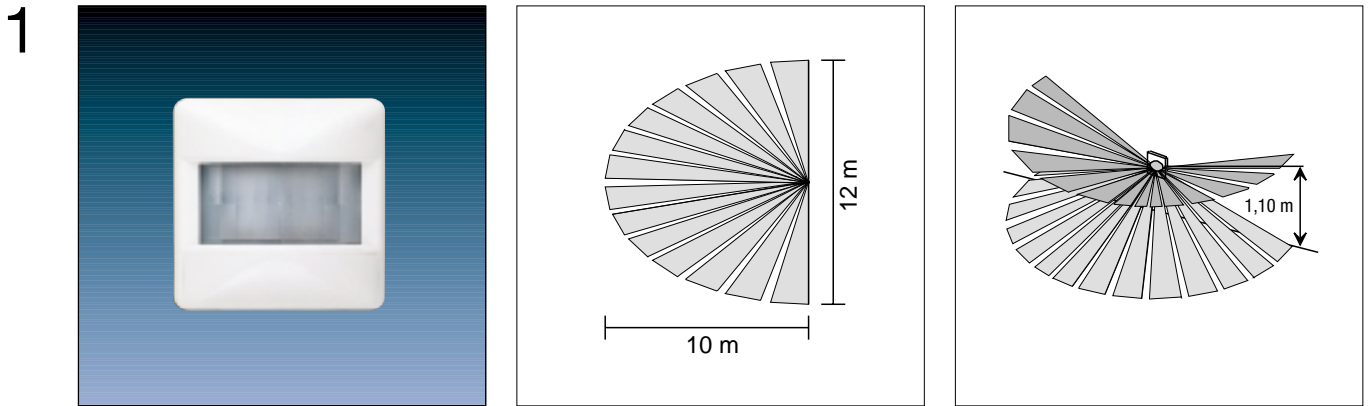


Physical Sensors

Automatic Switch – Standard



2

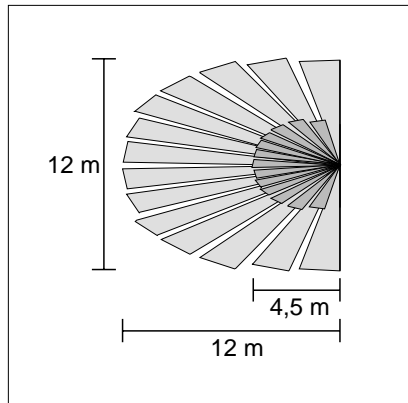
	Ref.-No.
KNX PIR automatic switch 180°	
1.1 m, standard	
ETS-product family:	Physical sensors
Product type:	Movement
ranges CD 500/CD plus	
ivory	3180
white	CD 3180 WW
blue	CD 3180 BL
brown	CD 3180 BR
grey	CD 3180 GR
light grey	CD 3180 LG
red	CD 3180 RT
black	CD 3180 SW
ranges LS 990/LS plus/Stainless Steel/Aluminium/Anthracite/Gold/Chrome	
ivory	LS 3180
white	LS 3180 WW
light grey	LS 3180 LG
Metal versions	
stainless steel	ES 3180
aluminium	AL 3180
anthracite	AL 3180 AN
gold coloured	GO 3180
chrome	GCR 3180
ranges AS 500/A 500/A plus	
ivory	A 3180
white	A 3180 WW
aluminium	A 3180 AL

3 The KNX automatic switch is plugged onto a flush mounted bus coupling unit. It reacts to changes in temperature like people moving into the detection area. This causes switching commands to devices such as binary outputs to switch groups of lights. The automatic switch has a detection angle of 180° and an area of 10 x 12 m. This angle can be restricted to 90° with a slip-on screen. The device has to be mounted at a height of 1.1 m.

Software applications:

PIR single unit	A00101	Vers. 1
PIR master	A00201	Vers. 1
PIR extension	A00301	Vers. 1

1



2

Ref.-No.

KNX PIR automatic switch 180°**2.2 m, standard**

ETS-product family: Physical sensors

Product type: Movement

ranges CD 500/CD plus

ivory	3280
white	CD 3280 WW
blue	CD 3280 BL
brown	CD 3280 BR
grey	CD 3280 GR
light grey	CD 3280 LG
red	CD 3280 RT
black	CD 3280 SW

ranges LS 990/LS plus/Stainless Steel/Aluminium/Anthracite/Gold/Chrome

ivory	LS 3280
white	LS 3280 WW
light grey	LS 3280 LG

Metal versions

stainless steel	ES 3280
aluminium	AL 3280
anthracite	AL 3280 AN
gold coloured	GO 3280
chrome	GCR 3280

ranges AS 500/A 500/A plus

ivory	A 3280
white	A 3280 WW
aluminium	A 3280 AL

3

The KNX automatic switch is plugged onto a flush mounted bus coupling unit. It reacts to changes in temperature like people moving into the detection area. This causes switching commands to devices such as binary outputs to switch groups of lights.

The automatic switch has a detection angle of 180° and an area of 12 x 12 m. This angle can be restricted to 90° with a slip-on screen.

The device has to be mounted at a height of 2.2 m.

Software applications:

PIR single unit	A00101	Vers. 1
PIR master	A00201	Vers. 1
PIR extension	A00301	Vers. 1

4 Technical data:

Supply	
Voltage:	24 V DC (+6 V / -4 V) via BCU
Power consumption:	max. 110 mW
Connection:	2 x 5-pole pin bar
Protection:	IP 20
Insulation voltage:	referring to V VDE 0829 part 230

Behaviour at	
Bus voltage drop:	no telegrams are sended
Bus voltage return:	object values = 0, out of function for approx. 80 sec.
Operation temperature:	-5°C ... +45°C
Storage temperature:	-25°C ... +75°C
Mounting:	plugged onto a flush mounted BCU

5 Description of application

1. Single unit A 00101

After detection of any movement the device will send an ON-telegram. At the end of detection and after the default min. delay time of 10 sec an OFF-telegram will be released. The evaluation of detection and the delay time can also be changed by parameters.

To avoid malfunctions after releasing the OFF-telegram (e.g. wrong detection by cooling down of a switched off halogen lamp), the device is locked-out for about 3 sec. In between these 3 sec no detection can be evaluated. The lock-out time can be adjusted by parameters.

The automatic switch only evaluates detections when the brightness value is under the adjusted dimmed lighting level which has a default value of 15 Lux. There is also the possibility to set the device brightness independent.

Additionally, a cyclical transmission during the detection can be activated.

By a special object the so-called disable object, the automatic switch is inactive. That means it can not detect any movement as long as the disable object is active. The telegram at start and end of blocking can be adjusted by parameters.

Objects

Number of addresses (dynamic):	5
Number of assignments (dynamic):	5
Communication objects:	2

Object	Name	Function	Type	Flag
0	Switch	Switch	1 Bit	C, W, T
1	Disable	Disable	1 Bit	C, W

Description of application

2. Master unit A 00201 / extension unit A 00301

With the combination of these applications it is possible to have one or several extension units (satellites) to one master unit.

Additionally, to the features of the application single unit there is one more object, the so-called movement object.

That is the object used for the communication between the master and the extension unit.

Every extension unit receives the real switch telegram of the master unit by the object switch (status). That is necessary for the extension to know the real switch status of the master.

Note: In the project design you have to take care that the switch objects of the devices (master/extensions) and the movement objects are connected together.

After commissioning or after bus voltage recovery the device is blocked for about 80 sec. During that time no movements can be detected.

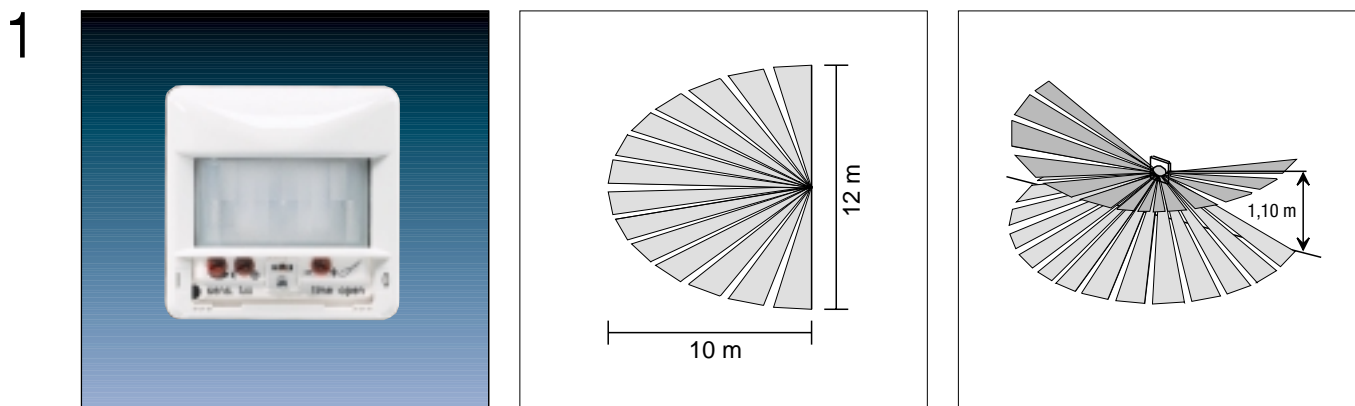
Objects

Number of addresses (dynamic):	6
Number of assignments (dynamic):	6
Communication objects:	3

Object	Name	Function	Type	Flag
0	Switch	Switch	1 Bit	C, W, T
1	Disable	Disable	1 Bit	C, W
2	Movement	Event signal from extensions input	1 Bit	C, W, T
2	Movement	Event signal to master	1 Bit	C, W, T

Physical Sensors

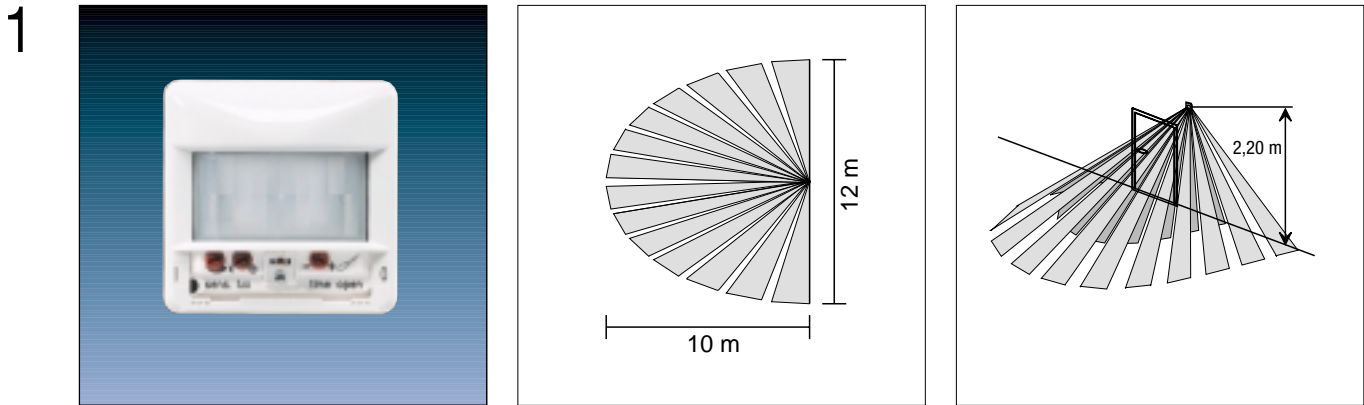
Automatic Switch – Universal



2

	Ref.-No.
KNX PIR automatic switch 180°	
1.1 m, universal	
ETS-product family:	Physical sensors
Product type:	Movement
ranges CD 500/CD plus	
ivory	3180-1 A
white	CD 3180-1 A WW
blue	CD 3180-1 A BL
brown	CD 3180-1 A BR
grey	CD 3180-1 A GR
light grey	CD 3180-1 A LG
red	CD 3180-1 A RT
black	CD 3180-1 A SW
ranges LS 990/LS plus/Stainless Steel/Aluminium/Anthracite/Gold/Chrome	
ivory	LS 3180-1 A
white	LS 3180-1 A WW
light grey	LS 3180-1 A LG
Metal versions	
stainless steel	ES 3180-1 A
aluminium	AL 3180-1 A
anthracite	AL 3180-1 A AN
gold coloured	GO 3180-1 A
chrome	GCR 3180-1 A
ranges AS 500/A 500/A plus	
ivory	A 3180-1 A
white	A 3180-1 A WW
aluminium	A 3180-1 A AL

3 The KNX automatic switch is plugged onto a flush mounted bus coupling unit. It reacts to changes in temperature like people moving into the detection area. This causes switching commands or value transmission to devices such as binary outputs to switch groups of lights or dimming actuators. It can also be used to release a light scene in combination with a light scene push-button. It has three potentiometers for time, brightness and sensitivity adjustable from the front side. A slide switch (ON/AUTO/OFF) is also integrated. The automatic switch has two major modes. There is one for lighting purposes as already explained and one for monitoring purposes used for simple alarm detection or in connection with the Central Alarm Unit EAM 4000. By activating a specific object the device can be toggled between these modes.



2

	Ref.-No.
KNX PIR automatic switch 180°	
2.2 m, universal	
ETS-product family:	Physical sensors
Product type:	Movement
ranges CD 500/CD plus	
ivory	3280-1 A
white	CD 3280-1 A WW
blue	CD 3280-1 A BL
brown	CD 3280-1 A BR
grey	CD 3280-1 A GR
light grey	CD 3280-1 A LG
red	CD 3280-1 A RT
black	CD 3280-1 A SW
ranges LS 990/LS plus/Stainless Steel/Aluminium/Anthracite/Gold/Chrome	
ivory	LS 3280-1 A
white	LS 3280-1 A WW
light grey	LS 3280-1 A LG
Metal versions	
stainless steel	ES 3280-1 A
aluminium	AL 3280-1 A
anthracite	AL 3280-1 A AN
gold coloured	GO 3280-1 A
chrome	GCR 3280-1 A
ranges AS 500/A 500/A plus	
ivory	A 3280-1 A
white	A 3280-1 A WW
aluminium	A 3280-1 A AL

3 The automatic switch has a detection angle of 180° and an area of 10 x 12 m. This angle can be restricted to 90° with a slip-on screen. The device has to be mounted in a height of 2.2 m. Additionally, the device has an integrated red LED used for testing mode or alarm indication when the cover was removed from the insert. It can also be programmed to release an alarm indication if somebody manipulated the cover.

Software application:

PIR universal A00802

4 Technical data:

Supply		
Voltage:	24 V DC (+8 V / -3 V)	
Power consumption:	typical 150 mW	
Connection:	KNX connection block	
Input:	for mounting height 1,10 m	for mounting height 2,20 m
Opening angle	180°	180°
Range, frontal	10 m	10 m
Range, side	2 x 6 m	2 x 6 m
No. of lences/detection levels	18/2	18/2
Protection:	IP 20	
Behaviour at voltage drop:	no response	
	Active movements detected or running delays will be disregarded and not continued after bus voltage recovery.	
Behaviour at voltage recovery:	depending on the used mode	
	thermal movement detection immunity time: approx 80 s	
Operation temperature:	-5°C ... +45°C	
Storage temperature:	-25°C ... +75°C	
Mounting:	plug onto a flush-mounted bus coupler	

5 Objects

Number of addresses (dynamic):	28
Number of assignments (dynamic):	28
Communication objects:	max. 9 (dynamic)

Object	Name	Function	Type	Flag
0	Switching	Switching	1 Bit	W, C, T, (R)*
1	Valuator	Valuator	1 Byte	W, C, T, (R)*
1	Light scene	Light scene	1 Bit	W, C, T, (R)*
	Extension input	Extension input	1 Byte	
2	Disable	Disable	1 Bit	W, C, (R)*
3	Level of dimmed	Detection (not)		
	Lighting	Brightness depend.	1 Bit	W, C, T, (R)*
4	Event signal from	Movement	1 Bit	W, C, T, (R)*
	Extension input			
4	Event signal to master	Movement	1 Bit	W, C, T, (R)*
5	Event signal	Event signal	1 Bit	W, C, T, (R)*
6	Switch object	Switch object	1 Bit	C, T, (R)*
	Signal mode	Signal object		
7	Operation mode	Operation mode	1 Bit	W, C, T, (R)*
8	Alarm	Alarm	1 Bit	W, C, T, (R)*

Objects marked with *: object value can be read out (set R-flag).

Description of objects

Object 0 switching:

1 bit object for sending a switch telegram. Within the master/extension mode operation (switching) the level of dimmed lighting will be deactivated with a switch object = 1 and activated with a switch object = 0 during a detected movement. This ensures that a movement can also be detected when the lights are switched On.

Object 1 valuator:

1 byte object for sending a value telegram. Within the master/extension mode operation (valuator) the level of dimmed lighting will be deactivated with a value object = 1 ... 255 and activated with a value object = 0 during a detected movement. This ensures that a movement can also be detected when the lights are switched On.

Object 1 light scene extension:

1 byte object for sending a light scene extension telegram.

Object 2 disable:

1 bit object to switch the disable mode ON or OFF. The disable object has a higher priority than the internal slide switch.

Object 3 level of dimmed lighting:

1 bit object to switch between brightness dependent or independent movement detection.

Level of dimmed

lighting object value = 0: level of dimmed lighting acc. to ETS-parameter "Level of dimmed lighting"

lighting object value = 1: brightness independent movement detection

5

Description of objects**Object 4 movement (event signal to master, event signal from extension):**

1 bit object for communication between master and extension. The movement object is only visible with application "master" and "extension input".

Object 5 event signal:

1 bit object for sending an event signal telegram in the monitoring mode.

Object 6 switch object / signal mode:

1 bit object for sending a switch telegram in the monitoring mode.

Object 7 operation mode:

1 bit object for switching between monitoring and the lighting mode within the parameterized operation modes:

- signal mode / switching + lighting mode
- signal mode / valuator + lighting mode
- signal mode / light scene retrieval + lighting mode

In case the T-flag is set in this object, an acknowledge telegram acc. to the actual object value can be sent.

This objects is only visible with a mixed operation (signal mode/lighting mode).

Object 8 alarm:

1 bit object for sending an alarm report in form of an ON or OFF telegram in case that the cover is removed.

Further functions**Walking test:**

The walking test is used to adjust the sensivity of the movement detector when the device is put into operation. It is no operation mode, it should be inactive after starting the device.

The walking test function will be activated after removing and putting on again the cover or after a bus reset, if:

1. the ETS parameter "walking test activated" Yes/No is fixed to Yes and
2. the potentiometer for the level of dimmed lighting is turned to the max. and
3. the potentiometer for additional sending delay is turned to "-50 %" (zero position).

The walking test function will be deactivated after removing and putting on again the cover or after a bus reset, if:

1. the ETS parameter "walking test activated" Yes/No is fixed to No or
2. the potentiometer for the level of dimmed lighting is not turned to the max. or
3. the potentiometer for additional sending delay is not turned to "-50 %" (zero position).

Removal recognition – event signal after removal:

When the cover is removed from the BCU a report in form of an ON or OFF telegram can be released via the alarm object.

Alternatively, this function can be disabled by ETS parameter "alarm function disabled".

Signal operation:

In the signal operation mode, the movement detector reacts more insensitive to detected movements. The criterion for releasing an event signal telegram is the number X of movements within a fixed time period (monitoring time).

In this operation mode a configuration as master and extension input is not possible.

Every device works separately and sends, after detection and evaluation of the movement, a telegram via the event signal object to e.g. a display, signal panel, visualization etc.

The signal operation mode can be both, just single mode as well as mixed with lighting modes. In the mixed operation mode it can be switched between the modes via the operation mode object (object 7).

Master unit A 00201 / extension unit A 00301

The automatic switch can be used as a single unit, as a master or an extension.

Thus several automatic switch can be used in order to enlarge the detected area.

The automatic switch can be combined with several automatic switch standard (application extension unit) or with several universal presence detectors.

With the combination of these applications it is possible to have one or several extension units (satellites) to one master unit.

Additionally to the features of the application single unit there is one more object the so-called movement object.

That is the object used for the communication between the master and the extension unit.

Every extension unit receives the real switch telegram of the master unit by the object switch (status). That is necessary for the extension to know the real switch status of the master.

Note: In the project design you have to take care that the switch objects of the devices (master/extensions) and the movement objects are connected together.

After commissioning or after bus voltage recovery the device is blocked for about 80 sec. During that time no movements can be detected.