SR™

Product Guide

EBMPIR-MB-SR

Sensor Ready (SR), miniature, IP65, Luminaire mount, PIR Presence Detector

Overview

The EBMPIR-MB-SR is a miniature, retrofit, luminaire mounted PIR (passive infrared) detector which provide automatic control of SR™ (Sensor ready) LED drivers with optional manual control via IR using our IR handsets. It is specifically designed for mounting onto a batten style luminaire.

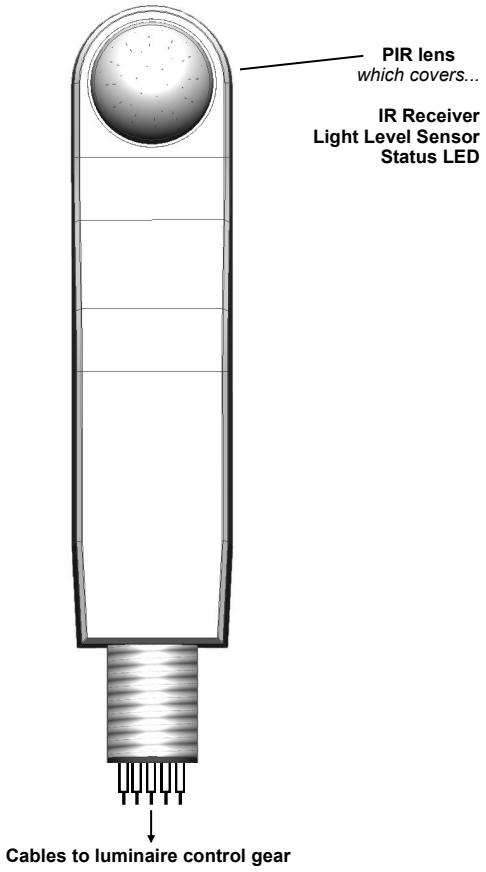
The units are IP65 rated as standard and are therefore suitable for outdoor use as well as wet and wash-down areas.

A selection of fixing washers are supplied to aid fixing to a variety of luminaires.

The product boasts the latest V3 firmware functionalities. Please refer the Programming Menu section.

Features

Front view



PIR Sensor
Detects movement within the unit's detection range, allowing load control in response to changes in occupancy.

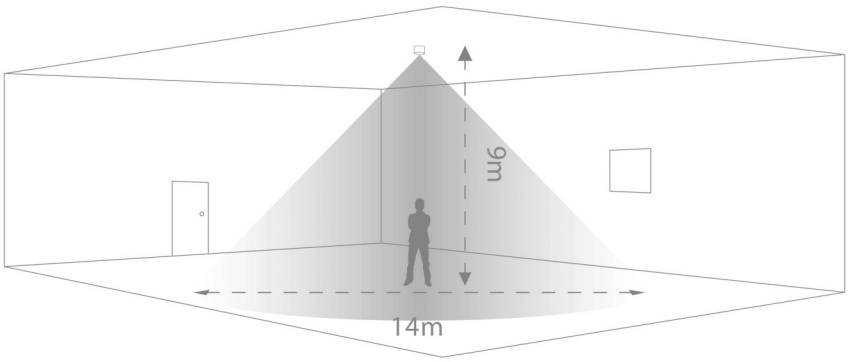
IR Receiver
Receives control and programming commands from an IR (infrared) handset.

Light Level Sensor
Measures the overall light level in the detection area

Detection diagram

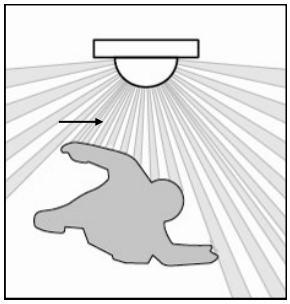
Range

high < sensitivity > low



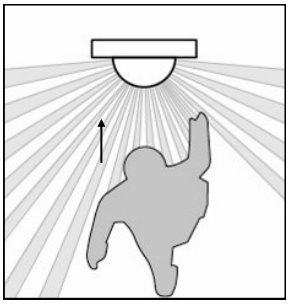
Note: illustration shows an average of the walk across and walk towards figures below.

Walk across



Height	Range Diameter
9m	14m
7m	13m
5m	11m
3m	8m

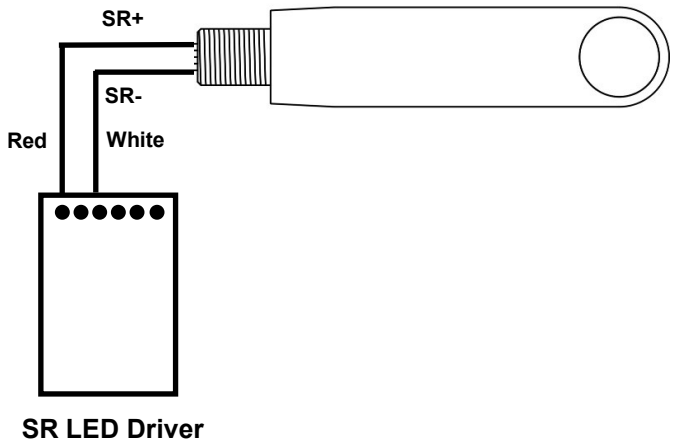
Walk towards



Height	Range Diameter
9m	7m
7m	7m
5m	7m
3m	5m

Wiring

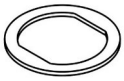
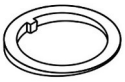
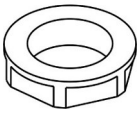
The EBMHS-MB-SR supplied with two 1m wires to connect to the SR LED drivers. The device is designed to operate correctly with reversed polarity.



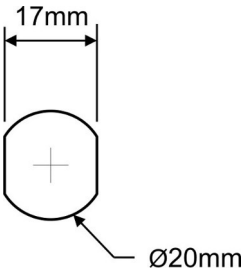
Installation

Do not grip unit at the lens end. Hold the square body near the threaded end when installing and tightening the nut. Care must be taken to prevent damage to the lens and surrounding IP seal.

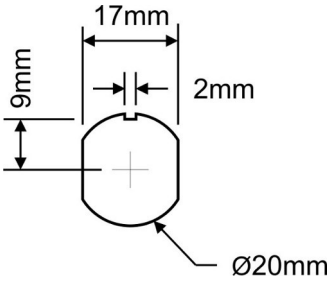
Components

	Part	Quantity Supplied
	IP Spacer with silicone coating	1
	Silicone washer	1
	5º washer	1
	5º spacer	1
	M20 nut	1

Mounting hole without key

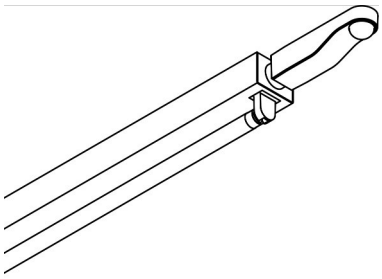


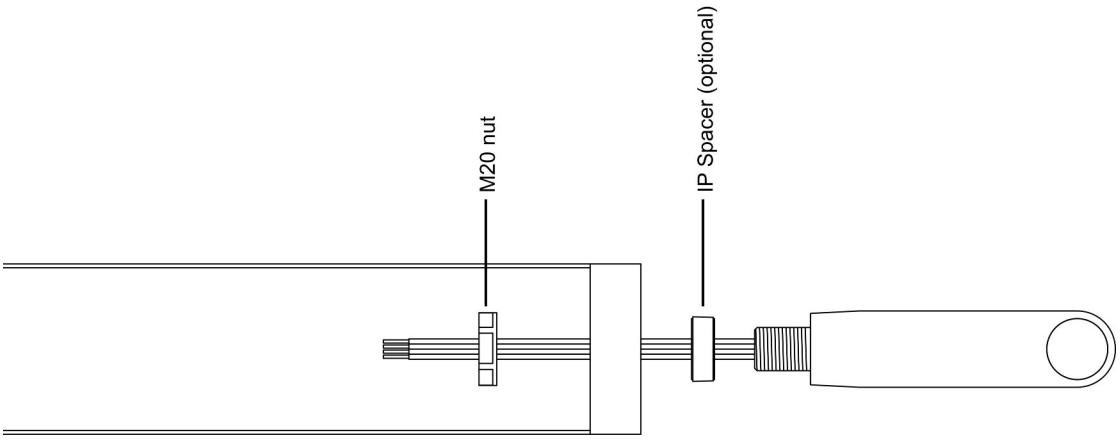
Mounting hole with key



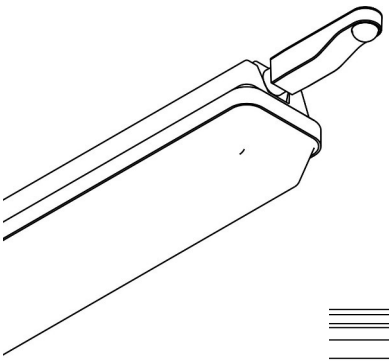
Note. Key to be at top of sensor.

Standard luminaire fitting

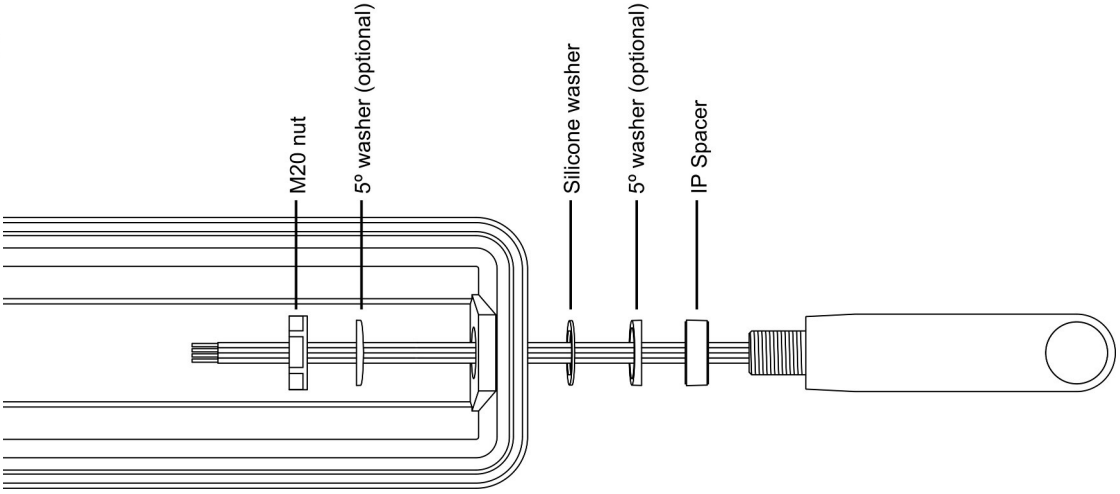




IP luminaire fitting



Important
Ensure that the silicone washer and/or the IP spacer are used to maintain IP rating.



Note. Use the 5º spacers where the luminaire housing has a draft angle.

Programming Menu

Below is a list of parameters applicable to this product. Other parameters found in the handset should NOT be used. If these are inadvertently changed, please apply the “Factory Reset” function before initiating the commissioning process.

UNLCDHS Programming — Detector Parameters
Basic Parameters for EBMPIR-MB-SR

Parameter	Default	Range / Option	Description
Timeout	20	0 – 99 minutes	How long the lights stay on for after movement has stopped. This sets both Timeout (channel 1) and Timeout (channel 2) to the same value. Select 0 for a 10 second delay (use for commissioning only).
Sensitivity On	9	1 – 9	Sensitivity level for detecting further movement when the lights are already on. 1 = minimum, 9 = maximum (least movement required to trigger the lights).
Sensitivity Off	9	1 – 9	Sensitivity level for detecting any movement when the lights are off. 1 = minimum, 9 = maximum (least movement required to trigger the lights).
Manual Timeout	10	0 – 99 minutes	Sets the time period for the unit to hold its output state after a manual override command is performed with a handset. This period is cancelled once motion detection Timeout period ends. If no movement is ever detected, the Manual Override Cancel command can be applied to cancel this operation so that the unit is ready to act immediately to the next motion detection.
Walk Test LED	Off	On / Off	When set to On a red LED on the sensor flashes when movement is detected. Use this feature to check for adequate sensitivity levels.
Disable Detect	No	Yes / No	Disables presence / absence detection, so that the detector can't control switching but can control dimming output. Use this mode when the unit is for maintained illuminance only.
Power Up State	Yes	Yes / No	Select No for a 40 second delay after initial power up before the detector starts detecting and changing outputs. Select Yes for no delay - the detector will always power up detecting.
Inhibit (secs)	1	1 - 99 seconds	The time to wait after the detector turns lights off before it can retrigger them. This inhibit function prevents inadvertent effects of vibrations caused by relay contact switching movement on highly sensitive models such as microwave technology sensors. Adjust only if signs of self re-triggering are happening. **Warning**: High values would render undesirable delays in the sensor's response to movement.

UNLCDHS Programming — LUX Control
Basic Parameters for EBMPIR-MB-SR

Parameter	Default	Range / Option	Description
Light Level (MI)	999	1 – 950 (999 = maintained illuminance off)	Sets a target light level to be maintained by the lighting system. Limit the target LUX setting to within 950 LUX which when mounted on the ceiling would equate to around 1900LUX on desk level for a reflectance factor situation of 0.5.
LUX Learn Level	0	0 – 950	Use with the Readback function to get the LUX level the unit is currently reading. Press Send to update the Light Level (MI) parameter with this value.
Auto Brightness %	0	0 – 100 (0 = disabled)	Instead of setting LUX ON and OFF as individual parameters, Auto brightness sets these parameters as the assigned percentage of Light Level (MI) parameter value. This is the % amount above the Light Level (MI) parameter value being used to set as the LUX OFF value. LUX ON will always be set fixed at 10% below the target Light Level (MI) parameter when this function is utilized.
LUX On Level	999	1 — 950, 999=disabled	Sets the light level below which will turn on the output in conjunction with movement control. The output will turn on without movement should the Disable Detect parameter be set to YES. 999 disables both LUX ON and LUX OFF functions. The LUX Off Level value must always be greater than the LUX On Level value.
LUX Off Level	999	1 — 950, 999=disabled	Sets the light level above which will turn OFF the output in conjunction with movement control. 999 disables both LUX ON and LUX OFF functions. The LUX Off Level value must always be greater than the LUX On Level value.
LUX On Time	0	0 – 99 minutes	When the ambient light falls below LUX ON Level, the time to wait before switching on the lights. If at any time during the timed delay the LUX change reverses then the process is cancelled. Minimum time of around 15 seconds is set for a value of 0. If you try to turn lights on using a switch or handset, the lights will go on regardless of ambient light level. However, if there is sufficient ambient light, they will turn off again after LUX Off Time.
LUX Off Time	0	0 – 99 minutes	When the ambient light rises above LUX OFF Level, the time to wait before switching off the lights. If at any time during the timed delay the LUX change reverses then the process is cancelled. Minimum time of around 15 seconds is set for a value of 0.

UNLCDHS Programming — Configuration
Basic Parameters for EBMPIR-MB-SR

Parameter	Default	Range / Option	Description
Factory Reset	—	—	Clears any programmed settings and returns the device to its default set-up.
Soft Reset	—	—	Reboots the device, but retains all current settings. Must leave value at zero.
LUX Cal Value	0	0 – 999	Enter the current reading of a LUX meter to calibrate the scale of the photocell in the detector. Must reset and send to 0 before applying a new setting.
LUX Cal Factor	0	0 – 255	Reads back the effective scaling factor calculated from the photocell LUX Learn reading and LUX Cal Value.
IR Enabled	Yes	Yes / No	Set to No to prevent the device from receiving commands from the handset. The device's LED will flash several times if you try to send a command when in this state. Set to Yes to re enable programming.

UNLCDHS Programming — Output Ch. 2
Advanced Parameters for EBMPIR-MB-SR

Parameter	Default	Range / Option	Description
On Value	99	0 – 99	Dimmed output level when lights manually switched on or via detection of occupancy.
Fade On Level	99	0 – 99	For future use. Leave as default values.
Gradual Fade On Time	0	0 – 99 minutes	For future use. Leave as default values.
Fade Off Level	0	0 – 99	Set the Stepped Fade Off light output level (%) to hold after occupancy has timed out. This level which would last the period specified in the Stepped Fade Off Time parameter before turning off. Note when this function is used, both channel 1 and channel 2 will work and switch off together and can no longer be treated as independently controlled.
Gradual Fade Off Time	0	0 – 99 minutes	For future use. Leave as default values.
Stepped Fade Off Time	0	0 – 99 minutes	Sets the time period of the Stepped Fade output level before turning off.
Dim Output	0	0 – 99	Use with the Readback function to see the dimming output level currently being sent to luminaires.
Off Value	0	0 – 99	Dimmed output level when lights manually switched off or after detector times out.
Max Value	99	0 – 99	Maximum dimming output level.
Min Value	1	0 – 99	Minimum dimming output level.
Burn-in Hours	0	1 – 999 hours (0 = disabled)	Determines how long the output will be at 100% so that new lamps burn-in. The burn-in time is not affected by power supply interruptions.
Speed (On)	40	0 – 99 seconds	Determines the dimming response speed during the set up time upon power ON. Measured in 0.1 sec intervals. If set to "0" will disable dimming for Set Seconds below, used if fittings are required to warm up before dimming.
Speed (Setup)	5	0 – 99	Determines how long the dimming response set-up period lasts upon power- up or on setting change. This enables a faster set up time.
Set Seconds	120	0 – 999 seconds	Sets the dimming response speed after the setup time has finished. Measured in 0.1 sec intervals (i.e. a value of 40 means 4 seconds).

UNLCDHS Programming — Device information

Under the device Info menu are items about the device that can be read back to the handset

Note: Not all devices support any or all of the information below.

- Range: e.g Standalone
- Part number: e.g MWS6
- Variant: e.g DD, PRM output variants
- Version: Version of software of the device.

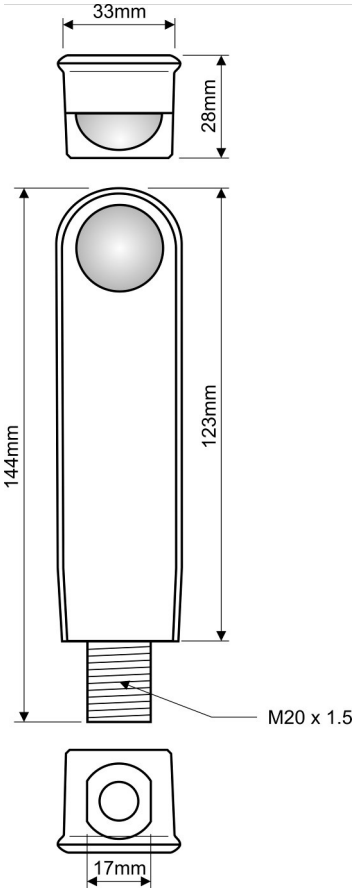
UNLCDHS Programming — User
Basic Parimeters for EBMPIR-MB-SR

Parameter	Default	Range / Option	Description
Select Scene	1	1 – 8	The preset dimming levels are as follows (does not operate the relay outputs): Scene 1 — Maintained illuminance, Scene 2 — 100%, Scene 3 — 75%, Scene 4 — 50%, Scene 5 — 25%, Scene 6 — 15%, Scene 7 — 10%, Scene 8 — 0% (min)
Scene Up	—	—	Changes the scene from 1 up to 8. (1—6 for pre V3 models)
Scene Down	—	—	Changes the scene from 8 down to 1. (6 down to 1 for pre V3 models)
Set Scene Level	0	0 – 255	Changes a particular scene's preset level. Select the scene first using Select Scene and then send Set Scene Level. 255 = 100%, 191 = 75%, 128 = 50%, 64 = 25%, 26 = 10%, 0 = 0% (min)
Raise	—	—	Increases light level. Reverts to programmed light levels when absence detected.
Lower	—	—	Decreases light level. Reverts to programmed light levels when absence detected.
Manual Override On	—	—	Turns lights on and reverts to automatic operation after the period set by Manual Timeout in the Detector Params menu.
Manual Override Off	—	—	Turns lights off and reverts to automatic operation after the period set by Manual Timeout in the Detector Params menu.
Manual Override Cancel	—	—	Cancels the manual on and off overrides, returning the detector to normal operation.

Technical data

Dimensions	See diagrams on page 1
Weight	0.15 kg
Supply Voltage	9.5VDC—22.5VDC
Supply Current	8mA
Cable Specification	1m long pre-cut cable, 1mm^2 solid core
Material (casing)	Flame retardant ABS and PC/ABS
Light detection range	Usable from 15 to 950 lux
Temperature	-10ºC to 35ºC
Humidity	5 to 95% non-condensing
Firmware	V3 (In-built) functionalities
Material	Flame retardant ABS/PC Type Class 2
IP rating	IP65
Compliance	EMC-2014/30/EU

For further compliance information visit
www.cpelectronics.co.uk/compliance



ISO 9001 Quality Management FM 45789
ISO 14001 Environmental Management EMS 534520
OHSAS 18001 Occupational Health & Safety Management OHS 642036

ESTA

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