

Product datasheet

Specifications



Modicon Quantum - high-speed counter module - 500000 Hz

140EHC20200

! To be discontinued on: 31 December 2022

! To be end-of-service on: 31 December 2030

! To be discontinued

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 Weight	444 g
Package 1 Height	5 cm
Package 1 width	17 cm
Package 1 Length	32 cm
Unit Type of Package 2	S03
Number of Units in Package 2	7
Package 2 Weight	3.5 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes

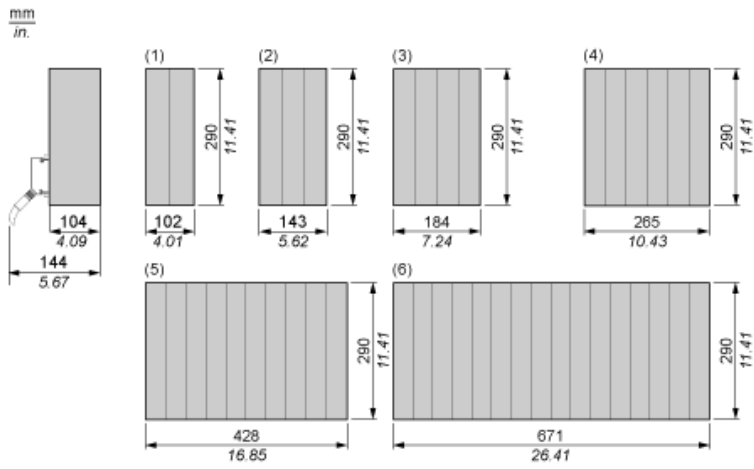
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

Warranty	18 months
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Racks for Modules Mounting

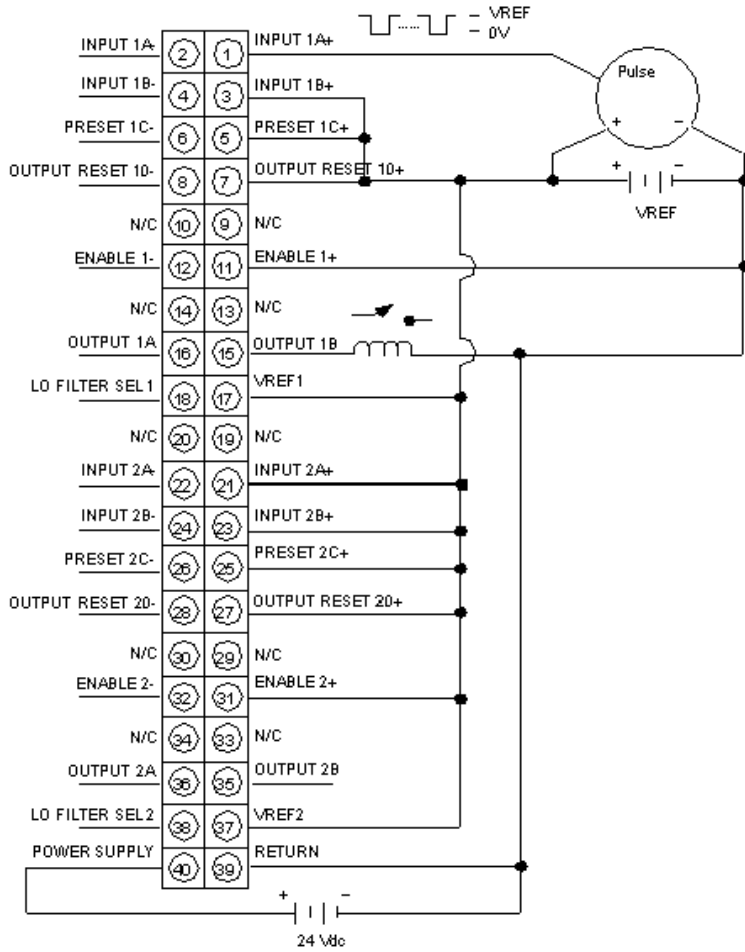
Dimensions of Modules and Racks



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

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.