

# Product data sheet

Specifications



## Modicon MC80, Controller, 8 DI, 12 DO, 2 HSC, 4 AI

BMKC8030311

**Product availability: Non-Stock - Not normally stocked in distribution facility**

### 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 analog input module BMXFTB28... 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 $\mu$ s Boolean 0.08 $\mu$ s mixed
Realtime Clock	With
Function Available	Memory retention without battery
Communication Port Protocol	1 non isolated serial link RJ45 RS485/RS232 0.3...19.2 kbit/s 247 1 CANopen SUB-D 9 20 kbit/s...1 Mbit/s 16 2 Ethernet RJ45 10/100 Mbit/s
Integrated Connection Type	USB port mini B USB
Port Ethernet	10BASE-T/100BASE-TX
Bus Length	0.00...32.81 ft (0...10 m) serial link non isolated 0.00...49.21 ft (0...15 m) serial link non isolated 0.00...3280.84 ft (0...1000 m) serial link isolated with external isolation tap 0.00...65.62 ft (0...20 m) 1 Mbit/s CANopen 0.00...8202.10 ft (0...2500 m) 20 kbit/s CANopen 0.00...328.08 ft (0...100 m) Ethernet
Communication Service	Read/write variables Modbus Diagnostics Modbus Send/receive character string character mode Process Data Object (PDO) CANopen Service Data Object (SDO) CANopen FDR client Ethernet SNMP Ethernet RSTP support Ethernet
Number Of Counter	2
Maximum Counting Frequency	60000 Hz

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

<b>Counter Functions</b>	Count events Frequency meter Ratio count One shot counting Measure time periods Freelarge counting Loop (modulo) 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>	2.4 mA
<b>Discrete Input Voltage</b>	19...30 V DC
<b>Discrete Output Number</b>	12 positive
<b>Discrete Output Current</b>	2 A per output 10 A per module
<b>Discrete Output Voltage</b>	19...30 V DC
<b>Protection Type</b>	Overload protection output Short-circuit protection output
<b>Analogue Input Number</b>	4
<b>Analogue Input Type</b>	Current - 20...20 mA Voltage - 10...10 V
<b>Fast Read Cycle Time For Analogue Input</b>	1.3 ms + 1.3 ms x number of channels used
<b>Nominal Read Cycle Time For Analogue Input</b>	6.5 ms for 4 channels
<b>Analogue Input Resolution</b>	16 bits

## Environment

<b>Ambient Air Temperature For Operation</b>	-13...158 °F (-25...70 °C)
<b>Ambient Air Temperature For Storage</b>	-40...185 °F (-40...85 °C)
<b>Relative Humidity</b>	0...95 %
<b>Vibration Resistance</b>	3 gn
<b>Marking</b>	CE
<b>Standards</b>	UL 508 CSA C22.2 No 213 Class I Division 2 Group C CSA C22.2 No 142 IEC 61131-2 CSA C22.2 No 213 Class I Division 2 Group A CSA C22.2 No 213 Class I Division 2 Group D CSA C22.2 No 213 Class I Division 2 Group B
<b>Product Certifications</b>	RCM

## Ordering and shipping details

<b>Category</b>	US1PC3418160
<b>Discount Schedule</b>	PC34
<b>Gtin</b>	3606485445168
<b>Returnability</b>	No
<b>Country Of Origin</b>	ID

## Packing Units

<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	5.67 in (14.4 cm)
<b>Package 1 Width</b>	4.65 in (11.8 cm)
<b>Package 1 Length</b>	10.71 in (27.2 cm)
<b>Package 1 Weight</b>	2.84 lb(US) (1.29 kg)
<b>Unit Type Of Package 2</b>	S03
<b>Number Of Units In Package 2</b>	6
<b>Package 2 Height</b>	11.81 in (30 cm)
<b>Package 2 Width</b>	11.81 in (30 cm)
<b>Package 2 Length</b>	15.75 in (40 cm)
<b>Package 2 Weight</b>	18.63 lb(US) (8.45 kg)
<b>Unit Type Of Package 3</b>	P06
<b>Number Of Units In Package 3</b>	48
<b>Package 3 Height</b>	31.50 in (80 cm)
<b>Package 3 Width</b>	31.50 in (80 cm)
<b>Package 3 Length</b>	23.62 in (60 cm)
<b>Package 3 Weight</b>	164.46 lb(US) (74.6 kg)

## Sustainability


**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)

## Well-being performance

 Mercury Free

 Rohs Exemption Information [Yes](#)

**Reach Regulation** [REACH Declaration](#)

**Eu Rohs Directive** Pro-active compliance (Product out of EU RoHS legal scope)

**China Rohs Regulation** [China RoHS declaration](#)

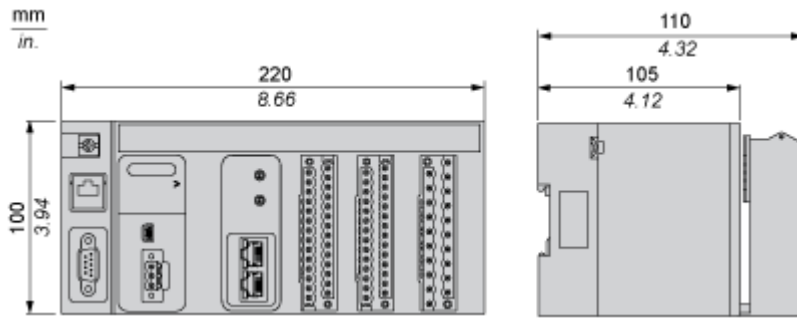
**Weee** The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

**California Proposition 65** WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Dimensions Drawings

Dimensions

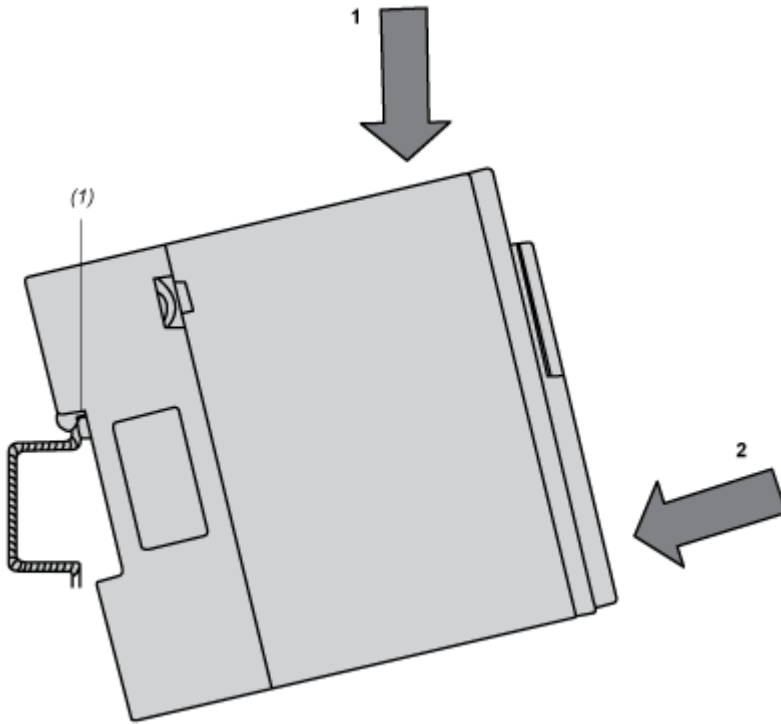
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Mounting and Clearance

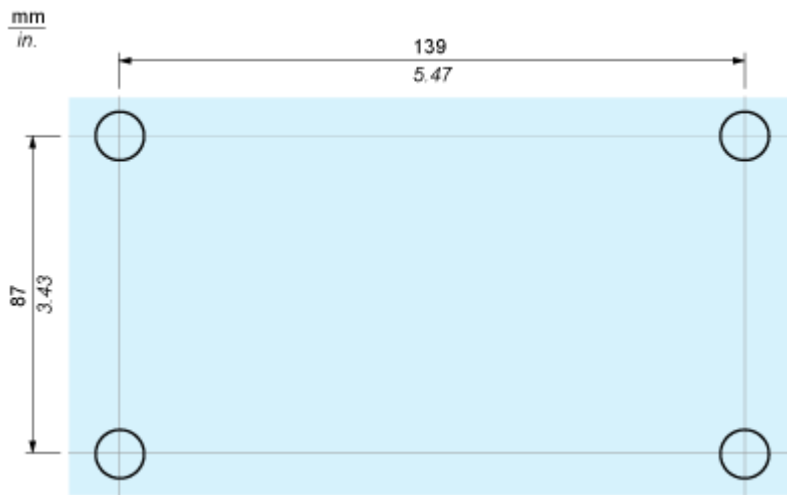
Mounting on DIN Rails

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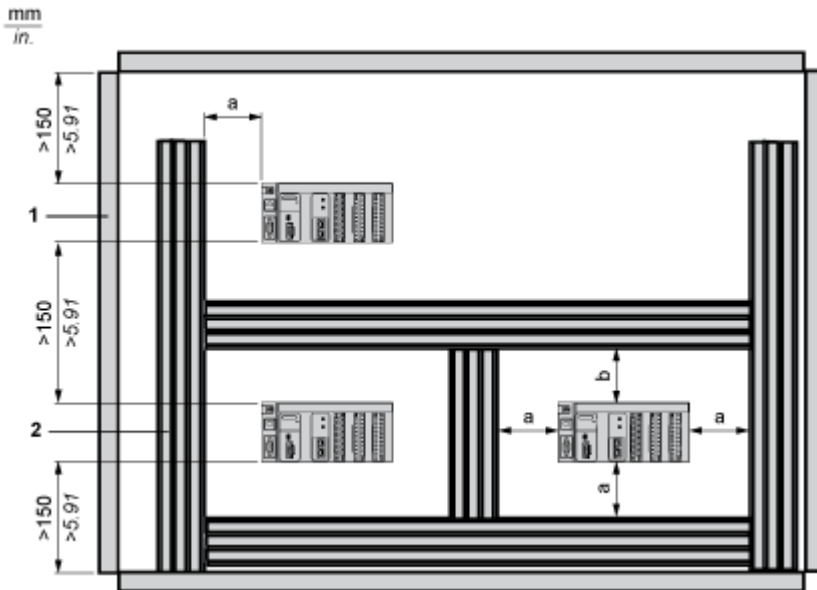
Mounting on Panels

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Clearance

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a : Greater than or equal to 60 mm (2.36 inch)

b : Greater than or equal to 80 mm (3.15 inch)

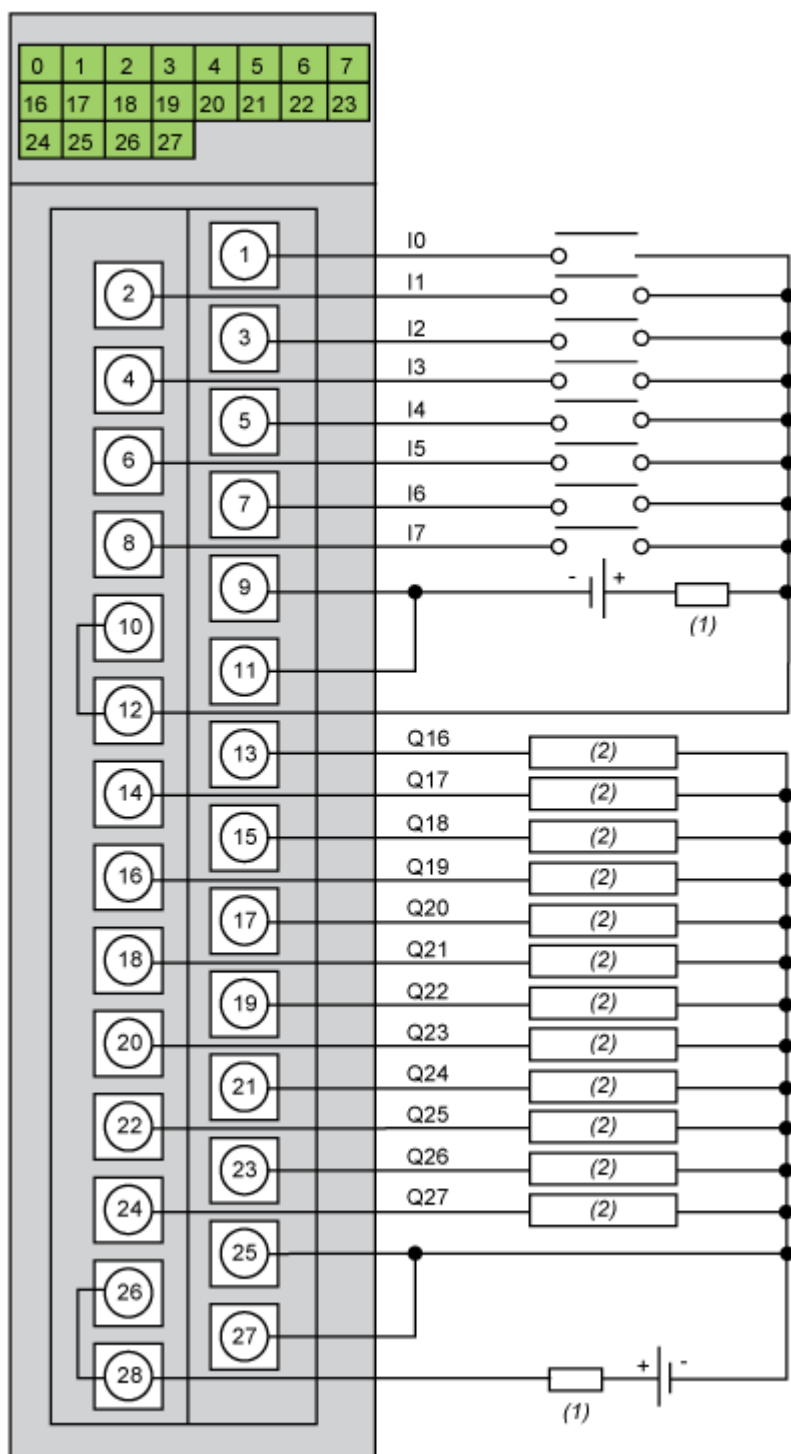
1 : Installation or casing

2 : Wiring duct or tray



Connections and Schema

Discrete I/O Connection



(1): Fuse

(2): Pre-actuator

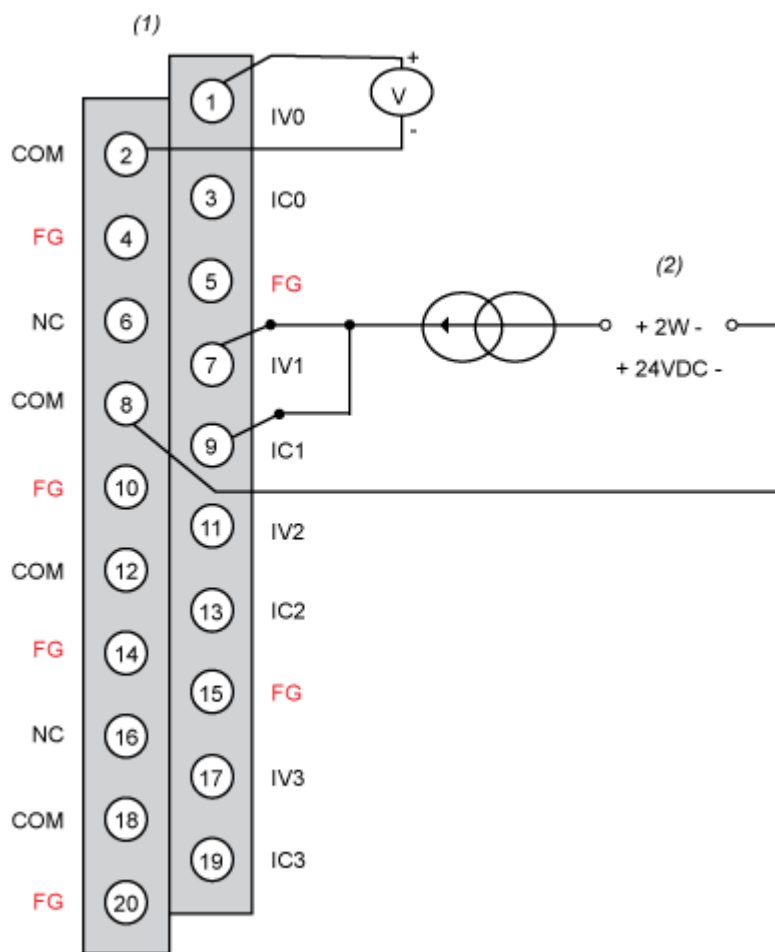
**Power supply:** 24 Vdc

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

**Output fuse:** fast blow fuse of 12 A



Analog Input Connection



(1) : Cabling view

(2) : Loopsupply

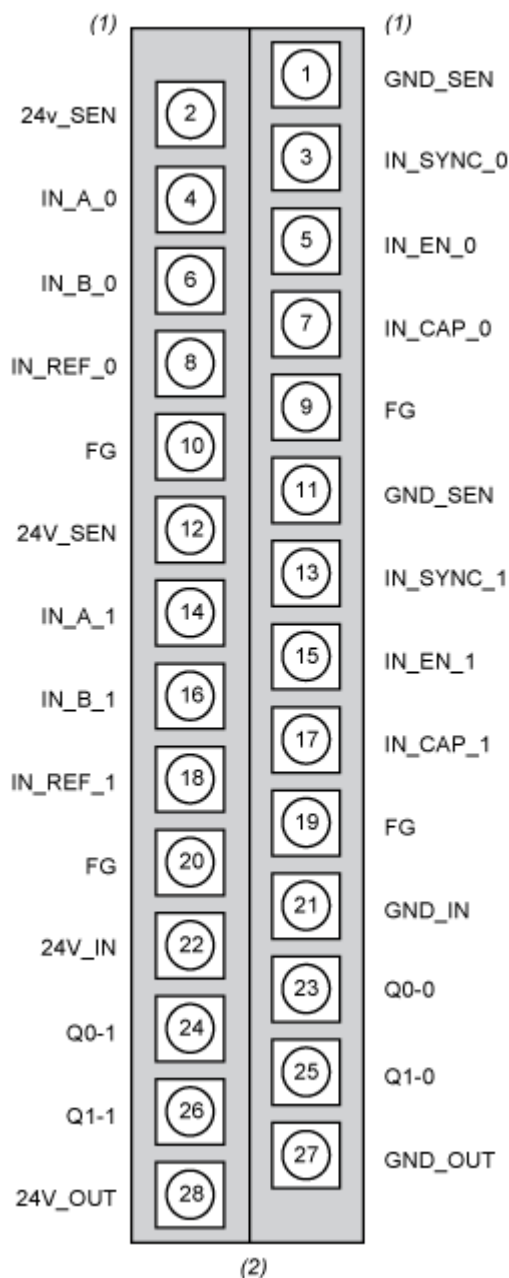
COM : Common pin for each channel

IVx : 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