TRANS

MRD-600SA series

SmartDALI Occupancy Sensor

REMOTE

OVERVIEW

The MRD-600SA series member of the TRANS family is a 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 line voltage or DALI bus to provide multi-scheme occupancy sensing control through DALI Broadcast commands.

The sensor will command DALI drivers to provide the programmed output 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 (SRP-280) allows you to configure sensor control scheme and settings, or download the existing settings of the installed sensor from the floor.

Like all sensors in the TRANS family, the MRD-600SA series is available with interchangeable lenses. The sensor comes with universal mounting design which provides complete installation flexibility. The sensor is designed to operate in the coldest of environments, down to -40°C/°F.

FEATURES

- Omni-directional quad element infrared sensor
- Digital data control ALS for daylight harvesting
- Available with AC line voltage or DALI bus power
- DALI broadcast command for multi-driver control
- Multi-level high/low StepDIM or SmartDIM control
- Exceptionally long range of remote programming
- Provides up to 100 mA of DALI bus power supply
- Up to 10 m of remote programmable range
- Beeping or light flashing acknowledgement
- Available with interchangeable lens options

APPLICATION

☑ DALI Lighting Control

The MRD-600SA series occupancy sensor can be used to directly control a DALI driver or ballast in different modes by sensing the presence and movements of the occupant. One sensor can control multiple DALI luminaires in the same scheme, while one DALI luminaire can only be controlled by a single sensor.

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SmartDIM

SmartDIM is an exclusive continuous dimming control algorithm developed by IR-TEC to provide a smooth and flawless automatic dimming performance. The output of the controlled lighting will be constantly adjusted to maintain the overall ambient light level within the pre-programmed range by sensing the daylight available in the space.

CONTROL MODES

The sensor can be easily programmed to control the light in one of the following modes via remote programmer.

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: SD/OFF	Vac: LD Occ: SD/HD	
OSLATO	Vac: OFF Occ: SD/OFF	Vac: LD*-OFF Occ: SD/HD	*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.
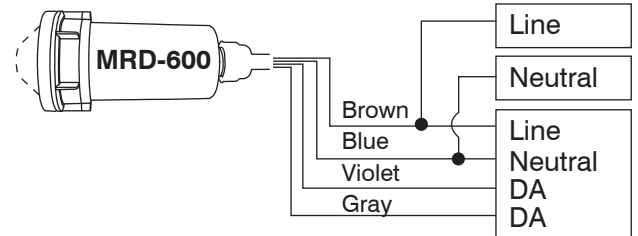[2] While ambient light level is lower than the threshold.

LENS OPTIONS

The MRD-600SA**X** series is available with following lens options which provide different coverage at different mounting height (H). When adding the lens code, the lens is then automatically shipped with the sensor.

Lens		Shape	Mounting Height		Coverage
A	Standard	Cone	8~15 ft.	2.4~4.5m	2X height
B	Extra wide	Cone	8~10 ft.	2.4~3.0m	6X height
C	High bay	Cone	15~30 ft.	4.5~9.0m	3X height
D	Standard	Round	8~20 ft.	2.4~6.0m	2X height
F	Extra wide	Dome	8~20 ft.	2.4~6.0m	4X height
G	Aisle way	Arch	8~40 ft.	2.4~12.0m	3X height
H	High bay	Dome	30~50 ft.	9.0~15.0m	1X height
L	Long aisle	Arch	8~10 ft.	2.4~3.0 m	6X height

WIRING DIAGRAM

Powered by line voltage

Powered by DALI bus

SENSOR MOUNTING
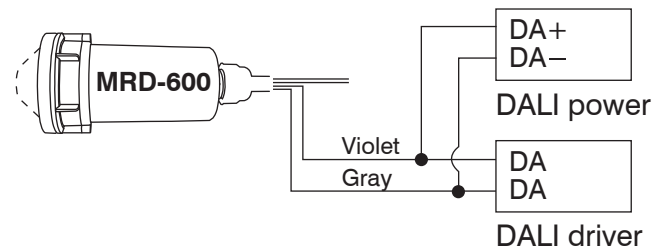
① Lighting — Anti-rotation clamp — Recommended screw size Ø4mm
② Lighting
③ Click! — Lighting
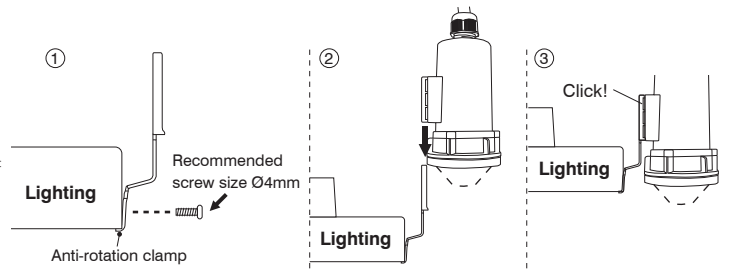
SPECIFICATIONS

Power supply	230-240VAC or DALI bus power
Power consumption	<0.5W @230VAC or <15 mA with DALI bus
Infrared sensor	Omni-directional quad element pyroelectric
Photo sensor	Digital ambient light sensor
DALI bus power	100 mA max.
Control protocol	DALI Broadcast
Detectable speed	0.3 ~ 3 m/sec. (1~10 ft/sec.)
Mounting height	Subject to the lens applied
Detection range	Subject to the lens type and mounting height
Remote range	10 m (33 ft) typical, indoor, no backlight
Op. humidity	Max. 95% RH
Op. temperature	-40°C ~70°C (-40°F~158°F)
Dimensions	Ø60 x H37mm (Ø2.36"x H1.45")