

Technical Datasheet lumina DAL4/8/16

1. Product description



The LON DALI-Controller DAL16 is designed for connection to up to 64 DALI-electronic ballasts in max. 16 groups, lumina DAL8 can control 8 groups, lumina DAL4 controls 4 groups. The DALI-devices can be supplied via the internal power supply or via an external DALI power supply.

The controller can be tested and controlled via front-panel switches without prior software configuration. This feature makes it possible to switch on or off all devices manually right after having connected them.

All set-up and maintenance functions (e.g. group definition, test or replacement) can be done via the build-in serial interface or via the LON-network by a LNS-Plug-in. A software tool for Windows-PCs and Windows Mobile-PDAs is available for this purpose.

The software application includes light actuator objects according to LONMARK™ profile „Lamp Actuator (3040)“. All light channels can be configured with adjustable ON/OFF switching delay or stairway lighting functions. Each lamp group has its own scene memory. In the optional selectable stairway light functionality is an integrated turn-off pre-warning implemented. Due to a priority interpretation central commands can override local commands.

A failure of illuminants or DALI-devices is detected by the software and is signalled via the LON-network.

A comfortable LNS-Plug-in and a commissioning software tool (using the serial interface) for Windows 2000/XP/Vista or Mobile 5.0 are available.

2. Mounting and installation

2.1. Mounting

1. Installation on DIN EN50022 rail, width 4 TE
2. When using an external DALI power supply, the internal power supply must be configured as "switched off". This can be done with the configuration/installation software.
3. The connection interface is located on the left-hand side of the housing. The actuator must only be operated with spega e.control controllers. Observe the maximum space available on the DIN rail.



Electrical devices must be assembled and installed by trained personnel only.



Please observe local standards, guidelines and regulations when planning and installing electrical devices.



Do not exceed device specifications.



The system installer has to take care that the correct application and the associated parameters are corresponding with the wiring and the intended use of the device.



Connecting or disconnecting modules or controllers is only allowed if they are disconnected from all power supplies.

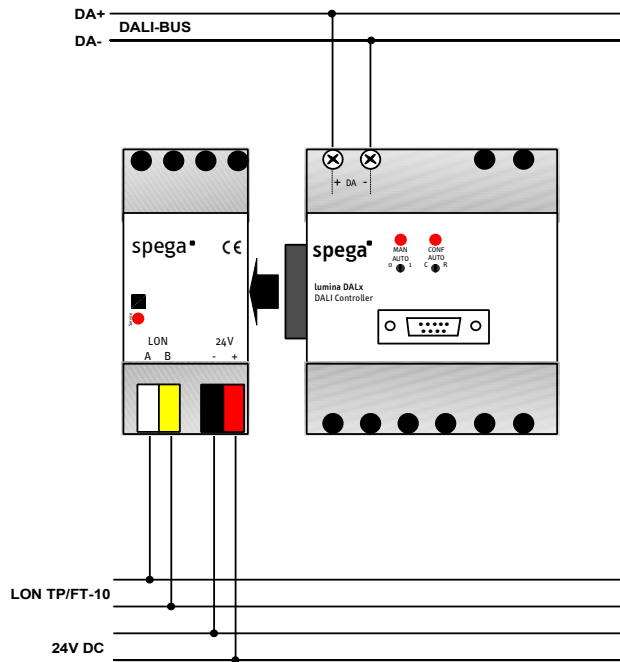
2.2. Installation



Electrical devices must be assembled and installed by trained personnel only.

Connecting to the LON universal controller

The LON universal controller uses an LON TP/FT transceiver for connecting to the LON network. The nominal operating voltage is 24VDC.



DALI bus connection

DALI components are directly connected to the spega DALI controller. The integrated DALI power supply of the controller can power the connected DALI devices (16V, max. 125 mA when using the internal DALI-PS).



Before using DALI devices with an external DALI power supply, the internal DALI power supply of the controller must be switched off by using the plug-in or configuration software.



DALI components are connected in parallel. With the exception of a ring topology every connection topology is usable. The maximum overall cable length (depending on the wire cross section) is limited to 300 meters.



All-pole disconnection must be observed in order to avoid dangerous touch voltages which originate via feedback from different phase conductors (230V AC, several phases).

Connection test

For checking the wiring and for switching the light during construction the rotary switches on the front of the spega DALI controller can be used.

- Sequence:**
- Step 1: Mount and connect the DALI controller lumina DAL16/DAL8/DAL4 and the other DALI components.*
 - Step 2: Use manual control rotary switches.*

3. Technical Data

Power supply

Operating voltage	via spega M/R series LON controller
Current consumption (full load)	typ. 200 mA (4,8W) (with internal DALI supply) typ. 45 mA (1,1W) (with external DALI supply)
Power dissipation (max.)	3,3W (with internal DALI supply) 1,5W (with external DALI supply)

Inputs/Outputs

Actuator interface	control interface for spega modules
DALI Bus connection	16 V DC (not SELV), max. 125 mA (internal DALI-PS) DAL16: max. 64 DALI units (< 2mA), controllable in max. 16 groups DAL8: max. 64 DALI units (< 2mA), controllable in max. 8 groups DAL4: max. 64 DALI units (< 2mA), controllable in max. 4 groups
Serial interface	RS232 (ANSI/EIA/TIA-232-F-1)

Connections

Actuator Interface	integrated 14 pin connector
DALI Bus connection	2 x 1pin terminal screw connection, Ø up to 4mm ²
Serial interface	9-pin Sub-D socket

Control elements

switch CONF	- (not used)
switch MAN	manual control

Indicators

LED CONF	configuration state and error state
LED MAN	operating state and error state

Housing

Protection	IP 20 (EN 60529)
Dimensions	85(45) x 70 x 60 mm (H x W x D) – corresponds to 4 modular spacings
Type/location of installation	distribution board, 35mm DIN mounting rail

Ambient conditions

Operating temperature	-5°C ... +45°C
Storage temperature	-25°C ... +55°C
Transport temperature	-25°C ... +70°C
Relative humidity	5% ... 93% (w/o condensation)
Installation height	up to 2000 m above sea level

Safety

Electrical isolation	SELV (EN 60950)
Protection class	II (DIN EN 61140, VDE 0140-1)

Standards

Device safety	Acc. EN 50 090-2-2
Immunity	Acc. EN 50 090-2-2
Certification	CE

4. Order information

Order number	Product	Description
120 164	lumina DAL4	DALI Controller for control and supply of 64 DALI devices in 4 groups
120 168	lumina DAL8	DALI Controller for control and supply of 64 DALI devices in 8 groups
120 166	lumina DAL16	DALI Controller for control and supply of 64 DALI devices in 16 groups
121 000 C	sistema MC	LON Universal controller for M/R series modular actuators

5. Support

The information given in this manual was carefully compiled. Should you have any further questions regarding this product, please contact:

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