

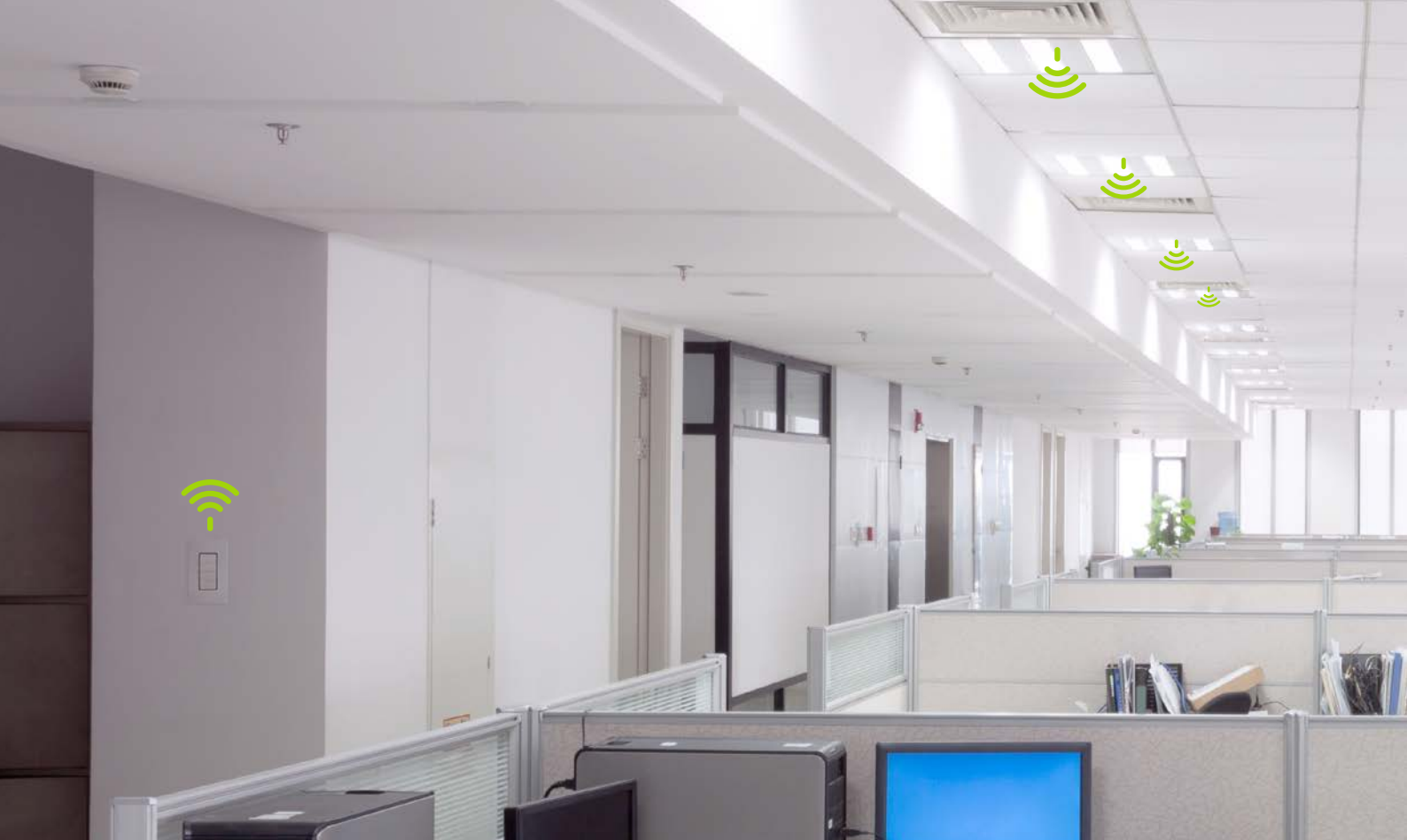
# OS'NET



## A Simpler and Smarter Wireless Lighting Control Solution



Flexibility • Functionality • Simplicity



## Table of Contents

Foreword .....	1
About OS-NET .....	2
OS-NET Features .....	3
OS-NET Devices .....	4
Control Schemes .....	10
Build an OS-NET .....	12
OS-NET vs. Others .....	13
OS-NET Applications .....	14
OS-NET Benefits .....	15
Device Selection .....	16



## FOREWORD

Bringing sophisticated lighting controls to non-residential buildings typically meant extra set of control wire networking, labor intensive device installation, complicated wiring connections among system devices, luminaires and central control unit, learning proprietary management software, time-consuming commissioning and troubleshooting. All above end up not only more wiring schematics, time getting up-and-down the ladder, and facility management challenges, but also higher ownership cost.

With the availability of advanced wireless communication technologies, such as Zigbee, Bluetooth and many others, wireless undoubtedly becomes the only feasible approach for non-residential buildings to enable smart lighting controls without the shortcomings above mentioned. However, most wireless lighting control solutions available in the market are still complicated for general lighting designers/specifiers, installers/contractors, and commissioning agents to learn, comprehend, and execute all the works required to deliver a code-compliant smart lighting control for commercial and industrial applications.

Developing a “real simpler” wireless lighting control solution for non-residential buildings is easier said than done. It not only has to fulfill the latest requirements from evolving energy codes, but also provides versatile controls to ensure high comfort level for occupants. In addition, reducing the device types and total SKU is also important for a solution to be claimed simple.

This brochure highlights all elemental information of OS-NET, a simpler and smarter wireless lighting control solution featuring second-to-none flexibility, functionality, and simplicity.

# About OS-NET

- **Achieving sophisticated control with unparalleled simplicity**
- **Enable Luminaire Level Lighting Control (LLLC) with ease**
- **A robust system without any Single Point Of Failure (SPOF)**
- **Universal control platform available for all types of luminaires**
- **Simplified system device types with flexible mounting options**
- **Effortlessly deploys an IoT adaptable wireless mesh network**
- **Independent system operation ensures highest security level**
- **Suitable for commercial, industrial and institutional buildings**
- **Ideal for new building or existed lighting renovation projects**

## Achieving Smart Lighting Control with Real Ease

Introducing the OS-NET, a simpler and smarter wireless solution developed to enable Networked Lighting Control (NLC) with unsurpassed level of Flexibility, Functionality and Simplicity.

Through simply installing the OS-NET enabled luminaires, lighting circuits, and plug loads at all applicable areas, an innovative Zigbee based wireless mesh network can be effortlessly deployed and easily configured to execute a variety of smart lighting controls, including numerous occupancy or vacancy sensing controls with multi-level StepDIM or continuous SmartDIM for commercial and industrial lighting systems.

The OS-NET system is mainly formed by OS-NET Sensors, Buttons, and Power Packs. With some easy and intuitive settings via a 2-way handheld remote programmer, all OS-NET devices can be wirelessly linked and grouped to execute code-compliant, smart lighting control based on an innovative “individual sensing control, group coordinated activation” control concept. If necessary, an operating OS-NET enabled lighting can be easily re-configured with different control or re-assigned to different group without complicated setting.

IR-TEC's OS-NET is not only a simple solution for OEM manufacturers to easily enable their fixtures with Luminaire Level Lighting Control (LLLC), but also a perfect solution for renovating the legacy lighting with solid state lighting featuring maximum energy savings from human-centric smart controls.

# Unparalleled Flexibility, Functionality and Simplicity

## **Deploy an IoT wireless mesh network effortlessly**

A Zigbee based wireless mesh network can be effortlessly deployed while installing lighting and control devices for commercial and industrial environments. A wireless mesh network broadly established throughout the entire space will be a valuable infrastructure for Internet of Things.

## **Flexible device integration allows easy installation**

The OS-NET Sensors can be flexibly integrated with OEM luminaires or mounted on the ceiling for lighting circuit control. Unparalleled integration flexibility allows installing the OS-NET enabled lighting system just like installing the conventional luminaires, occupancy sensors and wall switches.

## **All functionalities in one and one for all controls**

Each OS-NET Sensor is packed with multiple sensing and control functionalities for meeting different control requirements. Specific control scheme be easily programmed to execute even the most sophisticated control to the connected lights without complicated device installation and commissioning.

## **Individual sensing control with group activation**

When a specific grouped OS-NET Sensor detects the presence of occupant, the sensor not only controls the connected lighting as set according to the local condition, but also broadcasts an “occupied” command to other devices of the group for activating the programmed controls respectively.

## **Single device can be member of multiple groups**

A single OS-NET device can be assigned as member of up to 4 groups. This allows multiple lighting groups to be activated simultaneously by the sensor located at the spot with multi-directional traffics. Advanced group control setting enables pre-lighting or directional guide lighting at public areas.

## **Hybrid Switching protects from inrush current**

An advanced Hybrid Switching technology is employed to protect every OS-NET Sensor from being damaged by exceptionally high inrush current while switching on the LED driver. With Hybrid Switching protection, the service lifetime of OS-NET Sensor is guaranteed longer than others.

## **SmartDIM constant lighting control technology**

SmartDIM control can be programmed in each OS-NET Sensor to perform daylight harvesting control. This smart dimming control technology will continuously adjust the lighting output based on the ambient light level and occupancy status to maintain the overall light level within preset range.

## **Universal 2-way IR remote programming tool**

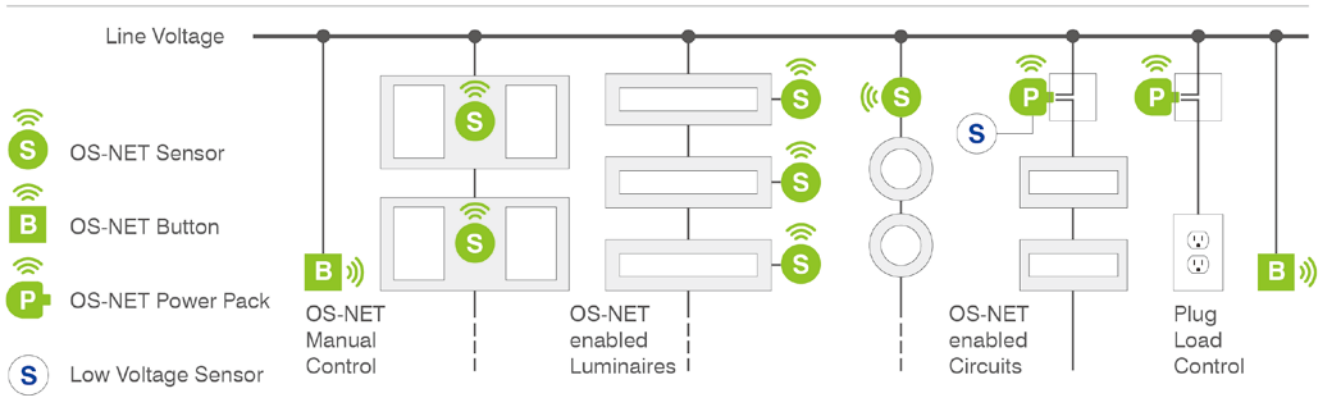
Unlike many other network control solutions, OS-NET does not require any proprietary management software, operation app or expensive hardware to make the system run. All you need is just a 2-way IR remote to set up the network, group the devices, and set the control scheme.

# Enable Sophisticated Controls with Simple Devices

An OS-NET system is formed by some simple wirelessly linked OS-NET devices; mainly include OS-NET Sensors, Buttons, and Power Packs. Each OS-NET device not only provides distinctive functionalities, but also acts as a network node to transmit, receive, and/or forward the commands and data to enable sophisticated controls.



## Wireless Lighting Control Solution



## OS-NET Devices

### OS-NET Sensors

M1	M2	M2P	T5	A6	Z7
			M L	L	L

M : Multiple mounting options

L : Multiple lens options

### OS-NET Buttons


EURO	NEMA	

# OS-NET Sensors



OS-NET Sensors (hereinafter refer as ONS) are fundamental network devices of an OS-NET system. Each ONS is packed with multiple sensing and control functionalities, including occupancy/vacancy sensing, ambient light level, 0-10V or DALI control output, and wireless mesh network connectivity required to achieve sophisticated smart lighting control. ONS are available with several form factors for different OEM luminaire integration and ceiling installation options.

## M1 ONS

The ONS with M1 form factor housing is a miniature remote OS-NET Sensor head designed for integrating with office luminaire or recess mounting on the ceiling via a 25mm (1") look down hole. Through an easy plug-in connection with specific Power Pack Controller, you can easily enable LED panel or Troffer powered by DALI/0-10V or typical LED driver an OS-NET enabled luminaire with wireless smart control capability.


	Model	Power Input	Control Output	Mounting
	<b>ON-MRD-124S</b>	DALI bus	DALI	Luminaire integrated Ceiling recess mount

## Power Pack Controller

	Model	Power Input	Control Output	Remarks
	<b>ON-PPU-100DP</b>	240VAC	DALI	Manual control input available
	<b>ON-PPU-109DA</b>	240VAC	DALI, 0-10V, Switched live	


## M2 ONS

The ONS with M2 form factor housing is a compact OS-NET Sensor available for integrating with general commercial luminaire via a 25mm (1") look down hole.

	Model	Power Input	Control Output	Mounting
	<b>ON-LRD-209S</b>	120/230/277VAC	0-10V, Switched live	Luminaire integrated
	<b>ON-MRD-210S</b>	230VAC/DALI bus	DALI	

## M2P ONS

The ONS with M2P form factor housing is a compact OS-NET Sensor designed for assembly with general linear luminaires via a 1/2" knockout hole.

	Model	Power Input	Control Output	Mounting
	<b>ON-LRD-209SP</b>	120/230/277VAC	0-10V, Switched live	1/2" knockout hole
	<b>ON-MRD-200SP</b>	230VAC/DALI bus	DALI	

## T5 ONS

The ONS with T5 form factor housing offers second-to-none flexibility for OEM luminaire integration and ceiling installation with multiple mounting and lens options for your selection.

Model	Power Input	Control Output	Mount	Lens
<b>ON-BRD-510S</b>	12-24VDC	0-10V, Digital output	<b>F/W/E/P/ S/C/R/L</b>	<b>A/B/C/D/ F/G/H/L</b>
<b>ON-LRD-509S</b>	120/230/277VAC	0-10V, Switched live		
<b>ON-MRD-510S</b>	230VAC, DALI bus	DALI		
<b>ON-MRD-514S</b>	DALI bus	DALI		

NOTE: While ordering the T5 ONS, please specify the Model No. with mount and lens codes.



## A6 ONS

The ONS with A6 form factor housing is an IP66 OS-NET Sensor designed for attaching with circular OEM high bay luminaires to enable state-of-the-art wireless smart control capability. Multiple lens options are available for providing distinctive detection coverage at different mounting heights.

Model	Power Input	Control Output	Mount	Lens
<b>ON-LRD-609S</b>	120/230/277VAC	0-10V, Switched live	<b>A</b>	<b>A/B/C/D/ F/G/H/L</b>
<b>ON-MRD-600S</b>	230VAC, DALI bus	0-10V, Switched live		

NOTE: While ordering the A6 ONS, please specify the Model No. with mount and lens codes.



## Z7 ONS

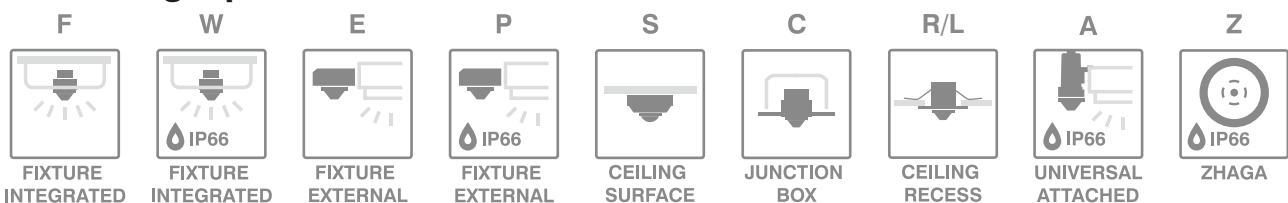
The ONS with Z7 form factor housing is an IP66 OS-NET Sensor exclusively designed for outdoor luminaire with Zhaga Book 18 socket. Multiple lens options are available for providing distinctive detection coverage at different mounting heights.

Model	Power Input	Control Output	Mount	Lens
<b>ON-MRD-734S</b>	Aux (+24V)	DALI	<b>Z</b>	<b>A/B/C/D/ F/G/H/L</b>

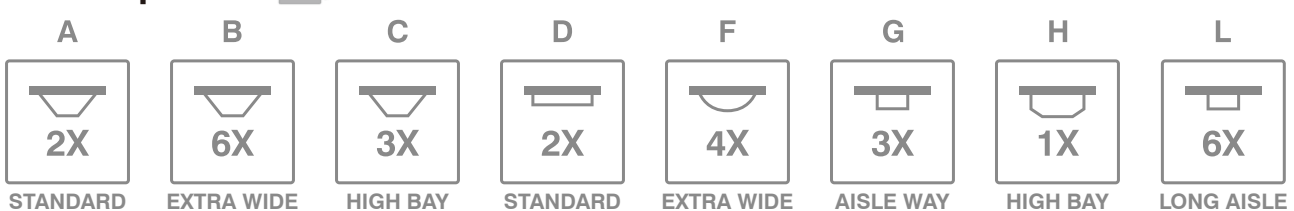
NOTE: While ordering the Z7 ONS, please specify the Model No. with mount and lens codes.



## Mounting Options



## Lens Options





# OS-NET Buttons

The OS-NET Buttons are optional wireless network devices designed for mounting into standard NEMA wall box to provide manual ON/OFF and dimming control for the assigned lighting groups.

Available in two form factors for different wall boxes; the ON-PBD-815W is for mounting into standard EURO type wall box, the ON-PBD-70xW is for mounting into standard NEMA wall box.

Model No.	Channel	Power Input	Mounting
<b>ON-PBD-815W</b>	1	230VAC	EURO wall box
<b>ON-PBD-705W</b>	1	120-277VAC	NEMA wall box
<b>ON-PBD-708W</b>	4	120-277VAC	NEMA wall box



ON-PBD-705W



ON-PBD-708W



ON-PBD-815W

# OS-NET Remote Programmer









The SRP-281 is a 2-way remote programming tool for configuring the entire OS-NET enabled lighting system; include creating a network, adding devices to the network and grouping, setting sensor control scheme and parameters, and all other management associated tasks.

Model No.	Power Input
<b>SRP-281</b>	2x AAA Battery



## Mounting Options

The OS-NET Sensors are designed for integrating with OEM luminaires and/or mounting on the ceiling for sensing presence, controlling light while also operating as network nodes. Following table highlights mounting brackets and accessories available for the OS-NET Sensors with T5 form factor. Detailed information is available on the mounting datasheet from [www.irtec.com](http://www.irtec.com).

Mounting option	Code	Bracket #	Appearance	Application Description
Fixture Integrated	<b>F</b>	---		F-mount is the original form factor of T5 ONS for integrating with OEM luminaire through a 2" hole or mounting on ceiling with different brackets.
IP66 Fixture Integrated	<b>W</b>	---		W-mount is the original form factor of T5 ONS for IP66 fixture integration through a 51mm (2") hole or with a PMB-500.
Fixture External	<b>E</b>	EMB-500		The EMB-500 is a bracket for mounting the F-mount T5 ONS with indoor luminaire through a 1/2" hole.
IP66 Fixture External	<b>P</b>	PMB-500		The PMB-500 is a bracket for mounting the W-mount T5 ONS with IP66 luminaire through a 1/2" hole.
Ceiling Surface	<b>S</b>	SMB-500		The SMB-500 is a bracket for mounting the F-mount T5 ONS on the surface of luminaire and hard lid ceiling with or without junction box.
Junction Box	<b>C</b>	CMB-500		The CMB-500 is a bracket for mounting the F-mount T5 ONS with an octagonal or square junction box.
Ceiling Recess	<b>R</b>	RMB-500		The RMB-500 is a bracket for recess mounting the low voltage T5 ONS through a 70mm hole.
Ceiling Recess	<b>L</b>	LMB-500		The LMB-500 is a bracket for recess mounting the F-mount T5 ONS through a 70mm hole with a tool removable back cover for cable connection.

### Accessories

Following accessories can be applied to extend or change sensor position for the OS-NET Sensor with E/P mount.

#### EJ-30F

30 mm extension joint



#### EJ-50F

50 mm extension joint
















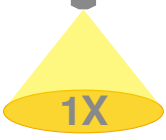

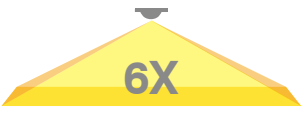
#### EL-40F

40 mm elbow joint



## Lens Options

Every PIR sensor requires an optical lens to collect infrared energy emitted from human/vehicle. Lenses with different Fresnel segment designs provide different detection patterns and for different mounting heights. Following lenses are available for the OS-NET Sensors with T5, A6, and Z7 form factors. For more details, please refer the lens datasheet available from [www.irtec.com](http://www.irtec.com).

Code	Lens	Coverage & Mounting Height	Feature and Application Notes
<b>A</b>	 Cone	2.4~4.5 m (8~15 ft) 	Lens A is a standard lens with 2X height coverage. It can be used to cover small to medium areas with major and walking motions.
<b>B</b>	 Cone	2.4~3.0 m (8~10 ft) 	Lens B is a wide angle lens with 6X mounting height coverage. It provides good detection to the major motions across the detection zones.
<b>C</b>	 Cone	4.5~9.0 m (15~30 ft) 	Lens C is a high bay lens with coverage up to 3X mounting height for using at warehouse or area up to 9m high.
<b>D</b>	 Round flat	2.4~6.0 m (8~20 ft) 	Lens D is a flat round lens with 2X height coverage. This lens provides better minor motion detection for using at office areas.
<b>F</b>	 Dome	2.4~6.0 m (8~20 ft) 	Lens F is a wide-angle lens with 4X height coverage ideal for general application. It has good picking up for major and minor motions.
<b>G</b>	 Arch	2.4~12.0 m (8~40 ft) 	Lens G is a universal aisle way lens with 3X height coverage ideal for aisle way detection. This lens can be rotated to align with the direction of aisle.
<b>H</b>	 Dome	9.0~15.0 m (30~50 ft) 	Lens H is a high bay lens with 1X height coverage. This diamond cut lens is specially designed for high bay application.
<b>L</b>	 Arch	2.4~3.0 m (8~10 ft) 	Lens L is a wide-angle lens with 6X height coverage designed for long corridor. This lens can be rotated to align with the direction of corridor.

### NOTES

- Coverage data is based on walking across the detection zones at 25°C. Higher temperature or walking toward the sensor will result in smaller coverage.
- Mounting heights are recommended for obtaining optimal detection. Using at higher or lower is possible.
- Lens C/G/H may be used up to 12/15/18 m at the areas with motions of large objects, such as forklift or trucks. To use the sensor higher than the recommended maximum height, please first ensure that the sensor with specific lens can pick up the motion at desired mounting height.
- Lens G/L are not IP66 rated.

# Simplicity is the Ultimate Sophistication

Each OS-NET Sensor features sophisticated sensing, control and networking capabilities which help creating the simplicity of OS-NET. Each ONS can be set to control the associated lighting in one of the following schemes derived from occupancy, vacancy and daylight sensing control strategies.

Scheme	Status	Day*	Night*	Operation Description
<b>ON/OFF</b>	Vacant	OFF		Lighting will be inhibited when the ambient light level is higher than the set threshold, regardless of occupancy or vacancy. When the ambient light level is lower than the set threshold, the controlled light will be turned on when sensor detects the presence of occupant. Sensor will turn off the light after the delay time elapsed.  <b>NOTE:</b> This is a typical <b>occupancy sensing</b> control scheme for <b>dimnable</b> or <b>non-dimnable</b> lighting, but <b>not HID</b> .
	Occupied	OFF	ON	
<b>OSO</b>	Vacant	Low Dim		When space is vacant, the lights will be maintained at Low Dim level. Whenever space is occupied, lighting output will be increased to High Dim level or continuously regulated to maintain within the pre-set range by SmartDIM control.  <b>NOTE:</b> This is an <b>occupancy sensing control</b> scheme suitable for areas that require 24-hour lighting. Do <b>NOT</b> use with <b>non-dimnable</b> lighting.
	Occupied	High Dim		
		SmartDIM		
<b>OSLA</b>	Vacant	OFF	Low Dim	Lighting will be inhibited if the ambient light level is higher than the set threshold, regardless of occupancy or vacancy. When the ambient light level is lower than the set threshold, the sensor will automatically control the light at Low Dim level. When sensor detects the presence of an occupant, lighting output will be increased to the High Dim level or continuously regulated within the pre-set range by SmartDIM control. After the delay time elapsed, lighting output will be reduced to Low Dim level or shut off if the ambient light is higher than the set threshold.  <b>NOTE:</b> This is an <b>occupancy sensing control</b> scheme to be applied in spaces that require automatic lighting whenever ambient light level is lower than the set threshold. Do <b>NOT</b> use with <b>non-dimnable</b> lighting.
	Occupied	OFF	High Dim	
		SmartDIM		
<b>OSLATO</b>	Vacant	OFF	Low Dim & OFF	Lighting will be inhibited if the ambient light level is higher than the set threshold, regardless of occupancy or vacancy. When the ambient light level is lower than the set threshold, and any sensor detects the presence of occupant, lighting output will be increased to High Dim level or continuously regulated to maintain overall lighting level within the pre-set range by SmartDIM control. After the delay time elapsed, lighting output will be reduced to Low Dim level for a period of TIME OFF delay before shut off.  <b>NOTE:</b> This is an <b>occupancy sensing control</b> scheme can be applied in spaces that require maintaining Low Dim lighting for a period of time before shutting off. This scheme requires <b>dimnable</b> lighting to enable dimming control. If lighting is <b>non-dimnable</b> , the controlled lights will be shut off after the TIME OFF delay elapsed.
	Occupied	OFF	High Dim	
		SmartDIM		

\*Day/Night refers to the condition when ambient light level is higher/lower than the threshold set.

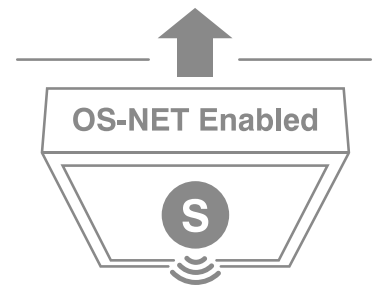
Scheme	Status	Day*	Night*	Operation Description
<b>DSVM</b>	Vacant	OFF	High Dim/ SmartDIM & Low Dim	Lighting will be inhibited if the ambient light level is higher than the set threshold. When the ambient light level is lower than the set threshold, the sensor will turn the light to High Dim level or continuously regulate the output to maintain overall lighting level within the pre-set range by SmartDIM control. Lighting output will be reduced to Low Dim level from a certain time before virtual midnight to a certain time after.
	Occupied	OFF	High Dim/ SmartDIM & Low Dim	<b>NOTE:</b> This is a <b>daylight sensing control</b> scheme to be applied in spaces that require automatically dimming the light to a low level between a certain time before and after virtual midnight. This scheme requires <b>dimnable</b> lighting to enable dimming control. If lighting is <b>non-dimnable</b> , the controlled lighting will remain full on whenever the ambient light level is lower than the set threshold.
<b>DSC</b>	Vacant	OFF	High Dim/ SmartDIM	The sensor will automatically turn on the light to High Dim level or continuously regulate the output to maintain overall lighting level within the pre-set range by SmartDIM control when the ambient light level is lower than the set threshold, and automatically turn off the light when the ambient light level is higher than the set threshold.
	Occupied	OFF	High Dim/ SmartDIM	<b>NOTE:</b> This is a <b>daylight sensing control scheme</b> to be applied in spaces that require automatic lighting whenever the ambient light is lower than the set threshold. This scheme requires <b>dimnable</b> lighting to enable dimming control. If lighting is <b>non-dimnable</b> , all lights will remain full on whenever ambient light level is lower than the threshold.
<b>VSC</b>	Vacant	OFF		The occupant would have to press the OS-NET Button to turn on the lighting group assigned. The sensor will control the lights at High Dim level or continuously regulate the output to maintain overall lighting level within the pre-set range by SmartDIM control. The sensor will control the connected lighting as per OSLATO.
	Occupied	Manual ON		<b>NOTE:</b> This is a <b>vacancy sensing control</b> scheme to be applied in spaces that require users to manually turn on the light, and have the sensor turn off automatically. This scheme requires <b>dimnable</b> lighting to enable dimming control. If lighting is <b>non-dimnable</b> , the controlled lighting will be shut off after the TIME OFF delay elapsed.
<b>OSB</b>	Vacant	OFF	OFF/ Low Dim	Lighting will be inhibited if the ambient light level is higher than the set threshold, regardless of occupancy or vacancy. When the ambient light level is lower than the set threshold and the first occupant is detected by a grouped sensor, the output of sensor connected light will be increased to High Dim level or continuously regulated within the pre-set range by SmartDIM control during occupancy, and the unoccupied areas of entire lighting group will brighten up to Low Dim level as background light. The entire lighting group turns off after the last person leaves and delay time elapsed.
	Occupied	OFF	High Dim	<b>NOTE:</b> This is an advanced <b>occupancy sensing control</b> scheme to be applied in open offices to provide background light level before the area of entire lighting group is vacant. Do <b>NOT</b> use this scheme to control <b>non-dimnable</b> lighting.
		SmartDIM		
<b>OFF</b>	Vacant	OFF		Once this scheme is set, <b>ALL</b> controlled lighting will remain OFF until another scheme is selected
	Occupied	OFF		<b>NOTE:</b> This is a manual control scheme can be used to keep the lights off for a certain period of time.

# Delivering Smart Lighting Control with 3 Easy Steps

Not all wireless lighting control solutions featuring the simplicity as you would expect. In fact, many can still frustrate lighting professionals due to different aspect of complication and complexity. OS-NET is a real simple solution that allows you to deliver a commercial/industrial lighting system with code-compliant, smart networked control. No router, no hub, no fixture controller, no room controller, no central control panel, no PC, no management software. All you need is an installation tool box with a SRP-281 remote programmer.

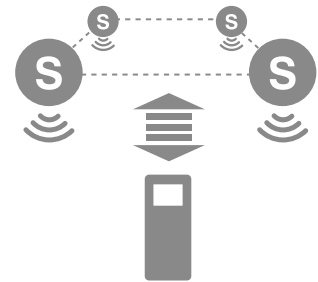
**1**

**Install the OS-NET enabled luminaires and devices**



**2**

**Link and group the OS-NET devices to the network**



**3**

**Set the control scheme and parameters as desired**

UPLOAD
CURRENT SETTING
EZ-SET 1
EZ-SET 2
EZ-SET 3
EZ-SET 4




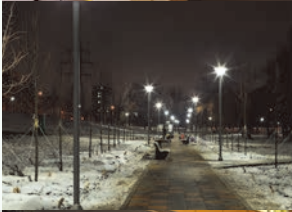







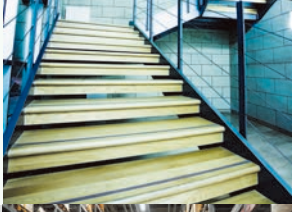


# An Optimized Solution with Clearly Better Edges

OS-NET is an optimized wireless solution with clearly better competitive edges in many aspects that no other single solution in the market can match.

Terms	OS-NET	Other Solutions
<b>Device Simplicity</b>	All sensing, control, and networking can be done with OS-NET Sensors. OS-NET Buttons and Power Packs are non-essential extra.	Most require complex devices, including Sensors, Fixture/Load Controllers, Switches, Dimmers, and Hubs/Gateways.
<b>Integration Flexibility</b>	OS-NET Sensors feature different form factors for flexible integration with OEM luminaires and lighting circuit controls.	Many require extra wiring connection between sensors and controllers. Only limited options available for LLLC.
<b>Ease of Installation</b>	Installing OS-NET enabled devices are virtually same as typical luminaires, sensors and wall switches.	Many consist of complex devices which result in more installation time and higher labor cost.
<b>Operation Software</b>	Requires no any management software to run the system. Each OS-NET device is a self-contained network control unit.	Many require proprietary management software to run the system.
<b>System Security</b>	Individual sensing control and operation under a standalone network ensures the highest system security.	PC-based or WiFi accessible system is more vulnerable to hostile threats or cyber attacks.
<b>Control Functionality</b>	Each OS-NET device can be programmed to provide specific sensing and control function with individual settings.	Sensing and control functionalities are determined by different devices or central controls.
<b>Ease of Commissioning</b>	Use a handheld remote to configure network, group, and device control scheme settings.	Most require complicated commissioning procedures via PC, special hardware and/or software tool.
<b>Ease of Maintenance</b>	Maintenance is exactly same as conventional lighting and sensor. Just replace the faulty and add the new device to the network.	Most require professional engineer to execute necessary maintenance. Removing the device can be complicated.
<b>Application Range</b>	Available for most indoor and outdoor applications of commercial and industrial lightings.	Many are only available for indoor lighting with limited applications and ceiling heights.
<b>Freedom of Supply</b>	Not binding with specific fixture manufacturer. Available with luminaires from different manufacturers.	Some may require luminaires with specific devices from certain manufacturers certified.
<b>Future Scalability</b>	Just require an easy remote operation to add the new OS-NET enabled lighting or device to the target network and group.	Adding new devices to the system normally would require the original installing and commissioning staff to get the job done.
<b>Ownership Cost</b>	Lower project and ownership costs effectively shorten the ROI.	Higher project and ownership costs prolong the ROI.

# Scalable Intelligent Lighting for All Applications

The OS-NET solution can be used indoors or outdoors in most applications of commercial, industrial, and institutional lighting environments to maximize energy efficiency through a wirelessly interconnected, versatile, simple to use, intelligent lighting control network.

Classroom		Office	
Cold storage		Outdoor	
Corridor/hallway		Parking garage	
Emergency exit		Retail	
Hazardous/chemical area		Public restroom	
Lecture hall		Stairwell	
Manufacturing		Warehouse	



# A Simple Solution

## Benefits All Parties

The OS-NET is capable of providing top-notch energy efficient, code-compliant, sophisticated multi-scheme controls without requiring extra sets of control wire networking to each luminaire and circuit. These controls include occupancy, vacancy, and daylight sensing based for on-off switching, bi-level StepDIM and continuous SmartDIM to the connected lighting in an individual or a group basis. With above capabilities, it can help lighting industry achieve smart controls with unsurpassed level of Flexibility, Functionality, and Simplicity.

### **OEM Lighting Manufacturer**

With OS-NET, an OEM lighting manufacturer can easily deliver smart lighting via integrating OS-NET sensors with luminaires. All OS-NET enabled luminaires can be easily grouped and intuitively set to execute smart LLLC through wireless mesh network via a handheld remote.



### **Lighting Designer/Specifier**

With OS-NET, designing a smart lighting system featuring code-compliant controls will be same as selecting general luminaires and ceiling sensors. No more complicated devices required, just allocating the OS-NET enabled luminaires and other devices at proper positions.



### **Electrical Contractor/Installer**

With OS-NET, installing an advanced lighting system featuring smart controls will be same as installing the conventional lighting and ceiling sensors. The intelligence is built in each OS-NET enabled luminaire and devices. All you need to do is installing, grouping and setting.



# Device Selection

## OS-NET SENSORS

Model No.	x - Mounting	y - Lens	Power Input	Control Output
<b>ON-MRD-124S<sup>1</sup></b>	--	--	DALI bus	DALI
<b>ON-LRD-209S</b>	--	--	120/230/277 VAC	0-10V, Switched live
<b>ON-MRD-210S</b>	--	--	230 VAC/DALI bus	DALI
<b>ON-LRD-209SP</b>	--	--	120/230/277 VAC	0-10V, Switched live
<b>ON-MRD-200SP</b>	--	--	230 VAC/DALI bus	DALI
<b>ON-BRD-510S<sub>xy</sub></b>	<b>F/W/E/P/S/C/R</b>	<b>A/B/C/D/F/G/H/L</b>	12-24VDC	0-10V, Digital output
<b>ON-LRD-509S<sub>xy</sub></b>	<b>F/W/E/P/S/C/L</b>	<b>A/B/C/D/F/G/H/L</b>	120/230/277 VAC	0-10V, Switched live
<b>ON-MRD-510S<sub>xy</sub></b>	<b>F/W/E/P/S/C/L</b>	<b>A/B/C/D/F/G/H/L</b>	230 VAC/DALI bus	DALI
<b>ON-MRD-514S<sub>xy</sub></b>	<b>F/W/E/P/S/C/L</b>	<b>A/B/C/D/F/G/H/L</b>	DALI bus	DALI
<b>ON-LRD-609S<sub>xy</sub></b>	<b>A</b>	<b>A/B/C/D/F/G/H/L</b>	120/230/277 VAC	0-10V, Switched live
<b>ON-MRD-600S<sub>xy</sub></b>	<b>A</b>	<b>A/B/C/D/F/G/H/L</b>	230 VAC/DALI bus	DALI
<b>ON-MRD-734S<sub>xy</sub></b>	<b>Z</b>	<b>A/B/C/D/F/G/H/L</b>	Aux (+24V)	DALI

<sup>1</sup> PPU-100DP or PPU-109DA may be required if luminaire is not with DALI driver featuring integrated bus power.

## OS-NET BUTTONS

Model	Power Input	Mounting	Control	Channel
<b>ON-PBD-815W</b>	230 VAC	EURO Wall box	On, Off, Dim	1
<b>ON-PBD-705W</b>	120-277 VAC	NEMA Wall box	On, Off, Dim	1
<b>ON-PBD-708W</b>	120-277 VAC	NEMA Wall box	On, Off, Dim	4

## OS-NET REMOTE PROGRAMMER

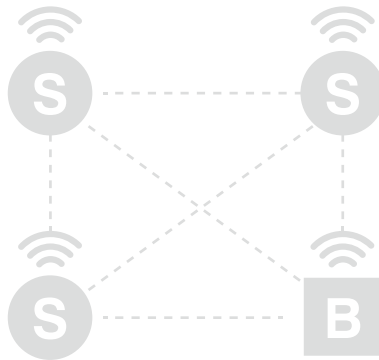
Model	Power Input
<b>SRP-281</b>	2x AAA Battery

## About IR-TEC

Found in 1982, as a pioneer of infrared motion sensing products, IR-TEC has established a solid reputation as a truly Innovative, Reliable, Technological, Efficient, and Cooperative business partner of its global customers. All IR-TEC products are designed, manufactured, and verified by a professional team under a well-maintained ISO-9001 quality management system in a state-of-the-art ISO-14001 certified manufacturing facility in Taiwan.


With decades of continuous hard work, IR-TEC has created a wide range of product portfolio, including occupancy/vacancy sensors, daylight sensors, power packs and controllers for commercial and industrial buildings to achieve the highest level of energy savings with occupancy/vacancy sensing based smart lighting and HVAC controls, without compromising occupant's comfort.






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