

Data sheet

Electronic controller MCX061V



**MCX061V
electronic controller**

MCX061V is a standard MCX electronic controller with integrated superheat algorithm and electronic expansion valve driver. It is fitted with or without graphic LCD display.

It holds all the typical functionalities of MCX controllers in the compact size of 8 DIN modules: programmability, connection to the CANbus local network, Modbus RS485 serial communication interface and Ethernet.

A slot for a memory card is also available in order to assure SW download and datalogging function. It is moreover available in the version with power supply 110-230 V ac or 24 V ac.



General features

MCX061V

Features	Value
ANALOG INPUTS	
Universal Prog. (NTC, Pt1000, 0/1V, 0/5V, 0/10V, ON/OFF, 0/20mA, 4/20mA) selectable via software - AI 1, AI 2, AI 3	3
Programmable (NTC, 0/1V, 0/5V, 0/10V, ON/OFF, 0/20mA, 4/20mA) - AI 4, AI 6	2
Superheat S1: Programmable (0/1V, 0/5V, 0/10V, ON/OFF, 0/20mA, 4/20mA) - AI 5	1
Superheat S2: Programmable (PT1000, 0/1V, 0/5V, 0/10V, ON/OFF) - AI 7	1
Total number	7
DIGITAL INPUTS	
Voltage free contact	8
Total number	8
ANALOG OUTPUTS	
0/10Vdc	2
0/10V, PWM, PPM selectable via software	1
Total number	3
DIGITAL OUTPUTS	
SPST relay 5A (normally open contacts)	6
Total number	6
OTHERS	
Power supply 24V AC	•
Power supply 110V/230V AC	•
Connection for programming key	•
Connection for remote display and keyboard	•
CANbus	•
RTC clock	•
Modbus RS485 serial interface	•
Ethernet/ Webserver	•
Memory card slot	•
Dimensions (DIN modules)	8
Mounting	DIN rail

Technical specifications

Power supply:

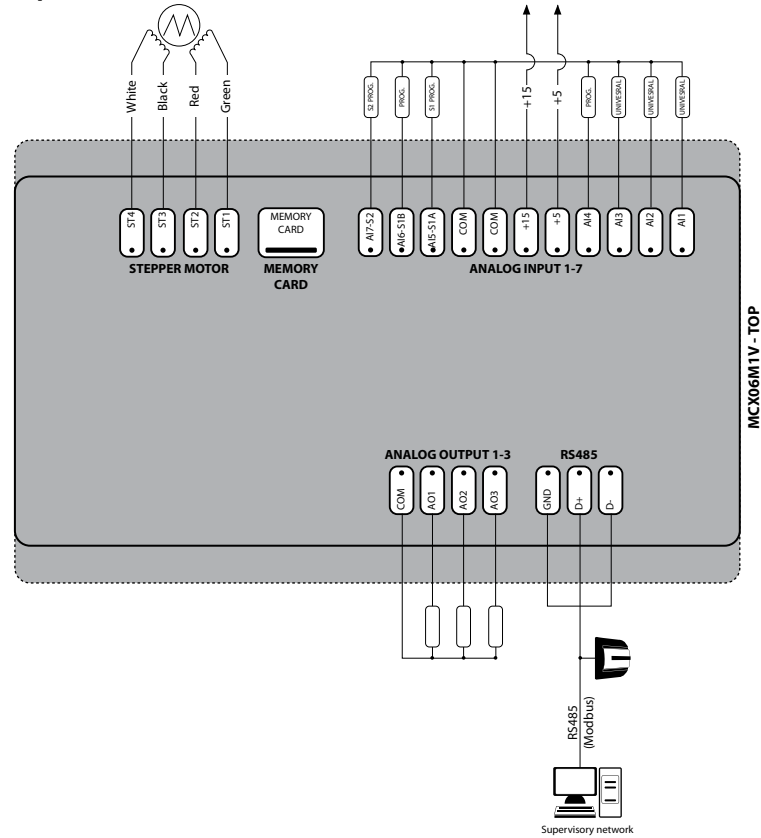
- 230Vac Universal range, max 19W, Reinforced Isolation
- 24Vac +/-15%, max19W, Functional Isolation

MCX061V

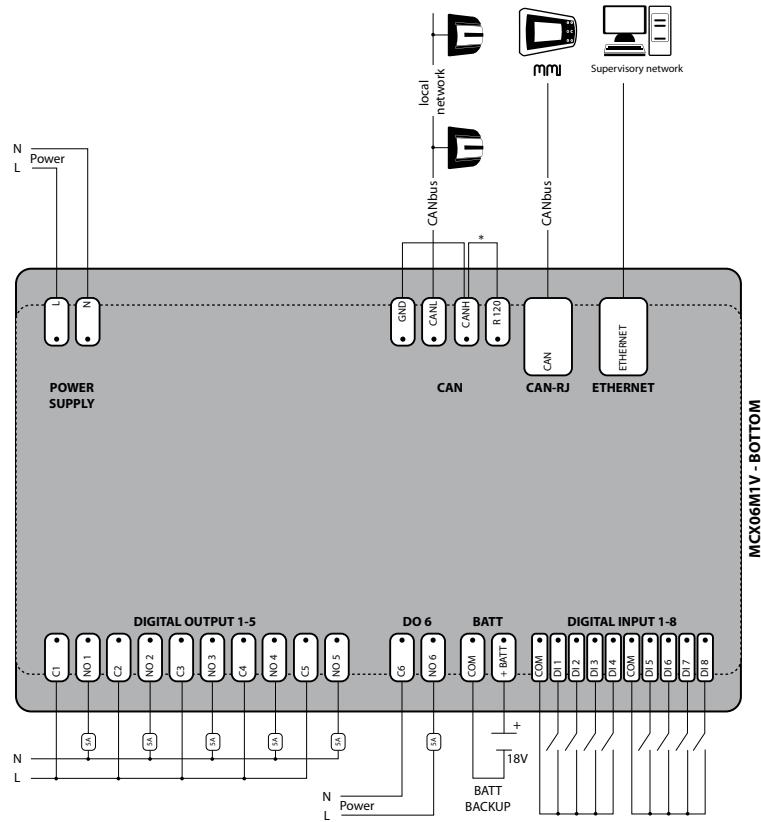
I/O	Type	Number	Pin information	Specifications
Digital outputs	Relay			Normally open contact relays 5A: - characteristics of each relay: 5A 30Vdc / 250Vac for resistive loads - 100.000 cycles 0,7A 250Vac for inductive load - 100.000 cycles with $\cos(\phi) = 0,5$
		5	DO1..DO5	Functional Isolation
		1	DO6	Reinforced isolation (with respect to DO1..DO5)
Digital inputs	Voltage free contacts			Voltage free contacts
		1	DI1	(frequency input) Min. pulse time 3ms
		7	DI2..DI8	Min pulse time 64ms
Analog outputs	0/10Vdc	2	AO1..AO2	Output, referred to the ground: 10mA maximum loads. 3Hz cut frequency 0/10Vdc
	0/10Vdc PWM, PPM	1	AO3	- pulsing output, synchronous with the line, at modulation of impulse position (PPM) or modulation of impulse width (PWM): 6.8V open circuit - pulsing output, at modulation of impulse position (PPM) with range from 100Hz to 500Hz: 6.8V open circuit
Analog inputs				Max 15V input voltage.
	0..1V, 0..5V, 0..10V	7	AI1...AI7	0..1V, 0..5V, 0..10V
	NTC	5	AI1,2,3,4,6	NTC temperature probes, default: 10k Ω at 25°C
	0..20mA; 4..20mA	6	AI1,2,3,4,5,6	0..20mA; 4..20mA;
	PT1000	4	AI1,2,3,7	PT1000
	Differential input	1	AI5(S1A+), AI6(S1B-)	Differential input, DM Voltage 0..100mV; CM voltage max 14V;
	SH	2	AI5(S1); AI7(S2)	Inputs for superheat control: S1: Pressure input; S2 Temperature input
Auxiliary Supplies	2	+15V and +5V Auxiliary Supplies	- 5V max: 70mA - 15V max: 100mA	
Stepper Motor				Bipolar and unipolar sepper motor output
		1	ST1..ST4	Danfoss ETS Valves
		1	ST1..ST4	Saginomyia UKV/SKV/VKV/PKV
		1	ST1..ST4	Other Valves: - Drive mode 1/8 microstep - Peak phase current: 500mA - Max drive voltage 30V - Max. output power 4.6W
Stepper Motor backup battery input		1	BATT	18-24Vdc Leakage current max. 12 μ A
Memory Card		1	MMC	Max 2GB

Connection diagram

Top board

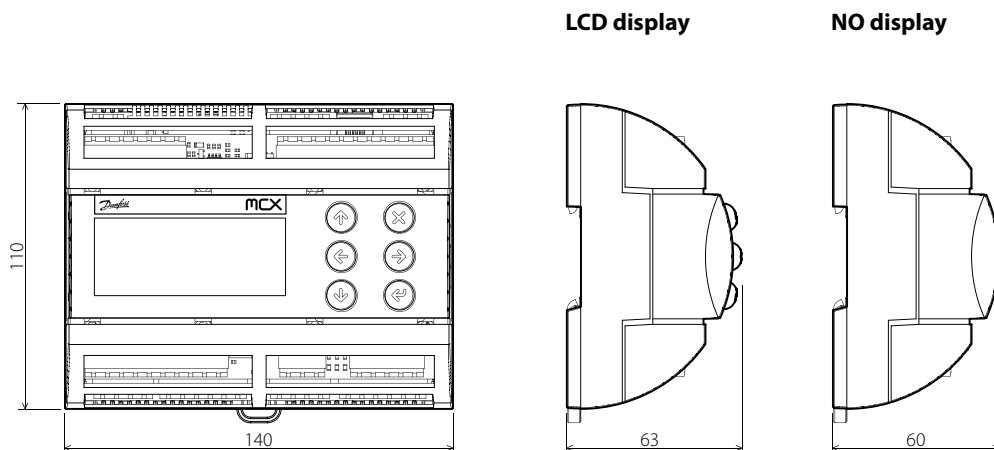


Bottom Board



*NOTE: connection has to be made on the first and last local network units, make the connection as close as possible to the connector

Dimensions



User interface

LCD Display

- display mode: STN blue transmissive
- backlight: white LED backlight adjustable via software
- display format: 128x64dots
- active visible area : 58x29mm
- contrast: adjustable via software

Keyboard

- number of keys: 6
- keys function is settled by the application software

Product part numbers

MCX061V

DESCRIPTION	CODE **
MCX061V, 230V, RS485, RTC, S	080G0246
MCX061V, 24V, RS485, RTC, S	080G0247
MCX061V, 230V, LCD, RS485, RTC, S	080G0250
MCX061V, 24V, LCD, RS485, RTC, S	080G0251
MCX061V Elect.Control 230V RS485 ETH S	080G0252
MCX061V Elect.Control 24V RS485 ETH S	080G0253
MCX061V Elect.Control 230V LCD RS485 ETH S	080G0254
MCX061V Elect.Control 24V LCD RS485 ETH S	080G0255

**NOTE: single pack codes (S) include standard kit connectors.
Is also available industrial pack codes (I) that don't include standard kit connectors

