Product datasheet

Specifications

Green Premium™

analog input module Modicon Quantum - 8 I thermocouple

140ATI03000

Discontinued on: 15 Jan 2023

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

Discontinued - Service only

Main

Range Of Product	Modicon Quantum automation platform
Product Or Component Type	Analogue input module
Type Of Filter	Notch filter - 3 dB at 50/60 Hz Single pole low pass - 3 dB at 20 Hz

Complementary

Analogue Input Number	8
Addressing Requirement	10 input words
Analogue Input Type	Thermocouple: - 210...760 °C for thermocouple J Thermocouple: - 270...1000 °C for thermocouple E Thermocouple: - 270...1370 °C for thermocouple K Thermocouple: - 270...400 °C for thermocouple T Thermocouple: - 50...1665 °C for thermocouple R Thermocouple: - 50...1665 °C for thermocouple S
Analogue Input Resolution	16 bits
Absolute Accuracy Error	+/- 2 °C plus + 0.1 % of reading thermocouple E +/- 2 °C plus + 0.1 % of reading thermocouple J +/- 2 °C plus + 0.1 % of reading thermocouple K +/- 2 °C plus + 0.1 % of reading thermocouple T +/- 4 °C plus + 0.1 % of reading thermocouple R +/- 4 °C plus + 0.1 % of reading thermocouple S
Linearity Error	1 °C, 0.1 °C, 1 F, 0.1 F - 210...760 °C 1 °C, 0.1 °C, 1 F, 0.1 F - 270...1000 °C 1 °C, 0.1 °C, 1 F, 0.1 F - 270...1370 °C 1 °C, 0.1 °C, 1 F, 0.1 F - 270...400 °C 1 °C, 0.1 °C, 1 F, 0.1 F - 50...1665 °C
Accuracy Drift According To Temperature	0.15 µV/°C + 0.0015 % of reading/°C max low level voltage
Common Mode Rejection	> - 120 dB 50/60 Hz
Isolation Between Channels And Bus	1780 V AC for 60 s 2500 V DC for 60 s
Isolation Between Channels	300 V DC 220 V AC
Update Time	1000 ms
Fault Type	Broken wire Overtacking scale
Marking	CE
Cold Junction Compensation	Internal 0…60 °C

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

Local Signalling	1 LED (green) for bus communication is present (Active) 1 LED (red) for external fault 8 LEDs (green) for channel is turned on 8 LEDs (red) for channel fault
Bus Current Requirement	280 mA
Power Dissipation In W	1.5 W
Module Format	Standard
Net Weight	0.3 kg

Environment

Standards	CSA C22.2 No 142 UL 508
Product Certifications	cUL FM Class 1 Division 2
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

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	5.000 cm
Package 1 Width	16.500 cm
Package 1 Length	31.500 cm
Package 1 Weight	425.000 g
Unit Type Of Package 2	S03
Number Of Units In Package 2	7
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	3.456 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-CO_2 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

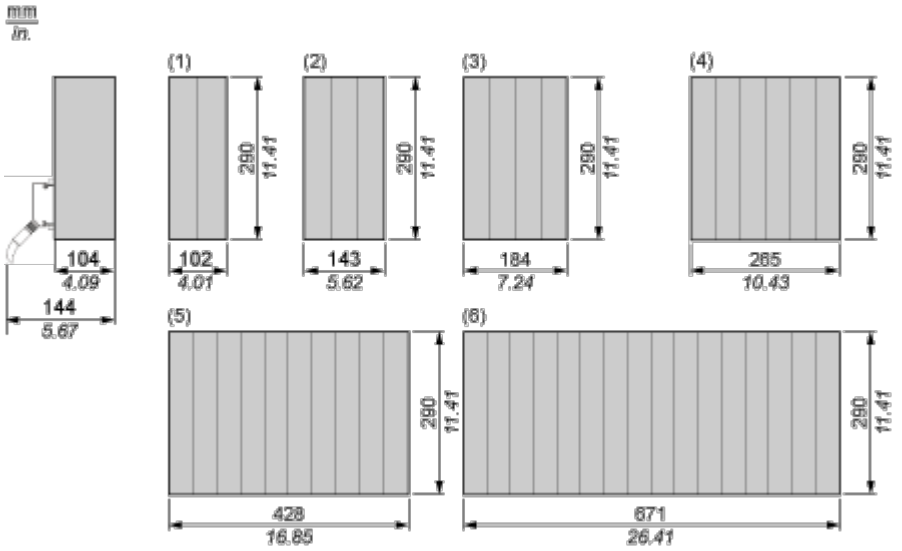
Certifications & Standards

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

Dimensions Drawings

Racks for Modules Mounting

Dimensions of Modules and Racks



(1) 2 slots

(2) 3 slots

(3) 4 slots

(4) 6 slots

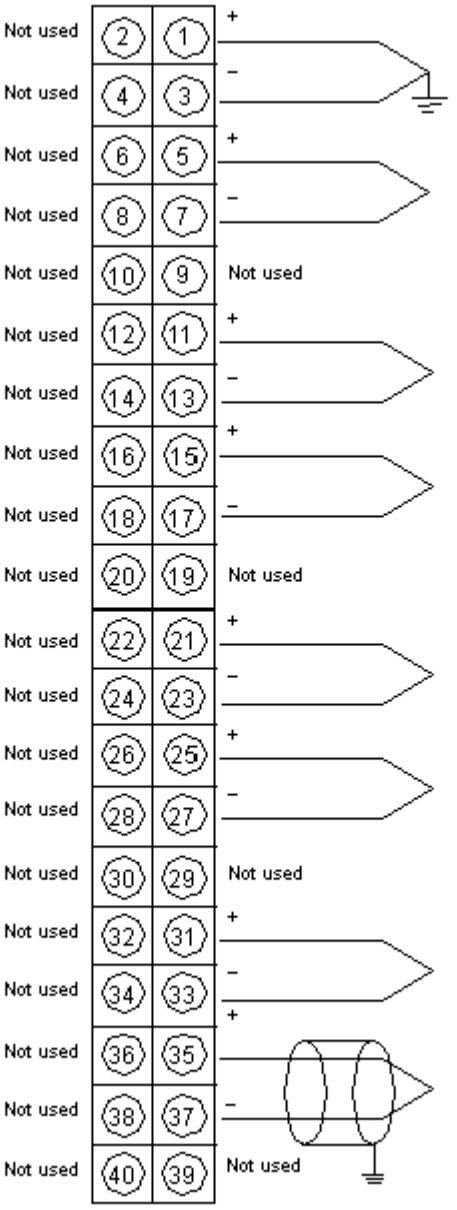
(5) 10 slots

(6) 16 slots

Connections and Schema

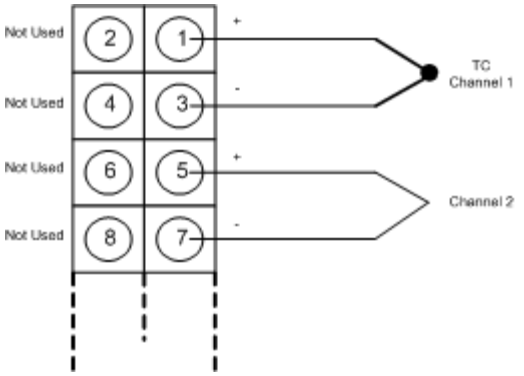
Thermocouple Input 8-Channel Module

Wiring Diagram



Using Cold Junction Compensation (CJC)

For temperature measurements, the module provides an internal CJC. However, a remote CJC can be used with the following TC types: J,K and T. The TC must be connected to Channel.


Not Used
2
1
+
TC
Channel 1
Not Used
4
3
-
Not Used
6
5
+
Channel 2
Not Used
8
7
-