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DESCRIPTION

The DALI light regulator from the POSEIDON® system is primarily designed to control luminaires equipped with a DALI control device (DALI electronic ballasts, DALI LED drivers, etc.). This regulator provides the regulation of the lighting to the desired level for up to four independent groups of lights. The device includes an internal movement sensor that can automatically turn lamps on or off based on the presence of people in the monitored area.

The commands for controlling the lighting level can be also wirelessly transmitted to other POSEIDON® receivers. The regulator can be used for contactless self-operated control in the function of movement sensor in cooperation with a suitable receiver.

The internal light sensor is used to measure light intensity and send the values wirelessly for further processing, especially to the P8 TR IP or P8 GWA DIN gateway. The DALI light regulator can be also used as signal repeater to re-transmit RF signal (RETR function).

FUNCTION

The regulator consists of four functional elements: movement sensor (occupancy), light sensor (lx levels), light regulator (for some types of regulation modes it can be extended up to four independent regulators) and control part with DALI bus power supply.

Movement sensor

The motion sensor reacts to the heat of a moving human bodies, animals or bodies. If the intensity of the surrounding lighting lower than set, motion sensor status is forwarded to the lighting level control block, or can be set to transmit a coded signal, based on which the cooperating receiver switches on the controlled appliance.

In ON + OFF mode, the sensor transmits two different signals. One to turn on and one to turn off appliances. Switching on lasts as long as the presence of people is indicated by the sensor and also for the duration set on the internal timer. This mode is suitable in the case where one controller (or cooperating receiver) is controlled by only one motion sensor.

In Only ON mode, the sensor repeatedly transmits only the switch signal. This mode must be used if one controller (or cooperating receiver) it is controlled by several motion sensors. In order for the motion sensor in case of continuous movement of persons in the range zone, it still did not transmit, the transmission suppression time is set on the sensor.

If necessary, the range of the sensor (sensitivity) can be reduced.

Light sensor

The value of light intensity measured by light sensor is used by movement sensor and by light regulator. It is also possible to transmit this value for further use to other POSEIDON® devices. The daylight sensor is located under the lens of the movement sensor.

Light regulator

Light regulator functions in several modes, which can be set and controlled by the internal movement sensor and/or by other POSEIDON® transmitters.

During the feedback daylight regulation, the DALI light regulator compares the actual light value measured at the lens of the sensor with the wanted light value which was measured at the lens during the commissioning and which corresponds to the required lx level at working desk. If the two values differ more than the set hysteresis level, OL regulator sends the output control signal to adjust the lights accordingly. The comparison continues in the preset time steps until the measured and wanted light values are equal. The feedback daylight regulation can only be set for regulator no.1.

For some applications the curve daylight regulation is a more favorable option. The curve daylight regulation uses the conversion curve which describes the relation between direct daylight level at the lens of the daylight sensor and the level of its output control signal. OL regulator provides the possibility to set up 8 conversion curves which can control up to 4 groups of lights on two different light levels (Normal and Low). The DALI light regulator used as a light sensor for the curve daylight regulation has to be installed in places without influence of the lighting fixtures. During the daylight regulation the output control signal can be set also at a fixed level.

Each of the 4 output control signals (Normal regulation) provide a possibility to use the offset function i.e. to use the second (offset) output control signal level adjusted by a fixed percentage value, e.g. for independent control of the series of lights in darker or lighter areas.

For each of the output control signals it is possible to set the state for situations power is ON and power is ON after a power failure.

The POSEIDON® transmitters can control and set some of the special functions of OL regulator.

DALI bus control and power supply

The DALI bus control block with power supply provides power and control up to 32 ballasts. (The number of connected ballasts is limited by their total current consumption, which must not exceed the maximum allowed value.) An independent DALI group of ballasts can be connected to each output signal from the regulation block 1 to 4. DALI groups G0 to G3, which are assigned to control blocks 1 to 4, are used.

INSTALLATION

The DALI light regulator is suitable for non-stop operation and for connection to the fixed installation which must comply with the relevant standards and regulations. The device must be connected to the mains only by a specialized technician with appropriate electrical qualification. Turn off the mains voltage supply before initiating installation work!

Connecting and installation

The device is designed to be mounted in the under ceiling. To fix the DALI light regulator a 68 mm (diameter) hole has to be done in the under ceiling. There has to be an open space above the regulator at minimum 68 mm high (including the under-ceiling). In special cases when the plastic cover of the connection terminals and the mounting strap are not used a 62 mm of open space above the regulator is needed. Remove the plastic cover of the connection terminals (Fig. 2) from the DALI light regulator body. Lead the connection wires under the mounting strap to the connection terminals (Fig. 3). If required the connection wires could be protected against pull out by screws on terminals and by mounting strap. Put back the plastic cover of the connection terminals if required. After the wiring is completed and in case the programming is done directly on the device using the black button placed on the body of the DALI light regulator (manual programming) hold the fixation springs on the side of the regulator and fix it in the under ceiling.

Note:

he approximate range depending on the monitored person's movement direction is specified in fig. 1a (installation height of 2.5 m). The 3 m zone shows the highest sensitivity (sitting position), the 6 m zone shows the maximum range when walking towards the sensor, and the 8 m zone shows the maximum range when moving perpendicular to the sensor (Figure 1a).

If the installation height is greater, the detection zone expands appropriately (up to dia. 12 m at an installation height of 8 m – fig. 1b).

Do not install the device near heating elements, lamps or other heat sources.

ADJUSTING ELEMENTS

There are three adjusting elements on the side of the DALI light regulator (Fig. 2):

a) SENS (function setting)

Use this element to set the on/off mode of the regulator using the integrated movement sensor. In the "+" position, the movement sensor turns on the light level regulation at the normal level and turns off the regulation; in the center position, the movement sensor only turns off the regulation; in the "-" position, the movement sensor does not influence the regulation (no control).

b) LIGHT (ambient light intensity)

The influence of ambient light can be set from maximum (C – the movement sensor works only in darkness) to full override (☀ – the movement sensor works even in full daylight).

c) TIME (switch-off delay)

The switch-off delay can be set between 5 s and 105 minutes; the center position corresponds to approximately 10 minutes.

Note:

Using remote management, the adjusting elements can be disabled and the functions of the movement sensor, ambient light influence and the required switch-off delay can be adjusted remotely.

PROGRAMMING

The DALI light regulator is designed for commissioning using software POSEIDON® Assistant and the P8 TR USB transmitter.

Modes of light regulator:

DIMM

Output control signals of the DALI light regulator are set on the wanted value independently from the value of ambient light. The change of output control signal value is done according to the preset rise and decay time.

NORMAL

Regulation is on and the set Wanted light value Normal is used.

LOW

Regulation is on and the set Wanted light value Low is used.

OFF

Regulation is off. The values of the output signals are zero (lights are off).

AUTO

Regulation is on and both Wanted light values (Normal and Low) are used. Modes DIMM, NORMAL and LOW are active for the duration of the three independent timers. After timers are expired the mode OFF is activated. Timers can be changed by internal movement sensor and/or by any connected POSEIDON® transmitter.

Modes of built-in movement sensor:

MOVEMENT

Command sent by a POSEIDON® transmitter simulates movement and activates the internal movement sensor.

In case the ambient light intensity is lower than the set value (Lighting) at the movement sensor (Movement sensor/Parameters), the sensor sends the command to the connected POSEIDON® receiver and the light is on for the set period of time (Timer). It is possible to ignore the Lighting level so the lights will always be switched on when the button is pressed. This function can be used in large corridors where the transmitter is placed outside the range of the monitored area of the movement sensor.

OFF PIR

Command sent by a POSEIDON® transmitter to cancel the current mode and running Timer of the movement sensor. It is also possible to set time interval when the movement sensor shall be non-active (Forced off time) to prevent re-activation of movement sensor when leaving the monitored area.

TIMER

Command sent by a POSEIDON® transmitter to activate the internal movement sensor and to set a new Timer. By selecting "Off when button hold" option it is also possible by holding (long press for more than 0.5 s) to switch off the Timer and also to set the time when the movement sensor is non-active (Forced off time). This mode is automatically terminated after the expiry of the Timer. Any new movement detected by internal movement sensor doesn't have influence on the Timer until the remaining time is lower than the Timer set at the internal movement sensor. Any movement sensed after that condition is met results in the refresh of the Timer set at the internal movement sensor.

TIMER /OFF PIR

Short press of the POSEIDON® transmitter button activates the function Timer. Long press (>0,5 s) of the POSEIDON® transmitter button activates OFF function.

TIMER + PIR

Short press of the POSEIDON® transmitter button activates the function Timer. It is possible to refresh the Timer up to max. 4 x times by short press of the button.

ADD TIMER + OFF PIR

Short press of the POSEIDON® transmitter button activates the function Add Timer. Long press (>0,5 s) of the POSEIDON® transmitter button activates OFF function. Possibility to set the Forced off time.

Manual settings allow only basic settings of the DALI light regulator:

A) Addressing of the ballasts

Before the first use it is necessary to set addresses of the connected DALI ballasts to the receiver (if it was not done already in a different way).

- Press (briefly) the PROG button (green LED lights up)
- Press (long press >0.5 s) the PROG button (green LED starts flashing rapidly)
- Luminaires connected to the ballasts change the brightness level every 2 s during address setting process.
- When the addressing is done, the luminaires switch off and the receiver will return to the operating mode.

Note:

Transmitters programmed manually into the receiver's memory are automatically assigned to the 1st channel for which is preset the control of DALI ballasts addressed to the group 0. To verify the correct connection of the DALI bus, the regulator is equipped with a test function. The test is performed after switching on power supply and only if the transmitter memory is empty. At start-up, all correctly connected lights will light up and they fade to low light. Unconnected fixtures will remain shine at 100%. After about 10 s, the lights turn on at 100% and subsequently, they are forwarded to management according to individual blocks DALI lighting controller.

B) Writing the transmitter into the memory of the DALI lighting controller in the Regulation function to a normal level

- Press twice (briefly) the PROG button on the DALI light regulator (red LED light under the regulator lens lights up).
- Press the appropriate button(s) of the transmitter twice.
- If programming is correct, the green LED under the regulator lens will flash slowly.

Note:

During programming transmitter are distinguish which buttons are used for transmitting the initialization code. If is used either buttons on the two button transmitter, or

pair buttons (upper and bottom left or upper and bottom right), or all button of the four button transmitter – the buttons are programmed in two buttons mode (NORMAL regulation / OFF).

C) How to delete a transmitter code from the DALI light regulator memory

- Press three times (briefly) the PROG button on the DALI light regulator (indicated by flashing of the red LED under the regulator lens).
- Press the appropriate button(s) of the transmitter twice.
- If deletion is correct, the green LED under the regulator lens will flash slowly.

D) How to delete all transmitters

- Press (long press >10 s) the PROG button on the DALI light regulator.
- If deletion of all transmitters is correct, the green LED under the regulator lens will flash slowly.

Notes:

If no code is programmed (deleted) or no initialization code is transmitted within 30 seconds of modes of programming, deletion or transmission of the initialization code, the DALI light regulator automatically returns to the operating mode.

Fast red flashing of the LED under the regulator lens indicates an error message (for example, the code being programmed has already been programmed in the DALI light regulator memory, or, in case of deletion, the code being deleted is not present in the memory).

Programming mode can be disabled using remote management. The DALI light regulator will indicate this state by fast flashing of the red LED upon pressing (briefly) the button.

Some records in the DALI light regulator memory can be locked against deletion using remote management. If you attempt to delete a locked record, the regulator will indicate this by slow flashing of the green LED followed by fast flashing of the red LED. The same indication is used for the presence of at least one locked record when deleting all codes from the memory.

REMOTE MANAGEMENT

For devices in the POSEIDON® series, manual programming of transmitter codes, functions and parameters can be substituted by remote management using the SW POSEIDON® Assistant tool and the P8 TR USB transmitter. You can even use remote management to set other functions and parameters that cannot be accessed otherwise:

- Disable (enable) manual programming and delete transmitters.
- Lock selected transmitters against deletion from the DALI light regulator memory.
- Disable (enable) search mode. Set regulation values for two groups of lamps.
- Wireless transmission of the measured light intensity.
- Forwarding of radio signals to other receivers of the POSEIDON® system to increase their reach (repeater function).
- Assignment of connected ballasts to DALI groups G0 up to G3

By default, the DALI light regulator is set to the so-called state of time-limited search. This means that when the regulator is being connected using remote management for the first time, it is possible to connect to it only within the first five minutes of connecting it to the supply voltage. To enable time-unlimited search (! can be misused to gain unauthorized access to remote management !), before you connect the DALI light regulator to the supply voltage, press and hold the button until the regulator indicates the change by three simultaneous flashes of the green and red LED under the regulator lens. Similarly, use this procedure to return to the time-limited search; the only difference is indication by only one blink.

The current setting of the search mode used in the DALI light regulator can be ascertained while connecting it to the supply voltage. Three short blinks of both the green and red LEDs indicate unlimited search, one short blink indicates time-limited search, no short blinking indicates searching is disabled.

RESET TO DEFAULTS

If you need to cancel all function and parameter settings, you can return to the manufacturer's default settings:

- Press and hold the PROG button on the DALI light regulator. Then connect the DALI light regulator to the supply voltage, until both red and green LEDs under the regulator lens light up (approx. 10 s).
- While the LEDs are lit up (approx. 3 s), release the button and press it briefly again.
- Resetting to the manufacturer's defaults will be indicated by slow flashing of the green LED.

Note:

When resetting to defaults, all programmed codes will be deleted from the DALI light regulator memory as well!!!

ENIKA.CZ s.r.o. hereby declares that this P8 LR CF DLM complies with the essential requirements and other relevant provisions of Directive 2014/53/EU. For details, see: www.enika.eu.

Technická data / Technical data	P8 LR CF DLM
Napájení / Power supply:	230 V ±10 % 50 Hz
Výstupní řídicí signál / Output control signal:	podle / according to ČSN EN 62386-101, -102 (DALI)
Napájení sběrnice / Bus bar power supply:	max. 20,5 V, max. 65 mA
Počet řízených kanálů / Number of controlled channels:	4
Provozní kmitočet / Frequency:	868,3 MHz
Dosah / Range:	až 150 m ve volném prostoru / in open space
Vf výkon / RF power:	10 dBm
Počet kódů / Number of codes:	2 ²⁴
Počet kódů v paměti / Number of codes in the device memory:	33
Provozní teplota / Operating temperature:	-20 až / to + 55 °C
Připojovací svorky / Terminal blocks:	max. 2,5 mm ²
Stupeň krytí / IP protection:	IP 23 podle / according to ČSN EN 60529
Rozměry / Dimensions:	podle obr. 2 / according to fig. 2
Hmotnost / Weight:	95 g

Na zařízení není dovoleno provádět dodatečné technické úpravy! / It is forbidden to do any technical modifications on the device!

Zařízení lze provozovat na základě aktuálního VO–R/10/ (viz www.ctu.cz) a za podmínek v něm uvedených.



enika EU PROHLÁŠENÍ O SHODĚ	
číslo: POS/002/2023	
Model výrobku/výrobek:	1106767
Výrobce:	ENIKA.CZ s.r.o. 509 01 Nová Paka, Vikov 33, Česká Republika IČO: 28218167
Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce.	
Předmět prohlášení:	typové označení: P8 LR CF DLM specifikace: --- druh výrobku: Regulator osvětlení DALI frekvence: 868,3 MHz vf výkon: -10 dBm
Výše popsaný předmět prohlášení je ve shodě s příslušnými harmonizačními právními předpisy Evropské unie:	
2014/53/EU (RED) (dodávání rádiových zařízení na trh) 2011/65/EU (RoHS) (omez. používání některých škodlivých látek)	
Harmonizované normy, které byly použity:	
ČSN ETSI EN 300 220-1 V3.1.1:17 ČSN ETSI EN 301 489-1 V2.2.3:19 ČSN EN 60669-1 ed.3.18+01.19+02:20 ČSN EN 60669-2-5:17 ČSN EN 50581-13+Z1:19	
podepsáno za a jménem:	ENIKA.CZ s.r.o.
místo a datum vydání:	Nová Paka 27. 03. 2023
jméno a funkce:	Vladimír Gernat, generální ředitel
podpis:	