

Product datasheet

Specifications



Modicon Quantum - high-speed counter module - 500000 Hz

Local distributor code:

395516461

140EHC20200

⚠ To be discontinued on: 31 Dec 2030

⚠ To be end-of-service on: 31 Dec 2030

⚠ Discontinued - Service only

EAN Code: 3595861127104

Main

Range of product	Modicon Quantum automation platform
Product or component type	High-speed counter module
Number of channels	2

Complementary

Addressing requirement	6 output words 6 input words
Data format	2147483647 dec 32 bits 65535 dec 16 bits
Counting input type	Incremental or quadrature
Counting frequency	500000 Hz
Discrete input voltage	< 30 V
Operating mode	Incremental or quadrature discrete input
Input resistance	10 kOhm discrete input
Operating threshold	0...11 V single ended mode 24 V DC at state off 0...2 V single ended mode 5 V DC at state on 0 V single ended mode 12 V DC at state on 13...24 V single ended mode 24 V DC at state on 2...7 V single ended mode 12 V DC at state off >= 1.8 V differential mode 3.5...5 V single ended mode 5 V DC at state off
Discrete output number	4
Discrete output type	Field Effect Transistor (FET)
Discrete output voltage	0 V switch off DC 0.4 V switch on DC
Load current	0.5 A
Maximum leakage current	0.4 mA state off
Maximum voltage drop	<0.4 V state on
Protection type	36 V transorb for discrete output
Isolation between channels and bus	1780 Vrms for 60 s
Fault type	Loss of output field power
Output short-circuit protection	Blown fuse 2.5 A
Power dissipation	4 + (0.4 x total module load current)
Bus current requirement	650 mA

External power requirement	19.2...30 V
Rack type	Local Remote Distributed
Local signalling	2 LEDs for channel status
Marking	CE
Current consumption	<= 1050 mA at 24 V DC external power supply
Module format	Standard

Environment

Resistance to electrostatic discharge	4 kV contact conforming to IEC 801-2 8 kV on air conforming to IEC 801-2
Resistance to electromagnetic fields	10 V/m 80...1000 MHz conforming to IEC 801-3
Ambient air temperature for operation	0...60 °C
Ambient air temperature for storage	-40...85 °C
Relative humidity	95 % without condensation
Operating altitude	<= 5000 m
Standards	UL 508
Product certifications	C-Tick.1 CSA No 142 FM Class 1 Division 2 UL

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.0 cm
Package 1 Width	17.0 cm
Package 1 Length	32.0 cm
Package 1 Weight	444.0 g

Contractual warranty

Warranty	18 months
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Better

Materials and Substances

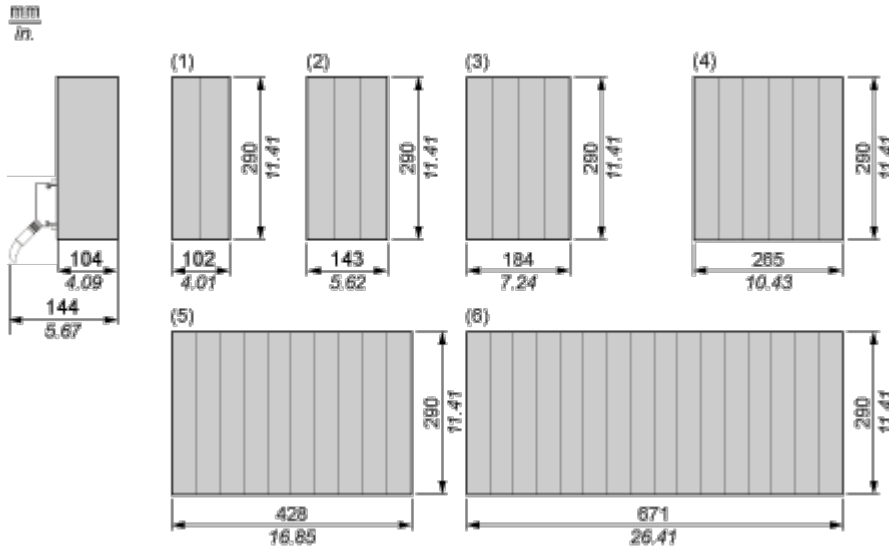
[EU RoHS Directive](#)

Pro-active compliance (Product out of EU RoHS legal scope)

Dimensions Drawings

Racks for Modules Mounting

Dimensions of Modules and Racks

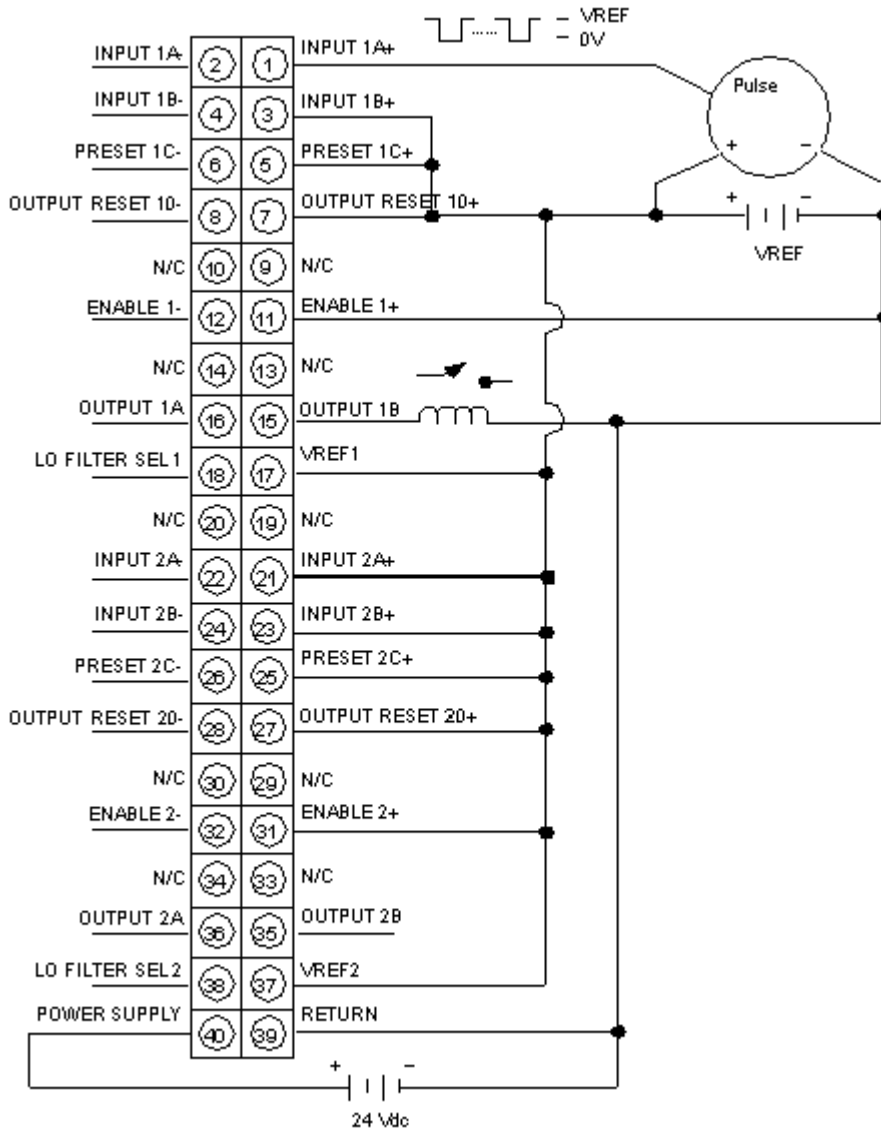


- (1) 2 slots
- (2) 3 slots
- (3) 4 slots
- (4) 6 slots
- (5) 10 slots
- (6) 16 slots

Connections and Schema

Two-Channel High Speed Counter Module

Wiring Diagram for a Single Ended Pulse Encoder



N/C Not Connected

Refer to the user guide for differential pulse encoder input and single ended/differential quadrature encoder input wiring diagrams.