



## Commercial status

End of Commercialisation :

△ End of Commercialisation

## Main

|                           |                                     |
|---------------------------|-------------------------------------|
| Range of product          | Modicon Premium Automation platform |
| Product or component type | Counter modules                     |
| I/O modularity            | 2 channels                          |
| Electrical circuit type   | Auxiliary output                    |

## Complementary

|                            |                                                                                                                                                                                                                   |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Counting frequency         | 40000 Hz                                                                                                                                                                                                          |
| Power dissipation in W     | 4.5...6 W                                                                                                                                                                                                         |
| Cycle time                 | 5 Ms                                                                                                                                                                                                              |
| Discrete input logic       | Current sink for auxiliary input (preset, enable and read) conforming-<br>to IEC 1131 Type 2<br>Resistive for 2/3-wire proximity sensors PNP/NPN conforming-<br>to IEC 1131 Type 2<br>Resistive for encoder input |
| Input logic                | Positive                                                                                                                                                                                                          |
| Input compatibility        | Incremental encoder 10...30 V totem pole<br>Incremental encoder 5 V DC RS422                                                                                                                                      |
| Input voltage              | 24 V 18 mA 2/3-wire proximity sensors PNP/NPN<br>24 V 7 mA auxiliary input (preset, enable and read)<br>5 V 18 mA encoder input                                                                                   |
| Input voltage limits       | <= 5.5 V encoder input<br>19...30 V 2/3-wire proximity sensors PNP/NPN<br>19...30 V auxiliary input (preset, enable and read)                                                                                     |
| Voltage state 1 guaranteed | >= 11 V for 2/3-wire proximity sensors PNP/NPN<br>>= 11 V for auxiliary input (preset, enable and read)<br>>= 2.4 V for encoder input                                                                             |
| Current state 1 guaranteed | >= 3.7 mA (encoder input)<br>>= 6 mA (2/3-wire proximity sensors PNP/NPN)<br>>= 6 mA (auxiliary input (preset, enable and read))                                                                                  |
| Voltage state 0 guaranteed | <= 1.2 V for encoder input<br><= 5 V for 2/3-wire proximity sensors PNP/NPN<br><= 5 V for auxiliary input (preset, enable and read)                                                                               |
| Current state 0 guaranteed | <= 1 mA (encoder input)<br><= 2 mA (2/3-wire proximity sensors PNP/NPN)<br><= 2 mA (auxiliary input (preset, enable and read))                                                                                    |
| Response time              | < 2.5 ms sensor voltage at loss of 24 V auxiliary input (preset, enable and read)                                                                                                                                 |
| Input impedance            | Encoder input: > 270 Ohm at U = 2.4 V<br>2/3-wire proximity sensors PNP/NPN: 1400 Ohm at Un<br>Auxiliary input (preset, enable and read): 3400 Ohm at Un<br>Encoder input: 400 Ohm at Un                          |
| Output voltage             | 24 V DC                                                                                                                                                                                                           |

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.

|                                 |                                                                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal output current          | 0.5 A                                                                                                                                                                           |
| Output voltage limits           | 19...30 V                                                                                                                                                                       |
| Maximum voltage drop            | <0.5 V at state 1                                                                                                                                                               |
| Output compatibility            | Positive logic DC inputs (resistance <= 15 kOhm) for auxiliary output                                                                                                           |
| Maximum leakage current         | 0.1 MA                                                                                                                                                                          |
| Switching time                  | < 0.25 ms                                                                                                                                                                       |
| Switching frequency             | < 0.6/LI² Hz on inductive load load                                                                                                                                             |
| Output overload protection      | Thermal tripping via program or automatically<br>Current limiter                                                                                                                |
| Output short-circuit protection | Thermal tripping via program or automatically<br>Current limiter                                                                                                                |
| Output overvoltage protection   | Zener diode                                                                                                                                                                     |
| Reverse polarity protection     | Reverse diode on supply                                                                                                                                                         |
| Checks                          | Sensor power supply                                                                                                                                                             |
| Current consumption             | 280 mA at 5 V DC<br>30 mA at 24 V DC                                                                                                                                            |
| Module format                   | Standard                                                                                                                                                                        |
| Local signalling                | 1 LED (green)module operating (RUN):<br>1 LED (red)external fault (I/O):<br>1 LED (red)internal fault, module failure (ERR):<br>2 LEDs (green)axis diagnostics available (CH.): |
| Electrical connection           | 1 connector HE-10, 20 pins<br>2 connectors SUB-D 15                                                                                                                             |
| Net weight                      | 0.32 Kg                                                                                                                                                                         |

## Environment

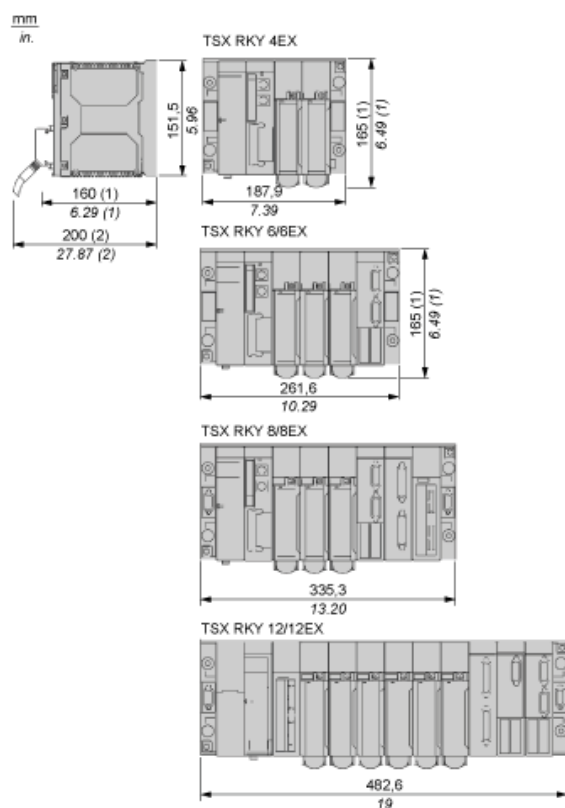
|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Protective treatment                  | TC<br>Conformal coating Humiseal 1A33 |
| Ambient air temperature for operation | 0...60 °C                             |
| Ambient air temperature for storage   | -25...70 °C                           |
| Relative humidity                     | 5...95 % without condensation         |
| Operating altitude                    | <= 2000 m                             |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## Standard and Extendable Racks for Modules Mounting

### Dimensions of Modules and Racks



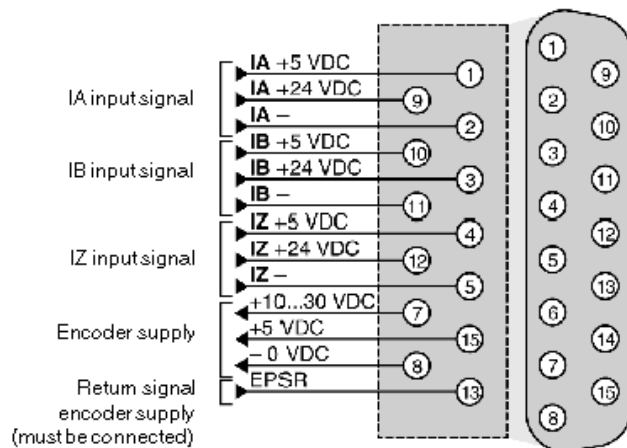
(1) With screw terminal block modules.

(2) Maximum depth for all types of modules and their associated connectors.

## 15-pin SUB-D Connectors of the Counting Module

### Pinout Configuration

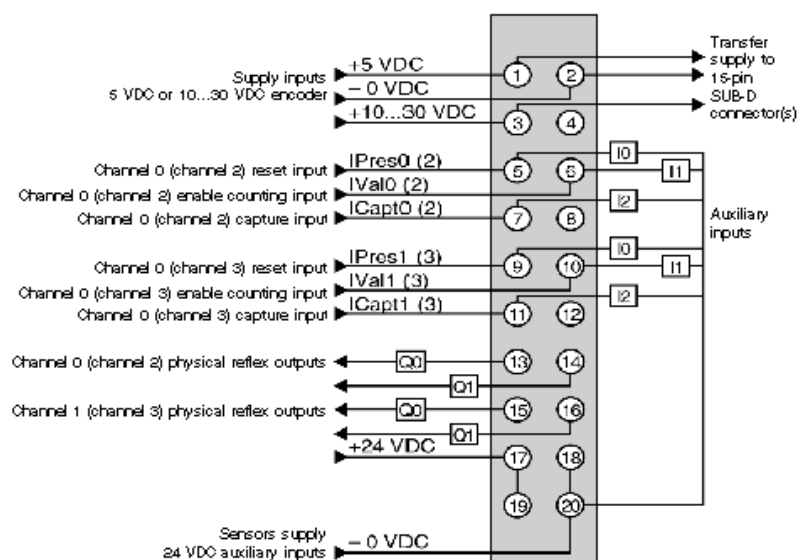
Standard 15-pin SUB-D connector for connecting the counting sensor to channels 0, 1, 2 or 3



| 5 Vdc signal                  | Pins |
|-------------------------------|------|
| + IA input                    | 1    |
| - IA input                    | 2    |
| + IB input                    | 10   |
| - IB input                    | 11   |
| + IZ input                    | 4    |
| - IZ input                    | 5    |
| Encoder power supply:         |      |
| +5 Vdc                        | 15   |
| -0 Vdc                        | 8    |
| Encoder power supply feedback | 13   |
| 10...30 Vdc signals           | Pins |
| + IA input                    | 9    |
| - IA input                    | 2    |
| + IB input                    | 3    |
| - IB input                    | 11   |
| + IZ input                    | 12   |
| - IZ input                    | 5    |
| Encoder power supply:         |      |
| +10...30 Vdc                  | 7    |
| -0 Vdc                        | 8    |
| Encoder power supply feedback | 13   |

## HE10 20-pin Connector of the Counting Module

## Wiring Diagram



| 24 Vdc signals                         | Pins     |
|----------------------------------------|----------|
| Channel 0 (channel 2) auxiliary input: |          |
| Preset IPres0/2                        | 5        |
| Confirmation IVal0/2                   | 6        |
| Capture ICapt0/2                       | 7        |
| Channel 1 (channel 3) auxiliary input: |          |
| Preset IPres1/3                        | 9        |
| Confirmation IVal1/3                   | 10       |
| Capture ICapt1/3                       | 11       |
| Channel 0 (channel 2) reflex output:   |          |
| Output Q0                              | 13       |
| Output Q1                              | 14       |
| Channel 1 reflex output:               |          |
| Output Q0                              | 15       |
| Output Q1                              | 16       |
| Power Supplies                         | Pins     |
| Encoder power supply:                  |          |
| +5 Vdc                                 | 1        |
| - 0 Vdc                                | 2        |
| +10...30 Vdc                           | 3        |
| Sensor power supply:                   |          |
| +24 Vdc                                | 17 or 19 |
| -0 Vdc                                 | 18 or 20 |

Product Life Status : **Post commercialisation**

TSXCTY2AC may be replaced by any of the following products:



**BMXEHC0200H**

high speed counter module M340 - 2 channels

Qty 1

Reason for Substitution: End of life | Substitution date: 31 Dec 2017 | Not same dimensions/design



### BMXEHC0200H

high speed counter module M340 - 2 channels

Qty 1

Reason for Substitution: End of life | Substitution date: 31 Dec 2017 | Not same dimensions/design

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### BMXEHC0200H

high speed counter module M340 - 2 channels

Qty 1

Reason for Substitution: End of life | Substitution date: 30 Jun 2018 |

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