

## Parameters

Electric Parameters:	
Working power	DC15~30V
BUS power consumption	28mA/DC24V
Output channel	4CH/16A
Relay	50A Magnetic latching relay
Max current in each channel	16A
Electronic life time of relay	>60000 (Resistance Load)
Protection	Connect a breaker in each channel
Environmental Conditions:	
Working temperature	-5°C~45°C
Working relative humidity	Up to 90%
Storage temperature	-20°C~+60°C
Storage relative humidity	Up to 93%
Approved	
CE	
RoHS	
Production Information:	
Dimensions	72×90×66 (mm)
Weight	248g
Housing material	Nylon, PC
Installation	35mm Din Rail installation
Protection degree	IP20

## Important Notes

- Bus cable - HDL Buspro/KNX cable, 0.8mm single-core copper cable.
- Bus Connection - Series connection (hand-in-hand).
- Output Channel - The following list is the recommended load for output channel. To protect the relay, please connect a 16A breaker for each channel.
- Recommended load type and power
 

Motors:	4H ( 1HP=746W )
Incandescent lamp load:	3500 W
Inductive transformer :	1800 W
Electronic transformer:	2000 W
Halogen lamp 220 V	3500 W
Mercury vapor lamp	
* Uncompensated lamp :	2800 W
* Parallel compensated lamp :	2800 W
Fluorescent lamp T5 / T8	
* Uncompensated lamp :	3500 W
* Parallel compensated lamp :	2000 W
* DUO lamp :	2000 W
Dulux lamp	
* Uncompensated lamp :	1500 W
* Parallel compensated lamp :	500 W

## Overview



**HDL-MR0416.431** Intelligent relay module, has 50A magnetic launching relay, zero power consumption and high reliability. The communication interface is HDL Buspro, which is based on RS485 protocol.

## Functions

- 4-channel relay output unit.
- Scene controller function available.
- Up to 4 separate areas, each area has 8 scenes, maximum running time for scene is 60 minutes.
- Each area has 2 sequences, each sequence has 12 steps.
- Each channel has light protection delay (0-60 minutes).
- Each channel has batch turn-on delay(0-25 seconds).
- Each channel has manual control for relay unit.
- You can select specified scene or scene before power off when the device restarts.
- Supports easy programming and HDL Buspro online upgrading.
- Communication: HDL Buspro.

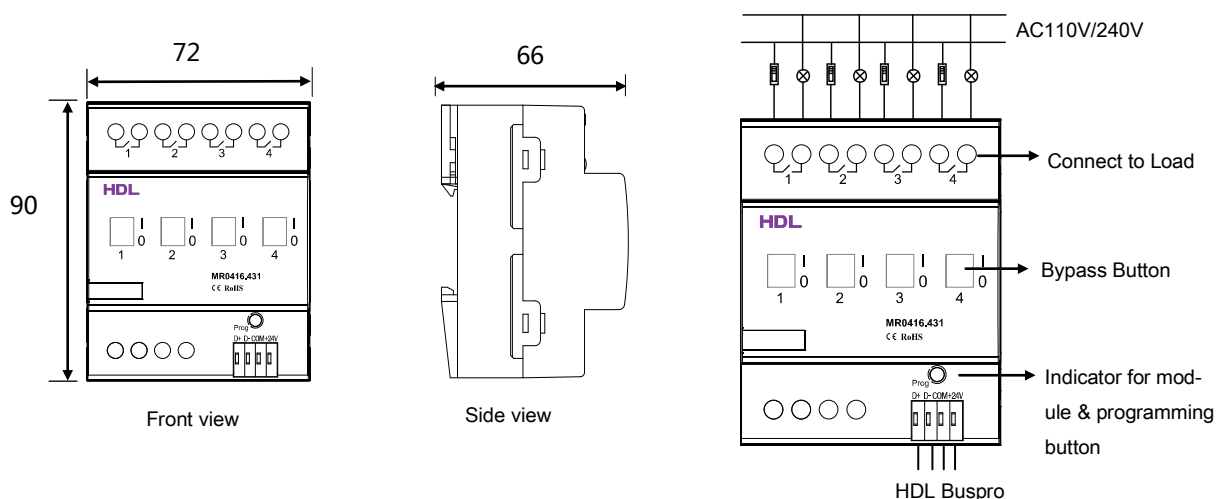
## Installation Step

- 35mm Din Rail Installation, inside DB box.
- Mark up each output connection cable.
- Connect the load and HDL Buspro cable.
- Check if there is any short circuit in output connection cable.
- Check the HDL Buspro connection, avoid any mistakes.
- Isolate the high power and low power.
- Tighten the screw again for all of terminal.

## HDL Buspro Definition for Cable

HDL Buspro	HDL Buspro/KNX
DC24V	Red
COM	Black
DATA-	White
DATA+	Yellow

## Dimensions and Wiring



### Indicator for module and easy programming mode

**Indicator for module:** Flickers when the module is working properly. Keep pressing the indicator for 3 seconds, it will turn red, then user can read and modify the address of the module in the HDL Bus Pro set up software.

### Steps for easy programming mode :

1. Press the programming button for about 10s, all output channel will be turned off automatically, the indicator will flicker fast
2. Now the panel shows "programming", then press Button 9, 10 of DLP switch together, the panel will display "external programming".
3. Keep pressing the indicator for 2s, it will change the load, short press the indicator will change the load's status.  
Note: The programming channel is from channel 1 to channel 4, and then it will go back to the channel 1. If you want to set multiple channels, the panel must be set to "Combination mode".
4. Choose a button which is used to control the channel. Keep pressing the button, it will cover the original targets, short press the button, it will add the relay loads.
5. Keep pressing the Indicator for 10 seconds to finish the programming.

**This function is to be used in conjunction with the new generation of DLP.**

## Safety attention



- The screw down strength should not exceed 0.4Nm.
- Connect a breaker or fuse with each channel.
- Current in each channel is less than 16A.
- Installation position: Distribution box (DB).
- Do not make wrong connection on Bus interface, it will damage the Bus interface of this module.
- Avoid the rain or water into module, it will damage this device.
- Do not get AC voltage into Bus wire, it will damage all devices in the system.
- Ensure good ventilation.
- Avoid contact with liquid and aggressive gases.

