DALI-2 PIR motion sensor

DLS-2XX series



Low-mounting type：DLS-203-P



Surface mounting



Flush mounting

High-mounting type：DLS-208-P

Indoor Household Building Automation

Features

- DALI-2 certified PIR motion sensor
- Compliant with IEC-62386-101/103/303/304 standards
- Compatible with DALI-2 controllers, such as MEAN WELL DLC-02
- Powered directly from DALI Bus
- PIR sensing technology
- Built-in daylight sensor
- 5-year warranty

Applications

- Office lighting
- Commercial lighting
- Warehouse lighting
- Home automation
- Luxury villa lighting

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

The DLS-2XX series is a DALI-2 compliant input device using PIR motion and daylight sensing techno -logy. It is powered by the DALI bus. It uses passive infrared (PIR) technology to detect motion from people or pets within the monitoring area in real time. The product includes a built-in daylight sensor to measure ambient light levels in real time. By combining PIR detection with daylight sensing, it provides fast and accurate input for applications such as smart homes, hotels, offices, warehouses, and parking lots. The product adopts a ceiling-mounted installation method and is available in low-height and high-height .installation type to accommodate different detection ranges.

This series of sensors can be paired with MEAN WELL's DLC-02 master controller, LED drivers, and DTP series touch panels to form a DALI-2 digital lighting system. It enables control of DALI luminaires, including on/off switching, dimming, and scene regulation, meeting daily lighting control requirements.

Model Encoding

DLS - 2 03 - P

- PIR sensor
- Typical mounting height(Low-mounting type:03, High-mounting type:08)
- DALI-2 version
- Sensor series name (DALI Sensor)

Type	Functions	Remark
203	Typical mounting height:3m, flush mounting available	In Stock
208	Typical mounting height: 8m, flush mounting and surface mounting available, with a surface-mounted base included as standard	In Stock

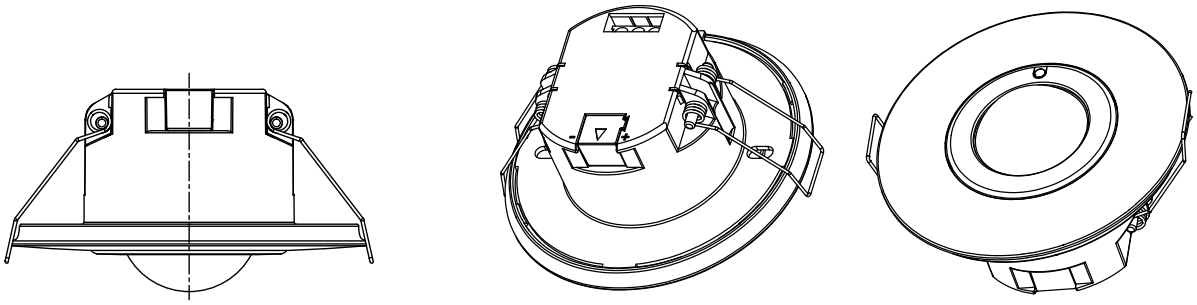
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

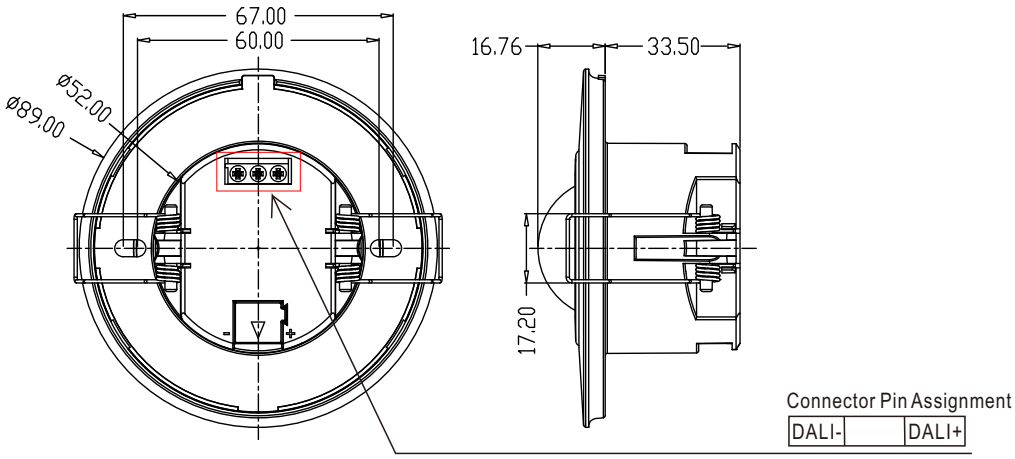
SPECIFICATION	DLS-203-P	DLS-208-P
Type	Low-mounting type	High-mounting type
INPUT		
INPUT VOLTAGE	9.5V~22.5V DC(powered by DALI BUS)	
CURRENT CONSUMPTION	Typ. current < 10mA@16VDC, Inrush current(Max.)<20mA	
START-UP TIME	10s self-test is initiated upon first power-up, with external motion detection disabled during this period	
PROTOCOL	DALI-2	
FUNCTION		
DALI STANDARD	Compliant with DALI standard IEC62386-101, 103, 303, 304	
FUNCTION	PIR motion detection+ daylight sensor	
HOLD TIME	5s(sensor hold time)+DALI master setting hold time	
DAYLIGHT SENSOR MEASUREMENT	2-65000Lux	
RADIUS DETECTION RANGE (BASED ON 100% SENSITIVITY)	Radius 3-4m @25℃, based on 3m mounting height and tangential motiondetection	Radius 5-6m @25℃, based on 10m mounting height and tangential motiondetection
ENVIRONMENT		
OPERATING TEMP. Note1	-25 ~ +50℃	
OPERATING HUMIDITY	10 ~ 85% RH	
STORAGE TEMPERATURE & HUMIDITY	-40 ~ +80℃， ≤85% RH	
IP RATING	IP20	Flush mounting: IP20, Surface mounting： IP54
SAFETY & EMC		
SAFETY STANDARD	EN60669-1； EN IEC60669-2-1	
EMC EMISSON	EN IEC55015	
EMC IMMUNITY	EN IEC61547	
OTHERS		
FACTORY DEFAULTS	Delay settings：5S, Indicator light: ON	
WIRE SIZE	0.5~1.5 mm^2(AWG 20~16)	
MOUNTING HEIGHT	2-6m,typical： 3m	2. 5-10m, typical： 8m
DRILL HOLE	⌀55-65mm	⌀55mm
SIZE/UNIT(L*W*H)	⌀89 * 34mm	105 * 105 * 80.8mm(ceiling flush mounting), 105 * 105 * 65.8mm(ceiling surface mounting)
PACKING	0.1Kg;40pcs/4.1Kg/1.18CUFT	0.25Kg;20pcs/5.0Kg/1.10CUFT
NOTE		
1. The detection range may increase as temperature decreases and decrease as temperature rises		

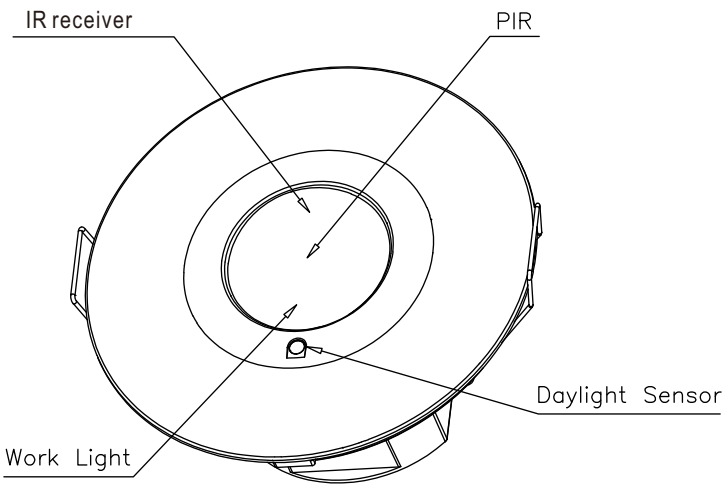
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

■ Mechanical Specification

Low-mounting type---order number: DLS-203-P Unit: mm Tolerance: ±1





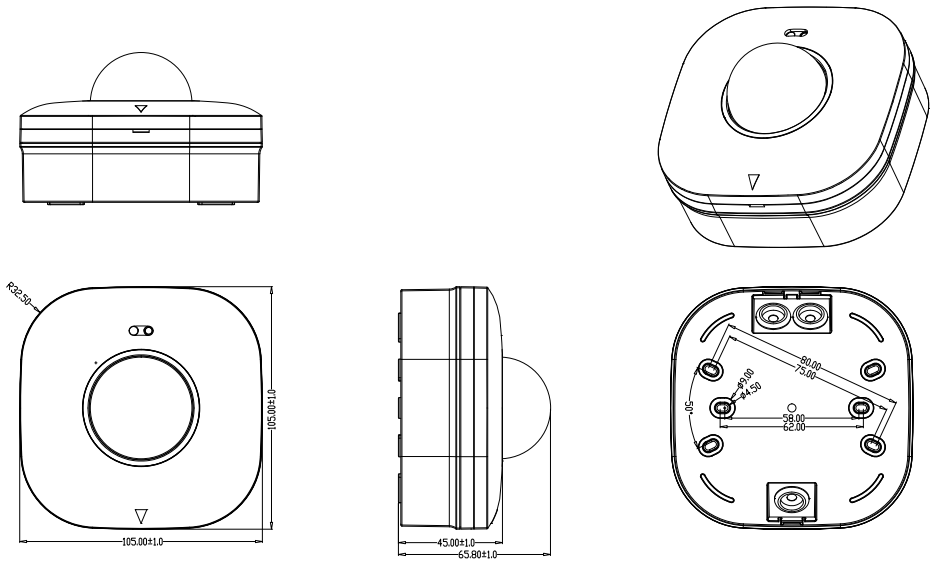


Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

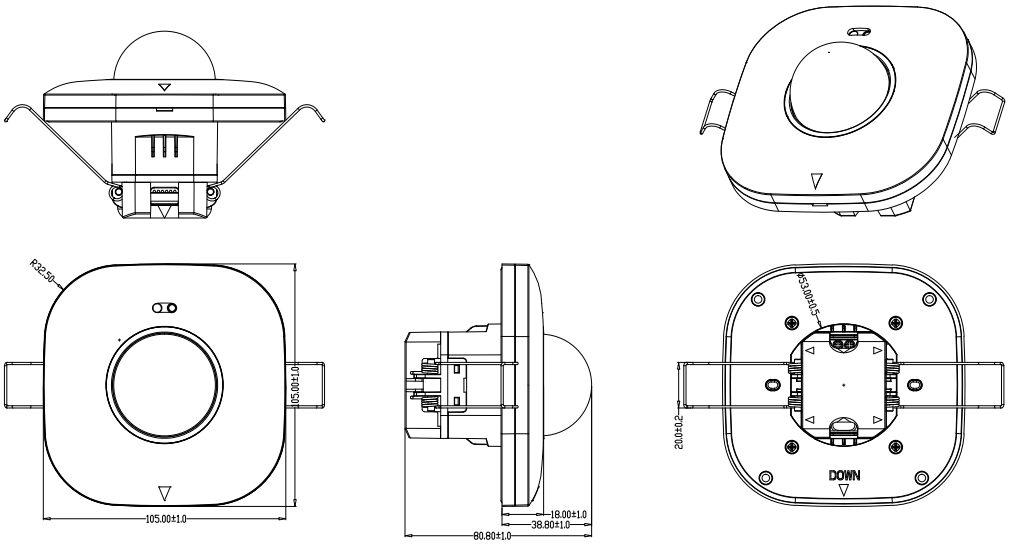
High-mounting type---order number: DLS-208-P

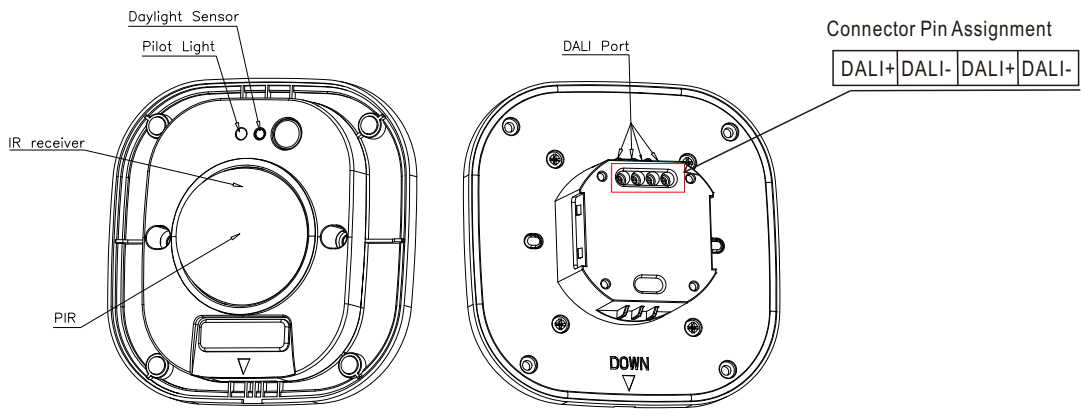
DLS-208-P supports two installation methods: surface mounting and flush mounting installation. Users can choose the appropriate installation method based on their actual scenario. surface mounting installation requires a base, which is supplied as standard with the product. For specific installation details, please refer to the instructions in the user manual.

Surface mounting



Flush mounting





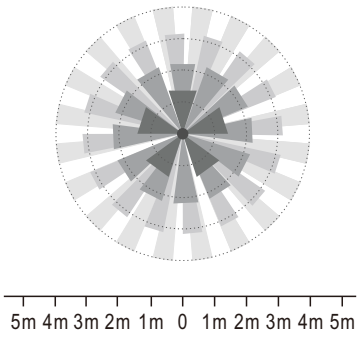
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

■ Detection radiation

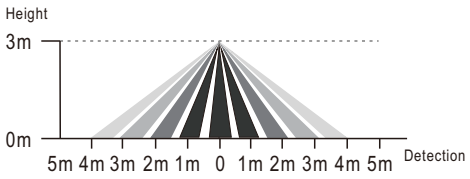
PIR sensor is highly recommended ceiling flush mounting and its detection radiation is as below shows:

Low-mounting：DLS-203-P

Detection radiation top view(unit:meter)

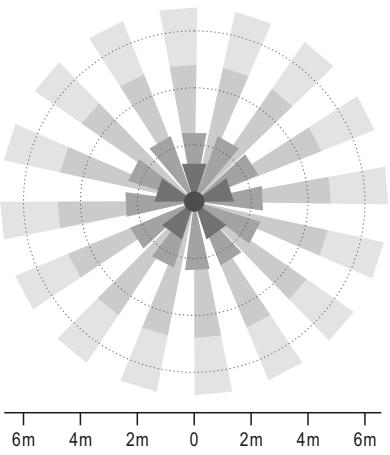


Detection radiation side view(unit:meter)

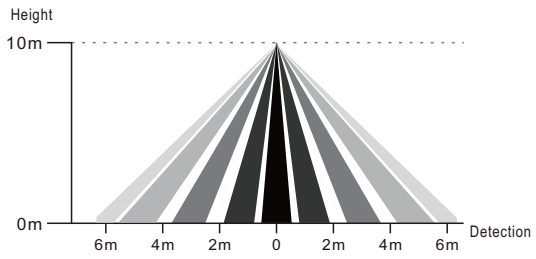


High-mounting type：DLS-208-P

Detection radiation top view(unit:meter)



Detection radiation side view(unit:meter)



■ Detection Signal

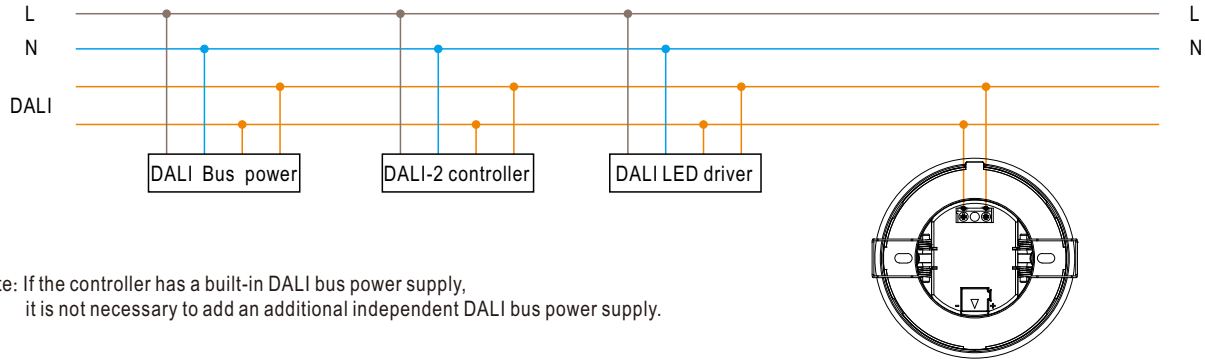
The product detects human movement signals to determine the presence or absence of movement (occupied/unoccupied) in non-sleep states.
The following is an explanation of the movement signals:

- Moving signal: detect the human significant moving (walking) in the detection area

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

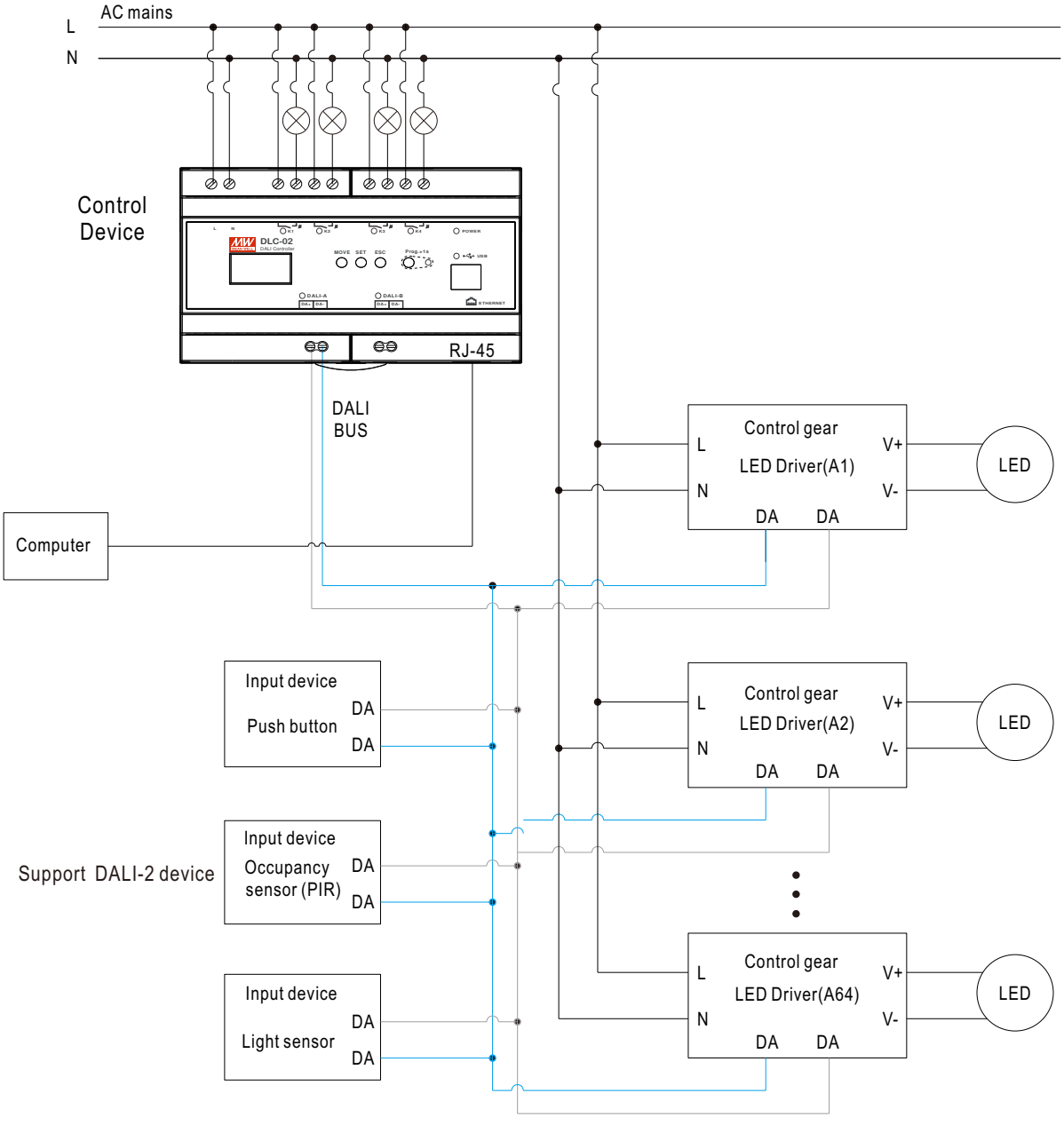
■ Sensor Power Supply Scheme

Simply wire the sensor to the polarity-free DALI bus for installation and operation.



Note: If the controller has a built-in DALI bus power supply,
it is not necessary to add an additional independent DALI bus power supply.

■ DALI-2 Digital Lighting System Commissioning: (MEAN WELL DLC-02 builting in DALI Bus)



MEAN WELL DLC-02 controller, each channel can be connected up to 12 input devices but the maximum number of input devices that can be connected is determined by the connected DALI bus power and operating current of the input device. For example, when 64(Lamp) LED drivers (2mA) are connected, the maximum remaining applicable current on the DALI bus is 250mA-(2mA x 64) = 122mA. If the current requirement of the input device is 10mA, then up to 12 input devices can be connected, DLC-02 manual, please refer https://www.meanwell.com/Upload/PDF/DLC-02-E.pdf

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Application Note

1. This product must be installed by a licensed electrician. Disconnect power before installation and wiring.
2. The optimal installation height is 3m(DLS-203-P) or 8m(DLS-208-P), Do not install outdoors, as environmental temperature changes may cause false triggering. Avoid installing in locations with frequent temperature or airflow changes, as this may cause false triggering or detection failures.
3. There should be no reflective objects directly in front of the sensor, as reflected light can cause the sensor to trigger incorrectly.
4. Keep the sensor at least 2 meters away from strong electromagnetic sources such as Wi-Fi routers, security cameras, or microwave ovens to prevent interference.
5. Due to the Fresnel lens design, tangential movement can be detected at a greater distance than radial movement.
6. When ambient temperature approaches human body temperature range(36°~37°C/96.8~98.6°F), motion detection sensitivity may be reduced or non-responsive.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000