

HDL MDL64-BP.53 Buspro-DALI Controller



HDL MDL64-BP.53 Buspro-DALI Controller Instruction Manual

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HDL®

HDL MDL64-BP.53 Buspro-DALI Controller



Specifications:

- **Rated voltage:** 24V DC
- **Rated current:** 15mA / 24V DC
- **Input voltage:** 100 – 240V AC 50/60Hz 0.1A
- **Output current:** 0.25A/17.0V DC
- **Total number of drivers supported:** 64
- **Communication protocol:** Buspro, DALI
- **Working temperature:** -5 ~ 45°C
- **Working relative humidity:** 90%RH, non-condensed
- **Storage temperature:** -20 ~ 60°C
- **Storage relative humidity:** 93%RH
- **Dimensions (W X H X D):** Not specified
- **Net weight:** Not specified
- **Housing material:** Not specified
- **Installation IP degree (compliant with EN 60529):** Not specified
- **Approved:** Not specified

Product Usage Instructions

Safety Precautions:

Danger: Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire, or personal injuries.

Wiring:

Tips: For Buspro connection, a hand-in-hand connection is recommended. There are no polar requirements for DALI Buspro. After all of the cables are terminated, check for correct and good terminations.

Installation:

Warning: Before performing any installation procedures on the device, it is crucial to disconnect the device from all voltage sources.

1. Fix the DIN rail with screws.
2. Mount the device on the DIN rail.
3. Slide the device to the desired position.

Note: After all of the cables are terminated, check for correct and good terminations. Before powering on, please ensure the device is tightly on the wall body.

Disassembly:

WARNING: Before disassembling, please cut off the power supply, and strictly prohibit operation with electricity.

Operation:

The device is configured with programming button and Fn button with indicators.

- **Programming button/indicator:** Long press for 2s to enter programming mode (red indicator). Flashes green every 2s in normal operation. Flashes red during Buspro communication. Flashes red per second during device positioning. Flashes red quickly during firmware update.
- **Fn button / Status indicator:** Short press to control broadcast switch (red indicator on = all lights on DALI bus on, red indicator off = all lights off).

FAQ:

Q: Can I use this product without connecting all 64 DALI drives?

A: Yes, you can use the product with fewer drives connected, but the functionality may be limited based on the connected drives.

Q: How do I perform an OTA upgrade on this device?

A: To perform an OTA upgrade, follow the instructions provided in the user manual specific to the upgrade process for this device.

MDL64-BP. 53

Before using this product, please read this manual carefully and keep it properly
Document Version C

Overview

Buspro-DALI controller (Model: MDL64-BP.53, hereinafter referred to as “the product” or “the device”) is a DALI-2 dimming control module based on HDL Buspro communication protocol. The device has single-loop control, area/group control, scene control, sequence control, and can realize intelligent control of lighting equipment and linkage control of intelligent equipment through APP.

Note: The pictures and illustrations provided in this instruction manual are for reference purposes only, and the actual product may differ.

Key Functions

- Supports 64 DALI drives with different functions
- Multiplexing of pre-set parameters in the driver
- Supports dimming, color temperature and color control.
- Supports 16 zones/groups of settings, which can be controlled separately
- 16 scenes can be set in each independent area, reaching a maximum of 256 scenes
- Sequence can be set to select different areas of the scene
- Support status feedback
- Support bus short circuit protection
- Support OTA upgrade

Appearance

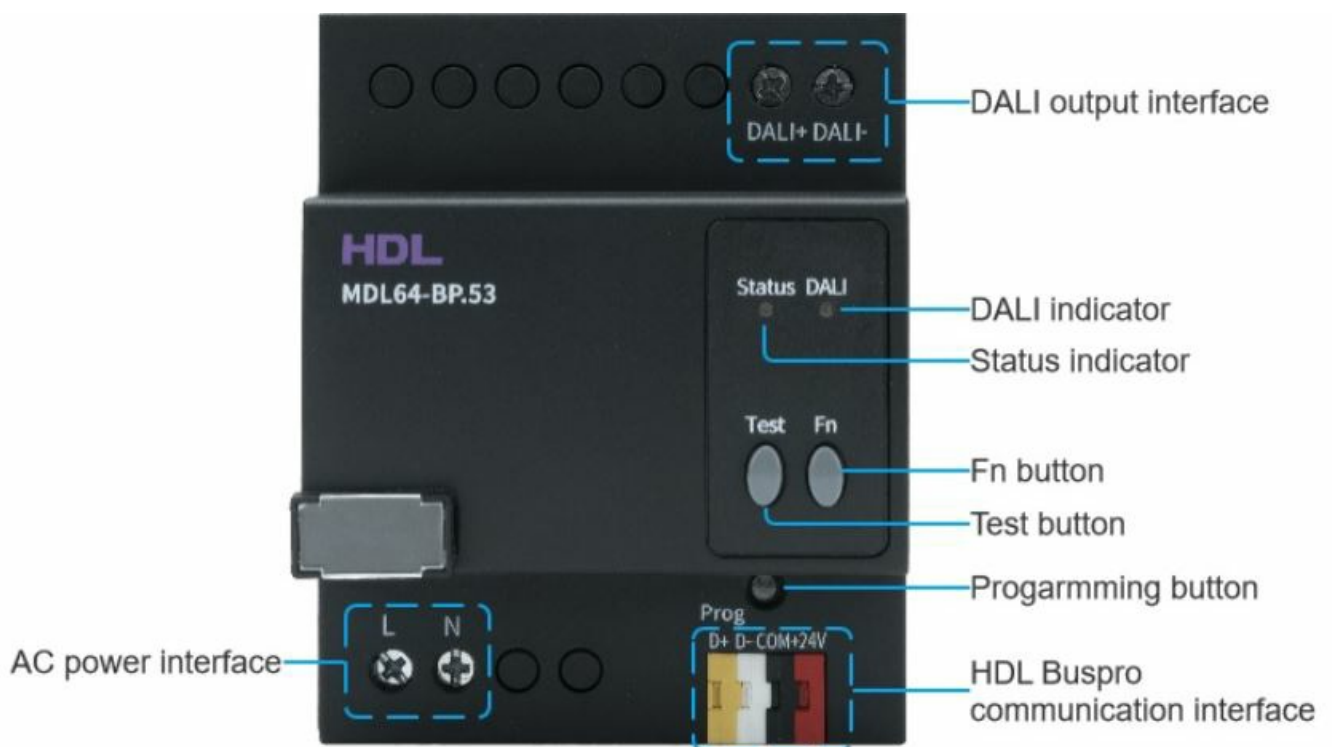


Figure 1

Technical Data

Rated voltage	24V DC
Rated current	15mA / 24V DC
Input voltage	100 – 240V AC 50/60Hz 0.1A
Output current	0.25A/17.0V DC
Total number of drivers supported	64

Communication protocol	Buspro, DALI
Working temperature	-5°C ~ 45°C
Working relative humidity	≤90%RH, non-condensed
Storage temperature	-20°C ~ 60°C
Storage relative humidity	≤93%RH

Specifications

Dimensions (W X H X D)	72×90×64mm See Figure 2 & 3
Net weight	338g
Housing material	Nylon, PC
Installation	35mm DIN rail mounted (See Figure 5 & 6)
IP degree (compliant with EN 60529)	IP20
Approved	RoHS CE

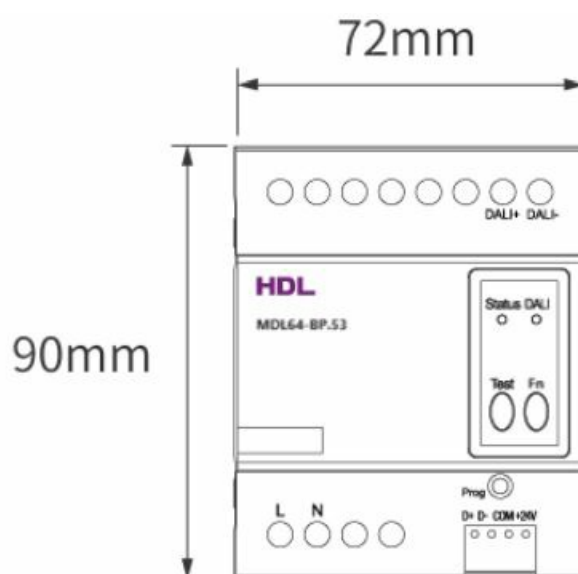


Figure 2



Figure 3

Safety Precaution

Danger:

Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire or personal injuries.

Warning:

- The installation and testing for the product must be carried out by HDL Automation Co., Ltd. (hereinafter referred to as HDL) or its appointed service agencies. The electric construction shall comply with local laws and safety regulations.
- The device should be installed with DIN rail in DB box. HDL will not be responsible for any consequence caused by the inexpert or faulty installation and wiring methods, which are not in accordance with the instructions contained in this datasheet.
- Please contact HDL after-sales departments or our designated service agencies for your maintenance service. Product failures caused by private disassembly are not subject to the warranty.

Caution:

- Before performing any installation or disassembly procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.
- Do not use corrosive liquid to wipe the device body, especially the interface, so to avoid damage to the device.
- Do not wipe the device with a damp cloth.
- Before performing any maintenance or cleaning procedures on the device, it is imperative to disconnect the device from all voltage sources. This precautionary measure is necessary in order to prevent electric leakage and the risk of electric shock.
- Buspro cable: CAT5E or HDL Buspro cable
- For Buspro connection, a hand-in-hand connection is recommended.
- After all of the cables are terminated, check for correct and good terminations.

- There are no polar requirements for DALI Buspro.
- Overrange is not allowed. Please use the device in accordance with the technical specifications.

Wiring

Tips: For Buspro connection, a hand-in-hand connection is recommended. There are no polar requirements for DALI Buspro. After all of the cables are terminated, check for correct and good terminations.

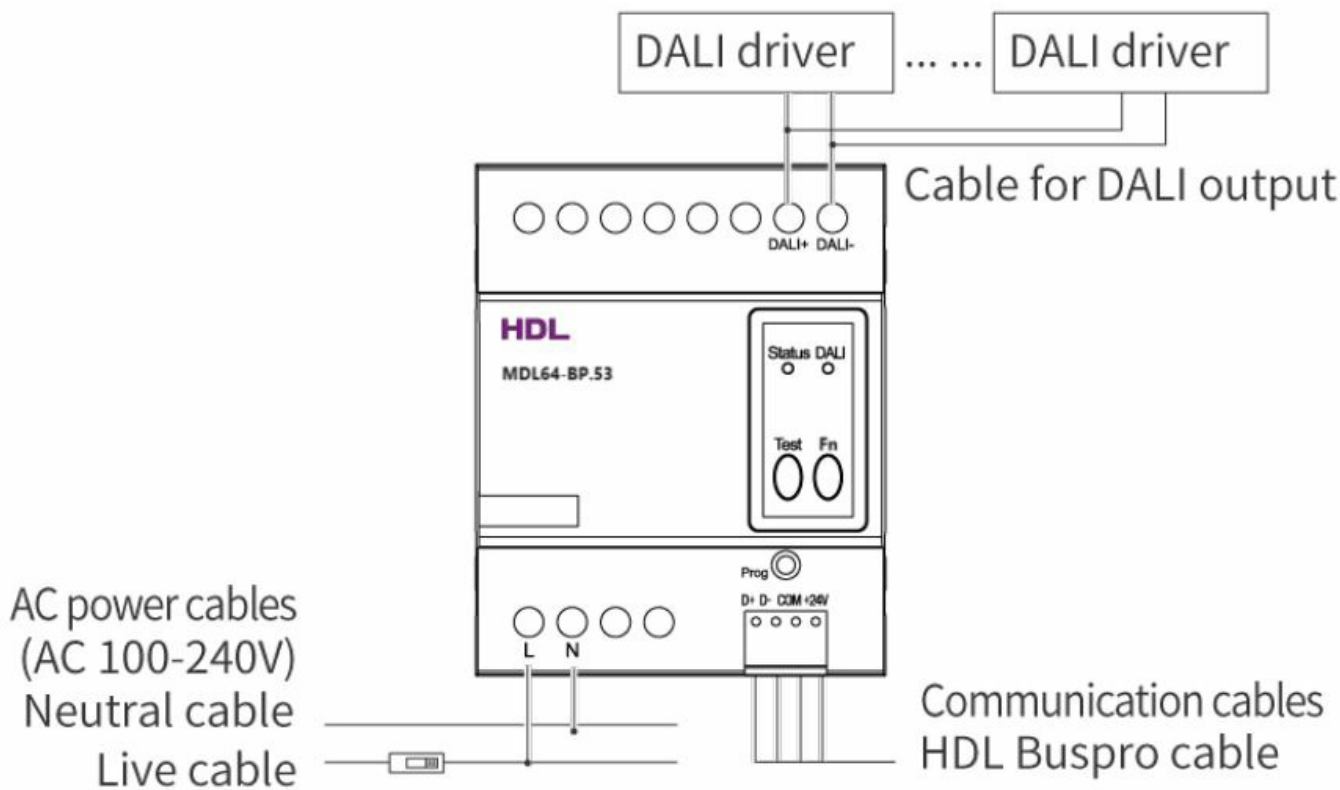


Figure 4

HDL Buspro Cable Guide

HDL Buspro	HDL Buspro Cable	CAT5 / CAT5E
DATA+	Yellow	Blue/Green
DATA-	White	Blue white/Green white
COM	Black	Brown white/Orange white
24V DC	Red	Brown/Orange

Installation

Warning: Before performing any installation procedures on the device, it is crucial to disconnect the device from all voltage sources.

Step 1. Fix the DIN rail with screws.

Step 2. Mount the device on the DIN rail.

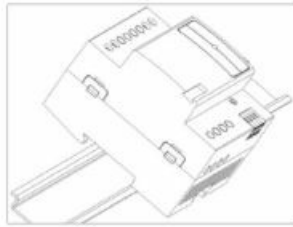


Figure 5

Step 3. Slide the device to the desired position.

Note: After all of the cables are terminated, check for correct and good terminations. Before powering on, please ensure the device is tightly on the wall body.

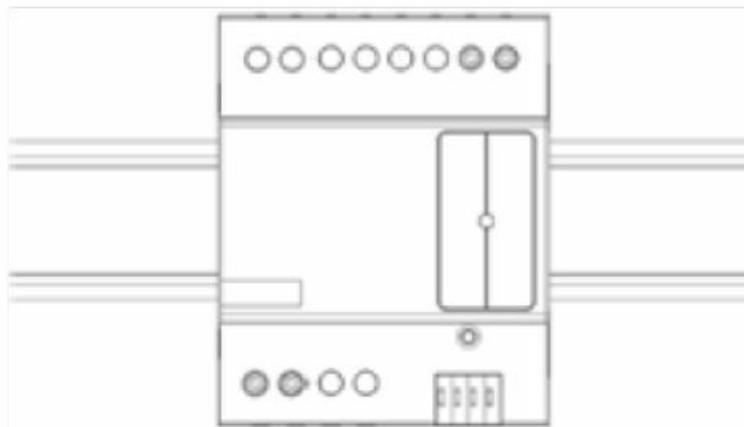


Figure 6

Disassembly

WARNING: Before disassembling, please cut off the power supply, and strictly prohibit operation with electricity.

Operation

The device is configured with the following buttons and indicators.

Tips: To press the buttons, it is recommended to use the appropriate tools, such as an eject pin.

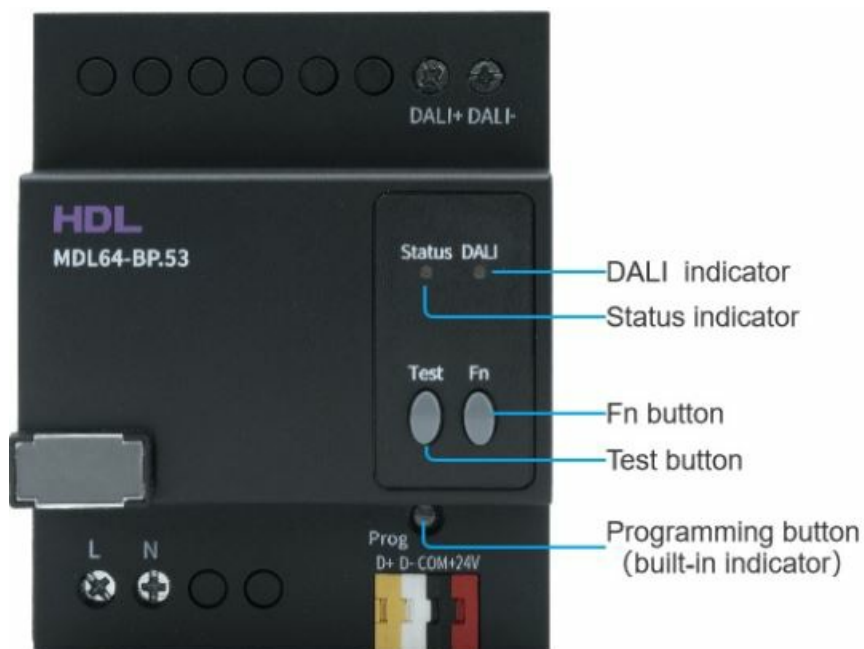


Figure 7

Programming button/indicator

Operation	Result / Device Status
Long press programming button for 2s	The device enters programming mode, with the indicator turning red.
/	When the device runs normally, the indicator flashes green in every 2s.
/	When Buspro communication is in progress, the indicator flashes red.
/	When the device positioning is on-going, the indicator flashes red per second.
/	During the firmware updating, the indicator flashes red quickly.

Fn button / Status indicator

Operation	Result / Device Status
Short press Fn button	Broadcast control switch, Status indicator red on, all lights on DALI bus are on.
Short press Fn button again	Broadcast control switch, Status indicator red off, all lights on the DALI bus are off.

Test button / Status indicator

Operation	Result / Device Status
Long press Test button for 30s	Re-assign address, with the indicator flashing green.
To start ballast test, i.e., all-lamp-flash test, short press Test button; To shut down the test, short press Test button again. Note: After launching the test, if not shut down in 10 minutes, the test will be auto-off.	During ballast test, the status indicator is blinking red at short intervals (on for 2s and then off for 2s).

DALI indicator

Operation	Result / Device Status
/	When the device runs normally, the indicator turns green.
/	When DALI communication is in progress, the indicator flashes red.

Packing List

- Buspro-DALI Controller*1
- Terminal block*1
- Label*7
- Datasheet*1

Note: After unpacking, please check if the product and the parts are complete.

Legal Statemen

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Update History

The form below contains the information of every update. The latest version contains all the updates of all former versions.

Version	Update Information	Date
V1.0	Initial release	March 22, 2024

Troubleshooting

E-mail: hdltickets@hdlautomation.com

Website: <https://www.hdlautomation.com>

Technical Support

E-mail: hdltickets@hdlautomation.com

Website: <https://www.hdlautomation.com>

	<p>HDL MDL64-BP.53 Buspro-DALI Controller [pdf] Instruction Manual</p> <p>MDL64-BP.53 Buspro-DALI Controller, MDL64-BP.53, Buspro-DALI Controller, Controller</p>
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References

- **[HDL](#)** **[Smart Home Automation Products Manufacturer - HDL Automation](#)**
- **[User Manual](#)**

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