Lunatone

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)
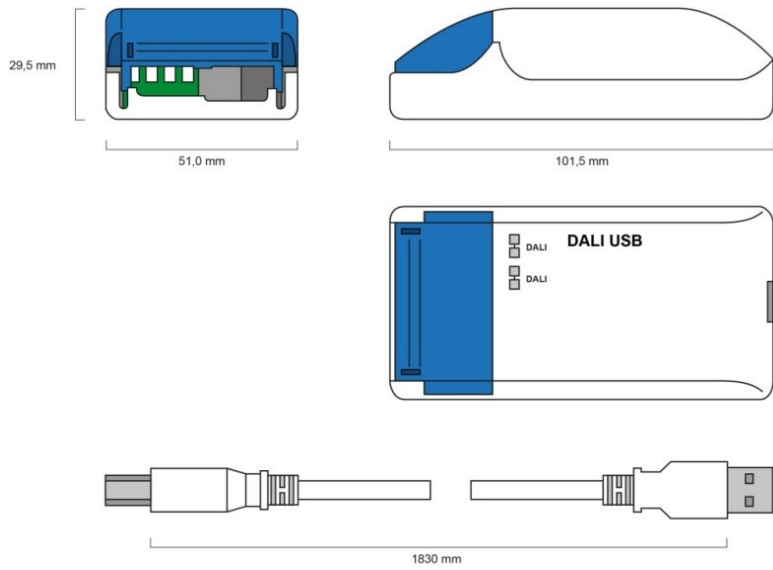
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DALI USB Interface

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
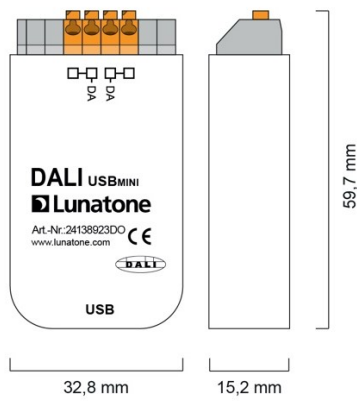
Specification, Characteristics

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 connection	Cable Type B	Cable Mini	Cable Mini
RF radio connection	-	-	-
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 … +60°C
protection class	IP20	IP20	IP20

Type	DALI USB HS	DALI Flash USB HS	wDALI USB
article number	24138923-HS	89454248	24138923-wD
geometry LxWxH	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 connection	Cable Mini	Cable Mini	USB Stick
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 class	IP20	IP20	IP20

DALI USB:

29,5 mm

51,0 mm 101,5 mm

DALI USB
DALI
DALI

1830 mm

DALI USB Mini: **wDALI USB:** **DALI USB 30mA:**

DA DA

DALI USBMINI
Lunatone
Art-Nr.:24138923DO CE
www.lunatone.com
DALI

USB

59,7 mm

32,8 mm 15,2 mm

DA DA

wDALI USB
Lunatone
Art.-Nr: 24138923-wD CE
DALI

58,5 mm

32,5 mm 15 mm

+ DA DA

DALI USB 30mA
Lunatone
Art-Nr.: 24138923-30 CE
www.lunatone.com
DALI

USB

58,5 mm

32,5 mm 15 mm

DALI USB HS / DALI Flash USB HS:

65,8mm
44,8mm
35,4mm
90mm
98mm

34mm
50,4mm
56,4mm

DA DALI DA

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

DA DALI DA

17,5mm
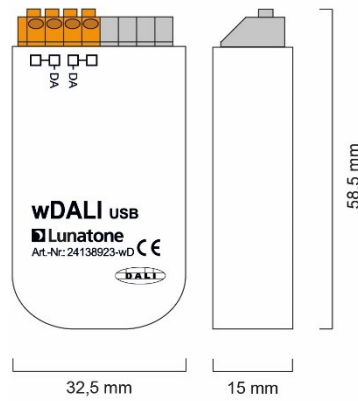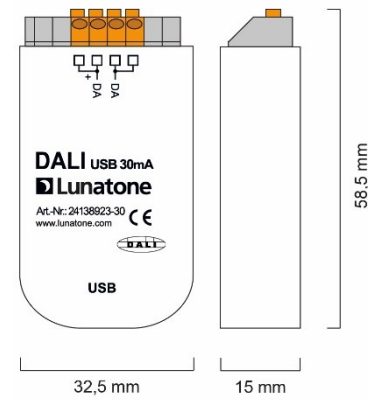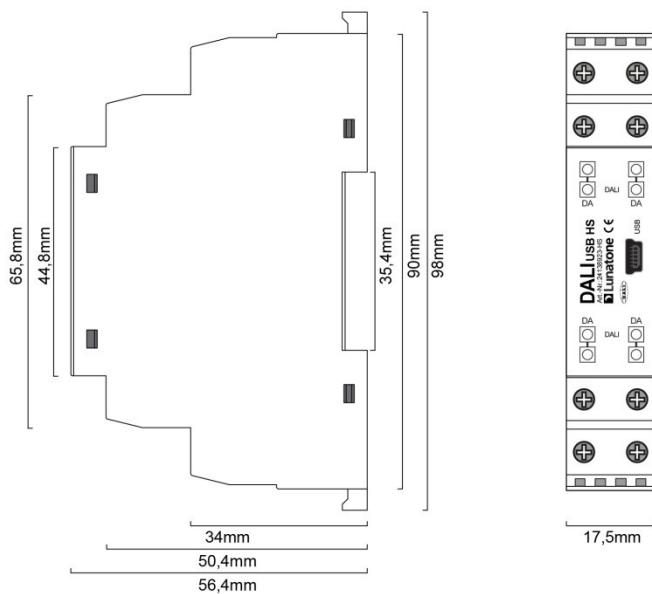
Connection and Electrical Specification

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).
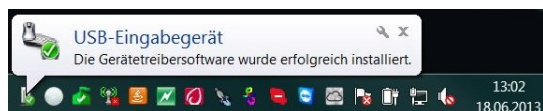
A driver installation is not required due to the windows-integrated support for human interface devices. The DALI USB will be detected by the operating system and all required drivers will be installed automatically.
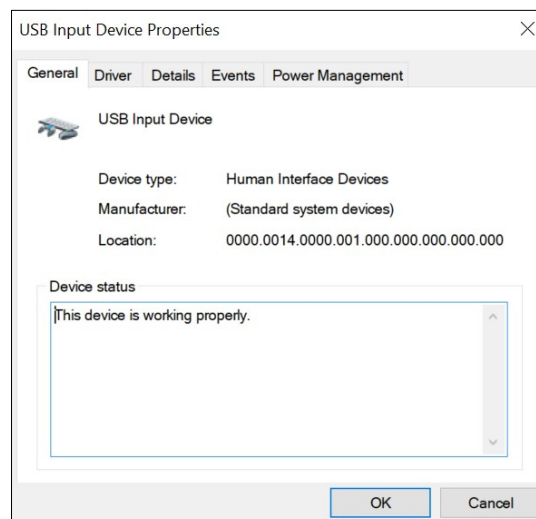
After the installation process is successfully completed the device can be found in the Device Manager: section HID (Human Interface Devices).
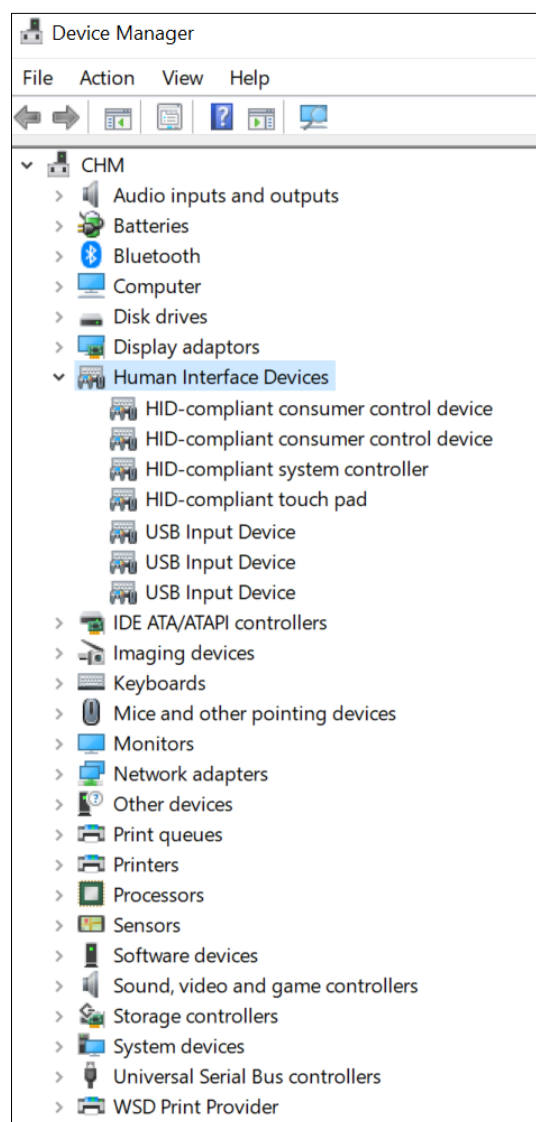
Supported DALI Specifications and Operating Modes

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.

On request, a Windows developer kit to access to the DALI USB interface is available for software development.

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.

☞ Please note that the maximum bus supply must not exceed 250mA. If the external bus supply already delivers 250mA, the internal 30mA should not be activated.
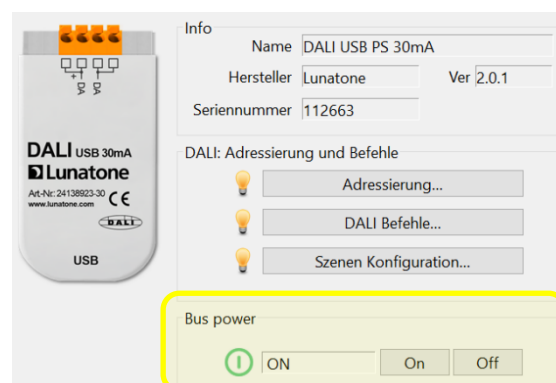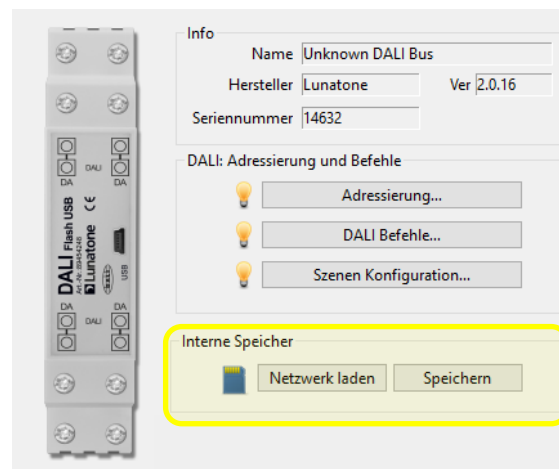

wDALI USB

Instead of a USB cable, a USB dongle 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 requiered. 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

Additional Information and Equipment

DALI-Cockpit – free configuration tool   for DALI systems
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

Technical Support: support@lunatone.com

Requests: sales@lunatone.com

www.lunatone.com

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.