

OSENZA HB CM 0-10V/12

Highbay sensor with Photocell & Microwave detection

Product Features:

OSENZA HB CM 0-10V/12 offers Standalone smart control for energy saving via microwave motion detection and light sensing functions for Warehouse/Industry applications.

Easy integration due to Miniaturized size and light weight.

0-10V dimming interface, powered by 12Vdc AUX output from Driver.

Mounting height up to 12m. Motion detection range up to Ø12m. Reliable movement detection due to microwave technology applied.

Enabling further energy saving via photocell sensor – lights are turned on ONLY when movement is detected under insufficient ambient light. It automatically switches lights on/standby/off based on configurable settings to the delay time, motion sensitivity and environmental light levels.

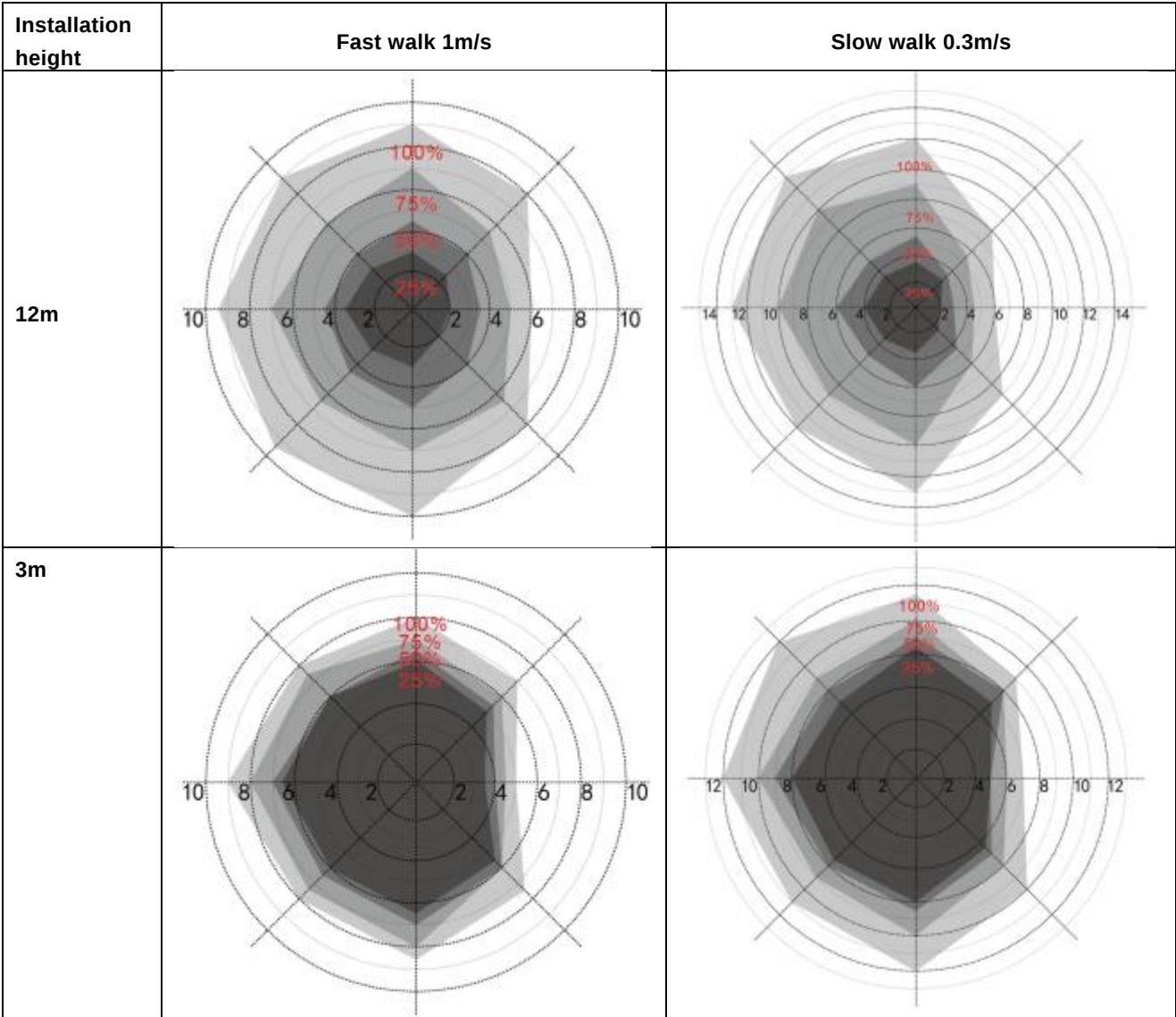
Typical applications are Highbay Industry and Warehouse.



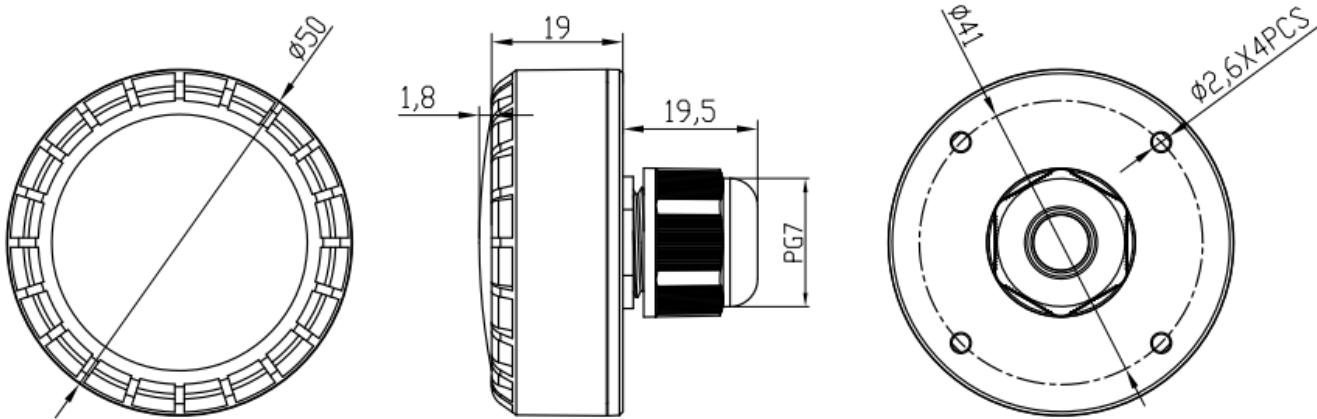
1. Specifications:

	Item	Value
Input	Input Voltage	12Vdc±1, Voltage Ripple <150mVp-p
	Stand-by Power	0.3W max.
Output	Dimming Interface	0-10V Dimming, < 10mA. Max. 10 LED dimming drivers with analog dimming interface
Sensor Parameters	Operating Frequency	5.8 GHz ±75 MHz, ISM Band.
	Transmitting power	3mW Max.
	Hold time	5S/30S/1min/3min/5min/10min/20min/30min
	Stand-by Level	10%(1.4-1.6V), 20%(1.9-2.1V), 30%(2.9-3.1V), 50% (4.9-5.1V)
	Stand-by time	0s/10S/1min/3min/5min/10min/30min/+∞
	Motion Detection range	25%/50%/75%/100%
	Daylight Sensor	Daylight Threshold - 5lux/15Lux/30Lux/50Lux/100lux/150lux/Disable Daylight priority On: (5lux/15Lux/30Lux/50Lux) / Off: 150Lux On: 100Lux / Off: 200Lux On: 150Lux / Off: 300Lux
	Mounting Height	12m Max
Environment	Operating	Temperature: -35°C...+60°C
	Storage	Temperature: -40°C...+80°C; Humidity: 10%-95% (non-condensing)
Conformity	Safety standards	EN60669-2-1, EN60669-1
	EMC standards	EN55015, EN61000-3-2, EN61000-3-3, EN61547
	Environmental Requirement	Compliant to RoHS
Others	Cable	Length: 300mm, Core: UL21996, 3*22AWG,
	IP Rating	IP65
	Protection Class	Class II
	Installation	Surface mounting to a cable junction box hanging on the ceiling. Or, integration mounting by side-hooking to a lighting fixture
	Net Weight	45g

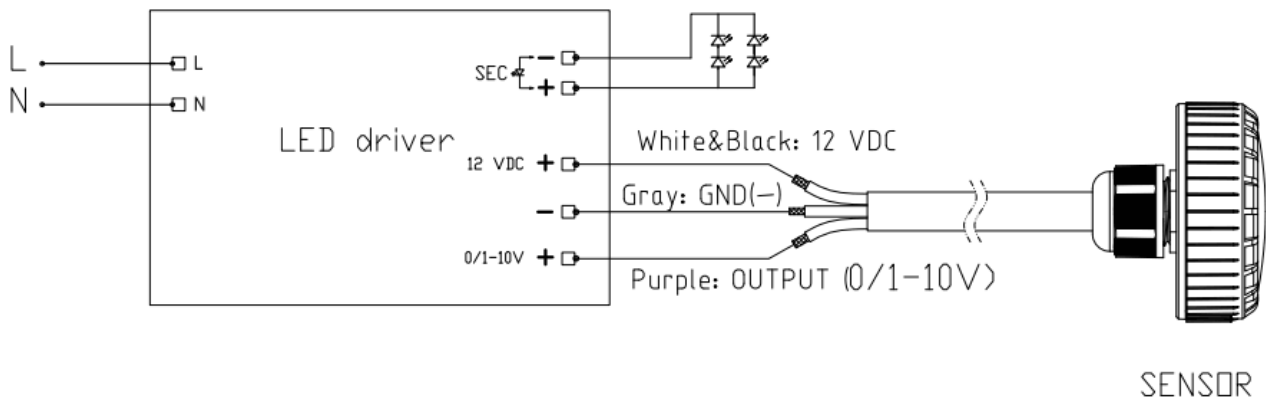
2. Detection Pattern:



3. Dimensions(mm):



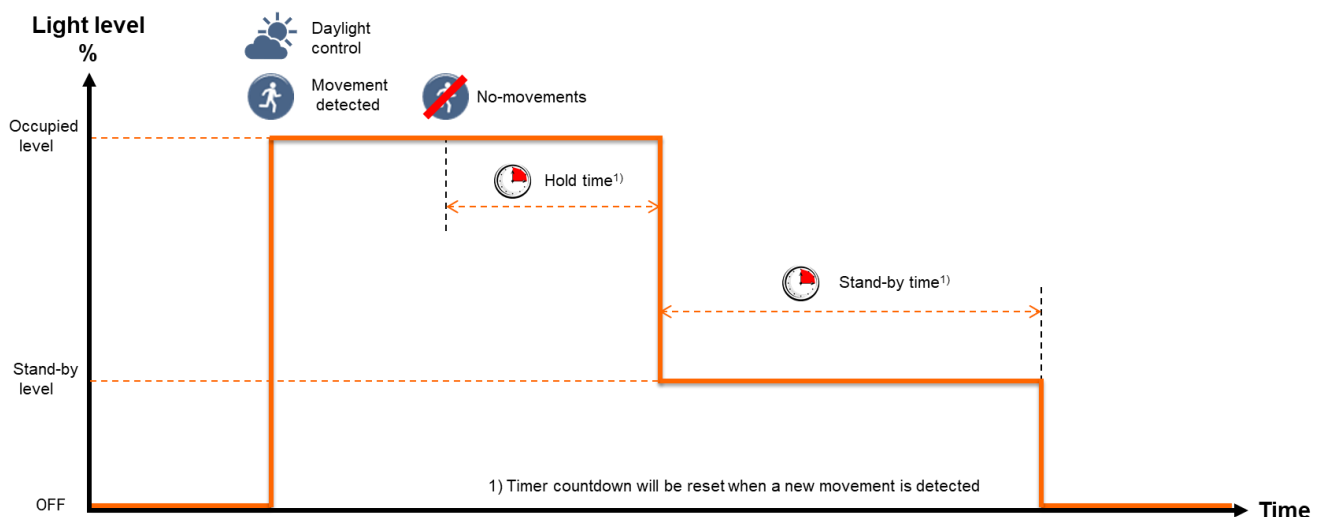
4. Wiring Diagram:



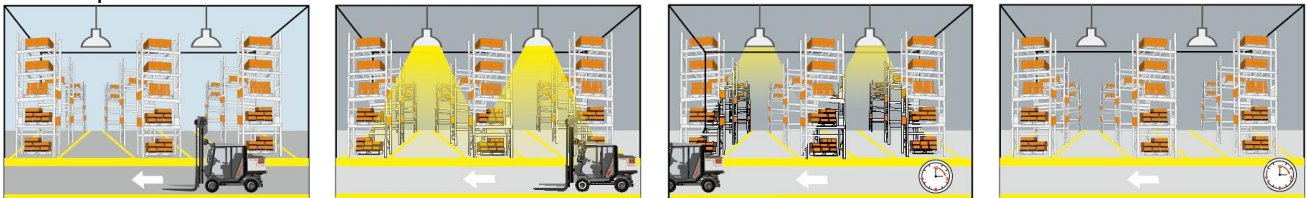
5. Sensor function:

1) Daylight Threshold mode

Occupancy + Daylight control@switch-on.



Example:



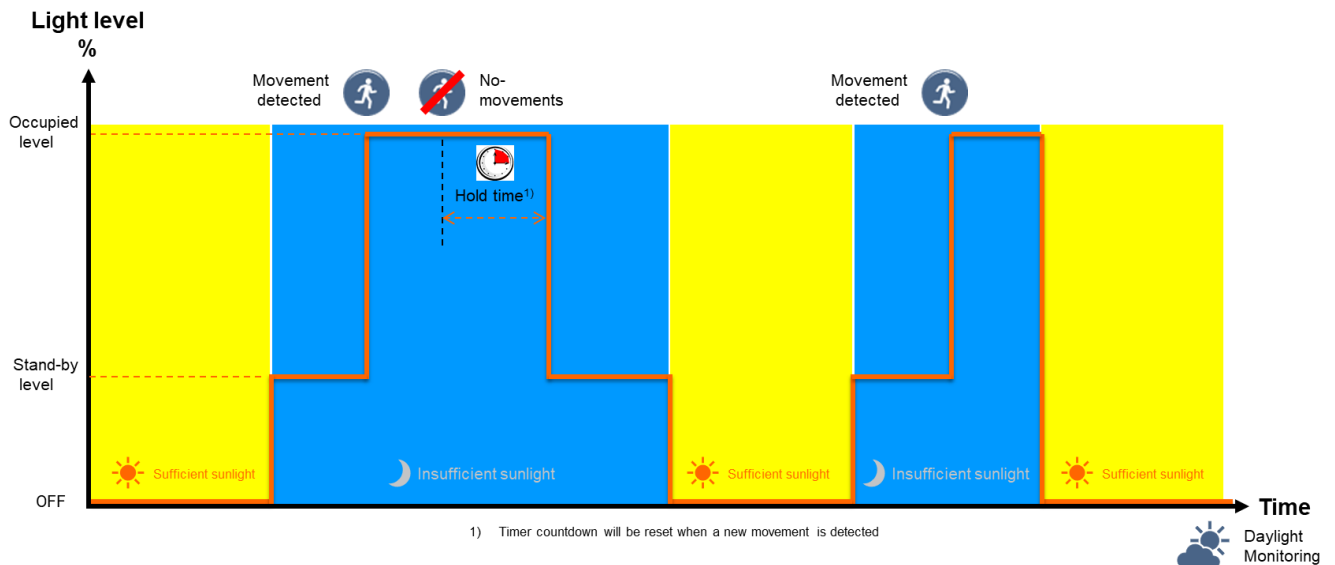
- 1) Light stays off under sufficient sunlight (higher than desired lux level).
- 2) Light switches on to occupied level when movement is detected under insufficient sunlight (lower than desired lux level).
- 3) Light dims down to stand-by level when no movement is detected & hold time is over.
- 4) Light switches off when no movement is detected & stand-by time is over.

2) Daylight Priority (DH) mode

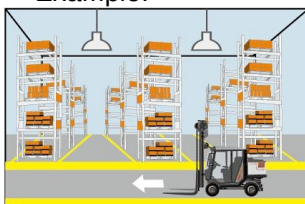
Maximizing energy saving under sufficient sunlight & ensuring a certain lux level all the time.

Daylight monitoring is active constantly, Stand-by time is '+∞'.

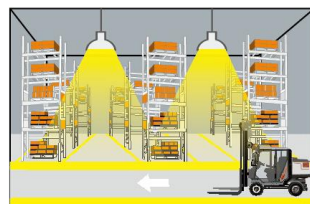
Min. lux level is not less than stand-by light level.



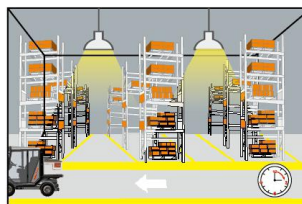
Example:



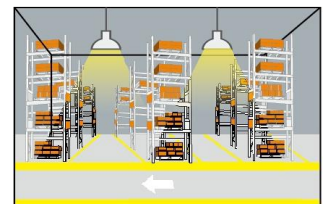
- 1) Light turns off actively whenever sunlight is sufficient (higher than desired lux level).



- 2) Light switches on to occupied level when movement is detected under insufficient sunlight (lower than desired lux level).



- 3) Light dims down to stand-by level when hold time is over with no movement is detected, and under insufficient sunlight.



- 4) Light stays at stand-by level under insufficient sunlight with no movement is detected.

6. Factory default & Quick selections:

IR remote setting	Motion Detection range	Occupied light level	Hold time	Stand-by light level	Stand-by time	Desired lux level	Motion Detection Sensitivity	DH mode
Factory default (good for initial test)	100%	100%	5 sec	10%	0 sec	Disable	HS	No
QS1 (on/off control by movement detection)	100%	100%	5 min	0%	0 sec	Disable	HS	No
QS2 (on/step-dim/off control by movement + daylight thread hold)	100%	90%	5 min	30%	10 min	50 lx	HS	No
QS3 (on/step-dim/off control by movement and daylight priority)	100%	90%	5 min	20%	+∞	50 lx	HS	Yes

7. Setting via Remote control:

Remote Control Setting	Button	Remarks
	ON/OFF	Toggle on/off manual control. Sensor is disabled during the operation. Press Reset or sensor motion button to quit.
	Reset	Resume to factory default setting. Please refer to - 6. Factory default & Quick selections:
	Sensor motion	Resume to automatic sensor control with the last setting applied.
	DIM Test	Short press it to perform a dimming test. Sensor sends dim up and dim down signal within a 2-seconds period. Automatic sensor control is resumed after the test.
	Override DH	Long press 3s to quit Daylight Priority (DH) mode.
	DIM + DIM -	To set the occupied light level. Each short press will decrease (DIM-) or increase (DIM+) by 2%.
	DH Mode	Long press 3s to enable Daylight Priority (DH) mode. Proper lux level needs to be defined. On: (5lux/15Lux/30Lux/50Lux) / Off: 150Lux; On: 100Lux / Off: 200Lux; On: 150Lux / Off: 300Lux
	QS1 QS2 QS3	Quick selections of predefined setting. Please refer to - 6. Factory default & Quick selections:
	TEST 2S	Short press to enter the test mode temporary, with same setting as factory default. When quitting the test mode, sensor will resume to the last setting. Press any other function button or power cycle the sensor will quite the test mode.
	HS LS	Motion detection sensitivity selection. 'HS' is recommended for open area. 'LS' is recommended for narrow-enclosed area with reflective metal, concrete walls etc.
		Daylight lux level setting.
		Stand-by time
		Hold time
		Stand-by light level
		Motion detection range
		Infra-Red range of Remote control. Number represents the distance in between the sensor to the Remote control.

8. Ordering information

Product description	EAN10	EAN40	Pieces/box
OSENZA HB CM 0-10V/12	4062172372855	4062172372862	100
OSENZA HB IR REMOTE	4062172372879	4062172372886	50

9. Sensor Initialization:

The initialization phase of the sensor will last for approximately 10 seconds after power on, during this phase, no movements will be detected and the light is turned on at 100%.

10. Instruction:

- 1) The sensor shall be installed by qualified electricians. Please switch off the power before installing, wiring.
- 2) The movement detection range will be reduced by plastic or glass fixture cover when the sensor is installed inside the fixture, for every 3mm increased in thickness, the sensitivity will be reduced by 20%.
- 3) The dimming performance could be different from different 0-10v drivers.
- 4) This sensor is for indoor use only. It will be affected by outdoor environments such as wind, rain, and moving objects around, and possibly causing false triggering.
- 5) The detection range of the sensor is influenced by mounting height, detection angle, moving speed and size of moving objects, installation environment, metal reflectors surrounding the sensor etc.
- 6) Do not place the sensor close to high-density objects such as metal, glass, concrete walls, etc, When the sensor is installed in a metal lamp, metal reflective surface, or a narrow-enclosed environment, the microwave will be reflected repeatedly and causing false triggering. In such case, please reduce the sensitivity to 'LS' or contact the manufacturer for technical support.
- 7) The declared detection range is the typical value tested by a 165cm person in an open indoor area. The detection range at wall mounting will be longer than at the ceiling mounting. Please reduce detection range at wall mounting or contact us to confirm the sensor settings.
- 8) The distance between any inductive sensors should be greater than 3m.
- 9) Please ensure that there is no moving object around the sensor, such as fan,DC motor, sewer pipe, air outlet, etc., these may generate false triggers.
- 9) The light sensitivity threshold is tested in a sunny environment, no shadow and ambient light diffuse reflection. Ambient lux level is not accurate but only a reference level, it could be influenced by environment conditions such as weather, climate, time-of-day and the season.
- 11) You are advised to test 5 samples before mass application of sensor in a new lighting project.
- 12) Due to continuous improvement, the contents of this document could be changed without prior notice.

Disclaimer

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