

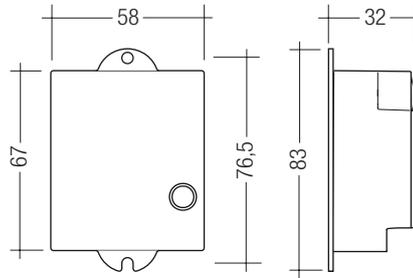


SWITCH Sensor HF 5BP

Automatic switching based on motion and light level

Product description

- Motion detector for luminaire installation
- Motion detection through glass and thin materials (except metal)
- For automatic on/off switching of electronic ballasts
- "Bright-Out" function: luminaire is not switched on if there is adequate brightness
- Delay time, detection range and light value for the "Bright-Out" function can be set via 3 potentiometers
- Max. installation height 5 m
- Infinitely variable range (0.5 – 5.0 m)
- 5-year guarantee



Technical data

Rated supply voltage	230 – 240 V
Mains frequency	50 Hz
Power consumption	< 0.5 W
Ambient temperature ta	-20 ... +75 °C
Storage temperature ts	-20 ... +75 °C
Humidity	min. 5 % ... max. 85 % at 30 °C
Type of protection	IP20
Casing material	PC, halogen-free
Casing colour	RAL 9016

Ordering data

Type	Article number	Packaging, carton	Weight per pc.
SWITCH Sensor HF 5BP	28000086	4 pc(s).	0.077 kg



Product matrix, page 2

Wiring diagrams and installation examples, page 2

Specific technical data

Type	Dimensions LxWxH	Detection			Output, relay (L')	
		Detection angle	Transmission power	Frequency	L' (switched line)	Switching output (at 240 V AC max.) ^①
SWITCH Sensor HF 5BP	83x58x32 mm	160°	1 mW	5.8 GHz	230 – 240 V	1,000 W / 4 A (ohmic load)

^① Inductive: 500 VA, cos phi > 0.5; capacitive: max. 2 ECG (à 54 W, max. 50 µF); inrush current: max. 160 A / 200 µs; up to 100.000 switching cycles.

SWITCH Sensor HF 5BP

SWITCH Sensor HF 5BP provides simple cost-effective motion detection in combination with the corridorFUNCTION offered by Tridonic electronic control gear. When the sensor detects movement it triggers a predefined motion detection profile in the control gear.

If the user-definable light value at the integrated light sensor is exceeded the control gear remains switched off.

High-frequency technology enables the sensor to be installed in completely enclosed luminaires.

Installation



- Not for use with phase cut dimmers
- Permanent installation only in luminaires
- The sensor must protrude over the light sources
- The power supply must be disconnected before installation
- Suitable for installation only in indoor luminaires (e.g. corridors and closed parking garage)
- Opening angle of the sensor: must be at least 45%

Standards

- EN 61347-1
- EN 61347-2-11
- EN 61000-4-4
- EN 61000-4-5
- EN 60669-2-1

Glow-wire test according to EN 60598-1

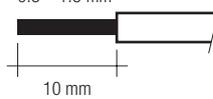
850 °C passed

Wiring type and cross section

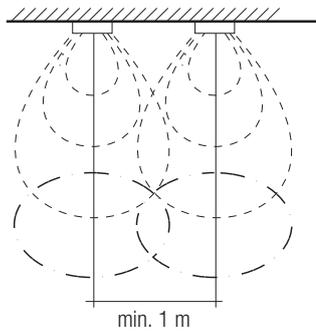
Stranded wire with ferrule or solid wire up to 1.5 mm² may be used for wiring. Strip 10 mm of insulation from the cables to ensure perfect operation of the push-in terminals.

Use one wire for each terminal connector only.

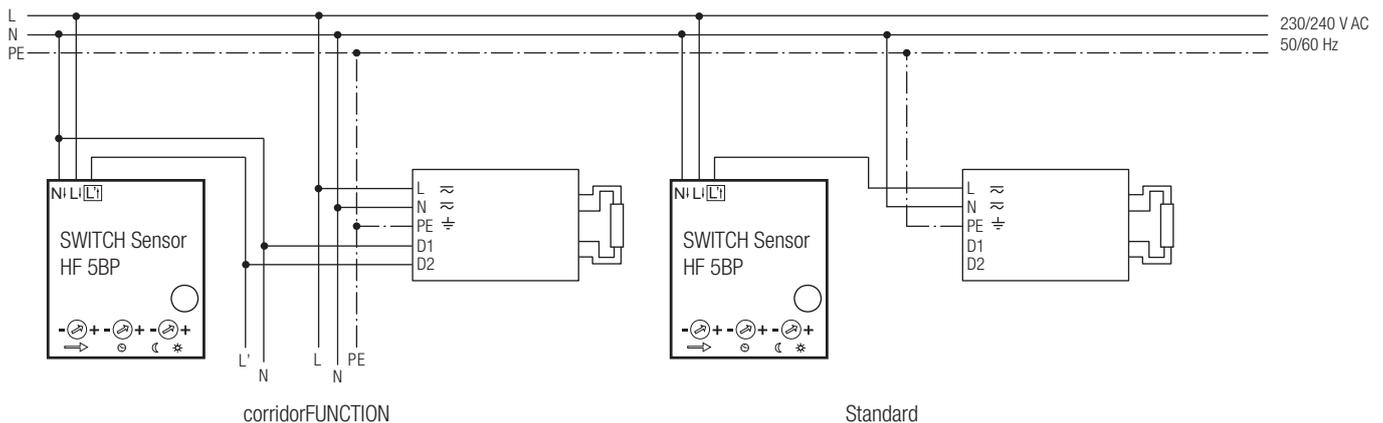
wire preparation:
0.5 – 1.5 mm²



Minimum spacing for further sensors



Wiring diagram



Setting up

Setting the threshold value

A threshold value can be set to prevent the lighting system from being switched on when there is already adequate illuminance. The threshold value indicates the illuminance value below which detected motion causes the lighting system to be switched on.

	Value range	2 – 2000 lx; infinitely
	Position +	Threshold value 2000 lx
	Position –	Threshold value 2 lx

Note:

To ensure the sensor switches on in conjunction with the corridorFUNCTION you should set the threshold value as high as possible. If the threshold value is set to maximum the sensor will always switch on.

Setting the detection area

The detection area can be restricted to prevent the lighting system being switched on unnecessarily, as would be the case if the area were too large. The detection area indicates the diameter within which motion is detected.

	Value range	infinitely; depending on installation height
	Position +	Maximum detection area
	Position –	Minimum detection area

Setting the switch-off delay

To prevent the lighting system being switched on and off unnecessarily you can set a switch-off delay. The delay starts after the last motion in the detection area. If a further motion is detected in the detection area during this delay then the delay is retriggered. At the end of the delay the corridorFUNCTION is started.

	Value range	30 s – 30 min; infinitely
	Position +	30 min
	Position –	30 s

Burn-in function

When they are first used, lamps should be operated for 100 hours unswitched and undimmed so that they function correctly and achieve the rated life-time specified by the manufacturer.

Starting the burn-in function by interrupting the power supply

- Switch off and on the power supply twice within 1 second. This starts the burn-in time. The lamps remain switched on for 100 hours. Motion detection then starts automatically.

Starting the burn-in function with a rotary potentiometer

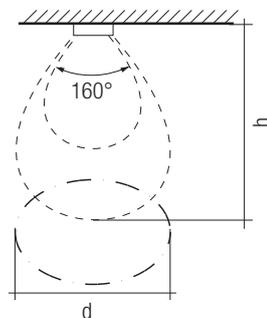
- Set the threshold value, detection area and switch-off delay rotary potentiometers to the + position. Set the switch-off delay rotary potentiometer first to the – position and then to the + position within 10 seconds. This starts the burn-in time. The lamps remain switched on for 100 hours. Motion detection then starts automatically.

corridorFUNCTION

The corridorFUNCTION can be activated by applying a voltage of 230 V for 5 minutes at the switchDIM connection of the control gear or via corridorFUNCTION Plug.

Note: To apply a voltage of 230 V for 5 minutes at the switchDIM input of the control gear the sensor must detect motion for more than 5 minutes or a switch-off delay longer than 5 minutes must be set.

Motion detection



h	d
0.5 m	0.5 m
1.0 m	1.0 m
1.5 m	2.0 m
2.0 m	3.0 m
2.5 m	4.0 m
3.0 m	5.0 m
3.5 m	4.0 m
4.0 m	3.0 m
4.5 m	2.0 m
5.0 m	1.0 m

Diameter of the detection cone as a function of height at maximum detection area without taking objects in the room into consideration. Stationary objects (walls, tables, floor-standing luminaires, etc.) located in the direct view of the sensor change the characteristics of the detection area.

For further technical information please visit www.tridonic.com