M/FME1R.1

KNX 1CH 16A Flush-mounted Switching Actuator (EU)

M/FME2R.1

KNX 2CH 10A Flush-mounted Switching Actuator (EU)

Hardware Version: A

Datasheet

Issued: November 30, 2020

File Edition: A



Figure 1. M/FME1R.1



Figure 2. M/FME2R.1

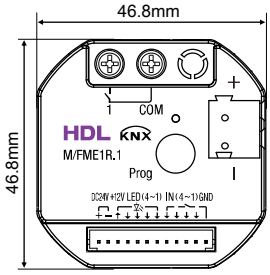


Figure 3. Dimensions - Front View

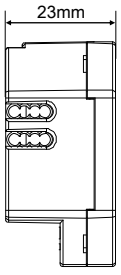


Figure 4. Dimensions - Side View

1CH 16A Flush-mounted Switching Actuator (EU)

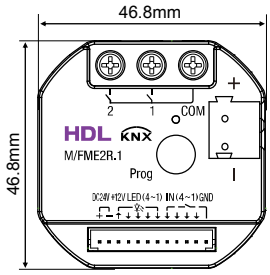


Figure 5. Dimensions - Front View

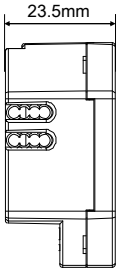
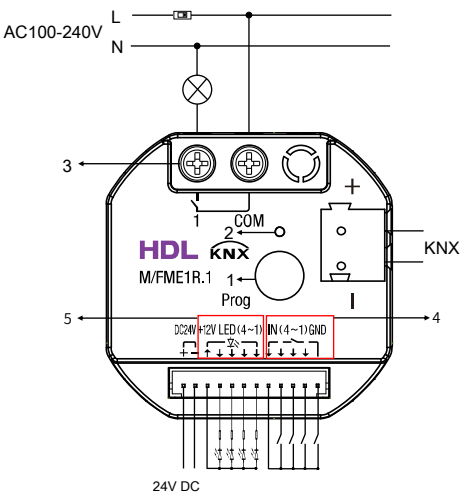


Figure 6. Dimensions - Side View

2CH 10A Flush-mounted Switching Actuator (EU)



Take the connection of M/FME1R.1 as an example

Figure 7. Wiring

Overview

KNX 1CH 16A(2CH 10A) Flush-mounted Switching Actuator (EU) (See Figure 1-2) is an actuator 1CH 16A/2CH 10A relay control channel(s), 4 dry contact input channels and 4 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 1CH 16A/2CH 10A relay switch control channel(s)
- 4 dry contact input channels and 4 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 3 - 6
Wiring - See Figure 7

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

Installation

Installation - See Figure 8 - 9 (Take M/FME1R.1 as an example)

Step 1. Mount the EU wall box 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.

Note(s)

- Installation - EU wall box. If the actuator is installed with the panel, it is recommended to install in the wall box at the edge (not hand-in-hand connection position), and the back of the panel should not thicker than 25mm. 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/16A 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 16A, and if a capacitive load is connected to the relay channel, the maximum load is 10A. (M/FME1R.1)
  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. (M/FME2R.1)
- The relay can only work if it is connected to a 24V auxiliary power supply.

Safety Precautions

- The installation and commissioning of the device must be carried out by HDL or the organization designated by HDL. For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
- HDL does not take responsibility for all the consequences caused by installation and wire connection that are not in accordance with this document.
- Please do not privately disassemble the device or change components, otherwise it may cause mechanical failure, electric shock, fire or body injury.
- Please resort to our customer service department or designated agencies for maintenance service. The warranty is not applicable for the product fault caused by private disassembly.

Package Contents

M/FME1(2)R.1*1 / Cable*1 / Datasheet*1

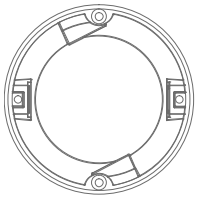


Figure 8



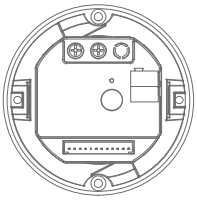


Figure 9

Figure 8 - 9. Installation

Technical Data

Basic Parameters	
Working voltage	21~30V DC
Working current	25mA/30V DC
Auxiliary voltage	20~30V DC
Auxiliary current	25mA/24V DC
Relay channel	M/FME1R.1: 1CH, 16A/CH (AC100-240V, 50/60Hz) M/FME2R.1: 2CH, 10A/CH (AC100-240V, 50/60Hz)
Dry contact	4CH dry contact input
LED	4CH LED output, 12mA/CH
Communication	KNX
Cable diameter of KNX terminal	0.6-0.8mm
External Environment	
Working temperature	-5℃~45℃
Working relative humidity	≤90%
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%
Specifications	
Dimensions	M/FME1R.1: 46.8mm×46.8mm×23mm M/FME2R.1: 46.8mm×46.8mm×23.5mm
Net weight	M/FME1R.1: 41g M/FME2R.1: 41g
Housing material	Flame retardant PC
Installation	Wall box (Figure 8 - 9)
Protection rating (Compliant with EN 60529)	IP20

Name and Content of Hazardous Substances in Products

Components	Hazardous substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr (VI))	Poly-brominated biphenyls (PBB)	Poly-brominated diphenyl ethers (PBDE)
Plastic	o	o	o	o	o	o
Hardware	o	o	o	o	-	-
Screw	o	o	o	×	-	-
Solder	×	o	o	o	-	-
PCB	×	o	o	o	o	o
IC	o	o	o	o	×	×

The symbol “-” indicates that the hazardous substance is not contained.
The symbol "o" indicates that the content of the hazardous substances in all the homogeneous materials of the component is below the limit requirement specified in the Standard IEC62321-2015.
The symbol “×” indicates that the content of the hazardous substance in at least one of the homogeneous materials of the part exceeds the limit requirement specified in the Standard IEC62321-2015.

KNX Cable Guide

KNX	KNX Cable
-	Black
+	Red

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