

Installation Guide

# MCX rooftop controller Instruction guide



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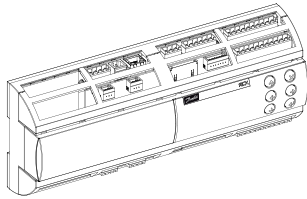


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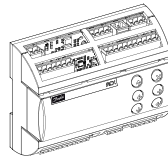
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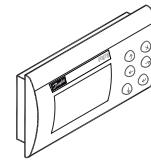
**Identification:**



**MCX152V**  
Ordering no.  
080G0304 = 110/230vac

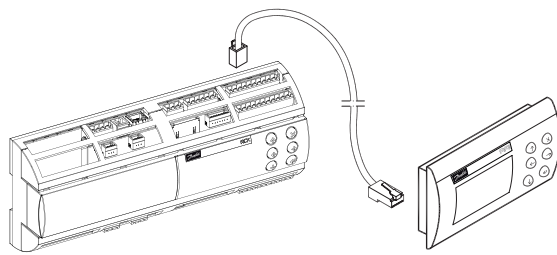


**MCX08M** (Optional)  
Ordering no.  
080G0029 = 110/230vac



**MMIGRS2** (Optional)  
Ordering no.  
080G0294

**Connection:**



**CE** IP 20  
-20 – 60 °C (0 – 140 °F)  
RH max. 90% non condensing

**CE COMPLIANCE**

This product is designed to comply with the following EU standards:  
Low voltage guideline: 73/23/EEC Electromagnetic compatibility EMC:  
89/336/EEC and with the following norms:

**EN61000-6-1, EN61000-6-3** (immunity for residential, commercial and light-industrial environments)

**EN61000-6-2, EN61000-6-4** (immunity and emission standard for industrial environments)

**EN60730** (Automatic electrical controls for household and similar use)

**UL APPROVAL**  
UL file: E31024

**Technical data:**

**Supply Voltage**

85 – 265 V AC, 50/60 Hz  
Maximum power consumption: 27 W, 48 VA  
Insulation between power supply and the extra-low voltage: reinforced

**Plugs normally not used**

Stepper Motor 1, Stepper Motor 2, Stepper Backup, RS485-2, Digital Input 18

**Modbus**

It is important that the installation of the data communication cable be installed correctly. Remember to terminate each end of the bus. See separate literature No. RC8AC.

**DO - Digital outputs, 15 pcs. DO1 – DO15**

DO1 - DO15, all are relays, no solid state relays  
The relays are de-rated to the specified values

**AO - Analog output, 6 pcs. AO1 – AO6**

Outputs are 0 – 10 V DC by default

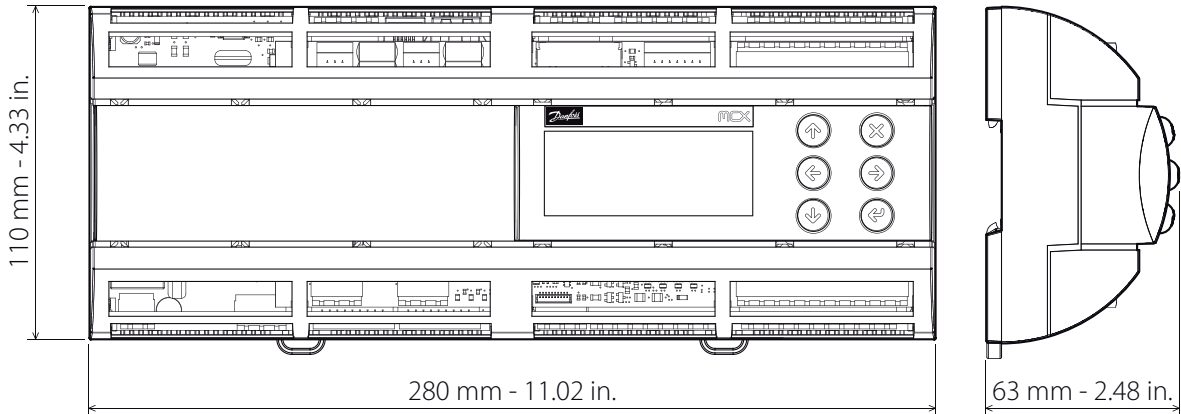
**AI - Analog Inputs, 14 pcs. AI1 – AI14**

All temperature sensors default to PT1000, Pressure transducers default to 0.5 – 4.5 V DC ratiometric with 5 V DC supply. All other inputs are 0 – 5 V DC by default

**DI - Digital switch inputs DI1 – DI17**

All Dry contacts except DI17, (24 V AC or 230 V AC driven)

**Dimensions:**



**Modbus topology:**

The cable must be EIA485 rated. The cable is connected from controller to controller, and no branches are allowed on the cable. If the cable length exceeds 1200 m a repeater must be inserted. One repeater must be added for every 32 controllers. If the data communication cable runs through an electrically noisy environment which impairs the data signal, one or more repeaters must be added to stabilise the signal.

When configuring Modbus devices on the control bus, the highest device address that can be used is 124 (max 120 modbus control devices in total - max 45 MCX RTC).

The wires are looped from device to device. A is connected to A and B is connected to B. The screen must be connected to the system device, all controller and any repeaters. A screen must always be looped from device to device.

The screen must not be connected to anything else.

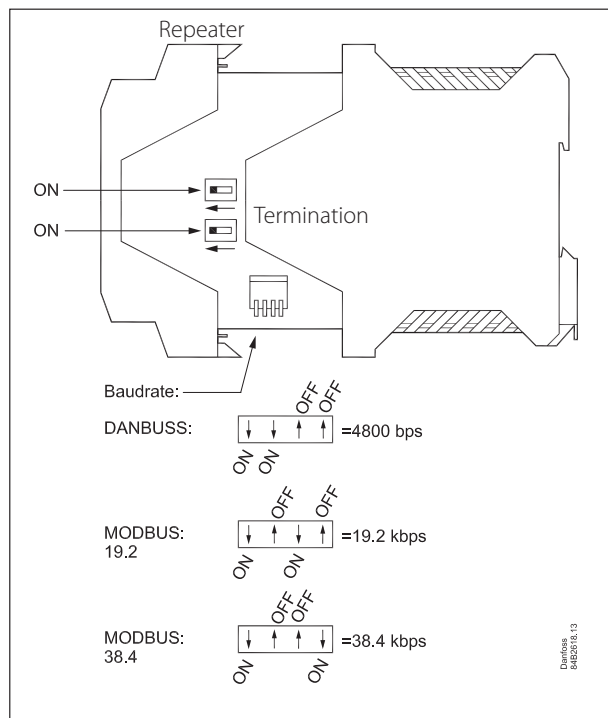
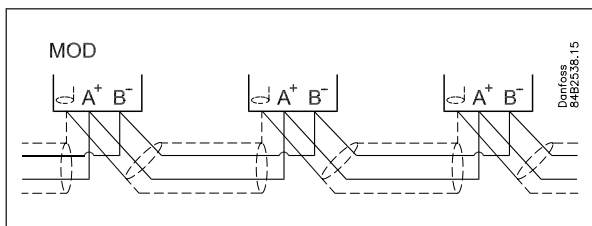
See AK-SM800 User Guide for system 485 wiring instructions.

Manual can be found at: <http://food-retail.danfoss.com/knowledge-center/software/ak-sm-800/>

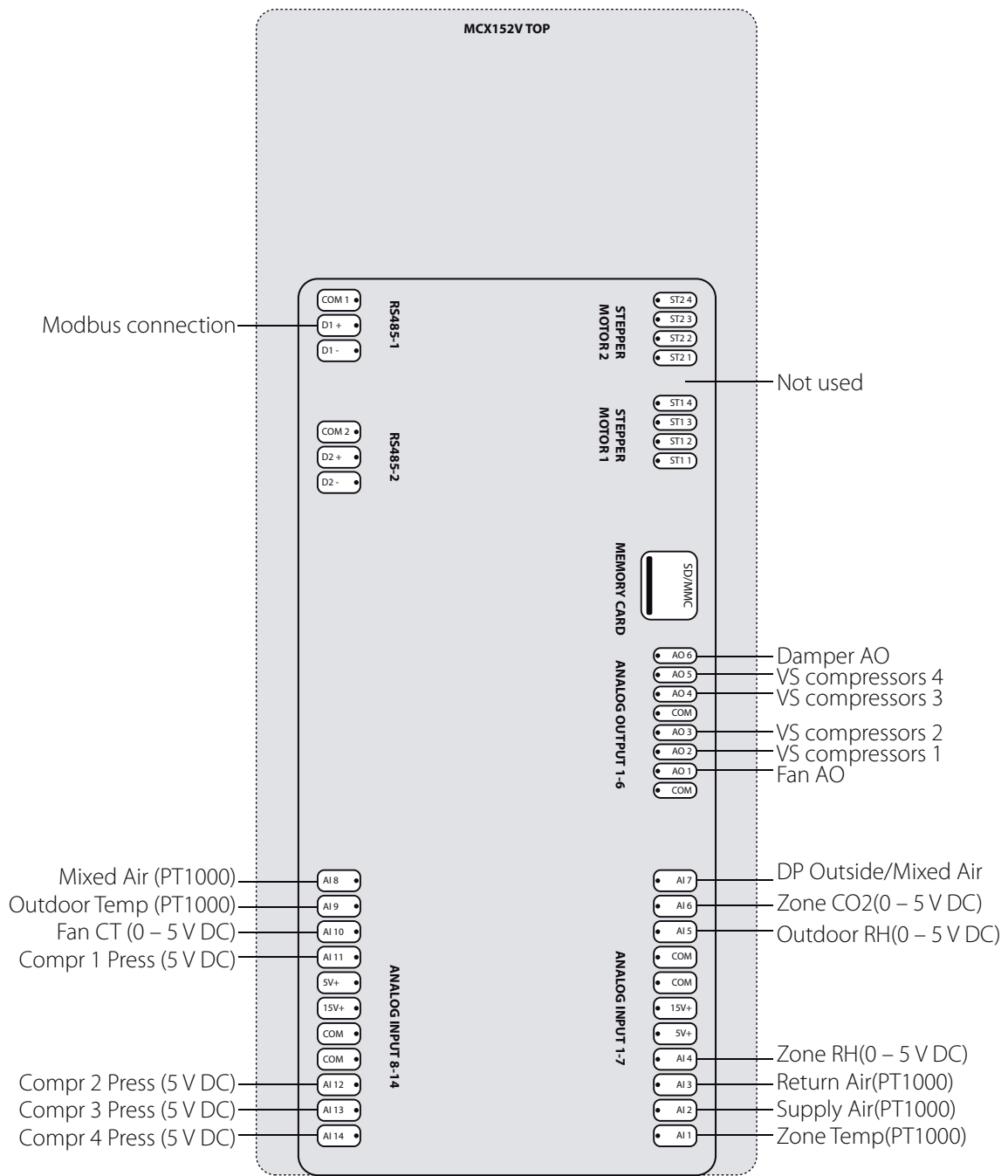
Be sure to configure the Modbus repeater AKA 222 (code#084B2240) to the correct baud rate.

MCX-RTU baud rate must be set to 38.4 K when used with the AK-SM800. MCX-RTU cannot be on the same 485 bus with SLVs.

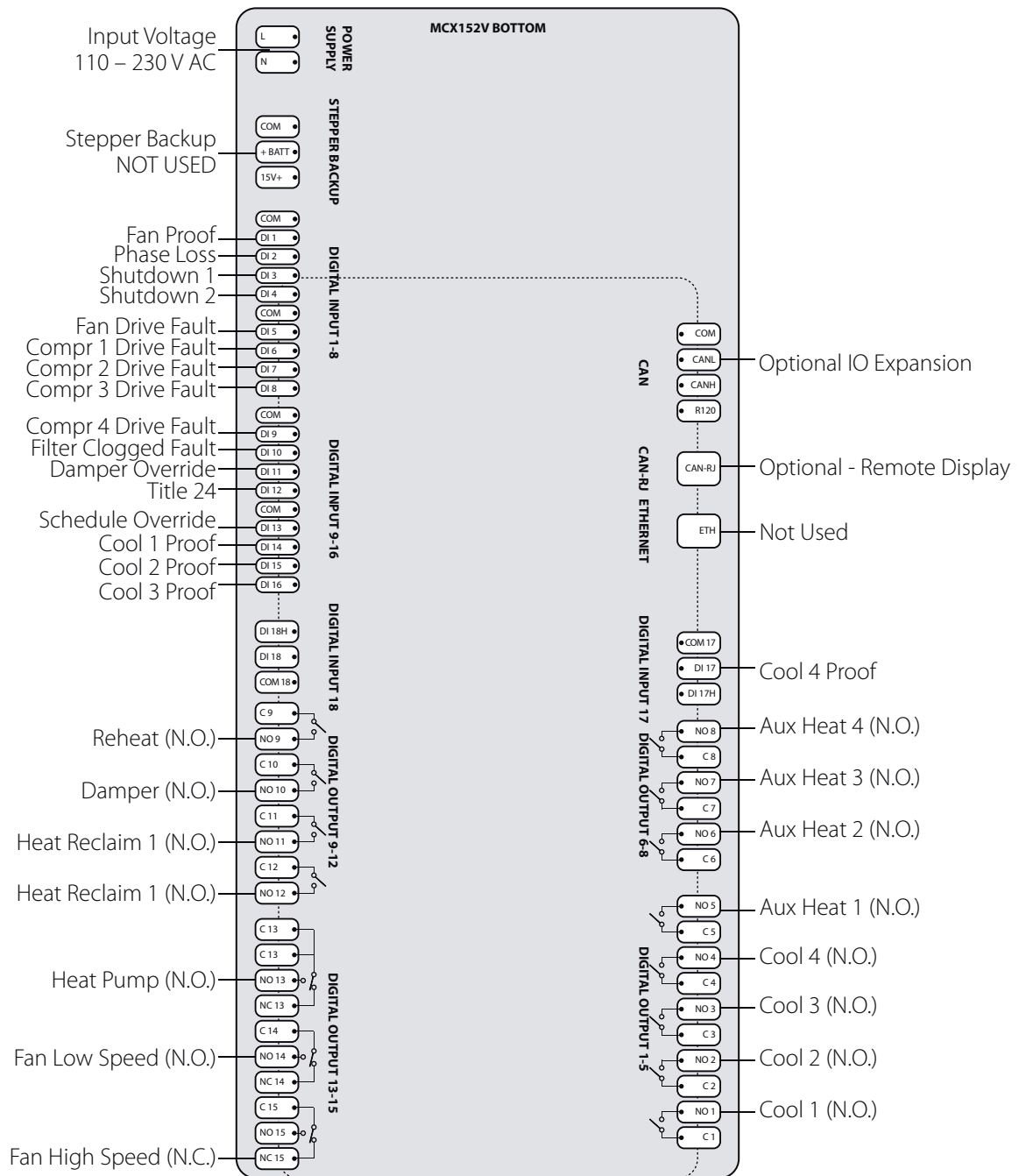
**AK-SM800:**



# Wiring Diagram MCX152V -bottom and top



## Wiring Diagram MCX152V -bottom and top



Contact info:  
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