



### Main

Range of Product	Modicon M340 automation platform
Product or Component Type	Counter module
Number of Channels	2
Maximum counting frequency	60000 Hz
Number of inputs	6
Input compatibility	19.2...30 V 2-wire/3-wire proximity sensor Incremental encoder with push-pull outputs, 10...30 V totem pole
Input voltage	24 V DC type 3
Number of outputs	2
Output voltage	24 V DC

### Complementary

Counter functions	Loop (modulo) counting Width modulation Down counting Measure time periods Ratio count Count events 32-bit counter counting Frequency meter
Cycle time	1 ms
Isolation voltage	1500 V 60 s
Input type	3 auxiliary input 3 high speed
Input voltage limits	30 V
Input current	2 mA at 11 V
Voltage state 1 guaranteed	11...30 V
Current state 1 guaranteed	>= 6 mA
Voltage state 0 guaranteed	< 5 V
Current state 0 guaranteed	<= 1.5 mA
Discrete output logic	Positive or negative configurable
Maximum output current	2 A per module 0.5 A per output
Output voltage limits	19.2...30 V
Maximum load current	1 A per module 0.5 A per output
Maximum leakage current	0.1 mA at state 0
Maximum voltage drop	<3 V at state 1
Output overload protection	Integrated
Output short-circuit protection	1.5 A integrated
Overlap time	0.2 ms
Electrical connection	1 connector 10 pins for wiring auxiliary input and sensor power supply 1 connector 16 pins for wiring the sensors of counter 0 1 connector 16 pins for wiring the sensors of counter 1
Current consumption	200 mA 3.3 V DC bus 40 mA 24 V DC rack 80 mA 24 V DC sensor
Module format	Standard
Net Weight	0.25 lb(US) (0.112 kg)

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## Environment

Ambient Air Temperature for Operation	32...140 °F (0...60 °C)
Relative Humidity	10...95 % without condensation
IP Degree of Protection	IP20
Directives	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility
Protective treatment	TC

## Ordering and shipping details

Category	18160-MODICON M340
Discount Schedule	PC34
GTIN	3595863910148
Returnability	Yes
Country of origin	FR

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.17 in (5.500 cm)
Package 1 Width	4.53 in (11.500 cm)
Package 1 Length	4.65 in (11.800 cm)
Package 1 Weight	4.94 oz (140.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	5.34 lb(US) (2.421 kg)

## Offer Sustainability

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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	 <a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	 <a href="#">China RoHS Declaration</a>
RoHS exemption information	 <a href="#">Yes</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

## Contractual warranty

Warranty	18 months
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Modules Mounted on Racks

Dimensions



(1) With removable terminal block (cage, screw or spring).

(2) With FCN connector.

(3) On AM1 ED rail: 35 mm wide, 15 mm deep. Only possible with BMXXBP0400/0400H/0600/0600H/0800/0800H rack.

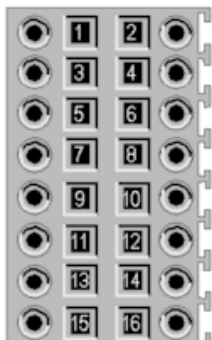
Rack references	a in mm	a in in.
BMXXBP0400 and BMXXBP0400H	242.4	09.54
BMXXBP0600 and BMXXBP0600H	307.6	12.11
BMXXBP0800 and BMXXBP0800H	372.8	14.68
BMXXBP1200 and BMXXBP1200H	503.2	19.81

## Counting Module Wiring

### Note

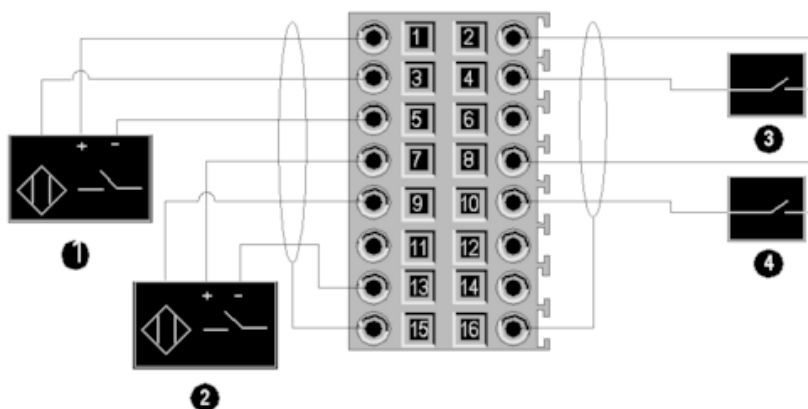
The two 16-pin connectors and the 10-pin connector are sold separately and are available in the BMXXTSHSC20 connection kit.

### Assignment of the 16-Pin Connector



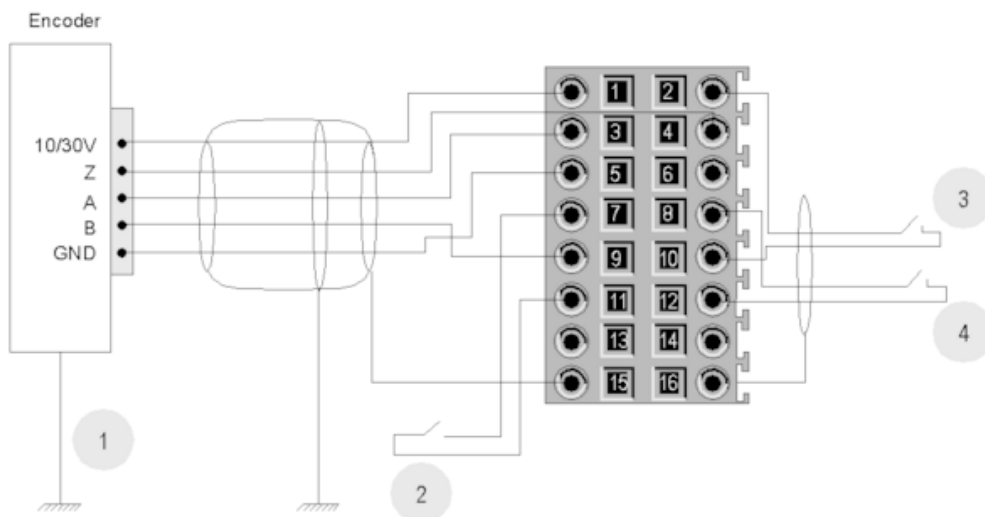
Pin number	Symbol	Description
1, 2, 7, 8	24V_SEN	24 VDC output for sensors supply
5, 6, 13, 14	GND_SEN	24 VDC output for sensors supply
15, 16	FE	Functional earth
3	IN_A	Input A
4	IN_SYNC	Synchronization input
9	IN_B	Input B
10	IN_EN	Enable input selected
11	IN_REF	Homing input
12	IN_CAP	Capture input

### Sensors Connection Example



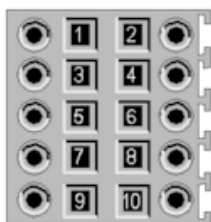
- 1 IN\_A input
- 2 IN\_B input
- 3 IN\_SYNC input (synchronization input)
- 4 IN\_EN input (enable input)

## Encoder Connection Example for Axis Control



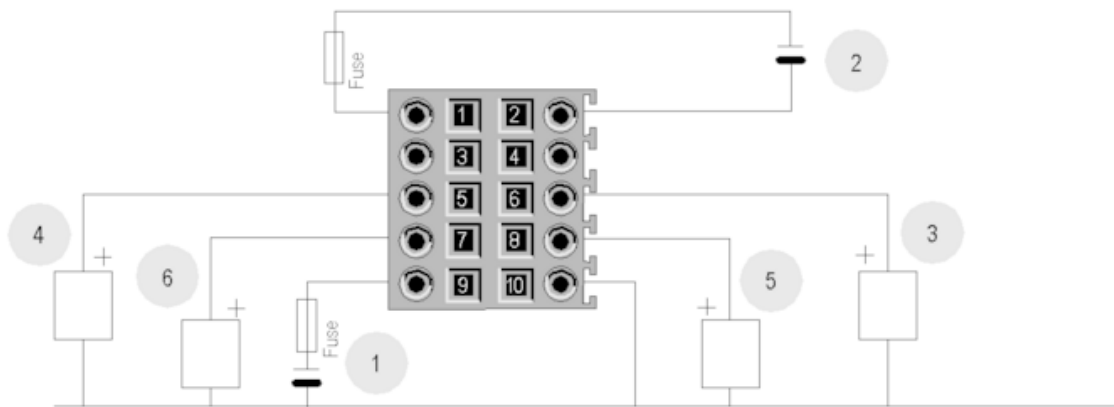
- 1 Encoder (inputs A, B and Z)
- 2 IN\_REF input (homing input)
- 3 IN\_EN input (enable input)
- 4 IN\_CAP input (capture input)

## Assignment of the 10-Pin Connector



Pin number	Symbol	Description
1	24V_IN	24 VDC input for sensors supply
2	GND_IN	Return 24 VDC input for sensors supply
5	Q0-1	Q1 output for counting channel 0
6	Q0-0	Q0 output for counting channel 0
7	Q1-1	Q1 output for counting channel 1
8	Q1-0	Q0 output for counting channel 1
9	24V_OUT	24 VDC input for actuators supply
10	GND_OUT	Return 24 VDC input for actuators supply

## Connecting Outputs and Supplies



1 24 VDC supply for sensors

2 Return 24 VDC supply for sensors

3 Actuator for the Q0 output of counting channel 0

4 Actuator for the Q1 output of counting channel 0

5 Actuator for the Q0 output of counting channel 1

6 Actuator for the Q1 output of counting channel 1

The Q0 and Q1 outputs are limited by a maximum current of 0.5 A.

## Recommended Circuit for high-Noise Environment Using BMXXSP... Electromagnetic Protection Kit

