KNX-DALI Broadcast Interface for up to 6 channels

ZDI-DLB6   **Technical Documentation**

FEATURES

- Control of up to 20 DALI ballasts per channel in up to 6 channels.
- Ballast replacement allowed with automatic detection.
- Error detection and monitoring (except multiaddress DALI ballasts).
- Burn-in, Stand-by and Auto-off functionality for each channel.
- Not suitable for emergency lighting control.
- Manual control through buttons and status LED indicators.
- 110/230V 50/60Hz external power supply required.
- Total data saving on power failure.
- KNX BCU integrated.
- Size 67 x 90 x 80mm (4.5 DIN units).
- DIN rail unit assembly (EN 50022), with snap fit clamp.
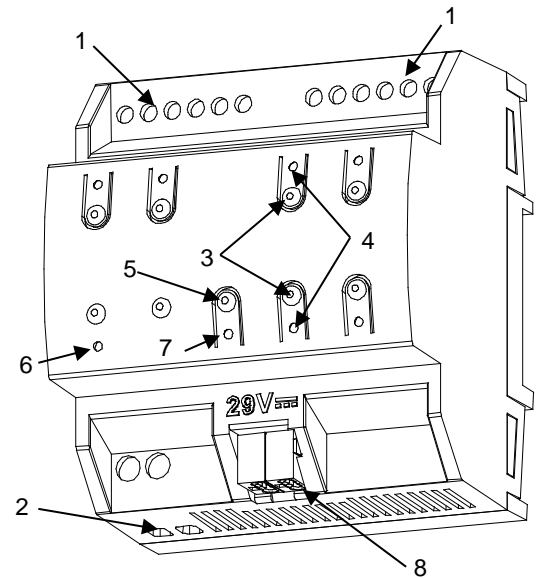- DALI Standard compatible.
- CE directives compliant.

Figure 1. DALIBOX Broadcast 6CH

1. DALI channel output	**2**. External supply	**3**. DALI channel control button	**4**. DALI channel status LED
5. Programming/Test button	**6**. External supply LED	**7**. Programming/Test LED	**8**. KNX connector

Programming/test button: short button press to set programming mode. If this button is held while plugging the device into the KNX bus, it goes into safe mode.

Programming/Test LED: programming mode indicator (red). When the device goes into safe mode, it blinks (red) every half second. The test mode is indicated by the green color. During start up (after reset or power failure) and if the device is not in safe mode, LEDs indicator blinks red once.

GENERAL SYSTEM SPECIFICATIONS

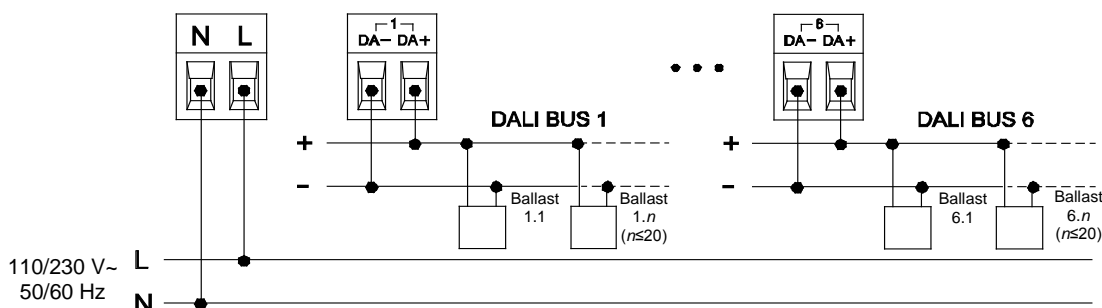| CONCEPT			DESCRIPTION	
Type of device			Electric operation control device	
KNX supply	Voltage (typical)		29VDC SELV	
	Voltage range		21…31VDC	
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	7	203
		24VDC[1]	10	240
	Bus connection		Typical bus connector TP1, 0,80mm² section	
Ext. power supply	Voltage and frequency		110/230V~ 50/60Hz	
	Maximum consumption		150mA	
Ambient temperature			from 0ºC to +45ºC	
Storage temperature			from -20ºC to +55ºC	
Ambient humidity			5 to 95% RH (no condensation)	
Storage humidity (relative)			5 to 95% RH (no condensation)	
Complementary characteristics			Class B	
Safety class			II	
Operation type			Continuous operation	
Device action type			Type 1	
Electrical solicitations period			Long	
Type of protection			IP20, clean environment	
Assembly			Independent control assembly device to be mounted inside of electrical panels with DIN rail (EN 50022).	
Minimal clearances			Not required	
KNX bus failure response			Data saving according to parameterization.	
Response when restarting KNX bus			Data recovering change according to parameterization.	
Operation indication			Programming LED indicates programming mode (red) and test mode (green). Each DALI channel LED indicates its status (flashing = error, see Fig. 2; fixed = active output). Power supply LED indicates the presence of supply voltage.	
Weight			124gr.	
PCB CTI index			175V	
Enclosure			PC FR V0 halogen free	

[1] Maximum consumption in the worst case scenario (KNX Fan-In model)

OUTPUT SPECIFICATIONS AND CONNECTIONS OF DALI CHANNELS

CONCEPT	DESCRIPTION
Number of channels	6
Channel type	DALI bus
Channel voltage	16VDC SELV
Maximum current per output	40mA
Maximum DALI ballasts per channel[2]	20
Maximum length of cable	300m (considering 1,5mm^2)
Short-circuit protection	YES
Overload protection	YES
Over-voltage protection	YES
Connection method	Cable screw terminal
Cable cross-section	0,5mm² to 2,5mm² (26-12 AWG)

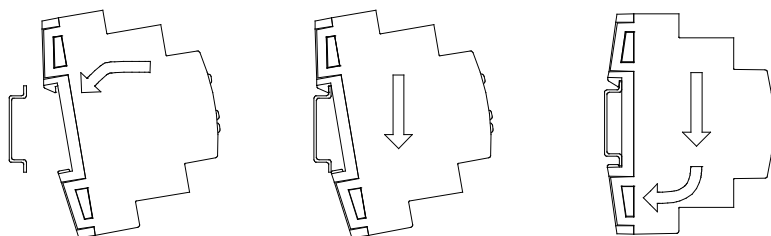**[2]** One DALI address is considered per DALI ballast.

INPUT SPECIFICATIONS AND CONNECTIONS OF EXTERNAL POWER SUPPLY

CONCEPT		DESCRIPTION
Fuse protection of supply to DALI power source	Voltage	250V~
	Current	4A
	Response type	F (Fast acting)
Connection method		Cable screw terminal
Cable cross-section		0,2mm² to 4mm² (26-10 AWG)

CONNECTION SCHEMATIC

Note: Electrical connection between different DALI channels must be avoided.

110/230 V~
50/60 Hz

Attaching DALIBOX Broadcast 6CH to DIN rail:

Removing DALIBOX Broadcast 6CH from DIN rail:
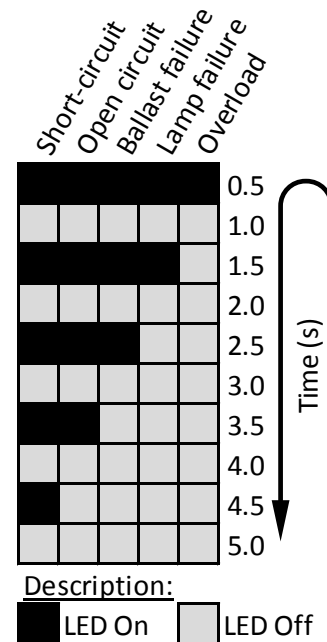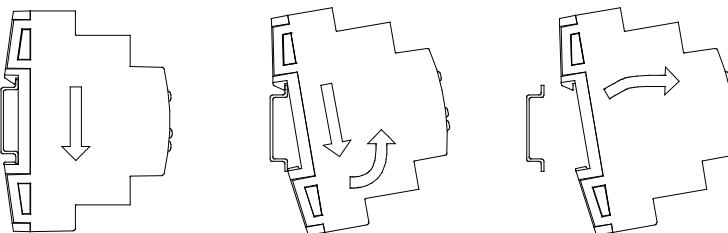

Description:
█ LED On   ░ LED Off

Figure 2. Error notification through DALI channel status LED

⚠ SAFETY INSTRUCTIONS

- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by law.
- The installation must be equipped with a device assuring the omni-polar sectioning. A 10A circuit breaker is recommended.
- Do not connect Main Voltage (110/230VAC) or any other external voltages to any point of the KNX or DALI system.
- Connecting an external voltage might put the entire KNX system at risk.
- Make sure during the installation that there is always sufficient insulation between the main voltage 110/230VAC and the KNX or DALI bus or the extension inputs.
- Once the device is installed, it must not be accessible from the outside.
- Keep away from water and do not cover the device with clothes, paper or any other material when in use.
- The device has a short-circuit protection fuse that, in case of activation, it should not be rearmed or replaced except for our technical department.
- The WEEE logo means that this device contains electronic parts and it must be discarded properly following the instructions of http://zennio.com/weee-regulation.