

Product datasheet

Specifications



Modicon MC80, Controller, 8 DI, 8 DO, 2 HSC, 4 AI

BMKC8030310

⚠ Discontinued on: 4 Apr 2022

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Main

Range of product	Modicon MC80
Product or component type	Processor module
Product specific application	Thermo solar - parabolic trough

Complementary

Product compatibility	BMXFTB28... terminal block high-speed counter module BMXFTB20... terminal block discrete I/O module BMXFTB20... terminal block analog input module
[Us] rated supply voltage	24 V - 15...20 % DC
Current consumption	<= 700 mA
Isolation voltage	1500 V DC
Memory description	Internal RAM 3840 kB Internal RAM 128 kB data Internal RAM 3590 kB program constants and symbols
Execution time per instruction	0.06 µs Boolean 0.08 µs mixed
Realtime clock	With
Function available	Memory retention without battery
Communication port protocol	1 non isolated serial link, connector type: RJ45, communication port: RS485/RS232, transmission rate: 0.3...19.2 kbit/s for connecting 247 devices 1 CANopen, connector type: SUB-D 9, transmission rate: 20 kbit/s...1 Mbit/s for connecting 16 devices 2 Ethernet, connector type: RJ45, transmission rate: 10/100 Mbit/s
Integrated connection type	USB port: mini B USB connector
Port Ethernet	10BASE-T/100BASE-TX
Bus length	0...10 m serial link non isolated 0...15 m serial link non isolated 0...1000 m serial link isolated with external isolation tap 0...20 m, transmission rate: 1 Mbit/s, communication port: CANopen 0...2500 m, transmission rate: 20 kbit/s, communication port: CANopen 0...100 m, communication port: Ethernet
Communication service	Read/write variables for Modbus Diagnostics for Modbus Send/receive character string for character mode Process Data Object (PDO) for CANopen Service Data Object (SDO) for CANopen FDR client for Ethernet SNMP for Ethernet RSTP support for Ethernet
Number of counter	2
Maximum counting frequency	60000 Hz

Counter functions	One shot counting Frequency meter Freelarge counting Measure time periods Ratio count Count events Loop (modulo) counting
Number of inputs for counter	3 auxiliary 3 high speed
Logic input for counter	Positive (sink)
Sensor power supply for counter	19...30 V DC
Input compatibility for counter	24 V 2-wire/3-wire proximity sensor incremental encoder with push-pull outputs, 10...30 V totem pole 24 V 2/3-wire sensor PNP
Number of outputs for counter	2 positive
Nominal output current for counter	0.5 A per output
Discrete input number	8 positive logic (sink)
Discrete input type	Type 3
Discrete input current	5 mA
Discrete input voltage	19...30 V DC
Discrete output number	8 positive
Discrete output current	500 mA per output
Discrete output voltage	19...30 V DC
Protection type	Overload protection for output Short-circuit protection for output
Analogue input number	4
Analogue input type	Current, input range: - 20...20 mA Voltage, input range: - 10...10 V
Fast read cycle time for analogue input	1.3 ms + 1.3 ms x number of channels used
Nominal read cycle time for analogue input	6.5 ms for 4 channels
Analogue input resolution	16 bits

Environment

Ambient air temperature for operation	-25...70 °C
Ambient air temperature for storage	-40...85 °C
Relative humidity	0...95 %
vibration resistance	3 gn
Marking	CE
Standards	IEC 61131-2 CSA C22.2 No 213 Class I Division 2 Group B CSA C22.2 No 213 Class I Division 2 Group A CSA C22.2 No 142 CSA C22.2 No 213 Class I Division 2 Group D UL 508 CSA C22.2 No 213 Class I Division 2 Group C
Product certifications	RCM

Packing Units

Unit Type of Package 1	PCE
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Number of Units in Package 1	1
Package 1 Height	10.5 cm
Package 1 Width	10 cm
Package 1 Length	22 cm
Package 1 Weight	1.23 kg

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Longer



Lifetime extension

Repair

No

Use Again



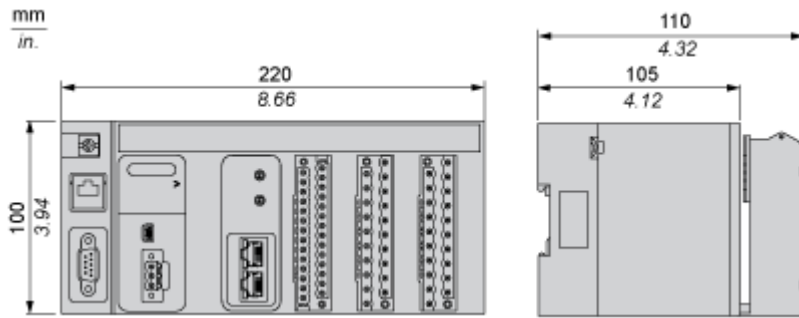
Repack and remanufacture

End of life manual availability

[End of Life Information](#)

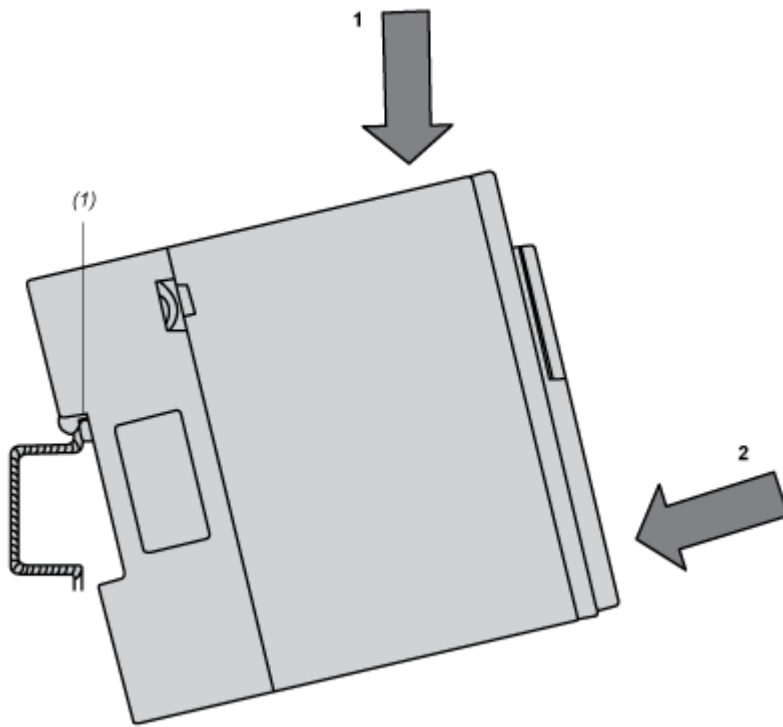
Dimensions Drawings

Dimensions

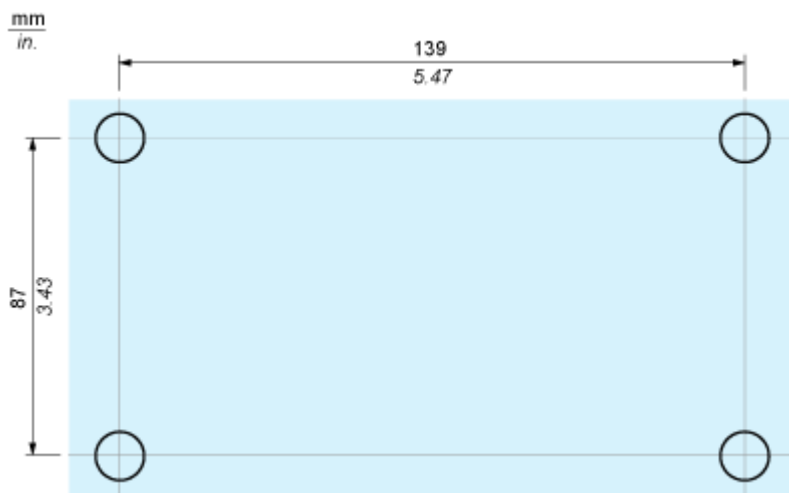


Mounting and Clearance

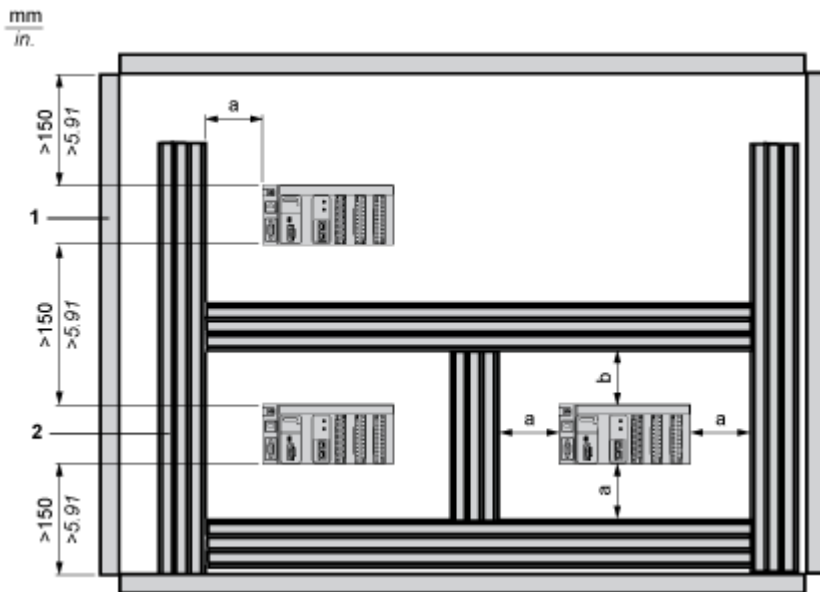
Mounting on DIN Rails



Mounting on Panels



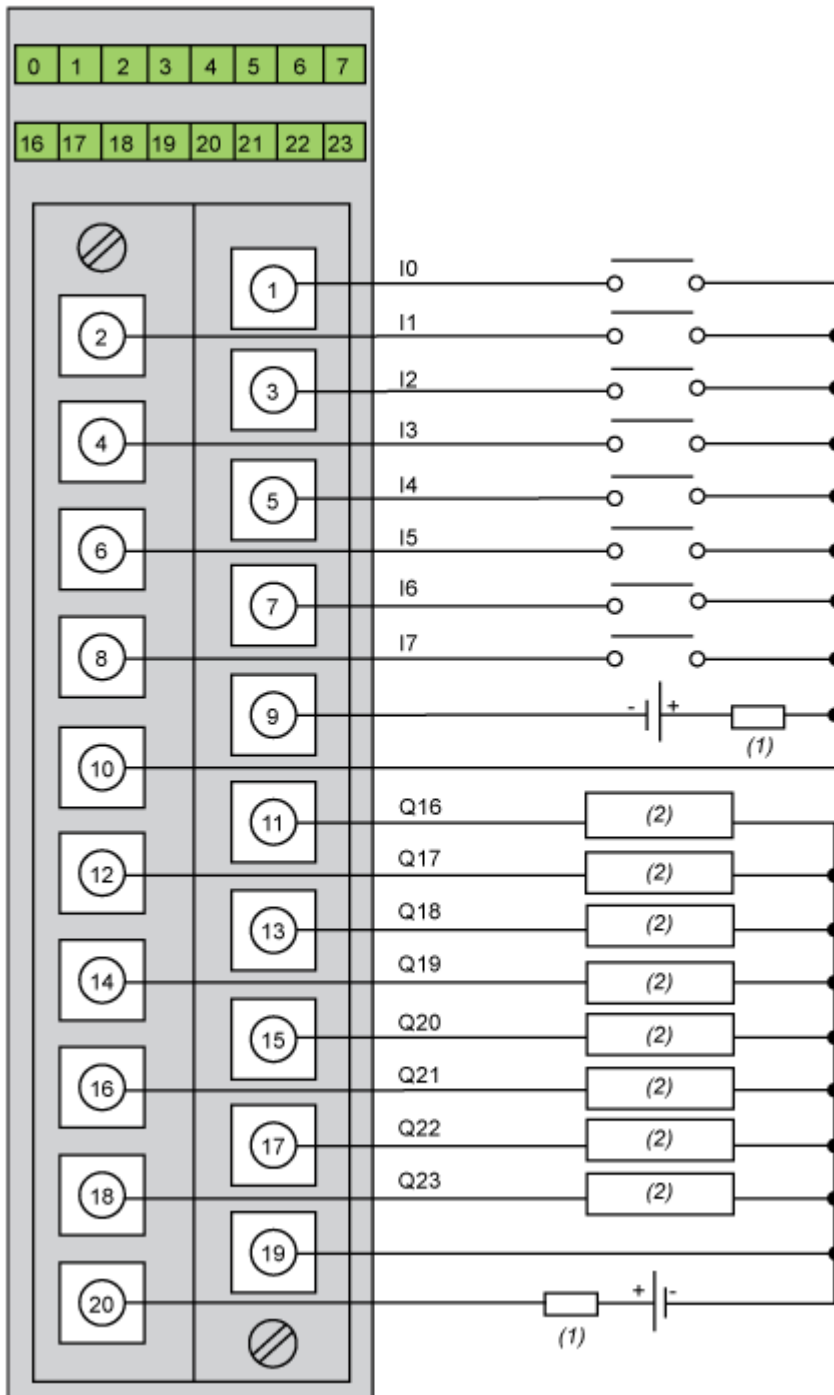
Clearance



- a : Greater than or equal to 60 mm (2.36 inch)
- b : Greater than or equal to 80 mm (3.15 inch)
- 1 : Installation or casing
- 2 : Wiring duct or tray

Connections and Schema

Discrete I/O Connection



(1): Fuse

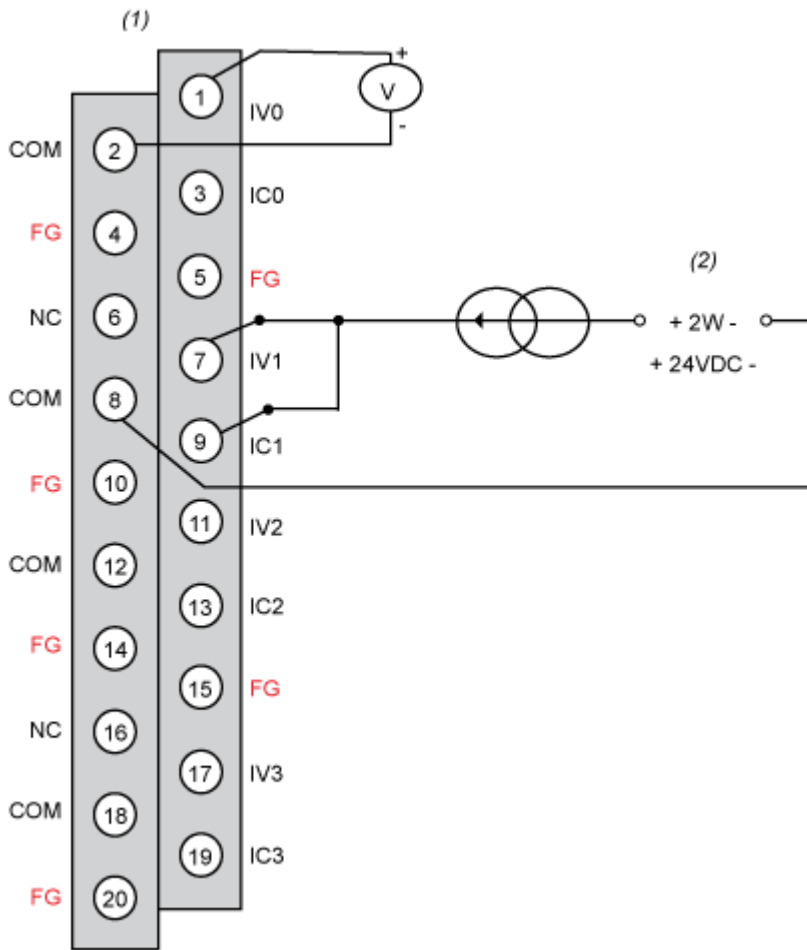
(2): Pre-actuator

Power supply: 24 Vdc

Input fuse: fast blow fuse of 0.5 A

Output fuse: fast blow fuse of 6.3 A

Analog Input Connection



(1) : Cabling view

(2) : Loopsupply

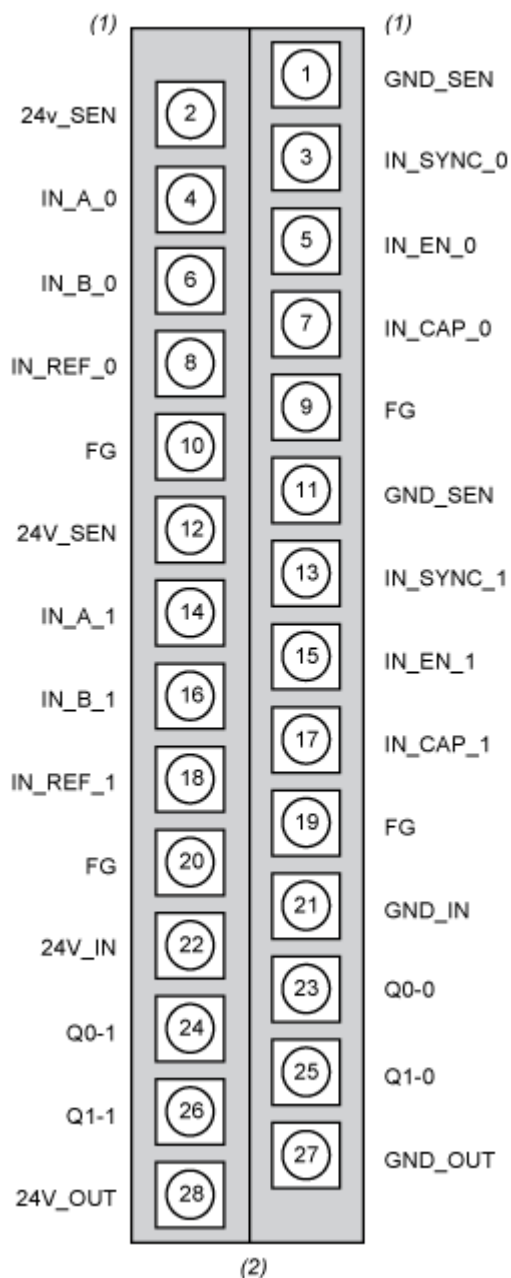
IVx +: Pole input for channel x

COM 0Vx: Pole input for channel x

ICx: Current reading resistor + input

FG: Functional ground

High Speed Counter Connection



(1) : Symbol

(2) : 28-pin Connector

Pin Number	Symbol	Description
2,12	24V_SEN	24 Vdc output for sensors supply
1,11	GND_SEN	24 Vdc output for sensors supply
9,10,19,20	FG	Functional ground
4,14	IN_A_0 IN_A_1	Input A

Pin Number	Symbol	Description
6,16	IN_B_0 IN_B_1	Input B
3,13	IN_SYNC_0 IN_SYNC_1	Synchronization input
5,15	IN_EN_0 IN_EN_1	Enable input
8,18	IN_REF_0 IN_REF_1	Homing input
7,17	IN_CAP_0 IN_CAP_1	Capture input
22	24V_IN	24 Vdc input for sensors supply
21	GND_IN	24 Vdc input for sensors supply
23	Q0-0	Q0 output for counting channel 0
24	Q0-1	Q1 output for counting channel 0
25	Q1-0	Q0 output for counting channel 1
26	Q1-1	Q1 output for counting channel 1
28	24V_OUT	24 Vdc input for actuators supply
27	GND_OUT	24 Vdc input for actuators supply