DALI-2 PS

Datasheet
DALI Bus Power Supply Unit

DALI-line power supply

Art. Nr. 24033444

DALI-2 PS Bus Power Supply

Overview

- DALI bus power supply unit
- guaranteed Supply Current 220mA
- maximum Supply Current 250mA
- suitable to power an entire DALI-line with 64 standard DALI ballasts
- suitable for DIN rail mounting
- power supply range 120Vac … 240Vac for worldwide use
- surge immunity up to 400V

- load indicator
- integrated test button for function check
- system status queries (DALI current, bus load, runtime etc.) with DALI-Cockpit Software

Specification, Characteristics

type	DALI-2 PS
article number	24033444

input: L, N	
input type	mains power supply
marking input terminals	L, N
input voltage range	120Vac … 240Vac
max. input supply current	40mA (@120Vac), 20mA (@240Vac)
input supply frequency	50Hz / 60Hz
power consumption max.	5,3W
startup time	250ms

output: DA+, DA-	
output type	DALI Supply
marking output terminals	DA+, DA-
output voltage range	12Vdc … 20,5Vdc
DALI supply current	250mA
guaranteed DALI supply current	220mA
max. DALI supply current	250mA
open circuit proof	yes
short circuit proof	yes
shut down on short circuit	yes

insulation data:	
impulse voltage category	II
pollution degree	2
rated insulation voltage	250V
rated impulse withstanding voltage	4kV

insulation DALI / mains	reinforced isolation
Insulation test voltage DALI / mains	3000V a.c.

environmental conditions:

storing and transportation temperature	-20°C … +75°C
operational ambient temperature	-20°C … +55°C
rel. humidity, none condensing	15% … 90%

general data:

| dimensions (l x w x h)	98mm x 17,5mm x 56mm
mounting	DIN rail
rated maximum temperature tc	75°C
expected life time @tc	50.000 h
protection class	II in intended use
protection degree housing	IP40
protection degree terminals	IP20

terminals:

connection type	screw connector
wire size solid core	0,5 … 2,5 mm^2 (AWG 20 … AWG 14)
wire size fine wired	0,5 … 2,5 mm^2 (AWG 20 …AWG 14)
wire size using wire end ferrule	0,25 … 1,5 mm^2
stripping length	7 mm / 0,27 inch
locking torque	0,5 Nm
release of wire	open screw

standards:

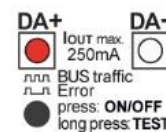| DALI	EN 62386-101:2014
EMC	EN 61547 EN50015 / IEC CISPR15
safety	EN 61347-2-11 EN 61347-1
markings	DALI-2, CE, UKCA
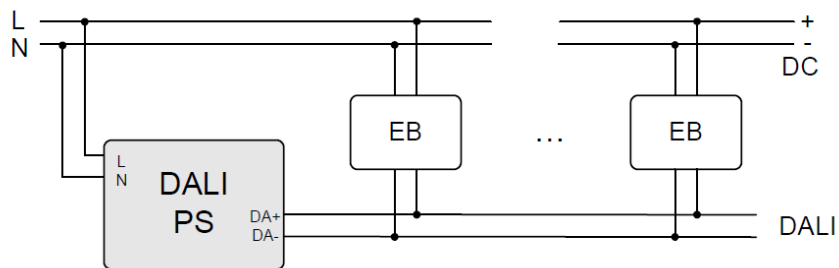
wiring diagram
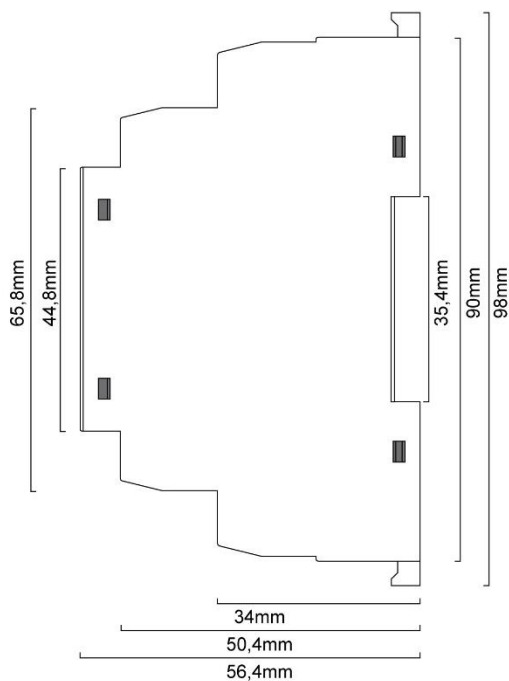
dimensions

connectors

Installation

- The DALI-2 PS is intended for DIN rail mounting

- Ensure protection against electric shock by an appropriate enclosure

- The wiring should be carried out as a permanent installation in a dry and clean environment.

- Installation may only be carried out in a voltage-free state of the system and by qualified specialists.

- National regulations for setting up electrical systems must be followed.

- Connect power supply terminals L and N to mains voltage according to the labelling.

- the polarity of the output voltage is marked on the housing (DA+, DA-)

- The DALI line may be routed together with the mains voltage (in one cable or as single wires in a tube)

- The DALI-line must **not** be connected to the mains or extra low voltage systems.

- The DALI wiring can be realised with standard low-voltage installation material. No special cables are required.

- Wiring topology of the DALI-line: Line, Tree, Star

- Wiring check by pressing the test button:

  o **short press:** recalls MAX broadcast, the red LED on the DALI-2 PS flashes. Another short press sends: broadcast OFF, the LED on the DALI-2 PS turns on (constant, normal operation).

  o **long press**: all luminaires connected to the DALI system will be controlled by a test sequence (on, off, dimming). The

---

LED on the DALI-2 PS flashes as long as the test sequence is active. The test sequence can be stopped with a short press of the test button. The test mode is automatically stopped when a DALI command is received on the DALI bus.

o **Pervious DALI-2 PS version with green LED:** when pressing the test button the LED is flashing and all luminaires connected to the DALI system will be controlled by a test sequence (on, off, dimming). To quit the test mode press the test button again.

☞ **Attention:** The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply.

☞ The voltage drop on the DALI line must not exceed 2V at maximum length (300m) and maximum bus load (250mA).

☞ **Attention**: an improper DALI power supply can cause damage on DALI devices!
Do not use standard DC power supplies on the DALI-line, since they do not meet the requirements for DALI communication

Figure 1 DALI Cockpit Settings

Commissioning

- The DALI power supply is ready for use after connecting.

- Make sure that the guaranteed supply current exceeds the current consumption of all bus devices.

- Status-LED (current version, red LED):
  - Constant on: normal operation
  - Flashing 50% on: test sequence active
  - Flashing 90% on: overload/short circuit

- Status-LED previous version (green LED):
  - Constant on: normal operation
  - flashing: overload/short circuit

- The DALI-2 PS can be addressed with the DALI Cockpit PC Software.
  When using the DALI Cockpit Software, the PC must be connected to the DALI bus via a suitable interface module (DALI-2 USB; DALI USB, DALI-2 WLAN, DALI-2 Display, DALI-2 IoT, DALI 4Net, DALI SCI RS232). The device is automatically recognised by the DALI Cockpit during the addressing process and listed in the device overview.

- With the DALI Cockpit, system parameters (bus load, DALI current, runtime etc.) can be read out and the behaviour on system events (power on, return of DALI voltage after a system failure) can be configured, see Figure 1 and section Function.

Function

Commands on Power On and System Failure

Sending a DALI command after starting the device or after resolving a DALI system error (e.g. short circuit) can be configured (the functions are not active as delivery default). The following configuration options are available:

- Address: Broadcast, group address or individual address
- Delay: time before sending 0-25 seconds
- DALI command: Recall Max, Recall Min, Light level 0-100% (DAP), OFF, scenes 0-15

Bus monitoring

The following information about the DALI system is available:

- Total running time
- active time
- power cycles
- bus system error
- executed test sequences
- average bus current
- average bus load

Purchase Order Information

Art.Nr. 24033444: DALI-2 PS, guaranteed DALI supply current 220mA, DIN rail

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
http://www.lunatone.com/en

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

Contact

Technical Support: support@lunatone.com

Requests: sales@lunatone.com

Disclaimer

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

The function in installations with other devices must be tested for compatibility in advance.