12 S1 Light, HVAC, bright/dark, pushb. ON/OFF 212202

Use of the application program

Product family: Physical sensors
Product type: Presence detector
Manufacturer: Siemens

Name: Presence detector
Order no.:   5WG1 258-2AB11

Functional description

The presence detector 258/11 can be configured with the application program "12 S1 Light, HVAC, bright/dark, pushb. ON/OFF 212202".
The switching behaviour is controlled via presence and daylight. It can be defined whether several presence detectors are operated in parallel or individually. The setting "Test mode" enables rapid commissioning of the presence detector. The OFF delay for the light can also be set. A value between 30 seconds and 20 minutes can be selected. At a setting between 2 and 15 minutes, the period changes auto-adaptively. It varies between the set minimum value and 15 minutes, depending on the behaviour of the user.
The presence detector has a detection range of 360° and enables control functions to be carried out automatically in the electrical installation by detecting movement. It is therefore possible for example to only switch on energy loads if people are moving within the detection range of the presence detector. The energy costs for lighting, heating, ventilation, cooling etc. can thus be reduced.
The functional principle of the presence detector fundamentally corresponds to that of a motion detector. With an optimum selection of the installation site, the presence detector can also reliably detect seated individuals. The front of the presence detector with its pyramid-shaped design consists of a large number of small individual lenses. The movements are routed via these lenses as through a magnifying glass to the electronics in the presence detector and evaluated. The presence detector also has intelligent signal preparation as well as a device for measuring daylight so that the lighting is only switched on for example at the set lighting threshold (DARK).

Prerequisites for the error-free detection of people by the presence detector are:
- The presence detector requires a clear view of the people that are to be detected.
- People moving behind walls, even those made of glass, are not detected.

When selecting the installation sites, the receiving characteristics of the detector should be taken into account.

Max. number of group addresses: 15
Max. number of associations: 15

Communication objects

Phys.Addr.	Program		
no.	Object name	Function	Type
01.01.003	12 S1 light,HVAC,bright/dark,pushb. ON/OFF 212202		
0	Switched output	Light	1 Bit
1	Switched output	HVAC	1 Bit
2	Input	Push button	1 Bit
4	Switched output	bright / dark	1 Bit

Obj	Object name	Function	Type	Flags
0	Switched output	Light	1 Bit	CRT
	The switching behaviour is controlled by presence and daylight via this object. An ON telegram is sent in the case of darkness and presence while an OFF telegram is sent for brightness or absence. The telegrams can be suppressed if required.			
1	Switched output	HVAC	1 Bit	CRT
	The switching behaviour is only controlled by presence via this object. An ON telegram is sent in the case of presence while an OFF telegram is sent for absence. The telegrams can be suppressed if required.			
2	Input	Push button	1 Bit	CWT
	The "Switched output light" can be switched on and off manually with the object "Push button input". To do so, an EIB push button is linked with the push button input of the detector. A telegram at the push button input toggles the switched output (changeover function).			
3	Switched output	bright / dark	1 Bit	CRWT
	The switching behaviour is only controlled by daylight via this object. An ON telegram is sent in the case of darkness while an OFF telegram is sent for brightness. The brightness threshold value serves as a switching threshold.			

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Parameters

General data

Parameters	Settings
Operation mode	master in parallel **master stand alone** slave
It can be defined with the parameter "Operation mode" whether several detectors are operated in parallel ("master in parallel") or individually ("master stand alone"). In general, a master is linked to several slaves in parallel operation. The trigger inputs/outputs are linked together. The slaves only supply the presence information from their detection area. The brightness measurement as well as the management of all the parameter settings takes place in the master. Several masters can also be connected in parallel. The presence detection is carried out globally while the lighting measurement, switched outputs and parameter settings are processed individually by each master. Benefit: Several switched outputs for light are received with their own brightness measurement but a common presence detection.	

Parameters	Settings
Norma-l or test operation **can also be set with DIP switch "test" at the sensor**	**normal operation** test mode
It is possible to choose between normal operation and test mode in this parameter. The LEDs in the presence detector enable the presence detection and brightness measurement to be checked and guarantee rapid commissioning. The test mode can be selected both via ETS and locally at the devices.	
Switched output for light	inactive **active**
The switched output for light can be enabled or disabled here.	
Switched output for HVAC	inactive **active**
The switched output for HVAC can be enabled or disabled with this parameter.	
Switched output bright/ dark	inactive **active**
The switched output for bright/dark can be enabled or disabled with this parameter.	
Push button input	inactive **active**
The push button input can be enabled or disabled here.	

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Switched output for light

Parameters	Settings
Switch-off delay light **(self adaptive)**	30 seconds 1 minute 2 ... **10 minutes** 12 minutes 15 minutes 20 minutes use the potentiometer settings
The parameter "Switch-off delay light" can be set between 30 seconds and 20 minutes or the options "use the potentiometer settings" and "none (only dependent on brightness)" can be selected. The delay is restarted after each movement. In a setting between 2 - 15 minutes, the delay period changes auto-adaptively. It varies between the set minimum value and 15 minutes depending on the behaviour of the user.	
Brightness threshold 6.0 corresponds to approx. **400 lux** **Increasing the value by 0.1 corresponds to a 10% rise in the lux value**	1.0 ... **6.0** ... 9.0 use the potentiometer settings none (only dependent on presence)
This parameter "Brightness threshold 6.0 corresponds to approx. 400 lux" is only influenced by daylight. An ON telegram is sent In the event of darkness while an OFF telegram is sent for brightness. The brightness threshold serves as a switching threshold. It is possible to choose between: "Switching value 1.0 ... 9.0", "use the potentiometer settings" and "none (only dependent on presence)" (identical to switching value of the switched output for light).	
Function of switched output for light	**fully automatic** semi-automatic
In the parameter "Function of switched output for light", it is possible to choose between "fully automatic" and "semi-automatic" (only available if the push button inputs are active). The operating modes "fully automatic" and "semi-automatic" define the switching behaviour of the switched output for light. In the operating mode "fully automatic", the switched output switches the light automatically ON and OFF. In the operating mode "semi-automatic", the output must always be switched on manually via push button. The output is switched off automatically.	

Parameters	Settings
Disable switch output light	disable by ON telegram disable by OFF telegram **disable inactive**
With the parameter "Disable switched output light", it is possible to disable with an ON or OFF telegram. The lighting output can send a final ON/OFF telegram at the start of the deactivation. No further telegrams occur during this period. Once the output has been enabled again, the switched output for light can send a telegram according to the current status.	

Switched output for HVAC

Parameters	Settings
Switch- off delay HVAC	30 seconds 1 minute 2 ... **10 minutes** 12 minutes 15 minutes 20 minutes 25 minutes 30 minutes 40 minutes 50 minutes 60 minutes use the potentiometer settings
In this parameter, the switching behaviour is only influenced by presence. An ON telegram is sent when presence is detected while an OFF telegram occurs in the case of absence. The telegrams can be suppressed if required. The required "Switch-off delay HVAC" can be set between "30 seconds and 60 minutes" or the option "use the potentiometer settings" can be selected. The delay is restarted after each movement.	
Behaviour at start / end of HVAC requirement	**send ON and OFF telegram** only ON telegram at the start only OFF telegram at the end
The behaviour at the start/end of the lighting requirement can be set with this parameter.	

Siemens AG
 Automation and Drives Group
 Electrical Installation Technology
 P.O. Box 10 09 53, D-93009 Regensburg

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Technical manual

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Switched output for bright/dark

General data	Switched output for light	Switched output for HVAC
	Switched output for bright/dark	

**Send ON telegram if dark
and OFF telegram if bright**

**As brightness threshold the setting
of the switched output**

for light is used

Parameters	Settings
Send ON telegram if dark and OFF telegram if bright **As brightness threshold the setting of the switched output for light is used**	
In the parameters "ON telegram if dark", "OFF telegram if bright" and "As brightness threshold the setting of the switched output for light is used", the switching behaviour is only influenced by daylight. An ON telegram is sent for darkness while an OFF telegram is sent for brightness. The brightness switching value serves as a switching threshold. It can be set between 25 and 1600 lux (identical to switching value of the switched output for light).	