

Price* : 8,237.00 USD



Commercial status

Discontinued on: 31 December 2010

To be end-of-service on: 31 December 2021

140AI33000C has not been replaced. Please contact your customer care center for more information.

❗ Discontinued

Main

Range of product	Modicon Quantum automation platform
Product or component type	Intrinsically safe temperature input module
Software designation	Concept V2.2 and above Unity Pro
Type of filter	Plus notch input filter 50/60 Hz thermocouple Single low pass input filter 20 Hz thermocouple

Complementary

Product destination	In conjunction with products for zone 20, 21 or 22
Analogue input number	8
Analogue input type	Low level voltage -100...100 mV Low level voltage -25...25 mV Thermocouple - 210...760 °C thermocouple J Thermocouple - 270...1000 °C thermocouple E Thermocouple - 270...1370 °C thermocouple K Thermocouple - 270...400 °C thermocouple T Thermocouple - 50...1665 °C thermocouple R Thermocouple - 50...1665 °C thermocouple S Temperature probe - 200...850 °C Pt 100, Pt 200, Pt 500, Pt 1000 Temperature probe - 60...180 °C Ni 100, Ni 200, Ni 500, Ni 1000 Thermocouple - 130...1820 °C thermocouple B
Measurement current	0.5 mA Pt 500, Pt 1000, Ni 500, Ni 1000 2.5 mA Pt 100, Pt 200, Ni 100, Ni 200
Source resistance	< 200 Ohm thermocouple
Input impedance	> 10 MOhm RTD > 1 MOhm thermocouple
Common mode rejection	> 100 dB 50/60 Hz RTD > 120 dB 50/60 Hz thermocouple
Cold junction compensation	Internal 32...140 °F (0...60 °C) thermocouple
Linearity	0.003 % of full scale RTD
Resolution	0.76 µV (16 bits) -25...25 mV millivolt 3.05 µV (16 bits) -100...100 mV millivolt 1 °C, 0.1 °C, 1 °F, 0.1 °F thermocouple 12 bits + sign (0.1 °C) RTD
Measurement accuracy	+/- 2 °C + 0.1 % of reading thermocouple E +/- 2 °C + 0.1 % of reading thermocouple J

* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

	+/- 2 °C + 0.1 % of reading thermocouple K +/- 2 °C + 0.1 % of reading thermocouple T +/- 4 °C + 0.1 % of reading thermocouple B +/- 4 °C + 0.1 % of reading thermocouple R +/- 4 °C + 0.1 % of reading thermocouple S +/- 0.5 °C RTD 77 °F (25 °C) +/- 0.9 °C RTD 32...140 °F (0...60 °C) 20 µV + 0.1 % of reading millivolt 77 °F (25 °C)
Absolute accuracy error	+/- 0.05 % of full scale RTD 77 °F (25 °C) +/- 0.1 % of full scale maximum RTD 77 °F (25 °C)
Accuracy drift according to temperature	0.15 mV/°C + 0.0015 % of reading/°C max thermocouple
Update time	1 s TC/millivolt thermocouple 1.35 s 3 wires RTD 750 ms 2 or 4 wires RTD
Isolation between channels and bus	1780 V 47...63 Hz AC for 1 minute 2500 V DC for 1 minute
Fault type	Out of range Broken wire
Power dissipation in W	2 W
Hot swapping fallback	Not allowed per intrinsic safety standards
Protection type	Internal fuse
Marking	CE II1 G/D-EEx ia IIC
Bus current requirement	400 mA
Module format	Standard
Net Weight	0.66 lb(US) (0.3 kg)

Environment

Protective treatment	Conformal coating Humiseal 1A33
Standards	EN 50281-1-1 EN 50284 Directive ATEX 94/9/EC EN 50020 EN 50014 CSA C22.2 No 142 EN 50039
Dust zone	Outside zone
Product certifications	SIRA 02ATEX2345X FM Class 1 Division 2 Hazardous location class 1, division 1 groups A, B, C C-Tick.1
Resistance to electrostatic discharge	4 kV contact IEC 801-2 8 kV on air IEC 801-2
Resistance to electromagnetic fields	9.14 V/m (10 V/m) 80...2000 Hz IEC 801-3
Ambient air temperature for operation	32...140 °F (0...60 °C)
Ambient air temperature for storage	-40...185 °F (-40...85 °C)
Relative humidity	95 % without condensation
Operating altitude	<= 16404.2 ft (5000 m)

Ordering and shipping details

Category	18155-QUANTUM I/O & POWER SUPPLIES
Discount Schedule	PC21
GTIN	03595860026354
Package weight(Lbs)	1.76 lb(US) (0.800 kg)
Returnability	No
Country of origin	US

Packing Units

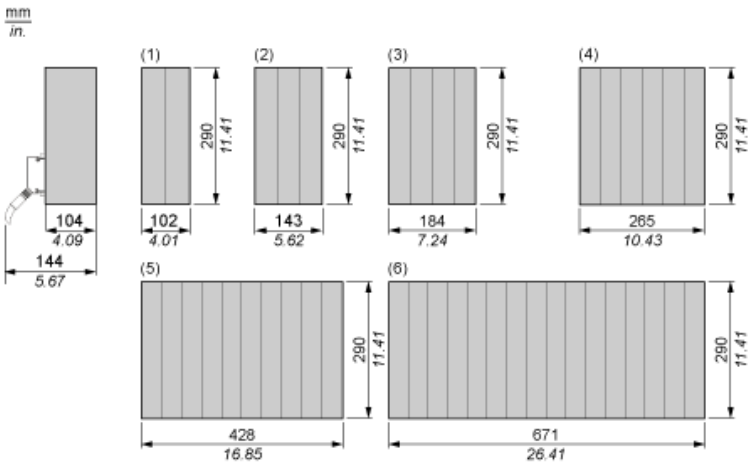
Package 1 Height	1.97 in (50.000 mm)
Package 1 width	6.50 in (165.000 mm)
Package 1 Length	12.20 in (310.000 mm)

Contractual warranty

Warranty	18 months
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Racks for Modules Mounting

Dimensions of Modules and Racks



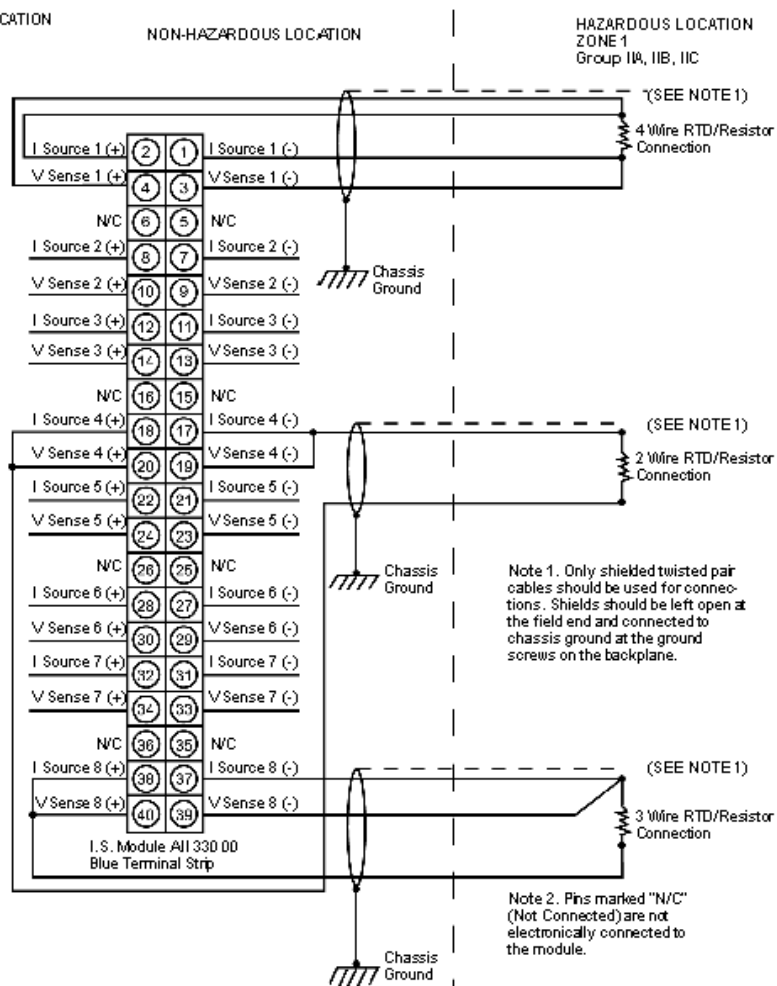
- (1) 2 slots
- (2) 3 slots
- (3) 4 slots
- (4) 6 slots
- (5) 10 slots
- (6) 16 slots

Intrinsically Safe Analog Input Module

Cenelec Certified Wiring Diagrams

Module configured with an RTD/Resistance connection:

CENELEC CERTIFICATION
Entity Parameters
per Channel:
 $V_o = 15.5 \text{ Vdc}$
 $I_o = 276 \text{ mA/ch}$
 $P_o = 1.07 \text{ W/ch}$
 $C_o = 0.508 \text{ } \mu\text{F/ch}$
 $L_o = 466 \text{ } \mu\text{H/ch}$

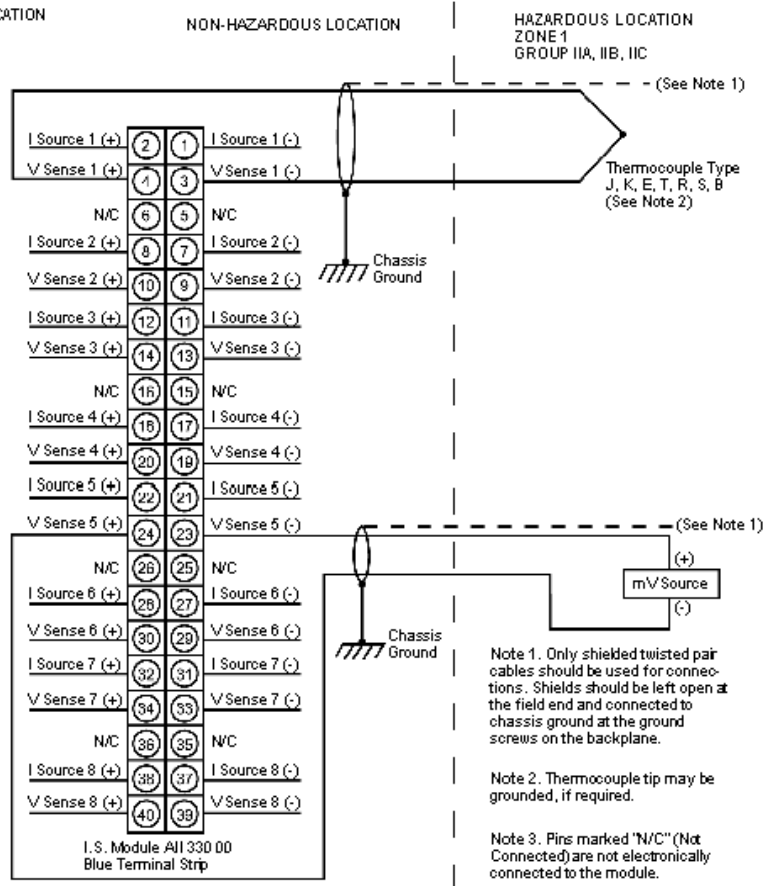


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140 AII 330 00 RTD Wiring Diagram

Module configured with a Thermocouple connection:

CENELEC CERTIFICATION
Entity Parameters
per Channel:
 $V_0 = 15.5 \text{ Vdc}$
 $I_0 = 278 \text{ mA/ch}$
 $P_0 = 1.07 \text{ W/ch}$
 $C_0 = 0.508 \text{ }\mu\text{F/ch}$
 $L_0 = 486 \text{ }\mu\text{H/ch}$



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140 All 330 00 TC Wiring Diagram