



Main

Range of product	Modicon M340 automation platform
Product or component type	Counter module
Product specific application	For severe environments
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	Ratio count Frequency meter Down counting 32-bit counter counting Loop (modulo) counting Measure time periods Count events Width modulation
Cycle time	1 ms
Isolation voltage	1500 V for 60 s
Input type	3 auxiliary input 3 high speed
Input voltage limits	19.2...30 V at 60 °C 26.4 V at 70 °C
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 with 10 pins for wiring auxiliary input and sensor power supply 1 connector with 16 pins for wiring the sensors of counter 0 1 connector with 16 pins for wiring the sensors of counter 1
Current consumption	200 mA at 3.3 V DC bus 40 mA at 24 V DC rack 80 mA at 24 V DC sensor

Module format	Standard
Net weight	0.112 kg

Environment

Ambient air temperature for operation	-25...70 °C
Relative humidity	10...95 % without condensation
IP degree of protection	IP20
Directives	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility
Product certifications	CE[RETURN]UL[RETURN]CSA[RETURN]RCM[RETURN]EAC[RETURN]Merchant Navy
Standards	EN 61131-2 EN/IEC 61010-2-201 UL 61010-2-201 CSA C22.2 No 61010-2-201 IACS E10 EN/IEC 61000-6-5, interface type 1 and type 2 EN/IEC 61850-3, location G
Environmental characteristic	Gas resistant class Gx conforming to ISA S71.04 Gas resistant class 3C4 conforming to IEC 60721-3-3 Dust resistant class 3S4 conforming to IEC 60721-3-3 Sand resistant class 3S4 conforming to IEC 60721-3-3 Salt resistant level 2 conforming to IEC 68252 Mold growth resistant class 3B2 conforming to IEC 60721-3-3 Fungal spore resistant class 3B2 conforming to IEC 60721-3-3 Hazardous location class I division 2
Protective treatment	Conformal coating

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.500 cm
Package 1 Width	11.500 cm
Package 1 Length	11.800 cm
Package 1 Weight	145.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	2.534 kg

Offer Sustainability

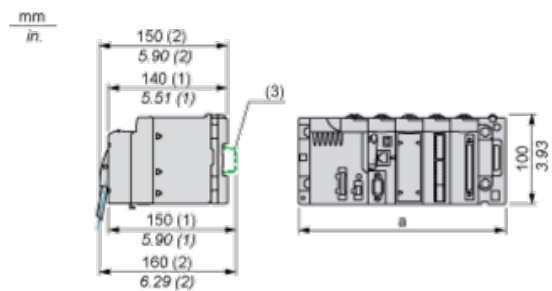
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed 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 "

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.

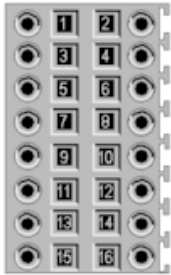
Rack references	a in mm	a in in.
BMXXBP0400 and BMXXBP0400H	242.4	09.54
BMXXBP0600 and BMXXBP0600H	307.6	12.11
BMXXBP0800 and BMXXBP0800H	372.8	14.68
BMXXBP1200 and BMXXBP1200H	503.2	19.81

Counting Module Wiring

Note

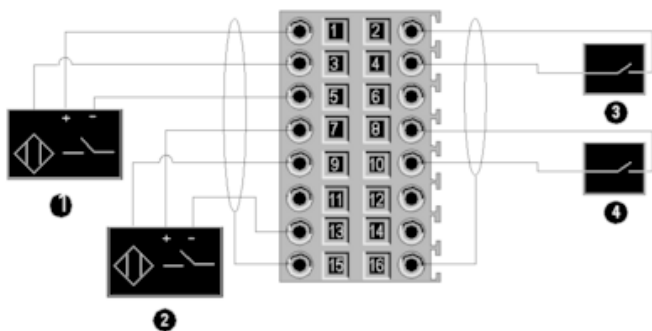
The two 16-pin connectors and the 10-pin connector are sold separately and are available in the BMXXTSHSC20 connection kit.

Assignment of the 16-Pin Connector



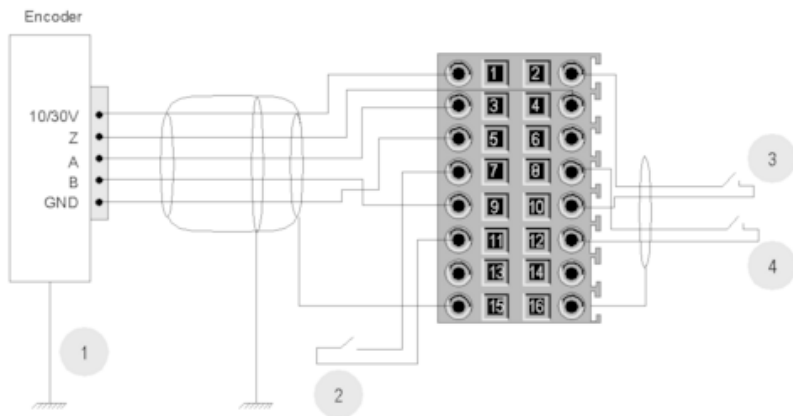
Pin number	Symbol	Description
1, 2, 7, 8	24V_SEN	24 VDC output for sensors supply
5, 6, 13, 14	GND_SEN	24 VDC output for sensors supply
15, 16	FE	Functional earth
3	IN_A	Input A
4	IN_SYNC	Synchronization input
9	IN_B	Input B
10	IN_EN	Enable input selected
11	IN_REF	Homing input
12	IN_CAP	Capture input

Sensors Connection Example



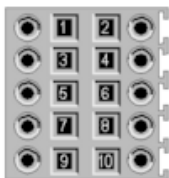
- 1 IN_A input
- 2 IN_B input
- 3 IN_SYNC input (synchronization input)
- 4 IN_EN input (enable input)

Encoder Connection Example for Axis Control



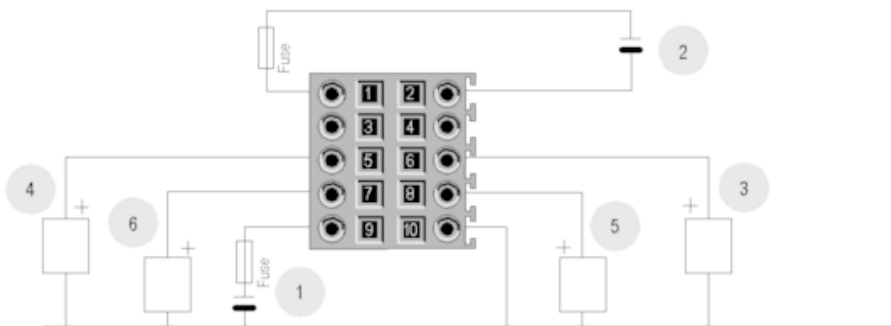
- 1 Encoder (inputs A, B and Z)
- 2 IN_REF input (homing input)
- 3 IN_EN input (enable input)
- 4 IN_CAP input (capture input)

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

