M/FCU01.10.1

KNX HVAC Module

Hardware Version：C

Datasheet

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Figure 1. KNX HVAC Module

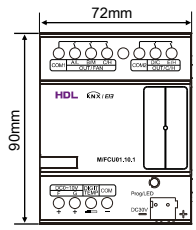

Figure 2. Dimensions - Front View

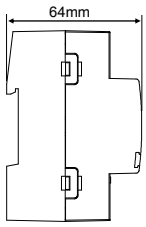

Figure 3. Dimensions - Side View

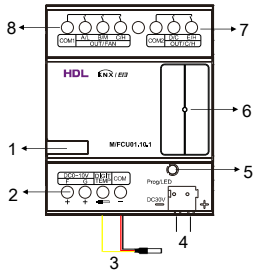

Figure 4. Components

TS/C 1.0

Figure 5. 2.5m Digital Temperature Sensor

Overview

KNX HVAC Module (See Figure 1) belongs to HDL KNX/EIB series, and it supports control of heating, cooling, high/medium/low fan speed. 7 independent floor heating control channels can be set. In conjunction with digital temperature sensor, the actuator achieves precise temperature control. In addition, 5 switch output channels and 2 DC0-10V output channels can be set for staircase lights and other requirements.

Functions

- 7 independent floor heating control channels
- Up to 7 digital temperature sensors supported
- 5 relay output channels
- 2 DC0-10V output channels (10mA/CH)
- Fan speeds: High, Medium, Low
- Working modes: Heating, Cooling
- Operation modes: Comfortable, Standby, Night, Protection
- Main functions: Fan speed, Valve status report, Local 7 channels temperature sampling, Local temperature report, Operation time statistics, Channel status response, Power-on status recall, Power-off status saving, Staircase lights, On/Off delay, Protection delay, PWM control output
- Active control and passive control: More flexible to work in conjunction with panels by different manufacturers.
  When in active control mode, this module can work in conjunction with panels without PI algorithm, for example M/DLP04.1.
  When in passive control mode, this module can work in conjunction with panels with algorithm, for example Siemens 5WG1.
- Supports online update

Important Notes

- Programming - The device is compliant with the KNX standard and the parameters are set by the Engineering Tool Software (ETS).
- Type of FAN - Check the type of FAN type, make sure the type is AC or 0-10V DC and connected to correct terminal.
- KNX cable - Dedicated KNX standard cable.
- Connections - Hand-in-hand connection recommended.

Product Information

Dimensions - See Figure 2 - 3
Components - See Figure 4
2.5 Meter Digital Temperature Sensor - See Figure 5
Wiring - See Figure 6 -11

1. Label area
2. Channel F, G: DC 0-10V output
3. Temperature sensor terminals: As shown in Figure 4, the terminals are respectively connected to the yellow, red, and white wires (the black wire in drawing is the sensor white wire). Up to 7 digital temperature sensors supported.
4. KNX/EIB interface
5. Programming button & LED indicator
6. Working LED
7. Channel D, E: heating or cooling or relay output
8. Channel A, B, C: fan speed or relay output

Installation - See Figure 12 - 14

Step 1. Fix the DIN rail with screws.

Step 2. Buckle the bottom cap of the KNX HVAC Module 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 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.
- The device should be installed in distribution box with DIN rail. 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.
- It is not allowed to exceed the range.

Package Contents

M/FCU01.10.1*1 / Label*5 / 2.5m Digital Temperature Sensor*1 / Datasheet*1

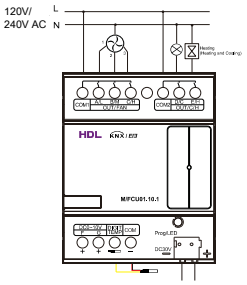

Figure 6

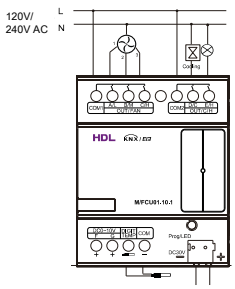

Figure 7

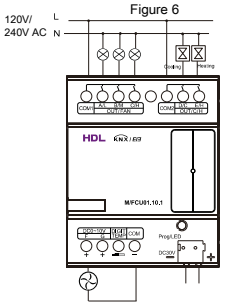

Figure 8

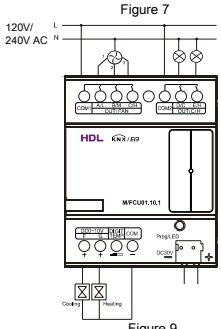

Figure 9

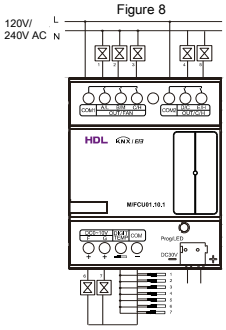

Figure 10

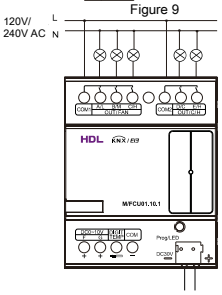

Figure 11

Figure 6 - 11. Wiring

Figure 12

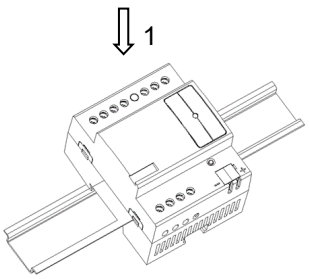

Figure 13

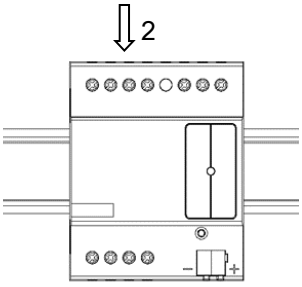

Figure 14

Figure 12 - 14. Installation

Technical support
E-mail: hdltickets@hdlautomation.com
Website: https://www.hdlautomation.com

Technical Data

Basic Parameters

Working voltage	21~30V DC
Working current	20mA/30V DC
Input voltage	120V/240V AC(50/60Hz)
Communication	KNX
Detecting temperature range	-30℃~+100℃
Temperature sensor	2.5m Digital Temperature Sensor (TS/C 1.0)
Communication	KNX
Output terminal	Line in, line out cable for each channel 2.5-4mm²
Output channel	5CH, 10A/CH
0-10V output	2CH, 10mA/CH
Cable diameter of KNX terminal	0.6 - 0.8mm
Electrical life time	>100000
Mechanical life time	>100000

External Environment

Working temperature	-5℃~45℃
Working relative humidity	≤90%
Storage temperature	-20℃~60℃
Storage relative humidity	≤93%

Specifications

Dimensions	90mm×72mm×64mm
Net weight	310g
Housing material	Frame-retardant nylon
Installation	35mm DIN rail installation (See Figure 12 - 14)
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