

KNX-DALI Broadcast Interface for up to 4 channels ZDI-DLB4

Technical Documentation

FEATURES

- Control of up to 20 DALI ballasts per channel in up to 4 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.

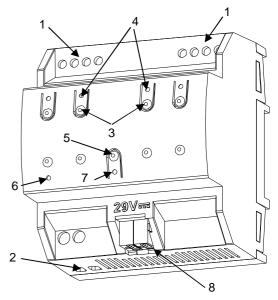


Figure 1. DALIBOX Broadcast 4CH

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		
	Voltage (typica	al)	29VDC SELV		
KNX supply	Voltage range	•	2131VDC		
		Voltage	mA	mW	
	Maximum	29VDC (typical)	7	203	
	consumption	24VDC ⁽¹⁾	10	240	
	Bus connection		Typical bus connector TP1; 0,80mm² section		
Ext. power	Voltage and frequency		110/230VAC 50/60Hz		
supply Maximum consumption			150mA		
Ambient temperature			from 0°C to +45°C		
Storage temperature			from -20°C to +55°C		
Ambient humidity			5 to 95% RH (no condensation)		
Storage humidity (relative)			5 to 95% RH (no condensation)		
Complementary characteristics		S	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		IX 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			124g		
PCB CTI index			175V		
Enclosure			PC FR V0 halogen free		

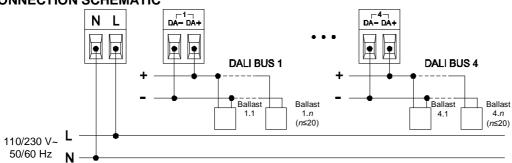
⁽¹⁾ Maximum consumption in the worst case scenario (KNX Fan-In model)

OUTPUT SPECIFICATIONS AND CONNECTIONS OF DALI CHANNELS			
CONCEPT	DESCRIPTION		
Number of channels	4		
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	0,5mm ² to 2,5mm ² (26-12 AWG)		

⁽²⁾ One DALI address is considered per DALI ballast.

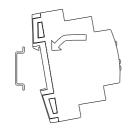
INPUT SPECIFICATIONS AND CONNECTIONS OF EXTERNAL POWER SUPPLY				
CONCEPT		DESCRIPTION		
Fuse protection of supply to DALI power source	Voltage	250V		
	Current	4A		
	Response type	F (Fast acting)		
Connection method		Cable screw terminal		
Cable cross-section		0,2mm² to 4mm² (26-10 AWG)		

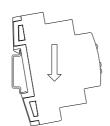
CONNECTION SCHEMATIC

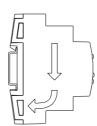


Note: Electrical connection between different DALI channels must be avoided.

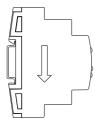
Attaching DALIBOX Broadcast 4CH to DIN rail:

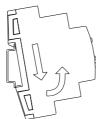


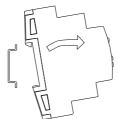




Removing DALIBOX Broadcast 4CH from DIN rail:







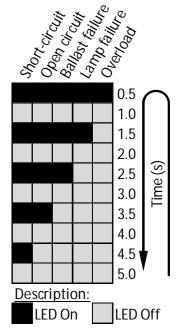


Figure 2. Error notification through DALI channel status LED

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.