4CH 10A 0-10V Dimming Actuator

Datasheet



MDA04-R10-BP.13

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Before using this product, please read this datasheet carefully and keep it properly!

Document Version：C

◇◆ Overview

4CH 10A 0-10V Dimming Actuator（Model: MDA04-R10-BP.13 , hereinafter referred to as "the Device"). It features 4 independent output channels, each equipped with a direct key and status indicator, supporting lighting on/off, scene mode and sequence control.

NOTE: All illustrations in this manual are for reference only. Please comply with the physical device for operation.）

Main Functions：

- HDL Buspro Communication Protocol.
- Integrates 4-channel relay switch output.
- Equipped with 4-channel 0-10V bidirectional analog ports, supporting dimming control of LED lamps, fluorescent lamps and other 0-10V lighting fixtures.
- Up to 5 separate zones with a maximum of 12 scenes per zone.
- Up to 4 sequences; each sequence contains 12 steps, and the maximum runtime for each step is 60 minutes. Four sequence operation modes are available: forward, backward, forward and backward, random.
- Each channel supports low threshold, high threshold and maximum threshold settings, suitable for various types of loads.
- Each channel is equipped with a bypass button for manual control.
- The device can automatically activate either a designated scene or the scene prior to power failure upon restart.
- Supports HDL Buspro online upgrade .

◇◆ Appearance

1. Product Dimensions

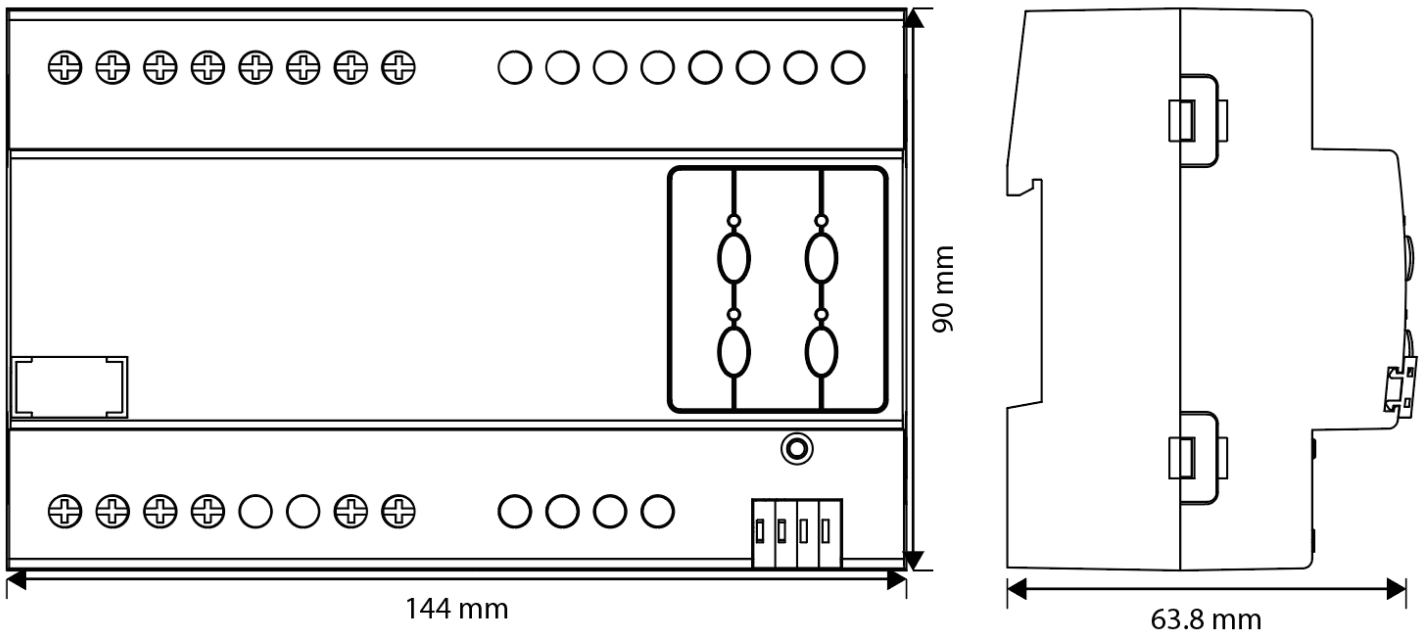


Figure 1

2.Port Information

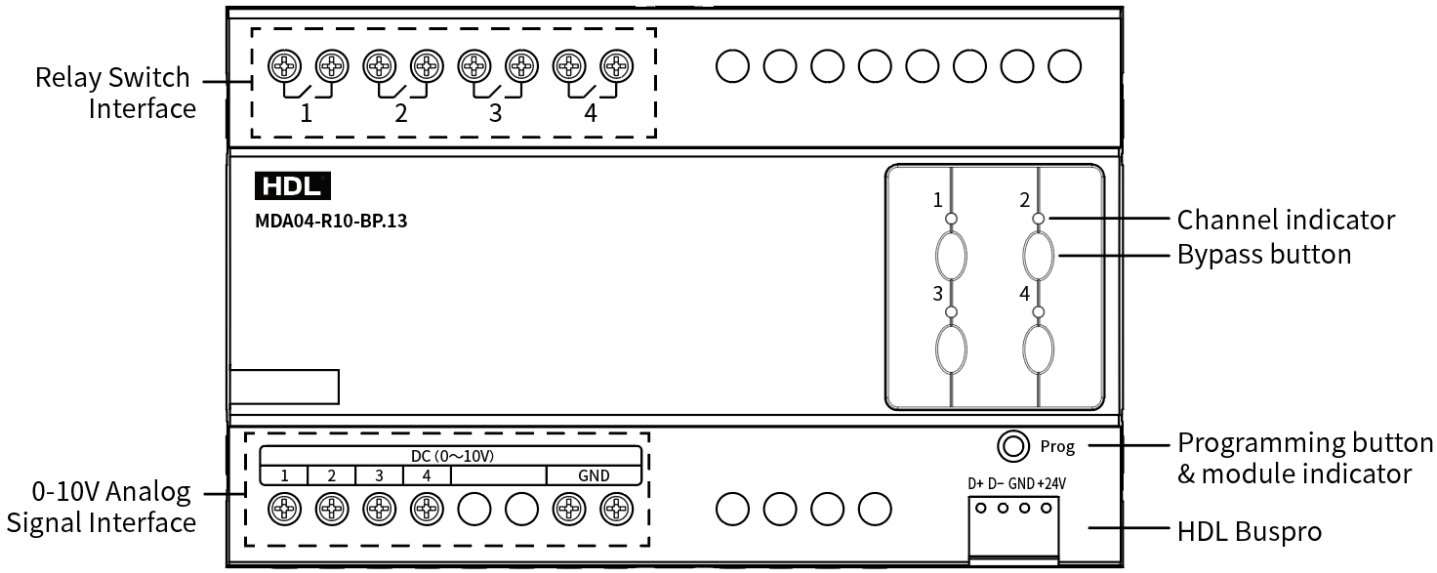


Figure 2

◇◆ Technical Data

Item	Parameter
Rated voltage	24V DC
Rated current	40mA / 24V DC
Input voltage	100-240V~50/60Hz
Relay max.output current	4CH, 10A/CH
Relay Specifications	TV-10
0-10V Output	4CH, 50mA/CH(Total current<100mA)
Communication protocol	HDL Buspro
Working temperature	-5℃~45℃
Working humidity	≤90%RH, non-condensed
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%RH

◇◆ Specifications

Item	Parameter

Dimensions（W × H × D）	144×90×63.8mm
Net weight	300g
Housing material	Nylon，PC
Installation	35mm DIN rail mounted
Protection rating (Compliant with EN 60529)	IP20
Product Certifications	CE, RoHS

◇◆ 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：

- Buspro cable - CAT5E or dedicated HDL Buspro cable
- Buspro connection - Series connection (hand-in-hand recommended)
- Load in each channel - Less than 800W dimmable fluorescent tube
- 0-10V load - The output of each channel is 50mA, total output of 6 channels is less than 100mA.
- Each channel needs to connect a breaker or fuse for protection
- Connection checking - Check all connections after installation

Caution：

- The installation and testing for the product must be carried out by our company or our 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. We 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 operating instruction.
- Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire or personal injuries.
- Please contact our after-sales departments or our designated service agencies for your maintenance service. Product failures caused by private disassembly are not subject to this warranty.
- It is not allowed to exceed the range.

◇◆ Wiring

Note：

- For Buspro connection, a hand-in-hand connection is recommended.
- After all of the cables are terminated, check for correct and good terminations.

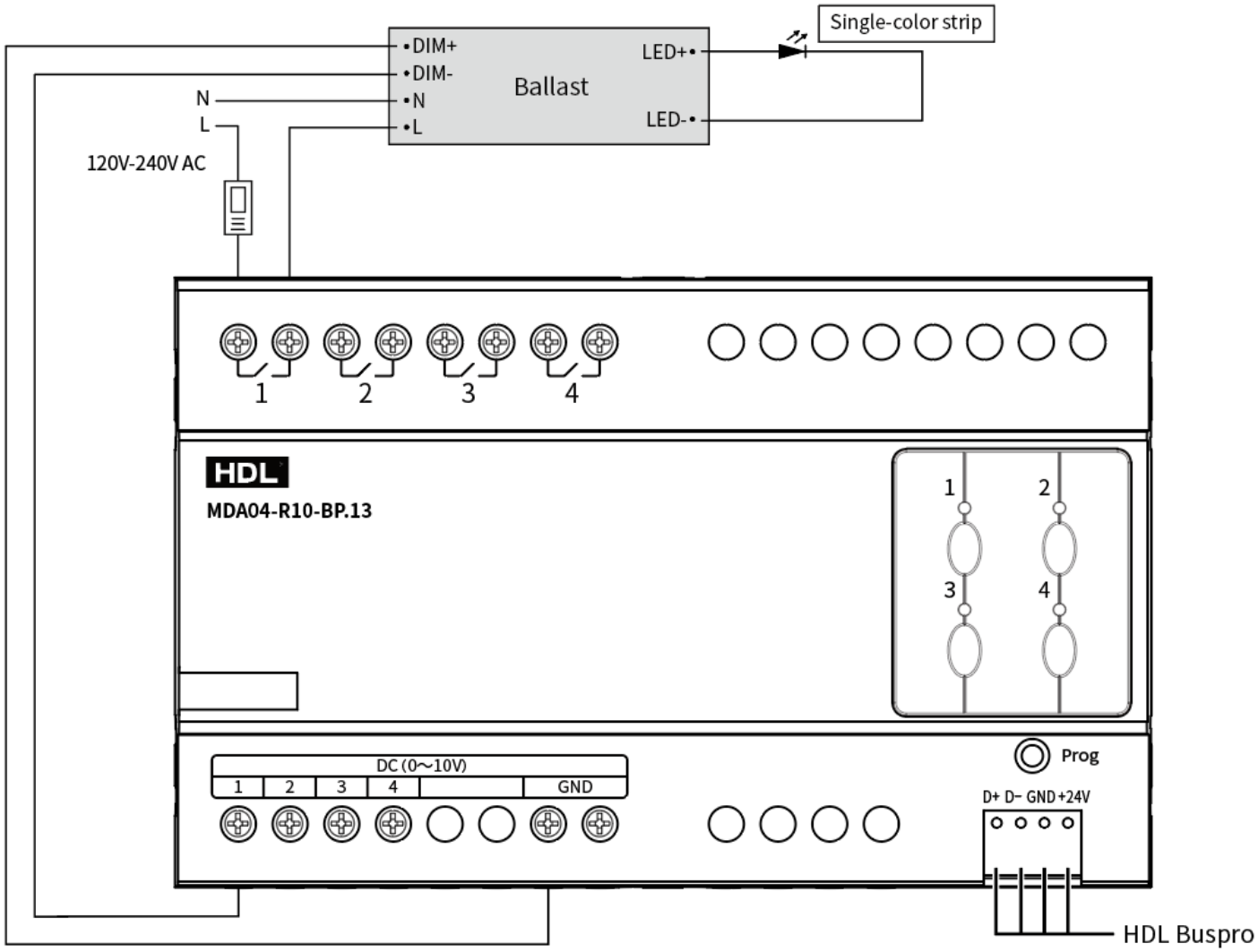


Figure 3

HDL Buspro Cable Guide

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

◇◆ Installation

Warning：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.

Step 1. Fix the DIN rail with screws.

Step 2. Buckle the bottom cap of the actuator on the edge of the DIN rail.

Step 3. Press the device on the DIN rail, slide it and fix it up until an appropriate position is adjusted.

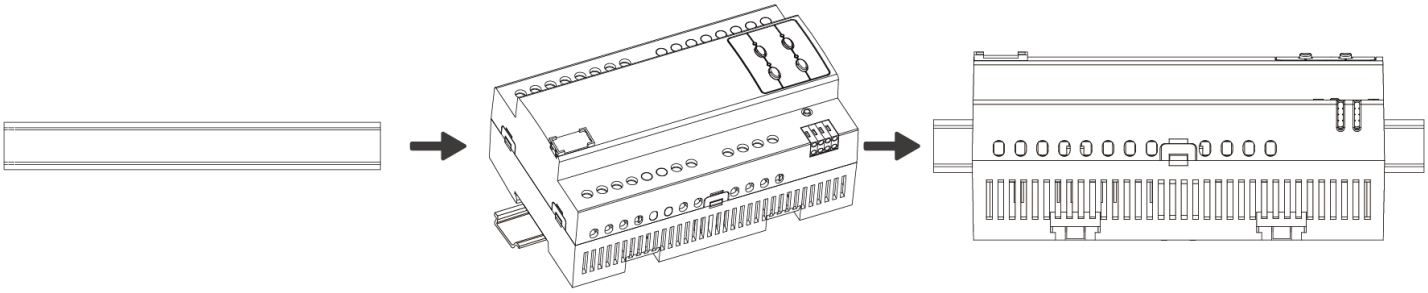


Figure 4

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.

◇◆ Operation

This device features 1 programming button and 4 direct-access buttons. See details below:

Note: Use an appropriate tool (e.g. reset pin) to actuate the programming button.

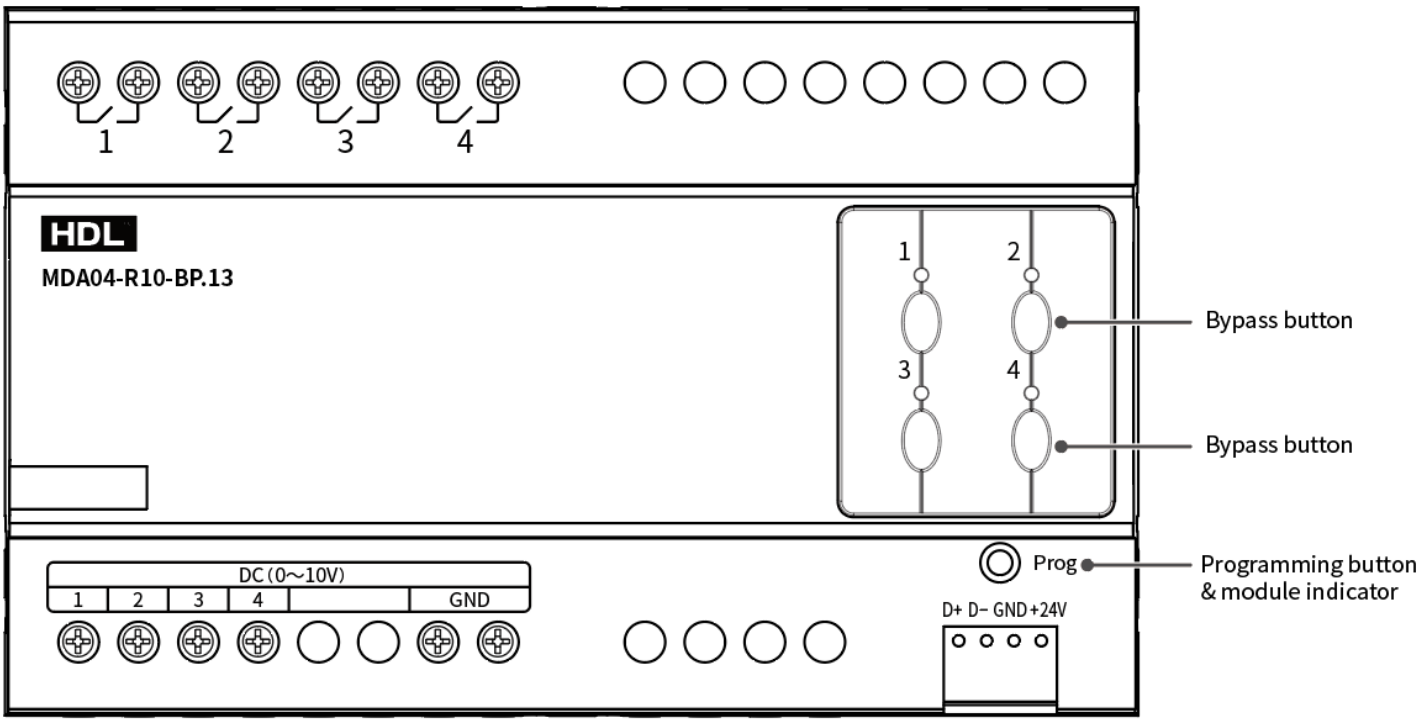


Figure 5

Operation	Result
Press and hold the programming button for 2 s.	The device enters programming mode, and its LED illuminates red. It automatically exits programming mode upon 1 minute of inactivity.

/	Under normal operation, the indicator flashes.
Under normal operation, press and hold the programming button for approx. 3s.	Read and modify device address via commissioning software.

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◇◆ Packing List

- 4CH 10A 0-10V Dimming Actuator ×1
- Buspro connector ×1
- Label ×7

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

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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	July 31, 2026

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