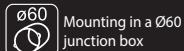


# ledix



Detailed mounting and programming manual instruction inside the packaging

## One-colour DALI-PWM LED controller SDL-01



Mounting in a Ø60  
junction box



Mounting  
indoor only

The SDL-01 controller is a one-channel LED dimmer designed to operate in lighting installations by means of DALI protocol (Digital Addressable Lighting Interface). The controller operates as a SLAVE device in a lighting installation and requires control by a MASTER controller. SDL-01 is designed to be mounted in a Ø60 junction box. The device is equipped with one transistor output with a maximum current load of 6A operating with the PWM modulation. Wide range of nominal supply voltage 10–48 V DC allows to control the majority of available LED lighting sources (LED tapes, LED modules and voltage controlled LED lighting fittings). Address programming in SDL-01 is possible only in the automatic mode (by means of the DALI controller). The device enables in addition to a fluent adjustable brightening/dimming and ON/OFF control, a parameterization of time, rate and a maximum / minimum level of brightening/dimming, etc.

Device is compatible with DALI standard.

## zameL

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10÷48 V DC / 0,3 W; IP20

weight: 27 g



The symbol means selective collecting of electrical and electronic equipment. It is forbidden to put the used equipment together with other waste.



## zameL

10 ÷ 48 V DC

## One-colour DALI-PWM ledix LED controller

# SDL-01

Declaration of Conformity is at [www.ledix.pl](http://www.ledix.pl)

Made in Poland

SDL-01 EN Ver. 01

[www.ledix.pl](http://www.ledix.pl)

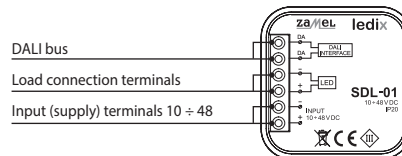
## DESCRIPTION

The SDL-01 controller is a one-channel LED dimmer designed to operate in lighting installations by means of DALI protocol (Digital Addressable Lighting Interface). The controller operates as a SLAVE device in a lighting installation and requires control by a MASTER controller. SDL-01 is compatible with devices operating in DT6 standard. It is designed to be mounted in a Ø60 junction box. The device is equipped with one transistor output with a maximum current load of 6A operating with the PWM modulation. Wide range of nominal supply voltage 10÷48 V DC allows to control the majority of available LED lighting sources (LED tapes, LED modules and voltage controlled LED lighting fittings). Address programming in SDL-01 module is possible only in the automatic mode (by means of the MASTER DALI controller). The device enables in addition to a fluent adjustable brightening/dimming and ON/OFF control, a parameterization of time, rate and a maximum / minimum level of brightening/dimming, etc.

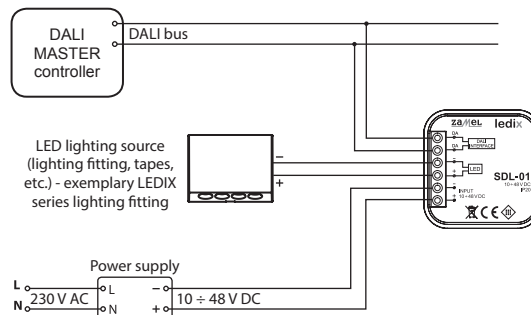
## TECHNICAL DATA

Nominal supply voltage:	10 ÷ 48 V DC
Power consumption during stand-by mode:	< 0,3 W
Number of channels:	1
Channel output element:	MOSFET transistor (displays the ground)
Channel maximum current:	6 A
Control type:	PWM modulation
PWM control resolution:	16-bit
PWM frequency:	250 Hz
Device type on the bus:	6 (DT6)
Address programming:	automatic (only by means of MASTER system)
Number of terminal clamps:	6
Cross-section of connection cables:	0,2 ÷ 2,5 mm <sup>2</sup>
Operating temperature range:	-10 ÷ +55 °C
Operation position:	free
Casing mounting:	Ø60 junction box
Casing protection degree:	IP20
Protection class:	III
Dimensions:	47,5 x 47,5 x 20 mm
Weight:	0,027 kg
Reference standard	EN 62386-102, EN 62386-207

## APPEARANCE



## DIAGRAM



## MOUNTING

**CAUTION!** Connection of this device to a single-phase installation must be installed in accordance with standards valid in a particular country. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions.

1. Disconnect power supply by the phase fuse, the circuit-breaker or the switch-disconnector combined to the proper circuit.
2. Check if there is no voltage on the connection cables by means of a special measuring equipment.
3. Install the power supply to 230 V AC.
4. Connect the cables with the correct SDL-01 terminals in accordance with the installing diagram.
5. Mount SDL-01 in the Ø60 junction box.
6. Switch on the power supply from the mains and check if the device operates properly.

## FUNCTIONING

### ADJUSTABLE PARAMETERS FOR SDL-01

Parameter	Description	Parameter value
FADE TIME	Time of transition from the current to the new brightness level (for example, during the implementation of the scenes and commands DACP)	0,7÷90,5 s default 0,7 s
FADE RATE	Speed Fade In / Out determined in steps / second. The parameter used in a command brighten and DIM. This parameter is directly linked with the time FADE TIME.	2,8÷358 speed/s 358 – max speed 2,8 – min speed default 45
MINIMUM LEVEL	This parameter specifies the minimum level of illumination	0÷100%*
MAXIMUM LEVEL	This parameter specifies the maximum level of illumination	0÷100%*
POWER ON LEVEL	The level of light after switching power supply	0÷100%*
SYSTEM FAILURE LEVEL	The level of illumination after a system crash (eg. A break on the bus)	0÷100%*

\* parameter change carried out with resolution dependent on the range.

Examples: range from 0.1 to 5.8 % - value change every 0.1 %  
range from 5.8 do 10 % - value change every 0,2 %  
range from 10 do 50 % - value change every 2,0 %

## COMMANDS

### EXEMPALRY COMMANDS REALISED BY SDL-01 (compatible with DT6 device operation)

Parameter	Description	Command No.	Minimum value	Maximum value
DIRECT ARC POWER (DACP)	- Switching on to the adjusted level	999	0 (0%)	255 (100%)
OFF	- (connected with Fade Time)	0	0	-
UP	- Switching off	1	-	-
DOWN	- Brightening (compatible with Fade Rate)	2	-	-
STEP UP	- Dimming (compatible with Fade Rate)	3	-	-
STEP DOWN	- Brightening with a minimum strobe	4	-	-
RECALL MAX. LEVEL	- Dimming with a minimum strobe	5	-	-
RECALL MIN. LEVEL	- Adjust the maximum level	6	-	-
STEP DOWN AND OFF	- Adjust the minimum level	7	-	-
ON AND STEP UP	- Dimming with a minimum strobe to switch off	8	-	-
SET MAX LEVEL (DTR0)	- Switching on and brightening with a minimum strobe	42	0	255
SET MIN LEVEL (DTR0)	- Adjust maximum level parameters	43	0	255
SET SYSTEM FAILURE LEVEL (DTR0)	- Adjust minimum level parameters	44	0	255
SET POWER ON LEVEL (DTR0)	- Lighting level adjustment after system failure	45	0	255
SET FADE TIME (DTR0)	- Lighting level adjustment after power supply voltage is switched on	46	0	255
SET FADE RATE (DTR0)	- Fade Time parameter adjustment	47	0	255
QUERY STATUS	- Fade Rate parameter adjustment	144	-	-
QUERY CONTROL GEAR PRESENT	- Query about the device mode	145	-	-

## COMMANDS

### EXEMPALRY COMMANDS REALISED BY SDL-01 (compatible with DT6 device operation)

Parameter	Description	Com-mand No.	Mini-mum value	Maxi-mum value
DIRECT ARC POWER (DACP)	- Switching on to the adjusted level	999	0 (0%)	255 (100%)
OFF	- (connected with Fade Time)	0	0	-
UP	- Switching off	1	-	
DOWN	- Brightening (compatible with Fade Rate)	2		
STEP UP	- Dimming (compatible with Fade Rate)	3		
STEP DOWN	- Brightening with a minimum strobe	4		
RECALL MAX. LEVEL	- Dimming with a minimum strobe	5		
RECALL MIN. LEVEL	- Adjust the maximum level	6		
STEP DOWN AND OFF	- Adjust the minimum level	7		
ON AND STEP UP	- Dimming with a minimum strobe to switch off	8		
SET MAX LEVEL (DTR0)	- Switching on and brightening with a minimum strobe	42	0	255
SET MIN LEVEL (DTR0)	- Adjust maximum level parameters	43	0	255
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SET FADE RATE (DTR0)	- Fade Time parameter adjustment	47	0	255
QUERY STATUS	- Fade Rate parameter adjustment	144		
QUERY CONTROL GEAR PRESENT	- Query about the device mode	145		

## ADDRESSING

The addressing depends on the applied control module (DALI MASTER) the SDL-01 module cooperates with. Typically, the addresses are automatically assigned to modules following the sequence. It is possible to change the address and the name of the SDL-01 controller by means of the DALI MASTER controller. There is no possibility to set addresses manually by means of the SDL-01 device.

## SAFETY DEVICE

The (OUT) output of SDL-01 is equipped with surge voltage and overload protections. In case of a small overload the temperature protection reacts in limiting the output power (lowering the PWM level to 5%). In case of high overload (160 – 190% Pn) or short circuit there is a complete output power supply cut off till the overload / short circuit is eliminated (recurring).

## REMARKS

1. The SDL-01 controller can be supplied with 10 V to 48V DC. The power supply voltage and the power supply output must be adjusted to the nominal supply voltage and power consumption of a lighting source connected to the SDL-01 output terminals.
2. Use a two-wire cable of 0,5÷1,5 mm2 diameter to connect SDL-01 with DALI bus. The length of the cable should not exceed 300 m (permissible voltage drop on the bus -2 V).
3. In case of DALI MASTER controllers if there is no own bus power supply, it is required to apply an additional bus power supply (typical 16 V ±5%) connected to the DA line.
4. DALI bus lines are resistant to polarity inversion.
5. In case of high loads and long distance connections between the power supply - DALI module and DALI module and the load it is recommended to properly select the cross-section of cables. Permissible voltage drop is 0,5 V.
6. Maximum of 64 modules can be connected to a single DALI bus. It must be taken into account already during the design phase.
7. The SDL-01 controller is designed to be mounted in a Ø60 junction box. It is recommended to use deep junction boxes (62 mm) or pocket junction boxes. The controller can also be mounted in a lighting fitting due to its small dimensions.
8. The device is designed to be mounted only indoor. In case of outdoor mounting, an additional casing is required with a minimum protection degree (IP54) and proper ventilation.