



### Main

|                              |   |
|------------------------------|---|
| Range of product             | Modicon M340 automation platform  |
| Product or component type    | Counter module  |
| Product specific application | For severe environments   |
| Number of channels           | 2   |
| Counting frequency           | $\leq 60000$ Hz   |
| Number of inputs             | 6   |
| Input compatibility          | Incremental encoder with push-pull outputs 10...30 V totem pole<br>2-wire/3-wire proximity sensor 19.2...30 V |
| Input voltage                | 24 V DC type 3  |
| Number of outputs            | 2   |
| Output voltage               | 24 V DC   |

### Complementary

|                                 |  |
|---------------------------------|--|
| Counter functions               | 32-bit counter counting<br>Count events<br>Down counting<br>Frequency meter<br>Loop (modulo) counting<br>Measure time periods<br>Ratio count<br>Width modulation                             |
| Cycle time                      | 1 ms   |
| Isolation voltage               | 1500 V for 60 s  |
| Input type                      | 3 auxiliary input<br>3 high speed  |
| Input voltage limits            | 26.4 V at 70 °C<br>19.2...30 V at 60 °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  |
| Output current limits           | $\leq 0.5$ A per output<br>$\leq 2$ A per module   |
| Output voltage limits           | 19.2...30 V  |
| Maximum load current            | 0.5 A per output<br>1 A per module   |
| Leakage current                 | $\leq 0.1$ mA at state 0   |
| 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 16 pins for wiring the sensors of counter 1<br>1 connector 16 pins for wiring the sensors of counter 0<br>1 connector 10 pins for wiring auxiliary input and sensor power supply |
| Current consumption             | 80 mA 24 V DC sensor<br>40 mA 24 V DC rack<br>200 mA 3.3 V DC bus  |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|                |          |
|----------------|----------|
| Module format  | Standard |
| Product weight | 0.112 kg |

## Environment

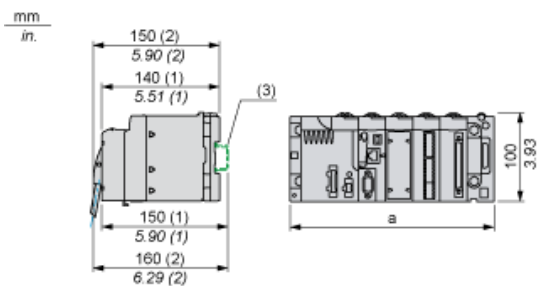
|                                       |  |
|---------------------------------------|--|
| Ambient air temperature for operation | -25...70 °C  |
| Relative humidity                     | 10...95 % without condensation   |
| IP degree of protection               | IP20   |
| Protective treatment                  | Conformal coating Humiseal 1A33<br>TC                                    |
| Environmental characteristic          | 3C4 conforming to EN/IEC 60721-3-3<br>3C3 conforming to EN/IEC 60721-3-3 |

## Offer Sustainability

|                               |   |
|-------------------------------|---|
| Sustainable offer status      | Not Green Premium product   |
| RoHS (date code: YYWW)        | Compliant - since 0901 - <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                         | Reference not containing SVHC above the threshold                                     |
| Product environmental profile | Available <a href="#">Download Product Environmental</a>                              |

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.

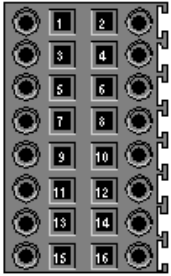
| Rack references            | a in mm | a in in. |
|----------------------------|---------|----------|
| BMXXBP0400 and BMXXBP0400H | 242.4   | 09.54    |
| BMXXBP0600 and BMXXBP0600H | 307.6   | 12.11    |
| BMXXBP0800 and BMXXBP0800H | 372.8   | 14.68    |
| BMXXBP1200 and BMXXBP1200H | 503.2   |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

## Counting Module Wiring

### Note

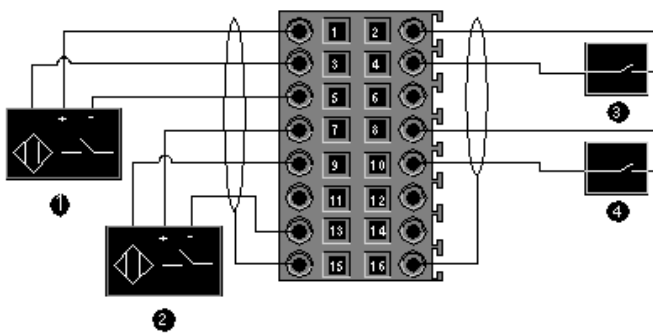
The two 16-pin connectors and the 10-pin connector are sold separately and are available in the BMXXTSHSC20 connection kit.

### Assignment of the 16-Pin Connector



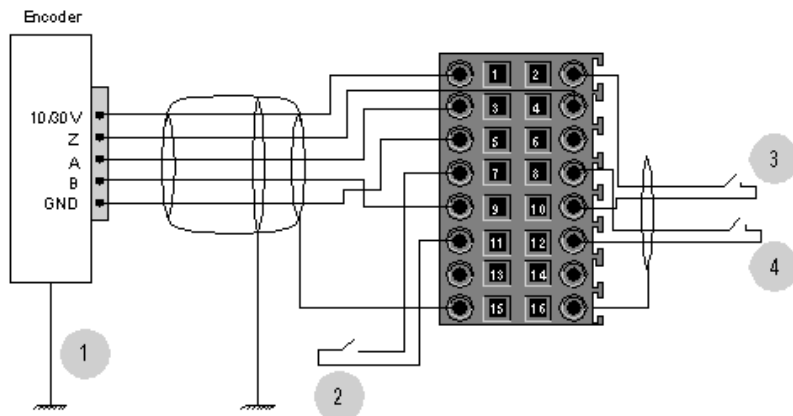
| Pin number   | Symbol  | Description                      |
|--------------|---------|----------------------------------|
| 1, 2, 7, 8   | 24V_SEN | 24 VDC output for sensors supply |
| 5, 6, 13, 14 | GND_SEN | 24 VDC output for sensors supply |
| 15, 16       | FE      | Functional earth                 |
| 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



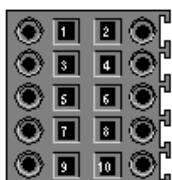
- 1 IN\_A input
- 2 IN\_B input
- 3 IN\_SYNC input (synchronization input)
- 4 IN\_EN input (enable input)

## Encoder Connection Example for Axis Control



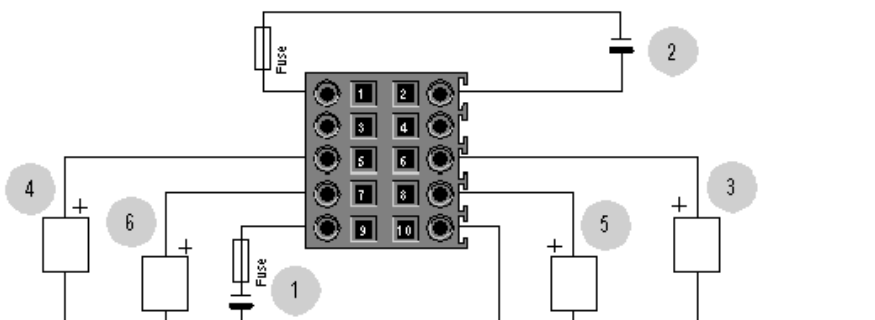
- 1 Encoder (inputs A, B and Z)
- 2 IN\_REF input (homing input)
- 3 IN\_EN input (enable input)
- 4 IN\_CAP input (capture input)

## 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

