DALIcontrol™ **CLIPSAL®**

by Schneider Electric
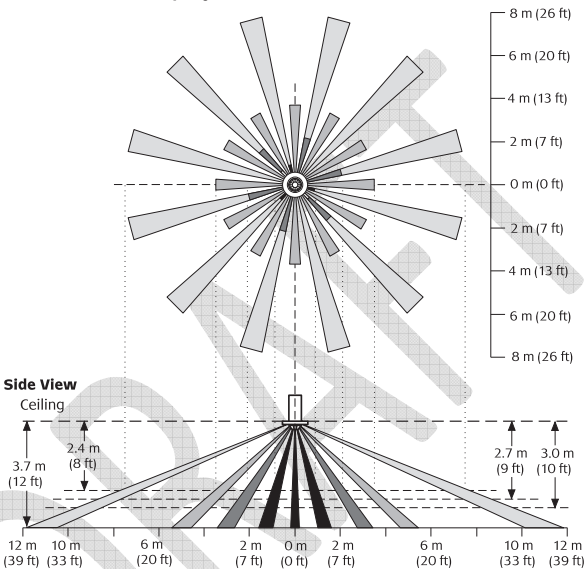
DALI 360° PIR Occupancy / Multi Sensor

DCDALM360

TWO YEAR WARRANTY **2**

Installation Instructions

Contents

1.0   Product Range

DCDALM360   DALI 360° PIR Occupancy Sensor

2.0   Description

The DCDALM360 Series PIR Sensor is part of the Clipsal DALI control range and can only be connected to a DALI line.

The DCDALM360 Series PIR Sensor monitors its immediate environment. When connected to an operating DALI line, the Sensor detects any moving infrared source that comes into its 'field of view.' Whenever it detects movement of body heat within its range, it issues commands over the DALI line to control output devices.

The DCDALM360 Series PIR Sensor includes an ambient light sensor that allows different behaviour in dark and light conditions. The light level required to change from light to dark is adjustable through the software interface.

3.0   Installation Procedure

3.1   Installation Location

The DCDALM360 Series is for indoor use only and is designed to recess mount into the ceiling with the best location being in the centre of the room. It has a 360-degree field of view with typical detection coverage of 15 metres when mounted 2.4 metres above the floor.

Typical Room Plan Example:

Right   Wrong

3.2   Field of View

Top View at 2.4 m Mounting Height

Side View

Disclaimer: *The stated field of view is typical for full body movement and is subject to variations caused by the type and quantity of clothing worn, as well as variable background temperature characteristics and speed of movement.*
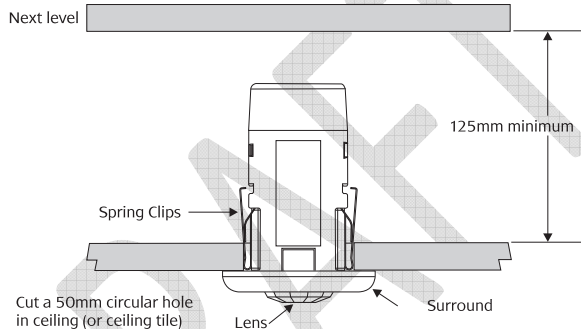
Rapid and large temperature changes may be detected even if they appear to be well beyond the field of view due to reflections off surfaces that are within the field of view.

3.3   Mounting Instructions

Step 1: Using a hole saw, cut a 50 mm (2 inch) circular hole in the ceiling (or ceiling tile).

Step 2: Press the outer ends of the spring clips towards the center of the unit and push the unit through the hole until it rests flat on the ceiling.

Note: Do not apply any pressure on the plastic Sensor lens, as this will damage the lens.

Next level

125mm minimum

Spring Clips

Cut a 50mm circular hole in ceiling (or ceiling tile)

Lens

Surround

Special points to take note of are:

• Do not apply any pressure on the actual Sensor lens itself as this may damage the lens.

• When mounting in suspended ceilings there should be at least 125mm between the lower surface of the tile and the hard surface above.
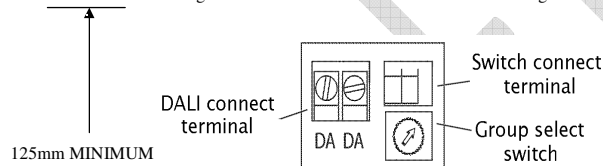

4.0   DALI Line Connections

The DCDALM360 Series must never be connected to mains voltages.

Installation of the DCDALM360 Series requires connection to a DALI line. Connection should be made using 1-4mm^2 two core mains rated flex. Do not use soldered connections as they are not reliable.

The DALI line Connection is not polarity sensitive, 'DA' is clearly marked on the rear of the DCDALM360 Series unit with the terminal cover removed.

It is the responsibility of the installer to ensure that the unit is wired to conform to the DALI wiring standards and meet local electrical and building codes.

125mm MINIMUM

DALI connect terminal

DA DA

Switch connect terminal

Group select switch

4.2 Selecting the group

Using a small blade screw driver carefully rotate the group select switch to the desired position to allow the sensor to directly control lighting assigned to that selected DALI group.

On first installation, the device will default to the single group selected using the rotary switch. If the user wishes to edit the devices group associations, it must be done using the DALI commissioning wizard software. Once the software is used the rotary switch is disabled.

4.3 Connecting a switch

Using a small blade screw driver firmly depress the orange locking mechanisms in a direction parallel to the circuit board to allow insertion of   a 1.5mm^2 solid core mains rated cable which has been stripped so that no greater than 6mm of copper is exposed. Release the locking mechanism and gently pull the mains flex to ensure a firm connection with no exposed copper. The cable between the DCDALM360 sensor and the switch must not exceed 10m in length with a capacitance of 300pF.
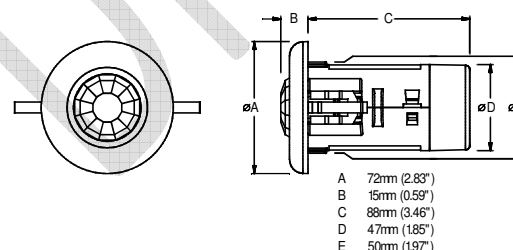

5.0   DALI Power Requirements

The DALI DCDALM360 Series Sensor draws <6mA from the DALI line. When a suitable DALI power supply is connected, up to 20 devices may be connected to a single DALI line.

6.0   Power Surges and Short Circuit Conditions

6.1 DALI terminals

Care should be taken to ensure that DALI devices are not connected to mains voltage as this may result in damage to any connected DALI devices.

The DCDALM360 Series has a RED visual warning light which will illuminate indicating a connection to abnormal input voltages beyond the DALI specified range. The warning light will remain on until the fault has been removed from the DALI terminal.

6.2 Switch Terminals

The switch input terminal is not protected against over voltage and must only be connected to voltage free mains rated switches using a solid core 1.5mm^2 mains rated flex to meet DALI standards.

7.0   Megger Testing

Megger testing must never be performed on any DALI line cabling or terminals as it may damage connected devices and cause unknown device behaviour.

8.0   Programming and Commissioning

The DALI DCDALM360 Series must be programmed to set a unique identification number and mode of operation on the DALI line. This can be achieved using BM-DALI commissioning wizard available from DALI Control. Using software not provided by DALI Control may void any warranties applicable to the hardware.

9.0   Product Specifications

9.1   Electrical Specifications

Catalogue No.	DCDALM360	
Operating voltage	9.5-22.5V DC	
Maximum Abnormal voltage	277VAC	
Operating current	<6Ma	
Operating temperature	0° to 45°C	
Warm up period	Up to 1 minutes for Sensor to stabilise	
PIR rated detection field	Typically 15 metres diameter at 2.4 metres mounting height	
Light level inhibit threshold	Continuous from 1 Lux to full sunlight	
Mounting surface	Ceiling	
Mounting height for rated detection field	2.4 metres	
Maximum mounting height	3.7 metres	
Minimum ceiling thickness	10mm	
Dimensions – overall	72mm (W) x 103mm (L)	
Weight	82g	85g
Maximum DCDALM360 units per DALI line	20	
Maximum cable length between switch and DCDALM360 unit	10m @300pF	

No user serviceable parts inside.

9.2   Dimensions

B   C

øA

øD   øE

A	72mm (2.83")
B	15mm (0.59")
C	88mm (3.46")
D	47mm (1.85")
E	50mm (1.97")

10.0 Standards Complied

DECLARATIONS OF CONFORMITY

The DCDALM360 Series models comply with the following standards:

European Standards

European Council	Standard	Title
European Committee for Standardisation $\;$ CE	EN 61347-2-11	Lamp control gear. Particular requirements for miscellaneous electronic circuits used with luminaires
	EN 61547	RFI Emissions Standard Specification for equipment for general lighting purposes. EMC immunity requirements RFI Emissions Standard
	EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

11.0 Two-Year Warranty

The DCDALM360 Series products carry a two-year warranty against manufacturing defects.

Warranty Statement

1) The benefits conferred herein are in addition to, and in no way shall be deemed to derogate; either expressly or by implication, any or all other rights and remedies in respect to Clipsal Integrated Systems Product, which the consumer has under the Commonwealth Trade Practices Act or any other similar State or Territory Laws.

2) The warrantor is Clipsal Pty Ltd, with registered offices in all Australian States.

3) This Clipsal Integrated Systems Product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.

4) Clipsal Australia Pty Ltd reserves the right, at its discretion, to either repair free of parts and labour charges, replace or offer refund in respect to any article found to be faulty due to materials, parts or workmanship.

5) This warranty is expressly subject to the Clipsal Integrated Systems Product being installed, wired, tested, operated and used in accordance with the manufacturer's instructions.

6) All costs of a claim shall be met by Clipsal Australia Pty Ltd, however should the product that is the subject of the claim be found to be in good working order, all such costs shall be met by the claimant.

7) When making a claim, the consumer shall forward the Clipsal Integrated Systems Product to the nearest office of Clipsal Australia Pty Ltd with adequate particulars of the defect within 28 days of the fault occurring. The product should be returned securely packed, complete with details of the date and place of purchase, description of load, and circumstances of malfunction.

For all warranty enquiries, contact your local Clipsal sales representative. The address and contact number of your nearest Clipsal Australia office can be found at http://www.clipsal.com/locations or by telephoning Technical Support 1300 722 247 (CIS Technical Support Hotline).

Technical Support and Troubleshooting

For further assistance in using this product, consult your nearest Clipsal Integrated Systems (CIS) Sales Representative or Technical Support Officer.

Technical Support Contact Numbers	
Australia	1300 722 247 (CIS Technical Support Hotline)
New Zealand	0800 888 219 (CIS Technical Support Hotline)
Northern Asia	+852 2484 4157 (Clipsal Hong Kong)
South Africa	011 314 5200 (C-Bus Technical Support)
Southern Asia	+603 7665 3555 Ext. 236 or 242 (CIS Malaysia)
United Kingdom	0870 608 8 608 (Schneider Electric Support)

Technical Support email: cis_support@clipsal.com.au