

KNX manual

Application description

Motion detectors
theMova P360 KNX
theMova S360 KNX



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1. Functional characteristics

1.1 Motion detectors theMova P360 / S360 KNX

The motion detector switches a lighting group dependent on the presence of persons and the current brightness. The light output can be dynamically faded up and down by the integrator. The brightness switching value can be set via parameters, object or the management remote control or installation remote control.

The lighting is switched on with presence and insufficient brightness, and off with absence. Manual switching can be performed using a push button.

An additional channel transmits the presence information in the room to further devices such as heating, ventilation or blind controls. This channel has a switch-on delay and a time delay.

The motion detector can also process scene numbers for the lighting groups. In combination with the remote control, the motion detector is not only capable of switching its own lighting groups, but also to control other external consumers such as lights, blinds etc.

1.2 Features

- ◆ Circular detection area 360°,
up to Ø 24 m (452 m²) for theMova P360 KNX
up to Ø 9 m (64 m²) for theMova S360 KNX
- ◆ Restriction of detection area with cover clips (only possible with theMova P360 KNX)
- ◆ Mixed light measurement suitable for fluorescent (FL/PL/ESL), halogen/incandescent lamps and LEDs.
- ◆ One lighting channels with one light measurement
- ◆ Switching operation
- ◆ Fully or semi-automatic
- ◆ Brightness switching value can be set in lux via parameters, the object or via remote control
- ◆ Teach-in of the brightness switching value
- ◆ Reduction of time delay when present briefly (short-term presence)
- ◆ Manual override by telegram or remote control
- ◆ One separate channel (presence) for controlling other devices such as HVAC systems with switch-on delay and time delay
- ◆ Master/Slave parallel switching for gap-free coverage of large areas
- ◆ Master/Master parallel switching for several lighting groups with separate light measurement, but joint presence detection
- ◆ Separate blocking objects for light and presence channel
- ◆ Detection and sending of current brightness
- ◆ Adjustable detection sensitivity
- ◆ Test mode for checking function and detection area
- ◆ Management remote control SendaPro 868-A (option)
- ◆ Installation remote control theSenda P (option)
- ◆ User remote control theSenda S (option)

1.3 Information about this document



Style

- < > Parameter names
- active.. The two dots at the end of the text in a parameter selection indicate that an additional parameter page has been opened.

Terminology

Operating mode	Master
	Slave
Configuration	Fully automatic device
type	Semi-automatic device
Channel function	Switching

1.4 Technical data

Motion detector	theMova P360 KNX	theMova S360 KNX
Number of light measurements (mixed light)	1	
Recommended installation height	2.0 - 6.0 m (Mh. > 1.7 m / max. installation height: 10 m)	2.0 - 4.0 m Mh. > 1.7 m
Maximum range	Ø 8 m (Mh. 3 m) / 50 m² radially moving Ø 24 m (Mh. 3 m) / 452 m² tangentially moving	Ø 4 m (Mh. 3 m) / 13 m² radially moving Ø 8 m (Mh. 3 m) / 50 m² tangentially moving
Detection angle horizontal	360°	
Operating voltage	Bus voltage KNX, max. 30 V	
Power consumption	approx. 8 mA / 9 mA with LED on	
Type of installation	Ceiling installation; flush/surface mounted or ceiling installation	Ceiling installation
Brightness switching value / set point value setting range	30 – 3000 lux	
Lighting time delay	30 s – 60 min	
Presence time delay	10 s – 120 min	
Presence switch-on delay	10 s – 30 min. / inactive	
Remote control communication Receiving data	IR	
Parameter setting	All settings can be remotely controlled via ETS. Described in this document	
Connection type	Plug-in terminals, type WAGO 243	
Size of flush-mounted box	Size 1, Ø 55 mm (NIS, PMI)	Ceiling cut-out: Ø 62 – 70 mm
Protection rating	IP 20 (IP 40 installed)	IP 20 (IP 40 installed) with DE version IP 54 with surface-mounted version
Ambient temperature	-15 °C – +50 °C	
CE Declaration of Conformity 	This device conforms to the regulations of the EMC Directive 2004/108/EC	
RCM compliance 	This device is compliant with the ACMA guidelines	

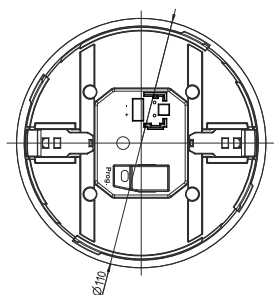
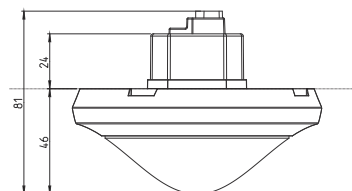
1.4.1 Product overview

Type of installation	Channel	Colour	Type	Item number
Ceiling installation	1 light 1 HVAC	White	theMova P360 KNX UP WH	1039600
Ceiling installation	1 light 1 HVAC	Grey	theMova P360 KNX UP GR	1039601
Ceiling installation	1 light 1 HVAC	Special colour in accordance with customer information	theMova P360 KNX UP SF	1039603
Ceiling installation	1 light 1 HVAC	White	theMova S360 KNX DE WH	1039560
Ceiling installation	1 light 1 HVAC	Grey	theMova S360 KNX DE GR	1039561
Ceiling installation	1 light 1 HVAC	Special colour in accordance with customer information	theMova S360 KNX DE SF	1039563
Surface mounting	1 light 1 HVAC	White	theMova S360 KNX AP WH	1039550
Surface mounting	1 light 1 HVAC	Grey	theMova S360 KNX AP GR	1039551
Surface mounting	1 light 1 HVAC	Special colour in accordance with customer information	theMova S360 KNX AP SF	1039553

Accessories	Item number
Back box 110A WH	9070912
Back box 110A GR	9070913
Ceiling installation box 73A	9070917
Covering clip for area restriction	9070921
SendoPro 868-A management remote control	9070675
Installation remote control theSenda P	9070910
User remote control theSenda S	9070911

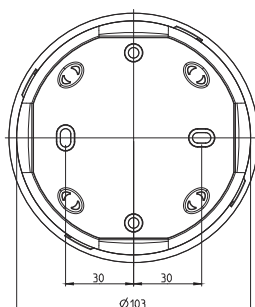
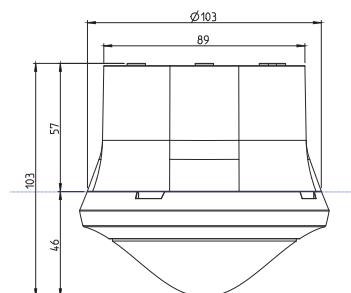
1.4.2 Measures

theMova P360 KNX Flush-mounted



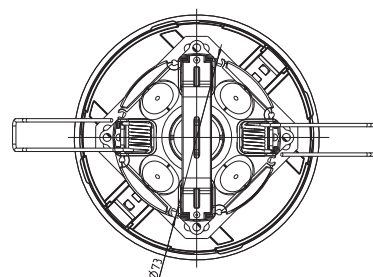
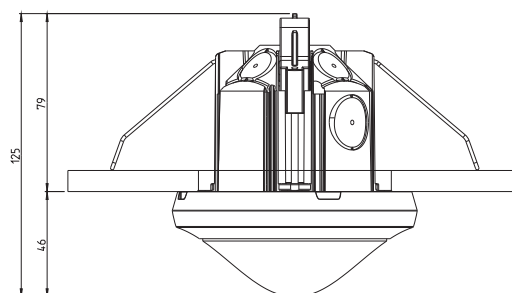
theMova P360 KNX UP

Surface-mounted



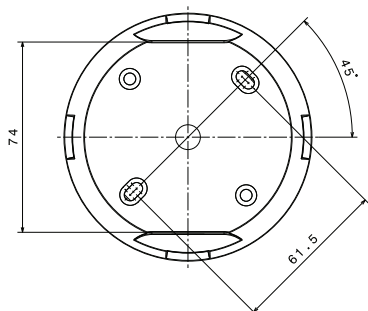
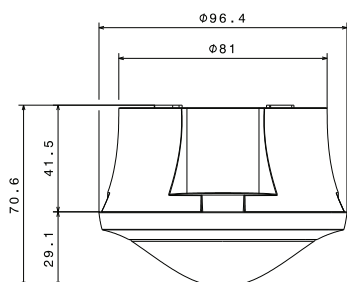
theMova P360 KNX UP
with back box 110 A

Ceiling installation



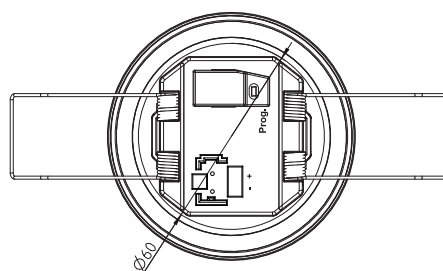
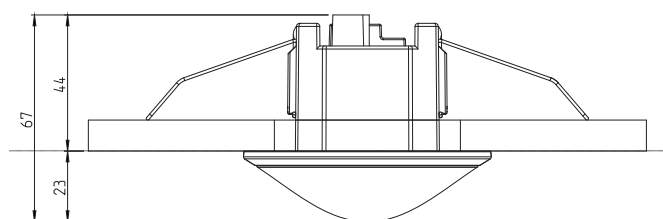
theMova P360 KNX UP
with ceiling installation box 73A

theMova S360 KNX Surface-mounted



theMova S360 KNX AP

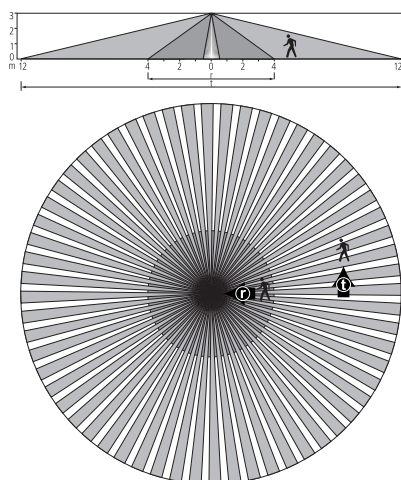
theMova S360 KNX Ceiling installation



theMova S360 KNX DE

1.4.3 Detection area theMova P360 KNX

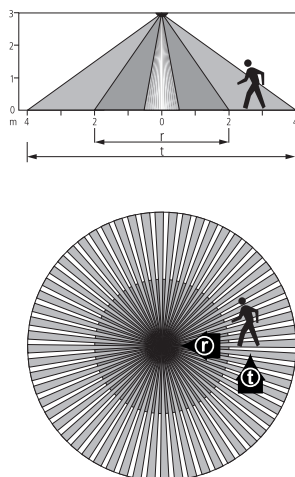
The circular detection area of theMova P motion detector covers a large detection area, and permits a complete room coverage with many applications. Note that moving persons can be detected in differently sized areas, depending on the direction of movement. The recommended installation height is 2.0 m – 6.0 m. As installation height increases, the sensitivity decreases. The extent and distance between the active and passive zones of the motion detector also increase. The detection range is reduced as the temperature increases.



Installation height (A)	moving persons Frontal (r)		moving persons Across (t)	
2.0 m	28 m ²	Ø 6 m	380 m ²	Ø 22 m
2.5 m	38 m ²	Ø 7 m	415 m ²	Ø 23 m
3.0 m	50 m ²	Ø 8 m	452 m ²	Ø 24 m
3.5 m	50 m ²	Ø 8 m	452 m ²	Ø 24 m
4.0 m	50 m ²	Ø 8 m	452 m ²	Ø 24 m
5.0 m	50 m ²	Ø 8 m	452 m ²	Ø 24 m
6.0 m	50 m ²	Ø 8 m	452 m ²	Ø 24 m
10.0 m	50 m ²	Ø 8 m	491 m ²	Ø 25 m

1.4.4 Detection area theMova S360 KNX

The circular detection area of theMova S motion detector covers an average detection area. Note that moving persons can be detected in differently sized areas, depending on the direction of movement. The recommended installation height is 2 m – 4 m. As installation height increases, the sensitivity decreases. The extent and distance between the active and passive zones of the motion detector also increase. The detection range is reduced as the temperature increases.



Installation height (A)	moving persons Frontal (r)		moving persons Across (t)	
2.0 m	5 m ²	Ø 2.5 m	38 m ²	Ø 7 m
2.5 m	7 m ²	Ø 3 m	38 m ²	Ø 7 m
3.0 m	13 m ²	Ø 4 m	50 m ²	Ø 8 m
3.5 m	13 m ²	Ø 4 m	50 m ²	Ø 8 m
4.0 m	13 m ²	Ø 4 m	64 m ²	Ø 9 m

2. The application programme theMova P360 / S360 KNX

2.1 Selection in the product database

	theMova P360 KNX	theMova S360 KNX
Manufacturer	Theben HTS AG	Theben HTS AG
Product family	Physical sensors	Physical sensors
Product type	Motion detector	Motion detector
Name	theMova P360 KNX	theMova S360 KNX

The KNX databases can be found on our website: <http://www.theben-hts.ch> or <http://www.theben.de>

2.2 Parameter pages

Name	Description
General	General settings, e.g. operating mode, etc.
Settings	Sensitivity, etc.
Brightness measurement	Settings for the current brightness value via the bus
Lighting channel C1	Settings for lighting control by lighting channel C1
Detail settings	Settings for lighting channel C1 - Switching
Block function	Settings for blocking lighting channel C1
Presence channel C4	Channel C4 for the presence-dependent control of other systems such as heating, air conditioning
Objects	Setting of telegrams
Block function	Settings for blocking presence channel C4
Remote control	Settings for allocation of commands in the user remote control
Scenes	Definition of scenes in relation to the user remote control

2.3 Communication objects

2.3.1 Overview

The motion detector theMova P360 / S360 KNX has 23 communication objects.

Object Number	Object name	Function	Length	Data type (ID)	Flags				
					C	R	W	T	U
0	Lighting channel C1	Switching	1 bit	1,001	✓		✓	✓	
4	Channel C1 brightness switching value	Receive value	2 byte	9,004	✓		✓	✓	
5	Channel C1 brightness switching value (teach-in)	\$01=call up/ \$81=save	1 byte	18,001	✓		✓		
6	Channel C1 Alternative brightness switching value	Receive value	2 byte	9,004	✓		✓	✓	
9	(Channel C1) Brightness value	Send lux value	2 byte	9,004	✓	✓		✓	
22	Lighting channel C1	Select brightness switching value	1 bit	1,003	✓		✓		
27	Lighting channel C1 time delay	Receive value	2 byte	7,005	✓		✓	✓	
28	Lighting channel C1	Block/unblock	1 bit	1,003	✓		✓		
29	Central command	Receive	1 bit	1,001	✓		✓		
31	Presence channel C4.1	Switching	1 bit	1,001	✓	✓		✓	
31	Presence channel C4.1	Send value	1 byte	5,010	✓	✓		✓	
31	Presence channel C4.1	Send percentage value	1 byte	5,001	✓	✓		✓	
31	Presence channel C4.1	HVAC operating mode	1 byte	20,102	✓	✓		✓	
31	Presence channel C4.1	Send scene	1 byte	17,001	✓	✓		✓	
32	Presence channel C4.2	Switching	1 bit	1,001	✓	✓		✓	
32	Presence channel C4.2	Send value	1 byte	5,010	✓	✓		✓	
32	Presence channel C4.2	Send percentage value	1 byte	5,001	✓	✓		✓	
32	Presence channel C4.2	HVAC operating mode	1 byte	20,102	✓	✓		✓	
32	Presence channel C4.2	Send scene	1 byte	17,001	✓	✓		✓	
33	Presence channel C4	Block/unblock	1 bit	1,003	✓		✓		
41	Parallel switching	Trigger input/output	1 bit	1,017	✓		✓	✓	
42	Scene output	Scene number	1 byte	18,001	✓			✓	
43	IR external 1 switching/dimming	Switching	1 bit	1,001	✓			✓	
44	IR external 1 switching/dimming	Brighter/darker	4 bit	3,007	✓			✓	
45	IR external 2 switching/dimming	Switching	1 bit	1,001	✓			✓	
46	IR external 2 switching/dimming	Brighter/darker	4 bit	3,007	✓			✓	
47	IR external blinds 1	Blinds up/down	1 bit	1,008	✓			✓	
48	IR external blinds 1	Open/close slats	1 bit	1,009	✓			✓	
49	IR external blinds 2	Blinds up/down	1 bit	1,008	✓			✓	
50	IR external blinds 2	Open/close slats	1 bit	1,009	✓			✓	
51	Presence test mode	On/Off	1 bit	1,001	✓		✓		

2.3.2 Explanation of the flags










Flag	Flag name	Description
C	Communication	Object can communicate
R	Read	Object value can be read (ETS / display etc.)
W	Write	Object can receive
T	Transmit	Object can send
U	Update	Object can overwrite

2.3.3 Object characteristics for lighting control

Object	Object name	Function	Description
Object 0	Lighting channel C1	Switching	<p>In this function, switch output C1 sends an ON telegram on detection of movement and insufficient brightness. An OFF telegram is transmitted when no one is present and after the time delay has expired:</p> <p>0 = Absence (OFF) 1 = Presence and insufficient brightness (ON)</p> <p>The motion detector does not have any specific push button inputs, but it responds to push button commands sent to object 0.</p> <p>Please observe the information on push button operation on page 21 chapter 3</p>
Object 4	Channel C1 brightness switching value	Receive value	<p>Object available if "yes" has been selected at <Set brightness switching value via bus>.</p> <p>This enables changing of the brightness switching value during operation.</p> <p>The brightness switching value is set automatically to the corresponding limit if the brightness switching value received lies outside the permissible value range (30..3000 lux).</p> <p>Object 4 returns the stored value of the brightness switching value.</p> <p>When changing the brightness switching value via the SendoPro, the new value is sent.</p> <p>In switching mode, value "0" means "Measurement off"</p>
Object 5	Channel C1 brightness switching value (teach-in)	\$01=call up, \$81=save	<p>Object available if "yes" has been selected at <Set brightness switching value via bus>.</p> <p>The motion detector accepts the currently measured brightness value [lux] as a new brightness switching value or alternative brightness switching value (depending on which one is active at the time) via a value telegram \$81 (129).</p> <p>For example, if the motion detector switches to the alternative brightness switching value, the currently measured brightness value [lux] is transferred to the alternative brightness switching value via the value telegram \$81 (129).</p> <p>Object 4 sends the saved value of the currently active brightness switching value, or object 6 sends the alternative brightness switching value (depending on which one is active at the time).</p> <p>Object 4, or if the alternative brightness switching value is active, object 6 sends the current brightness switching value via a value telegram \$01 (1).</p> <p>Transfer is made to the currently active brightness switching value.</p>
Object 6	Channel C1 Alternative brightness switching value	Receive value	<p>Object available if "yes" has been selected at <Set alternative brightness switching value via bus>.</p> <p>This enables resetting of the alternative brightness switching value during operation.</p> <p>The brightness switching value is set automatically to the corresponding limit if the brightness switching value received lies outside the permissible value range (30..3000 lux).</p> <p>Object 6 returns the stored value of the alternative brightness switching value.</p> <p>When changing the alternative brightness switching value via the SendoPro, the new value is sent.</p> <p>In switching mode, the value "0" means "Measurement off".</p>
Object 9	Channel C1 Brightness value	Send lux value	<p>Object available if "yes" has been selected at <Send brightness value via bus>.</p> <p>The motion detector sends the current brightness measurement value as a 2-byte telegram via object 9. The frequency of telegrams depends on the cycle time and the minimum change in brightness.</p> <p>The 2-byte telegrams to object 9 are used to visualise a brightness value.</p>

Object	Object name	Function	Description
Object 22	Lighting channel C1	Select brightness switching value	<p>Object available if "active" has been selected at <Select brightness switching value>.</p> <p>Depending on the configuration, it is possible to switch between two brightness switching values for daylight-dependent switching or constant light control.</p> <ul style="list-style-type: none"> - An ON telegram to bus object 22 switches to the alternative brightness switching value. - An OFF telegram switches back to the original base brightness switching value as switching value.
Object 27	Lighting channel C1 time delay	Receive value	<p>Object available if "yes" has been selected at <Set lighting time delay via bus>.</p> <p>The time delay can be set for lighting channel C1 in a range of 30 s to 60 min. via object. 27. The value must be sent in seconds.</p>
Object 28	Lighting channel C1	Block/unblock	<p>Object available if "yes" has been selected at <Activate block function>.</p> <p>The lighting channel is blocked via an ON or OFF telegram. At the start of the blocking process, the light output optionally sends one of the following telegrams: ON, OFF, no telegram. While blocked, the channel does not send any telegram, based neither on presence/absence nor brightness.</p> <p>The lighting channel is unblocked via an ON or OFF telegram in addition to the telegram when blocking. When unblocking, the detector always sends the current status and thereby continues the brightness-dependent switching.</p>
Object 29	Central command	Receive	<p>An ON telegram switches on lighting channels C1. The motion detector behaves as if the user switches it on via a push button.</p> <p>An OFF telegram switches lighting channel C1 in accordance with the following conditions:</p> <ul style="list-style-type: none"> - No motion within the last 5 seconds: The light switches off immediately. The current time delay for lighting channel C1 is set to 0. The motion detector then returns to normal operation. - Motion when receiving the OFF telegram: The light stays on. <p>Fully automatic device:</p> <ul style="list-style-type: none"> - If further motion is detected afterwards, the light switches on again if there is insufficient brightness. <p>Semi-automatic device:</p> <ul style="list-style-type: none"> - If further motion is detected again within 10 s, the light is switched on again if there is insufficient brightness. If motion is detected after > 10 s, the light remains switched off. The light can be switched on again via push button. <p>Motion detector is blocked</p> <ul style="list-style-type: none"> - The central command is not carried out. <p>Note: If object 29 is used for parallel switching, the central command immediately triggers the output of the parallel switching in case of motion.</p>

2.3.4 Characteristics of other objects

Object	Object name	Function	Description
Object 31 Object 32	Presence channel C4.1 Presence channel C4.2	Switch command Value Percentage value HVAC operating mode Scene	Object available if "active.." has been selected at <Channel C4 presence function>. The presence channel C4 sends the configured telegram (independently of brightness after a potential delay due to the configured switch-on delay) or no telegram if there is a presence. The configured telegram or no telegram at all is sent after the time delay elapses. The telegram type is freely selectable.
Object 33	Presence channel C4	Block/unblock	Object available if "yes" has been selected at <Activate block function>. The presence channel is blocked via an ON or OFF telegram. The response at the start of blocking can be defined as follows: <ul style="list-style-type: none"> - No response - as when presence detected - as at the end of the time delay The presence channel is unblocked via an ON or OFF telegram in addition to the telegram when blocking. After unblocking, the current state is sent.
Object 41	Parallel switching	Trigger input/output	Object available if "Parallel switching" has been selected at <Master operating mode> or <Operating mode> "Slave" has been selected. The trigger input/output is required for parallel switching of several motion detectors. There are two possible types of switching: Master/Slave parallel switching: A Master receives the motion information from several Slaves in the room and switches the lighting as required on the basis of the brightness measured by the Master. The advantage is uniform switching with a defined brightness value. Example of use: Corridors, the Master is always installed at the darkest point. Master/Master parallel switching: Several Masters exchange the motion information among each other. Further information see page 22 chapter 4. Each detector sends a maximum of two ON telegrams per minute on detection of motion. The interval (cycle time) between two telegrams can be set to a maximum of four minutes. Please note, the interval between two trigger telegrams is always shorter than the time delay. Please observe the information on parallel switching on page 22 chapter 4.
Object 42	Scene output	Scene number	Object available if "Send scene number to bus" has been selected at <Scene control>. When the scene buttons  on the user remote control theSenda S are pressed, the scene output object sends the set scene number.
Object 43 Object 44	IR external 1 switching/dimming IR external 1 switching/dimming	Switching Brighter/darker	The parameter <Upper button row theSenda S controls> has a permanently assigned group address I. If during configuration "Switching/dimming external 1" is set to the parameter <Upper button row theSenda S controls> and a command is received with the IR group address I, objects 43 and 44 assume the following function: Briefly pressing the  /  buttons causes a 0 or 1 telegram to be sent via object 43 switching. Holding down the  button on the remote control causes "dim brighter" to be sent via object 44 and stop when released. Holding down the  button on the remote control causes "dim darker" to be sent via object 44 and stop when released.
Object 45 Object 46	IR external 2 switching/dimming IR external 2 switching/dimming	Switching Brighter/darker	The parameter <Lower button row theSenda S controls> has a permanently assigned group address II. If during configuration "Switching/dimming external 2" is set to the parameter <Lower button row theSenda S controls> and a command with IR group address II is received, objects 45 and 46 assume the same function as described for objects 43 and 44.
Object 47 Object 48	IR external blinds 1 IR external blinds 1	Blinds up/down Open/close slats	The parameter <Upper button row theSenda S controls> has a permanently assigned group address I. If during configuration "Blinds external 1" is set to the parameter <Upper button row theSenda S controls> and a command is received with the IR group address I, objects 47 and 48 assume the following function: Briefly pressing the  /  buttons causes a 0 or 1 telegram to be sent via the object "Open/close slats". Holding down the  /  buttons causes a 0 or 1 telegram to be sent via the object "Blinds up/down".

Object	Object name	Function	Description
Object 49 Object 50	IR external blinds 2 IR external blinds 2	Blinds up/down Open/close slats	The parameter <Lower button row theSenda S controls> has a permanently assigned group address II. If during configuration "Blinds external 2" is set to the parameter <Lower button row theSenda S controls> and a command with IR group address II is received, objects 49 and 50 assume the same function as described for objects 47 and 48.
Object 51	Presence test mode	On/Off	An ON telegram activates the presence test mode for the duration of the configured time. See page 23 chapter 6 for a description of the presence test mode AN OFF telegram ends the presence test mode early and the detector restarts.


2.4 Parameter

Default values appear in bold.

2.4.1 General

Parameter name	Values	Meaning
Operating mode	Master Slave	A Master is capable of lighting control (switching) and relaying the presence information. Slaves are used to extend the detection area. They supply presence information to the Master. The <Parallel switching cycle time> parameter is displayed. Please observe the information on parallel switching in chapter 4 page 22.
Master operating mode	Individual switching Parallel switching	Motion detector works as an independent device. Parallel switching: If required, the detection area can be extended by connecting additional detectors to a "Master" as "Slaves", or a number of "Masters" can be connected to each other. The <Parallel switching cycle time> parameter is displayed.
Parallel switching cycle time	30 seconds 1 minute 2, 3, 4 minutes	Each detector sends a maximum of two ON telegrams per minute on detection of motion. The interval between two telegrams can be set to up to 4 minutes, to reduce the number of telegrams. Please note, the interval between two trigger telegrams is always shorter than the time delay.
Lighting channel C1 function	Switching light.. inactive	Lighting channel C1 switches a lighting group on the basis of the presence of persons and the current brightness level. The motion detector is not used for lighting control. The associated parameters and objects are not displayed.
Presence channel C4 function	active.. inactive	The "Presence channel C4" parameter page is displayed. Presence channel C4 switches other devices such as HVAC systems on/off on the basis of presence of persons or delivers the presence information to higher-level systems (independently of brightness). The motion detector is not used for controlling HVAC applications. The associated parameters and objects are not displayed.
Activation of test mode	via object or remote control, max. 30 min 2 – 60 min	An activated presence test will automatically be ended after expiry of the set time, and the detector will be restarted. See page 23 chapter 6 for the description of the presence test.

2.4.2 Settings

Parameter name	Values	Meaning
Detection sensitivity	1–5 3 standard	<p>The detector has 5 sensitivity levels</p> <ul style="list-style-type: none"> 1 very insensitive 2 insensitive 3 standard 4 sensitive 5 very sensitive <p>By selecting the operation mode test presence, the set sensitivity increment is not changed.</p> <p>The basic setting is the middle increment (3).</p>
Parameter settings at download	<p>Overwrite via download</p> <p>Unchanged via download</p>	<p>The setting affects the following parameters:</p> <ul style="list-style-type: none"> - Brightness switching value Lighting Channel C1 - Alternative brightness switching value Lighting channel C1 - Lighting time delay - Detection sensitivity <p>The relevant parameter values (see above) in the motion detector will be overwritten. Settings modified with SendoPro 868-A management remote control, theSenda P installation remote control, or via bus object will be lost.</p> <p>The parameters set in the ETS are accepted.</p> <p>The relevant parameter values (see above) in the motion detector remain unchanged. Settings modified with SendoPro 868-A management remote control, theSenda P installation remote control, or via bus object will be preserved.</p> <p> Note: With the first download (factory setting) or after discharging the detector, valid parameter values have to be downloaded first, otherwise error flashing will be displayed on the motion detector.</p>
Motion indicated by the LED	<p>no</p> <p>yes</p>	<p>No display of motion. LED is switched off.</p> <p>As soon as motion is detected, the LED illuminates. The LED remains on as long as motion is detected.</p>

2.4.3 Brightness measurement

Parameter name	Values	Meaning
Send brightness value on bus	yes no	The measured brightness value is sent as a 2-byte telegram via bus object 9. The parameters "Transmit brightness value cyclically" and "Transmit brightness value upon change" are displayed. Note: If the brightness value is used for external control, please note that <Transmit brightness value cyclically> is set to 5 s and <Transmit brightness value upon change> is set to > 5 %. The measured brightness value is not transmitted.
Transmit brightness value cyclically	5 s 30 min every 1 min no	The measured brightness value is transmitted cyclically at the selected time. Standard value The measured brightness value is not transmitted cyclically
Transmit brightness value upon change	>5% ... >80% of >30% no	The brightness value is sent if the measured value has changed by at least the configured value since the last transmission. This change is independent of the length of time taken for this process. If the brightness remains constant, the brightness value will be resent on completion of the configured cycle time. With frequent changes in brightness, the value is sent not earlier than 5 seconds after the last transmission. This time setting cannot be changed. Standard value The measured brightness value is not transmitted on the basis of a change in brightness.

2.4.4 Lighting channel C1

Parameter name	Values	Meaning
Configuration type	<p>Fully automatic device</p> <p>Semi-automatic device</p>	<p>In the "fully automatic device" <configuration type>, the lighting channel automatically switches the lighting on the basis of presence and surrounding brightness. Switching off occurs automatically.</p> <p>In the "semi-automatic" <function mode>, switching on must always be initiated manually via push button or remote control. Switching off occurs automatically.</p> <p>See also page 21 chapter 3.</p>
Brightness switching value	<p>30–3000 lx</p> <p>500 lx</p> <p>Measurement off (depending on presence only)</p>	<p>Switch lights: The brightness switching value defines the minimum desired brightness. The currently prevailing brightness is measured below the motion detector. If the prevailing brightness is below the switching value, the light switches on as soon as a presence is detected.</p> <p>The brightness switching value can be set in increments between 30–3000 lx.</p> <p>Standard value.</p> <p>Lighting channel C1 only reacts to presence.</p> <p>The SendaPro 868-A management remote control or the Senda P installation remote control provide assistance when setting the brightness switching value.</p>
Set brightness switching value via bus	<p>yes</p> <p>no</p>	<p>Bus objects 4 and 5 are visible and can be used.</p> <p>Bus objects 4 and 5 are not available.</p> <p>Note: The brightness switching value can always be set with the remote control.</p>
Lighting time delay	<p>30 s – 60 min</p> <p>10 min</p>	<p>The time time can be set between 30 seconds and 60 minutes. Each detected motion restarts the time delay.</p> <p>The time delay adjusts itself in a self-learning way, as follows: If a motion is detected within 10 seconds after the time delay has expired and the light has been switched off, the current time delay will be doubled. This can be repeated several times, up to a max. time delay of 30 minutes. If the time delay has expired and no motion is detected within 10 seconds, the time delay will be set to the defined value. This function is only active within a time delay of 2 to 30 minutes.</p>

Parameter name	Values	Meaning
Set lighting time delay via bus	yes no	The time delay can be set via the bus. Bus object 27 is available. The time delay can be set only via a remote control.
Short-term presence	inactive active	The lighting channel time delay can be switched off sooner if a room is occupied for only a short time. (In fully automatic and semi-automatic configuration type) The time delay is used according to the set parameter. If someone enters an unoccupied room and it is only occupied for up to 45 seconds, the light goes off 2 minutes early. Short-term presence is also applied if a push button is used to switch on the lights. Note: If the lighting time delay is set to ≤ 2 min., short-term presence is not effective.
Select brightness switching value	inactive active	There is only one brightness switching value (basis) available. A second, alternative brightness switching value can be configured. During operation, one can toggle between these two brightness switching values. Bus object 22 is visible and can be used. - An ON telegram to the appropriate bus object switches to the alternative brightness switching value. - An OFF telegram restores the original value. Example: Implementation of day and night operation with two different brightness levels.
Alternative brightness switching value	30–3000 lx 400 lx Measurement off (depending on presence only)	The parameter is visible if <Selecting brightness switching value> „active“ has been selected. During operation, bus object 22 can be used to switch between the brightness switching values. The alternative brightness switching value can be set in increments between 30–3000 lx. Standard value Lighting channel C1 only reacts to presence.
Set Set brightness switching value via bus	yes no	The parameter is visible if „active“ has been selected at <Selecting brightness switching value>. Bus object 6 is visible and can be used. Bus object 6 is not available. Note: The brightness switching value can always be set with the remote control.

2.4.5 Detail settings - Lighting channel C1 - Switching

The parameter page is visible if "Switch lights on/off" is set at the parameter <Lighting channel C1 function>. See page 13 chapter 2.4.1

Parameter name	Values	Meaning
Transmit channel C1 output value cyclically	every 1 min. .. 60 min. no	Current channel C1 output value* is sent cyclically at the selected time. * all values except "OFF" Standard value
Activate block function	yes no	Blocking lighting channel C1 means that the motion detector does not send telegrams via object 0, although the evaluation of motion and brightness continues. Standard value

2.4.6 Lighting channel C1 - Block function

The parameter page is visible if "yes" has been set at the channel C1 detail settings parameter <Activate block function>.

Parameter name	Values	Meaning
Block telegram	 blocking with ON telegram blocking with OFF telegram	Blocking the output of lighting channel C1 means that the motion detector does not send telegrams via object 0, although the evaluation of motion and brightness continues. The following channel is not affected by the blocking of lighting channel C1: - Presence channel C4 Note: Switching is still possible with the user remote control. General unblocking If no person is present anymore, the lighting time delay is set to 0 when unblocking. The causes the lighting to be switched off immediately. The lighting is not switched off if motion is detected with insufficient brightness. Lighting channel C1 is blocked with an ON telegram to the blocking object. All telegrams are suppressed for the duration of the blocking. Lighting channel C1 is unblocked with an OFF telegram. The detector sends its current status after unblocking. The lighting C1 output is blocked with an OFF telegram and unblocked with an ON telegram.
Response at start of blocking	ON telegram OFF telegram no telegram	An ON telegram is sent at the start of blocking. An OFF telegram is sent at the start of blocking. No telegram is sent at the start of blocking. The current status is always sent after unblocking, for instance, an ON telegram with absence and insufficient brightness in switching mode.
The current status is sent at the end of the blocking.		

2.4.7 Presence channel C4

The parameter page is visible if "active" is set at the parameter <Presence channel C4 function>. See page 13 chapter 2.4.1

Parameter name	Values	Meaning
Presence switch-on delay	inactive 10 s – 30 min.	An inactive switch-on delay means the presence channel switches immediately on detection of motion. A switch-on delay of 10 seconds to 30 minutes can be set for the presence channel. The presence channel does not switch immediately upon detection of motion, but only after the switch-on delay has expired. Example: A switch-on delay of 2 minutes can be set if the presence channel is used for controlling a fan in a toilet. The fan does not switch on if the toilet is briefly occupied, a longer presence of over 2 minutes switches the fan on.
Presence time delay	10 s – 120 min. 15 min.	The switch-off delay time presence can be set for between 10 seconds and 120 minutes. It is restarted with every new motion.

2.4.8 Objects - Presence channel C4

The parameter page is visible if "active" is set at the parameter <Presence channel C4 function>. See page 13 chapter 2.4.1

Parameter name	Values	Meaning
Telegram type C4.1, C4.2	Switch command Value Percentage value HVAC operating mode Scene	Five telegram types are available
When presence detected At the end of the time delay	 do not send telegram send following telegram once send cyclically	Presence channel C4 is switched on only by presence without the influence of brightness. No telegram is sent on detection of motion or at the end of the time delay. A telegram is sent once on detection of motion or at the end of the time delay, as a standard response. A telegram is sent cyclically on detection of motion or at the end of the time delay.
Telegram with switching command	Off/On On Off	Select at <Telegram type> "Switching command" Standard value (when presence detected) Standard value (at the end of the time delay)
Telegram with value	0...255 255 0	Select at <Telegram type> "Value" Standard value (when presence detected) Standard value (at the end of the time delay)
Telegram with percent value	0% ... 100% 100% 0%	Select at <Telegram type> "Percent value" Standard value (when presence detected) Standard value (at the end of the time delay)
Telegram with HVAC	Comfort Standby Temperature reduction at night Frost/heat protection	Select at <Telegram type> "HVAC operating mode". These have the following byte values: Comfort: 1; Standby: 2; Temperature reduction at night: 3; Frost/heat protection: 4. Standard value (when presence detected) Standard value (at the end of the time delay)
Telegram with scene	Scene 1 ... 64 Scene 1 Scene 2	Select at <Telegram type> "Scene" Standard value telegram C4.1/C4.2 (when presence detected) Standard value telegram C4.2/C4.1 (at the end of the time delay)

Parameter name	Values	Meaning
Should a second telegram be sent?	no yes	Standard value In addition to telegram C4.1, a second telegram C4.2 is sent. The telegrams and parameters available are the same as for C 4.1.
Cycle time (if used)	every 1 ... 60 min. every 60 min.	Select the cycle time for cyclical transmission.
Activate block function	yes.. no	When blocking presence channel C4, its telegrams will not be sent. Presence channel C4 is not blocked as standard. The telegrams are transmitted on detection of motion and after the time delay elapses according to the configuration.

2.4.9 Presence channel C4 - Block function

The parameter page is visible if "yes" has been set at the parameter <Activate block function>. See page 18 chapter 2.4.8



Parameter name	Values	Meaning
Block telegram	blocking with ON telegram blocking with OFF telegram	Presence channel C4 is blocked with an ON telegram and unblocked with an OFF telegram. After unblocking, the detector sends its current status. Presence channel C4 is blocked with an OFF telegram and unblocked with an ON telegram. After unblocking, the detector sends its current status.
Response at start of blocking	No response as when presence detected as at the end of the time delay	No response after blocking. Once the channel is blocked, the motion detector responds as when presence is detected. Once the channel is blocked, the motion detector responds as at the end of the time delay.

2.4.10 Remote control

Parameter name	Values	Meaning
Allocation of IR group addresses		The IR group address of the motion detector and theSenda S user remote control must match, so that the lighting channel or external channels can be operated. For detailed information on the application of IR group addresses, see Chapter 7 page 24. In the ETS, the same IR group address must be defined as the one set on theSenda S user remote control.
Upper button row theSenda S controls	Lighting channel C1 External switching/dimming 1 External blinds 1 inactive	Switching of lighting group C1 (visible when channel C1 is activated) Further information see 2.3.4 „Characteristics of other objects“ page 12, object 43/44 Further information see 2.3.4 „Characteristics of other objects“ page 12, object 47/48 The motion detector cannot be controlled with the upper button row of theSenda S
IR group address upper row of buttons theSenda S	I II III All	On theSenda S, IR group address I is permanently assigned to the upper button row. This is why the IR group address has to be set to I, when using theSenda S. The motion detector responds to group addresses I, II, and III. Note: Free assignment of IR group addresses is only possible with the Senda-Clic user remote control.

Parameter name	Values	Meaning
Lower button row theSenda S controls	Lighting channel C1 External switching/dimming 2 External blinds 2 inactive	Switching of lighting group C1 (visible when channel C1 is activated) Further information see 2.3.4 „Characteristics of other objects“ page 12, object 45/46 Further information see 2.3.4 „Characteristics of other objects“ page 12, object 49/50 The motion detector cannot be controlled with the lower button row of theSenda S
IR group address lower row of buttons theSenda S	I II III All	On theSenda S, IR group address II is permanently assigned to the lower button row. This is why the IR group address has to be set to II, when using theSenda S. The motion detector responds to group addresses I, II, and III. Note: Free assignment of IR group addresses is only possible with the Sendo-Click user remote control.

2.4.11 Scenes

Parameter name	Values	Meaning
Scene controls	Send scene number on bus inactive	The <Scene number user remote control button scene 1> and <Scene number user remote control button scene 2> parameters are displayed. Scene numbers can be allocated to the Scene 1  1 and Scene 2  2 buttons on theSenda S user remote control. Scene controls are not supported.
Scene number on user remote control Scene button 1 Scene number on user remote control Scene button 2	inactive Scene 1-64	The parameters are visible if the parameter <Scene controls> is set to "Send scene number on bus". No scene number is sent. The set scene number is sent via object 42 (1 byte) by pressing the scene buttons on theSenda S user remote control.

3. Manual operation with push buttons

The motion detector can be overridden by using push buttons or other overriding commands. It is important to know that no separate push button input objects are required. On the contrary, the motion detector responds to telegrams sent directly to the actuators by the push buttons or superior functions. In addition, the same group address is used for the push button output, the detector output and the actuator input.

Manual operation applies exclusively to the light output. The presence output is not affected by manual operation.

3.1 Manual operation via the switching function

If the lighting is operated manually via <Lighting channel C1 function> "Switch lights", the motion detector responds as follows:

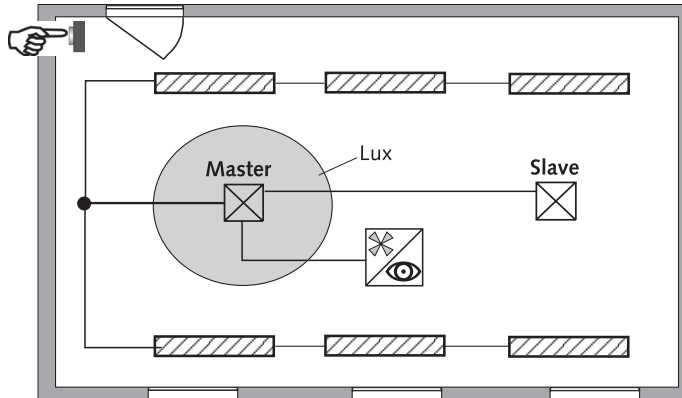
Push button operation	Response of lighting/motion detector
ON telegram	The lighting is switched on with an ON telegram to object 0. The light measurement is switched off as long as the lighting is switched on. If the room is vacated, the light will be switched off normally after the expiration of the set time delay. The light measurement is switched on afterwards.
OFF telegram	The lighting is switched off with an OFF telegram to object 0. The lighting remains switched off while the room is occupied. The detector returns to the normal switching mode after the room is vacated and the time delay has expired.

4. Parallel switching

In larger rooms, several detectors can be connected in parallel. This extends the overall presence detection area.

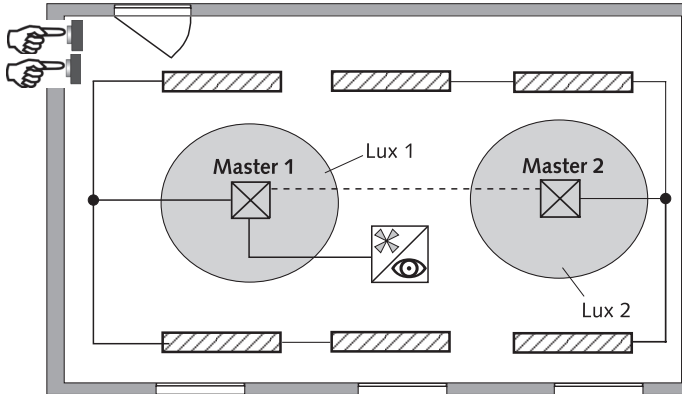
4.1 Master/Slave parallel connection

A "Master in parallel switching" can be connected to several "Slaves". For this, the trigger inputs/outputs are connected with each other. The Slaves only supply presence information from their detection area. The Master performs the brightness measurement and the administration of all parameter settings.



4.2 Master/Master parallel switching

Several "Masters in parallel switching" can be linked with each other. Presence detection is completed jointly while light measurement, parameter settings and lighting control are individually processed by each Master. This results in several light outputs with their own light measurement but with joint presence detection.



4.3 Telegram load when using parallel switching

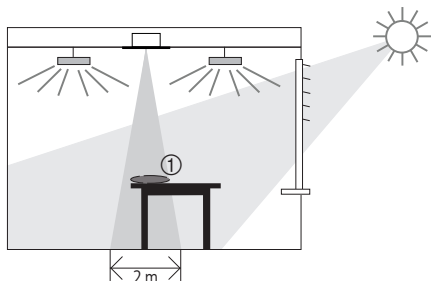
With parallel switching, each master in parallel switching and each Slave sends a maximum of two telegrams per minute, provided there is somebody in the detection area. The interval between two telegrams can be increased to 4 minutes to reduce the telegram load. Please note that the time delay can never be shorter than the interval between two telegrams in order to prevent unintentional switch off.

Parallel switching is compatible with all ThebenHTS KNX motion detectors.

5. Brightness switching value



5.1 Setting the brightness switching value

The brightness switching value defines the minimum desired brightness. The currently prevailing brightness is measured below the motion detector. If the prevailing brightness is below the switching value, the light switches on as soon as a presence is detected.



6. Presence test

The presence test serves to test presence detection and parallel switching.

Activation	<ul style="list-style-type: none"> - Presence test «On» control command via the "SendoPro 868-A" management remote control or installation remote control "theSenda P" button  - ON telegram via bus object 51 <p>The presence test mode can be activated anytime.</p>
End	<p>With subsequent restart:</p> <ul style="list-style-type: none"> - Presence test «Off» control command via the "SendoPro 868-A" management remote control - OFF telegram via bus object 51 - Power failure and thus power up - Automatically according to the time set in the ETS, parameter <Activation of test mode> - Control command "Restart" (SendoPro 868-A) - Reset with "theSenda P" button 

LED display Status channels	Description
On	In the event of movement, the LED is on and channel C1 switches on.
Off	After the movement has stopped, the LED is off and channel C1 switches off after approx. 10 s.

Test response

- Brightness measurement deactivated, light output does not react to brightness.
- The detector reacts as in configuration type fully automatic, even if semi-automatic is set.
- Light "On" during motion; light "Off" during absence
- Lighting channel C1 has a fixed time delay of 10 s.
- The presence channel C4 reacts unchanged as in normal operation.

Commands and adjustable parameters

The following commands are possible with the "SendoPro 868-A" management remote control in the presence test mode:

- End test presence
- Changing detection sensitivity

The selected detection sensitivity (1 . . 5) is unchanged on activation of the presence test. Sensitivity can be adjusted during the test. The motion detector performs a restart after the end of the test mode.

7. Integrating theSenda S user remote control

See the Senda S operating manual as well

7.1 Performance characteristics of the Senda S

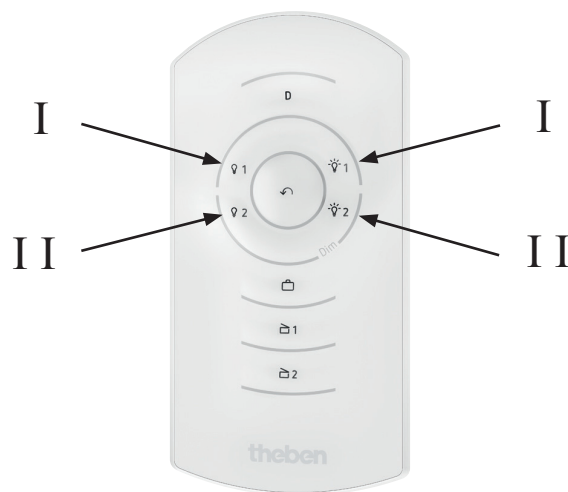
theSenda S user remote control makes it easier to switch lighting using theMova P360 / S360 KNX motion detector. theSenda S has two channels for controlling lighting groups, blinds or external channels with switching and dimming. theSenda S can also be used to send two scene numbers on bus and thus to control external devices. See also page 20 chapter 2.4.11.

7.2 Combining the motion detector and the Senda S

The motion detector channels and the theSenda S channels are linked via an IR group address. Two IR group addresses are available for linking.

Operation of a lighting group requires that the IR group address of the motion detector channel and that of the Senda S channel match.

Selection of IR group addresses enables the separation of neighbouring detectors controlled by the theSenda S user remote control. IR group addresses I and II are allocated permanently to 4 buttons on theSenda S and cannot be changed. Further information can be found in the operating manual for theSenda S.




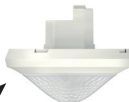

7.3 Examples of set IR group addresses

Subject	Chapter/page
Two motion detectors, two lighting channels	7.3.1 page 25
Two motion detectors, each with one lighting channel and blinds	7.3.2 page 26

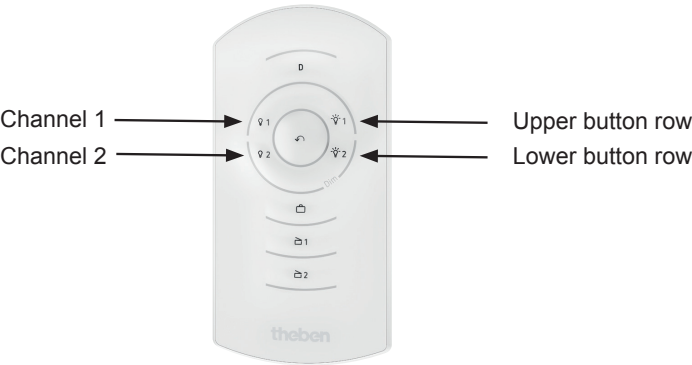
7.3.1 Two motion detectors, two lighting channels

Description	One lighting channel each on two motion detectors can be controlled manually by one theSenda S user remote control. Lighting channel C1 on the Master 1 motion detector is controlled by channel 1 on theSenda S. Lighting channel C2 on the Master 1 motion detector is controlled by channel 2 on theSenda S. The lighting channels on the motion detectors are not influenced mutually by theSenda S commands.
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Devices	theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560) theSenda S (Order No. 9070911)
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Overview						
	IR Grp. Addr.	Channel	Master 1	Master 2	Channel	IR Grp. Addr.
	T	Lighting channel C1			Lighting channel C1	II
						




Parameter	theMova P360 / S360 KNX		
	Master 1		
	Parameter page	Parameter	Setting
	Remote control	Upper row of buttons theSenda S controls	Lighting channel C1
		IR group address upper row of buttons theSenda S	T
	theMova P360 / S360 KNX		
	Master 2		
	Parameter page	Parameter	Setting
		Lower row of buttons theSenda S controls	Lighting channel C1
		IR group address lower row of buttons theSenda S	II



7.3.2 Two motion detectors, each with one lighting channel and blinds

Description	<p>One lighting channel on each of two motion detectors as well as the blinds channel on one motion detector can be controlled manually by a theSenda S user remote control.</p> <p>The respective channels C1 on the two motion detectors are controlled by channel 1 on theSenda S. As both lighting channels are controlled by the same IR group address, a mutual interaction between the lighting channels is possible. The user remote control must be aimed directly at the appropriate motion detector. Furthermore, the IR signals can be diverted in the room and therefore be received by other motion detectors.</p> <p>The blinds are controlled by the Master 2 motion detector via channel 2 on theSenda S. Channel 2 commands are ignored by Master 1.</p>
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Devices	<p>theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560)</p> <p>theSenda S (Order No. 9070911)</p>
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Overview	IR Grp. Addr.	Channel	Master 1	Master 2	Channel	IR Grp. Addr.
	I	Lighting channel C1			Lighting channel C1	I
					External blinds 2	II

Parameter	theMova P360 / S360 KNX Master 1		
	Parameter page	Parameter	Setting
	Remote control	Upper row of buttons theSenda S controls	Lighting channel C1
		IR group address upper row of buttons theSenda S	I
	theMova P360 / S360 KNX Master 2		
	Parameter page	Parameter	Setting
	Remote control	Upper row of buttons theSenda S controls	Lighting channel C1
		IR group address upper row of buttons theSenda S	I
		Lower row of buttons theSenda S controls	External blinds 2
		IR group address lower row of buttons theSenda S	II

8. Troubleshooting

Fault/error	Cause
Light does not switch on	Lux value is set too low; detector set on semi-automatic; light was switched off manually via push button or theSenda S; person not within detection range; obstruction(s) interrupting detection; time delay set too short
Light does not switch off or light switches on spontaneously when no one is present	Wait for time delay; thermal sources of interference in the detection area: fan heaters, incandescent lamps/halogen spotlights, moving objects (e.g. curtains hanging in an open window); the startup phase was not problem-free.
Error flashing (3 x per second)	Error during start-up phase or during operation: <ul style="list-style-type: none">- With the first download (factory setting) or after discharging the detector, valid parameter values have to be downloaded first, otherwise error flashing will be displayed.- Device not properly functional.

9. Appendix


9.1 Typical applications

Subject	Chapter/page
Presence and brightness-dependent switching of light	9.1.1 page 28
Presence and brightness-dependent switching of light, additional manual override via push button	9.1.2 page 29
Presence and brightness-dependent switching with additional heating control	9.1.3 page 30
Master - Slave parallel connection	9.1.4 page 32
Master - Master parallel connection	9.1.5 page 33

9.1.1 Presence and brightness-dependent switching of light

Description	The classic function of a motion detector is switching lights on only if a room is occupied and there is insufficient natural daylight. The lighting is automatically switched off if the room is vacated.
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Devices	theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560) RMG 8 S KNX (Order No. 4930220)
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Overview	
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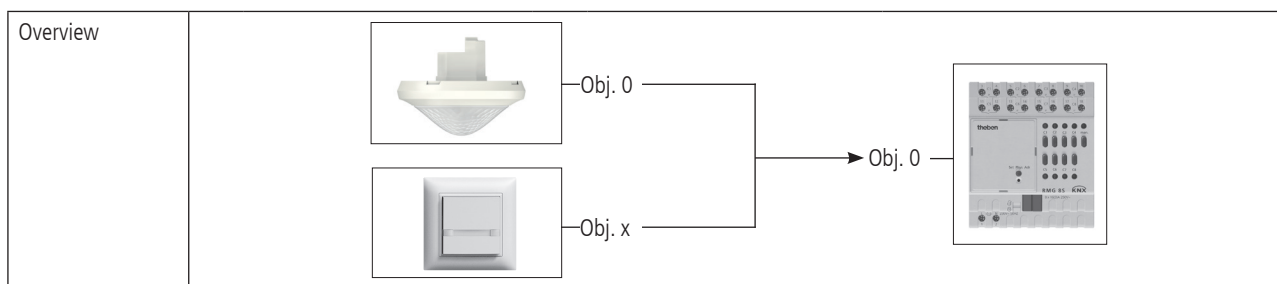
Links	theMova P360 / S360 KNX		RMG 8 S		Comment
	No.	Object name / Function	No.	Object name	
	0	Lighting channel C1 / Switching	0	RMG 8 S channel C1	

Parameter	theMova P360 / S360 KNX		
	Parameter page	Parameter	Setting
	General	Operating mode	Master
		Master operating mode	Individual switching
		Lighting channel C1 function	Switching light..
	Lighting channel C1	Configuration type	Fully automatic device
		Brightness switching value	500 lx (e.g. for office application)
		Lighting time delay	10 min. (as per customer specification)
	RMG 8 S		
	Parameter page	Parameter	Setting
	RMG 8 S channel C1 function selection	Channel function	Switching On/Off
	Standard or customer-defined parameter settings apply to unlisted parameters.		

9.1.2 Presence and brightness-dependent switching of light, additional manual override via push button

Description	<p>The motion detector switches the lighting. The lighting can also be switched on and off manually.</p> <p>The lighting is switched on with the push button and is only switched off when no one is present and after the time delay has expired. When the light is switched off via push button, the lighting remains switched off as long as the motion detector detects that the room is occupied. The motion detector takes control only after the time delay has expired.</p> <p>It is also possible to operate the motion detector in semi-automatic mode. In this case, the lighting must always be switched on by hand; the detector does not switch the lighting on automatically. If no one is present, the motion detector switches the lighting off as usual.</p>
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Devices	theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560) RMG 8 S KNX (Order No. 4930220)
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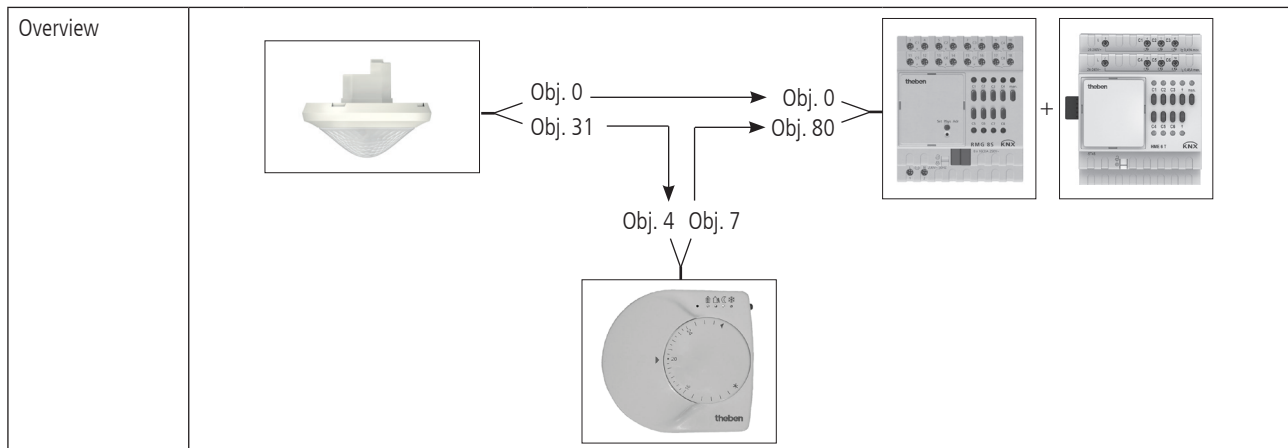
Links	theMova P360 / S360 KNX		RMG 8 S		Comment
	No.	Object name / Function	No.	Object name	
	0	Lighting channel C1 / Switching	0	RMG 8 S channel C1	
					Switching lighting on and off
	any KNX push button		RMG 8 S		Comment
	No.	Object name	No.	Object name	
	x	e.g. button 1	0	RMG 8 S channel C1	
					Manual switching on and off via push button

Parameter	theMova P360 / S360 KNX		
	Parameter page	Parameter	Setting
General		Operating mode	Master
		Master operating mode	Individual switching
		Lighting channel C1 function	Switching light..
Lighting channel C1		Configuration type	Fully automatic / semi-automatic
		Brightness switching value	500 lx (e.g. for office application)
		Lighting time delay	10 min. (as per customer specification)
KNX push button (example)			
	Parameter page	Parameter	Setting
Rocker 1 left		Telegram on pressing the button	On
		Telegram when released	no telegram
Rocker 1 right		Telegram on pressing the button	Off
		Telegram when released	no telegram
RMG 8 S			
	Parameter page	Parameter	Setting
RMG 8 S channel C1 function selection		Channel function	Switching On/Off
Standard or customer-defined parameter settings apply to unlisted parameters.			

9.1.3 Presence and brightness-dependent switching with additional heating control

Description	The presence output on the detector is also used for heating control in addition to the presence and daylight-dependent switching of a lighting group. The output is configured with a switch-on delay. In large rooms, this switching can be extended with additional motion detectors (Master or Slave).
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Devices	theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560) Mix combination: RMG 8 S + extension module HME 6 T (Order No. 4930220 + 4930245) Ramses 713 S KNX (Order No. 7139201)
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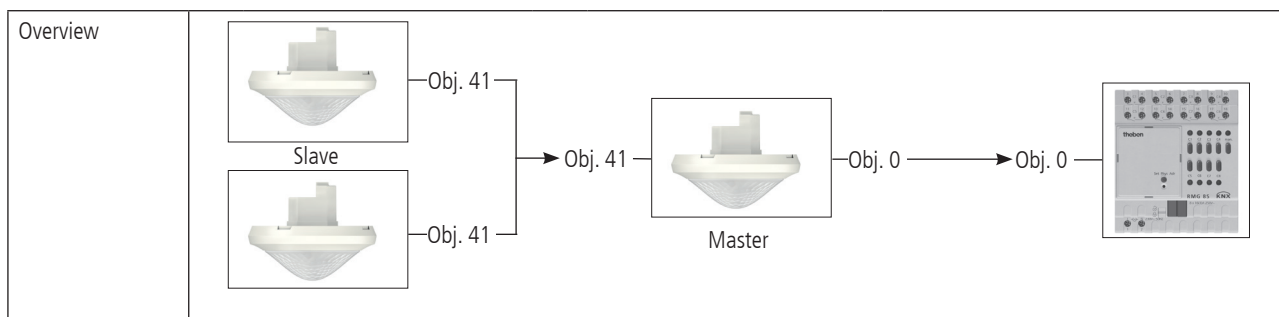
Links	theMova P360 / S360 KNX		MiX combination		Comment
	No.	Object name / Function	No.	Object name	
	0	Lighting channel C1 / Switching	0	RMG 8 S channel C1	Switching lighting on and off
	theMova P360 / S360 KNX		RAM 713 S		Comment
	No.	Object name / Function	No.	Object name	
	31	Presence channel C4.1 / Switching	4	Presence	If the presence object is set, RAM 713 S changes to comfort mode.
	RAM 713 S		MiX combination		Comment
	No.	Object name	No.	Object name	
	7	Channel 1 switching	80	EM HME 6 T Channel 1	RAM 713 sends the actuating value for heating to the heating actuator

Parameter	theMova P360 / S360 KNX		
	Parameter page	Parameter	Setting
	General	Operating mode	Master
		Master operating mode	Individual switching
		Lighting channel C1 function	Switching light..
		Presence channel C4 function	active..
	Lighting channel C1	Configuration type	Fully automatic device
		Brightness switching value	500 lx (e.g. for office application)
		Lighting time delay	10 min. (as per customer specification)
	Presence channel C4	Presence switch-on delay	as per customer specification
		Presence time delay	as per customer specification
	RAM 713 S		
	Parameter page	Parameter	Setting
	Operating mode	Objects for determining the operating mode	new: operating mode, presence, window status
		Operating mode after reset	Standby
		Presence sensor type (on obj. 4)	Motion detector
	Heating control ¹⁾	Type of control	Continuous control
	1) This setting is only required if a user-defined control is selected on the Settings parameter page.		
	MiX combination RMG 8 S and extension module HME 6 T		
	Parameter page	Function	Setting
	General	Number of basic modules	RMG 8 S
		Type of 1st extension module	HME 6 T...
	RMG 8 S channel C1 function selection	Function	Switching On/Off
	HME 6 T Channel H1: Configuration options	Type of actuating value	Continuous
	Standard or customer-defined parameter settings apply to unlisted parameters.		

9.1.4 Master - Slave parallel connection

Description	<p>A number of motion detectors can be linked together to provide coverage of larger areas, such as open-plan offices or corridors. One device is used as Master, the others as Slaves.</p> <p>The slaves trigger the master when motion is detected. All settings, such as delay times and brightness thresholds are configured on the Master.</p>
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Devices	<p>theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560)</p> <p>RMG 8 S (Order No. 4930220)</p>
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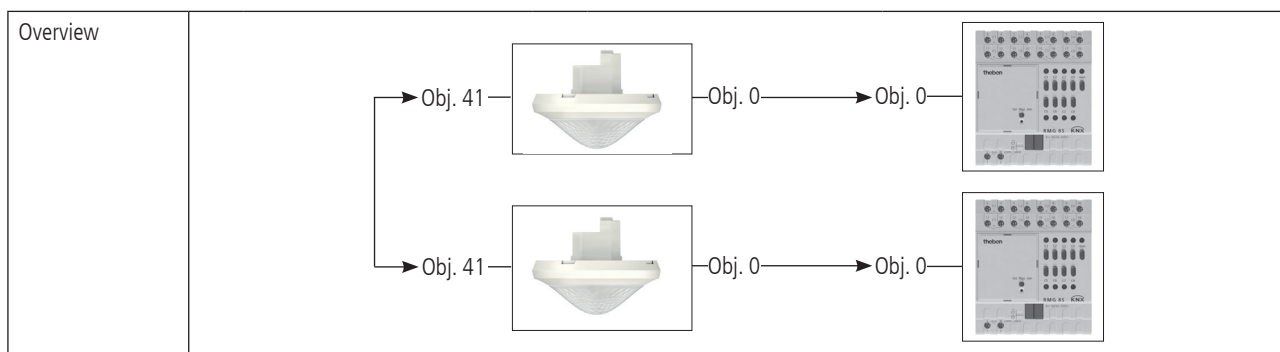
Links	theMova P360 / S360 KNX		RMG 8 S		Comment
	No.	Object name	No.	Object name	
	0	Lighting channel C1 / Switching	0	RMG 8 S channel 1	Switching lighting on and off
	theMova P360 / S360 KNX (Slaves)		theMova P360 / S360 KNX (Master)		Comment
	No.	Object name	No.	Object name	
	41	Parallel switching: Trigger input/output	41	Parallel switching: Trigger input/output	Connection between Master and Slave

Parameter	theMova P360 / S360 KNX (Master)		
	Parameter page	Parameter	Setting
	General	Operating mode	Master
		Master operating mode	Parallel switching
		Lighting channel C1 function	Switching light..
	Lighting channel C1	Configuration type	Fully automatic device
		Brightness switching value	500 lx (e.g. for office application)
		Time delay	10 min. (as per customer specification)
	theMova P360 / S360 KNX (Slaves)		
	Parameter page	Parameter	Setting
	General	Operating mode	Slave
	RMG 8 S		
	Parameter page	Parameter	Setting
	RMG 8 S channel C1 function selection	Channel function	Switching On/Off
	Standard or customer-defined parameter settings apply to unlisted parameters.		

9.1.5 Master - Master parallel connection

Description	<p>A number of Master motion detectors can be connected together to cover larger rooms with varying lighting conditions, such as open-plan offices.</p> <p>Each Master operates its lighting group according to its measurements and settings. They exchange presence with each other. This extends the detection area. Master/master parallel switchings permit several lighting groups to operate with their own light measurement. It should be noted that every Master can only detect light switched or controlled by itself.</p>
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Devices	<p>theMova P360 KNX UP (Order No. 1039600) or theMova S360 KNX DE (Order No. 1039560)</p> <p>RMG 8 S (Order No. 4930220)</p>
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Links	theMova P360 / S360 KNX		RMG 8 S		Comment
	No.	Object name / Function	No.	Object name	
	0	Lighting channel C1 / Switching	0	RMG 8 S channel 1	Switching lighting on and off
	theMova P360 / S360 KNX		theMova P360 / S360 KNX		Comment
	No.	Object name	No.	Object name	
	41	Parallel switching: Trigger input/output	41	Parallel switching: Trigger input/output	Connection between Master and Master

Parameter	theMova P360 / S360 KNX		
	Parameter page	Parameter	Setting
	General	Operating mode	Master
		Master operating mode	Parallel switching
		Lighting channel C1 function	Switching light..
	Lighting channel C1	Configuration type	Fully automatic device
		Brightness switching value	500 lx (e.g. for office application)
		Time delay	10 min. (as per customer specification)
	RMG 8 S		
	Parameter page	Parameter	Setting
	RMG 8 S channel C1 function selection	Channel function	Switching On/Off
	Standard or customer-defined parameter settings apply to unlisted parameters.		

