Product data sheet
Characteristics

TSXCTY2A
Counter modules, Modicon Premium, 2 channels modularity, thermal tripping protection, 4.5 to 6W, 40kHz,

Main

Range of Product	Modicon Premium Automation platform
Product or Component Type	Counter modules
I/O modularity	2 channels
Electrical circuit type	Auxiliary output EN/IEC 61131

Complementary

Counting frequency	40 kHz
Power dissipation in W	4.5…6 W
Cycle time	5 ms
Discrete input logic	Current sink auxiliary input (preset, enable and read) IEC 1131 Type 2 Resistive 2/3-wire proximity sensors PNP/NPN input IEC 1131 Type 2 Resistive encoder input
Input logic	Positive
Input compatibility	2/3-wire proximity sensors PNP/NPN Incremental encoder 10...30 V totem pole Incremental encoder 5 V DC RS422
Input voltage	24 V 18 mA 2/3-wire proximity sensors PNP/NPN 24 V 7 mA auxiliary input (preset, enable and read) 5 V 18 mA encoder input
Input voltage limits	<= 5.5 V encoder input 19...30 V 2/3-wire proximity sensors PNP/NPN 19...30 V auxiliary input (preset, enable and read)
Voltage state 1 guaranteed	>= 11 V 2/3-wire proximity sensors PNP/NPN >= 11 V auxiliary input (preset, enable and read) >= 2.4 V encoder input
Current state 1 guaranteed	>= 3.7 mA encoder input) >= 6 mA 2/3-wire proximity sensors PNP/NPN) >= 6 mA auxiliary input (preset, enable and read))
Voltage state 0 guaranteed	<= 1.2 V encoder input <= 5 V 2/3-wire proximity sensors PNP/NPN <= 5 V auxiliary input (preset, enable and read)
Current state 0 guaranteed	<= 1 mA encoder input) <= 2 mA 2/3-wire proximity sensors PNP/NPN) <= 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 2/3-wire proximity sensors PNP/NPN 1400 Ohm at Un Auxiliary input (preset, enable and read) 3400 Ohm at Un Encoder input 400 Ohm at Un
Output voltage	24 V DC
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) auxiliary output
Maximum leakage current	0.1 mA

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	280 mA 5 V DC 30 mA 24 V DC
Module format	Standard
Local signalling	For module operating (RUN) 1 LED (green) For external fault (I/O) 1 LED (red) For internal fault, module failure (ERR) 1 LED (red) For axis diagnostics available (CH.) 2 LEDs (green)
Electrical connection	1 connector HE-10, 20 pins 2 connectors SUB-D 15
Net Weight	0.71 lb(US) (0.32 kg)

Environment

Protective treatment	TC
Ambient Air Temperature for Operation	32…140 °F (0…60 °C)
Ambient Air Temperature for Storage	-13…158 °F (-25…70 °C)
Relative Humidity	5…95 % without condensation
Operating altitude	<= 6561.68 ft (2000 m)

Ordering and shipping details

Category	22558-TSX PREMIUM, ATRIUM & PL7 PRO
Discount Schedule	PC22
GTIN	3389110756975
Returnability	No
Country of origin	FR

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.17 in (5.5 cm)
Package 1 Width	7.09 in (18.0 cm)
Package 1 Length	10.24 in (26.0 cm)
Package 1 Weight	17.25 oz (489.0 g)

Offer Sustainability

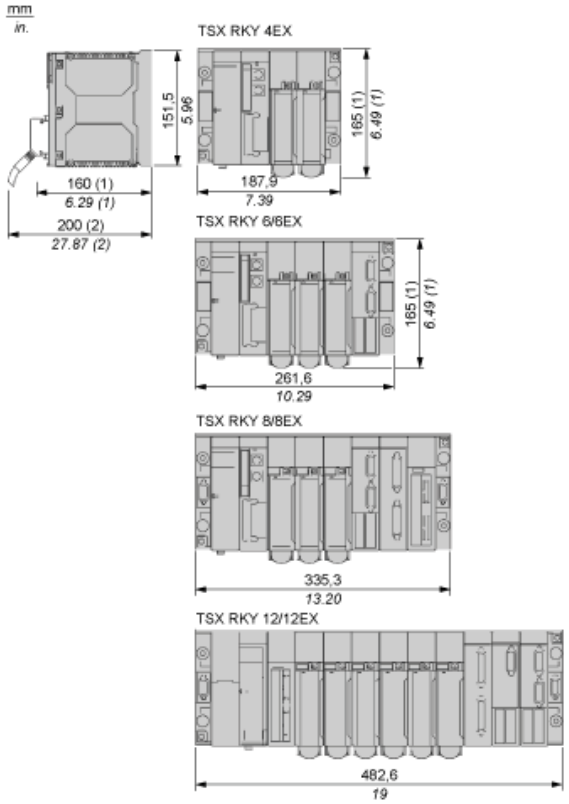
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds which is known to the State of California to cause cancer and birth defects or other reproductive harm.For more information go to www.p65warnings.ca.gov

Contractual warranty

Warranty	18 months

Standard and Extendable Racks for Modules Mounting

Dimensions of Modules and Racks



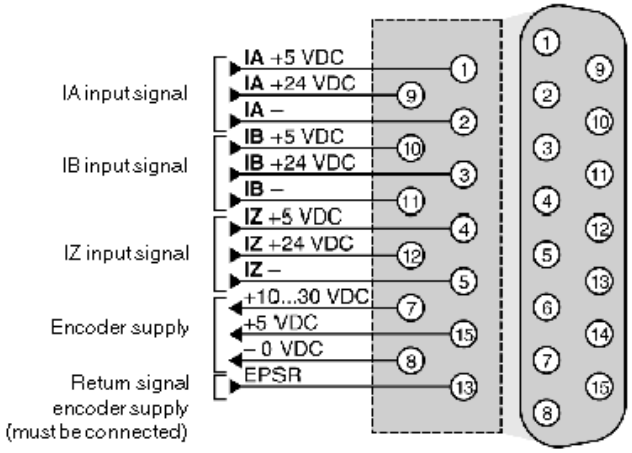
(1) With screw terminal block modules.

(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

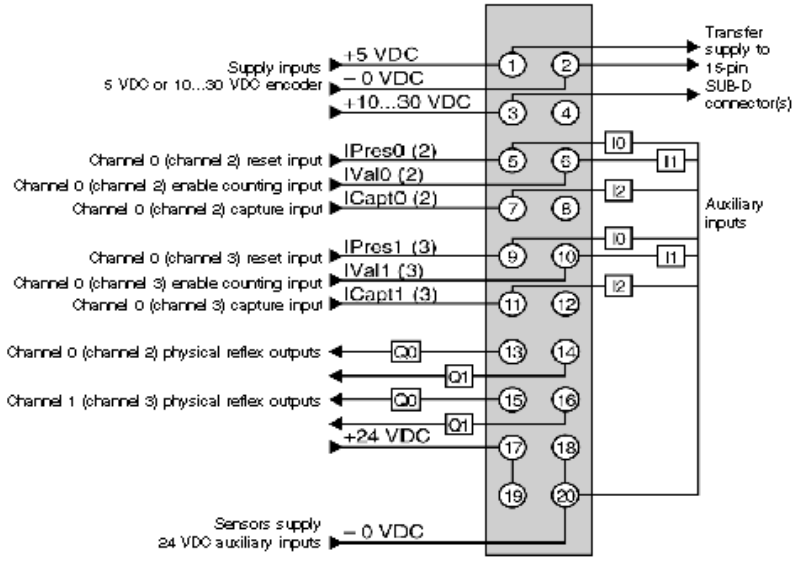


5 Vdc signal	Pins
+ IA input	1
- IA input	2
+ IB input	10
- IB input	11
+ IZ input	4
- IZ input	5
Encoder power supply:	
+5 Vdc	15
-0 Vdc	8
Encoder power supply feedback	13

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