



### Main

|                           |                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------|
| Range of product          | Modicon M340 automation platform                                                                              |
| Product or component type | Counter module                                                                                                |
| 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            | 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                                                                                                                                                            |
| 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                                                                                                                            |
| Module format                   | Standard                                                                                                                                                                                     |
| Product weight                  | 0.112 kg                                                                                                                                                                                     |

## Environment

|                                       |                                |
|---------------------------------------|--------------------------------|
| Ambient air temperature for operation | 0...60 °C                      |
| Relative humidity                     | 10...95 % without condensation |
| IP degree of protection               | IP20                           |
| Protective treatment                  | TC                             |

## Offer Sustainability

|                               |                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status      | Not Green Premium product                                                             |
| RoHS (date code: YYWW)        | Compliant - since 0722 - <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.

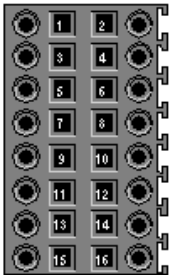
| Rack references            | a in mm | a in in. |
|----------------------------|---------|----------|
| BMXXBP0400 and BMXXBP0400H | 242.4   | 09.54    |
| BMXXBP0600 and BMXXBP0600H | 307.6   | 12.11    |
| BMXXBP0800 and BMXXBP0800H | 372.8   | 14.68    |
| BMXXBP1200 and BMXXBP1200H | 503.2   |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

Counting Module Wiring

Note

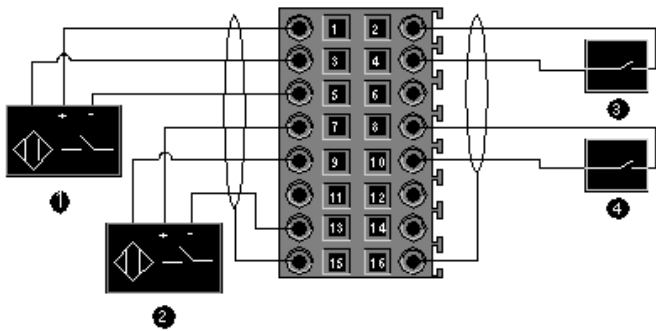
The two 16-pin connectors and the 10-pin connector are sold separately and are available in the BMXXTSHSC20 connection kit.

Assignment of the 16-Pin Connector



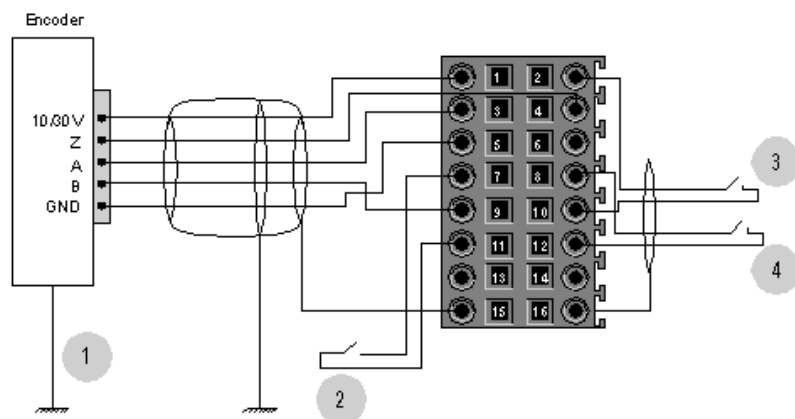
| Pin number   | Symbol  | Description                      |
|--------------|---------|----------------------------------|
| 1, 2, 7, 8   | 24V_SEN | 24 VDC output for sensors supply |
| 5, 6, 13, 14 | GND_SEN | 24 VDC output for sensors supply |
| 15, 16       | FE      | Functional earth         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



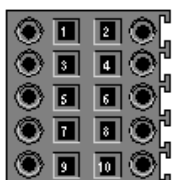
- 1 IN\_A input
- 2 IN\_B input
- 3 IN\_SYNC input (synchronization input)
- 4 IN\_EN input (enable input)

## Encoder Connection Example for Axis Control



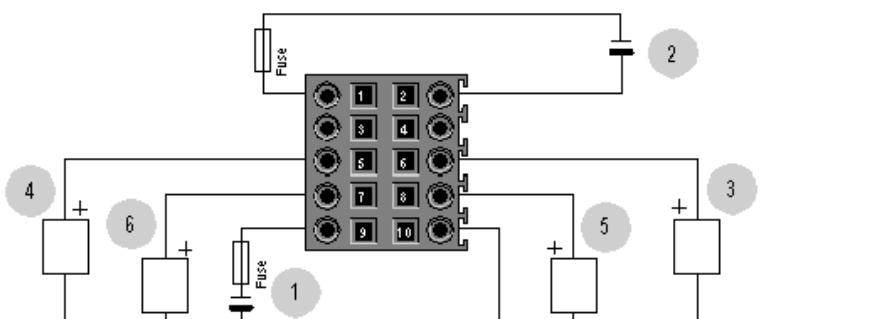
- 1 Encoder (inputs A, B and Z)
- 2 IN\_REF input (homing input)
- 3 IN\_EN input (enable input)
- 4 IN\_CAP input (capture input)

## 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

