M/DM02.1 KNX 2CH 3A MOSFET Dimming Actuator

M/DM04.1 KNX 4CH 1.5A MOSFET Dimming Actuator

M/DM06.1 KNX 6CH 1.5A MOSFET Dimming Actuator

Hardware Version: A

Datasheet

Issued: December 10 , 2019

File Edition: A



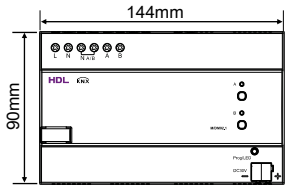
Figure 1. KNX 2CH 3A MOSFET Dimming Actuator



Figure 2. KNX 4CH 1.5A MOSFET Dimming Actuator

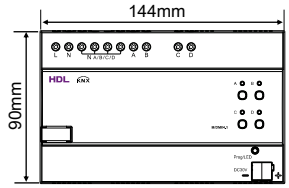


Figure 3. KNX 6CH 1.5A MOSFET Dimming Actuator



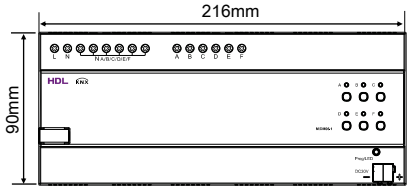
KNX 2CH 3A MOSFET Dimming Actuator

Figure 4. Dimensions - Front View



KNX 4CH 1.5A MOSFET Dimming Actuator

Figure 5. Dimensions - Front View



KNX 6CH 1.5A MOSFET Dimming Actuator

Figure 6. Dimensions - Front View

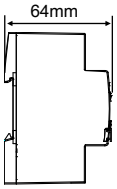
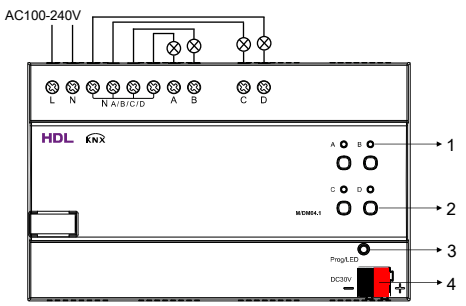


Figure 7. Dimensions - Side View



Take the connection of KNX 4CH 1.5A MOSFET Dimming Actuator as an example

Figure 8. Wiring

Overview

KNX MOSFET Dimming Actuator (See Figure 1-3) has 3 types (2CH 3A, 4CH 1.5A, and 6CH 1.5A) of output circuits, which supports multiple application functions. This series of dimming actuators are in full compliance with European Safety Standards and KNX standard protocol.

Its main functions include:

- 3 types of output circuits: 2, 4 and 6 channels of dimming actuator.
- Supports trailing edge mode and capacitive load types.
- Parallel channels can form heavy current output.
- Manual control: Manual switching, dimming for each channel.
- Application functions: Statistics ON time, Status response, Status recovery, Short-circuit protection, Overload protection, Overheat protection, Staircase light, Flashing light, Scene control, Scene dimming, Read temperature, Overheat alarm, Dimming higher limit control, Dimming lower limit control, Sequence control, Heating control (PWM).

Components

Dimensions - See Figure 4 - 7

Wiring - See Figure 8

1. LED indicator, indicates the status of the channel
2. Manual control button
3. Programming button/indicator:
   Red LED indicates programming mode.
4. KNX interface.

Installation

Installation - See Figure 9 - 11 (Take HDL-M/DM04.1 as an example)

Step 1. Fix the DIN rail with screws.

Step 2. Buckle the bottom cap of MOSFET Dimming 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.

Note(s)

- Programming - The device is compliant with the KNX standard and the parameters are set by the Engineering Tool Software (ETS).
- Load types - Incandescent light, halogen light, dimmable LED light, etc.
- Trailing edge mode is not allowed for the inductive load.
- Check connections - Re-tighten all connections after installation.
- Output current - Total current of KNX 2CH 3A(4CH 1.5A) MOSFET Dimming Actuator: Less than 6A. Total current of KNX 6CH 1.5A MOSFET Dimming Actuator: Less than 9A.

⚠ 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.
- The device should be installed with DIN rail in DB box. 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/DM02(4/6).1*1 / Label*5 / Datasheet*1



Figure 9

1

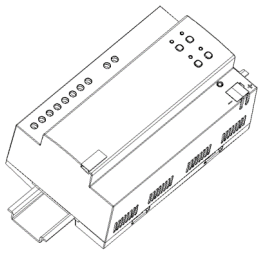


Figure 10

2

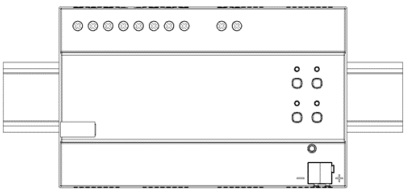


Figure 11

Figure 9 - 11. Installation

Technical Data

Basic Parameters	
Working voltage	21~30V DC
Working current	M/DM02.1: 20mA/30V DC M/DM04.1: 20mA/30V DC M/DM06.1: 25mA/30V DC
Input voltage	AC100-240V (50/60Hz)
Communication	KNX
Cable diameter of KNX terminal	0.6 - 0.8mm
User control	Manual operation for each channel
Line in/Line out terminals	2.5 - 4mm²
Output channel	M/DM02.1: 2CH, 3A/CH M/DM04.1: 4CH, 1.5A/CH M/DM06.1: 6CH, 1.5A/CH
Total output current	M/DM02.1: 6A Max. M/DM04.1: 6A Max. M/DM06.1: 9A Max.
External Environmental	
Working temperature	-5℃~45℃
Working relative humidity	≤90%
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%
Specifications	
Dimensions	M/DM02.1: 90×144×64(mm) M/DM04.1: 90×144×64(mm) M/DM06.1: 90×216×64(mm)
Net weight	M/DM02.1: 405g M/DM04.1: 412g M/DM06.1: 521g
Housing material	Flame-retardant nylon
Installation	35mm DIN rail installation (See Figure 9 - 11)
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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