



Main

Range of product	Modicon Quantum automation platform
Product or component type	Single axis motion module
Encoder type	Differential

Complementary

Number of axis	1 remote 1 real
Axis function	Automatic control of linear, rotary, or continuous axes Synchronization of master/slave speed and position
Axis positioning range	4294967296 points
Axis positioning range units	Inches Mm Other units
Acquisition speed	1...4294967296 points
Axis speed units	Counts/S Inches/S Mm/S Rpm
Axis update	0.5 ms speed loop 1 ms position loop
Maximum system accuracy	0.5 arc/min encoder dependant
Axis motion	28 traversing programs 650 flash memory commands Absolute movement Continuous movement Homing movement Relative movement
Checks	Encoder interface Logical stops Loop position control Point window Position captures (stops)
Register words	3 input words 4 output words
Encoder voltage	5 V +/- 20 %
Encoder impedance	500 Ohm
Incremental encoder frequency x1	<= 500 kHz
Incremental encoder frequency x 4	<= 2000 kHz
Analogue output type	Bipolar output +/- 10...24 V 11 bits + sign servo interface
Discrete output type	Drive enable output 24 V 500 mA servo interface Auxiliary output 3 24 V 150 mA Drive enable output <= 30 V
Discrete input type	Dry contact OT input Drive fault input 5 V TTL servo interface Auxiliary input 7 24 V
Analogue input range	+/- 10...24 V 30000 Ohm auxiliary input

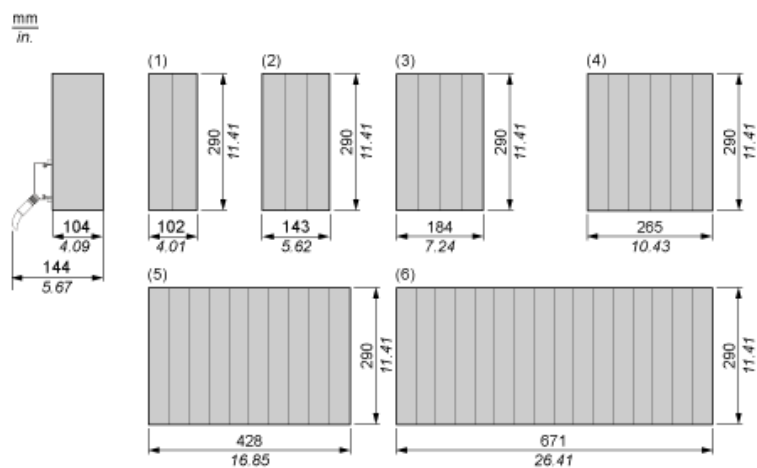
Analogue output range	+/- 10...24 V 11 bits + sign 0.003 A auxiliary output
Position capture time	250 ms high speed input
Impulse duration	25 ms high speed input
Time between capture	>= 20 ms high speed input
Communication port protocol	Modbus Serial line slave RS232D 300..9600 bit/s
Local signalling	7 LEDs input status 3 LEDs output status 1 digital indicator Modbus plus status
Electrical connection	1 connector SUB-D 50 connection to servo drive 1 connector SUB-D 9 RS232D Modbus link
Current consumption	500 mA 24 V DC external power supply 1000 mA 5 V DC rack
Module format	Standard
Product weight	0.45 kg

Environment

Resistance to electrostatic discharge	8 kV on air conforming to IEC 801-2 4 kV contact 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	ABS CSA Class 1 Division 2 C-Tick DNV GL GOST LR RINA RRS UL

Racks for Modules Mounting

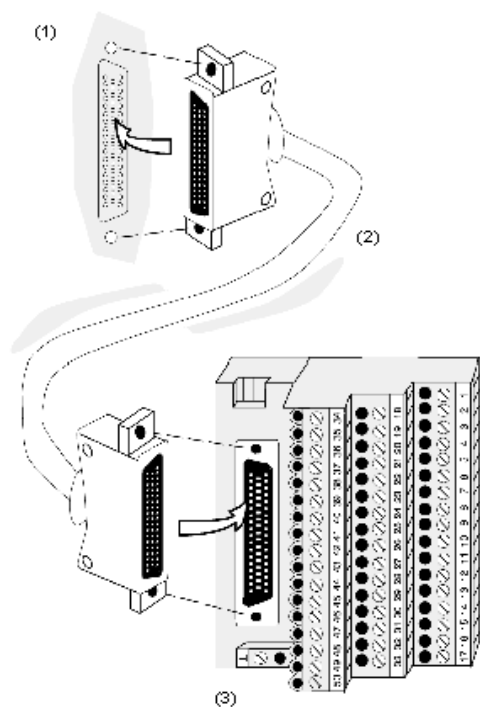
Dimensions of Modules and Racks



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

Single Axis Motion Module

Connection to the Module Servo Connector



- (1) Single axis motion module servo connector
- (2) 690MCI0000x cable
- (3) 690MCB00000 breakout module

Servo Connector signals 34 trough 50:

PIN	Signals
34	Velocity+
35	N/C
36	N/C
37	Velocity-/Phase common
38	Drive fault
39	Drive enable contact (NO)
40	Drive enable contact N/C
41	Drive enable common
42	Overtemp high
43	Overtemp low
44	Cosine input high
45	Cosine input low
46	Sine input high
47	N/C
48	N/C
49	N/C
50	N/C

Servo Connector signals 18 trough 33:

PIN	Signals
18	24 VDC
19	24 V common
20	Brake output (Auxiliary output 1)
21	Auxiliary output 2
22	Auxiliary output 3
23	Limit CW (Auxiliary input 1)
24	Limit CCW (Auxiliary input 2)
25	Home (Auxiliary input 3)
26	Auxiliary input 4
27	Auxiliary input 5
28	Auxiliary input 6
29	Auxiliary input 7
30	High speed input
31	Analog output
32	Analog common
33	Analog input

Servo Connector signals 1 through 17:

PIN	Signals
1	Encoder 1 Phase A+
2	Encoder 1 Phase A-
3	Encoder 1 Phase B+
4	Encoder 1 Phase B-
5	Encoder 1 Mark+
6	Encoder 1 Mark-
7	Encoder 2 Phase A+
8	Encoder 2 Phase A-
9	Encoder 2 Phase B+
10	Encoder 2 Phase B-
11	Encoder 2 Mark+
12	Encoder 2 Mark-
13	N/C
14	N/C
15	N/C
16	N/C
17	N/C