

Product data sheet

Specifications



Modicon Quantum - high-speed counter module - 500000 Hz

140EHC20200C

⚠ Discontinued on: Dec 31, 2021

⚠ To be end-of-service on: Dec 31, 2029

⚠ Discontinued - Service only

Main

Range Of Product	Modicon Quantum automation platform
Product Or Component Type	High-speed counter module
Number Of Channels	2

Complementary

Addressing Requirement	6 input words 6 output 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

Disclaimer: 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

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
Protective Treatment	Conformal coating Humiseal 1A33
Standards	UL 508
Product Certifications	CSA No 142 C-Tick.1 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	31.5 cm
Package 1 Weight	472.0 g
Unit Type Of Package 2	S02
Number Of Units In Package 2	2
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	1.294 kg

Contractual warranty

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

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



RoHS/REACH

Well-being performance

✓ Reach Free Of Svhc

✓ Mercury Free

✓ Rohs Exemption Information [Yes](#)

Certifications & Standards

Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information
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

Dimensions Drawings

Racks for Modules Mounting

Dimensions of Modules and Racks

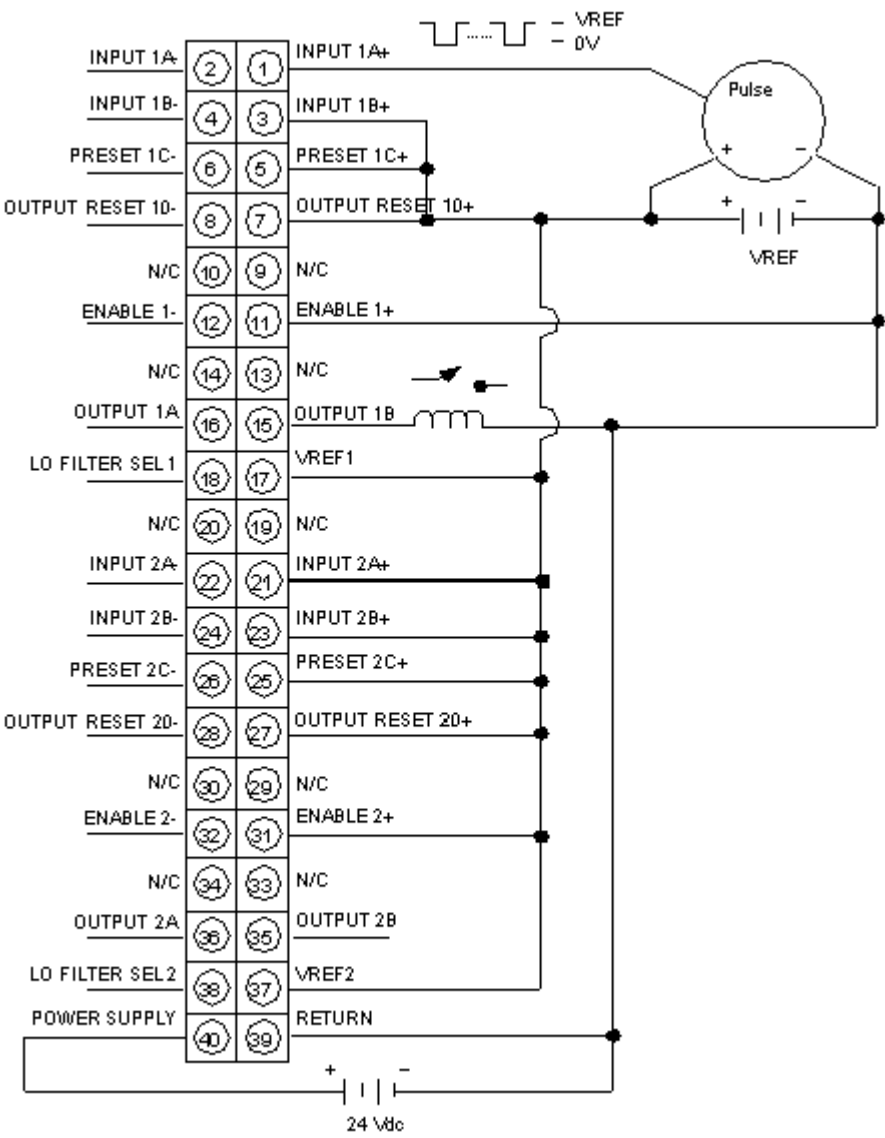


- (1) 2 slots
- (2) 3 slots
- (3) 4 slots
- (4) 6 slots
- (5) 10 slots
- (6) 16 slots

Connections and Schema

Two-Channel High Speed Counter Module

Wiring Diagram for a Single Ended Pulse Encoder



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