HDL®

M/FMC3R.1
KNX 3CH 10A Flush-mounted Switching Actuator
Hardware Version: A

KNX®

Datasheet
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Figure 1. KNX 3CH 10A Flush-mounted Switching Actuator
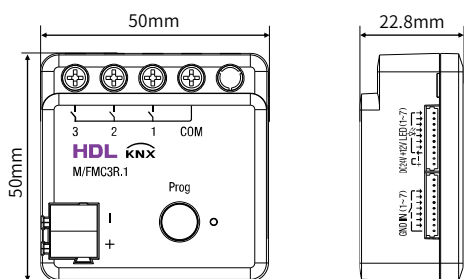

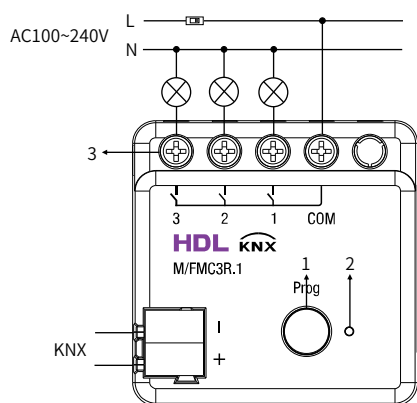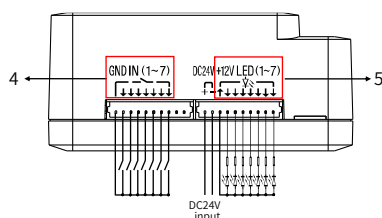Figure 2. Dimensions - Front View   Figure 3. Dimensions - Side View

Figure 4. Wiring

Figure 5. Wiring

Overview

KNX 3CH 10A Flush-mounted Switching Actuator (See Figure 1) is an actuator with three 10A relay control channels, 7 dry contact input channels and 7 LED output channels. In conjunction with the corresponding dry contact panel, the actuator enables smart control of electrical devices, for example, home lighting, curtain, fan, sockets, etc.

Its main features include:

- Supports three 10A relay control channels
- 7 dry contact input channels and 7 LED output channels
- Programming buttons and programming indicators available
- Short press the programming button to enter the programming mode, the red indicator is always on in the programming mode; long press the button to control all the relay channels on/off.
- With scene control, staircase light control, delay control functions
- Channel running time and switching times statistics.

Components and Operation

Dimensions - See Figure 2 - 3
Wiring - See Figure 4 - 5

1. Programming button: Short press the programming button to enter the programming mode, the red indicator is always on in the programming mode; long press the button to control all the relay channels on/off.
2. Programming button indicator
3. Connection terminal of relay channels
4. Dry contact input interface
5. LED output interface

Note(s)

- Installation - Chinese standard wall box (with the recommended depth of 70mm), the specific use is determined according to the actual wiring plan.
- KNX Bus voltage - 21~30V DC, no AC power supply allowed.
- Programming - This device is compliant with the KNX standard and can only be programmed by ETS software.
- To protect the actuator and loads, it is recommended to connect a 10A circuit breaker to each relay channel.
- Each LED output channel needs to be connected a resistor in series to the LED (680Ω-1kΩ resistor is recommended).
- If a resistive load is connected to the relay channel, the maximum load is 10A, and if a capacitive load is connected to the relay channel, the maximum load is 6A.
- The relay can only work if it is connected to a 24V auxiliary power supply.

⚠ Safety Precautions

- The installation and testing for the product must be carried out by HDL Automation Co., Ltd. or its appointed service agencies. The electric construction shall comply with local laws and safety regulations.
- 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 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.

Package Contents

M/FMC3R.1*1 / Cable*2 / Datasheet*1

Figure 6

Figure 7

Figure 6 - 7. Installation

Technical Data

Basic Parameters	
Working voltage	21~30V DC
Working current	25mA/30V DC
Auxiliary voltage	20~30V DC
Auxiliary current	53mA/24V DC
Relay channel	3CH, 10A/CH (AC100~240V, 50/60Hz)
Dry contact	7CH dry contact input
LED	7CH LED output, 12mA/CH
Communication	KNX
Cable diameter of KNX terminal	0.6-0.8mm
External Environment	
Working temperature	-5°C~45°C
Working relative humidity	≤90%
Storage temperature	-20°C~60°C
Storage relative humidity	≤93%
Specifications	
Dimensions	50mm×50mm×22.8mm
Net weight	57g
Housing material	Flame retardant PC
Installation	Wall box (Figure 6 - 7)
Protection rating (Compliant with EN 60529)	IP20
Approved	
CE, RoHS	
KNX	

KNX Cable Guide

KNX	KNX Cable
-	Black
+	Red

Installation

Installation - See Figure 6 - 7

Step 1. Mount the wall box (Chinese standard wall box with 70mm depth) in the wall and draw the AC power cable and KNX Bus cable.

Step 2. Make correct wiring for AC power cable and KNX Bus cable.

Step 3. Put the actuator in wall box with facing outward, and bend the AC power cable and KNX Bus cable into the wall box.

Step 4. Plug in the cable between the actuator and the dry contact panel.

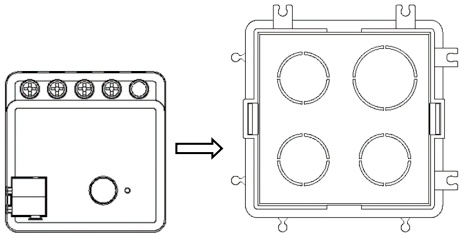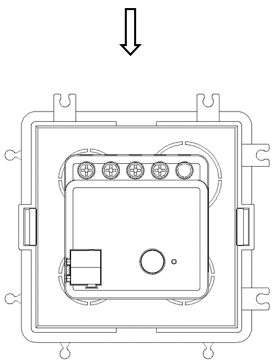Step 5. Mount the panel on the wall box with screws.