◗ Lunatone

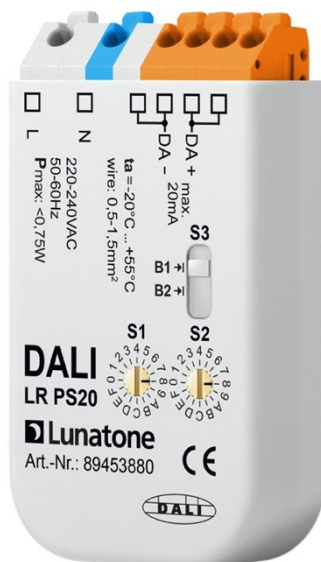# DALI LR PS20

Datasheet

Control Device

Control unit for automatic
Power reduction with integrated
DALI power supply

Art. Nr. 89453880
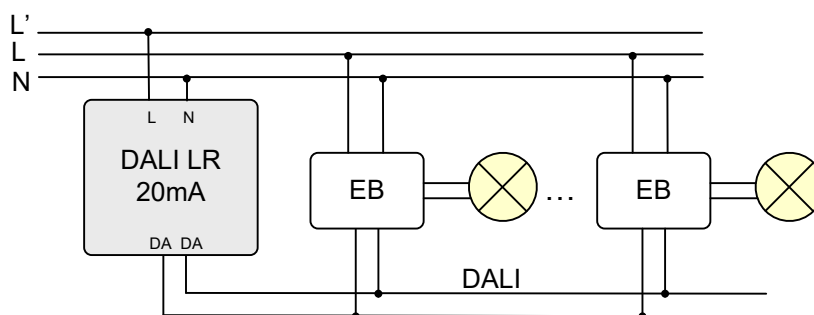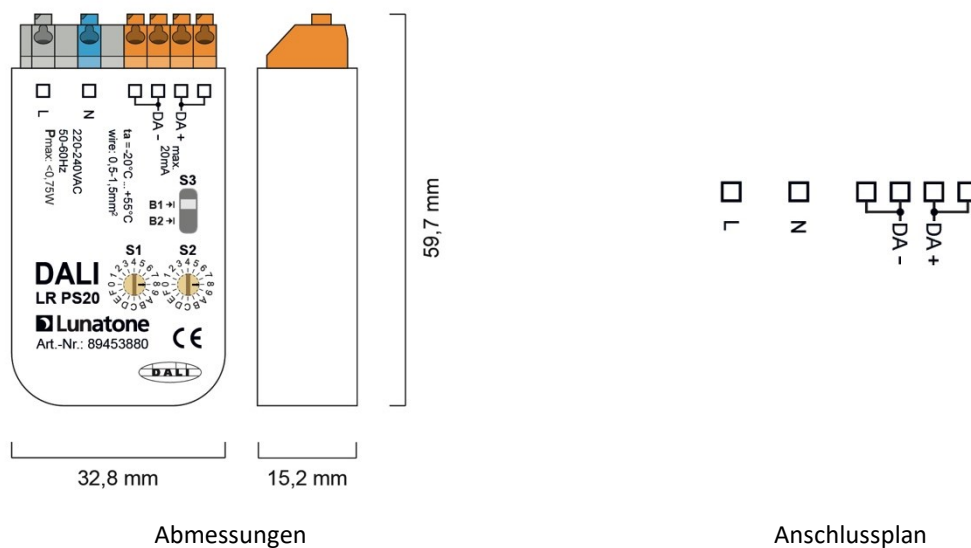
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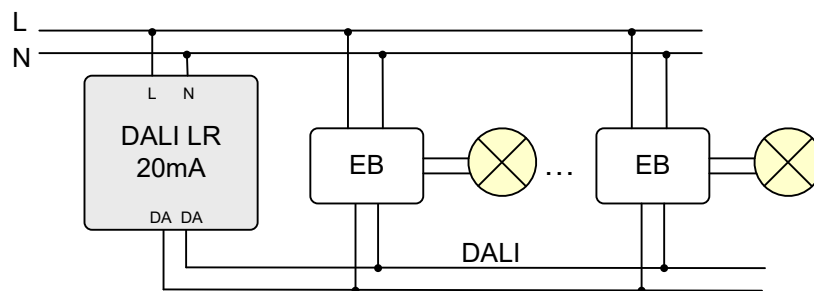# DALI LR PS20 Control Device

Overview

- Compact control module for automatic power reduction / brightness reduction for night-time

- Integrated bus supply for up to 7 standard DALI loads (20mA), extension possible to max. 64 loads with DALI Expander

- 2 operating modes

- Operating mode B1: power reduction through mains phase or control phase

- Operating mode B2: power reduction using virtual midnight calculation

- All necessary settings can be made using rotary and slide switches

- The module is supplied with 230V

- Suitable for installation in flush-type installation boxes or integration in protection class II devices

- Galvanic isolation between DALI output (20mA) and 230V input

- 2 sets of DALI terminals for easy connection

Specification, Characteristics

type	DALI LR 20mA
article number	89453880

electrical data:

supply voltage	230V AC
input supply frequency	50/60 Hz
max. current consumption	3 mA
max. power consumption	< 0.75W
output	DALI, Imax=20mA

mechanical data:

storing and transportation temperature	-20°C to 75°C
operating ambient temperature ta	-20°C to 55°C
protection class	IP20
maximum connecting wire cross section	0.5-1.5 mm^2
mounting	back box installation
dimensions	59mm x 33mm x 15 mm

Abmessungen   Anschlussplan

Operating mode B1: power reduction through the mains control phase, the DALI LR is supplied via a separately switched phase; in the event of a failure, the lamps switch to the SYSTEM FAILURE LEVEL which can be set with the control dial (S1) on the DALI LR device.

Operating mode B2- "virtual midnight": the DALI LR reduces the power during the operating time. The time span can be adjusted, it is always symmetrical to a virtual midnight (see figure "Power reduction with virtual midnight calculation" on page 4)

Installation

The DALI LR module is powered by the mains and provides a 20mA DALI bus supply for up to 5 DALI devices. If the power supply is insufficient, the sub-circuit can be extended with a DALI Expander. There are 2 sets of DALI terminals for easy wiring.

Functions and Set-Up

The desired operating mode B1 or B2 can be set with the slide switch S3 on the device housing. The position of the slide switch will be read and saved when the module is supplied with power.

Operating mode B1:
power reduction through mains control phase.

In Operating mode B1 the two control dials on the device housing are used as follows:
S1 is used to set the SYSTEM FAILURE LEVEL
S2 is used to set the POWER ON LEVEL

These settings are sent cyclically (every 5 seconds), when the device is powered up and whenever settings are changed. This information is sent to all connected devices (broadcast).

Operating mode B1 Dial S1	
Position control dial S1	Dim level for System Failure Level
0	0%
1	10%
2	15%
3	20%
4	25%
5	30%
6	35%
7	40%
8	45%
9	50%
A	60%
B	70%
C	80%
D	90%
E	100%
F	Test

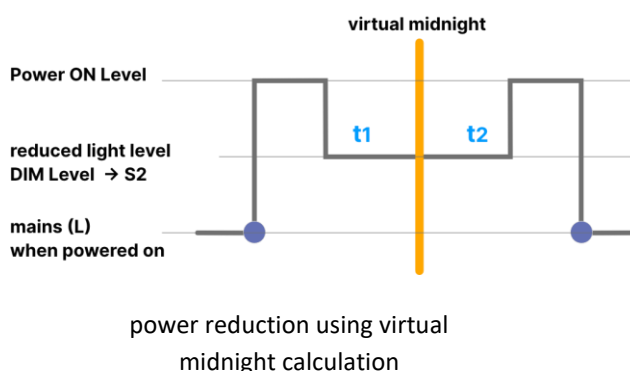| Operating mode B1, Dial S2	
Position control dial S2	Dim level for Power On Level
0	0%
1	10%
2	15%
3	20%
4	25%
5	30%
6	35%
7	40%
8	45%
9	50%
A	60%
B	70%
C	80%
D	90%
E	100%
F	Test

Operating mode 2:
power reduction using virtual midnight calculation

In Operating mode B2 the two control dials on the device housing are used as follows:
S1 is used to set the TIME for the power reduction -> t1, t2
S2 is used to set the DIM LEVEL

The time of the virtual midnight is calculated on the basis of the duty / working cycle and the time for the power reduction is calculated relative to this.

power reduction using virtual midnight calculation

Delivery state: Power On Level = 100%, virtual midnight is placed 4 hours after the switch-on time. The switching times t1 and t2 are relative to the virtual midnight have to be set with the control dial S1 on the device housing

Operating mode B2, Dial S1			
position control dial S1	t1 (h)	t2 (h)	TIME for the power reduction (h)
0	3	3	6
1	3	4	7
2	3	5	8
3	3,5	3	6,5
4	3,5	4	7,5
5	3,5	5	8,5
6	4	3	7
7	4	4	8
8	4	5	9
9	4,5	3	7,5
A	4,5	4	8,5
B	4,5	5	9,5
C	5	3	8
D	5	4	9
E	5	5	10
F	Test	Test	Test

Operating mode B2, Dial S2	
position control dial S2	Dim level for Power On Level
0	0%
1	10%
2	15%
3	20%
4	25%
5	30%
6	35%
7	40%
8	45%
9	50%
A	60%
B	70%
C	80%
D	90%
E	100%
F	Test

Test:
Dial S1 in position 0 or Dial S2 in position F: The dimming level is set to 100% and lowered to 50% after 5 seconds.

Changing the power on level for operating mode B2:
Set slider S3 to position 1 and dial S2 to position 0 to activate mode, then move further to the desired power on level. If you bring S3 back to position 2, the new power on level will be saved. Afterwards S2 can be turned back to the desired dimming level for power reduction.

Purchase Information

Art.Nr. 89453880: DALI LR 20mA, module for automatic power reduction with internal 20mA bus supply, suitable for installation in flush-type installation boxes or integration in protection class II devices.

Additional Information and Equipment

DALI-Cockpit – free configuration tool from Lunatone for DALI systems
https://www.lunatone.com/en/product/dali-cockpit/

Lunatone DALI products
https://www.lunatone.com/en/

Lunatone datasheets and manuals
https://www.lunatone.com/en/downloads-a-z/

Contact

Technical Support: support@lunatone.com

Requests: sales@lunatone.com

www.lunatone.com

Disclaimer

Subject to change. Information provided without guarantee.
The datasheet refers to the current delivery.

The compatibility with other devices must be tested in advance
to the installation.