

## DALI USB

### Datasheet

#### DALI USB Interface

Communication interface between  
PC and modules on a DALI Bus

Art. Nr. 24138923 (USB)

Art. Nr. 24138923DO (USB-Mini)

Art. Nr. 24138923-30 (USB 30mA)

Art. Nr. 24138923-HS (USB HS)

Art. Nr. 89454248 (Flash USB HS)

Art. Nr. 24138923-wD (wDALI-USB)

# DALI USB Interface

## Overview

- Communication interface between DALI systems and the configuration software tool: DALI Cockpit.
- bidirectional data communication for DALI bus monitoring, configuration and control.
- support of the Standard DALI protocol, DALI-2 protocol, and various extended DALI protocols
- USB and DALI-line are galvanically isolated.
- supply via DALI-line and USB interface
- various types available:
  - standard
  - mini
  - with integrated 30mA bus power supply
  - for DIN rail mounting
  - for DIN rail mounting with flash memory
  - wireless
- 2 sets of DALI terminals for easy connection - signal line can be looped through

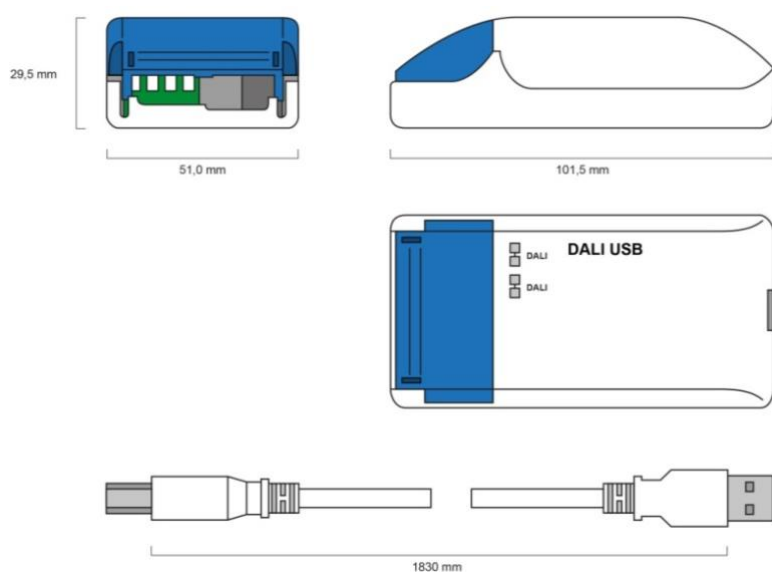


## Specification, Characteristics

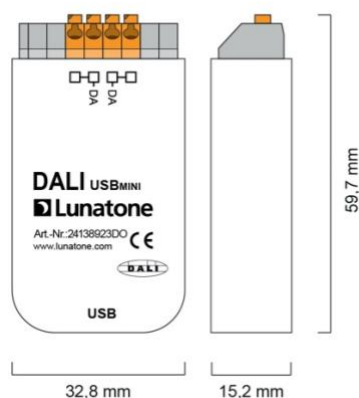
Type	DALI USB	DALI USB Mini	DALI USB 30mA
article number	24138923	24138923DO	24138923-30
geometry LxWxH	102x51x30mm	59x33x15mm	59x33x15mm
housing, installation	Mouse	back box	back box
typ. current consumption	DALI: 6mA, USB: 10mA	DALI: 6mA, USB: 10mA	USB: 40mA
bus power supply	-	-	30mA
USB connector on device	USB B	USB Mini	USB Mini
included USB Cable	USB A — USB B	USB A — USB Mini	USB A — USB Mini
RF radio connection	-	-	-
storage / transportation temperature	-20°C ... +75°C	-20°C ... +75°C	-20°C ... +75°C
operational ambient temperature	-20°C ... +75°C	-20°C ... +75°C	-20°C ... +60°C
protection degree, IP Code	IP20	IP20	IP20
Certification	DALI, CE	DALI, CE	DALI, CE

Type	DALI USB HS	DALI Flash USB HS	wDALI USB
article number	24138923-HS	89454248	24138923-wD
geometry L x W x H	98x17.5x56mm	98x17.5x56mm	59x33x15mm
housing, installation	din rail	din rail	back box
typ. current consumption	DALI: 6mA, USB: 10mA	DALI: 6mA, USB: 10mA	DALI: 9mA, USB: 40mA
bus power supply	-	-	-
USB connector type	USB Mini	USB Mini	none, wireless (+ USB dongle)
included USB Cable	USB A — USB Mini	USB A — USB Mini	none
RF radio connection	-	-	2.4Ghz / up to 300m
storage and transportation temperature	-20°C ... +75°C	-20°C ... +75°C	-20°C ... +75°C
operational ambient temperature	-20°C ... +75°C	-20°C ... +75°C	-20°C ... +75°C
protection degree, IP Code	IP20	IP20	IP20
Certification	DALI, CE	DALI, CE, RCM, UKCA	DALI, CE

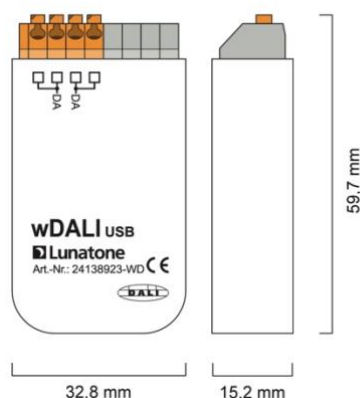
## DALI USB:



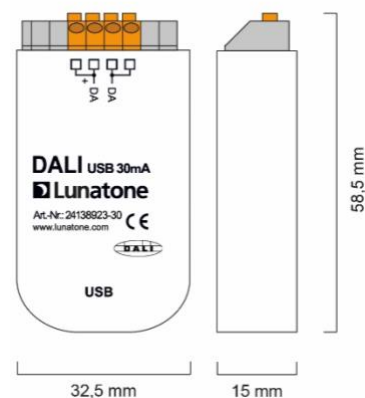
## DALI USB Mini:



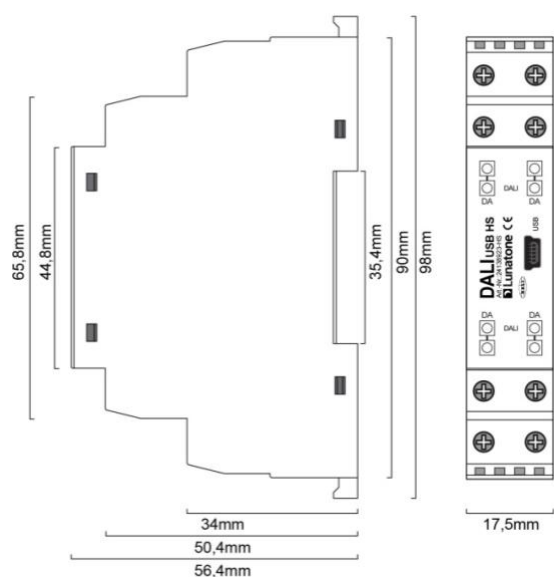
## wDALI USB:



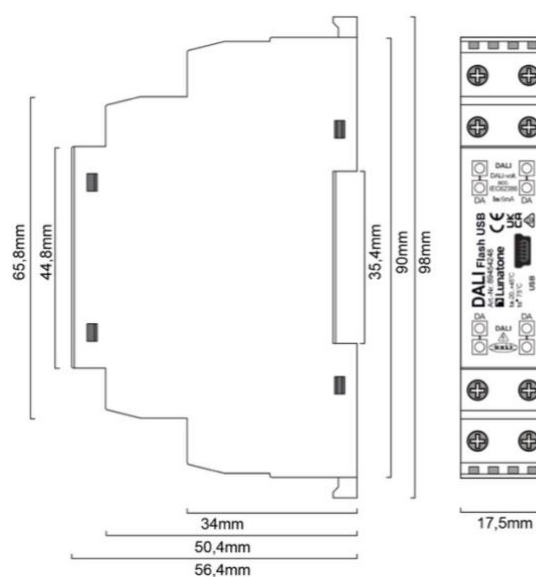
## DALI USB 30mA:



## DALI USB HS:



## DALI Flash USB HS:



## Connection and Electrical Specification

The DALI USB module is supplied by the DALI-line (current consumption ~6mA) as well as by USB (current consumption 10mA/40mA max). The DALI-line and the USB are galvanically isolated. The connection to the DALI-line is polarity free and protected against overvoltage of up to 270Vac.

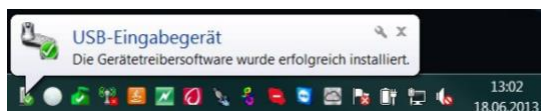
## USB, Firmware Update and Windows-Installation

The USB-interface has the following properties:

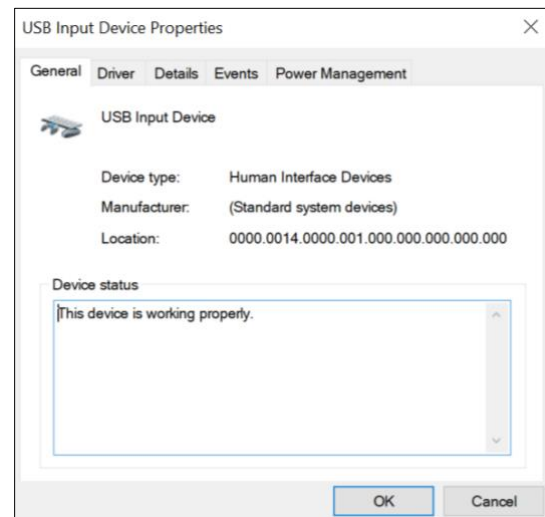
vendor ID	17B5h (Lunatone Industrielle Elektronik GmbH)
product ID	0020h
USB current consumption	10mA max.
speed	full speed USB device (12MBit/s max.)

Any DALI USB firmware update will be carried out automatically via USB by the program "DALIBusServer.exe". This program is part of the DALI Cockpit Software package and will be installed automatically with the DALI Cockpit.

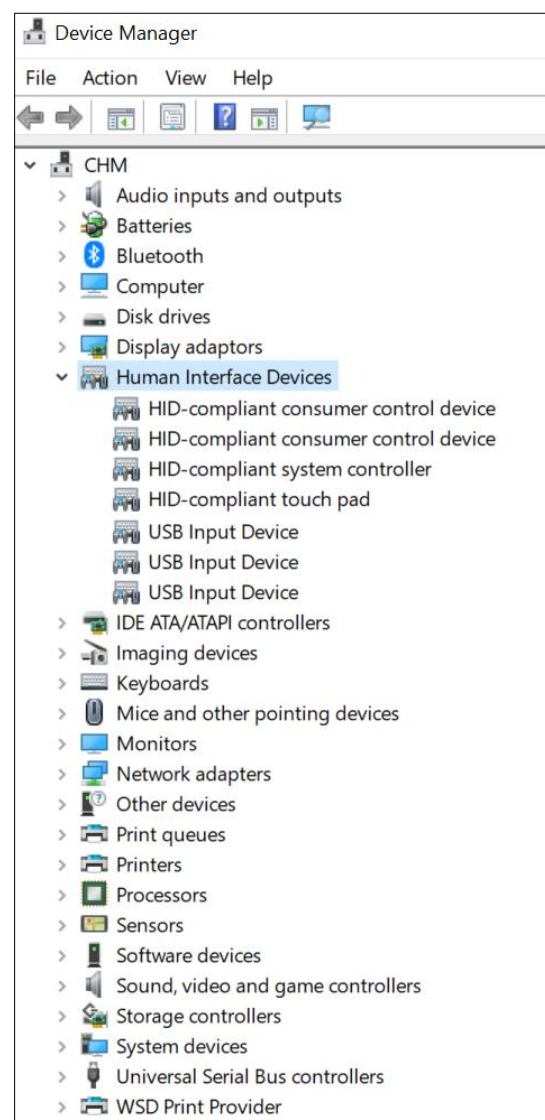
The DALI USB is implemented as USB HID (Human Interface Device).



A driver installation is not required due to the windows-integrated support for human interface devices. The DALI USB will be detected by the operating system and all required drivers will be installed automatically.



After the installation process is successfully completed the device can be found in the Device Manager: section HID (Human Interface Devices).



## Supported DALI Specifications and Operating Modes

The DALI USB module supports the following protocols:

- standard DALI (16bit)
- standard DALI (8bit), backchannel
- eDALI, special 25bit Tridonic protocol (24bit data)
- DALI2 (24Bit) forward frame according IEC 62386-103 and NEMA DALI, 24bit corresponding to NEMA standard publication 243-2005
- 17bit DALI, special DALI-frame used by Helvar
- DSI on DALI bus (16bit and 8bit), signal on DALI-line is set LOW 10ms before and after sending a DSI-frame

The DALI USB interface supports the transmission of DALI commands as well as monitoring functions for the DALI communication. During monitoring each DALI command on the DALI line, that corresponds to the supported protocols, is transmitted to the PC.

## Application

The Lunatone DALI Cockpit Software package is a configuration and monitoring tool for DALI systems. For more details check the instruction manuals of the DALI Monitor, DALI Cockpit and the Lunatone DALI Tutorial found on our homepage, section Downloads – Software&Manuals and section DALI Expert.

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

On request, a Windows developer kit to access to the DALI USB interface is available for software development. (Note: maintenance of the developer kit has been discontinued)

## Available types

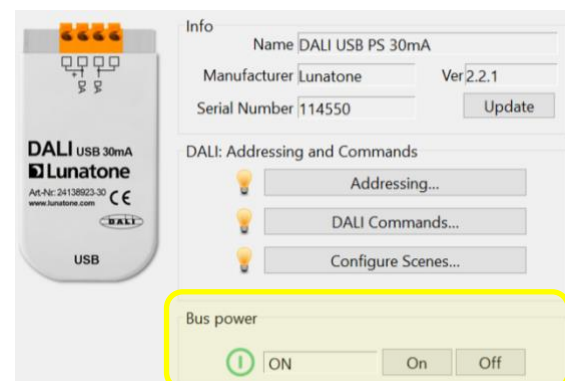
Variants with additional functionalities and different types of housings are available (see drawings and specification).

### DALI USB 30mA

Offers an integrated DALI bus power supply of 30mA, the power is supplied via USB. This power supply is switched off by default and can be activated in the DALI Cockpit configuration software. (A version with the bus power supply on by default is available on request.)



Please note that the **maximum bus supply must not exceed 250mA**. If the external bus supply already delivers 250mA, the 30mA of the DALI USB should not be activated.



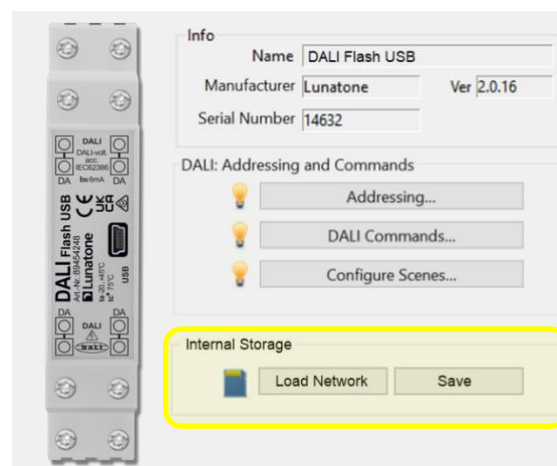
### wDALI USB

Instead of a USB cable, a USB dongle (USB type A) is connected to the PC and the Receiver is connected to the DALI bus. The transmission range depends on the local conditions.



## DALI Flash USB HS

The DIN Rail version is intended for permanent installations where a fixed interface is required. With the Flash function the «project file» from the DALI Cockpit Software can be saved directly to the flash memory of the DALI USB interface. It will be loaded when reconnected to a PC. Therefore, a copy of the complete configuration is always available on site.



## Purchase Information

**Art.Nr. 24138923:** DALI USB, Mouse

**Art.Nr. 24138923-DO:** DALI USB Mini

**Art.Nr. 24138923-30:** DALI USB 30mA

**Art.Nr. 24138923-HS:** DALI USB HS

**Art.Nr. 89454248:** DALI Flash USB HS

**Art.Nr. 24138923-wD:** wDALI USB

## Contact

Technical Support: [support@lunatone.com](mailto:support@lunatone.com)

Requests: [sales@lunatone.com](mailto:sales@lunatone.com)

[www.lunatone.com](http://www.lunatone.com)



## Additional Information and Equipment

DALI-Cockpit – free configuration tool for DALI systems

[www.lunatone.com/en/product/dali-cockpit/](http://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/>

## 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.