Product data sheet
Characteristics

TSXCTY2AC
2 channels counter modules - 40 kHz - 30 mA at 24 V DC, 280 mA at 5 V DC

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
Module cycle time	5
Discrete input logic	Resistive encoder input Resistive 2/3-wire proximity sensors PNP/NPN conforming to IEC 1131 Type 2 Current sink auxiliary input (preset, enable and read) conforming to IEC 1131 Type 2
Input logic	Positive
Input compatibility	Incremental encoder 5 V DC RS422 Incremental encoder 10...30 V totem pole
Input voltage	5 V 18 mA encoder input 24 V 7 mA auxiliary input (preset, enable and read) 24 V 18 mA 2/3-wire proximity sensors PNP/NPN
Input voltage limits	19...30 V auxiliary input (preset, enable and read) 19...30 V 2/3-wire proximity sensors PNP/NPN <= 5.5 V encoder input
Voltage state1 guaranteed	>= 2.4 V encoder input >= 11 V auxiliary input (preset, enable and read) >= 11 V 2/3-wire proximity sensors PNP/NPN
Current state 1 guaranteed	> 6 mA auxiliary input (preset, enable and read) > 6 mA 2/3-wire proximity sensors PNP/NPN > 3.7 mA encoder input
Voltage state 0 guaranteed	<= 5 V auxiliary input (preset, enable and read) <= 5 V 2/3-wire proximity sensors PNP/NPN <= 1.2 V encoder input
Current state 0 guaranteed	< 2 mA auxiliary input (preset, enable and read) < 2 mA 2/3-wire proximity sensors PNP/NPN < 1 mA encoder input
Response time	< 2.5 ms sensor voltage at loss of 24 V auxiliary input (preset, enable and read)
Input impedance	400 Ohm at Un encoder input 3400 Ohm at Un auxiliary input (preset, enable and read) 1400 Ohm at Un 2/3-wire proximity sensors PNP/NPN > 270 Ohm at U = 2.4 V encoder input
Output voltage	24 V DC
Nominal output current	0.5 A
Output voltage limits	19...30 V
Voltage drop	< 0.5 V at state 1
Output compatibility	Positive logic DC inputs (resistance <= 15 kOhm) auxiliary output
Leakage current	< 0.1 mA
Switching time	< 0.25 ms
Switching frequency	< 0.6/LI² Hz on inductive load

Output overload protection	Thermal tripping via program or automatically Current limiter
Output short-circuit protection	Thermal tripping via program or automatically Current limiter
Output overvoltage protection	Zener diode
Reverse polarity protection	Reverse diode on supply
Checks	Sensor power supply
Current consumption	30 mA 24 V DC 280 mA 5 V DC
Module format	Standard
Local signalling	2 LED green axis diagnostics available (CH.) 1 LED red internal fault, module failure (ERR) 1 LED red external fault (I/O) 1 LED green module operating (RUN)
Electrical connection	2 connectors SUB-D 15 1 connector HE-10 20 pins
Product weight	0.32 kg

Environment

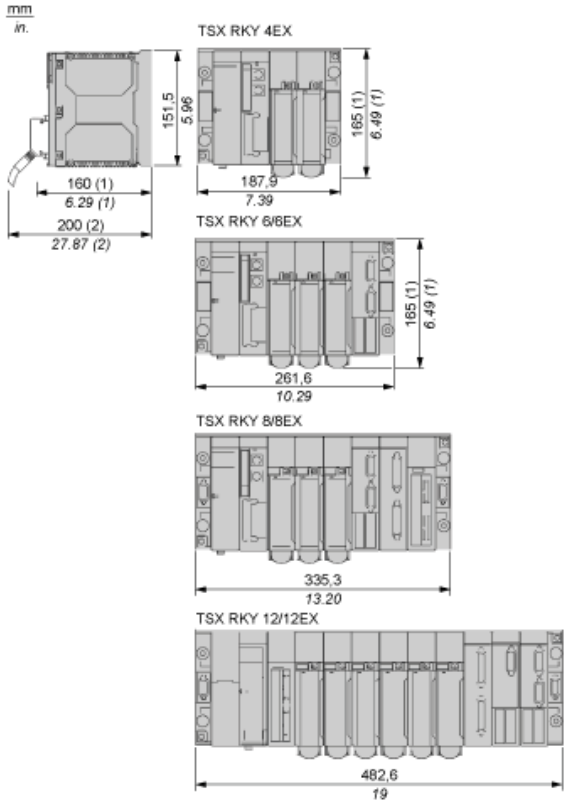
Protective treatment	Conformal coating Humiseal 1A33 TC
Ambient air temperature for operation	0...60 °C
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % without condensation
Operating altitude	<= 2000 m

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS	Compliant - since 0840 - Schneider Electric declaration of conformity download declaration of conformity

Standard and Extendable Racks for Modules Mounting

Dimensions of Modules and Racks



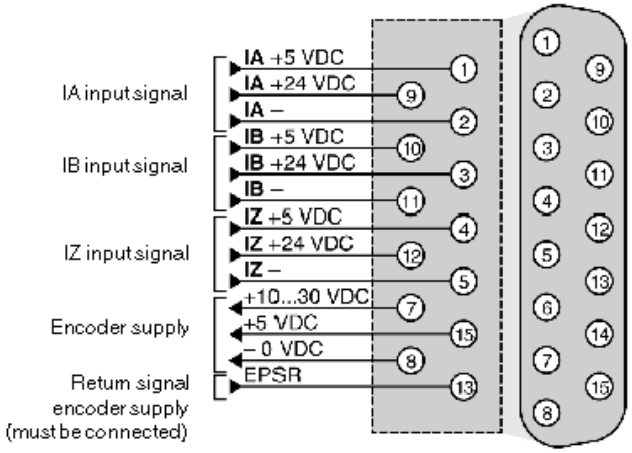
(1) With screw terminal block modules.

(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

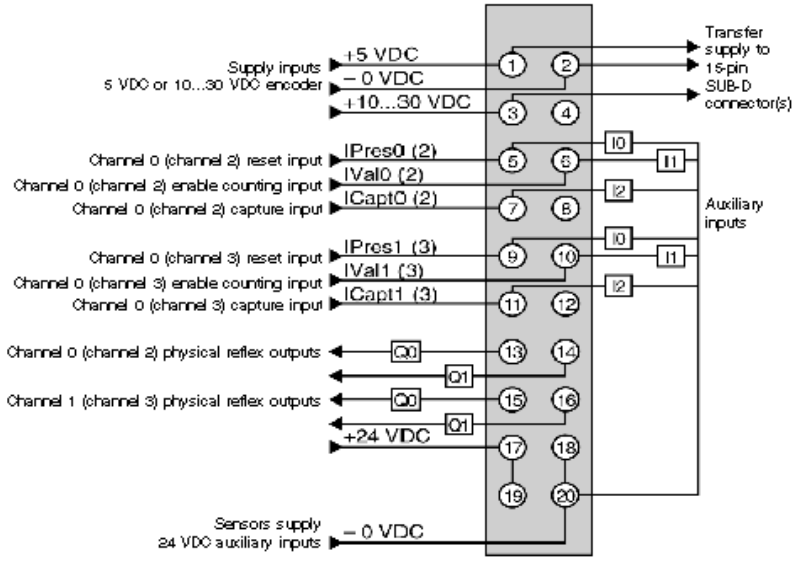


5 Vdc signal	Pins
+ IA input	1
- IA input	2
+ IB input	10
- IB input	11
+ IZ input	4
- IZ input	5
Encoder power supply:	
+5 Vdc	15
-0 Vdc	8
Encoder power supply feedback	13

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