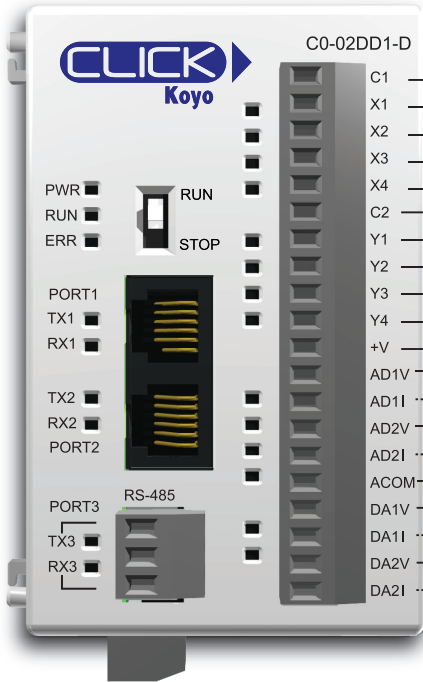


Analog CPU Module Specifications

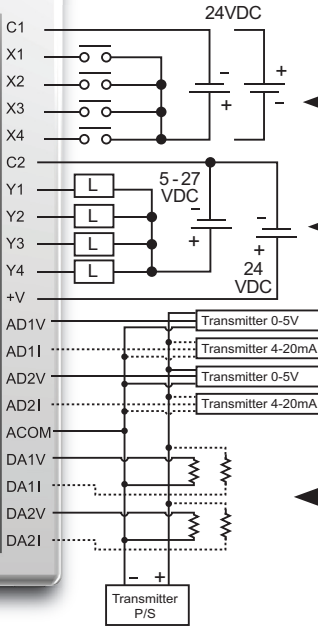
C0-02DD1-D

\$129.00

4 DC Input/4 Sinking DC Output; 2 Analog In/2 Analog Out Micro PLC



Wiring Diagram



See Discrete I/O Specifications - Inputs (X1 through X4)

See Discrete I/O Specifications - Outputs (Y1 through Y4)

See Analog Specifications - Voltage & Current Input (AD1V through AD2I)

See Analog Specifications - Voltage & Current Output (DA1V through DA2I)

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.3 oz (150 g)



NOTE: WHEN USING ANALOG CPUs, YOU MUST USE CLICK PROGRAMMING SOFTWARE VERSION V1.12 OR LATER.



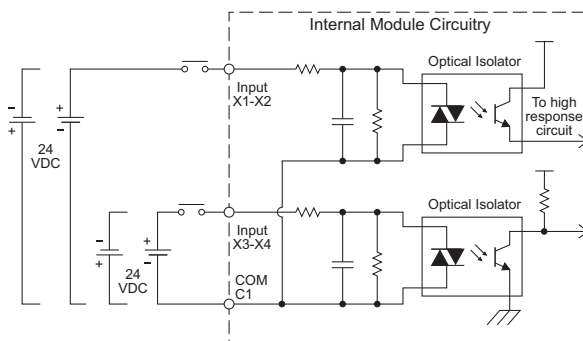
IMPORTANT: YOU CAN USE ONLY ONE TERMINAL (VOLTAGE OR CURRENT) PER CHANNEL. YOU MUST ALSO SELECT THE ANALOG TYPE (VOLTAGE OR CURRENT) IN THE CPU BUILT-IN I/O SETUP IN THE CLICK PROGRAMMING SOFTWARE (PULL-DOWN MENU SETUP > CPU BUILT-IN I/O SETUP).

X1 - X4

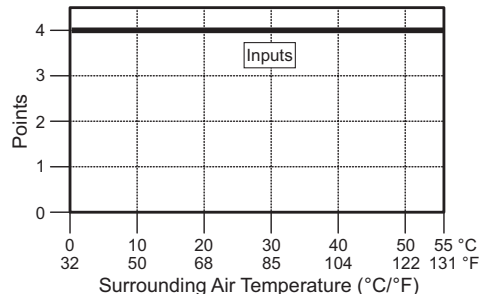
C0-02DD1-D Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-4: Typ 4 mA @ 24 VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-4: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24 VDC X3-4: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-4: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-4: < 7 VDC
Minimum ON Current	X1-2: 4.5 mA X3-4: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-4: 0.5 mA
OFF to ON Response	X1-2: Typ 5 μs Max 20 μs* X3-4: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 μs Max 20 μs* X3-4: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

* Threshold level is 70% amplitude.

Equivalent Discrete Input Circuit



C0-02DD1-D Temperature Derating Chart



There are no ZipLink pre-wired PLC connection cables and modules for the analog CPUs (cannot mix discrete I/O and analog I/O signals in a ZIPLink cable).

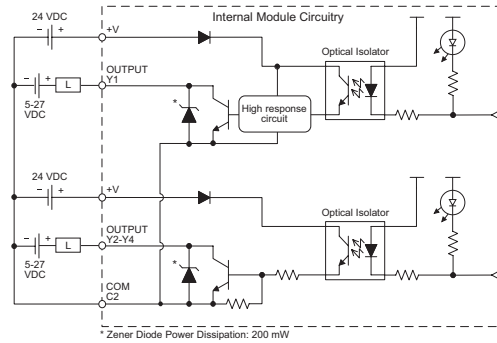
Analog CPU Module Specifications

C0-02DD1-D (cont'd)

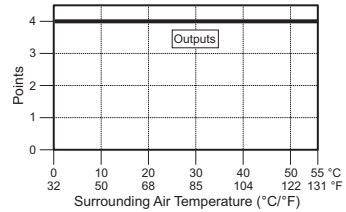
Y1 - Y4

C0-02DD1-D Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5-27 VDC
Output Voltage Range	4-30 VDC
Maximum Output Current	0.1 A/point; 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150 mA for 10 ms
OFF to ON Response	Y1: typ 5 μ s; max 20 μ s; Y2-4: < 0.5 ms
ON to OFF Response	Y1: typ 5 μ s; max 20 μ s; Y2-4: < 0.5 ms
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20-28 VDC Maximum @ 60 mA (all points on)

Equivalent Discrete Output Circuit



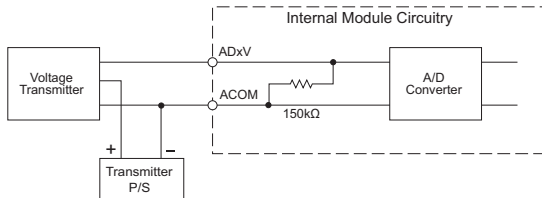
C0-02DD1-D Temperature Derating Chart



AD1V - AD2I

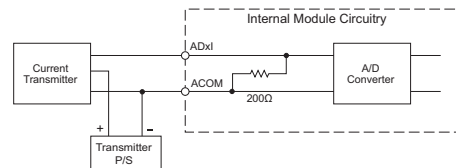
C0-02DD1-D Analog Specifications - Voltage Input	
Number of Channels	2 (voltage/current selectable)
Input Range	0 - 5 VDC (6 VDC Max.)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	150 k Ω
Input Stability	± 2 LSB maximum
Full-Scale Calibration Error	$\pm 1.2\%$ maximum
Offset Calibration Error	± 5 mV maximum
Accuracy vs. Temperature Error	± 100 ppm / °C maximum

Analog Voltage Input



C0-02DD1-D Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	200 Ω
Input Stability	± 2 LSB
Full-Scale Calibration Error	$\pm 1\%$ maximum
Offset Calibration Error	± 0.1 mA maximum
Accuracy vs. Temperature Error	± 100 ppm / °C maximum

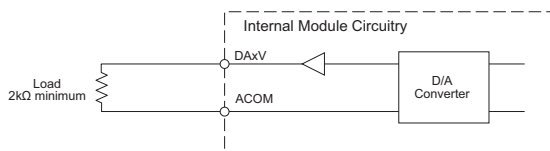
Analog Current Input Circuit



DA1V - DA2I

C0-02DD1-D Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0 - 5 VDC
Resolution	12 bit
Conversion Time	1 ms
Load Impedance	2 k Ω minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	$\pm 0.8\%$ maximum
Offset Calibration Error	± 5 mV maximum
Accuracy vs. Temperature Error	± 100 ppm / °C maximum

Analog Voltage Output Circuit



C0-02DD1-D Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	1 ms
Loop Supply Voltage	DC 18 - 30 V
Load Impedance	250 ohms Load Power Supply: DC 18V: 600 Ω maximum DC 24V: 900 Ω maximum DC 30V: 1200 Ω maximum
Full-Scale Calibration Error	$\pm 1\%$ maximum
Offset Calibration Error	± 0.1 mA maximum
Accuracy vs. Temperature Error	± 100 ppm / °C maximum

Analog Current Output Circuit

