M/R4.16.1-CD

KNX 4CH 16A High Power Switch Actuator with Current Detection

M/R8.16.1-CD

KNX 8CH 16A High Power Switch Actuator with Current Detection

M/R12.16.1-CD

KNX 12CH 16A High Power Switch Actuator with Current Detection

Hardware Version：A

Datasheet

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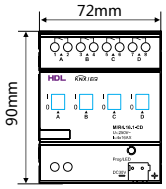
Figure 1. 4CH 16A High Power Switch Actuator with Current Detection



Figure 2. 8CH 16A High Power Switch Actuator with Current Detection

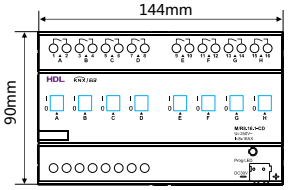


Figure 3. 12CH 16A High Power Switch Actuator with Current Detection



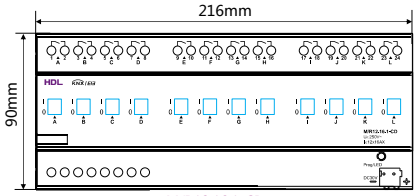
M/R4.16.1-CD

Figure 4. Dimensions - Front View



M/R8.16.1-CD

Figure 5. Dimensions - Front View



M/R12.16.1-CD

Figure 6. Dimensions - Front View

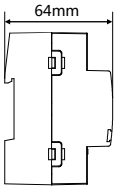


Figure 7. Dimensions - Side View

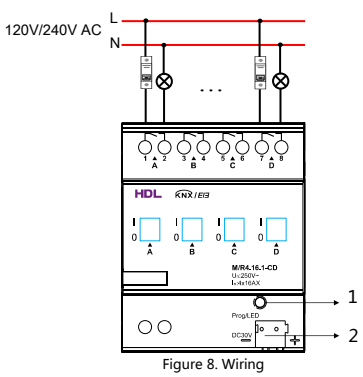


Figure 8. Wiring

Overview

KNX 16A High Power Switch Actuator with Current Detection (See Figure 1-3) adopts 50A magnetic latching relay, which has three types(4CH, 8CH and 12CH) of output circuits, and each channel outputs 16A current. This series of High Power Actuators have the characteristics of long life, low power consumption and fast execution speed.

Functions

- 16A High Power Switch Actuators with Current Detection include 3 types: 4, 8 and 12 channels of actuator.
- Maximum output current of each channel:16A
- Control functions: Statistical ON time, Status response, Status recall, Staircase light, Flashing, ON/OFF delay, Protection delay, Scene control, Threshold function, Curtain control, etc.
- Logic function: AND, OR, XOR.
- Heating function: PWM(1bit/1byte) control output.
- Current detection function: Current report, Current surveillance, Current conformance detection, Current threshold comparison detection.

Important Notes

- Programming - This device is compliant with the KNX standard and can only be programmed by ETS software.
- Maximum output current of each channel: 16A, and a fuse/circuit breaker more than 16A should be connected to each channel for protection.
- Three phase connection - This series of actuators support 3 phase input, take the 12CH actuator as an example, CH1, 4, 7, 10 connect to L1. CH2, 5, 8, 11 connect to L2. CH3, 6, 9, 12 connect to L3.

Product Information

Dimensions - See Figure 4 - 7

Wiring - See Figure 8

1. Programming button/indicator:
   Red LED indicates programming mode.
2. KNX/EIB interface.

Installation - See Figure 9 - 11 (Take M/R4.16.1-CD as an example)

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.

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 in distribution box with DIN rail. HDL takes no responsibility for all consequences caused by installation and wire connection which 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.
- It is not allowed to exceed the range.

Package Contents

KNX 16A High Power Switch Actuator with Current Detection*1 / Label*5 / Datasheet*1



Figure 9

1

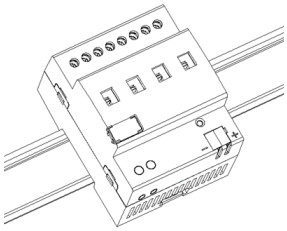


Figure 10

2

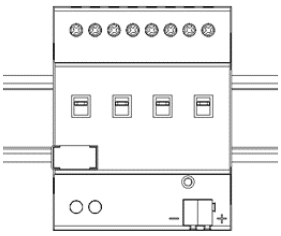


Figure 11

Figure 9 - 11. Installation

Technical Data

Basic Parameters	
Working voltage	21~30V DC
Working current	15mA/30V DC
Input voltage	120V/240V AC (50/60Hz)
Communication	KNX
Cable diameter of KNX terminal	0.6-0.8mm
Rated switch current	16A lighting load, max inrush 500A
Operation times	>100,000
Line in/Line out terminals	2.5-4mm²
Output channel	4CH/16A, 8CH/16A, 12CH/16A
Capacitance	<300μF
External Environment	
Working temperature	-5℃~45℃
Working relative humidity	≤90%
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%
Specifications	
Dimensions	M/R4.16.1-CD 90×72×64(mm) M/R8.16.1-CD 90×144×64(mm) M/R12.16.1-CD 90×216×64(mm)
Net weight	M/R4.16.1-CD: 257g M/R8.16.1-CD: 577g M/R12.16.1-CD: 823g
Housing material	Flame-retardant nylon
Installation	35mm DIN rail installation (See Figure 9 - 11)
Protection rating (Compliant with EN 60529)	IP20

Recommended Load Types and Power

240V, 16A, Resistive, 100,000 cycles, 40°C;

240V, 16FLA/96LRA, Motor, 30,000 cycles, 40°C;

240V, 16A, Standard Ballast, 30,000 cycles, 40°C;

240V, 16A, Electronic Ballast, 6,000 cycles, 40°C;

120V, 16FLA/96LRA, Motor, 30,000 cycles, 40°C;

120V, 16A, Electronic Ballast, 6,000 cycles, 40°C;

120V, 16A, Standard Ballast, 30,000 cycles, 40°C;

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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