

# Product datasheet

Specifications



## Modicon MC80, Controller, 8 DI, 8 DO, 2 HSC

BMKC8020310

EAN Code: 3606480711404

### Main

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

### Complementary

Product compatibility	BMXFTB28... terminal block high-speed counter module BMXFTB20... terminal block discrete I/O 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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

<b>Counter functions</b>	Count events Ratio count Frequency meter One shot counting Measure time periods Loop (modulo) counting Freelarge counting
<b>Number of inputs for counter</b>	3 auxiliary 3 high speed
<b>Logic input for counter</b>	Positive (sink)
<b>Sensor power supply for counter</b>	19...30 V DC
<b>Input compatibility for counter</b>	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
<b>Number of outputs for counter</b>	2 positive
<b>Nominal output current for counter</b>	0.5 A per output
<b>Discrete input number</b>	8 positive logic (sink)
<b>Discrete input type</b>	Type 3
<b>Discrete input current</b>	5 mA
<b>Discrete input voltage</b>	19...30 V DC
<b>Discrete output number</b>	8 positive
<b>Discrete output current</b>	500 mA per output
<b>Discrete output voltage</b>	19...30 V DC
<b>Protection type</b>	Overload protection for output Short-circuit protection for output

## Environment

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

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	14.200 cm
<b>Package 1 Width</b>	12.000 cm
<b>Package 1 Length</b>	27.500 cm
<b>Package 1 Weight</b>	1.195 kg
<b>Unit Type of Package 2</b>	S03

---

<b>Number of Units in Package 2</b>	6
<b>Package 2 Height</b>	30.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	7.826 kg

---

## Logistical informations

---

<b>Country of origin</b>	ID
--------------------------	----

## Contractual warranty

---

<b>Warranty</b>	18 months
-----------------	-----------


## 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 Better

 <b>Materials and Substances</b>	
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
<a href="#">EU RoHS Directive</a>	Pro-active compliance (Product out of EU RoHS legal scope)
REACH Regulation	<a href="#">REACH Declaration</a>

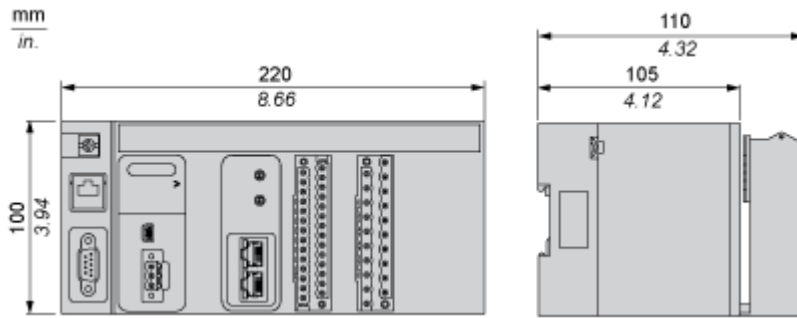
### Use Again

 <b>Repack and remanufacture</b>	
Take-back	No

Dimensions Drawings

Dimensions

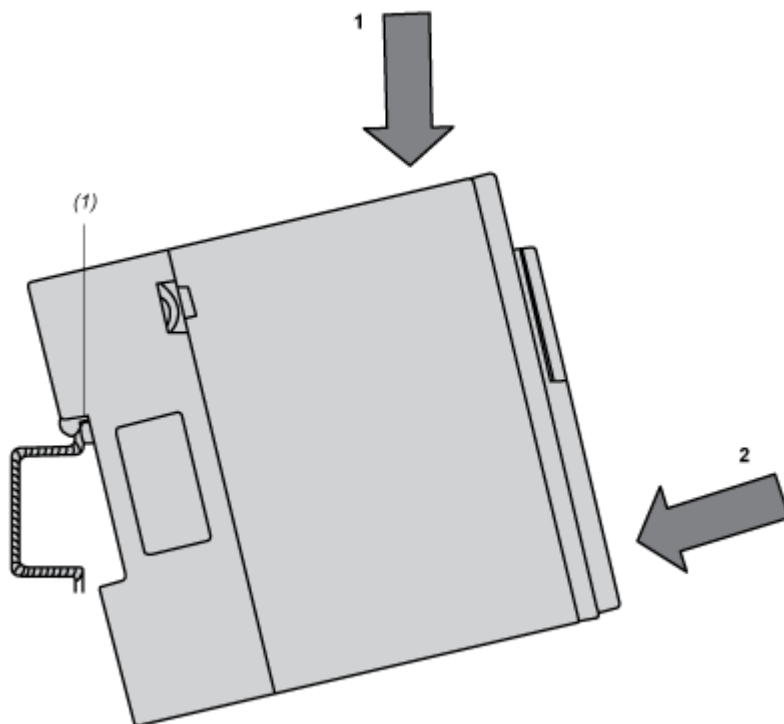
---



Mounting and Clearance

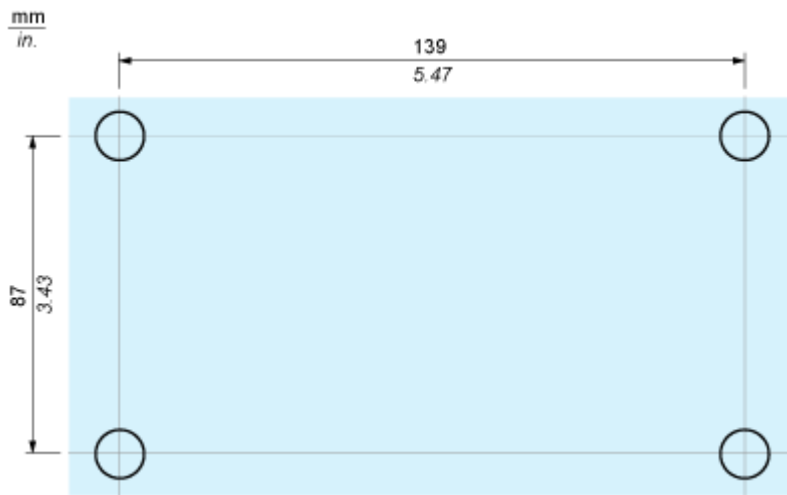
Mounting on DIN Rails

---

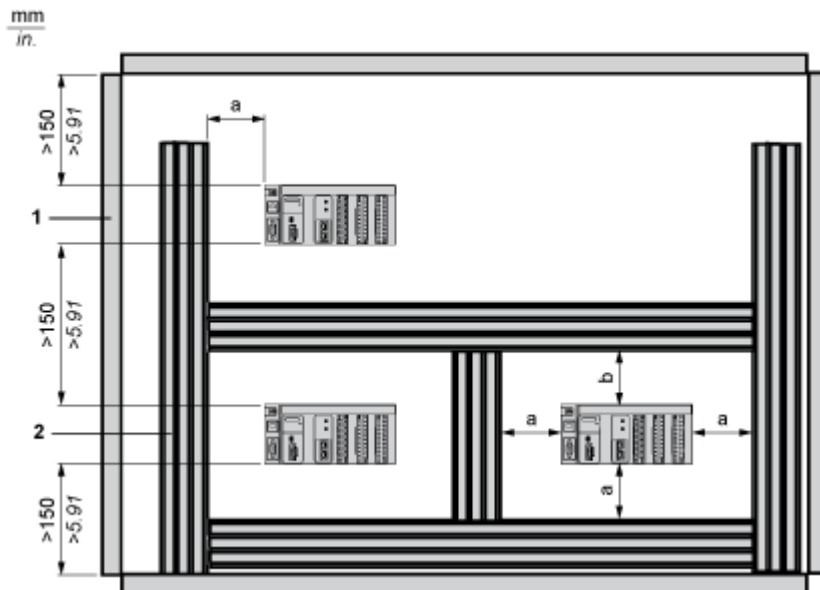


Mounting on Panels

---



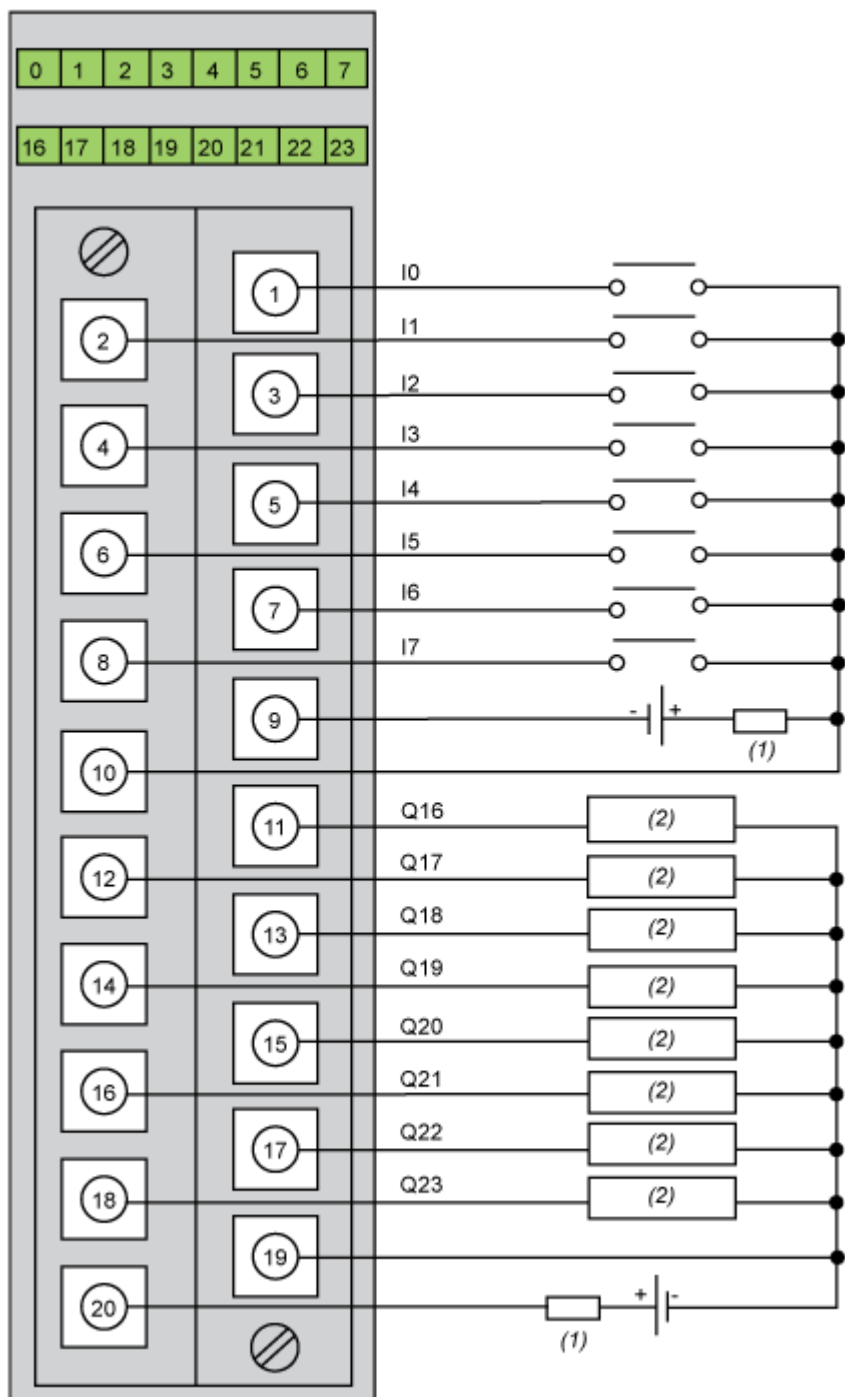
Clearance



- 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

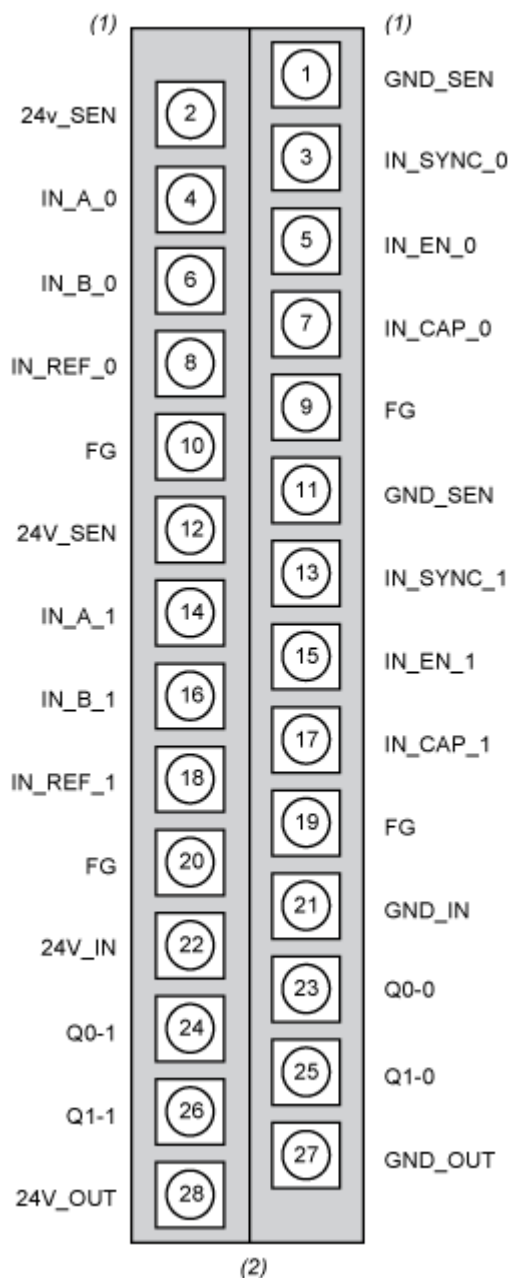
(2): Pre-actuator

**Power supply:** 24 Vdc

**Input fuse:** fast blow fuse of 0.5 A

**Output fuse:** fast blow fuse of 6.3 A

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