



## 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
- 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 dinrail 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:**

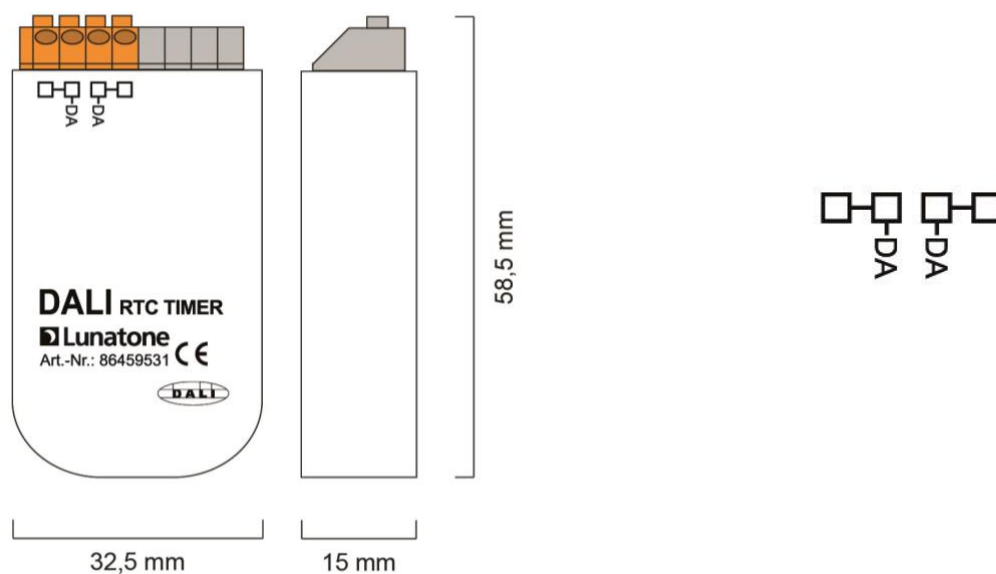
dimensions (l x w x h)	59mm x 33mm x 15mm	98mm x 17,5mm x 56mm
mounting	back box integration in class II devices	dinrail mounting integration in class II devices
rated max. temperature tc	50°C	
expected life time @tc	50.000 h	
protection class	II in intended use	
protection degree housing	IP40	
protection 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 <sup>2</sup> (AWG20 ... AWG16)	0,5 ... 2,5 mm <sup>2</sup> (AWG20 ... AWG14)
wire size fine wired	0,5 ... 1,5 mm <sup>2</sup> (AWG20 ... AWG16)	0,5 ... 2,5 mm <sup>2</sup> (AWG20 ... AWG14)
wire size using wire end ferrule	0,25 ... 1 mm <sup>2</sup>	0,25 ... 1,5 mm <sup>2</sup>
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

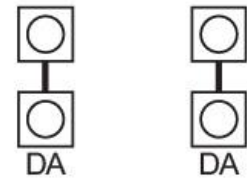
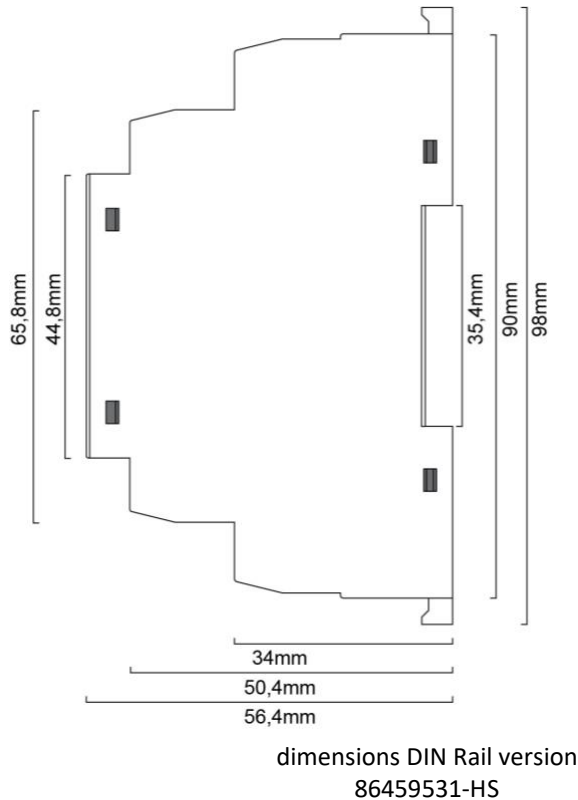
**standards:**

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

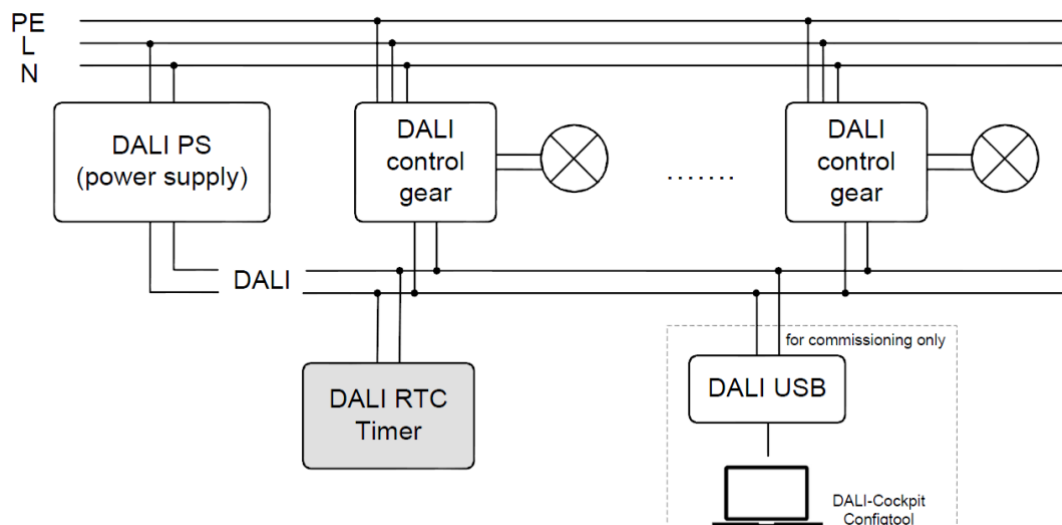
- The DALI RTC Timer is intended for back box installation or integration in protection class II devices, the HS-type is suited for dinrail mounting, ensure protection against electric shock by an appropriate enclosure
- Wiring as fixed installation in a dry and clean environment
- Installation only 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



**HINT:** The DALI-signal is not classified as SELV circuit. Therefore the standards for installation in low voltage system apply.



The voltage drop on the DALI-line shall not exceed 2V.

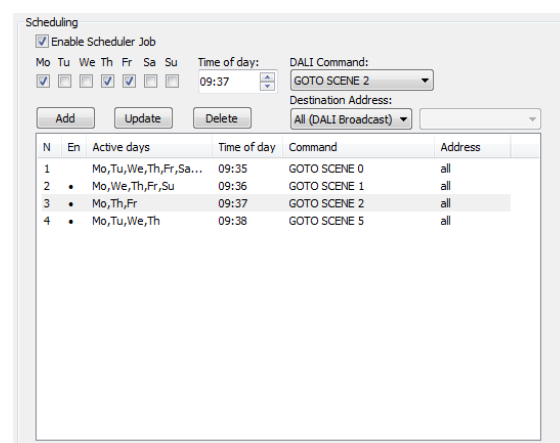


typical application

## Commissioning

- After installation the DALI RTC Timer is ready for use
- The configuration can be done with the help of the DALI-Cockpit software (interface module to DALI-line required, e.g. DALI USB, DALI SCI RS232, DALI4Net)
- 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.

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.



## Function

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

Up from firmware version 2.4 the module supports astroclock-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.

Scheduling

☒ Enable Scheduler Job

Mo Tu We Th Fr Sa Su  
☒ ☒ ☒ ☒ ☒ ☒ ☒

Latitude: 48.208174 Longitude: 16.373819

Time point: Before Sunrise Time Of day: 2 min DALI command: GOTO SCENE 12

Add Update Delete

Destination Address: Group Gruppe 12 (G12)

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.

Furthermore 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, dinrail 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.