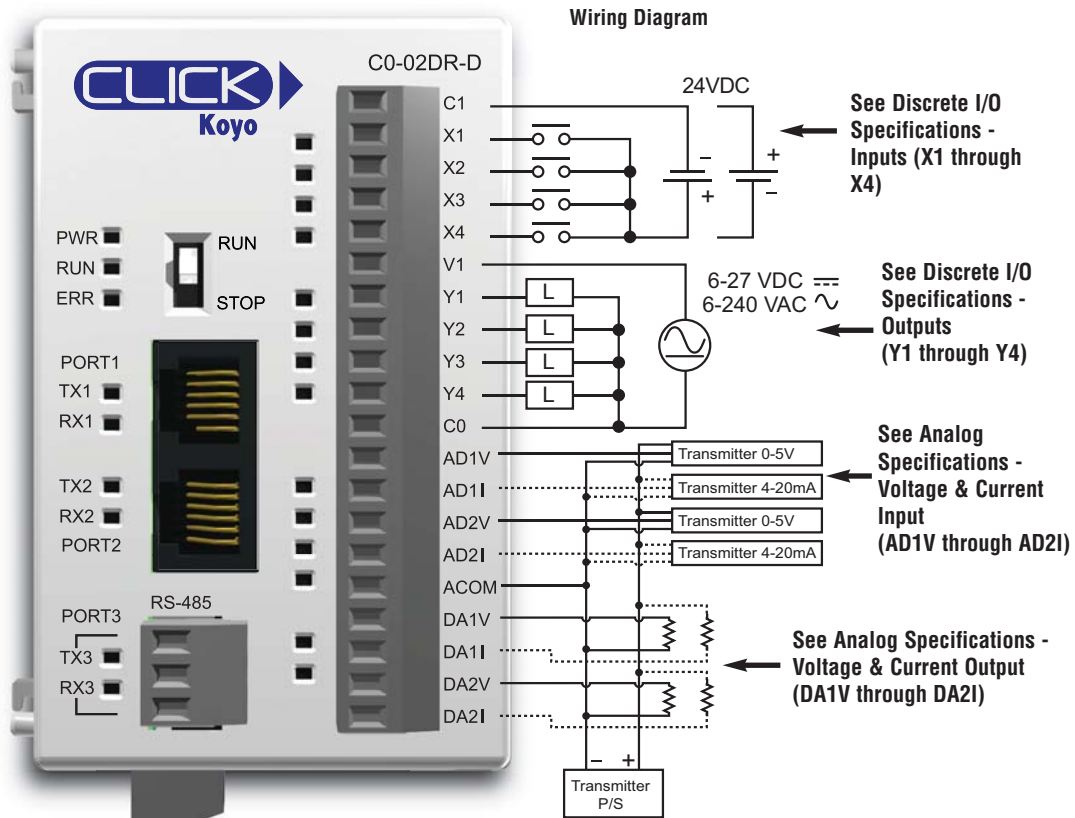


C0-02DR-D – 4 DC Input/4 Relay Output; 2 Analog In/2 Analog Out Micro PLC

2

**General Specifications**

Current Consumption at 24VDC	120 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.6 oz (160 g)

Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	Load Current: 1 A
30 VDC Resistive	300,000 cycles
30 VDC Solenoid	50,000 cycles
120 VAC Resistive	500,000 cycles
120 VAC Solenoid	200,000 cycles
ON to OFF = 1 cycle	

NOTE: Please refer to the Analog I/O Configuration section in Chapter 3 for information on using these analog I/O.

NOTE: When using Analog CPUs, you must also use CLICK programming software version V1.10 or later.

NOTE: 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.)

Chapter 2: Specifications

C0-02DR-D (cont'd)

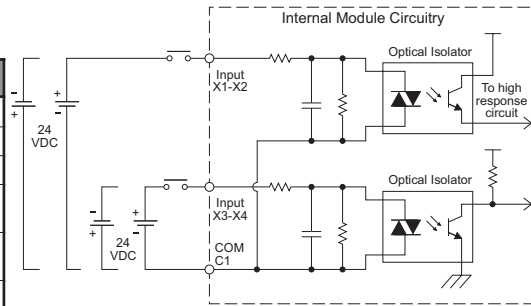
X1 - X4

2

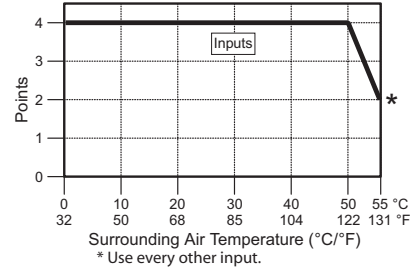
C0-02DR-D Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-4: Typ 4 mA @ 24 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24 VDC X3-4: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC 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.

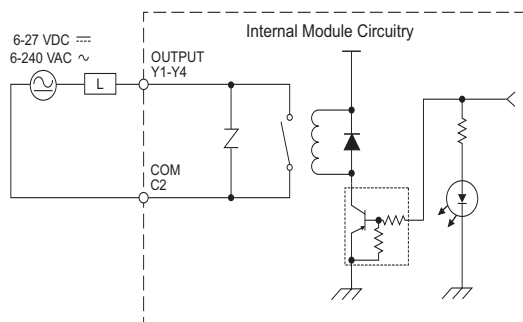
Equivalent Discrete Input Circuit



C0-02DR-D Temperature Derating Chart

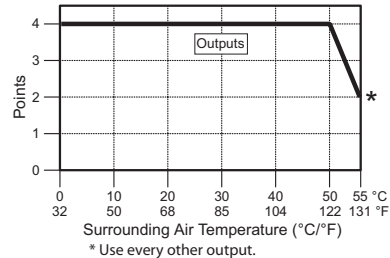


Equivalent Output Circuit



This circuit does not contain built-in protection.
Install protection elements such as a fuse outside the module if necessary.

C0-02DR-D Temperature Derating Chart



Y1 - Y4

C0-02DR-D Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6-27 VDC6 (-15%/+10%)/ 6-240 VAC (-10%/+10%)
Output Type	Relay, form A (SPST)
AC Frequency	47-63 Hz
Maximum Current	1 A/point (resistive)
Minimum Load Current	5 mA @ 5 VDC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)
Fuse	None

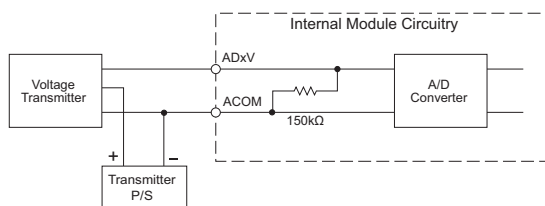
C0-02DR-D (cont'd)

AD1V - AD2I

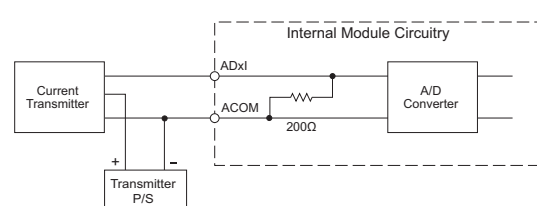
C0-02DR-D Analog Specifications - Voltage Input		C0-02DR-D Analog Specifications - Current Input	
Number of Channels	2 (voltage/current selectable)	Inputs per Module	2 (voltage/current selectable)
Input Range	0 - 5 VDC	Input Range	4 - 20 mA
Resolution	12 bit	Resolution	12 bit
Conversion Time	50 ms	Conversion Time	50 ms
Input Impedance	150 k Ω	Input Impedance	200 Ω
Input Stability	± 2 LSB maximum	Input Stability	± 2 LSB
Full-Scale Calibration Error	$\pm 1.2\%$ maximum	Full-Scale Calibration Error	$\pm 1\%$ maximum
Offset Calibration Error	± 5 mV maximum	Offset Calibration Error	± 0.1 mA maximum
Accuracy vs. Temperature Error	± 100 ppm / $^{\circ}\text{C}$ maximum	Accuracy vs. Temperature Error	± 100 ppm / $^{\circ}\text{C}$ maximum

2

Analog Voltage Input Circuit



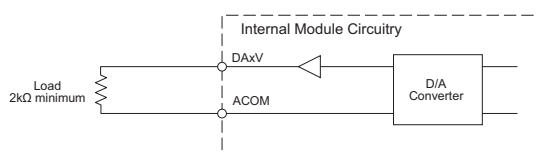
Analog Current Input Circuit



DA1V - DA2I

C0-02DR-D Analog Specifications - Voltage Output		C0-02DR-D Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)	Outputs per Module	2 (voltage/current selectable)
Output Range	0 - 5 VDC	Output Range	4 - 20 mA
Resolution	12 bit	Resolution	12 bit
Conversion Time	1 ms	Conversion Time	1 ms
Load Impedance	2 k Ω minimum (output current 2.5 mA maximum)	Loop Supply Voltage	DC 18 - 30 V
Full-Scale Calibration Error	$\pm 0.8\%$ maximum	Load Impedance	250 Ω Load Power Supply: DC 18V: 600 Ω maximum DC 24V: 900 Ω maximum DC 30V: 1200 Ω maximum
Offset Calibration Error	± 5 mV maximum	Full-Scale Calibration Error	$\pm 1\%$ maximum
Accuracy vs. Temperature Error	± 100 ppm / $^{\circ}\text{C}$ maximum	Offset Calibration Error	± 0.1 mA maximum
		Accuracy vs. Temperature Error	± 100 ppm / $^{\circ}\text{C}$ maximum

Analog Voltage Output Circuit



Analog Current Output Circuit

