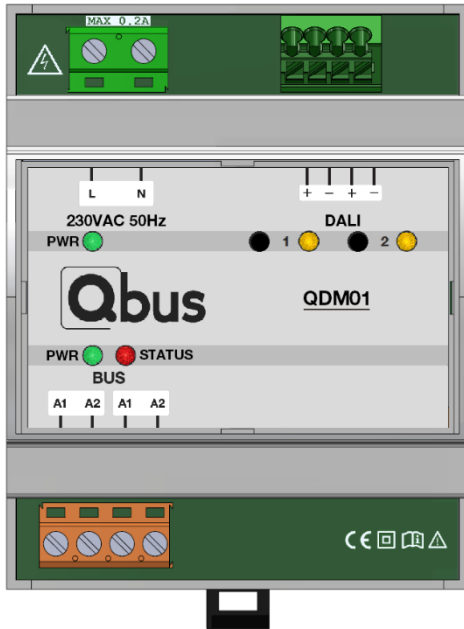


# Qbus DALI Master with 1 DALI- BUS (QDM01)



1 QDM01

## 1. Product description

The Qbus DALI Master with one DALI(2) bus, is a module within the Qbus bus system. The QDM01 has a built-in DALI(2) power supply. You can easily configure and address the DALI(2) devices via System Manager III without additional DALI software or interfaces. The QDM01 supports up to 64 DALI(2) devices. All DALI and DALI2 lighting devices can be controlled with the QDM01 via individual DALI(2) addresses or DALI(2) group addresses. Each address or group address can be linked to one of the 64 available Qbus outputs with one of the many Qbus modes such as e.g. dimmer, toggle, timer and RGB+ mode. In addition to supporting the Qbus DALI Sensors (QDSEN & QDSEN/HB), the QDM01 also supports certain DALI2 sensors and certain functions (Motion and LUX). With the rise of Human Centric Lighting (HCL) and the associated demand for daylight simulation, but also the demand for RGB(W) via DALI(2), this module supports DALI Type 8 (DT8) in addition to LED devices (DT6) and older types. The module has two push buttons on the front for direct control of the entire system. As soon as the QDM01 is equipped with 230VAC voltage, all DALI(2) devices are connected to this QDM01, and the DALI(2) lighting devices are powered, the installation can be tested and operated via the push buttons. Using System Manager III and the QDM01 you can set the physical minimum and maximum levels as well as the behavior for the DALI functions "Level Power ON" and "Level System Failure" (devices DT6 and DT8!) In this way you can improve the user experience for residential use.

Just like every Qbus module, the QDM01 has a unique serial number that is entered into the Configuration Software System Manager III during configuration. All programmed data remains stored internally in a permanent memory.

## 2. Safety regulations



Read the full manual before installing and activating the module.

### ATTENTION

- The module must be installed, started and maintained by a licensed electrical installer in accordance with the applicable legal regulations of the country.
- This module is only suitable for DIN-rail installation EN50022. The module must be installed in a fireproof, closed distribution box with ventilation grilles.
- Before working on the QDM01, the power must be switched off.
- Never connect external voltages (e.g. 230Vac) to the DALI buses, or to the Qbus bus! This will cause irreparable damage to the module and/or connected devices.
- A single DALI device may absorb 2mA bus load so that the maximum of 64 devices can be reached.
- Do not use the module in an environment that is accessible to children.

## 3. Installation and cabling

**ATTENTION : INTERRUPT THE POWER SUPPLY TO THE MODULE BEFORE WORKING ON THE MODULE.**

**Placement:** Click the module on a DIN rail DIN EN50022.

**Power supply:** A two-pole circuit breaker of maximum C16A must be connected to the 230Vac module power supply, but a fuse of 2A is sufficient. Diameter of the conductor: minimum 1.5mm<sup>2</sup> by 16A. Remove about 7mm of insulation from the conductor and screw the conductor into the connector L-N.

**Load:** The QDM01 provides one DALI(2) bus for up to 64 DALI(2) devices calculated at 2mA per DALI(2) device. The voltage for the lighting devices is provided separate from the QDM01. No external voltage or 230V may be connected to the DALI(2) bus! Two pairs of conductors can be connected to these plug terminals. Internally, there is a bridge between the clamps, so there is no difference between the first DALI+ & DALI- clamp and the second DALI+ & DALI- clamp. Remove about 7mm of insulation from the DALI wires and push the bare conductors into the DALI clamps +& -. Both solid core and stranded wire between 0.5 – 1.5mm<sup>2</sup> can be used. To bring in the stranded wire, there must be pushed with a screwdriver on the pressure spring to open the clamp.

The wires can be loosened again by pushing on the pressure spring of the clamp at the top with a screwdriver. However, do not make a turning movement with the screwdriver, because this can lead to irreparable damage to the clamps! Do not switch on the power to the luminaires until all connections have been checked and the DALI bus is live. In rare cases, devices that were powered on before the DALI bus was powered on are not addressed. In that case, turn the power of these fixtures off and on again.

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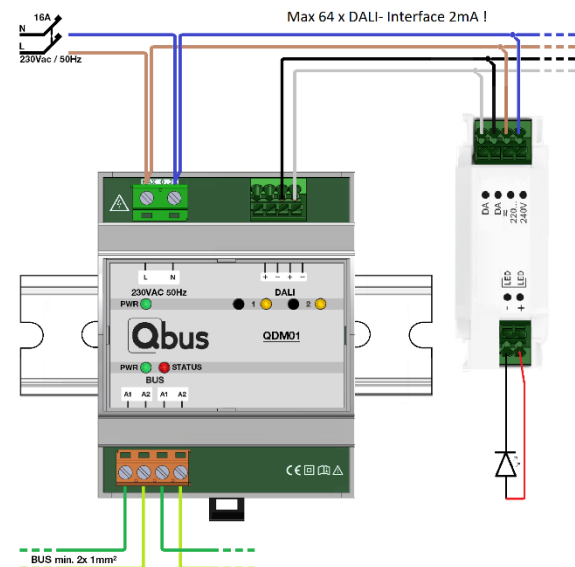
## Qbus bus cabling:

Any shielded cable with conductors of at least 2 x 1 mm<sup>2</sup> can be used as a bus cable. The green shielded EIB cable is the recommended cable when the conductors are tormented together 2 to obtain a section of at least 2 x 1 mm<sup>2</sup>. The shielding of the bus cable must, and may only, be connected at one end to the general grounding of the building.

## LED indication on the module:

- Green: Power supply OK (top) / Bus OK (bottom)
- Red: Status LED 2 seconds during start-up and then during programming.
- Orange: Output active; Flashing = error (overload, short circuit).

Manual operation: The buttons on the QDM01 are used to operate the DALI(2) devices directly from the module. In this way you can check whether the installation is working correctly before starting the assignment of the DALI(2) addresses. Via push button 1 you can operate all live DALI(2) devices, via push button 2 you can operate the unaddressed DALI(2) devices. In the case of non-operable devices, the voltage and DALI(2) connections must be checked.



2 QDM01 Wiring diagram

## 4. Technical data

### General specifications QDM01

- Ambient temperature:  
Operating temperature: 10°C to 45°C  
Storage temperature: -10°C to 60°C
- Maximum humidity: 93 %, no moisture condensation
- Power supply: 230Vac (max. 0.2A)
- Peak load Qbus bus: 10mA
- Max. installation height: 2,000 meters above sea level

### General specifications DALI bus

- DALI bus power supply: 250mA
- DALI bus- spanning: 16Vdc

- Maximum distance between QDM01 and DALI(2) device is 300m with a minimum wire section of 1.5mm<sup>2</sup>
- Topology: star and tree structure. No closed loop!
- Support DALI types: DT0, DT1, DT2, DT3, DT4, DT5, DT6, DT7, DT8 (fixed colors or color wheel only)
- Support sensors BEG-Luxomat BMS DALI 2; sensors Esylux BMS DALI2
- Dual DALI connection, so that you can start 2x from the module for the same DALI bus

## Electrical protection:

- Qbus Bus: 13.8Vdc - 18Vdc very low safety voltage
- Non-toxic, in accordance with WEEE/RoHS
- Overspanning CAT. III (CAT.3)

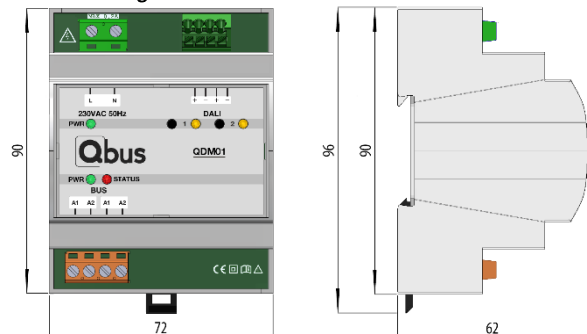
## CE:

- Qbus declares that this product complies with all applicable European directives and regulations.
- The EU declaration of conformity is available on request.

## Physical specifications:

- Housing: plastic, self-extinguishing according to UL94-V0
- Degree of protection: IP20, EN 60529
- Installation: quick mounting on DIN rail, width 4 modules
- Dimensions (H x W x L): 62mm x 90mm x 72mm
- Weight: about 139g.

## Dimensions diagram:



3 QDM01 Dimensions

## 5. Explanation of symbols



Equipment where protection against the risk of electrical contact is based not only on basic insulation, but also on additional protection such as double insulation or reinforced insulation. There is no possibility of grounding.



Before connecting the device, it is mandatory to read the manual of the respective product. ISO7000-0434

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Mains connection (230V) to the power connector. IEC 60417-5036



CE conformity. All declarations of conformity are available on request.

### 6. Warranty terms

#### Warranty period

2 years from delivery date. The warranty no longer applies if the module has been opened! The warranty period is extended by 2 years if it was installed by a recognized Qbus installer. In case of defects, Qbus support must be contacted by an authorized installer. After registration with Qbus support, the defective module with description of the defect can be sent postage-free to our Qbus support.

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