



MCX15B electronic controller

MCX15B is fitted with or without graphic LCD display. It is an electronic controller that stands on the top of the MCX range, thanks to the large number of its inputs and outputs. It holds all the typical functionalities of MCX controllers: programmability, connection to the CANbus local network and up to two Modbus RS485 serial communication interfaces.

Furthermore it is available in two models, powered at 110-230Vac or 24Vac

Programmable	Protection degree	CAN bus	MYK connection	Graphic display	Multilanguage	Modbus RS485
						

General features

MCX15B	
Features	Value
ANALOG INPUTS	
NTC, 0/1V, 0/5V	4
Universal (NTC, Pt1000, 0/1V, 0/5V, 0/10V, ON/OFF, 0/20mA, 4/20mA) selectable via software	6
Total number	10
DIGITAL INPUTS	
24V optoinsulated	18
230Vac optoinsulated	4
Total number	18
ANALOG OUTPUTS	
0/10Vdc optoinsulated	4
PWM, PPM selectable via software	2
Total number	6
DIGITAL OUTPUTS	
SPDT relay 16A (changeover contacts)	2
SPST relay 8A (normally open contacts)	9
SPDT relay 8A (changeover contacts)	4
Total number	15
OTHERS	
Power supply 24V AC/20-60V DC	•
Power supply 110V/230V AC	•
Connection for programming key	•
Connection for remote display and keyboard	•
Buzzer	•
CANbus	•
RTC clock	•
Modbus RS485 serial interface	•
Dimensions (DIN modules)	16
Mounting	DIN bar

Technical specifications

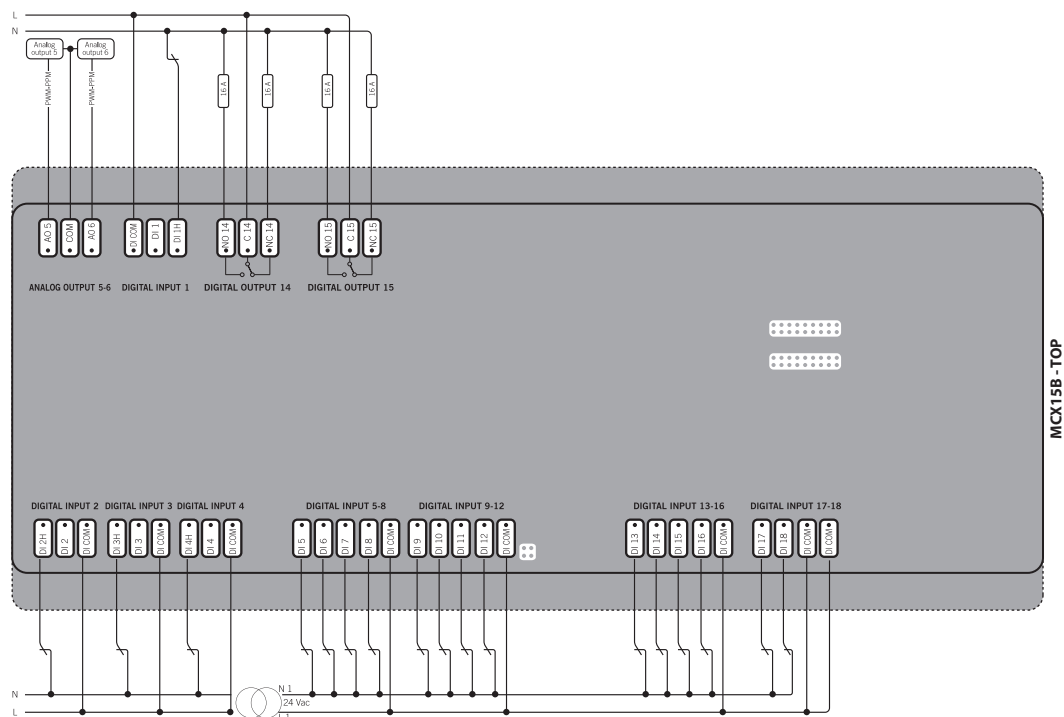
POWER SUPPLY:

- 85Vac at 265Vac, 50-60Hz. Maximum power consumption: 26VA
- 20Vdc at 60Vdc and 24Vac $\pm 15\%$ 50/60Hz. Maximum power consumption: 12W, 20VA

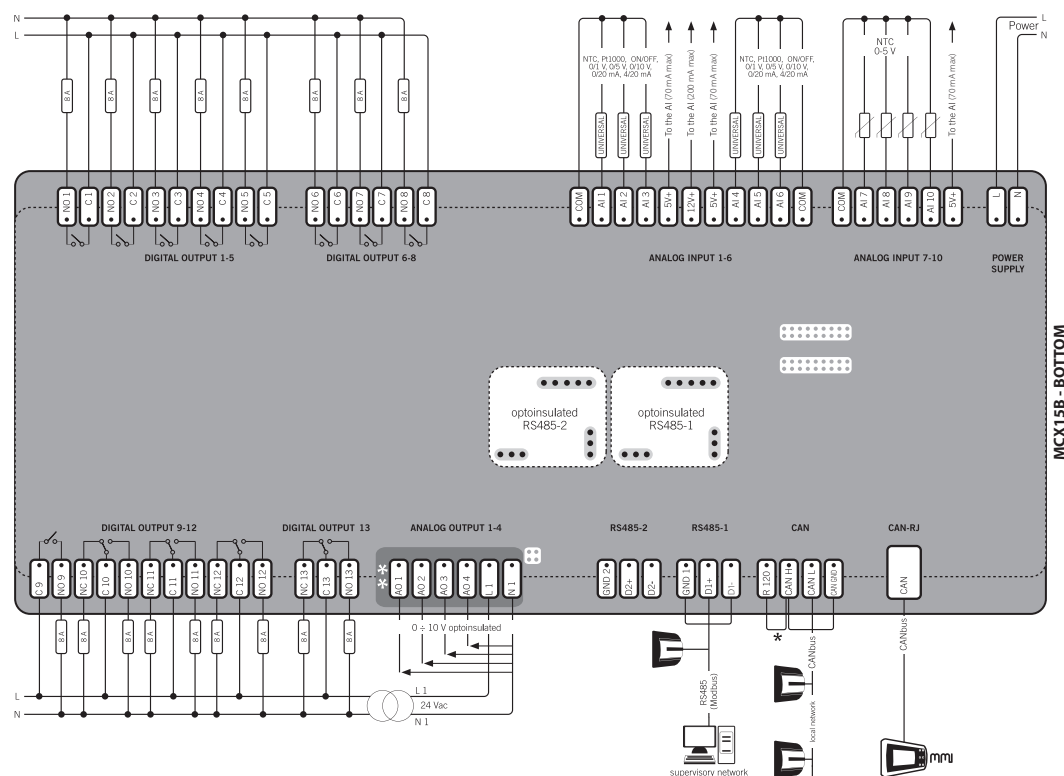
MCX15B			
I/O	Type	Number	Specifications
Digital outputs	Relay	15	<p>Concerning the insulation distance there are three groups of relays:</p> <ul style="list-style-type: none"> - group 1: relays 1 to 8 - group 2: relays 9 to 13 - group 3: relays 14 to 15 <p>Insulation between relays of the same group: functional Insulation between relays of different groups: reinforced Insulation between relays and the extra-low voltage parts: reinforced Total current load limit: 92A C1-NO1 to C9-NO9 Normally open contact relays 8A: - characteristics of each relay: 6A 250Vac for resistive loads - 100.000 cycles 4A 250Vac for inductive loads - 100.000 cycles with $\cos(\phi) = 0.6$ UL: 240Vac - 4A resistive - 3.6 FLA - 21.6 LRA - 346VA pilot duty 30.000 cycles C10-NO10-NC10 to C13-NO13-NC13 Changeover contacts relay 8A: - characteristics of each relay: 6A 250Vac for resistive loads - 100.000 cycles 4A 250Vac for inductive loads - 100.000 cycles with $\cos(\phi) = 0.6$ UL: 240Vac - 4A resistive - 3.6 FLA - 21.6 LRA - 346VA pilot duty 30.000 cycles C14-NO14-NC14 to C15-NO15-NC15 High inrush current (80A - 20ms) changeover contacts relay 16A: - characteristics of each relay: 7A 250 Vac for resistive loads - 100.000 cycles 3.5A 230Vac for inductive loads - 230.000 cycles with $\cos(\phi) = 0.4$ UL: 240Vac - 6A resistive - 4.9 FLA - 29.4 LRA - 470VA pilot duty 30.000 cycles</p> <p>Using of device in case of $T_{amb} = 70^{\circ}\text{C}$ has to be according to following requirements:</p> <ul style="list-style-type: none"> - maximum load admitted for 8A relay: 4A 250Vac - maximum load admitted for 16A relay: 5A 250Vac
	24V optoinsulated	18	DI1 to DI18 Digital Inputs optoinsulated 24Vac 50/60Hz o 24Vdc
Digital inputs	230Vac optoinsulated	4	DIH1 to DIH4 Inputs optoinsulated, 230Vac 50/60Hz. Basic insulation - NOTE: when the 230Vac DIH1 input is used, the corresponding 24V DI1 input is not available anymore; the same for the couple of inputs DIH2 and DI2, DIH3 and DI3, DIH4 and DI4
	0/10V	4	AO1, AO2, AO3, AO Analog outputs optoinsulated 0/10Vdc 10mA Max for each output External power supply 24Vac/Vdc
Analog outputs	PWM, PPM	2	AO5, AO6 Analog outputs selectable via software between: <ul style="list-style-type: none"> - pulsing output, synchronous with the line, at modulation of impulse position (PPM) or modulation of impulse width (PWM) - pulsing output, at modulation of impulse position (PPM) with range 20Hz to 1KHz: 6.8V open circuit voltage (1kΩ minimum load)
	NTC, 0/1V, 0/5V	4	AI7 to AI10 Analog inputs selectable via software between: <ul style="list-style-type: none"> - NTC temperature probes, default: 10kΩ at 25$^{\circ}\text{C}$ - pressure transducers with 0/5V output
Analog inputs	Universal	4	AI1 to AI6 Universal analog inputs selectable via software between: <ul style="list-style-type: none"> - ON/OFF (current: 20mA) - 0/1V, 0/5V, 0/10V - 0/20mA, 4/20mA - NTC (10kΩ at 25$^{\circ}\text{C}$) - Pt1000 <p>12V+ power supply 12Vdc, 200mA max for 4/20mA transmitter (total on all outputs) 5V+ power supply 5Vdc, 210mA max for 0/5V transmitter (total on all outputs)</p>

Connection diagram

TOP BOARD



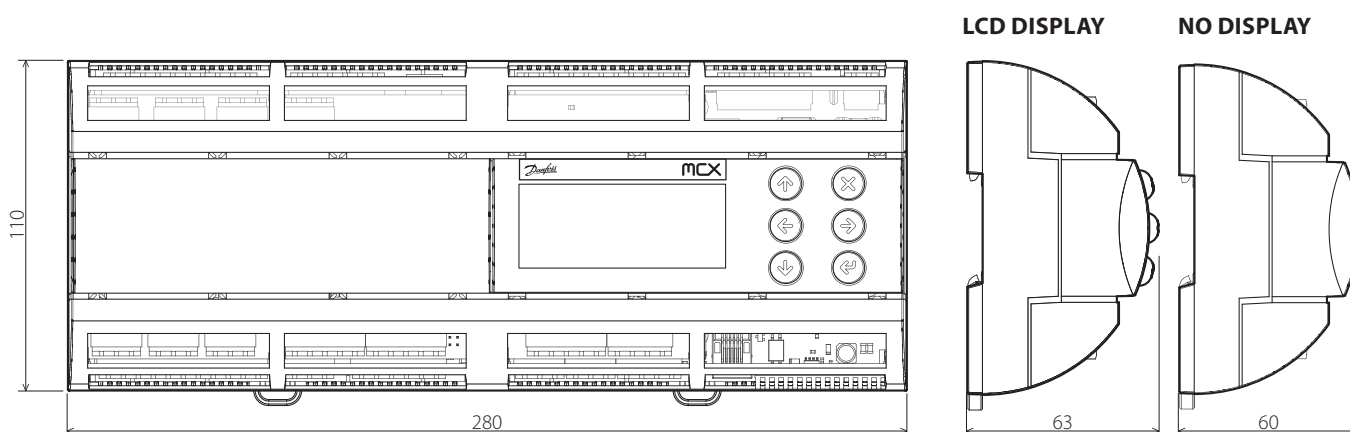
BOTTOM BOARD



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

**NOTE: optoisolated analog outputs voltages are referenced to contact N1

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

MCX15B	
CODE ***	DESCRIPTION
080G0088	MCX15B, 24V, LCD, RTC, S
080G0089	MCX15B, 230V, LCD, RTC, S
080G0036	MCX15B, 24V, LCD, RS485, RTC, S
080G0037	MCX15B, 230V, LCD, RS485, RTC, S
080G0053	MCX15B, 24V, LCD, 2XRS485, RTC, S
080G0054	MCX15B, 230V, LCD, 2XRS485, RTC, S
080G0090	MCX15B, 24V, RTC, S
080G0091	MCX15B, 230V, RTC, S
080G0042	MCX15B, 24V, RS485, RTC, S
080G0043	MCX15B, 230V, RS485, RTC, S
080G0055	MCX15B, 24V, 2XRS485, RTC, S
080G0056	MCX15B, 230V, 2XRS485, RTC, S

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



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