User manual

document version 0.2

for DALImiwe

DALImiwe

Microwave sensor
Motion sensor up to 2.8 metres
Power supply from DALI bus
Protocol version DALI2
Range 10 metres

DALImiwe is a motion sensor with constant light level control on the DALI bus.

Technical Specifications		
bus	DALI / DALI2	
power supply from DALI bus	10	mA
cross section of wires	0,5	mm^2
degree of coverage	IP40	
ambient working temperature	5 ÷ 50	°C
storage temperature	-10 ÷ 70	°C
weight	18	g

Functions

DALImiwe is a motion sensor with the ability to directly control lighting without the need for an additional controller.

Addressing and setting is done with the DALIconfig program, which is available free of charge on the manufacturer's website via DALIusb, DALI232, DALInet or DALI2net converter.

Motion sensor - DALI2

The motion sensor has functions according to the DALI2 specification.
Therefore, they can send information about the following events to the bus.

Occupied	The space is occupied (the occupancy of the space is extended from the last movement for the time according to the "Hold timer" parameter)
Vacant	The space is empty
Repeat	Periodic sending of motion information (according to the "Report timer" parameter)
Movement	Motion detected
No movement	End of motion detection

It is configurable whether events send information to the bus, but if information is sent, it has the same 10 bit format for all events:

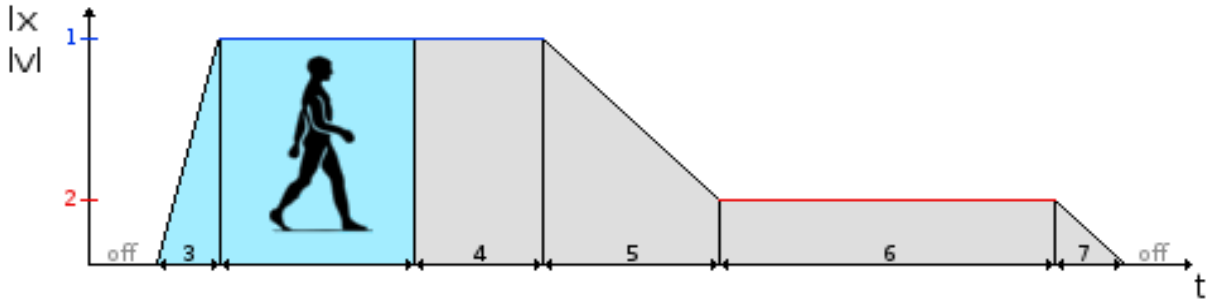
9b.	8b.	7b.	6b.	5b.	4b.	3b.	2b.	1b.	0b.
-	-	-	-	-	-	1	Occupancy unchanged	Space occupied	Motion detected

Configuration

Report timer	Frequency of periodic transmission of movement information (1 - 255s or 0 - off)
Hold Timer	Occupied extension from the end of motion detection (No movement) (0-42.3min, after 10sec)
Dead timer	Maximum frequency of sending the illuminance value (0-12.75s).

Motion sensor - DALI2+ extended functions

On top of the DALI2 standard, an extension called DALI2+ is implemented in DALImiwe, which allows direct control and regulation of lighting on the DALI bus without the need to install a higher-level control system.
A motion sensor is used to automatically turn on lights when there is movement and dim/turn off lights when there are no people in the area.
The "Application controller enabled" option must be activated in the DALI2 device for the DALI2+ functions to be available.



Configuration

Motion control enable		Enabling the motion sensor function
Motion mode – motion sensor mode	Temporily disable	Temporarily switched off control of luminaires during movement
	Enable	On function for controlling the lights when moving. Lights are on when moving and dimmed or off when absent.
	Enable (only off)	On function for controlling the lights when moving. Lights must be be switched on manually and then dimmed or switched off in their absence.
Luminaire group Gmain		Main controlled group
1: Presence value		The absolute level to which the luminaires are set when present. Setting range 0-100%. In case the regulation to constant illuminance level is switched on, the value is unused and regulated to "Desired level 1" in the "Light sensor" section.
2: Absence value		The absolute level to which the luminaires are set in case of absence. Setting range 0-100%. In case the regulation to constant illuminance level is switched on, the value is unused and regulated to "Desired level 2" in the "Light sensor" section.
3: Fade time (to presence)		The speed of lighting when moving to "1: Presence value" if it is set to a percentage value. The "not used" value means that the value set in the fixture will be retained.

4: Run-on time (Presence)	Time from the end of movement for which absence is declared (5s-60min, or "infinity" which means that absence is not automatically declared).
5: fade time (to absence)	The rate of darkening at the end of the movement to "2: Absence value" if it is set to a percentage value. The value "not used" means that the value set in the fixture will be left.
6: Switch-off delay (Absence)	The period of time in absence during which the lights are dimmed. After that, unless "never-off" is set, the lights will turn off. If "never-off" is set, the lights will remain at "2: Absence value".
7: fade time (to off)	Extinction rate at the end of the absence period (Absence) A value of "not used" means that an OFF command will be sent and the lights will be turned off immediately.
Dead time (manual off)	The period of time the sensor ignores motion after receiving an "OFF" command on the luminaire. This allows leaving the room without turning the lights back on (0sec - 20min).
Sensitivity	Sensitivity of the sensor to motion. Setting range 0-250. Smaller number means higher sensitivity. For a value less than 70, false motion detections may occur depending on conditions.
LED function	**Auto** – the light signal in the sensor lights up when motion is detected. When the control is switched on to a constant light level, this function is suppressed. **Off** – the indicator light in the sensor is off. **On** – the indicator light in the sensor is on.

Sensor status control via DALI bus

In addition to motion detection, it is possible to influence the status of the motion sensor over the DALI bus by means of sequence recall messages. On each scene recall that is sent for the main controlled group (Luminaire group Gmain) one of the following events can be recalled in the "Response to scene recall" section.

DISB	temporily disable	Turning off the motion sensor function (Motion mode=temporily disable)
ENAB	enable	Switching on the motion sensor function (Motion mode=enable)
EOFF	enable only off	Enable the motion sensor function to turn off (dim) the lights without motion. Switching on must be manual. (Motion mode=enable only off)
SMOV	simul. move	Motion simulation
SEPR	simul. end of presence	Switching to end-of-presence state "Presence"
SEAB	simul. end of absence	Switch to end-of-absence status "Absence"
SEDT	simul. end of dead time	Switching to the end-of-time state "dead time"
SSPR	simul. start of presence	Switching to the state of the beginning of the presence period "Presence"

Connecting the terminals

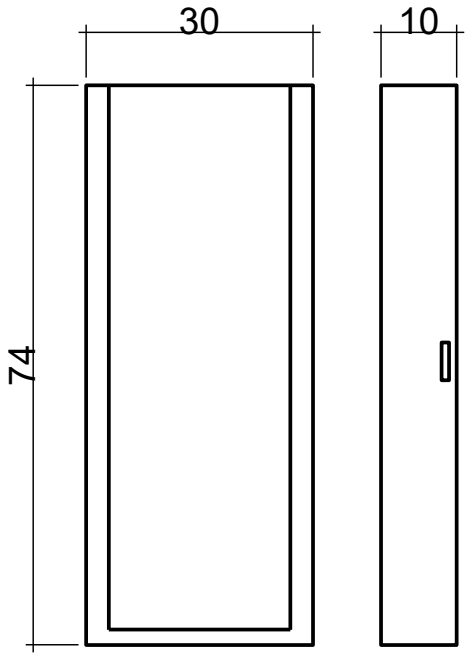
clamp marking	*Description*
DA	DALI bus, two wires interchangeable

Installation

DALImiw is usually installed in a plasterboard ceiling.
Microwave technology is affected by electrically conductive objects and therefore DALImiw should not be installed directly on or near metal profiles.

For attachment, a hole in the DALImiw body can be used, through which a standard 3.6mm tightening strap can be pushed.

Dimensions [mm]



Length of DALI bus wires 140mm.

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