

DALI-2 RM8Z、RM8ZT

Datasheet

DT7 Relay Module

Relay Module for the integration of non-dimmable ballasts

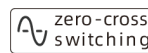
in DALI lighting systems(DT7)

Back box

DALI-2 Relay Module DT7 Relay Module

Overview

- Compact relay module for the direct control of 230V AC loads via DALI.
- Ballasts without DALI-input can be simply integrated in a DALI lighting control system. The loads can then be switched ON and OFF by DALI commands.
- For RM8ZT, The loads can also be switched ON and OFF by Push Button Switch.
- The DALI-2 relay module fulfils the requirements for DALI Device Type 7 - switching function.
- Configurable Power-Up and System-Failure behaviour.
- Zero cross switching.
- supplied directly by the DALI signal line, no additional power supply necessary.
- Easy configuration via CORSL DALI USB interface and DALI-Config Software Tool or APP.
- The modules act like any conventional DALI ballast, and can be addressed and configured accordingly.



Specification, Characteristics

Model No	RM8Z	RM8ZT
article number	8980200321120	8980210321120
color	white	white
NFC	Yes	Yes

electrical data:

supply	via DALI-line	
current consumption (at 16.5V)	4 mA	
Max. switching capacity (resistive load)	8A 250V (AC), 5A 30V (DC)	
Nominal switching capacity (resistive load)	5.6A 250V (AC), 3.5A 30V (DC)	
Max. switching power (resistive load)	2000VA, 150W	
Max. switching voltage	250V (AC), 30V (DC)	
Max. switching current	8A (AC), 5A (DC)	
switching method	zero cross switching (AC)	
type of relay contact	Latching relay	
switching operations at nominal load, resistive	>10 ⁵	
maximum switching frequency	1Hz	
input	DALI	DALI、SWITCH
number of used DALI addresses	1	

environmental conditions	
storing and transportation temperature	-20°C ... +75°C
operational ambient temperature	-20°C ... +60°C

general data	
dimensions (l x w x h)	45.9mm x 36.8mm x 18.25mm
mounting	installation box
protection class	II in intended use
protection degree	IP20
behaviour at Power Up	programmable: ON/OFF/no Change
behaviour at System failure	programmable: ON/OFF/no Change

terminals	
connection type	quick-connect terminals
Wire size (DALI terminals)	0,2 ... 1,5 mm ² (24 ... 16AWG)
Wire size (Load terminals)	0,2 ... 2,5 mm ² (24 ... 14AWG)
stripping length	8~9 mm

standards	
DALI	IEC62386-101, IEC62386-102, IEC62386-208, use app to open the energy consumption statistics feature (IEC62386-251, IEC62386-252, IEC62386-253)
markings	DALI-2、CE

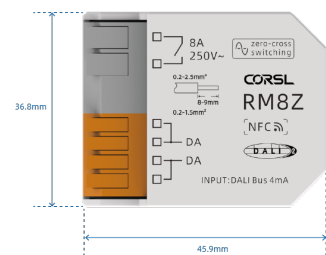


Figure 1: Dimensions

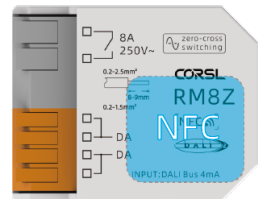
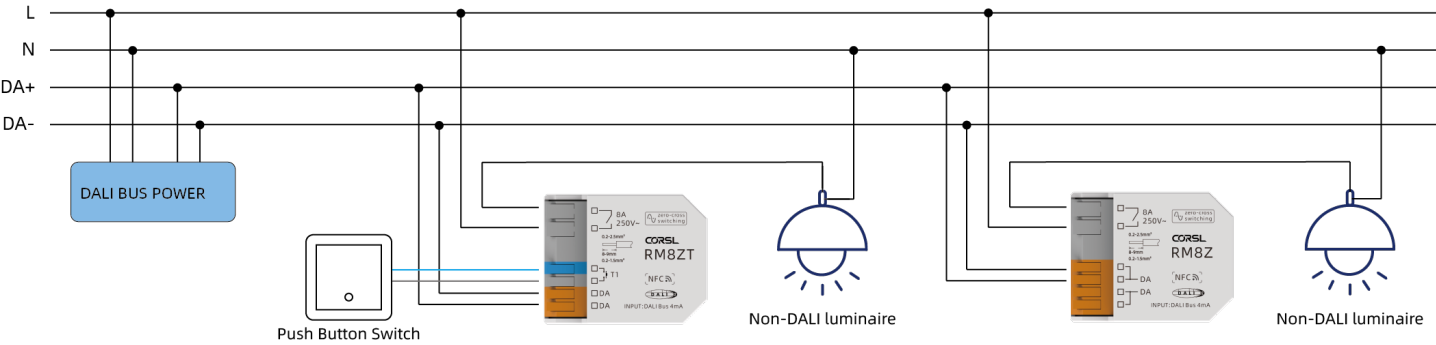


Figure 2: NFC antenna area

Typical application



Hint: In order to ensure that the load current does not exceed the maximum switching current, the installation must be secured with a suitable automatic circuit breaker.

Factory Default Settings

A basic configuration is already implemented on delivery (factory default setting). If necessary, this can be changed and adapted.

	DALI Standard
Min Level	100%
Max Level	100%
Power On Level	100%
System Failure Level	100%
Fade Time	0
Fade Rate	44.7 steps/s
Scene values	all scenes: MASK
Dim UP switch ON threshold	0.1% (DAP 1)
Dim UP switch OFF threshold	MASK
Dim DOWN switch ON threshold	MASK
Dim DOWN switch OFF threshold	0% (DAP 0)
Line frequency (zero-crossing detect.)	50Hz,60Hz

Installation

- The DALI-2 Relay Module is directly connected and supplied by the DALI bus. A DALI bus power supply (e.g. DALI PS) is required, an additional power supply is not necessary.
- The connection to the DALI terminals can be made regardless of polarity. The bus input is protected against overvoltage (mains voltage up to 250VAC).
- The DALI-line must not be connected to the mains or extra low voltage systems.
- Wiring topology of the DALI-line: Line, Tree, Star
- Switching is done at zero cross of AC voltage.
- National regulations for setting up electrical systems must be followed.
- Only 1 wire may be connected to each terminal. When using double wire end ferrules, the connection capacity of the terminal must be considered.
- In order to ensure that the load current does not exceed the maximum switching current of the relay a suitable automatic circuit breaker has to be installed.
- 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.
- The DALI wiring can be realised with standard low-voltage installation material. No special cables are required.

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

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

Addressing and Configuration

- After installation the DALI-2 Relay Module is ready for use.
- The configuration can be done with the help of the DALI-Config Software, The PC must be connected to the DALI bus via a suitable interface module(DMUmini).
- The configuration can also be done with the help of the APP(DALIConfig).
- The DALI-2 Relay Module is automatically recognised by the DALI-Config or APP during the addressing process and listed in the device overview.
- The standard DALI device settings as well as the device specific settings can be configured in the DALI-Config or APP, see section "Functionality".
- The "Identify" function can be used for localization after addressing. With the DALI command IDENTIFY, or selecting the checkbox "localize" in the DALI-Config the relay module.

Functionality

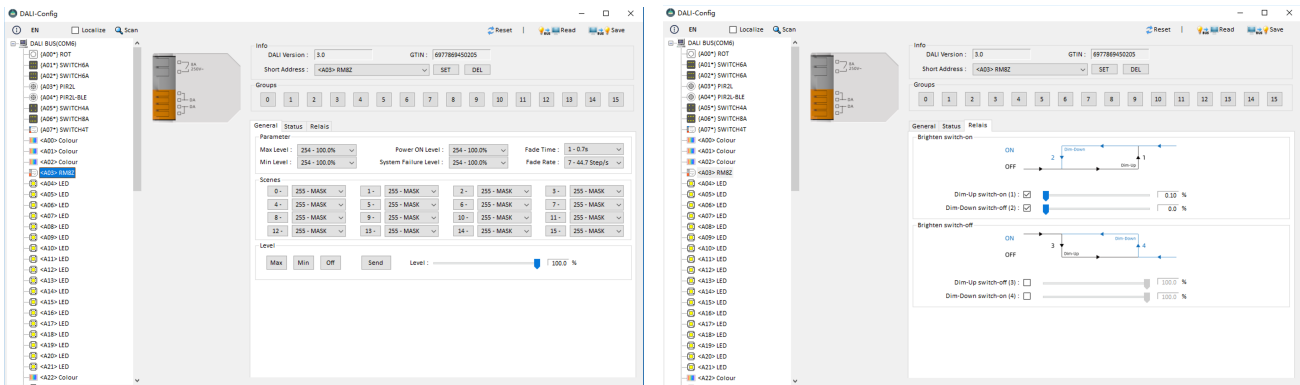
- The DALI-2 Relay Module acts as a DALI-controlled relay contact. Hence ballasts can be integrated in a DALI-system and switched on and off by DALI commands.
- The DALI-2 Relay Module acts like a standard DALI ballast for non-dimmable loads. It is based on the DALI specification for control gear (IEC 62386-102) and the device type 7 extension (IEC 62386-208). Therefore, the switching characteristic is determined by the comparison of the virtual direct arc power level (VAPL) with 4 thresholds.

- The virtual dim level (VAPL) is like the dim level of DALI-ballasts and is therefore limited by MINLEVEL and MAXLEVEL and influenced by fade-time and fade-rate.
- For each dim direction 2 thresholds can be defined. They are compared with the virtual dim level and as a result the output is switched on or off:

Virtual dim direction	comparison of virtual dim level and thresholds	output
UP	$VAPL \geq \text{UP SwitchOn Threshold}$	ON
UP	$VAPL \geq \text{UP SwitchOff Threshold}$	OFF
DOWN	$VAPL \leq \text{DOWN SwitchOn Threshold}$	ON
DOWN	$VAPL \leq \text{DOWN SwitchOff Threshold}$	OFF

- If a threshold value is set to "MASK" the threshold is inactive and does not influence the relay output.

➤ Configuration by DMUmini with DALI-Config software



➤ Configuration by APP(DaliConfig)

Quick Configuration:

Save the device's configuration(excluding address) as a QR code image to the phone.

factory default setting is deactivate.

When activate, open the energy consumption statistics feature (IEC62386-251, IEC62386-252, IEC62386-253).

This interface will appear when 'Energy Reporting' is activate, enter the input load power here.

After configuration, click the 'Write'-button to save. First click 'Write'-button, then bring your phone's NFC antenna area with the Relay Module's antenna area. After write, Click the 'Read'-button to check if the configuration has been saved correctly.

HINT: Do not bring your phone's NFC antenna area with the Relay Module's antenna area before click 'Write'-button.

Quick Configuration:

Import: First, read the product's configuration information via the 'Read' button, then import the saved QR code image of the same product model from your phone. Make adjustments as needed, finally click the 'Write'-button to save the configuration to the product.

HINT: only applicable for the quick configuration of same model product.

select 'NFC' first and click 'Read'-button.

then bring your phone's NFC antenna area with the Relay Module's antenna area.

HINT: Do not bring your phone's NFC antenna area with the Relay Module's antenna area before click 'Read'-button.

Click 'Read'-button to read the device's configuration. First click 'Read'-button, then bring your phone's NFC antenna area with the Relay Module's antenna area.

HINT: Do not bring your phone's NFC antenna area with the Relay Module's antenna area before click 'Read'-button.



Additional Information and Equipment

- CORSL DALI products folder

<https://www.corsl-tech.com/index.html>

- DALI-Config : DALI system configuration tool, free when using DMUmini interface device

<https://www.corsl-tech.com/software.html>

- DaliConfig: APP(NFC、Buletooth)

➤ Android: <https://www.corsl-tech.com/software.html>

➤ IOS: [DaliConfig](#)

Contact

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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.