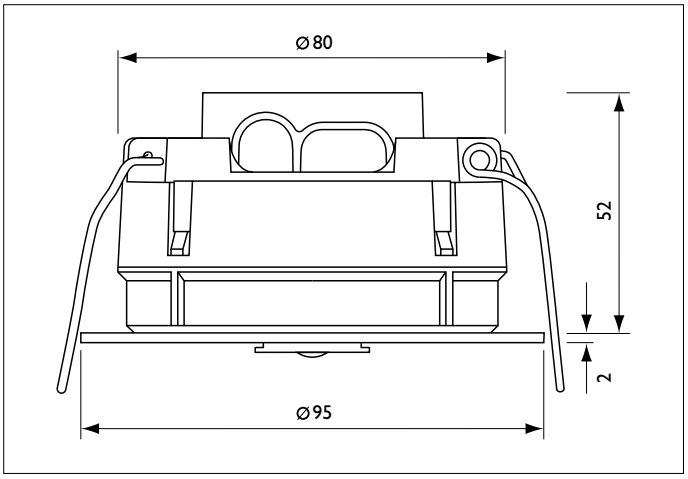
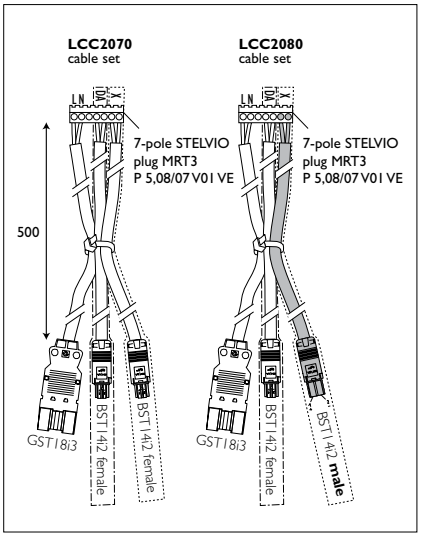
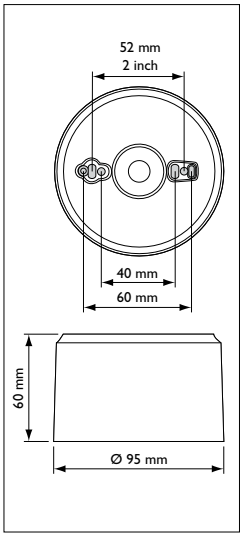
LRM207x, LRM208x, LRM209x Datasheet
OccuSwitch DALI sensor/controller







Dimensions in mm

General description

The OccuSwitch DALI is a combined sensor and controller. It will dim and switch the lights in a room or area on occupancy and available daylight, with options for local override, parallel operation and network links to Building Management Systems (BMS).
Savings up to 75% can be achieved with functions like daylight depending dimming, occupancy control and over dimension correction. The OccuSwitch DALI is designed for an office area of 20 .. 25 m^2, or a classroom of around 40 m^2 but the area can be doubled, or even tripled, with the extension sensor LRM8118. Up to 15 luminaires can be controlled.
A detachable wiring connector enables easy installation and mounting in the ceiling. Separate Wieland cables are available for an even easier, fast and trouble-free installation.
It is possible to link up to 22 (advanced only) OccuSwitch DALI units in parallel to cover larger area's with a specific "open plan" mode to ensure maximum comfort and savings.
The LRM2090 can be linked to most BMS or other control systems that have standard DALI interfaces. This makes simple yet very effective control scenarios in a building possible.
The LRM2095 has tunable white control, capable of creating atmospheres with different color temperature. The LRM2095 is part of the SchoolVision proposition.

The OccuSwitch DALI family exists of:

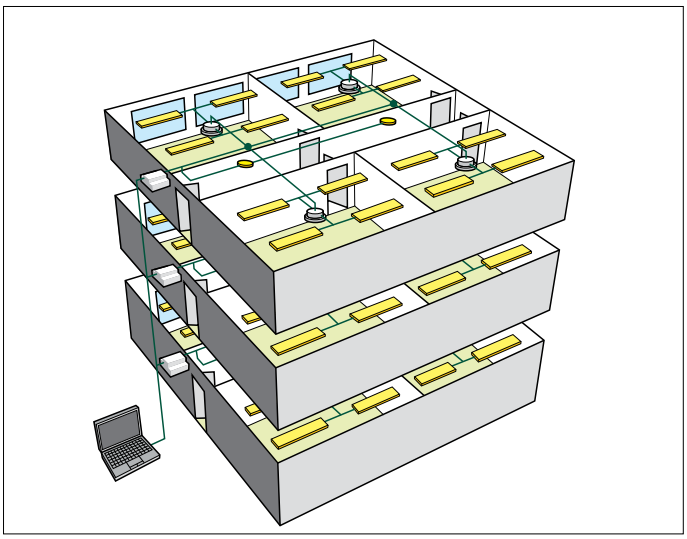
LRM2070	Basic functionality
LRM2071	Basic functionality + Enocean® interface
LRM2080	Parallel operation
LRM2081	Parallel operation + Enocean® interface
LRM2090	DALI interface for BMS or othernetwork
LRM2091	DALI interface for BMS + Enocean® interface
LRM2095	Tunable white + interface forlocal/central control
LCC2070	Wieland cable for LRM207x
LCC2080	Wieland cable for LRM208x and LRM209x
LRH2070	Ceiling mounting box
LCU2070	Push-button Unit for 4 switches
LCU2071	Additional Push-button Unit (for LRM2095 only)
IRT8097	OmniProg easy, commissioning tool
IRT8099/10	OmniProg, commissioning tool
IRT8096	OmniProg, dedicated for LRM2095

PHILIPS

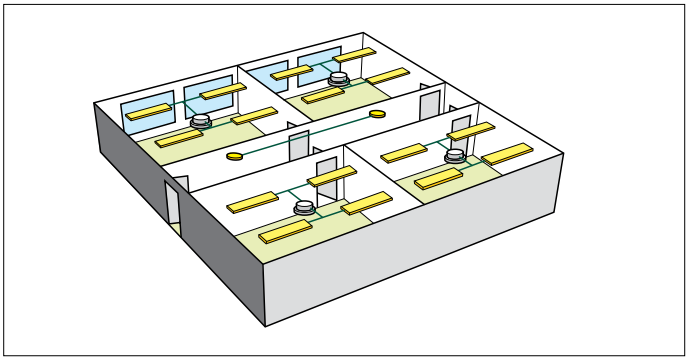
Applications

The OccuSwitch DALI is designed for use in offices and similar applications like schools, including corridors, meeting rooms, etc. It is optimized for recessed ceiling mounting and for mounting heights between 2.5 and 4 meter.
The surface box allows surface mounting as well, with either recessed wiring or surface mounted ducts.
The advanced OccuSwitch DALI can be connected in parallel (max 22) to cover larger area's like open plan offices. The use of different mains groups or even phases is no problem.
The OccuSwitch DALI design guide (available on www.philips.com/occuswitchdali) gives all necessary design information for offices, schools and meeting rooms.

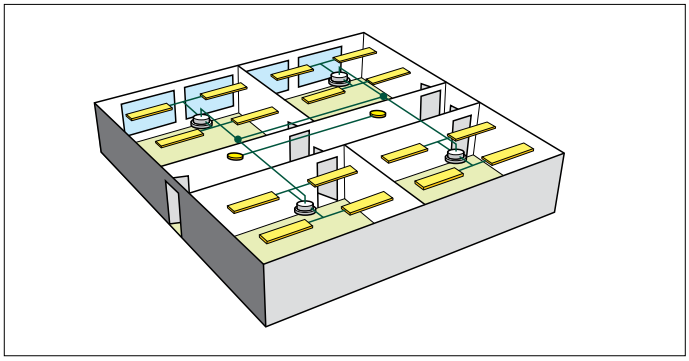
Typical applications



LRM2090 / LRM2095



LRM207x

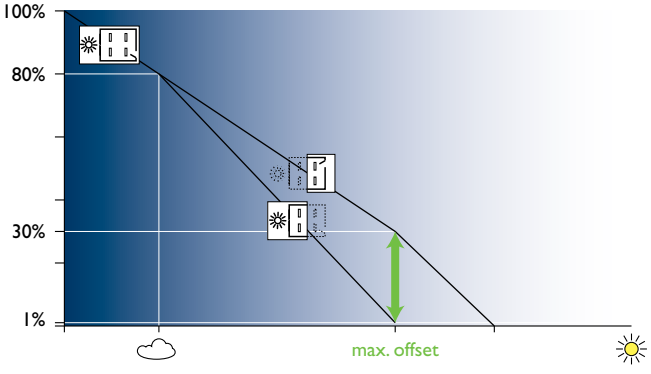


LRM208x

Features

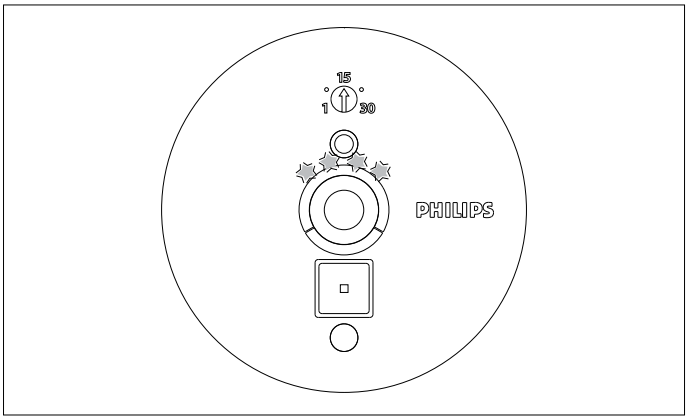
Window/corridor and dynamic offset control

For optimal energy savings the window and corridor luminaires are controlled separately as indicated in the graph. Window-side lights will switch off (or not switch on entrance, the daylight override function) when sufficient daylight is available. The corridor side however will by default dim to minimum only, hence indicating to the user that the system is operational. This feature can be disabled.



Energy indicator

The LED on the OccuSwitch DALI indicating movement or communication will change color depending on the energy usage. Dimming levels below 30% will show a green color, below 70% yellow, and above red.



LRM2080

DALI addressing

The OccuSwitch DALI can be used with one channel only or two (window / corridor control), using the physical outputs (LRM2070 only). However all versions can be used with DALI addressing as well. Up to 4 channels can be defined.

DALI group	Function
1	Window
2	Corridor
3	Additional presence
4	Additional absence

The additional lum naire groups can switch on together with the window and corridor groups or only switch on manually (absence). All groups will switch off when the area is vacated. Pre-programmed luminaires will be recognized upon start-up.

Auto commissioning

The OccuSwitch DALI can determine the installed lux level and take this as set point for the daylight depending regulation. This is easy to use without the need for a Lux meter.

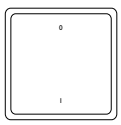
DALI network interface

The LRM2090 can be controlled with a DALI network interface. This means that this device can be connected to most BMS or other control system with a DALI interface. This enables functions like switching on/ of or dim, scenes and queries for lamp/ballast states, the set light level and even more functions.
With an specific gateway, supporting the OccuSwitch DALI BMS functions, it is also possible to use parallel occupancy control, very much like the OccuSwitch DALI advanced.

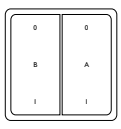
Enocean® interface

OccuSwitch DALI allows the use of wireless switches with Enocean® RF technology. Both single rocker and dual rocker switches can be used. You can connect up to 4 switches to a single OccuSwitch DALI, if required each with different functions. Switches and OccuSwitch DALI units are bound with each other during the commissioning process.
A single switch can be linked to several OccuSwitch DALI units.

Functions

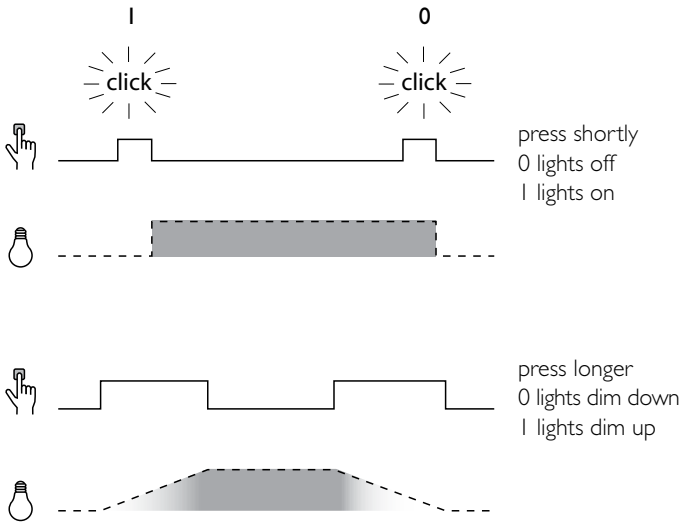


window + corridor + additional presence



window	or	corridor
window + corridor + additional presence		additional absence

For all functions



Binding procedure see www.philips.com/omniprog

Commissioning tools

The OccuSwitch DALI comes with two commissioning tools, the Omniprog and Omniprog easy. With both tools the light levels can be set, witnessing mode be started and window/corridor be assigned. The Omniprog can also set the desired mode, Start-up behaviour, IR group and assign more luminaire channels.

IRT8097, OmniProg easy

IRT8099/10, OmniProg

Witnessing mode

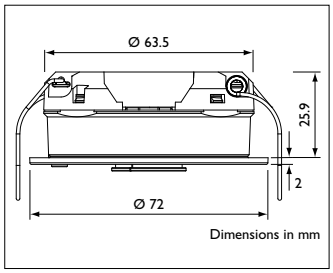
With the Omniprog (easy) the witnessing mode can be started. This makes it possible to check if the OccuSwitch DALI and the connected luminaires are correctly installed and fully operational, Quick and easy.

100 hours burn-in

Many lamp manufacturers advise not to dim fluorescent lamps for a 100 hours period prior to normal use. Especially to maintain the light quality at (very) low dimming. The OccuSwitch DALI can do this automatically. During 100 hours lights will not be dimmed, and all dimming functions are adapted.
Only during witnessing (to test the installation) and commissioning dimming is allowed to make the necessary adjustments.

Extension sensor

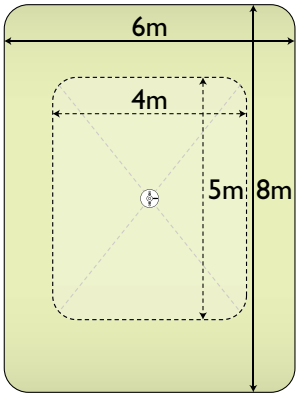
The LRM8118 extension movement detector can be used to double the movement detection area. This sensor is connected to the same DALI channel as the luminaires. Installation is simple since mains is not required.



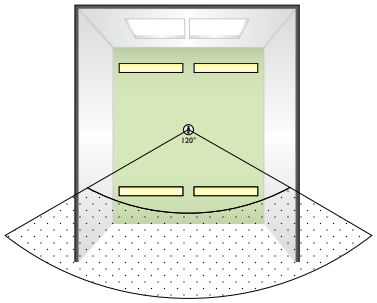
LRM8118 extension sensor

Smart Timer

On some occasions with very little movement it is possible that the standard delay time of the OccuSwitch DALI is too short. If movement is detected during switch off (including fade this takes 10 seconds), the delay timer is automatically increased by 10 minutes.



Detection pattern



If the shield is retracted the detection pattern will be cut on one side (120°) as indicted in the diagram.

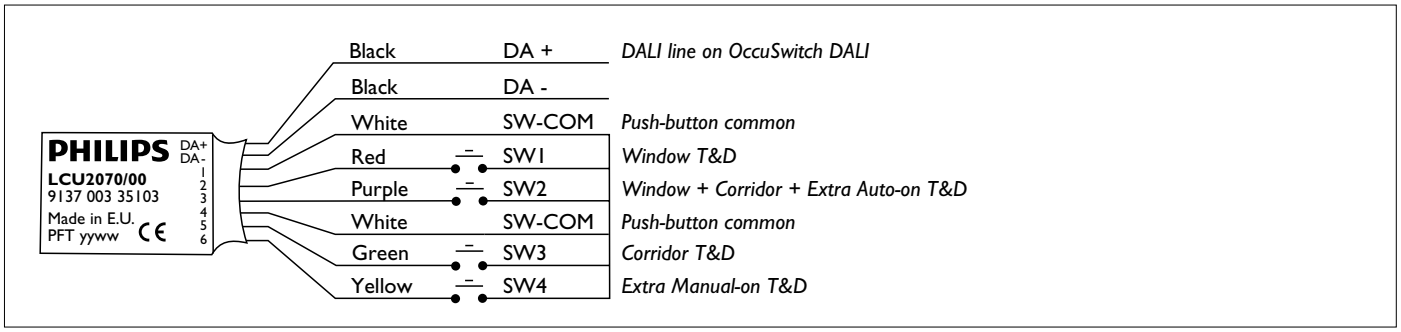
The OccuSwitch DALI detection pattern (see drawing) is 4 by 5 meters for small movements (desk work) and 6 by 8 meters for larger movements like walking.
We strongly suggest using the 4 by 5 meters for the design. It is also the right range for the Light Sensor (for daylight depending regulation).
The detection area of the movement detector can be extended by two extension sensors (LRM8118) each with a equal detection pattern as the OccuSwitch DALI.

Push-button Unit

The LCU2070 Push-button unit (PBU) makes it possible to connect up to 4 switches to the OccuSwitch DALI, to dim and switch different channels. This PBU is connected to the DALI channel (DA and X (LRM2070/10) or DA only (LRM2080/10 and 2090/10)). It derives its power form the DALI channel, so no additional power supply is required. The PBU uses the same interface technique as the Enocean® or Touch & Dim; press shortly and it will switch on when off, and off when on, pressed for a longer time and it will alternatively dim up and down.
Up to two PBUs can be used on a single OccuSwitch DALI. It is possible to interconnect (single) switches to several PBUs to control several OccuSwitch DALI units.

LCU2070 Push-button unit

Note: the LCU2070 requires the /10 versions of the OccuSwitch DALI



LCU2070/00 wiring

LRM 2090/2091

The BMS version has a second DALI interface ("X"). The OccuSwitch DALI will act as a DALI slave.
This interface makes it possible to connect the OccuSwitch DALI to a building management system using a controller with a DALI interface or a DALI gateway.
It also makes it possible to use DALI user interfaces to override the OccuSwitch DALI.
This interface is fully compliant to DALI but the unit will act, of course, a bit different than a standard DALI ballast.

Response to DALI commands

If a DALI command is received (for instance a direct arc power command) every lamp on any channel connected to the OccuSwitch DALI will respond, and respond in the same way.
The OccuSwitch DALI sends most of these DALI commands directly to the ballasts.
Every command that changes the output level will disable the daylight depending regulation, and restart the occupancy timer.

Response to DALI queries

The OccuSwitch DALI will respond to all DALI queries like a DALI (#102) ballast.
A query on the ACTUAL LEVEL will result in the value of the window side (channel 1).
The unit performs a regular scan on the connected ballasts. Queries on status and lamp failure will report the result of this scan, if a single ballast reports an error, the OccuSwitch DALI will do as well.
Other queries like MAX LEVEL will show the value and status as stored in the OccuSwitch DALI.

Exceptions

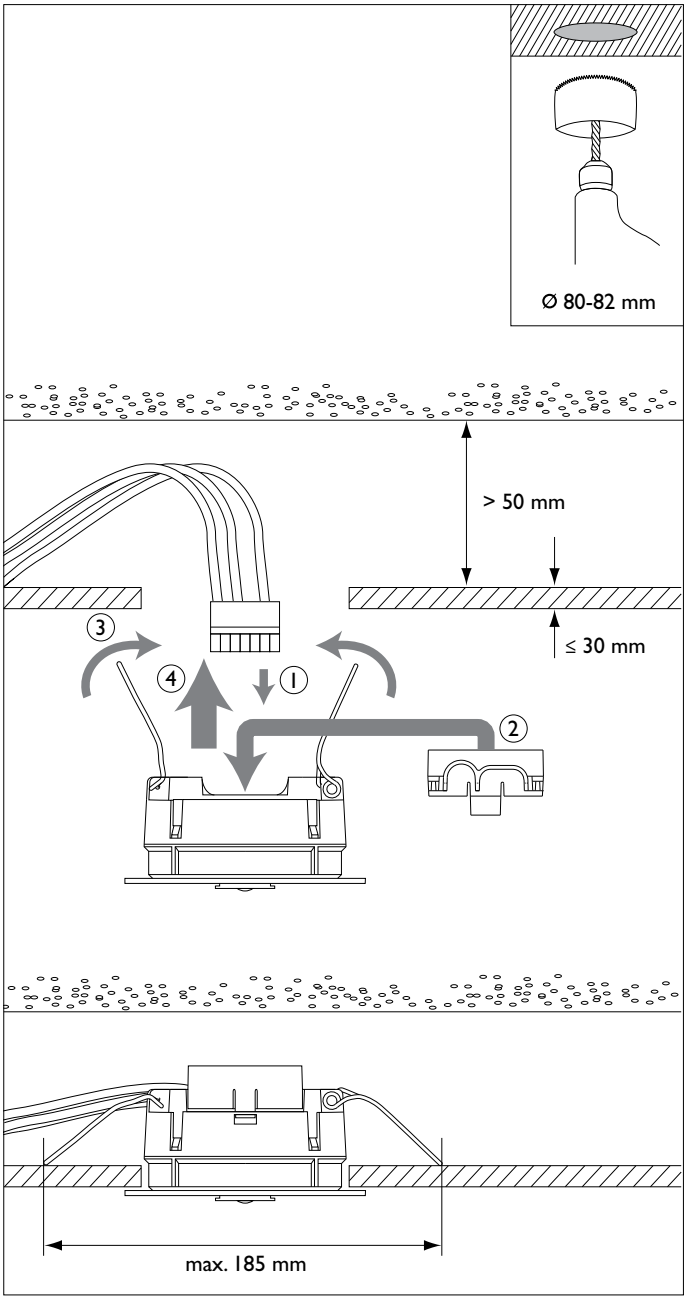
- The OccuSwitch DALI will not recall SCENE 1. It will use the default light level settings and start daylight depending regulation again.
- Any command resulting in a different output level will (re)start the occupancy timer. If you need to keep the lights on (or off) you need to repeat the command periodically with a shorter repeat time than the set occupancy timer.

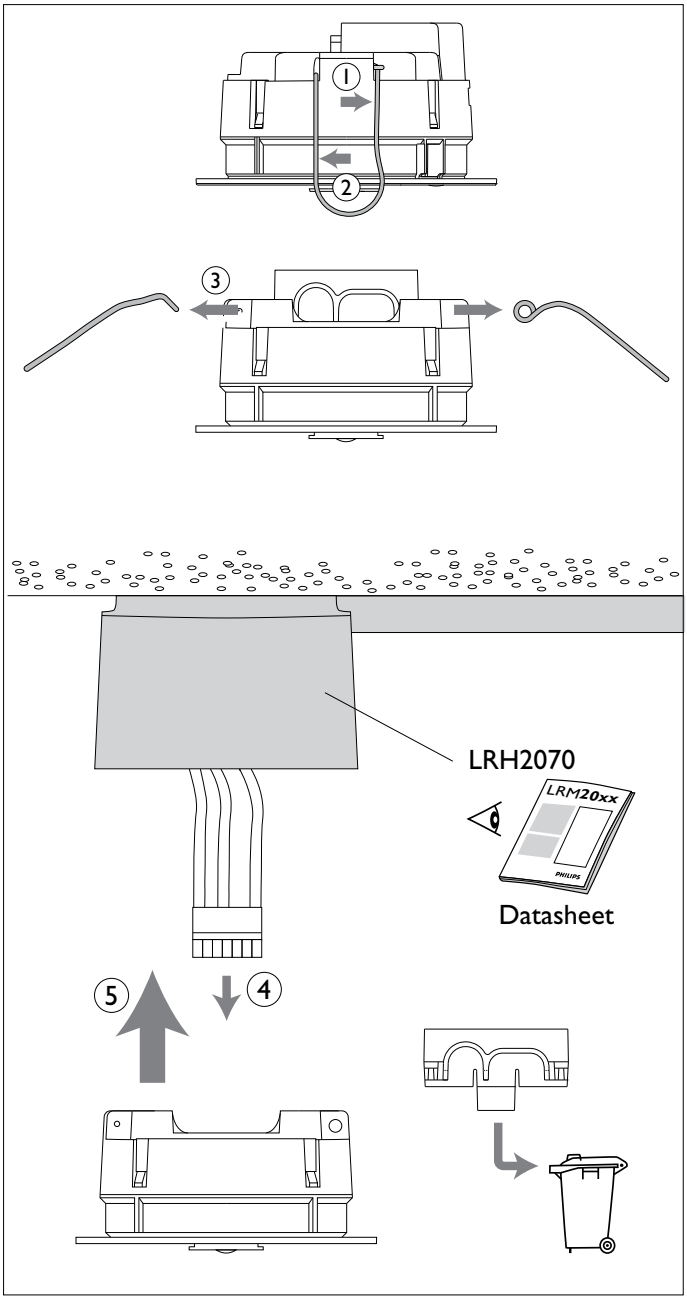
Addressing

The OccuSwitch DALI supports the standard ways to address units, including physical selection (using the Push-button on the front).
All address (including grouping) related commands are NOT relayed to the connected ballasts.
It is also possible to use the IRT8099/10 OmniProg to set the short address of the unit.
This is only possible when the address has not been set before, or after a complete reset (back to basic) of the unit.
Aim at the unit with the IRT8099/10 and press within 5 seconds the required 2 digit address on the numeric keypad, for instance 36 or 05.
The OccuSwitch DALI will blink its LEDs and connected lights to confirm the new settings.

Mechanical installation

The OccuSwitch DALI can be mounted in two ways; recessed in the ceiling or surface mounted using the ceiling box. The ceiling box (LRH2070) has a breakout port for cable ducts and a breakout centerpiece.

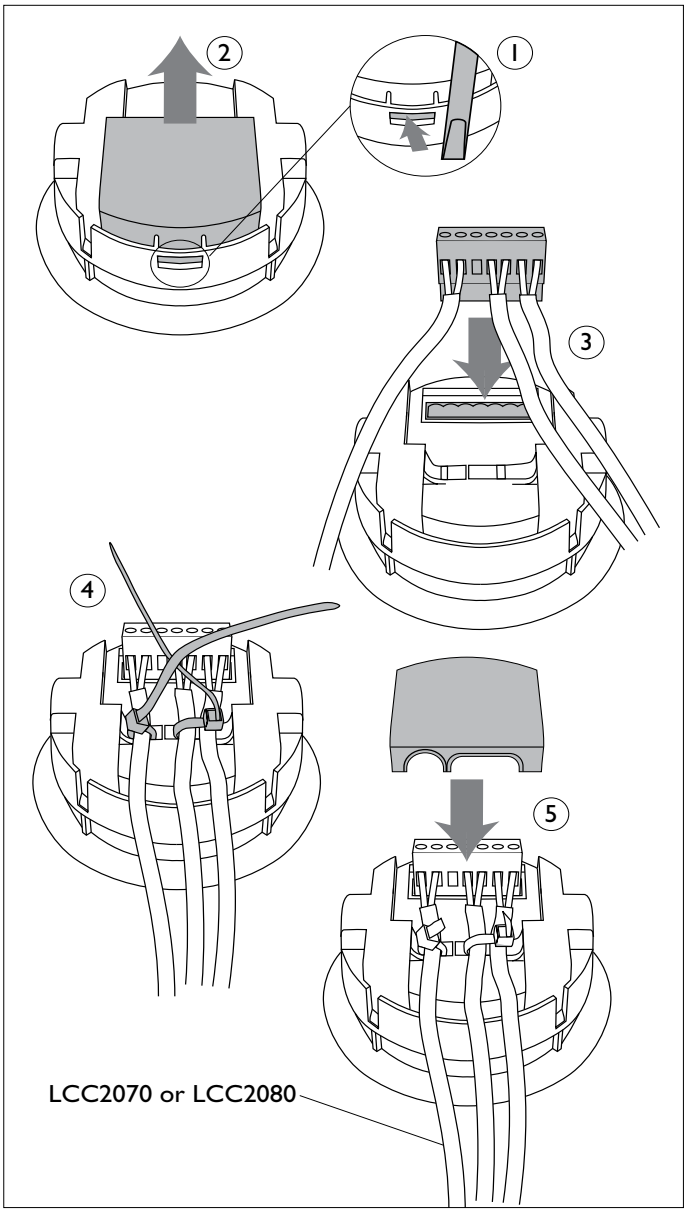


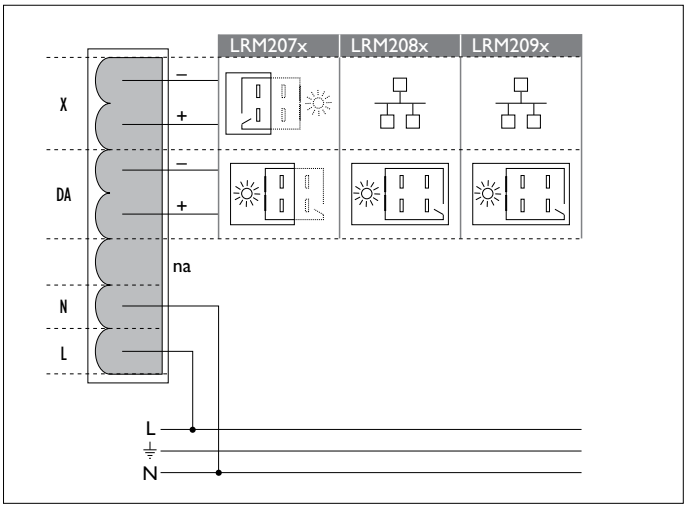


Electrical installation

The OccuSwitch DALI can be installed with either conventional wiring or Wieland connectors. For the last option the Wieland cable (LCC2070 or LCC2080) is required. The OccuSwitch DALI comes with a detachable mains connector for easy installation. This connector is removed if the Wieland cable is used. The mains connection is protected by a retractable cover and secured with two tie raps.

The DALI signal from a ballast or luminaire, although low voltage and isolated from mains, cannot be treated as a safe signal (SELV). All wiring and isolation materials used must be similar to mains wiring (FELV). The same applies to the network connection of the LRM208x and LRM209x.





Commissioning

Desired standard light level

There are three ways to set the light level.

Automated mode

Step 1 Press the OccuSwitch DALI button for 3 seconds until the LEDs start a yellow/green sequence
Step 2 Release and press again, the LEDs will now blink red/green
Step 3 Clear the area beneath the OccuSwitch DALI
Step 4 Within 10 seconds the auto calibration starts
Lights will switch off and on to determine the installed lux level
Lights will flash to indicate a successful operation
The calibration is finished

Manual with normal control

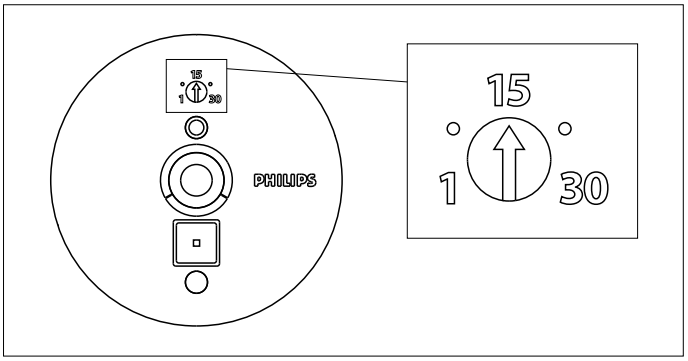
Step 1 Use a remote or switch to set the desired light level
Step 2 Press the OccuSwitch DALI button until the LEDs start a yellow/green sequence
Step 3 Clear the area beneath the OccuSwitch DALI
Step 4 The light level existing 10 seconds after step 2 is used as set point
Lights will flash to indicate a successful operation
The calibration is finished

Manual with OmniProg (easy)

Step 1 Use the OmniProg's up an down keys to create the desired light level
Step 2 Press the "SAVE" button
Step 3 The lights will flash once to indicate calibration was successful

Delay time occupancy control

With the rotary it is possible to select a delay time of either 70s, 5 till 30 min (in steps of 5 minutes).



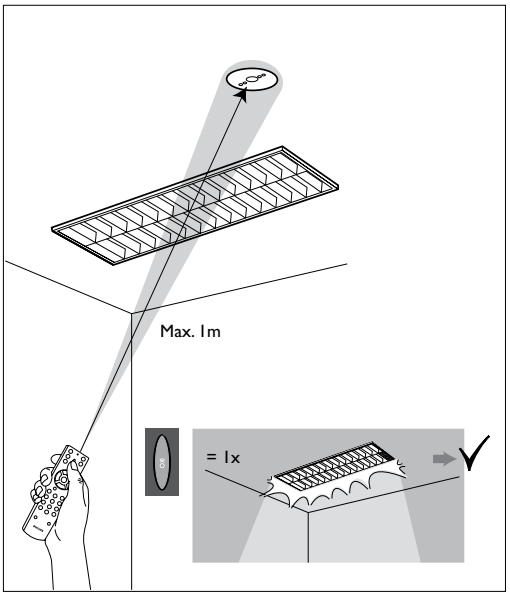
Rotary

Further commissioning

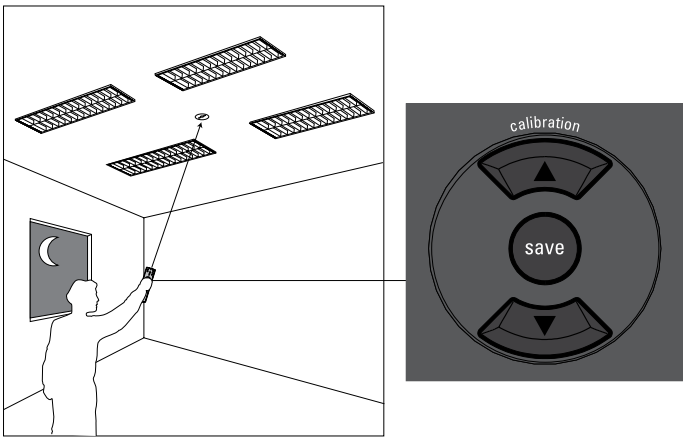
OmniProg (easy)

The OccuSwitch DALI will acknowledge commissioning commands by flashing the lights.
For detailed information please refer to the manual or www.philips.com/omniprog
The OmniProg tool has a low power and very narrow beam to prevent that neigbouring OccuSwitch DALI units are programmed by mistake. You must be within 3 meters of the device and aim exactly at it.

IRT8099110 commissioning tool



Send command



Calibrate light level

Commissioning of switches with Enocean® RF technology

Shortly press the front button of the OccuSwitch DALI, all LEDs will flash shortly.
Press again but now hold the button down until the green and red LEDs start to flash rapidly.
Wait till the flashing slows down.
Press one of the keys of the switch you want to bind to the OccuSwitch DALI.
The LEDs will flash rapidly again. Wait till the flashing slows down.
You can now bind another switch.
Press the front button (shortly), or wait for 30 seconds, to stop the commissioning. The green/red flashing will now stop and normal operation is resumed.

If you make a mistake or want to make alterations, stop the commissioning process, and restart again.

The following settings are sent all at once with the green SEND button. After selection of the function the red LED on the transmitter will switch on.

Change IR group

Both the OccuSwitch DALI and transmitters can operate in 7 different groups. Both the transmitter and OccuSwitch DALI must be in the same group
Select "group A-G" on the IRT8099, followed by the desired IR group (A-G, buttons 1 .. 7).

Change power-up behaviour

The OccuSwitch DALI switches the output on when it is connected to the mains. If the area is vacated the lights will switch off after 5 minutes. It is possible to leave the output off and start movement detection 30 seconds after the mains is connected.
Select "power up ON/OFF" on the IRT8099, followed by either "ON" or "off".

Restore defaults

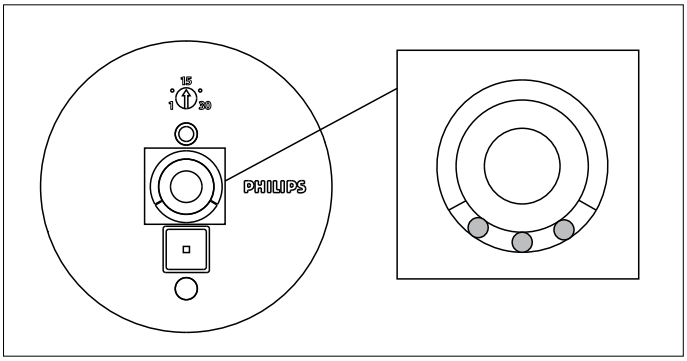
To restore the default settings aim the IRT8099 towards the OccuSwitch DALI and press on "basics" and press SEND.

Attention
The IRT8099 will send all parameters when the SEND button is pressed.

Error states

The OccuSwitch DALI is designed to create (if possible) a safe situation if the device itself or its peripherals fail.
Depending on the failure the OccuSwitch DALI will continue "as good as possible" or switch the lights on.
The LED on the device will be always yellow and will not switch off, even if there is no movement or communication detected.
Please refer to the manual or www.philips.com/OccuSwitch DALI for more information and diagnostic flow charts.

LED



Flash Red, Yellow or Green	Movement or communication detected. Red = 100 – 70% Yellow = 70 – 30% Green = 30% - off
Circulation (long/short)	
Yellow/Green	Auto commissioning with current light level
Red/Green	Auto commissioning
Green/Red	DALI commissioning in progress
Continuously	
Green (when lights are on)	In 100 hours burn in mode (no dimming possible)
Yellow	Internal error
Red	Short circuit on DALI channel
Fast sequence	
Red/Yellow/Green	Trigger received from parallel unit (LRM2080 only)

Attention
The OccuSwitch DALI should not be used in the following situations

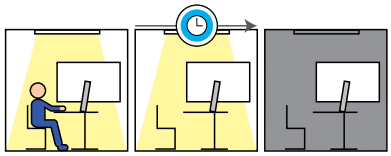
- In applications outside the specification range, most notable heights above 4 meter.
- Environmental conditions other than in a normal office environment (temperature, humidity).
- In applications with heat sources like electrical heaters, within the detection range of the device
- In applications with (semi continuous) IR appliances like IRDA communication, IR communication between PDA and phones and other devices, headsets operating with IR communication, etc. etc. Please note that some devices with IR communication send IR messages, even when there is no active communication link. These features must be disabled.
- In applications with electronic ballasts that operate up or near a frequency of 36Khz. Also when these ballasts are not used in combination with the device, but the light from the lamps they operate is visible to the IR receiver.

OccuSwitch DALI Modes

The OccuSwitch DALI is set, by default, with a generic set of parameters for a standard office. But it is possible to recall 8 other application (specific cell, open plan or meeting room) modes as mentioned below.
This makes the system very flexible for all different kinds of applications. With the aid of the advanced mode selection tool IRT8099 specific modes can be selected. Once selected, the mode can be stored and copied via a point and shoot method. The mode will be stored in a non-volatile memory. Even when the luminaires are switched off for a longer period, stored parameters are kept.
The modes are compatible with the Actilume system's modes, except for modes 4 and 5.

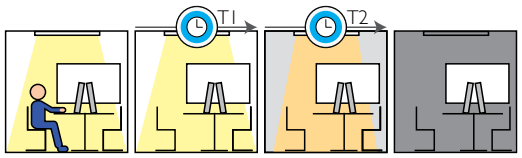
Mode 1
Cell office

Auto on



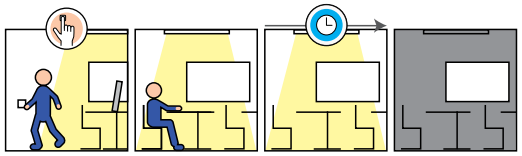
Mode 2
Open plan office

Auto on

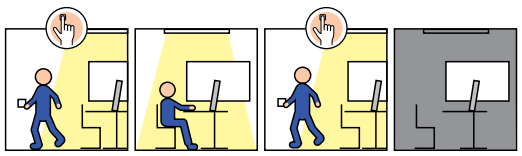


Mode 3
School, classroom

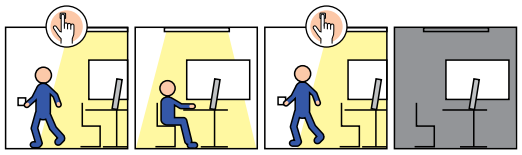
Manual on



Mode 4
Cell office
Comfort mode
EN 12464

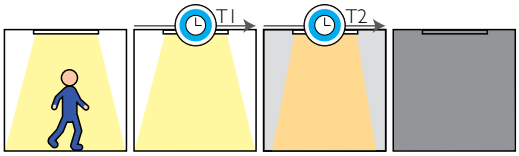


Mode 5
Open plan office
Comfort mode
EN 12464



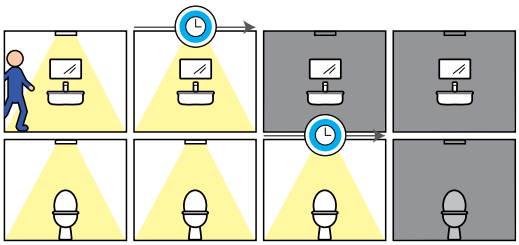
Mode 6
Corridor

Auto on

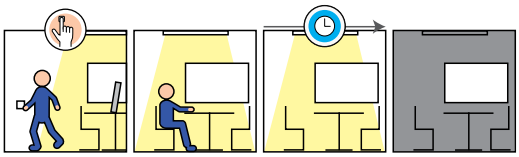


Mode 7
Toilets

Auto on
DDR off

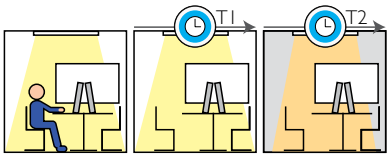


Mode 8
Meeting rooms



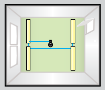
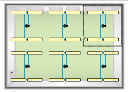
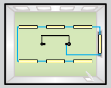
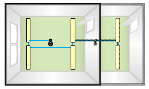
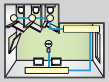
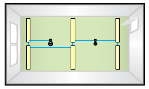
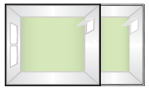
Mode 9
Open plan
Always light

Auto on



Mode 10
Open plan
Comfort mode, always light

Custom mode

Mode	Application	Occupancy	Smart timer (minutes)	Background period (minutes)	Daylight override	Daylight dependent regulation	Daylight dependent switching	Parallel link period (Advanced only)
1	 Cell office (default)	Auto ON/OFF	10	0	Window only	Window / corridor	Window only	Local occupancy
2	 Open plan office	Auto ON/OFF	10	120	Window only	Window / corridor	Window only	Local occupancy
3	 Class room	Manual ON/auto OFF	10	0	N.a.	Window / corridor	Window / corridor	Local occupancy
4	 Cell office*	Disabled	10	0	N.a.	Window / corridor	Window only	N.a.
5	 Open plan*	Disabled	10	0	N.a.	Window / corridor	Window only	N.a.
6	 Corridor	Auto ON/OFF	10	60	Window / corridor	Window / corridor	Window / corridor	Local occupancy
7	 Toilets	Auto ON/OFF	0	15 (portal only)	Disabled	Disabled	Disabled	Local occupancy
8	 Meeting room	Manual ON/auto OFF	10	0	Disabled	Window / corridor	Window only	Local occupancy
9	 Open plan office**	Auto ON/OFF	10	Infinite	Window only	Window / corridor	Window only	Background lighting
10	 Custom	N.a.	N.a.	N.a.	N.a.	N.a.	N.a.	N.a.

* Equals mode 1 and 2, but without MD active. Do not use these modes for normal applications.

** This mode works differently in the advanced (LRM2080) version. Here the lights will switch off (the basic never switches off) when none of the advanced OccuSwitch DALI units in the parallel network detect movement. If one, or more, do detect movement all other units will go to background level.

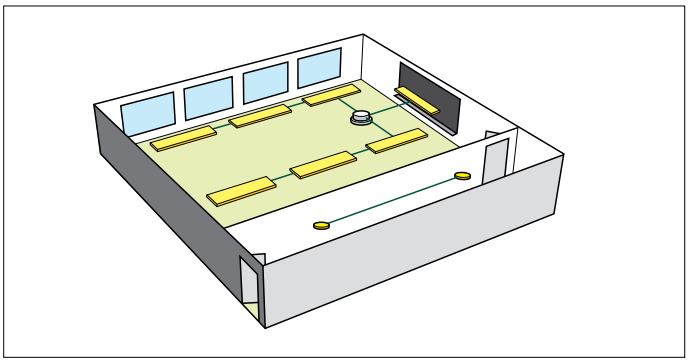
LRM2095

Introduction

The LRM2095 is a special version of the OccuSwitch DALI. On top of the normal OccuSwitch DALI functions it is capable of changing the color temperature of the lighting (assuming the luminaires have the same capability).
The system has been released for lighting systems with 2 lamp types in a single luminaire (each with a DALI driver), with cold (17000 K) and warm (2700 K) lamps. This section provides the differences between the standard (LRM2070) and the LRM2095 OccuSwitch DALI functions.

Application

The main application is for use in classrooms.



LRM2095

The (occupancy) detection range can, like with the other OccuSwitch DALI versions, be extended with the LRM8118 extension sensors.

Standard Philips Dynamic Lighting (DL) or SchoolVision luminaires are already pre-programmed and can be used without any programming.

Channel	Function
1	Cold lamps ("window")
2	Warm lamps ("window")
3	Additional presence
4	Additional absence (board lighting)
5	Cold lamps ("corridor")*
6	Warm lamps ("corridor")*

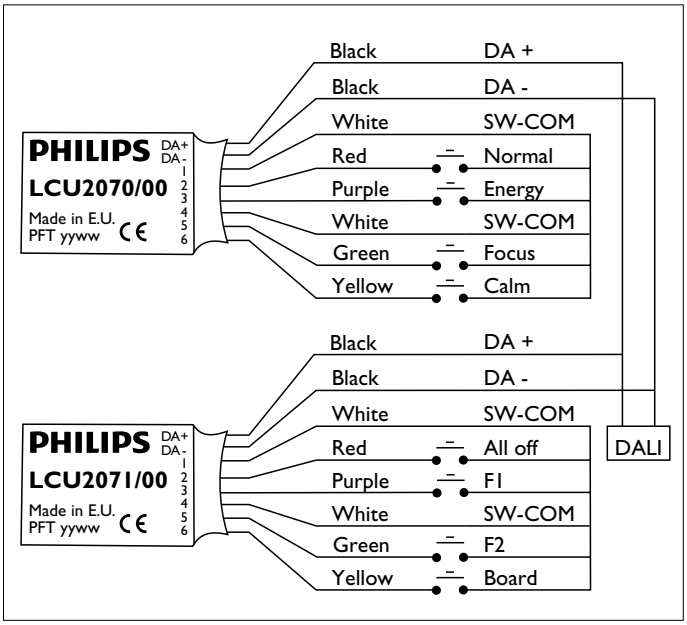
* See window/corridor control

Window/corridor control

The LRM2095 does not have a separate window corridor steering for daylight depending regulation. Due to the nature of the color temperature system this could lead to color differences between window and corridor. It is however possible to address the luminaires as window or corridor, so that several settings are still possible, like daylight override and/or daylight switching for window row only.
It is not possible to manually override window or corridor luminaires separately from each other.

Push-button Units

The LCU2070 and LCU2071 can be used with the LRM2095. Please be aware that the functions of the LCU2070 are not the same for the LRM2095 as for all other OccuSwitch DALI units.
The functions and connections can be found below:



LCU207x/00 wiring

With
F1 Intensity
F2 Color temperature

Additional presence

This channel (without color control) is available but should normally not be used. This channel will switch together with the DL luminaires, both on automatic as manual control. It is not possible to control this group separately.
There are no controls available for this channel on manual control (IR remote control) and Push-button Unit.

Enocean® interface

There is no Enocean® option for this product.

Loads

The LRM2095 can handle up to 24 loads on the master (DA) output. Each unit (Philips DALI driver (or ballast, either LED or fluorescent), extension sensor and PBU) counts as one load.
For other driver systems than Philips use for safety 2 loads.

Remote control

The LRC2095 can be used with standard Philips IR remotes, like the other OccuSwitch DALI units. There are some difference though.

- Do not use IR channel 2 and 3
- Use IR channel 1 to control the main lighting (intensity only)
- Use IR channel 5 to control the board lighting.

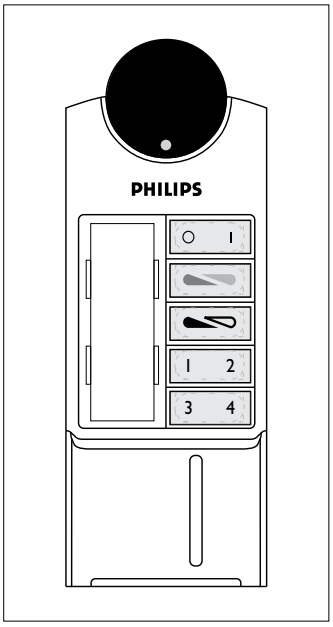
The IRT7090 can be used as well for the standard luminaires (no option available for board lighting, a separate control (eg. IRT8050) is required.

User Interfaces

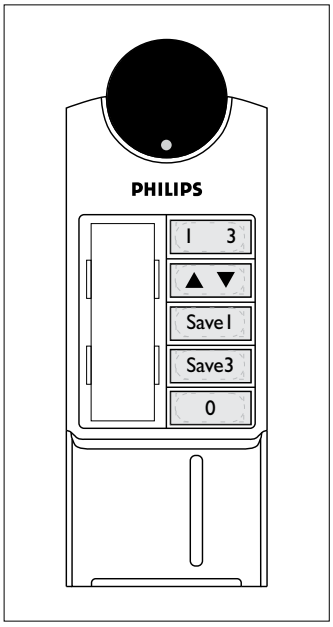
There are several user interface options available for this product. Refer to the SchoolVision propositions for more details.

Calibration

(see also commissioning guide)



IRT7090



IRT8096

IRT8096

The IRT8096 is a specific tool for SchoolVision. It can set the required light level and change Preset1 (normal) to another value than 300 Lux.

Operation of the IRT8096

General light level calibration

Step 1	Select (preset) 3
Step 2	Change the light level with the arrows to the required light level, for SchoolVision this will be 1000 Lux.
Step 3	Press Save3, the lights will blink to confirm that the setting has been accepted and stored.

Change "Normal" (preset 1) to 500 Lux

Step 1	Select (preset) 1
Step 2	Change the light level with the arrows to the required light level, for instance to 500 Lux.
Step 3	Press Save1, the lights will blink to confirm that the setting has been accepted and stored.

Safety

The OccuSwitch DALI uses DALI or DALI like signals to communicate to other devices, ballasts or BMS systems. The interfaces (DA and X) on the OccuSwitch DALI are supplementary isolated from mains (SELV). However most DALI devices (like ballasts in luminaires) only provide basic isolation between mains and DALI. Therefore to avoid Installation safety Issues all interface wiring (also on the X-Interface) should be treated as FELV, so mains rated isolation is required.
We strongly recommend to always use cabling with mains rated isolation to prevent potential unsafe installations.

Short circuit and protection

The DA (all units) and X (LRM207x and 208x) interface provides DALI (or other) power in order to be able to communicate. These interfaces are protected against a short circuit if used within specification.
External power (DALI) supplies can only be used on the BMS DALI network of the LRM209x (X-Interface).
The use of more than 22 LRM208x units in parallel connected on the X-Interface can damage the X-Interface circuit.
The network (X) interface of the LRM209x Is extended protected against mains connection. For all OccuSwitch DALI devices the DA and X interface (except X-Interface on LRM209x) will be damaged beyond repair if mains power is connected. Although safe, smoke and a strong smell can occur if this happens.

Parallel mode

The LRM208x OccuSwitch DALI advanced supports parallel mode for occupancy control (X-interface). This means that the separate units have their own daylight depending and local control and their own settings. Only the MD signal from connected units is shared. This means that lights will stay on if one of the connected systems detects movement. Lights will stay on and only switch off, or go to background level when the last MD timer in the group elapses.
Exception to this rule is mode 9. The parallel link is refreshed every 60 seconds. So when movement is detected a signal will be given, than after 60 seconds again, and again, until de timer elapses. This signal is visible on the unit.

Technical data

Environmental conditions	
Storage conditions	
Temperature	-20 .. +70 °C
Relative humidity	10 to 85 %; no condensation
Operating conditions	
Temperature	+5 .. +50°C
Relative humidity	15% to 80%; no condensation
Mains connection	
Voltage	230VAC +/10%; 50/60Hz
Power consumption	Stand-by <1 W (without DALI load) Max. 1.7 W (with 15 ballasts) LRM20x1 (Enocean® option) adds 0.2W
Connector screw terminal	MRT3P7.62-3VE or GMVSTBW2.5/3-ST-7.62
Wire range	0.75 .. 2.5 mm^2 **Note** wires must be >= 0.75 mm^2
Mains distribution system	TN-S, 16A max, with Neutral grounded
Interfaces	
Parallel interface (LRM208x only)	Up to 22 units in parallel Free topology wiring and polarity sensitive
BMS interface (LRM209x only)	DALI compatible Up to 64 units in parallel (depending on control device used as master) Free topology and polarity insensitive
DALI output interface	
Protocol	Bi phase coded according to EN60929 Extend annex E Network polarity and polarity insensitive
Load capacity	Maximum 15 DALI devices per output (for LRM207x X+DA Interface)
Protection	Interface is short circuit proof
Transmission rate	Max. 1200 bits per second
DALI voltage	11.5VDC to 21.5VDC
Connector type	Wieland BST 14i2; blue
General	
LED indicators	see text
Switch off delay	1,5,10,15,20,25,30,35* minutes * OmniProg only
Light levels	250 .. 1000 Lux (30% reflection)
Detection range	see detection pattern, page 4 (IR remote is similar)
Light sensor	see diagram, page 4
Standards	EN/IEC 61347-2-11 Lamp control gear, Particular requirements for miscellaneous electronic circuits used with luminaires IEC 60598-1 Luminaires, General requirements and tests
Classification	Class I
Pollution	degree 2
Over voltage	category III
Approbation	Product complies with the relevant European Directive (CE) KEMA ENEC
Protection Class	IP20
Flammability	UL94 V-0
Glow wire test	960°C/5s
Insulation	Supplementary insulation between Mains and SELV
EMC	
Compliance IEC	(EN) 61347-2-11 / 60598-1
Immunity IEC	(EN) 61547
Emission IEC	(EN) 55015 and IEC (EN) 55022, class B

Packing data

Type	Box dimensions (mm)	Qty	Material	Weight (Kg) net	gross
LRM2070/10	105 x 95 x 58	1	card board	0.12	0.15
LRM2071/10	105 x 95 x 58	1	card board	0.18	0.21
LRM2080/10	105 x 95 x 58	1	card board	0.12	0.15
LRM2081/10	105 x 95 x 58	1	card board	0.18	0.21
LRM2090/10	105 x 95 x 58	1	card board	0.12	0.15
LRM2091/10	105 x 95 x 58	1	card board	0.18	0.21
LRM2095/00	105 x 95 x 58	1	card board	0.12	0.15
LCC2070	-	1	plastic bag	0.13	0.14
LCC2080	-	1	plastic bag	0.13	0.14
LRH2070	105 x 95 x 58	1	card board	0.05	0.08
LCU2070	-	1	plastic bag	0.16	0.21
LCU2071	16 x 11 x 0.5	1	plastic bag	0.16	0.21
IRT8097	131 x 58 x 87	1	card board	0.06	0.09
IRT8099/10	168 x 45 x 22.5	1	card board	0.08	0.10

Ordering data

Type	MOQ	Ordering number	EAN code level 1	EOC
LRM2070/10 Basic	1	9137 003 32904	8711 559 732305	732305 99
LRM2071/10 Basic RF	1	9137 003 33304	8711 559 732404	732404 99
LRM2080/10 Advanced	1	9137 003 33004	8711 559 732343	732343 99
LRM2081/10 Advanced RF	1	9137 003 33404	8711 559 732442	732442 99
LRM2090/10 BMS	1	9137 003 33103	8711 559 732367	732367 99
LRM2091/10 BMS RF	1	9137 003 33503	8711 559 732466	732466 99
LRM2095/00 Dynamic Lighting	1	9137 003 39403	8727 900 900590	900590 00
LCC2070 Wieland cable for LRM2070	1	9137 003 33703	8711 559 732497	732480 99
LCC2080 Wieland cable for LRM2080-90	1	9137 003 33803	8711 559 732510	732503 99
LRH2070 Surface Box	1	9137 003 33903	8711 559 732534	732527 99
LCU2070 PBU	1	9137 003 35103	8727 900 870268	870268 00
LCU2071 PBU opt. 1	1	9137 003 39303	8727 900 870268	870268 00
IRT8097 OmniProg Easy	1	9137 003 34103	8727 900 891409	891409 00
IRT8099/10 OmniProg Standard	1	9137 003 34203	8711 559 732572	732565 99

3222 636 33203
10/2010
Data subject to change

www.philips.com/lightingcontrols