

DALI RTC Timer

Datasheet

Control Device

DALI Real Time Clock
with Scheduler

Art. Nr. 86459531

Art.Nr. 86459531-HS



DALI RTC Timer Control Device

Overview

- DALI Real Time Clock
- Time can be set and queried via DALI
- Scheduler Function – up to 28 entries
- Astro-clock function (up from firmware 2.4)
- For each scheduler job weekday mask, time stamp and a DALI command can be defined
- Easy schedule configuration via DALI Cockpit software tool and DALI USB interface
- Daylight saving mode
- The DALI RTC module must not be connected to the mains. It is supplied directly via the DALI signal line.
- Battery inside, as factory default the clock is set to local time (GMT+1)
- Simple installation due to DALI double-clamp connector
- Types for backbox installation and DIN rail mounting, suitable for installation in protection class II devices



Art.Nr. 86459531-HS:



Specification, Characteristics

type	DALI RTC Timer	
article number	86459531	86459531-HS
DALI-Interface, supply: DA, DA		
input type	DALI, supply	
marking terminals	DA, DA	
input voltage range	9,5Vdc ... 22,5Vdc (acc. to IEC62386)	
max. current consumption DALI	5mA	
number of DALI addresses	1	
insulation data:		
impulse voltage category	II	
pollution degree	2	
rated insulation voltage	250V	
insulation DALI / housing	reinforced isolation	
Insulation test voltage DALI / housing	3000Vac	
environmental conditions::		
storing and transportation temperature	-20°C ... +75°C	
operational ambient temperature	0°C ... +50°C	
rel. humidity, none condensing	15% ... 90%	

general data:

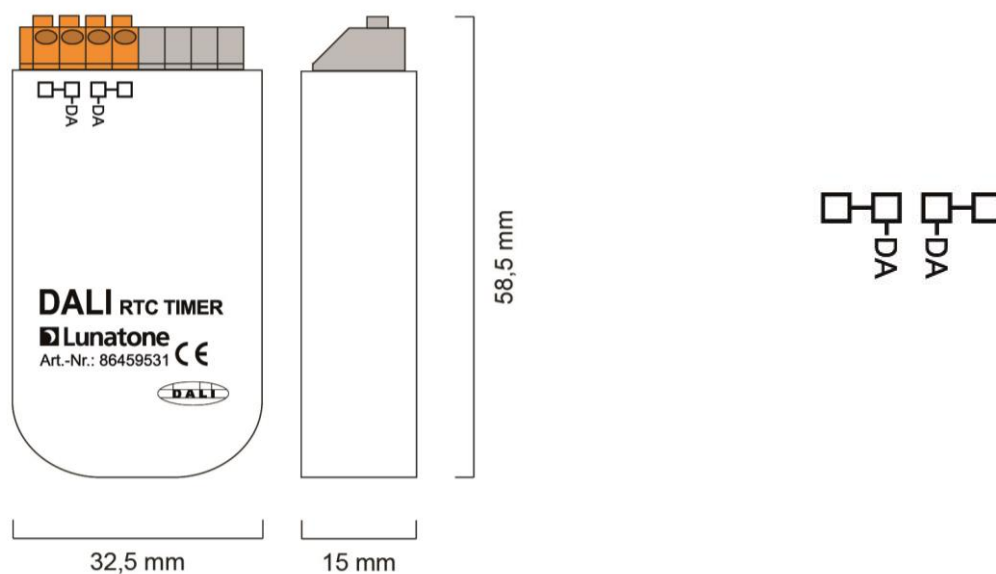
dimensions (l x w x h)	59mm x 33mm x 15mm	98mm x 17,5mm x 56mm
mounting	back box integration in class II devices	dinrail mounting integration in class II devices
rated max. temperature tc	50°C	
expected life time @tc	50.000 h	
protection class	II in intended use	
protection degree housing	IP40	
protection degree terminals	IP20	
real time clock (accuracy)	quarz based (~20ppm)	

terminals:

connection type	spring terminal connector	screw connector
wire size solid core	0,5 ... 1,5 mm ² (AWG20 ... AWG16)	0,5 ... 2,5 mm ² (AWG20 ... AWG14)
wire size fine wired	0,5 ... 1,5 mm ² (AWG20 ... AWG16)	0,5 ... 2,5 mm ² (AWG20 ... AWG14)
wire size using wire end ferrule	0,25 ... 1 mm ²	0,25 ... 1,5 mm ²
stripping length	8,5 ... 9,5 mm / 0,33 ... 0,37 inch	7 mm / 0,27 inch
locking torque	-	0,5Nm
release of wire	push button	open screw

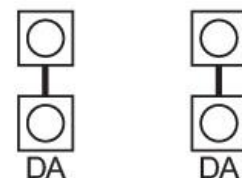
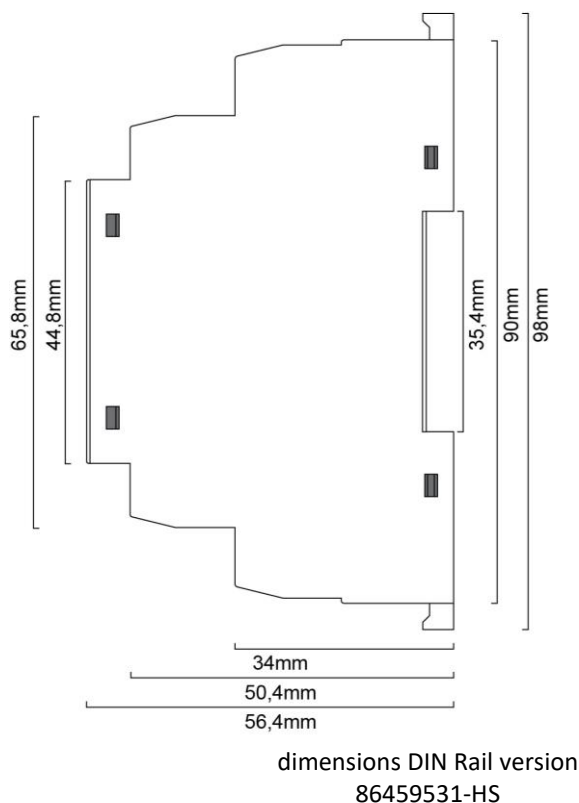
standards:

EMC	EN 61547 EN 50015 / IEC CISPR15	
safety	EN 61347-2-11 EN 61347-1	
markings	DALI, CE	DALI, CE, UKCA, RCM



dimensions 86459531

connection plan 86459531



connection plan DIN Rail
version 86459531-HS

Installation

- The DALI RTC Timer is intended for back box installation or integration in protection class II devices, the HS-type is suited for DIN rail mounting, ensure protection against electric shock by an appropriate enclosure
- Wiring as fixed installation in a dry and clean environment
- Installation only by qualified person when no voltage is applied
- Attend regulations regarding electrical installations of national authorities
- The DALI RTC Timer is powered by the DALI line (typical current consumption 5 mA), no separate power supply needed
- the connection to the DALI-line is polarity free
- DALI-line wiring with standard low voltage installation material
- The DALI-interface can handle mains voltage, protecting the device in case of wrong wiring
- Wiring topology of the DALI-line: Line, Tree, Star
- Connect only one wire on each terminal, if twin ferrules are used take care to the maximum wire size

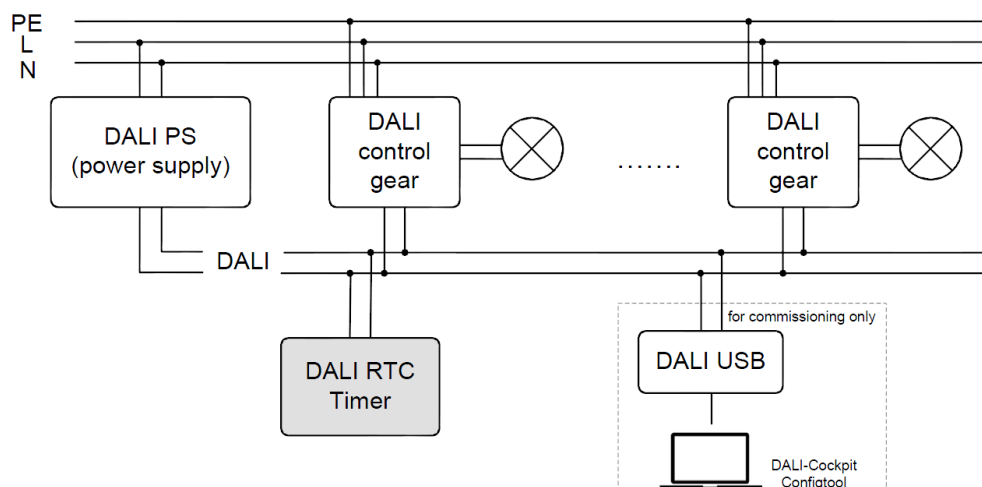


Attention: The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply



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

Application Example



typical application

Commissioning

- After installation the DALI RTC Timer is ready for use
- The configuration can be done with the help of 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 DALI RTC Timer is automatically detected during the addressing procedure and is then shown in the component tree
- The device can be selected – date and time can be set and the scheduler entries can be configured, see section Function.

Function

The DALI RTC timer sends out DALI commands to the DALI-line based on the entries defined in the scheduler.

Time settings

The current time and date can be set, as well as the time zone and the automatic daylight saving.

time zone settings

UTC+01:00

☐ enable daylight saving time mode

Scheduler entries

In the scheduler up to 28 scheduler jobs can be defined. Each entry consists of status, a weekday mask, a time and finally DALI-command and DALI address.

Scheduling

☒ Enable Scheduler Job

Mo Tu We Th Fr Sa Su Time of day: 09:37

DALI Command: GOTO SCENE 2

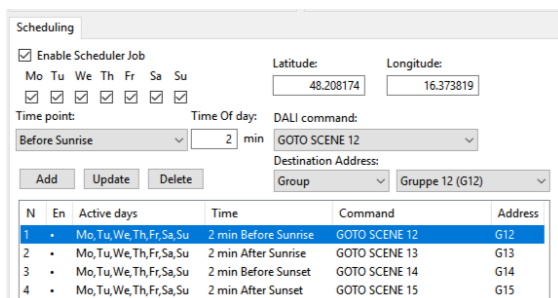
Destination Address: All (DALI Broadcast)

Add Update Delete

N	En	Active days	Time of day	Command	Address
1		Mo,Tu,We,Th,Fr,Sa...	09:35	GOTO SCENE 0	all
2		Mo,We,Th,Fr,Su	09:36	GOTO SCENE 1	all
3		Mo,Th,Fr	09:37	GOTO SCENE 2	all
4		Mo,Tu,We,Th	09:38	GOTO SCENE 5	all

Astro-clock functionality

Up from firmware version 2.4 the module supports Astro-clock function, i.e. instead of absolute time a timestamp can be defined relatively to sunset or sunrise. For this function information about the GPS-coordinates in decimal degree format is required.



N	En	Active days	Time	Command	Address
1	•	Mo,Tu,We,Th,Fr,Sa,Su	2 min Before Sunrise	GOTO SCENE 12	G12
2	•	Mo,Tu,We,Th,Fr,Sa,Su	2 min After Sunrise	GOTO SCENE 13	G13
3	•	Mo,Tu,We,Th,Fr,Sa,Su	2 min Before Sunset	GOTO SCENE 14	G14
4	•	Mo,Tu,We,Th,Fr,Sa,Su	2 min After Sunset	GOTO SCENE 15	G15

Please note that it is not possible to postpone actions based on sunset/sunrise beyond midnight.

Time queries

Date and time can be queried using QUERY SCENE commands:

QUERY SCENE 0 LEVEL: seconds

QUERY SCENE 1 LEVEL: minutes

QUERY SCENE 2 LEVEL: hours

QUERY SCENE 3 LEVEL: day of month

QUERY SCENE 4 LEVEL: month

QUERY SCENE 5 LEVEL: year-2000

Purchase Information

Art.Nr. 86459531: DALI RTC Timer, DALI Real Time Clock with Scheduler Function, back box installation and class II device integration

Art.Nr. 86459531-HS: DALI RTC Timer, DALI Real Time Clock with Scheduler Function, DIN rail mounting, built-in

Additional Information and Equipment

DALI-Cockpit – Lunatone configuration tool for DALI systems

<https://www.lunatone.com/en/product/dali-cockpit/>

Lunatone DALI products

<https://www.lunatone.com/en>

Lunatone datasheets and manuals

<https://www.lunatone.com/en/downloads-a-z/>

Contact

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Art.Nr. 86459531-HS:



Disclaimer

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

The compatibility with other devices must be tested in advance to the installation.