MRD-210S

SmartDALI Occupancy Sensor

OVERVIEW

The MRD-210S is a low profile, two-way IR remote programmable DALI occupancy sensor featuring bi-level StepDIM or continuous SmartDIM control to lighting with DALI driver or ballast. The sensor can be powered by either AC mains or DALI bus to provide multi-scheme occupancy sensing control with DALI Broadcast commands.

The sensor will command DALI drivers to provide output as programmed when it detects the presence of an occupant or vehicle, and automatically dim to the low level or shut off the light after the area is vacant for a period of time. An exclusive two-way handheld remote programmer allows you to configure the sensor with specific control scheme and settings, or download the existing settings of the installed sensor from the floor.

This compact sensor can be easily integrated with general office luminaires through a 1″ hole. A low profile flat lens provides excellent sensing capability for office activities within its coverage. With MRD-210S, you can easily deliver energy efficient smart luminaires for most commercial lighting environments.

FEATURES

- Omni-directional quad element infrared sensor
- Digital data control ALS for daylight harvesting
- Operation with AC line voltage or DALI bus power
- Multi-level high/low StepDIM or SmartDIM control
- DALI broadcast command for multi-driver control
- 2-way IR remote programmable sensor settings
- Provides up to 100 mA of DALI bus power supply
- Available for integration with Troffer or LED panel

APPLICATION

☑ DALI Lighting Control

The MRD-210S sensor can be integrated with Troffer or side-lit LED panel to provide occupancy sensing control in continuous or multi-level dimming to the connected lighting. One sensor can control multiple DALI luminaires in the same scheme, while one DALI luminaire can only be controlled by a single sensor.

MRD-210S
SmartDALI Occupancy Sensor

CONTROL MODES

The sensor can be easily programmed to control the light in one of the following modes via remote programmer. For details of specific control mode, please visit www.irte.com or contact an IR-TEC team member directly.

Mode	Day[1]	Night[2]	Remarks
ON/OFF	Vac: OFF Occ: ON/OFF*	Vac: OFF Occ: ON	For non-dimmable lighting *ALS enabled
OSO	Vac: LD Occ: SD/HD	Vac: LD Occ: SD/HD	LD: Low Dim, HD: High Dim SD: SmartDIM
OSLA	Vac: OFF Occ: OFF	Vac: LD Occ: SD/HD	
OSLATO	Vac: OFF Occ: OFF	Vac: OFF Occ: HD/SD-LD*	*Low Dim during Time Off delay
OFF	Vac: OFF Occ: OFF	Vac: OFF Occ: OFF	Light stays off

ON/OFF : ON-OFF Switching
OSO : Occupancy Sensing Only
OSLA : Occupancy Sensing at Low Ambient
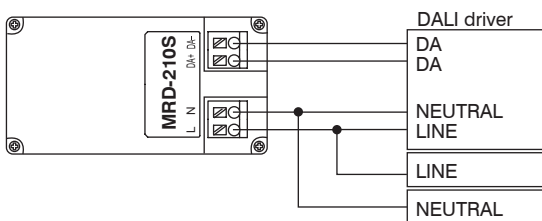OSLATO : Occupancy Sensing at Low Ambient with Time-Off
OFF : Light OFF all the time
Vac : Vacant   Occ : Occupied

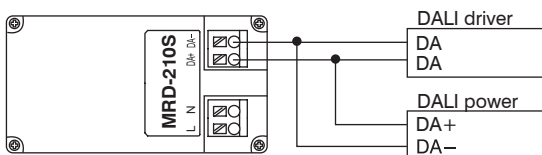[1] While ambient light level is higher than the threshold.
[2] While ambient light level is lower than the threshold.
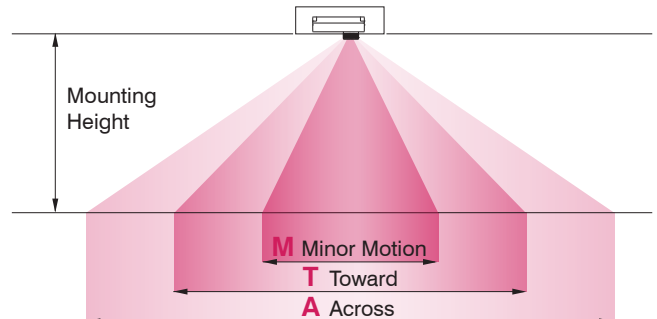
WIRING DIAGRAM

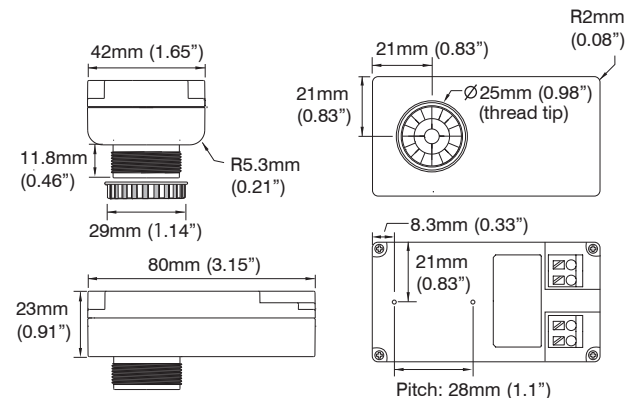### Powered by line voltage

Powered by DALI bus

DETECTION PATTERN

Mounting Height		2.4 m (8 ft)	3.0 m (10 ft)	3.6 m (12 ft)	6.0 m (20 ft)
Coverage Diameter	M	1.0 m (3 ft)	2.0 m (7 ft)	3.0 m (10 ft)	--
	T	3.0 m (10 ft)	4.0 m (13 ft)	5.0 m (16 ft)	6.0 m (20 ft)
	A	5.0 m (16 ft)	6.0 m (20 ft)	7.0 m (23 ft)	9.0 m (30 ft)

DIMENSIONS

SPECIFICATIONS

Power supply	230-240VAC or DALI bus power
Power consumption	<0.5W @230VAC, <15mA with DALI bus
Infrared sensor	Omni-directional quad element pyroelectric
Photo sensor	Digital ambient light sensor
DALI power output	100 mA max.
Control protocol	DALI Broadcast
Detectable speed	0.3 ~ 3 m/sec. (1~10 ft/sec.)
Mounting height	2.4~6m (8~20 ft)
Detection range	Subject to the mounting height
Op. humidity	Max. 95% RH, non-condensated
Op. temperature	-40°C~70°C(-40°F~158°F)
Dimensions	80x42x34.8mm(3.15"x1.65"x1.37")