - The behavior when the threshold value is not reached or and/or exceeded can be set with the following parameters; no message, ON message, OFF message, ON message (transmit cyclically), OFF message (transmit cyclically)
 - Further parameters: hysteresis, delay time, cycle time
 - Blocking object blocks transmission per channel

Possible applications

- Control of several lines of fluorescent luminaires
- With the brightness sensor max. four different brightness steps can be monitored.

Technical Data

Threshold values, dimming stages and switching delay settable via software
 Operating voltage: bus voltage
 Range: 1–20.000 Lux
 Switching delay: 8–240 s
 Product consumption: < 10 mA
 Permissible ambient temperature: -5 °C ...+45 °C (-5T45)
 Degree of protection: IP 20 in accordance with EN 60529
 Length of sensor line (max.): approx. 100 m
 Cross-section sensor line: 2 x 0.75 mm²
 Captive hinged cover, tamper proof
 Housing: 45 x 35 x 60 mm (2 modules)

Order numbers:

GIS 1-3 Channel
 Brightness Sensor 90990058



GIS 1

Application software GIS 1

Address	Device	Address	Device	Object	Object Type
01.01.008	Luna 130 EIB	130 9 200	brightness sensor with 3 thresholds		
0	switch at threshold 1	channel 1			1 Bit
1	switch at threshold 2	channel 2			1 Bit
2	switch at threshold 3	channel 3			1 Bit
3	input inhibit telegram	inhibit			1 Byte
01.01.009	Luna 130 EIB	130 9 200	brightness sensor with 4 scenes		
0	send value	value object			1 Byte
1	send switching teleg.	switching object 1			1 Bit
2	send switching teleg.	switching object 2			1 Bit
3	send switching teleg.	switching object 3			1 Bit
4	inhibit	inhibit			1 Byte

There are 2 different applications:

Brightness sensor with three thresholds

- 6 group addresses
- 5 possible associations
- 4 objects

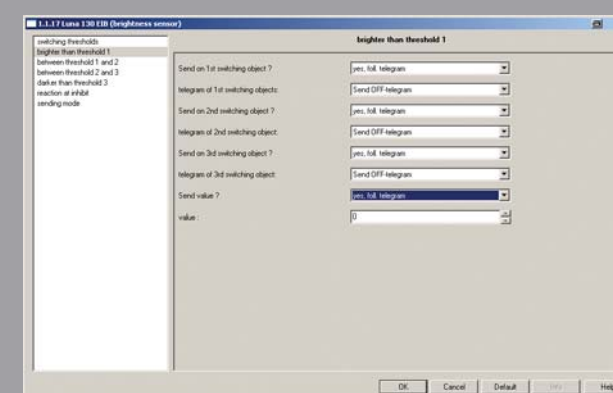
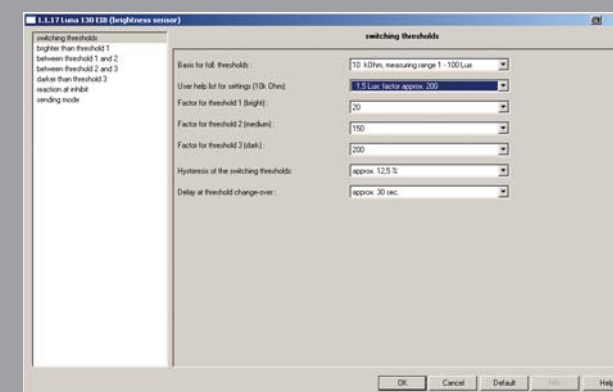
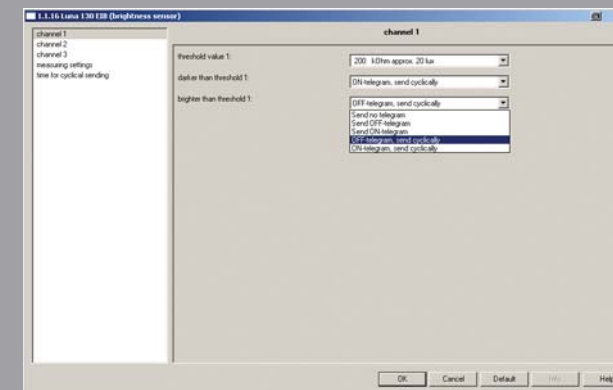
Brightness sensor with 4 scenes

- 6 group addresses
- 5 possible associations
- 5 objects

Brightness sensor with 3 thresholds
 Upon reaching the threshold, if wanted, a switch telegram (1 bit) is transmitted singly or cyclically.

Brightness sensor with 4 scenes
 First, the 3 switch thresholds from 1–100 Lux or 100–20.000 Lux can be selected. Additionally, the hysteresis and the delaytime when reaching the threshold is defined.

Brightness sensor with 4 scenes
 Between each of the thresholds, up to 4 telegrams can be transmitted contemporarily. Three of them are switch telegrams (1 bit) and 1 is a value telegram (1 byte).



Weather station

What ever the weather – processes measured values of wind, rain, brightness and temperature in one device



This combination weather station may be used to measure brightness, temperature, rain and wind. The various threshold values may be selected in any combination, e.g. wind and brightness only.

7 different channels can be used, each with adjustable threshold values. 4 of these are universal channels that allow any combination of the measurement variables, and 3 sun protection channels that are optimized especially for blind, awning and roller shutter applications.

The automatic sun protection controls the blinds/shutters/awnings independently during the day, without any intervention necessary. When a threshold is reached, two separate telegrams can be sent, e.g. for height and slant of a blind or a valve and switch telegram.

Advantages

- Only one weather station in a housing that records all variables and evaluates them.
- Can be connected directly to existing bus lines. This makes further cabling unnecessary.
- Any parameterization of the various channels possible
- Sun protection for up to 3 sides of the building is possible
- All weather data can be displayed via the VARIA multifunctional display.

Weather station
Combination device for commercial units as well as for larger family houses



Thea
IQ

Characteristics

- Records wind, rain, brightness and temperature.
- Ultra sensitive rain sensor. A delay can be set for after rain has stopped to prevent unnecessary movement of blinds.
- Measured variables can be transmitted directly to the bus and for example, displayed via the multifunctional display and V ARIA operating unit.
- Wind, brightness, temperature are each transmitted as 2-byte values, rain as 1 bit.
- Wind can be transmitted either in m/s or km/h.
- The data are evaluated in the device itself.
- Power supply from bus voltage and 230V.
- Brightness range 1 – 100.000 lux.
- Temperature range $-20\text{ °C} \dots +55\text{ °C}$.
- 4 universal channels.
- 3 sun protection channels (specifically for blind and shutter application). Integrated bus coupler
- Integrated heater for rain sensor
- Automated sun protection mechanism for independent control of blind, awning etc.
- The brightness threshold teach-in features are user-friendly and enable the customer to retrospectively define the threshold with the keystroke. This does not require the weather station to be re-configured.

- The automated sun protection mechanism independently controls the blind (shutter/awning) during the day without no manual intervention. When a threshold is reached, two separate telegrams can be sent, e.g. for height and slat of a blind or a valve and switching telegram.
- The different channels can have any configuration.

Technical Data

Measure range: $-20\text{ °C} \dots +55\text{ °C}$

Brightness range: 1–100.000 Lux

Light detection angle: 150 °

Operating voltage: Bus voltage and 230 V necessary for heating

Product consumption: $\leq 10\text{ mA}$

Degree of protection: IP44 (EN 60529)

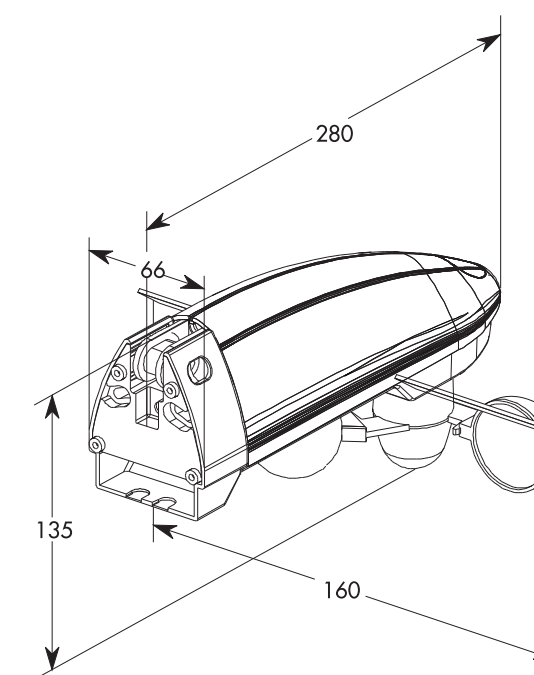
Housing: 280 x 160 x 135 mm

Order numbers:

Weather station KNX 90990056



Sensors

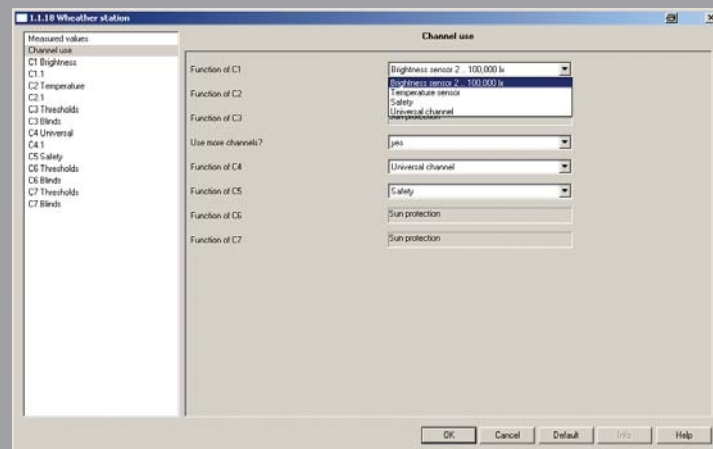


Application software Weather station

0	Physical value	Brightness value	2 Byte
1	Physical value	Temperature value	2 Byte
2	Physical value	Wind velocity	2 Byte
3	Rain / no rain	Rain sensor	1 Bit
4	switch	C1.1 Brightness threshold	1 Bit
7	Input	C1 set brightn. threshold	1 Byte
8	switch	C2.1 Temperature threshold	1 Bit
12	drives up/down	C3 up/down	1 Bit
13	Height	C3 Blinds	1 Byte
14	Position	C3 Slats	1 Byte
15	Morning=1 / Evening=0	C3 Sun control	1 Bit
16	Input	C3 Safety	1 Bit
17	Input	C3 set brightn. threshold	1 Byte
40	report	Brightness thresholds	2 Byte

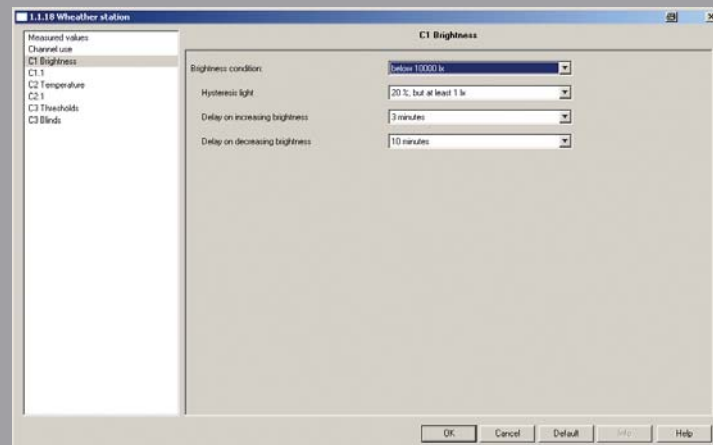
➤ The individual physical values (brightness, temperature, wind) along with the message whether or not it is raining can be transmitted on the bus. The brightness thresholds can also be input via object.

- 108 group addresses
- 108 possible associations
- 41 objects



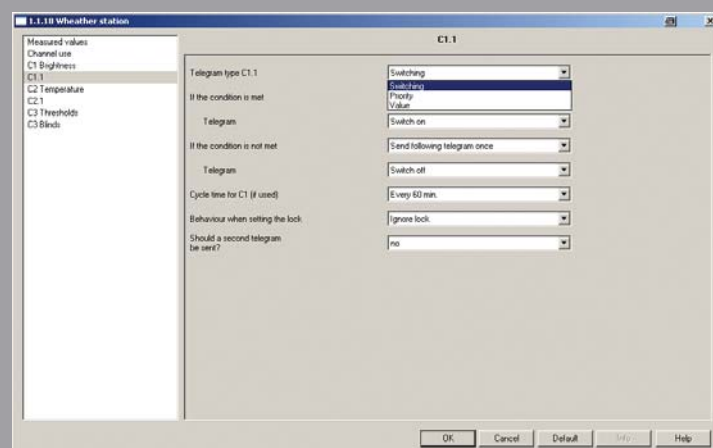
➤ Channel use
There are 7 channels available, of which 3 channels are preprogrammed for sun protection, e.g. for east, south, west directions. The 4 remaining channels may be parameterized as

- brightness sensor
- temperature sensor
- safety channel (OR operation of wind, temperature, rain)
- universal channel (AND operation of brightness, wind, temperature and rain)



➤ Channel use of the brightness sensor
The brightness threshold may lie between 2 and 90.000 Lux. Additionally, the hysteresis and the delay time is set.

- Advantage:**
- Simplest parameterization of the brightness condition



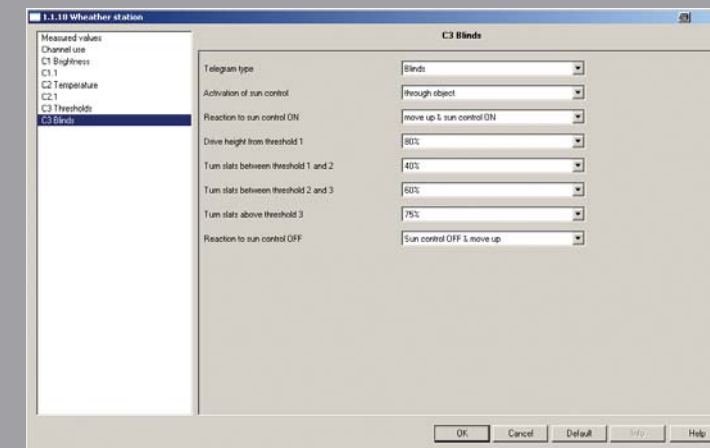
➤ Reaching the threshold
When a parameterized threshold or condition is reached, a

- switching command (1 bit)
- priority (2 bit)
- value telegram (1 byte)

can be transmitted as desired. In so doing, it is differentiated if the condition is fulfilled or not.

- An independent second telegram (1 bit, 2 bit or 1 byte) can likewise be transmitted.

Application software Weather station



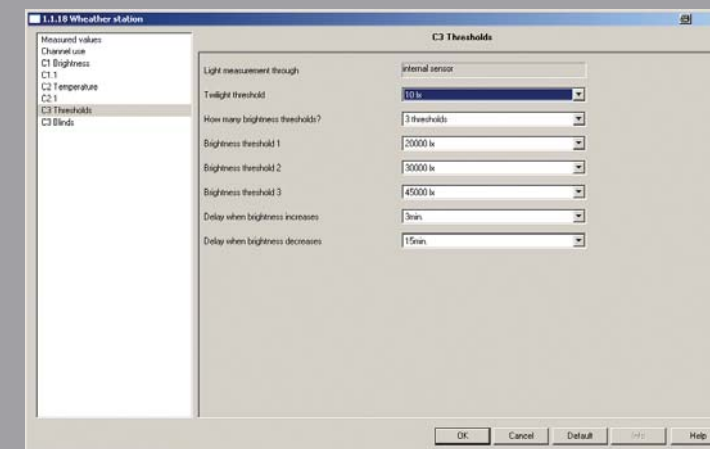
➤ Sun protection
The sun protection function allows you to choose between:

- Blinds
- Roller shutter/textile sun protection
- Sending value
- Scenes via 1 bit telegrams

The automatic sun protection can be activated via object or twilight threshold.

Advantage:

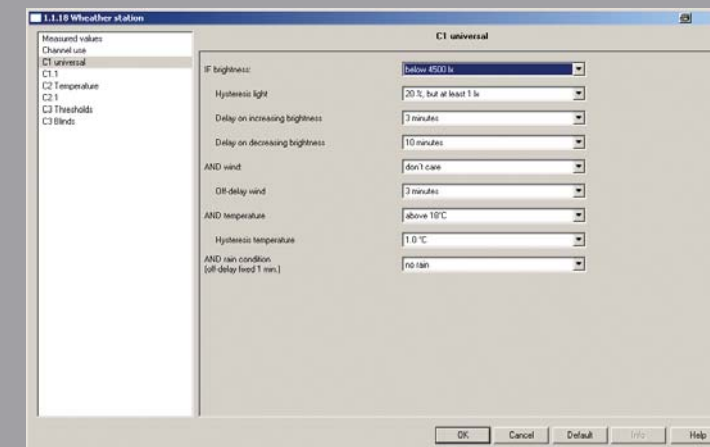
- Comfortable automatic control of the sun protection without manual intervention



➤ Threshold for sun protection function
The twilight threshold is used for activating the automatic sun protection. In addition, up to 3 brightness thresholds can be parameterized that represent the conditions for the automatic sun protection.

Advantage:

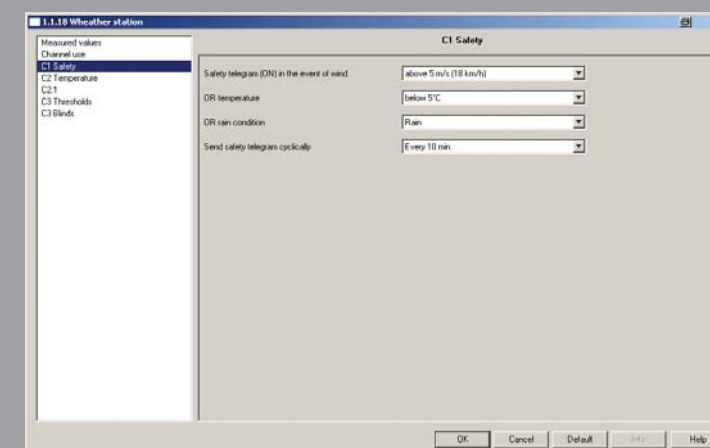
- With increasing brightness, the hanged elements (blinds, shutters) are moved to parameterized values to attain comfortable lighting conditions.



➤ Universal channel
The individual measurement variables of brightness, wind, temperature and rain can be combined as desired (AND-operation). When so doing, all 4 measurement values or any selection of the individual measurement variables can be combined.

Advantage:

- Each and every situation can be described
- The user remains very flexible



➤ Safety channel
The safety channel can combine wind, temperature and rain in any way desired (OR-operation). Should one of the set conditions apply, the safety telegram is transmitted.

Advantage:

- The safety channel can be combined ideally with the sun protection channel for controlling awnings, blinds, etc.

Presence Detector PSD 2- IR DUAL-EIB

Presence detector for ceiling installation for automatic control of 2 lighting groups



Presence detector for large-area applications in classrooms, offices and public areas.

- Realisation of daylight controls with two different light bands as well as two light set point values for example
- Depending on user behaviour the self-learning run-on time varies between the set minimum value and 15 mins.
- Square detection range, 360°
- Automatic control of two lighting groups
- Double "Genuine daylight measurement"
- Two light outputs
- Lighting control with two light threshold values and self-learning run-on time
- Choice of fully or semi-automatic operation

Advantages

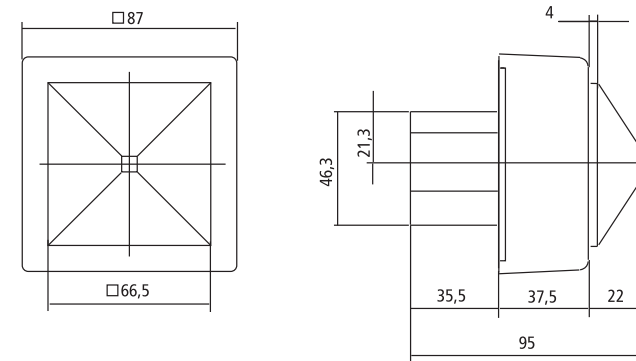
- The self-learning run-on time adjusts to user behaviour.
- Manual override: Lighting can be manually controlled at any time
- The square detection range allows accurate and simple planning.

PSD 2-IR DUAL-EIB

- Passive infra-red presence detector for ceiling installation
- 2 lighting groups can be controlled automatically



PSD 2-IR DUAL-EIB



Thea
IQ

Characteristics

- The switching behaviour of the presence detector is controlled by presence and light.
- The lighting switches on with darkness and presence and off with sufficient light or absence.
- Fully or semi-automatic: In "Fully automatic" mode the light switches on and off automatically according to presence and light. In "Semi-automatic" mode it must be switched on manually and switches off automatically.
- The presence detector has double "Genuine light measurement" and is only suitable for switching fluorescent lamps (FL/PL).
- Master/slave parallel switching: Several detectors can be connected with each other to increase the detection area. The master controls lighting and HVAC. All other detectors merely provide presence information as slaves.
- Master/master parallel switching: Several detectors can be connected with each other to control several lighting groups. Every master controls its lighting group according to its own light measurements. Presence is detected by all the detectors.
- Master or slave operating mode is selected via configuration.
- Test operating mode checks the detection range and configuration.
- The parameters are set by ETS or potentiometer.

Accessories

- Suitable bus coupler KNX
- A suitable AP frame is available for surface mounted installation.
- Ceiling installation with QuickFix installation housing for false ceilings with round cover or square cover
- Ceiling installation with QuickFix installation housing for concrete ceilings with round cover or square cover

Technical Data

Detection range: 360° horizontal, 120° vertical
 Recommended installation height: 2.0 m–3.5 m
 Max. range: max. 8 x 8 m at a height of 2.5 m
 max. 10 x 10 m at a height of 3.5 m
 Genuine daylight measurement:
 approx. 100–1600 lux can be deactivated, approx. 25–200 lux (extended)
 Light run-on time: 30 s–20 min
 Assembly plate: 70 x 70 mm
 Connection: bus terminal
 Size of flush-mounted socket: Socket Ø 55 mm (NIS, PMI)
 Ambient temperature: +0 °C... +45 °C
 Protection rating: IP 40

Order numbers:

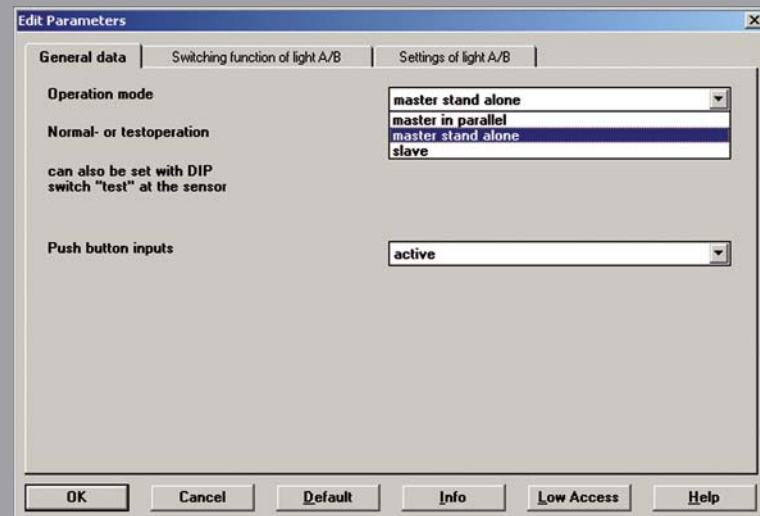
PSD 2-IR DUAL-EIB 90990032
 KNX BCU bus coupler required,
 flush-mounted installation 90990054

Application software PSD 2-IR DUALEIB

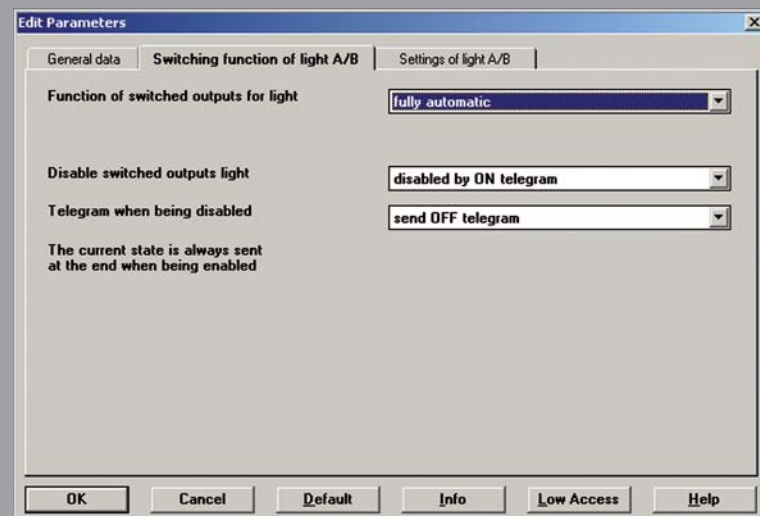
0	Light A	Switched output	1 Bit
1	Light B	Switched output	1 Bit
2	Push button A	Input	1 Bit
3	Push button B	Input	1 Bit
5	Disable light	Input	1 Bit

➤ Each with its own switching object for light A and light B as well as a key object for key A and key B.

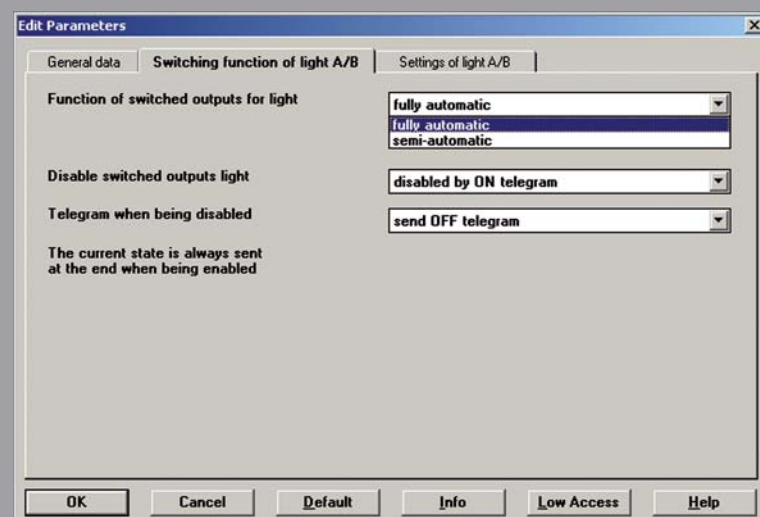
- 6 group addresses
- 6 possible associations
- 6 objects



➤ Operating mode
 Master in individual switching mode:
 Presence detector works as independent device. Master in parallel switching mode: to extend the detection range, additional detectors are connected as "slaves" to a "master in parallel switching mode" or several "masters in parallel switching mode" are connected with each other. Slave:
 Slaves are used to extend the detection range. They supply exclusive presence information to the master.

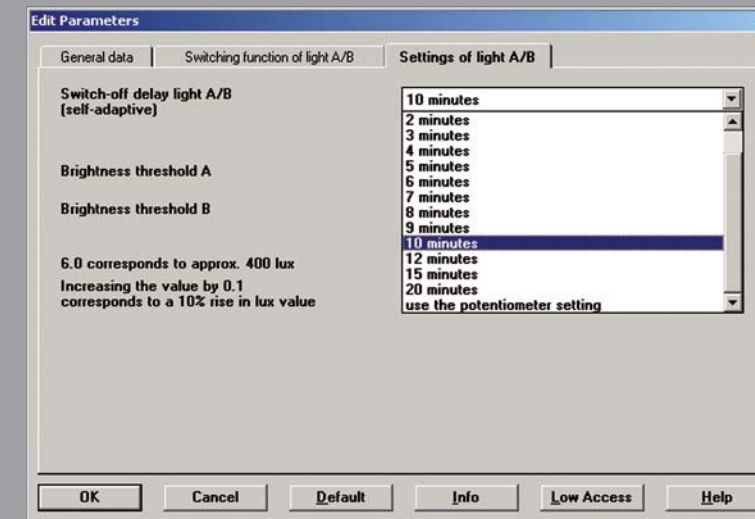


➤ Light switching outputs
 Switching behaviour is controlled by presence and daylight. With darkness and presence there is an ON telegram, with light or absence an OFF telegram. The telegrams can be suppressed if required.

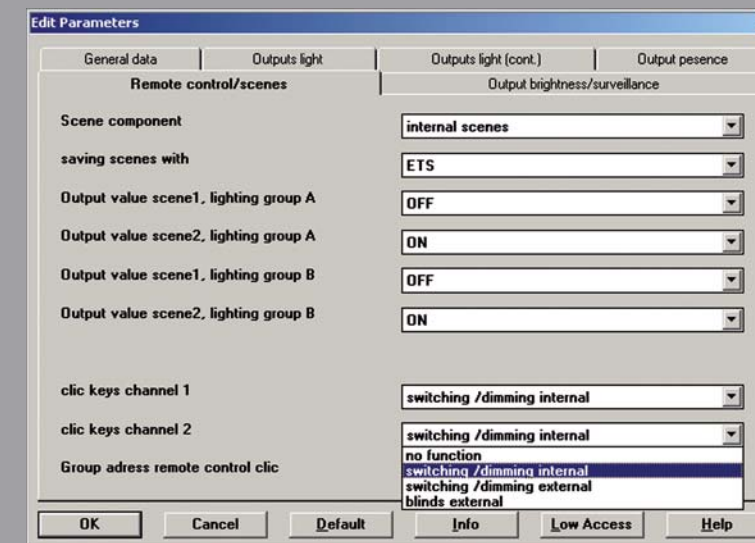


➤ Fully or semi-automatic
 In the "fully automatic" operating mode the light switching output automatically switches the lighting On and OFF depending on presence and ambient lighting. In the "Semi-automatic" operating mode switching must always be completed manually using a key. Switch off occurs automatically.

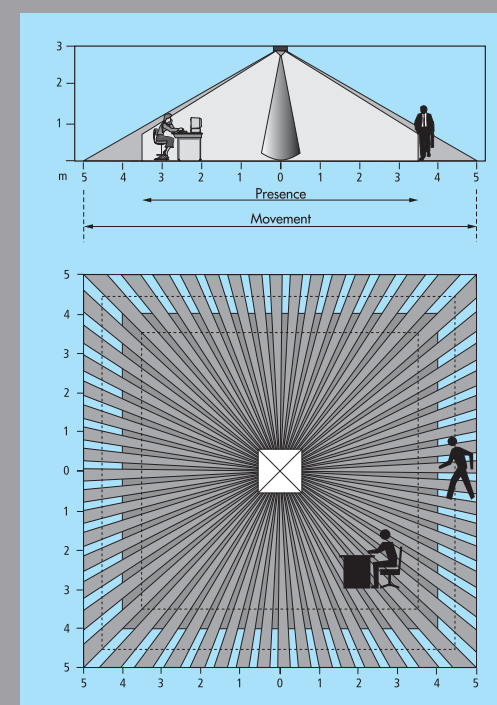
Application software PSD 2-IR DUALEIB



➤ Run-on time
 The desired light run-on time can be set for between 30 sec. and 20 mins. It is restarted with every new movement. The run-on time changes on auto-learning basis for settings between 2 - 15 mins. Depending on user behaviour it varies between the set minimum value and 15 mins.



➤ Light threshold value
 The desired light switching value can be set between 25 and 1600 lux or deactivated. The genuine daylight measurement only registers daylight, artificial light from FL and PL lights is suppressed.



➤ Detection range

Installation height	Seated persons	Moving persons
2.0 m	4.5 m x 4.5 m	6.0 m x 6.0 m ± 0.5 m
2.5 m	6.0 m x 6.0 m	8.0 m x 8.0 m ± 0.5 m
3.0 m	7.0 m x 7.0 m	9.0 m x 9.0 m ± 0.5 m
3.5 m	8.0 m x 8.0 m	10 m x 10 m ± 1 m
4.0 m	-	11 m x 11 m ± 1 m

Application software motion detector KNX

The automatic lighting control that combines safety and comfort with economy



The easy to use presence detector for use in hallways and corridors.

- Passive infrared presence detector for ceiling installation.
- Square detection area, 360°, max. 30 x 4,5 m.
- Mixed light measurement.
- Two light outputs for controlling two lighting groups.
- Switching or constant light control.
- Choice of fully or semi-automatic operation.
- Presence output for HVAC control with switch on delay and run-on time.
- Room monitoring with selective movement detection.
- Integrated bus coupling.
- QuickSet plus service remotecontrol (optional).
- Clic user remote control (optional).

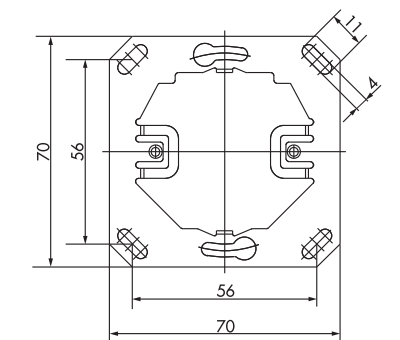
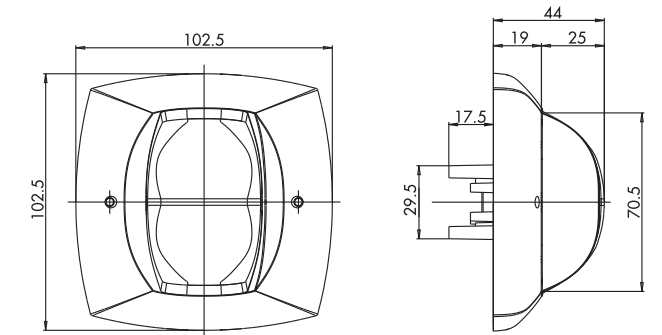
Advantages

- Reduction in the number of detectors thanks to the large detection area.
- The self-learning run-on time adjusts to user behaviour.
- Manual override: Lighting or dimming can be manually controlled at any time.
- The square detection area allows accurate and simple planning.

Motion detector KNX
Ceiling presence detector for controlling up to 2 lighting groups as well as output to HVAC control.



Motion detector KNX



Characteristics

- The switching behaviour of the presence detector is controlled by presence and light, as required in switching or constant light control operating modes.
- In the "Switching" operating mode, the lighting switches on with darkness and presence and off with sufficient light or absence. In the "constant lightcontrol" operating mode the sensor controls the artificial light daylight-dependent on a constant lighting level.
- Fully or semi-automatic: In "Fully automatic" mode the light switches on and off automatically according to presence and light. In "Semi-automatic" mode it must be switched on manually and switches off automatically.
- The presence detector has a mixed light measurement and is suitable for controlling the following types of lamp: fluorescent lamps (FL/PL), halogen and glow lamps.
- Presence output for HVAC control: Switching behaviour is only controlled by presence.
- The switch-on delay prevents instantaneous switch on. The presence output only switches after the delay is completed.
- The monitoring output works with reduced sensitivity and indicates the presence of persons with a high level of accuracy.
- The light output makes the light information available for visualisation purposes.
- Master/slave parallel switching: Several detectors can be connected with each other to increase the detection area. The master controls lighting and HVAC. All other detectors merely provide presence information as slaves.
- Master/master parallel switching: Several detectors can be connected with each other to control several lighting groups. Every master controls its lighting group according to its own light measurements. Presence is detected by all the detectors.
- Master or slave operating mode is selected via configuration.
- Test operating mode checks the detection range and configuration.

Technical Data

Detection range: 360° horizontal , 120° vertical
Recommended installation height:
2.0 m – 3.0 m
Maximal range:
max. 30 x 4 m at a height of 2.5 m
max. 30 x 5 m at a height of 3.5 m

Mixed light measurement: approx. 10 – 1500 lux
Light run-on time: 30 s – 20 min
Light stand-by time: 0 sec. – 60 mins/on
Presence run-on time: 30 s – 120 min
Presence switch on delay: 0 s – 30 min

Assembly plate: 70 x 70 mm
Bus connection: Bus terminal
Size of flush-mounted socket:
Socket Ø 55 mm (NIS, PMI)
Ambient temperature: +0 °C... +50 °C
Protection rating: IP 40

Order numbers:

Motion detector KNX 90990057

Application software motion detector KNX

0	switching	Output light A	1 Bit
8	disable/enable	Outputs light A,B	1 Bit
9	switching	Output presence	1 Bit
10	disable/enable	Output presence	1 Bit
12	scene 1/2	Input scene	1 Bit
19	blinds up/down	IR external channel 2	1 Bit
20	lamella open/close	IR external channel 2	1 Bit
21	report	Surveillance	1 Bit
22	confirmation	Surveillance	1 Bit
24	enable	Surveillance	1 Bit
25	sending LUX value	Output brightness	2 Byte
26	switching brightness value	Outputs light A,B	1 Bit

➤ Compact passage has disable objects for motion sensors and constant light control.

- 90 group addresses
- 90 possible associations
- 27 objects

➤ Operating mode
 Master in individual switching mode: Presence detector works as independent device.
 Master in parallel switching mode: According to requirements, additional detectors are connected as "slaves" to a "master in parallel switching mode" to extend the detection range.
 Slave: Slaves are used to extend the detection range. They exclusively supply presence information to the master.

➤ Light outputs
 Light output A active: Presence detector switches or controls a lighting group dependent on the presence of persons and natural daylight.
 Light outputs A, B active: Presence detector switches or controls two lighting groups dependent on the presence of persons and natural daylight.
 Light outputs inactive: The presence detector is not used for lighting control.

➤ Switching or constant light control
 Switching (ON/OFF): The light output sends an ON telegram on recognition of movement and insufficient light. An OFF telegram is sent on completion of the run-on time or in case of sufficient light.

Constant light control: On recognition of movement and insufficient light the light output controls the lighting to a set lighting setpoint value and keeps it constant with variations in daylight. A second light output can also be controlled with a brightness fill-in.

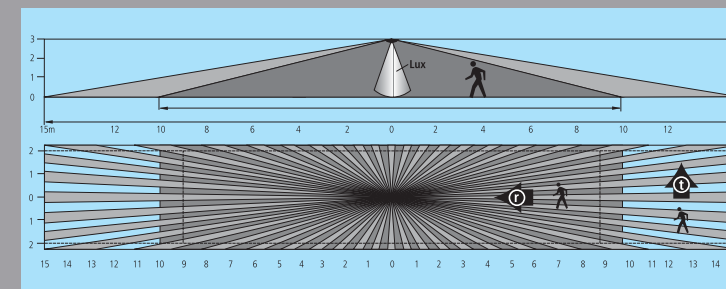
Application software motion detector KNX

➤ Stand-by time
 (in case of constant light control)
 In standard operating mode an activated standby time ensures that both lighting groups are dimmed to minimum brightness after the completion of the run-on time. The stand-by time can be set between 0 sec. and 60 mins.

➤ Clic remote control (optional)
 Internal switching/dimming: A short depression on the left keys ▲/▼ on clic switches the light output A on or off. A long keystroke dims the light for the duration of the depression. If both A and B light outputs are active, the right row of keys ▲/▼ light output B analogically.

External switching/dimming: A short push of the the relevant row of keys ▲/▼ on clic switches an external consumer on or off (channel 1 or 2). A long keystroke dims the external consumer for the duration of the depression.

External blinds: A long push on the relevant row of keys ▲/▼ on clic raises or lowers the blinds. A short keystroke opens or closes the slats.



➤ Detection range

compact passage KNX

Installation height	seated persons	moving persons
2.0 m	16 m x 3,5 m ± 1 m	30 m x 3,5 m ± 1 m
2.5 m	18 m x 4,0 m ± 1 m	30 m x 4,0 m ± 1 m
3.0 m	20 m x 4,5 m ± 1 m	30 m x 4,5 m ± 1 m
3.5 m	20 m ± 1 m x 5,0 m	30 m x 5,0 m ± 1 m

Infra-red remote controls Thea IQ RSC 1 Quickset plus, Thea IQ RSC 2

Easy-to-use commissioning and operation via intelligent remote controls



Thea IQ RSC 1 Quickset plus

- Infra-red remote control for easy commissioning of Thea IQ HTS presence detectors
- Rapid adjustment to changed operating conditions without uninstalling the detectors
- Transmission of individual settings or complete value packages to the detector
- Call up of pre-defined value packets for typical rooms
- Storing and calling-up 8 user-defined value packets
- The service remotecontrol Thea IQ RSC 1 Quickset plus for the electrician enables efficient startup and flexible adaptation to new applications.
- Setting of all potentiometer by pressing button.
- Functions such as test/reset can be called up.
- Setting changes made with Thea IQ RSC 1 Quickset plus are saved even in case of loss of power or resetting of detector.
- Settings that are frequently used, can be saved, retrieved as required at any time and transmitted to the sensor.
- Typical values for different rooms (office, corridor, WC, etc...) are predefined in Thea IQ RSC 1 Quickset plus.
- User defined settings can be stored in Thea IQ RSC 1 Quickset plus. 8 memory locations are available per sensor type.

Thea IQ RSC 1 Quickset plus
Service remote control

Thea IQ RSC 2
User remote control



Thea IQ RSC 1 Quickset plus



Thea IQ RSC 2

Thea IQ RSC 2

- Infra-red remote control for compact office EIB
- Switching and dimming of lighting, scene control
- 2 channels for 2 light groups
- 2 programmable scenes
- 5 group addresses for defining the channels
- Coding switch and programming key for the easy allocation of lighting groups and channels
- The user remote control clic features 2 channels for controlling 2 light groups.
- Thea IQ RSC 2 enables the switching and dimming of up to 2 light groups
- Light scenes can be called up and saved.
- Settings in the presence detector cannot be changed with Thea IQ RSC 2.
- In combination with the presence detector compact office EIB the functions of the Thea IQ RSC 2 keys can be selected as required, e. g. for blinds control UP/DOWN

Technical Data

Thea IQ RSC 1 Quickset plus
Power supply: 9 V battery, 1 x PP3/6F22
Transmission medium: Infra-red
Range: approx. 4 m
Emission angle: $\pm 15^\circ$
Dimensions: 140 x 62 x 30 mm
Temperature range: +0 °C... +50 °C
Colour: Black

Thea IQ RSC 2
Power supply: 2 x 1.5 V batteries, LR03/AAA
Transmission medium: Infra-red
Range: approx. 10 m
Emission angle: $\pm 15^\circ$
Dimensions: 120 x 57 x 24 mm
Temperature range: +0 °C... +50 °C
Colour: Light grey

Order numbers:

Thea IQ RSC 1 Quickset plus	
Service remote control	90990033
Thea IQ RSC 2	
User remote control	90990034

Touch Panels

Thea IQ Touch CE



Thea IQ Touch CE
Thea IQ Touch CE allows you to have an immediate to understand visual representation of what's happening in every room in your home. Visualyser offers high performances and excellent graphical quality in a totally-safe fanless and diskless environment. Run your embedded applications in a safe environment, support web-based solutions and proprietary applications or dedicated systems for data acquisition.

- Send events and alarm notifications by Email and SMS
- Easy to manage users and groups
- Integrated alarm management
- One-click scenario execution
- Weekly and daily Schedule and advanced holiday management
- Exchange field data and log data with remote PCs
- View live images from IP webcams and from the web
- Automatically share tags, alarms and scenarios with other touch panels
- Save log data on removable supports such as USB keys and SD cards

Thea IQ Touch CE

Thea
IQ

Touch Panels



Thea IQ Touch CE

SUPPORT UP TO 100 PROTOCOLS

Konnex
Lon
DMX
Modbus

...And many, many more!

Technical Data

Touch Panel 7"
Screen: 7,5"
Resolution (in pixel): 640x480
Rating: IP40
Processor: fanless low consumption
Intel PXA270 520 MHz CPU
Memory: 64 MB RAM, 32 MB Flash
Power Supply: 18...32 Vcc
Power Consumption: ~10W
Dimensions: 290x196x65
Interfaces: LAN, USB, RS 232, RS485 on DB9, PS2
Plus Version Extras
Operating System: Polymath EZBuilder / MyVision



Order numbers:

Thea IQ Touch CE 7" 90990076
Thea IQ Touch CE 10" 90990077

Touch Panels

Thea IQ Touch KNX



Thea IQ Touch KNX

Thea IQ Touch KNX
 Compared with _Q KNXSERVER , Thea IQ Touch KNX is a stand-alone device, optimized for the use in smaller systems. A revolutionary wizard accompanies the user step by step and allows him to create his visualization easily by selecting the proposed pre-configured command and application pages. Consequently, Thea IQ Touch KNX unites a simple control concept and just as easy programming for the first time in one device! The Panel equips a 10,1" LED wide screen color display, 2 LAN interfaces, IR, microphone, loudspeakers, approximation sensor as well as an Intel Atom processor of the newest generation. Thea IQ Touch KNX is also available as a PLUS version with many additional features.

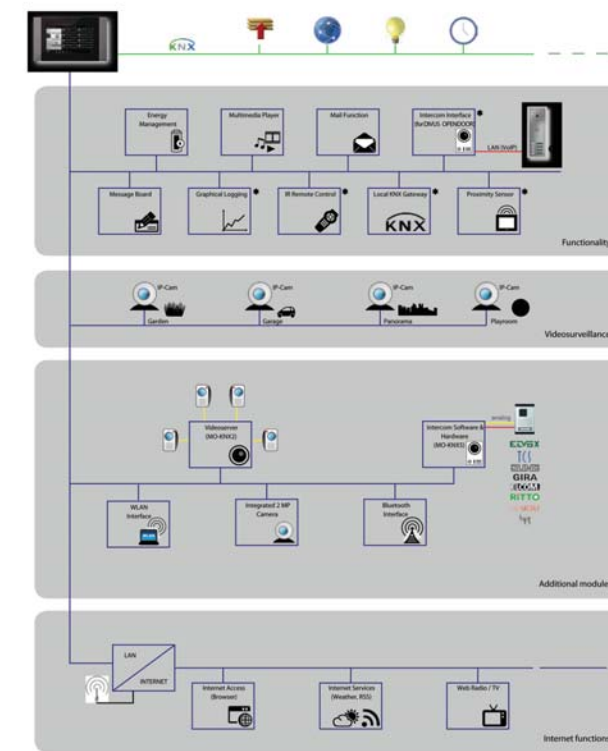
NOTE: Internal connections are intended as inside the box unit, normally on pin header, external ones as outside the box. Nevertheless, once mounted in the wall, only connections described as "front



Touch Panels



Thea IQ Touch KNX



Technical Data

- Touch Panel 10"
- Screen: 10,1"
- Resolution (in pixel): WSVGA 1024x600
- Rating: IP20
- Processor: fanless low consumption Atom N450 1,66 GHz CPU
- With integrated GMA3150 Graphic Controller
- Memory: 1 GB DDR2 SDRAM
 (Plus Version) 2GB DDR2 SDRAM
- KNX Group Addresses: up to 500
 (Plus Version) up to 1000
- Power Supply: 100-240 VAC
- Power Consumption: max. 15W
- Dimensions: 315x202x80
- Weight: 5 kg
- Interfaces: LAN,USB,RS 232,RS485 on DB9
- Plus Version Extras
- Multimedia: Speaker and microphone with echo cancellation
- Intercom: Prepared for use with DIVUS OPENDOOR
- Cut -out dimensions wall mount Box for 10"
- Width (d) :315 mm
- Height (e) :202 mm
- Depth :80 mm

Order numbers:

- Thea IQ Touch KNX 90990062
- Thea IQ Touch XP Mountig Box 10,1" 90990064

Thea IQ Touch XP



Thea IQ Touch XP
 With Thea IQ Touch XP we have developed a PC which is used in Building Automation and support 2 important tasks:

- 1) The diskless and fan less PC convince with a modern PC architecture is totally silent and maintenance free.
- 2) Thea IQ Touch XP should be a picture on the wall and decorate your ambience and ready for useful functions.

The open system architecture with the pre-installed operating system Windows® embedded lets the heart of each expert beat faster. Own and foreign software can easily be integrated and updated.

Thea IQ Touch XP is delivered with current PC-Performance and ideal storage solution. Wish configurations for individual applications are easily integrable. Due to the option of a LON or KNX-Interface, Thea IQ Touch XP can be completely customized for the specific needs.

That is real independence!

The innovative intercom communication

The IQ VIDEOPHONE software is installed per default on each Thea IQ Touch XP XPembedded with multimedia option, without additional costs!

NOTE: Internal connections are intended as inside the box unit, normally on pin header, external ones as outside the box. Nevertheless, once mounted in the wall, only connections described as "front accessible" will be reachable for the customer

Thea IQ Touch XP

Touch Panels



Thea IQ Touch XP



15" Frame



6,5" Frame

Technical Data

Touch Panel 6,5" - 19"
 Screen: 6,5" - 19"
 Resolution (in pixel): WSVGA 1024x768
 Rating: IP20
 Processor: fanless low consumption Atom N450 1,66 GHz CPU
 With integrated GMA3150 Graphic Controller
 Memory: 1 GB DDR2 SDRAM
 Power Supply: 90-260 VAC
 Power Consumption: max. 40W

Dimensions:	6.5"	230x210x80
	10.4"	340x285x80
	15"	425x365x90
	19"	497x435x90
Weight:	6.5"	5kg
	10.4"	7kg
	15"	9kg
	19"	11kg

Interfaces: LAN,USB,RS 232,RS485 on DB9,PS2
 Multimedia: Speaker and microphone with echo cancellation
 Operating System: Windows XP Embedded

Cut -out dimensions wall mount Box for 6,5"
 Width (d) : 214 mm
 Height (e) : 194 mm
 Depth : 80 mm

Cut -out dimensions wall mount Box for 10,4"
 Width (d) : 313 mm
 Height (e) : 258 mm
 Depth : 80 mm

Cut -out dimensions wall mount Box for 15"
 Width (d) : 399 mm
 Height (e) : 336 mm
 Depth : 90 mm

Cut -out dimensions wall mount Box for 19"
 Width (d) : 472 mm
 Height (e) : 410mm
 Depth : 90 mm

Order numbers:

Thea IQ Touch XP 90990039
 Thea IQ Touch XP Mounting Box

6,5"	90990128
10,4"	90990129
15"	90990130
19"	90990131

Touch Panels

IQ Videophone



With IQ Videophone we present to you the solution to serve your video intercom panel conveniently through your PC. Thanks to the use of VoIP technology, you have access to all intercom functions either through the customizable interface of our software IQ Videophone and transmits directly to your UDP enabled visualization!

IQ Videophone



Wiring

As already mentioned, the IQ Videophone-Box is divided in 2 parts:

1) Audio: a VoIP gateway converts the analogous a/b signal from the intercom system into standard VoIP packages. The required connections are the following:

- a- Connect the power supply Audio to a 230V power socket
- b- Connect the RJ11 phone cable with the a/b phone line of the intercom system
- c- Connect the RJ45 network cable Audio (VoIP) with the local network (Switch/Router).

2) Video: A video server converts the analogous video signal from the intercom system into a network stream. The required connections are the following:

- a- Connect the power supply Video to a 230V power socket.
- b- Connect the RCA video cable to the analogous video signal of the intercom system.
- c- Connect the RJ45 network cable to the local network (Switch/Router).

Order numbers:

IQ Videophone 90990041



Touch Panels



IQ KNXSERVER



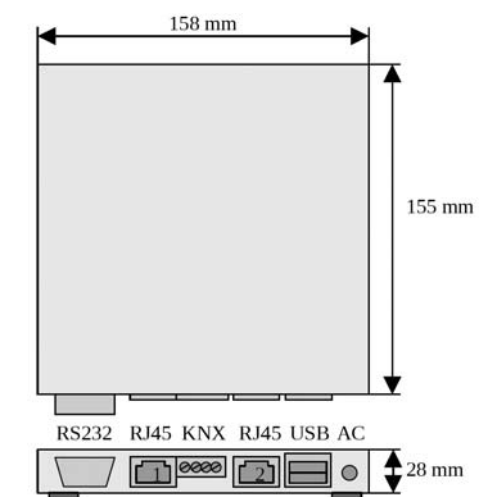
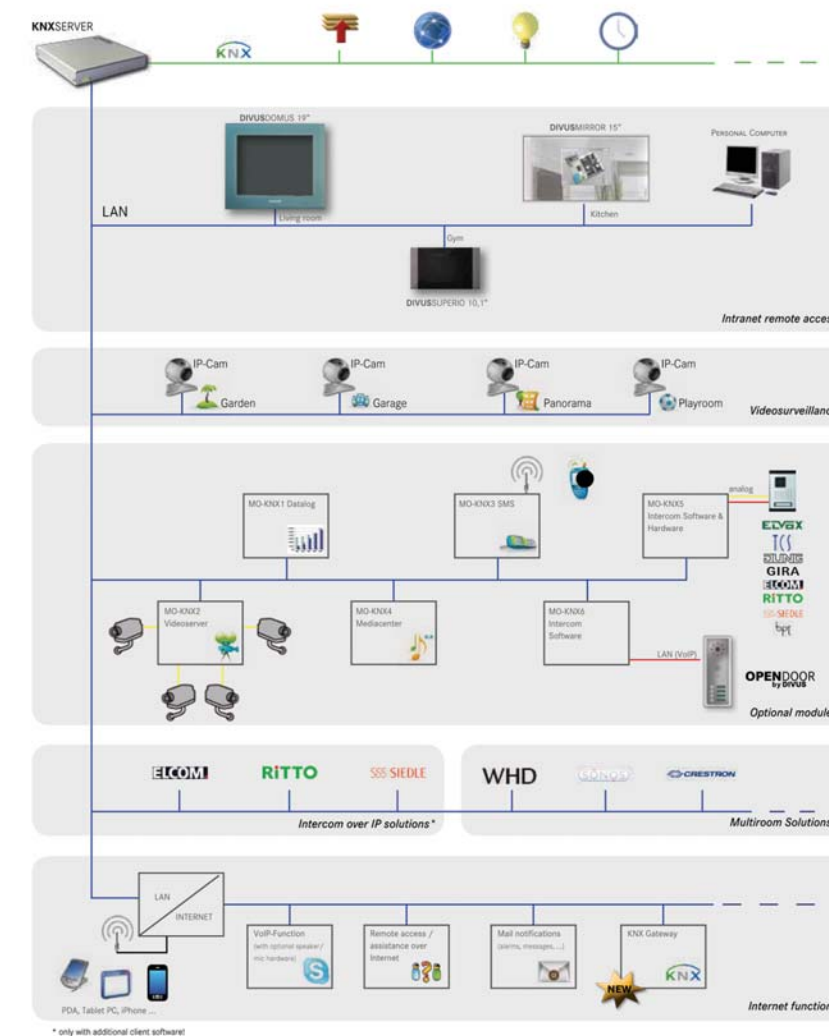
IQ KNXserver is a box PC based on embedded Linux as well as a browser controlled software and guarantees effective management of systems on basis of the EIB/KNX technology. Once configured, the IQKNXservers of tware can be accessed by remote connection (requires network/ internet connection) using another PC or each medium with browser support (ex: smart phone, organizer). All access methods show the same user interface and offer the same configuration possibilities; there are no differences between the local and the remote access.

IQ KNX server is the heart of Web-based technology solution for the visualization of KNX systems that provides you with full control over your home. The creation of visualization has been greatly simplified and also allows KNX newcomers to create high-quality visualization in the shortest time. In addition to the import of functions from ETS, the existing wizard has been enhanced and allows you to create a complete visualization in a few steps. KNX functions can be imported via configurable import rules automatically and will be linked to touch-icons (such as sensors, temperature controllers, dimmers, control blinds and much more assigned). Among the numerous additional features IQ KNXserver provides logic functions, timers and scenarios including modules for data management and integration of intercoms.



IQ KNXserver

KNXSERVER Anwendungsbeispiel - Application Example



Order numbers:

IQ KNXSERVER

Max 1500 Group address 90990155

Unlimited Group address 90990156

BASE MODULE



4x Switching

RSA 4S



4 x C Load Switching

RSA 4C



2 x Dimming

DSA 2



2 x 1-10V Dimming

SSA 2



4 x Blind Control

JSA 4S



4 x Heating Control

HSA 4



6 x Binary Input

BSA 6

EXTENSION MODULE



4x Switching

RSE 4S



4 x C Load Switching

RSE 4C



2 x Dimming

DSE 2



2 x 1-10V Dimming

SSE 2



4 x Blind Control

JSE 4S



4 x Heating Control

HSE 4



6 x Binary Input

BSE 6

COMBINATION EXAMPLES

	BASE MODULE	+	EXTENSION	+	EXTENSION
4 X Switching + 4 x Dimming	RSA 4S	+	DSE 2	+	DSE 2
8 x Switching + 4 x C Load	RSA 4S	+	RSE 4S	+	RSE 4C
6 x Binary Input + 4 x Switching + 2 x Dimming	BSA 6	+	RSE 4S	+	DSE 2
2 x 1-10v Dimming + 6 x Binary Input + 4 x Switching	SSA 2	+	BSE 6	+	RSE 4C
4 x Heating + 6 x Binary Input + 4 x Switching	HSA 4	+	BSE 6	+	RSE 4C
4 x Blind + 4 x Switching + 4 x C Load	JSA 4S	+	RSE 4S	+	RSE 4C
4 x Blind + 2 Dimming + 6 Binary Input	JSA 4S	+	DSE 2	+	BSE 6
12 x Switching	RSA 4S	+	RSE 4S	+	RSE 4S
12 x C Load	RSA 4C	+	RSE 4C	+	RSE 4C
6 x Dimming	DSA 2	+	DSE 2	+	DSE 2
6 x 1-10v Dimming	SSA 2	+	SSE 2	+	SSE 2
18 x Binary Input	BSA 6	+	BSE 6	+	BSE 6
12 x Heating	HSA 4	+	HSE 4	+	HSE 4
12 x Blind	JSA 4S	+	JSE 4S	+	JSE 4S

▶ CONTROLLER

Output

• RSA 4C Base Module, 4 channel	4
• RSE 4S Extension Module, 4 channel	4
• DSA 2 Base Module	8
• DSE 2 Extension Module	8
• DSB 2 Booster Power Extension by parallel connection	8
• SSA 2 Base Module	12
• SSE 2 Extension Module	12
• JSA 4S Base Module	16
• JSE 4S Extension Module	16
• RSA 8 Base Module, 8 channel	20
• RSE 8 Extension Module, 8 channel	20

Input

• BSA 6 Base Module	24
• BSE 6 Extension Module	24

HVAC

• HSA 4 Heating Actuator	28
• HSE 4 Heating Actuator Extension Module	28
• HST 6/12 Heating Actuator for thermic actuating drivers	32
• FSC 1 Fan Coil Module	36

Time Switch

• TSR 644S	40
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System Device

• PSS 1 EIB Power Supply 640 mA	42
• PSS 1 EIB Power Supply 320 mA	42
• PSS 1 EIB Power Supply 160 mA	42
• USB 1 Interface	44
• LSC 1 Line Coupler KNX	44

▶ FLUSH MOUNT

Switch Sensor

• Thea IQ TSA 2x1 4x2 8x4	46
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Sensor

• Thea IQ Room Thermostat	50
• Thea IQ PSD 180 Presence Dedector	54
• Thea IQ PSD 360 Presence Dedector	54

▶ EQUIPMENT

Input

• Thea IQ TA 2 Channel	58
• Thea IQ TA 4 Channel	58
• Thea IQ TA 6 Channel	58

Sensor

• 3 Channel Brightness Sensor GIS 1	62
• Wheater Station	64
• Presence Dedector PSD 2-IR DUAL-EIB	68
• Compact Presence Dedector KNX	72

Remote Controller

• Thea IQ RSC 1 Quickset Plus	76
• Thea IQ RSC 2	76

Touch Panel

• Thea IQ Touch CE	78
• Thea IQ Touch KNX	80
• Thea IQ Touch XP	82
• TheaIQ Videophone	84
• Thea IQ KNXServer	86