CLICK PLC Family Overview

PLC System

The CLICK PLC family of components includes the original CLICK series as well as the new CLICK PLUS models. All are designed to offer practical PLC features in a compact and expandable design as well as best ease-of-use.

System Configuration

Any powered CLICK/CLICK PLUS PLC by itself can be used as a complete PLC system

- All CLICK Basic, Standard, Ethernet Basic, and Ethernet Standard PLCs include 8 built-in inputs and 6 built-in outputs.
- CLICK Analog and Ethernet Analog PLCs have either 2 or 4 analog inputs and 2 analog outputs as well as 4 discrete inputs and 4 discrete outputs.
- The CLICK PLUS PLCs allow you to select or change the internal I/O using Option Slot Modules, including DC and AC discrete inputs and outputs, analog inputs and outputs, relay outputs and serial communications.
- Any CLICK system can be expanded with up to 8 additional Stackable I/O modules.
- The CLICK family features high-speed capability in Ethernet Basic, Ethernet Standard, Ethernet Analog PLCs, and CLICK PLUS PLCs.

Communications

- The CLICK PLUS PLCs offer a mix of 10/100 Mbps Ethernet, Wi-Fi, RS-232, RS-485, USB and Bluetooth connectivity as well as MQTT capability.
- CLICK Basic, Standard and Analog PLCs have 2 built-in RS-232 communications ports while Standard and Analog PLCs also have 1 built-in RS-485 communications port.
- CLICK Ethernet Basic, Standard and Analog PLCs have 1 built-in 10/100 Mbps Ethernet communications port. Additionally, Ethernet Standard and Analog PLCs have an RS-485 port.
- For models with 2 RS-232 ports, the RS-232 Port 1 supports the Modbus RTU (slave only) protocol only and can be used as the programming port.
- All built-in RS-232 ports supply 5VDC, which allows you to connect a monochrome ***C-more*** Micro HMI panel without an additional power supply.
- Besides the RS-232 Port 1, all other serial ports support either Modbus RTU (master/slave) or ASCII (in/out) protocol.
- Ethernet ports can be used for both programming and Modbus TCP (client/server) and EtherNet/IP (adapter/server) Networking. MQTT is also available over Ethernet on CLICK PLUS PLCs.

Analog I/O

CLICK Analog PLCs have built-in analog I/O (2- or 4-channel analog input and 2-channel analog output). CLICK PLUS PLCs allow you to add up to 4 analog inputs and 2 analog outputs in the Option Slot. Any CLICK/CLICK PLUS PLC can also be expanded with Analog input, output and combo I/O modules.

Calendar / Clock & Battery Backup

All PLC units except CLICK Basic PLC units include a real-time clock and battery backup for the internal SRAM. The battery (sold separately) allows data to be retained for 3 years. Each CLICK PLUS PLC can synchronize its clock with a network time server.

FREE Programming Software

The CLICK programming software can be downloaded free from www.automationdirect.com/pn/C0-PGMSW.

Easy-to-Use Instructions

The CLICK family of controllers supports a very simple but practical instruction set. The easy-to-use instructions include PID and cover most applications suitable for this DIN*nector* class of PLC.

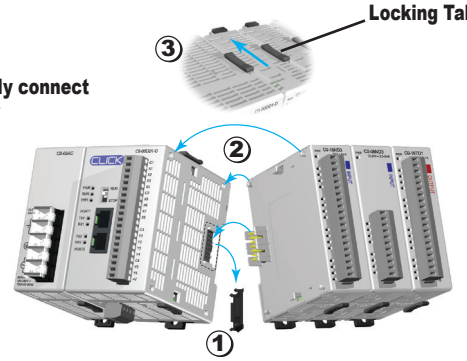
8,000 Steps of Program Memory

CLICK and CLICK PLUS PLCs can store up to 8,000 steps of ladder program in its flash EEPROM memory.

Use a CLICK family PLC as a stand-alone controller...

...or, expand the system by installing up to 8 additional I/O modules.

Modules easily connect to each other



FREE programming software!

2-Year Warranty
All PLC units are covered under a 2-year warranty.

CLICK PLC Family Overview

CLICK vs. CLICK PLUS at a Glance

The table below gives a top-level comparison of key features of the CLICK and CLICK PLUS PLCs. Use it to quickly zero in on the PLCs that best match your needs. Details, features and specifications for each PLC are presented on pages dedicated to each model.

CLICK vs. CLICK PLUS PLCs Feature Comparison

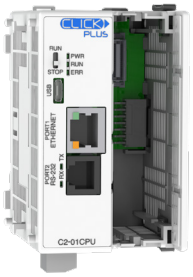
Items	Contents	CLICK PLC						CLICK PLUS PLC		
		Serial Models			Ethernet Models					
		Basic C0-00x	Standard C0-01x	Analog C0-02x	Basic C0-10x	Standard C0-11x	Analog C0-12x	C2-01CPU C2-01CPU-2	C2-02CPU C2-02CPU-2	C2-03CPU C2-03CPU-2
Hardware	microSD	-	-	-	-	-	-	-	-	Yes
	Wi-Fi	-	-	-	-	-	-	-	Yes	Yes
	Bluetooth (for PLC provisoning only)	-	-	-	-	-	-	-	Yes	Yes
	CPU Option Module Slot	-	-	-	-	-	-	Yes	Yes	Yes
	Micro USB (programming port)	-	-	-	-	-	-	Yes	Yes	Yes
	RJ45 (Ethernet)	-	-	-	Yes	Yes	Yes	Yes	-	Yes
	Analog I/O	-	-	Yes	-	-	Yes	Yes	Yes	Yes
	Terminal (RS-485)	-	Yes	Yes	-	Yes	Yes	-	-	Yes
	Battery Backup	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Real-Time Clock	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	RJ12 (RS-232)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes
	Stackable I/O Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Protocol	MQTT	-	-	-	-	-	-	Yes	Yes	Yes
	Network Time Service	-	-	-	-	-	-	Yes	Yes	Yes
	Modbus TCP (client/server)	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	EtherNet/IP Implicit and Explicit (adapter server)	-	-	-	Yes	Yes	Yes	Yes	-	Yes
	Modbus RTU (master/slave)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes
	ASCII (in/out)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes
Network	DHCP	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	SNTP	-	-	-	-	-	-	Yes	Yes	Yes
	DNS	-	-	-	-	-	-	Yes	Yes	Yes
Advanced Functions	Data Logging	-	-	-	-	-	-	-	-	Yes
	PID	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	High-Speed Input	-	-	-	Yes	Yes	Yes	Yes*	Yes*	Yes*
	High-Speed Output	-	-	-	-	-	-	Yes*	Yes*	Yes*
	Run-Time Edits	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
Security	Requires PLC Password	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Disable Ports	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Session Security	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Strong Password Support	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Disable Ping Response	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
	Encrypted Password Transfer	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
CLICK PLUS Provisioning App	PLC Network Provisoning	-	-	-	-	-	-	-	Yes	Yes
Remote PLC App	Remote PLC Monitoring via Mobile Device	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes

* On CLICK PLUS CPUs, High-Speed Inputs and Outputs are available on Slot 0 only.

CLICK PLC Family Overview

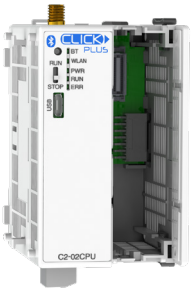
CLICK PLUS PLC Units

CLICK PLUS PLC Units										
PLC	Number of Option Slots	Communication Ports						MicroSD Slot	Battery Backup	Run-Time Edit	Price
		USB	Ethernet (Port 1)	RS-232 (Port 2)	RS-485 (Port 3)	Bluetooth	WLAN				
C2-01CPU	1	Yes (MicroB)	Yes (10/100)	Yes	None	None	None	None	Yes	Yes	$110.00
C2-01CPU-2	2										$154.00
C2-02CPU	1		None	None	None	Yes (external antenna required)	Yes (external antenna required)	None			$167.00
C2-02CPU-2	2										$212.00
C2-03CPU	1		Yes (10/100)	Yes	Yes			Yes			$223.00
C2-03CPU-2	2										$277.00



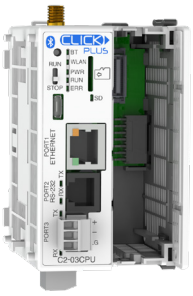
C2-01CPU

C2-01CPU-2

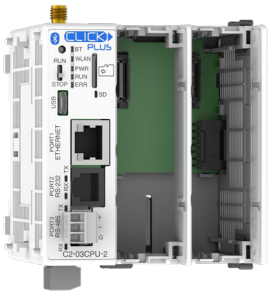


C2-02CPU

C2-02CPU-2



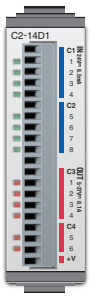
C2-03CPU



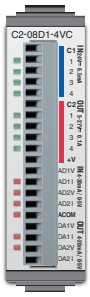
C2-03CPU-2

CLICK PLC Family Overview

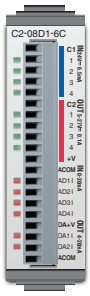
CLICK PLUS Option Slot Modules



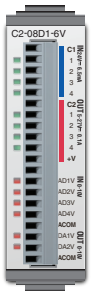
C2-14xx



C2-08xx-4VC



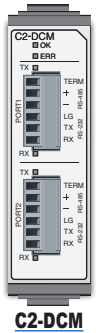
C2-08xx-6C



C2-08xx-6V

CLICK PLUS Option Slot I/O Modules					
Part Number	*Discrete Input Types*	*Discrete Output Types*	*Analog Input Types*	*Analog Output Types*	*Price*
C2-14D1	8 DC (sink/source) 8 points high-speed**	6 DC (sink) 3 points high-speed**	None	None	$66.00
C2-14D2		6 DC (source) 3 points high-speed**			$66.00
C2-14DR		6 relay			$76.00
C2-14AR	8 AC				$78.00
C2-14TTL	8 TTL (sink/source) 8 points high-speed**	6 TTL (source) 3 points high-speed**			$70.00
C2-08D1-4VC*	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	2 channel; voltage (0–5 VDC) / current (4–20 mA); selectable separately per channel, 12-bit	2 channel; voltage (0–5 VDC) / current (4–20 mA); selectable separately per channel, 12-bit	$100.00
C2-08D2-4VC*		4 DC (source) 2 points high-speed**			$100.00
C2-08DR-4VC*		4 relay			$112.00
C2-08AR-4VC*	4 AC				$112.00
C2-08D1-6C	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	4 channel; current (0–20 mA), 12-bit	2 channel; current (4–20 mA), 12-bit	$100.00
C2-08D2-6C		4 DC (source) 2 points high-speed**			$100.00
C2-08DR-6C		4 relay			$113.00
C2-08AR-6C	4 AC				$113.00
C2-08D1-6V	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	4 channel; voltage (0–10 VDC), 12-bit	2 channel; voltage (0–10 VDC), 12-bit	$99.00
C2-08D2-6V		4 DC (source) 2 points high-speed**			$99.00
C2-08DR-6V		4 relay			$112.00
C2-08AR-6V	4 AC				$112.00

* -4VC Option Slot modules require that you select analog I/O type (voltage or current) in the CLICK programming software.
** High-speed Inputs and Outputs are only available when the Option Slot I/O Module is installed in Slot 0.



C2-DCM

C2-NRED

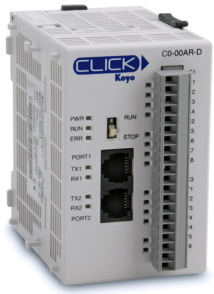
C2-OPCUA

CLICK PLUS Option Slot Intelligent Modules		
Part Number	*Description*	*Price*
C2-DCM	CLICK PLUS communication module, Modbus RTU and ASCII, 2 ports, (2) RS-232/RS-485 (6-pin terminal) port(s). For use with all CLICK PLUS PLCs. (2) C2-6TB terminal blocks included.	$127.00
C2-NRED	CLICK PLUS Node-RED module, Node-RED and JavaScript, microSD card slot, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.	$241.00
C2-OPCUA	CLICK PLUS communication module, OPC-UA Server and SNTP Client, 1 port, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.	$202.00

CLICK PLC Family Overview

CLICK PLC Units

The thirty one CLICK PLC units are available with different combinations of built-in I/O types.



Basic PLC

CLICK Basic PLC Units			
Part Number	***Inputs (8 points)***	***Outputs (6 points)***	***Price***
C0-00DD1-D	DC (24VDC, sink/ source)	DC (0.1 A, 5–27 VDC, Sink)	$104.00
C0-00DD2-D		DC (0.1 A, 24VDC, Source)	$104.00
C0-00DR-D		Relay (1 A @ 6–27 VDC/6–240 VAC)	$133.00
C0-00AR-D	AC (100–120 VAC)		$141.00

- Basic PLC Unit Features:
- Eight discrete input points
- Six discrete output points
- Two RS-232 communications ports

Standard PLC

CLICK Standard PLC Units			
Part Number	***Inputs (8 points)***	***Outputs (6 points)***	***Price***
C0-01DD1-D	DC (24VDC, sink/ source)	DC (0.1 A, 5–24VDC, Sink)	$153.00
C0-01DD2-D		DC (0.1 A, 24VDC, Source)	$157.00
C0-01DR-D		Relay (1 A @ 6–27 VDC/ 6–240 VAC)	$172.00
C0-01AR-D	AC (100–120 VAC)		$172.00

- Standard PLC Unit Features:
- Eight discrete input points
- Six discrete output points
- Two RS-232 communications ports
- One RS-485 communications port
- Calendar / clock
- Battery backup (Battery, p/n D2-BAT-1, sold separately)

Analog PLC

CLICK Analog PLC Units				
Part Number	***Inputs (4 points)***	***Outputs (4 points)***	***Analog Inputs, Outputs***	***Price***
C0-02DD1-D	DC (24VDC, sink/source)	DC (0.1 A, 5–24VDC, Sink)	2 channels in / 2 channels out; voltage (0–5 VDC) and current (4–20 mA) selectable, 12-bit resolution for both inputs and outputs	$212.00
C0-02DD2-D		DC (0.1 A, 24VDC, Source)		$215.00
C0-02DR-D		Relay (1 A @ 6–27 VDC/6–240 VAC)		$225.00

- Analog PLC Unit Features:
- Four discrete input points and four discrete output points
- Two analog input points and two analog output points (not isolated)
- Two RS-232 communications ports
- One RS-485 communications port
- Calendar / clock
- Battery backup (Battery, p/n D2-BAT-1, sold separately)

CLICK PLC Family Overview

CLICK PLC Units (continued)

Ethernet Basic PLC

CLICK Ethernet Basic PLC Units			
Part Number	***Inputs (8 points)***	***Outputs (6 points)***	***Price***
C0-10DD1E-D	DC (24VDC, sink/ source) 4 points high-speed	DC (0.1 A, 5–27 VDC, Sink)	$201.00
C0-10DD2E-D		DC (0.1 A, 24DC, Source)	$201.00
C0-10DRE-D		Relay (1A @ 6-27 VDC/6-240 VAC)	$216.00
C0-10ARE-D	AC (100-120 VAC)		$217.00

- Ethernet Basic PLC Unit Features:
- Eight discrete input points
- Six discrete output points
- One Ethernet communications port
- One RS-232 communications port
- Calendar / clock
- Battery backup (Battery, p/n D2-BAT-1, sold separately)

Ethernet Standard PLC

CLICK Ethernet Standard PLC Units			
Part Number	***Inputs (8 points)***	***Outputs (6 points)***	***Price***
C0-11DD1E-D	DC (24VDC, sink/ source) 8 points high-speed	DC (0.1 A, 5–27 VDC, Sink)	$233.00
C0-11DD2E-D		DC (0.1 A, 24VDC, Source)	$233.00
C0-11DRE-D		Relay (1 A @ 6-27 VDC/ 6-240 VAC)	$247.00
C0-11ARE-D	AC (100-120 VAC)		$247.00

- Ethernet Standard PLC Unit Features:
- Eight discrete input points
- Six discrete output points
- One Ethernet communications port
- One RS-232 communications port
- One RS-485 communications port
- Calendar / clock
- Battery backup (Battery, p/n D2-BAT-1, sold separately)

CLICK PLC Family Overview

CLICK PLC Units (continued)

Ethernet Analog PLC

CLICK Ethernet Analog PLC Units						
Part Number	***Discrete Inputs (4 points)***	***Discrete Outputs (4 points)***	***Analog Inputs***	***Analog Outputs***	***External Power***	***Price***
C0-12DD1E-D	DC (24V, sink/ source) 4 points high-speed	DC (0.1 A, 5–27 V, sink)	2 channel; voltage (0–5 VDC) / current (4–20 mA); selectable separately per channel, 12-bit	2 channel; voltage (0–5 VDC) / current (4–20 mA); selectable separately per channel, 12-bit	24VDC (Required for all PLC units)	$278.00
C0-12DD2E-D		DC (0.1 A, 24V, source)				$276.00
C0-12DRE-D		Relay (1 A @ 6-27 VDC/ 6-240 VAC)				$293.00
C0-12ARE-D	AC (100-120 VAC)					$294.00
C0-12DD1E-1-D	DC (24V, sink/ source) 4 points high-speed	DC (sink)	4 channel; current (0–20 mA), 12-bit	2 channel; current (4–20 mA), 12-bit		$278.00
C0-12DD2E-1-D		DC (source)				$277.00
C0-12DRE-1-D		Relay (1 A @ 6-27 VDC/ 6-240 VAC)				$293.00
C0-12ARE-1-D	AC (100-120 VAC)					$294.00
C0-12DD1E-2-D	DC (24V, sink/ source) 4 points high-speed	DC (sink)	4 channel; voltage (0–10 VDC), 12-bit	2 channel; voltage (0–10 VDC), 12-bit		$278.00
C0-12DD2E-2-D		DC (source)				$276.00
C0-12DRE-2-D		Relay (1 A @ 6-27 VDC/ 6-240 VAC)				$292.00
C0-12ARE-2-D	AC (100-120 VAC)					$294.00

- Ethernet Analog PLC Unit Features:
- Four discrete input points
- Four discrete output points
- Two or Four analog input points (current or voltage)
- Two analog output points (current or voltage)
- One Ethernet communications port
- One RS-232 communications port
- One RS-485 communications port
- Calendar / clock
- Battery backup (Battery, p/n D2-BAT-1, sold separately)

CLICK PLC Family Overview

Power Supplies

Two power supplies are offered.

C0-00AC

C0-01AC

DC-DC Converter

This DC-to-DC converter can be used to power the CLICK/CLICK PLUS PLC from 12VDC input power.

PSP24-DC12-1

CLICK Power Supplies			
Part Number	*Input Voltage*	*Output Current*	*Price*
C0-00AC	85–264 VAC	0.5 A @ 24VDC	$59.00
C0-01AC	85–264 VAC	1.3 A @ 24VDC	$73.00

12VDC-to-24VDC Converter			
Part Number	*Input Voltage*	*Output Current*	*Price*
PSP24-DC12-1	9.5–18 VDC	1.0 A @ 24VDC	$120.00

Discrete Input Modules

There are six discrete input modules available.

C0-08ND3

C0-08ND3-1

C0-16ND3

C0-08NE3

C0-16NE3

C0-08NA

CLICK Discrete Input Modules		
Part Number	*Inputs*	*Price*
C0-08ND3	DC (8 pts, 12–27 VDC)	$53.00
C0-08ND3-1	DC (8 pts, 3.3–5 VDC)	$53.00
C0-16ND3	DC (16 pts, 24VDC)	$69.00
C0-08NE3	AC/DC (8 pts, 24 VAC/VDC)	$57.00
C0-16NE3	AC/DC (16 pts, 24 VAC/VDC)	$78.00
C0-08NA	AC (8 pts, 100–120 VAC)	$63.00

Discrete Output Modules

There are nine discrete output modules available.

C0-08TD1

C0-08TD2

C0-16TD1

C0-16TD2

C0-08TA

C0-04TRS

C0-04TRS-10

C0-08TR

C0-08TR-3

CLICK Discrete Output Modules		
Part Number	*Outputs*	*Price*
C0-08TD1	DC (8 pts, 0.3 A @ 3.3–27 VDC, Sink)	$55.00
C0-08TD2	DC (8 pts, 0.3 A @ 12–24 VDC, Source)	$57.00
C0-16TD1	DC (16 pts, 0.1 A @ 5–27 VDC, Sink)	$70.00
C0-16TD2	DC (16 pts, 0.1 A @ 12–24 VDC, Source)	$69.00
C0-08TA	AC (8 pts, 0.3A @ 17–240 VAC)	$80.00
*C0-04TRS**	Relay (4 pts, 7A @ 6–27 VDC/6–240 VAC)	$68.00
C0-04TRS-10	Relay (4 pts, 10A @ 6–24 VDC/6–240 VAC)	$78.00
C0-08TR	Relay (8 pts, 1A @ 6–27 VDC/6–240 VAC)	$63.00
C0-08TR-3	Relay (8 pts, 3A @ 6–27 VDC/6–240 VAC)	$67.00

*** To drive more than a 7A load or to use replaceable relays, consider using a C0-16TD1 output module with a ZL-RRL16-24-1 *ZIP*Link relay module and the correct *ZIP*Link cable (see Wiring System for CLICK/CLICK PLUS PLCs later in this section).**

CLICK PLC Family Overview

Discrete Combo I/O Modules

There are three discrete combo modules available.

C0-16CDD1

C0-16CDD2

C0-08CDR

CLICK Discrete Combo I/O Modules			
Part Number	*Input Type*	*Output Type*	*Price*
C0-16CDD1	DC (8 pts, 24VDC)	DC (8 pts, 0.1 A @ 5–27 VDC, Sink)	$90.00
C0-16CDD2	DC (8 pts, 24VDC)	DC (8 pts, 0.1 A @ 12–24 VDC, Source)	$90.00
C0-08CDR	DC (4 pts, 12–24 VDC)	Relay (4 pts, 1A @ 6.25–24 VDC / 6–240 VAC	$81.00

Specialty I/O Modules

There are two specialty I/O modules available.

C0-08SIM

C0-04POT

CLICK Specialty Module		
Part Number	*Inputs*	*Price*
C0-08SIM	8-pt, Toggle Switch	$57.00
C0-04POT	4-pt, Potentiometer, 12-bit	$73.00

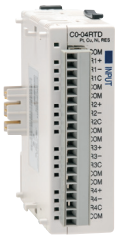
CLICK PLC Family Overview

Analog Input Modules

There are four analog input modules available.


C0-04AD-1


C0-04AD-2


C0-04RTD


C0-04THM

CLICK Analog Input Modules		
Part Number	Analog Input Types	Price
C0-04AD-1	4 channel, current (0-20 mA), 13 bit	$128.00
C0-04AD-2	4 channel, voltage (0-10 V), 13 bit	$129.00
C0-04RTD	4 channel RTD input (0.1 degree °C/°F resolution), or resistive input (0 - 3125Ω, 0.1Ω or 0.01Ω resolution)	$217.00
C0-04THM	4 channel thermocouple input (0.1 degree °C/°F resolution), or voltage input (-156.25 mV to 1.25 V, 16 bit)	$217.00

Analog Output Modules

There are two analog output modules available.

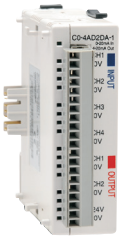

C0-04DA-1

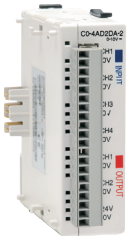

C0-04DA-2

CLICK Analog Output Modules		
Part Number	Analog Output Types	Price
C0-04DA-1	4 channel, current sourcing (4-20 mA), 12-bit	$175.00
C0-04DA-2	4 channel, voltage (0-10 V), 12-bit	$175.00

Analog Combo I/O Modules

There are two analog combo modules available.


C0-4AD2DA-1


C0-4AD2DA-2

CLICK Analog Combo I/O Modules			
Part Number	Analog Input Type	Analog Output Type	Price
C0-4AD2DA-1	4 channel, current (0-20 mA), 13-bit	2 channel, current sourcing (4-20 mA), 12-bit	$226.00
C0-4AD2DA-2	4 channel, voltage (0-10 V), 13-bit	2 channel, voltage (0-10 V), 12-bit	$217.00

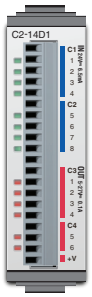
CLICK PLC Family Overview

What you'll need

Of course, what you'll need for your system depends on your particular application, but this overview shows you what you'll need for a simple system.

1. ***Select your CLICK or CLICK PLUS PLC unit.***

2. ***If using a CLICK PLUS PLC, select an Option Slot Module if desired.***



3. ***If you need additional I/O, select from 24 different types of Stackable I/O modules.***

4. ***Select a 24VDC power supply.***

or

5. ***Download the FREE CLICK programming software.***
support.automationdirect.com/products/clickplcs.html

6. ***Download the FREE CLICK mobile app. The CLICK mobile app is available for iOS and Android. It can connect to your C2-02CPU or C2-03CPU over Bluetooth to provision the PLC onto a Wi-Fi network. (PLC requires an external antenna)***

Download on the App Store

GET IT ON Google Play

CLICK PLC Family Overview

What you'll need (continued)

7. ***Select your PC-to-PLC programming cable.***
If your PC has a USB port, use cable EA-MG-PGM-CBL to connect to the PLC port. If your PC has a 9-pin serial communications port, use programming cable D2-DSCBL. If your PC has an Ethernet port, use C5E-STPYL-C3 (crossover) or C5E-STPYL-S3 (straight through) Ethernet cable. If your PC is on a network with a wireless access point, you can connect using one of our Wi-Fi anteannas.

USB-CBL-AMICB6

USB A to USB microB Programming Cable Assembly (CLICK PLUS Only)

C5E-STPYL-C3 (crossover)
C5E-STPYL-S3 (straight through)

For Ethernet PLC Unit

or

SE-ANT250
Wi-Fi/Bluetooth Dome Antenna
(C2-02CPU & C2-03CPU only)

or

SE-ANT210
Wi-Fi/Bluetooth Whip Antenna
(C2-02CPU & C2-03CPU only)
(nonmetal enclosure only)

D2-DSCBL

(PC requires RS-232 port to use this cable)

or

EA-MG-PGM-CBL

Connects to PC USB Port

8. ***Select tools, wire, and provide power.***

Screwdriver
TW-SD-MSL-2

Wire Strippers
DN-WS

Hookup Wire

CLICK Programming Software

FREE Software!

CLICK programming software can be downloaded at no charge.

The CLICK programming software is designed to be a user-friendly application, and the tools, layout, and software interaction provide ease-of-use and quick learning.

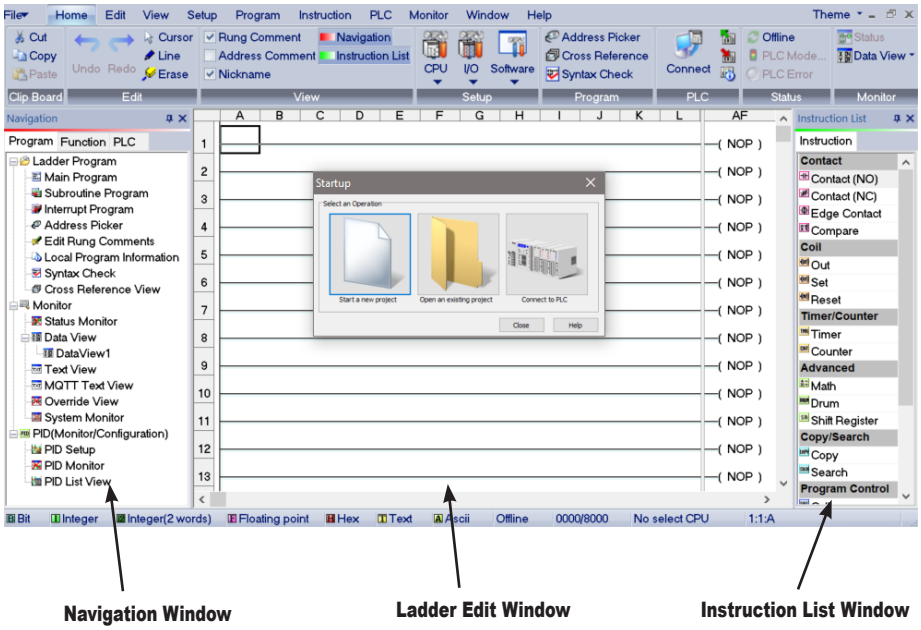
The simple operation of this software allows users to quickly develop a ladder logic program. The online help file provides information that will help you get acquainted with the software quickly.

C0-PGMSW Free Download

The programming software is also available for purchase on a USB for $12.00

Main window

The Main Window is displayed when the program opens. It is divided into Menus, Toolbars, and Windows that work together to make project development as simple as possible.



CLICK Programming Software

Instructions

The easy-to-use instructions are described in the CLICK programming software online help file.

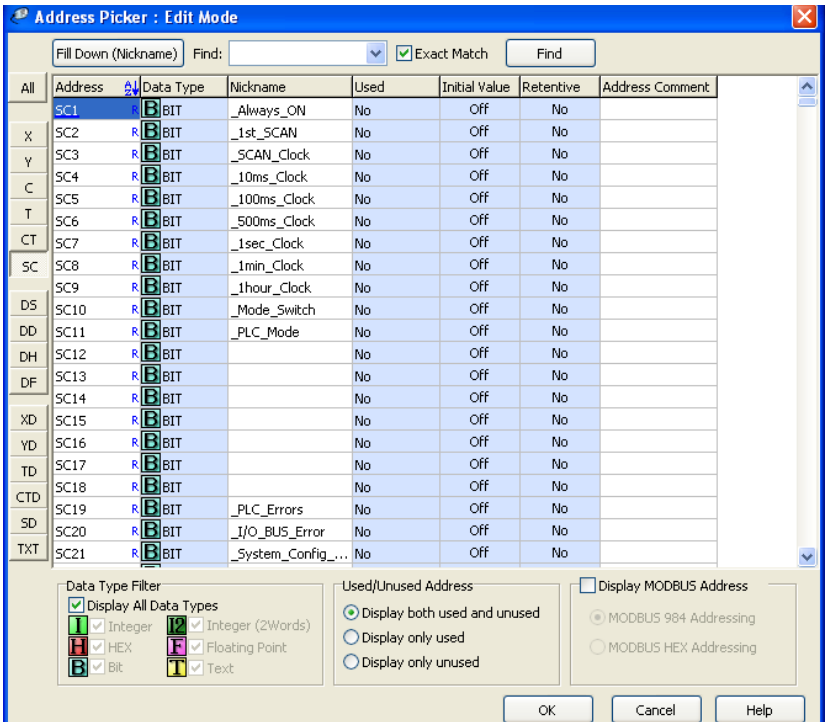
Powerful Features!

CLICK programming software has amazingly powerful features for a free software product, such as

- Address picker
- Separate subroutine programs
- Separate interrupt programs
- Color rung comment feature
- Project loader
- Documentation is stored within the PLC Memory

Address Picker

The Address Picker is a powerful multi-function memory table which can be used to assign nicknames, create address comments, and establish initial values for specific memory locations. It can assign specific memory locations to be retentive during power outages. The Address Picker also has powerful tools for sorting the memory table and making it easier to use.

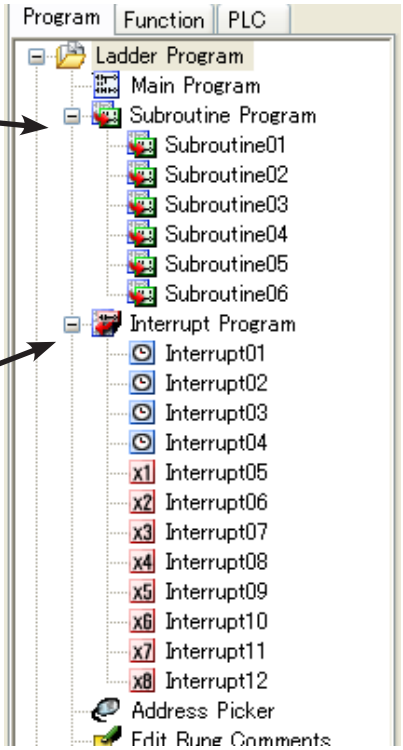


Subroutine Programs

Subroutine programs can be created and named to isolate a body of program code that is run selectively. You can run up to 986 subroutine programs.

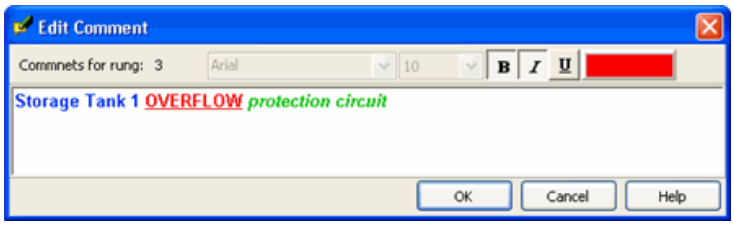
Interrupt Programs

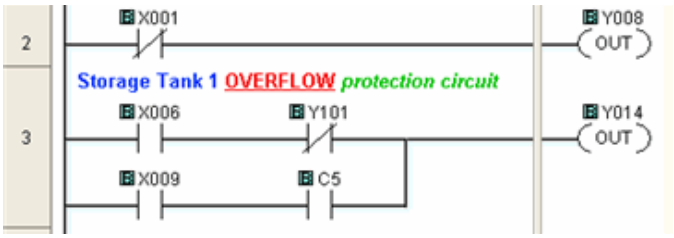
Interrupt programs are created and named. Interrupt Programs are used for: External Interrupts, Software Interrupts, High Speed Input features.



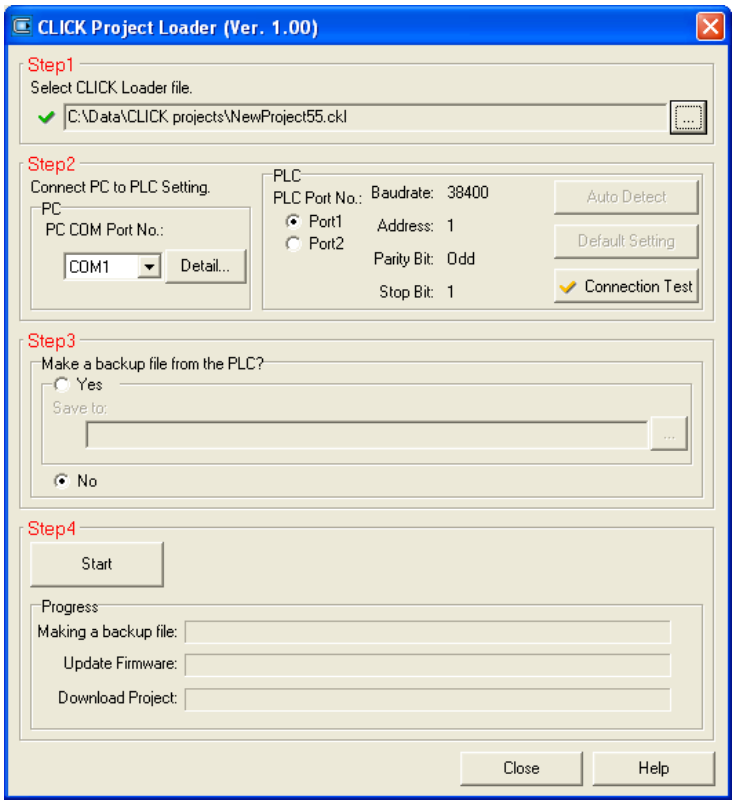
CLICK Programming Software

Color Rung Comment
Easily create and edit rung comments with colors and three text styles. Comments are stored in the PLC memory for future reference.





Project Loader
The CLICK programming software can export the CLICK project in an encrypted format. The exported file can be sent to the end user. Then the end user can download the file into the CLICK PLC with the tool called Project Loader.



NOTE: Project Loader is a separate program from the CLICK programming software, but it is installed on the PC when the CLICK programming software is installed.

CLICK PLUS Provisioning Mobile App

Connect to your CLICK PLUS PLC with our FREE Provisioning Mobile App!

The CLICK PLUS Provisioning App connects your mobile device to a CLICK PLUS PLC via Bluetooth and offers a quick plug and play way to provision the CLICK PLUS PLC to connect to a wireless LAN.

The mobile app is available for free from either the iOS App Store or the Google Play Store. Just search for the app in your app store (CLICK PLUS Provisioning, published by Automationdirect.com).

Download on the App Store

GET IT ON Google Play

CLICK Remote PLC Mobile App

Monitor or set designated values, track PLC errors, and check project info over Wi-Fi or Bluetooth with our FREE Remote PLC Mobile App!

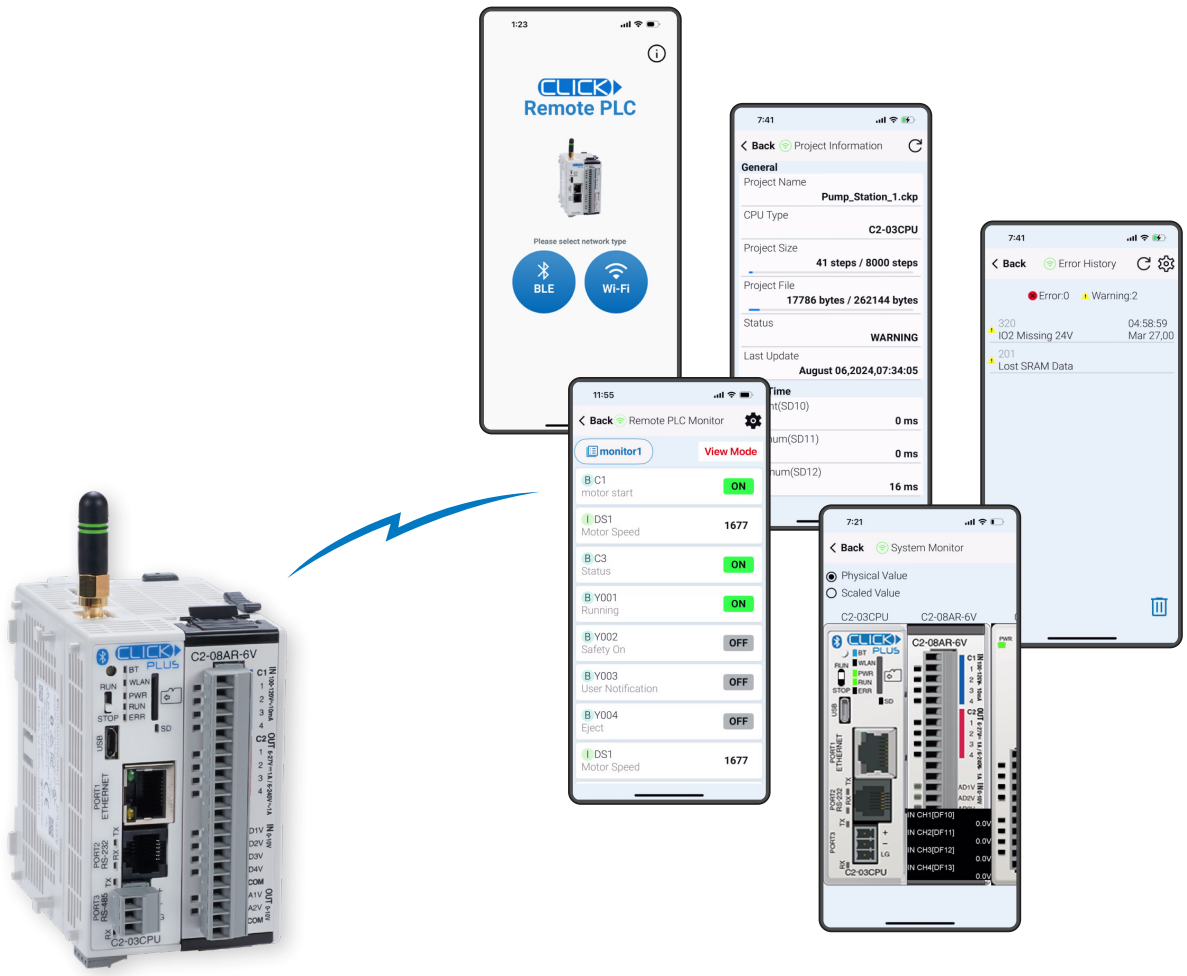
The Remote PLC app provides real time monitoring and control for Ethernet- or Bluetooth-enabled CLICK and CLICK PLUS PLCs. It offers a quick method of connecting to a PLC to view and edit values in the PLC registers, as well as check the PLC project information, including the Error logs.

- **Multiple level user accounts** allow authorized users to view and edit Monitor Windows based on their permission levels setup in the project file.
- **Custom Monitor windows** can be created and stored to the PLC using the CLICK Programming software version 3.60 or later. Monitor Window access can be based on the user permissions.
- **Monitor and edit** designated discrete and numeric values within the PLC. Timer/counter values can easily be viewed and edited.
- **Track PLC status**, such as PLC error logs, scan times (min and max), and project file information.

The mobile app is available for free from either the iOS App Store or the Google Play Store. Just search for the app in your app store (Remote PLC, published by Automationdirect.com).

Download on the App Store

GET IT ON Google Play



Power Supplies

Power Supplies

The CLICK PLC family offers two 24VDC power supplies. They are identical except for the output current.

It is not mandatory to use one of these CLICK power supplies for the CLICK/CLICK PLUS PLC system. You can use any other 24VDC power supply that Automationdirect.com offers, including the PSP24-DC12-1 12 to 24 VDC converter shown below.

C0-00AC Power Supply

Limited auxiliary AC power supply allows you to power the 24VDC CLICK C0 and C2 series PLCs with 100–240 VAC supply power. The 0.5 A DC power supply is capable of controlling the PLC plus a limited configuration based on the power budget of each I/O module. The C0-00AC is a low-cost solution for applications requiring only minimal I/O and power consumption. This power supply will not support a fully-populated CLICK PLC system with all possible I/O module combinations.

C0-01AC Power Supply

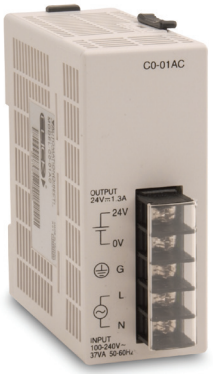
Expanded auxiliary AC power supply allows you to power the 24VDC CLICK C0 and C2 series PLCs with 100–240 VAC supply power. The 1.3 A DC power supply is capable of supporting a fully-populated CLICK PLC system with all possible I/O module
combinations, with no concerns for exceeding the power budget.

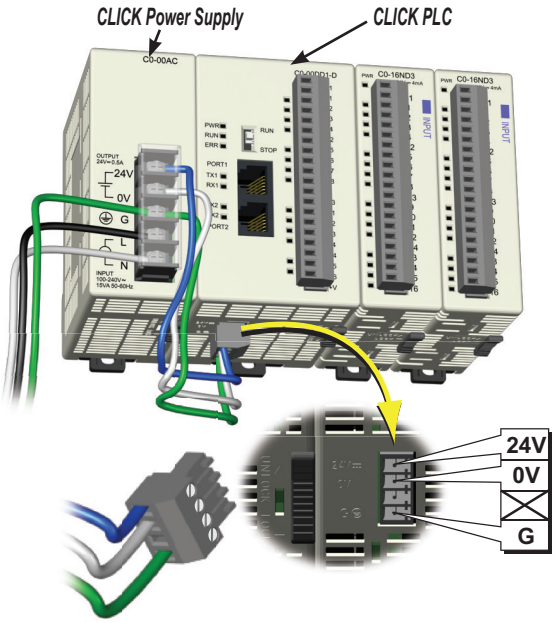
PSP24-DC12-1 DC-DC Converter

With this DC-DC converter you can operate the CLICK/CLICK PLUS PLC with 12VDC input power.

C0-00AC

C0-01AC





24VDC power is supplied to the PLC unit through wiring connected from the power supply output to the 4-pin 24VDC input connector located on the bottom of the PLC unit.

PSP24-DC12-1

CLICK 24VDC Power Supply Ratings

Part Number	Output Current	Price
C0-00AC	0.5 A	$59.00
C0-01AC	1.3 A	$73.00

Power Supply Input Specifications

Part Number	C0-00AC	C0-01AC
Input Voltage Range	85–264 VAC	
Input Frequency	47–63 Hz	
Input Current (typical)	0.3 A @ 100VAC, 0.2 A @ 200VAC	0.9 A @ 100VAC, 0.6 A @ 200VAC
Inrush Current	30A	
Efficiency	80% typical	

Power Supply Output Specs

Part Number	C0-00AC	C0-01AC
Output Voltage Range	23–25 VDC	
Output Current	0.5 A	1.3 A
Ripple	200mV p-p max (0–55°C)	
Ripple Noise	300mV p-p max (0–55°C)	
Over Current Protection	@ 0.65 A (automatic recovery)	@ 1.6 A (automatic recovery)
Over Voltage Protection	@ 27.6 V (clamped by Zener diode)	
Start-up Time	1000ms max at rated input and load	
Hold-up Time	10ms minimum at 85VAC, I=max	

Power Supply General Specs

Part Number	C0-00AC	C0-01AC
Ambient Operating Temperature	32–131°F [0–55°C]	
Storage Temperature	-4–158°F [-20–70°C]	
Humidity	30–95%, non-condensing	
Vibration Resistance	JIS C60068-2-6, sine wave vibration	
Shock Resistance	JIS C60068-2-27	
Voltage Withstand Input-Output Input-Ground Output-Ground	 1500VAC, 5mA cutoff current 1500VAC, 5mA cutoff current 500VAC, 5mA cutoff current	
Insulation Resistance Input-Output Input-Ground Output-Ground	 10MΩ minimum, 500VDC 10MΩ minimum, 500VDC 5MΩ minimum, 500VDC	
Noise Immunity	FCC Class A, EN55022:1998 Class A	
Input/Output Interface	5P terminal block, Fujicon UF2362AX series or equivalent	
Agency Approvals	UL508, UL1604, EN61010-1 (IEC 1010-1), CAN/CSA E60079-15:02, JIS C0025	
Drawing Link	PDF	PDF
Weight	5.3 oz [150g]	6.0 oz [170g]

PSP24-DC12-1 DC-DC Converter Specs

Input Voltage Range	9.5–18 VDC
Input Power (no load)	1.0 W max.
Startup Voltage	8.4 VDC
Undervoltage Shutdown	7.6 VDC
Output Voltage Range	24–28 VDC (adjustable)
Output Current	1.0 A
Short Circuit Protection	Current limited at 110% typical
Drawing Link	PDF
Weight	7.5 oz [213g]

Power Budgeting

Power Budgeting

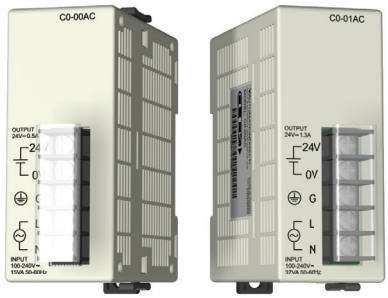
There are two factors to consider when determining the power required to operate a CLICK PLC system. The first is the power required by the PLC and internal logic-side power provided through the PLC. This includes the CPU's own I/O, any connected I/O modules that are powered through the PLC expansion port, plus any device, such as a ***C-more*** Micro-Graphic panel, that is powered through one of the communications ports.

The second area is the power required by all externally-connected I/O devices. This should be viewed as the field-side power required. The field-side power is dependent on the voltage used for a particular input or output device as it relates to the wired I/O point and to the calculated load rating of the connected device.

It is strongly recommended that the power source for the logic side be separate from the power source for the field side to help eliminate possible electrical noise.

Power budgeting requires the calculation of the total current the 24VDC power source needs to provide to CLICK's logic side. A separate calculation is required to determine the total current required for all devices operating from the field side of the PLC system.

Refer to the Power Budgeting example shown on the following page. The table shows required current for a CLICK PLUS PLC, two I/O modules, and a ***C-more*** Micro. Use the total amperage values to select a suitable power supply.



CLICK 24VDC Power Supply
C0-00AC or C0-01AC

Other 24VDC Power Supply
Example: PSP24-060S

Power Consumption for CLICK and CLICK PLUS PLC Units

PLC Current Consumption (mA)		
Part Number	*Power Budget 24VDC (Logic Side)*	*External 24VDC (Field Side)*
Basic PLC Units		
C0-00DD1-D	120	60
C0-00DD2-D	120	0
C0-00DR-D		
C0-00AR-D		
Standard PLC Units		
C0-01DD1-D	140	60
C0-01DD2-D	140	0
C0-01DR-D		
C0-01AR-D		
Analog PLC Units		
C0-02DD1-D	140	60
C0-02DD2-D	140	0
C0-02DR-D		
Ethernet Basic PLC Units		
C0-10DD1E-D	120	60
C0-10DD2E-D	120	0
C0-10DRE-D		
C0-10ARE-D		
Ethernet Standard PLC Units		
C0-11DD1E-D	140	60
C0-11DD2E-D	140	0
C0-11DRE-D		
C0-11ARE-D		

PLC Current Consumption (mA)		
Part Number	*Power Budget 24VDC (Logic Side)*	*External 24VDC (Field Side)*
Ethernet Analog PLC Units		
C0-12DD1E-D	140	60
C0-12DD2E-D		0
C0-12DRE-D	160	
C0-12ARE-D		
C0-12DD1E-1-D	140	60
C0-12DD2E-1-D		0
C0-12DRE-1-D	160	
C0-12ARE-1-D		
C0-12DD1E-2-D	140	60
C0-12DD2E-2-D		0
C0-12DRE-2-D	160	
C0-12ARE-2-D	140	
CLICK PLUS PLCs		
C2-01CPU	110	0
C2-01CPU-2	120	
C2-02CPU	105	
C2-02CPU-2	115	
C2-03CPU	130	
C2-03CPU-2	140	

Power Consumption for CLICK PLUS Option Slot Modules

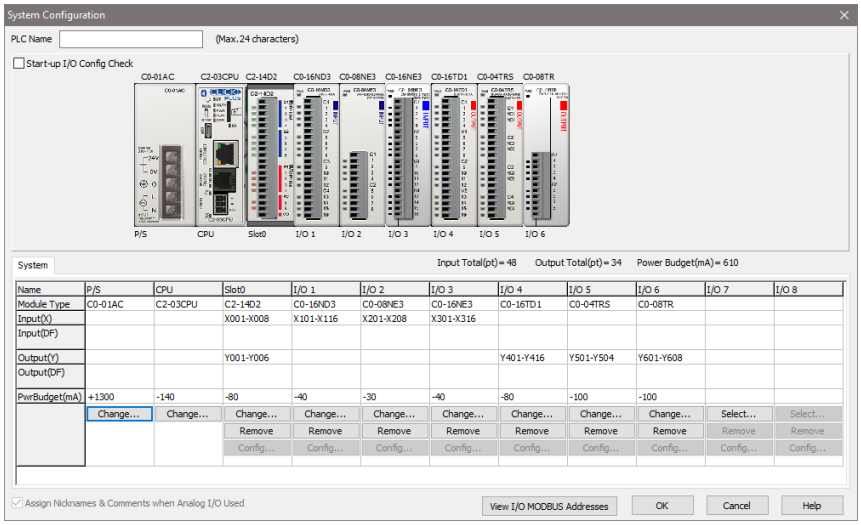
CLICK PLUS Option Slot Modules Current Consumption (mA)		
Part Number	*Power Budget 24VDC (Logic Side)*	*External 24VDC (Field Side)*
Option Slot I/O Modules		
C2-14D1	50	60
C2-14D2	50	0
C2-14DR	75	0
C2-14AR	75	0
C2-14TTL	220	0
C2-08D1-4VC	80	60
C2-08D2-4VC	80	0
C2-08DR-4VC	100	0
C2-08AR-4VC	100	0
C2-08D1-6C	80	60
C2-08D2-6C	80	0
C2-08DR-6C	100	0
C2-08AR-6C	100	0
C2-08D1-6V	80	60
C2-08D2-6V	80	0
C2-08DR-6V	100	0
C2-08AR-6V	100	0
Option Slot Intelligent Modules		
C2-DCM	60	0
C2-NRED	125	0
C2-OPCUA	125	0

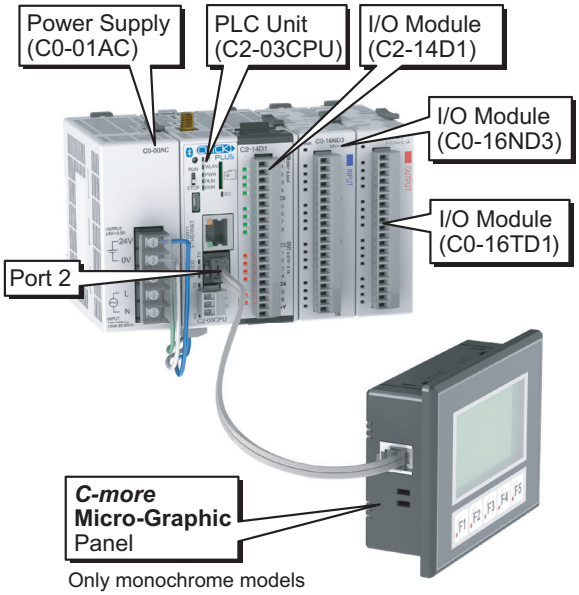
Power Budgeting

Power Consumption for CLICK Stackable I/O Modules

I/O Module Current Consumption (mA)		
Part Number	*Power Budget 24VDC (logic side)*	*External 24VDC (field side)*
Discrete Input Modules		
C0-08SIM	50	0
C0-08ND3	30	0
C0-08ND3-1	30	0
C0-16ND3	40	0
C0-08NE3	30	0
C0-16NE3	40	0
C0-08NA	30	0
Discrete Output Modules		
C0-08TD1	50	15
C0-08TD2	50	0
C0-16TD1	80	100
C0-16TD2	80	0
C0-08TA	80	0
C0-04TRS	100	0
C0-04TRS-10	120	0
C0-08TR	100	0
C0-08TR-3	90	0

I/O Module Current Consumption (continued) (mA)		
Part Number	*Power Budget 24VDC (logic side)*	*External 24VDC (field side)*
Discrete Combo I/O Modules		
C0-16CDD1	80	50
C0-16CDD2	80	0
C0-08CDR	80	0
Analog Input Modules		
C0-04AD-1	20	65
C0-04AD-2	23	65
C0-04POT	30	0
C0-04RTD	25	0
C0-04THM	25	0
Analog Output Modules		
C0-04DA-1	20	145
C0-04DA-2	20	85
Analog Combo I/O Modules		
C0-4AD2DA-1	25	75
C0-4AD2DA-2	20	65
C-more Micro-Graphic Panel		
Monochrome only	90	0





Only monochrome models can be powered from port 2.

Power Budgeting Example

Current Consumption (mA) Example		
Part Number	*Power Budget 24VDC (logic side)*	*External 24VDC (field side)*
C2-03CPU	130	0
C2-14D1	50	60
C0-16ND3	40	0
C0-16TD1	80	100
C-more Micro	90	0
Total:	390	160 *

*** Add in calculated load of connected I/O devices.**

CLICK PLUS PLC Specifications

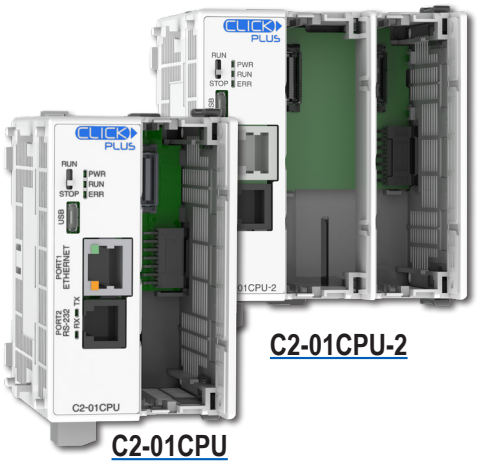
General Specifications For All CLICK PLUS PLC Products

These general specifications apply to all CLICK PLUS PLCs. Please refer to the appropriate I/O temperature derating charts under the Option Slot module and Stackable I/O module specifications to determine best operating conditions based on the ambient temperature of your particular application.

General Specifications	
Operating Temperature	32°F to 131°F [0°C to 55°C]
Storage Temperature	–4°F to 158°F [–20°C to 70°C] IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)
Ambient Humidity	30% to 95% relative humidity (non–condensing)
Environmental Air	No corrosive gases. Environmental pollution level is 2 (UL840)
Environment	For Indoor Use Only
Vibration	IEC60068-2-6 (Test Fc) 5–9Hz:3.5mm amplitude, 9–150Hz 1.0G 10 sweep cycles per axis on each of 3 mutually perpendicular axes.
Shock	IEC60068-2-27 (Test Ea) 15G peak, 11ms duration, 3 shocks in each direction per axis, on 3 mutually perpendicular axes.
Voltage Withstand (Dielectric)	1000VAC, 1 minute (between G and 24V IN)
Insulation Resistance	500VDC, 10M ohm (between G and 24V IN)
Noise Immunity	<EN61131-2> EN61000-4-2 (ESD): 4kV(Contact Discharge) 8kV(Air Discharge) EN61000-4-3 (RFI): 10V/m (80MHz–1GHz) ,3V/m (1.4 GHz–2.0 GHz) 1V/m (2.0 GHz–2.7 GHz) EN61000-4-4 (FTB) : 2kV ,positve/negative , 5kHz (DC Power Port) 1kV ,positve/negative, 5kHz (I/O and Communication Port) EN61000-4-5 (Surge): 0.5 kV/1kV line to line 0.5 kV/1kV line to earth EN61000-4-6 (Conducted): 10V ,0.15 MHz – 80MHz EN61000-4-8 (Power frequency magnetic field immunity) : 30A/m <Local Test> Impulse Immunity : 1000V @ 1µs pulse
Emissions	EN55011 Class A (Radiated RF emission)
Agency Approvals	UL61010 (File No. E157382, E316037); CE (EN61131-2); CUL Canadian C22.2
Radio Standards	FCC part15C (US), RED Article 3.2 & 3.3(d) (e) and (f) (CE), IC RSS-247 (Canada), MIC Item 19 of Article 2-1 (Japan), AS/NZS 4268 (Australia/New Zealand)
Other	RoHS 2011/65/EU Amendment (EU)2015/863

CLICK PLUS PLC Specifications

PLC Unit Specifications (continued)

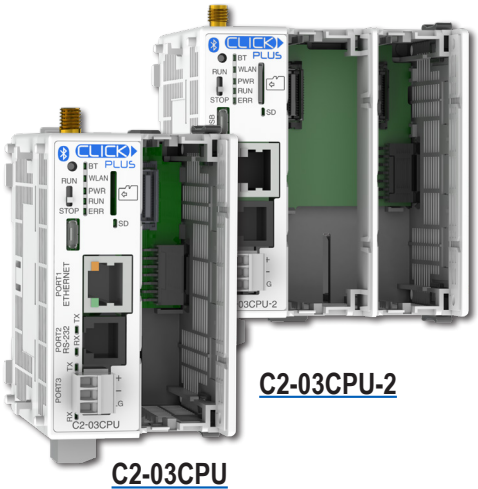


C2-01CPU-2

C2-01CPU

C2-02CPU-2

C2-02CPU



C2-03CPU-2

C2-03CPU

CLICK PLUS PLC Unit Specifications				
		C2-01CPU C2-01CPU-2	C2-02CPU C2-02CPU-2	C2-03CPU C2-03CPU-2
Control Method		Stored Program/Cyclic execution method		
I/O Numbering System		Fixed in Decimal		
Ladder Memory (steps)		8000		
Total Data Memory (words)		8000		
Contact Execution (boolean)		< 0.2 µs		
Typical Scan (1k boolean)		< 1ms		
RLL Ladder Style Programming		Yes		
Run Time Edits		Yes		
Scan		Variable / fixed		
PLC Mode Switch		1 (RUN/STOP)		
FLASH Memory		Standard on PLC		
Protocol	Modbus RTU (master/slave)	Yes	No	Yes
	ASCII (in/out)	Yes	No	Yes
	Modbus TCP (client server)	Yes	Yes	Yes
	EtherNet/IP Implicit and Explicit (adapter server)	Yes	No	Yes*
MQTT		Publisher: 4 publishers, 3 blocks each Subscriber: 10 blocks		
Data Logging		N/A	N/A	Time, date, 16 addresses
CLICK Programming Software		Yes (Windows)		
Number of Instructions Available		21		
Control Relays		2000		
System Control Relays		1000		
Timers		500		
Counters		250		
Interrupt		Yes (external: 8 / timed: 4)		
Subroutines		Yes		
For/Next Loops		Yes		
Math (Integer and Hex)		Yes		
Drum Sequencer Instruction		Yes		
Internal Diagnostics		Yes		
Password Security		Yes		
System Error Log		Yes		
User Error Log		No		
Memory Backup		Super capacitor + battery		
Battery Backup		Yes (battery part #D0-MC-BAT)		
Calendar/Clock		Yes		

*** EtherNet/IP available on the Ethernet RJ45 port only. Not available over Wi-Fi.**

CLICK PLUS PLC Specifications

PLC Unit Specifications (continued)

CLICK PLUS PLC Unit Specifications							
		C2-01CPU	C2-01CPU-2	C2-02CPU	C2-02CPU-2	C2-03CPU	C2-03CPU-2
I/O Slot	Internal I/O	N/A (optional)					
	Option Slot Support	Yes, 1	Yes, 2	Yes, 1	Yes, 2	Yes, 1	Yes, 2
	Expansion I/O	Yes (max. 8 modules)					
Com. Ports	USB Port (programming)	Yes (device) (For programming and providing 5VDC power, microB USB)					
	Ethernet (RJ45)	Yes (10/100)		No		Yes (10/100)	
	Serial Port RS-232 (RJ12)	Yes		No		Yes	
	Serial Port RS-485 (terminal block)	No				Yes	
	WLAN	No		Yes (RP-SMA connection for optional external antenna, shared)			
	Bluetooth	No					
Status Indicators	WLAN Status LED	None		1			
	Bluetooth Status LED	None		1			
	CPU Status LED	3 (PWR/RUN/ERR)					
	Ethernet Status LED	2 (LINK/ACT 10/100)		None		2 (LINK/ACT 10/100)	
	Serial Status LED	2 (TX/RX)		None		2 (TX/RX)	
	SD Card Status LED	None				1	
Other	MicroSD Card Slot (SDHC-compatible)	No				Yes	
Power	Nominal Input Voltage	24VDC (4-pin terminal block)					
	Operating Voltage Range	24VDC, Class 2 or SELV (Safety Extra-Low Voltage) or Limited Energy Circuit power supply					
	Input Voltage Range	20.0–28.0 VDC					
	Maximum Inrush Current	30A @ 1ms					
	Power Consumption*	20W	22W	20W	22W	20W	22W
	Acceptable External Power Drop	Max 10ms (AC power failure with C0-00AC or C0-01AC)					
	Current Required	110mA	120mA	105mA	115mA	130mA	140mA
	Fuse	None					
	External Fuse Recommended	No					
	Polarity Protection	Power input is reverse polarity protected					
	USB Supply	5VDC (via USB programming port)					
Communication Port & Terminal Block Replacement		N/A		N/A		AutomationDirect p/n C0-3TB	
24VDC Power Terminal Block Replacement		AutomationDirect p/n C0-4TB					
Antenna Requirements		N/A		2.4 GHz antenna, RP-SMA connector (AutomationDirect p/n SE-ANT250 or SE-ANT210)			
Drawing Link		PDF	PDF	PDF	PDF	PDF	PDF
Weight		3.5 oz [99g]	4.0 oz [114g]	3.3 oz [94g]	3.8 oz [109g]	4.0 oz [114g]	4.6 oz [129g]

*** Power consumption shown is the maximum power consumption with the maximum number of I/O modules attached.**

CLICK PLUS PLC Specifications

CLICK PLUS PLC Hardware/Software Compatibility

The table below shows the minimum software and hardware versions required for the CLICK PLUS PLCs and Option Slot Modules. The CLICK PLUS PLC can also utilize the CLICK Stackable I/O Modules, as any software and hardware version compatible with CLICK PLUS is also compatible with the CLICK Stackable I/O Modules.

CLICK PLUS PLC Features Software Compatibility

		Minimum CLICK Software Version						
Device Type	**Part Number**	**Hardware**	**High-Speed Inputs***	**High-Speed Outputs***	**EtherNet/IP**	**DHCP, DNS**	**SNTP**	**PID, MQTT**
CLICK PLUS CPU	C2-01CPU	v3.00	v3.00	v3.30	v3.00	v3.00	v3.00	v3.00
	C2-02CPU				N/A			
	C2-03CPU				v3.00			
	C2-01CPU-2	v3.20	v3.20		v3.20	v3.20	v3.20	v3.20
	C2-02CPU-2				N/A			
	C2-03CPU-2				v3.20			
Option Slot I/O Modules	C2-14D1	v3.00	v3.00	v3.30	N/A	N/A	N/A	N/A
	C2-14D2							
	C2-14DR			N/A				
	C2-14AR		N/A					
	C2-14TTL	v3.70	v3.70	v3.70				
	C2-08D1-4VC	v3.00	v3.00	v3.30				
	C2-08D2-4VC							
	C2-08DR-4VC			N/A				
	C2-08AR-4VC		N/A					
	C2-08D1-6C	v3.00	v3.00	v3.30				
	C2-08D2-6C							
	C2-08DR-6C			N/A				
	C2-08AR-6C		N/A					
	C2-08D1-6V	v3.00	v3.00	v3.30				
	C2-08D2-6V							
	C2-08DR-6V			N/A				
	C2-08AR-6V		N/A					
Option Slot Intelligent Modules	C2-DCM	v3.20	N/A	N/A	N/A	N/A	N/A	N/A
	C2-NRED	v3.70				v3.70	v3.70	
	C2-OPCUA					N/A		

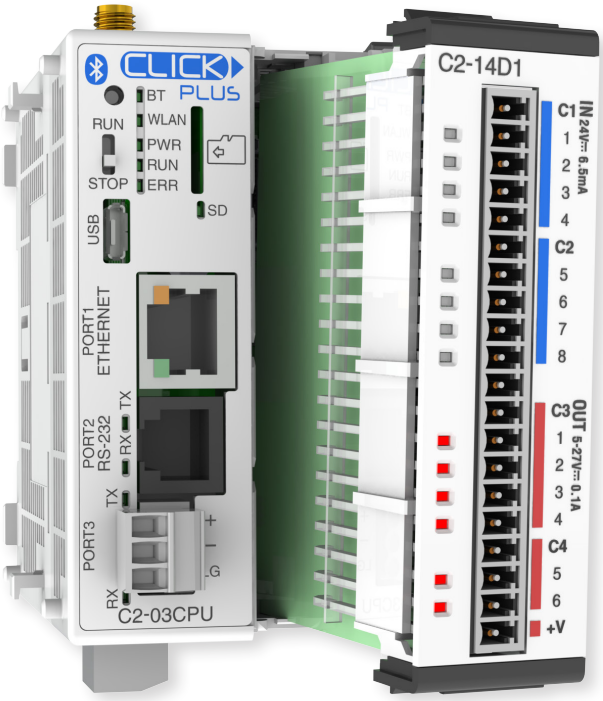
*** High-speed Inputs and Outputs are only available when the Option Slot I/O Module is installed in Slot 0.**

CLICK PLUS Option Slot Module Specifications

General Specifications For All CLICK PLUS Option Slot Modules

These general specifications apply to all CLICK PLUS Option Slot Modules. Please refer to the appropriate I/O temperature derating charts under the Option Slot module and Stackable I/O module specifications to determine the best operating conditions based on the ambient temperature of your particular application.

Option Slot Module General Specifications	
Operating Temperature	32°F to 131°F [0°C to 55°C]
Storage Temperature	−4°F to 158°F [−20°C to 70°C] IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)
Ambient Humidity	30% to 95% relative humidity (non-condensing)
Environmental Air	No corrosive gases. Environmental pollution level is 2 (UL840)
Environment	For Indoor Use Only
Vibration	IEC60068-2-6 (Test Fc) 5–9Hz:3.5mm amplitude, 9–150Hz 1.0G 10 sweep cycles per axis on each of 3 mutually perpendicular axes.
Shock	IEC60068-2-27 (Test Ea) 15G peak, 11ms duration, 3 shocks in each direction per axis, on 3 mutually perpendicular axes.
Noise Immunity	<EN61131-2> EN61000-4-2 (ESD) EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity) <Local Test> Impulse Immunity: 1000V @ 1uS pulse
Emissions	EN55011 Class A (Radiated RF emission)
Agency Approvals	UL61010 (File No. E157382); CE (EN61131-2); CUL Canadian C22.2
Other	RoHS 2011/65/EU Amendment (EU)2015/863



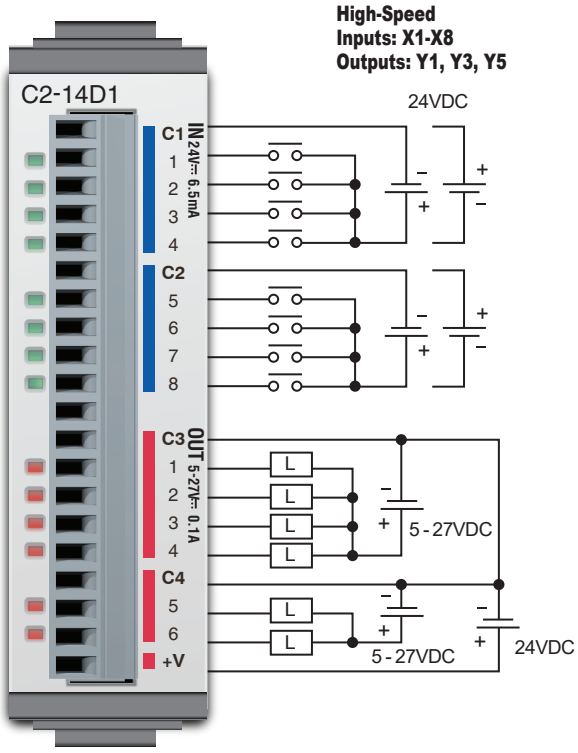
CLICK PLUS Option Slot Module Specifications

C2-14D1 $66.00

8 DC Input/6 Sinking DC Output Option Slot I/O Module

8-point 24VDC input, 6-point 5–27 VDC sinking output module, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-11DD1E-D PLC.

I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

I/O Specifications - Outputs	
Outputs per Module	6 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point; C3: 0.4 A/common, C4: 0.2 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
Output Frequency (Max)	Y1, Y3, Y5: 100kHz (3m cable)
OFF to ON Response	<5µs (Duty 40–60%, Load current 20mA)
ON to OFF Response	<5µs (Duty 40–60%, Load current 20mA)
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com)
External DC Power Required	20–28 VDC Maximum @ 60mA (All Points On)

General Specifications	
Current Consumption at 24VDC	50mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

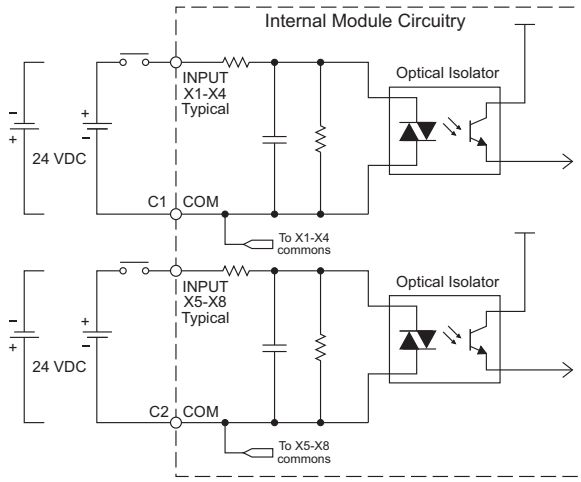
Maximum Number of High Speed Counters	
Up	6
Down	6
Up/Down	3
Pulse/Direction	4
Quadrature A-B	4
Quadrature A-B+Z	2

Maximum Number of High Speed Outputs	
Pulse Train	3
Pulse Width Modulation	3

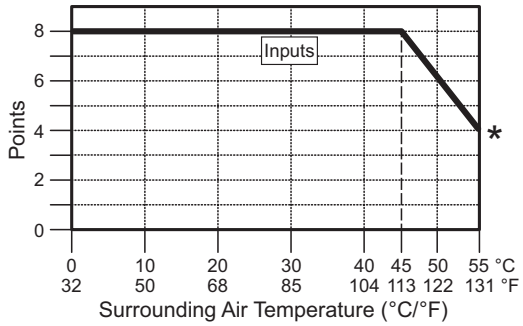
CLICK PLUS Option Slot Module Specifications

C2-14D1 (cont'd)

Equivalent Input Circuit

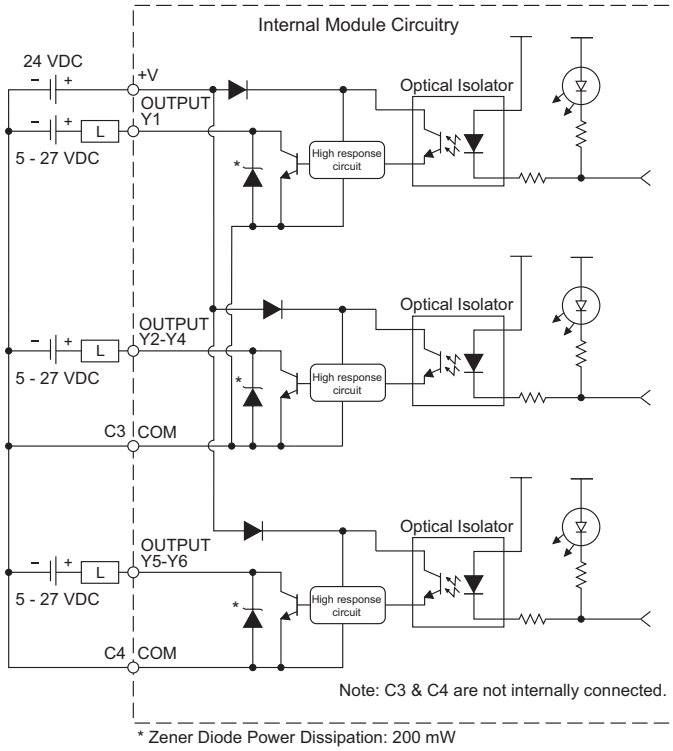


C2-14D1 Temperature Derating Chart



* Use every other input.

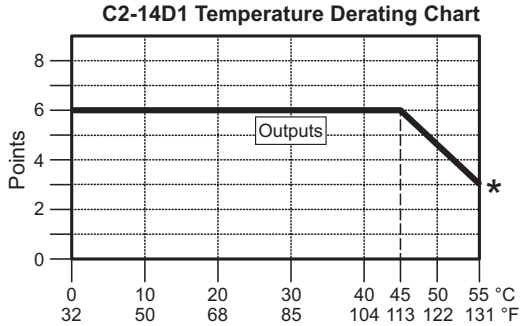
Equivalent Output Circuit



Note: C3 & C4 are not internally connected.

* Zener Diode Power Dissipation: 200 mW

C2-14D1 Temperature Derating Chart



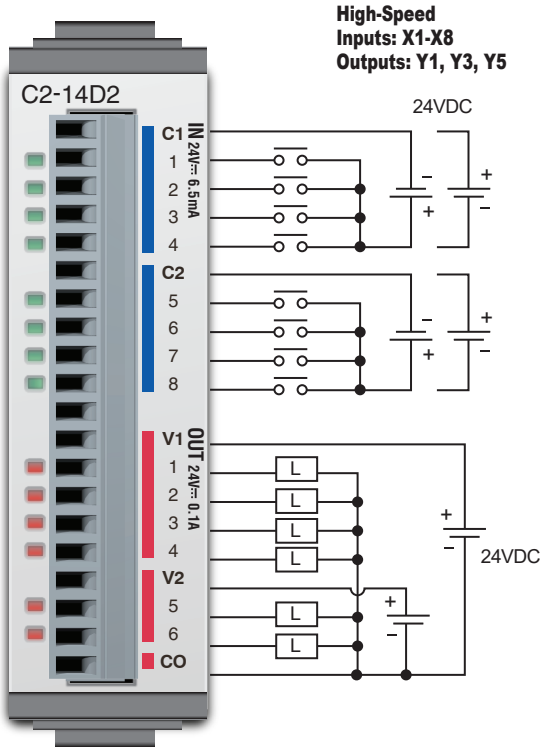
* Use every other output.

CLICK PLUS Option Slot Module Specifications

C2-14D2 $66.00

8 DC Input/6 Sourcing DC Output Option Slot I/O Module
8-point 24VDC input, 6-point 24VDC sourcing output module, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-11DD2E-D PLC.

I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point, 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
Output Frequency (Max)	Y1, Y3, Y5: 100kHz (3m cable)
OFF to ON Response	<5µs (Duty 40–60%, Load current 20mA)
ON to OFF Response	<5µs (Duty 40–60%, Load current 20mA)
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	50mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	47g

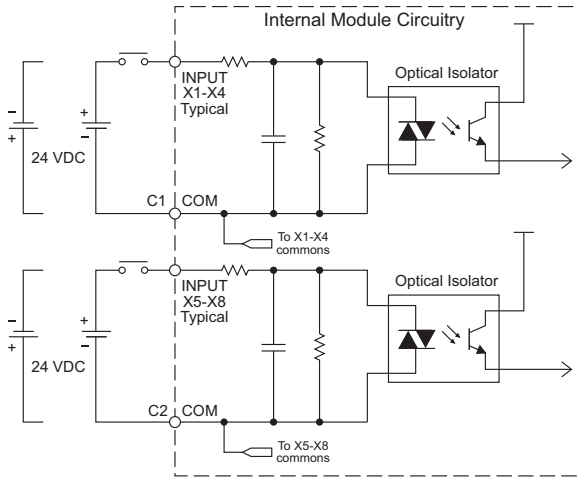
Maximum Number of High Speed Counters	
Up	6
Down	6
Up/Down	3
Pulse/Direction	4
Quadrature A-B	4
Quadrature A-B+Z	2

Maximum Number of High Speed Outputs	
Pulse Train	3
Pulse Width Modulation	3

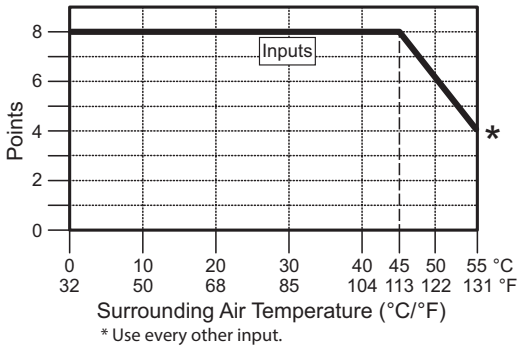
CLICK PLUS Option Slot Module Specifications

C2-14D2 (cont'd)

Equivalent Input Circuit

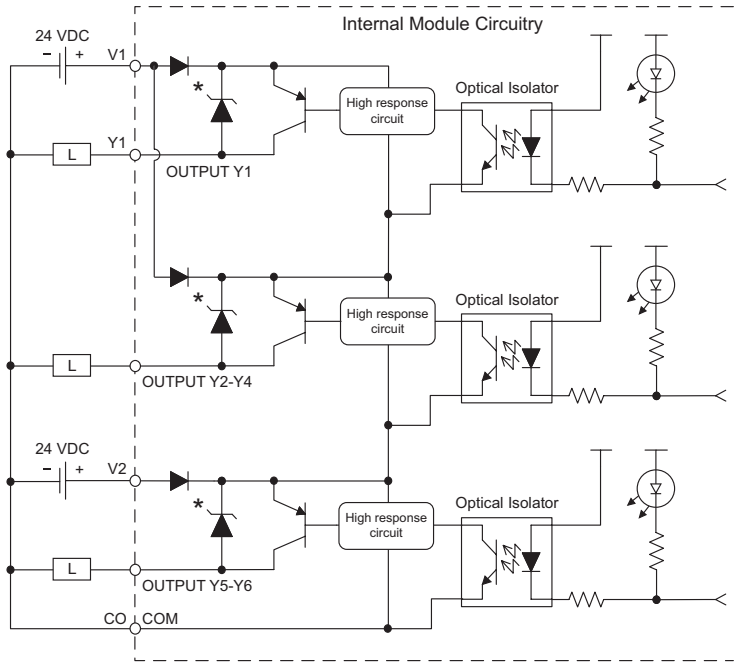


C2-14D2 Temperature Derating Chart



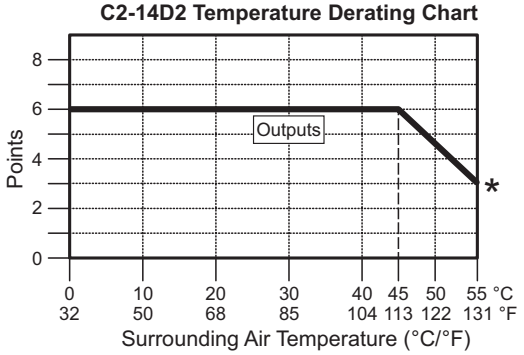
* Use every other input.

Equivalent Output Circuit



*Zener Diode Power Dissipation: 200 mW

C2-14D2 Temperature Derating Chart



* Use every other output.

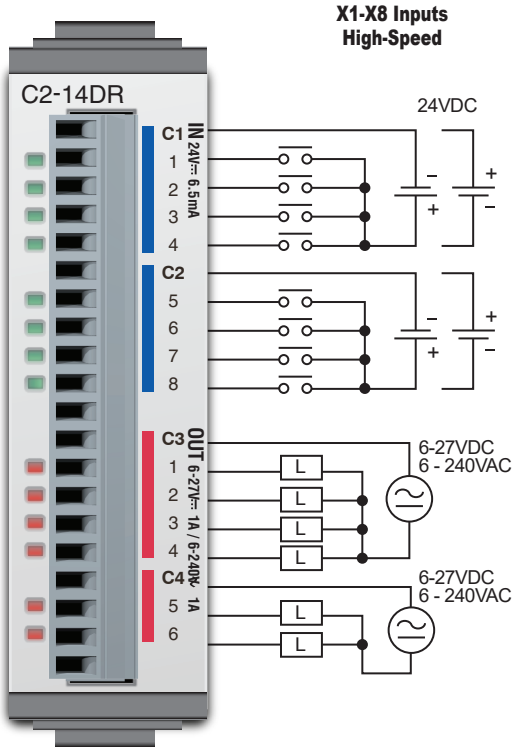
CLICK PLUS Option Slot Module Specifications

C2-14DR $76.00

8 DC Input/6 Relay Output Option Slot I/O Module

8-point 24VDC input, 6-point Form A SPST relay output module, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-11DRE-D PLC.

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

NOTE: The C2-14DR is derated to 2A maximum per Common when used with the ***ZIP*Link wiring system.

I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive) C3: 4A/common; C4: 2A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons per Module	2 (4 points or 2 points / common)

General Specifications	
Current Consumption at 24VDC	75mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	62g

Maximum Number of High Speed Counters	
Up	6
Down	6
Up/Down	3
Pulse/Direction	4
Quadrature A-B	4
Quadrature A-B+Z	2

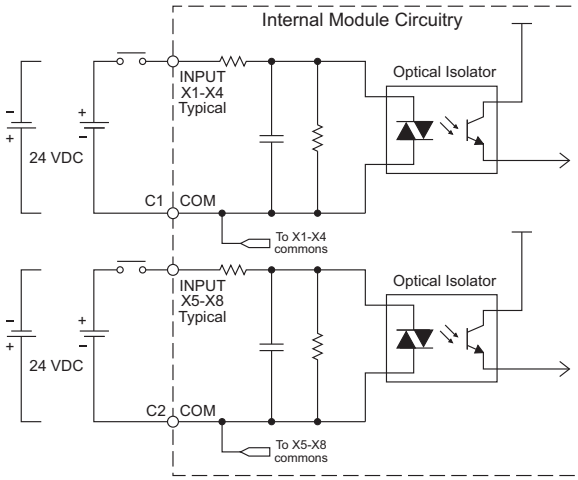
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life****
30VDC Resistive	200,000 cycles
30VDC Inductive	100,000 cycles
250VAC Resistive	200,000 cycles
250VAC Inductive	50,000 cycles

*ON to OFF = 1 cycle

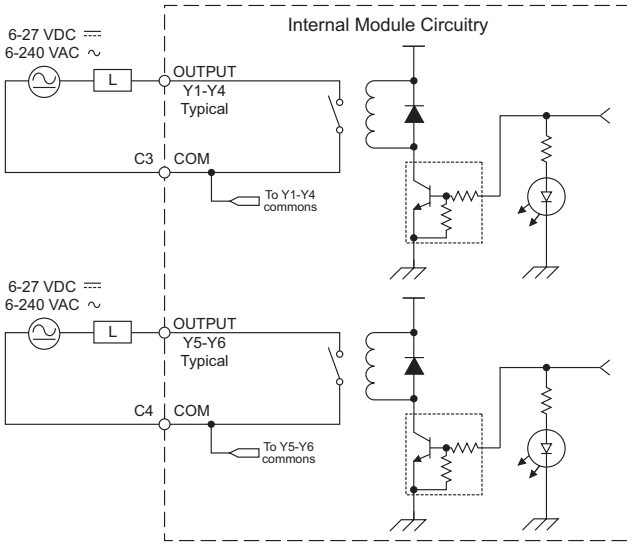
CLICK PLUS Option Slot Module Specifications

C2-14DR (cont'd)

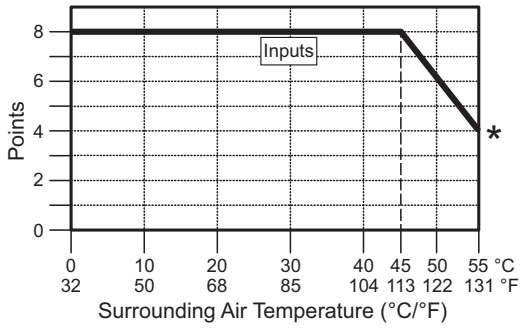
Equivalent Input Circuit



Equivalent Output Circuit

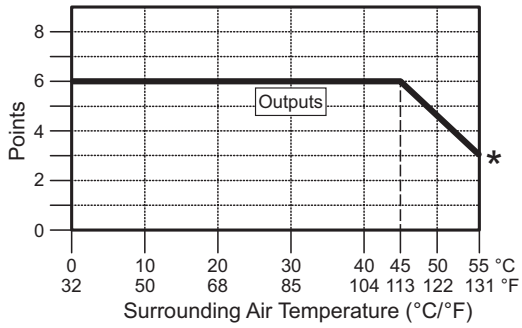


C2-14DR Temperature Derating Chart



* Use every other input.

C2-14DR Temperature Derating Chart



* Use every other output.

Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

Input to Output Insulation

Basic insulation is provided between Relay Output 1 and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

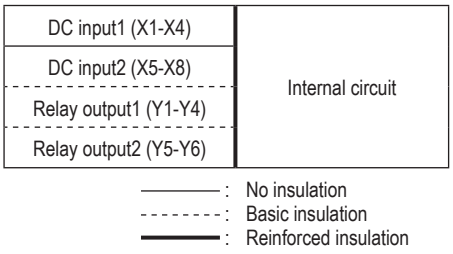
Output to Output Insulation

Basic insulation is provided between Relay Outputs. When connecting a Relay Output to a circuit that exceeds 100VAC (141VDC) more than the adjacent Relay Outputs, an additional basic insulation layer must be added to the adjacent Relay Output circuits.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.

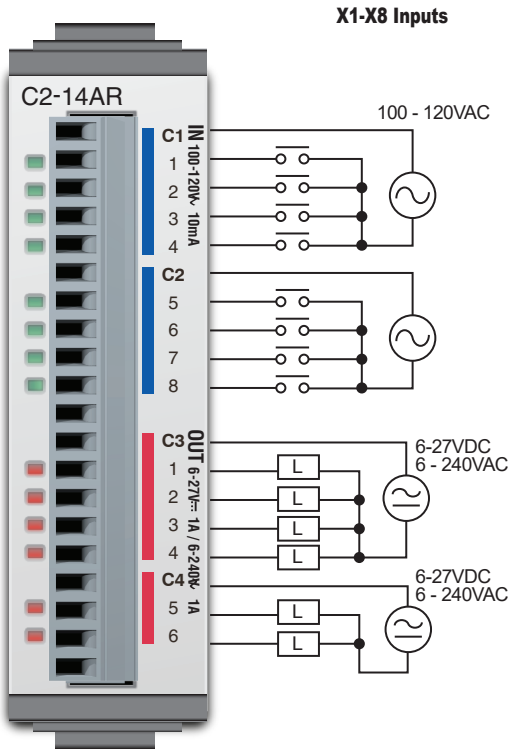


CLICK PLUS Option Slot Module Specifications

C2-14AR $78.00

8 AC Input/6 Relay Output Option Slot I/O Module
8-point 100–120 VAC input, 6-point Form A SPST relay output module, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

NOTE: The C2-14AR is derated to 2A maximum per Common when used with the ***ZIP*Link wiring system.

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-11ARE-D PLC.

I/O Specifications - Inputs	
Inputs per Module	8
Operating Voltage Range	100–120 VAC
Input Voltage Range	80–144 VAC
AC Frequency	47–63 Hz
Input Current	8.5 mA @ 100VAC at 50Hz 10mA @ 100VAC at 60Hz
Maximum Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive) C3: 4A/common; C4: 2A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons per Module	2 (4 points or 2 points / common)

General Specifications	
Current Consumption at 24VDC	75mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	63g

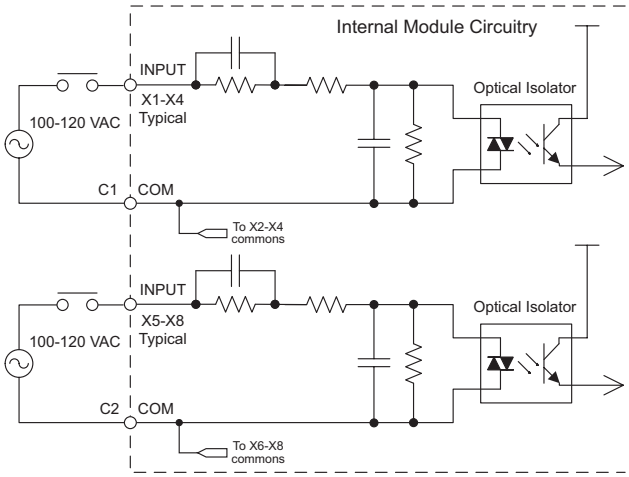
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life****
30VDC Resistive	200,000 cycles
30VDC Inductive	100,000 cycles
250VAC Resistive	200,000 cycles
250VAC Inductive	50,000 cycles

*ON to OFF = 1 cycle

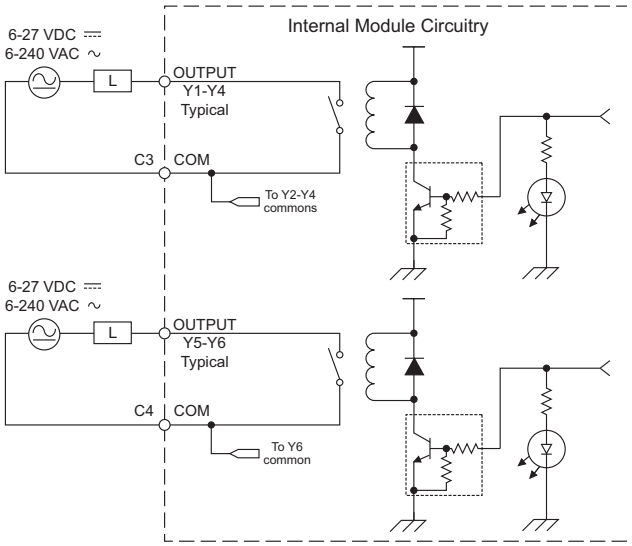
CLICK PLUS Option Slot Module Specifications

C2-14AR (cont'd)

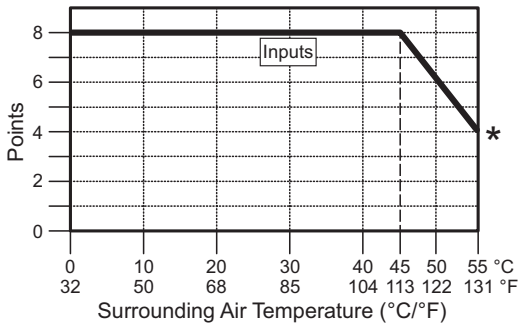
Equivalent Input Circuit



Equivalent Output Circuit

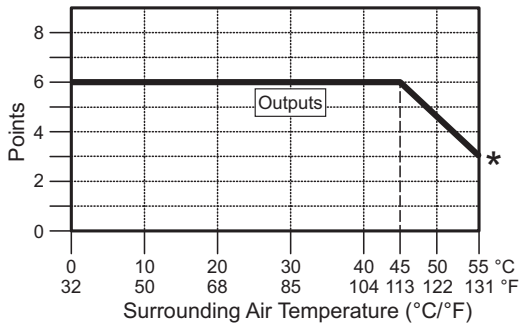


C2-14AR Temperature Derating Chart



* Use every other input.

C2-14AR Temperature Derating Chart



* Use every other output.

Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

Input to Output Insulation

Basic insulation is provided between Relay Output 1 and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

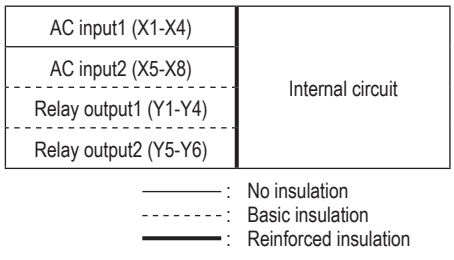
Output to Output Insulation

Basic insulation is provided between Relay Outputs. When connecting a Relay Output to a circuit that exceeds 100VAC (141VDC) more than the adjacent Relay Outputs, an additional basic insulation layer must be added to the adjacent Relay Output circuits.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.

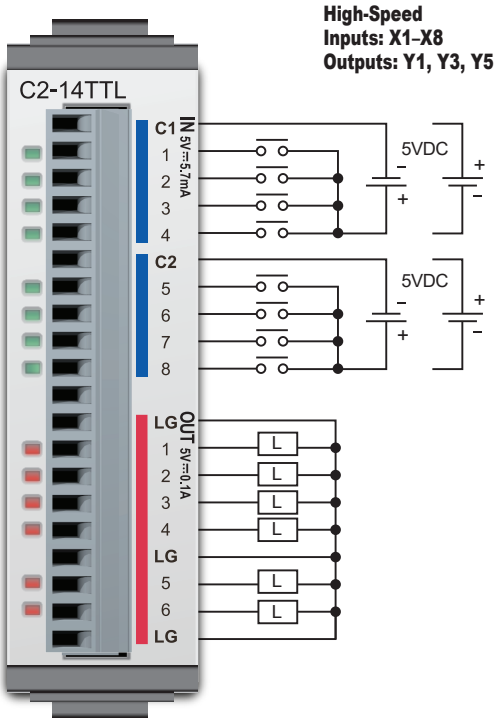


CLICK PLUS Option Slot Module Specifications

C2-14TTL $70.00

8 TTL Input/6 Sourcing TTL Output Option Slot I/O Module
CLICK PLUS discrete combo module,
Input: 8-point, 4.5–5.5 VDC, sinking/sourcing/TTL,
Output: 6-point, 4.5–5.5 VDC, sourcing/TTL,
0.1 A/point. Removable terminal block included.

Wiring Diagram



ZIPLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	5VDC
Input Voltage Range	4.5–5.5 VDC
Input Current	Typ 5.7 mA @ 5VDC
Maximum Input Current	7.4 mA @ 5.5 VDC
Input Impedance	360Ω @ 5VDC
Input Frequency (Max)	X1-X8: 100 kHz (3m cable)
ON Voltage Level	> 4.0 VDC
OFF Voltage Level	< 2.0 VDC
Minimum ON Current	4.0 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 5µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	5VDC
Output Voltage Range	4.5–5.5 VDC
Maximum Output Current	0.1 A/point, 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 5.5 VDC
On Voltage Drop	0.1 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
Maximum Switching Frequency	100kHz (3m cable)
OFF to ON Response	<5µs (Duty 40–60%, Load current 20mA)
ON to OFF Response	<5µs (Duty 40–60%, Load current 20mA)
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	220mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

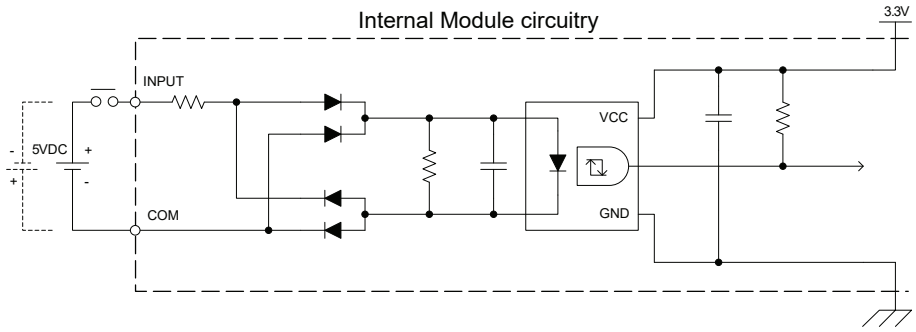
Maximum Number of High-Speed Counters	
Up	6
Down	6
Up/Down	3
Pulse/Direction	4
Quadrature A-B	4
Quadrature A-B+Z	2

Maximum Number of High-Speed Outputs	
Pulse Train	3
Pulse Width Modulation	3

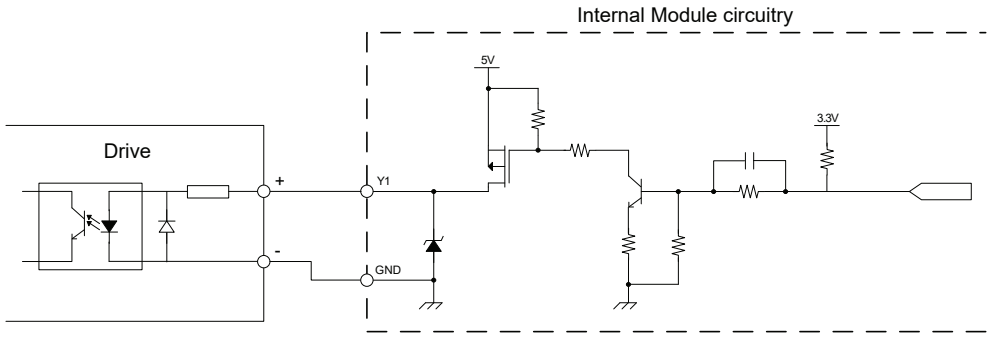
CLICK PLUS Option Slot Module Specifications

C2-14TTL (cont'd)

Equivalent Input Circuit



Equivalent Output Circuit



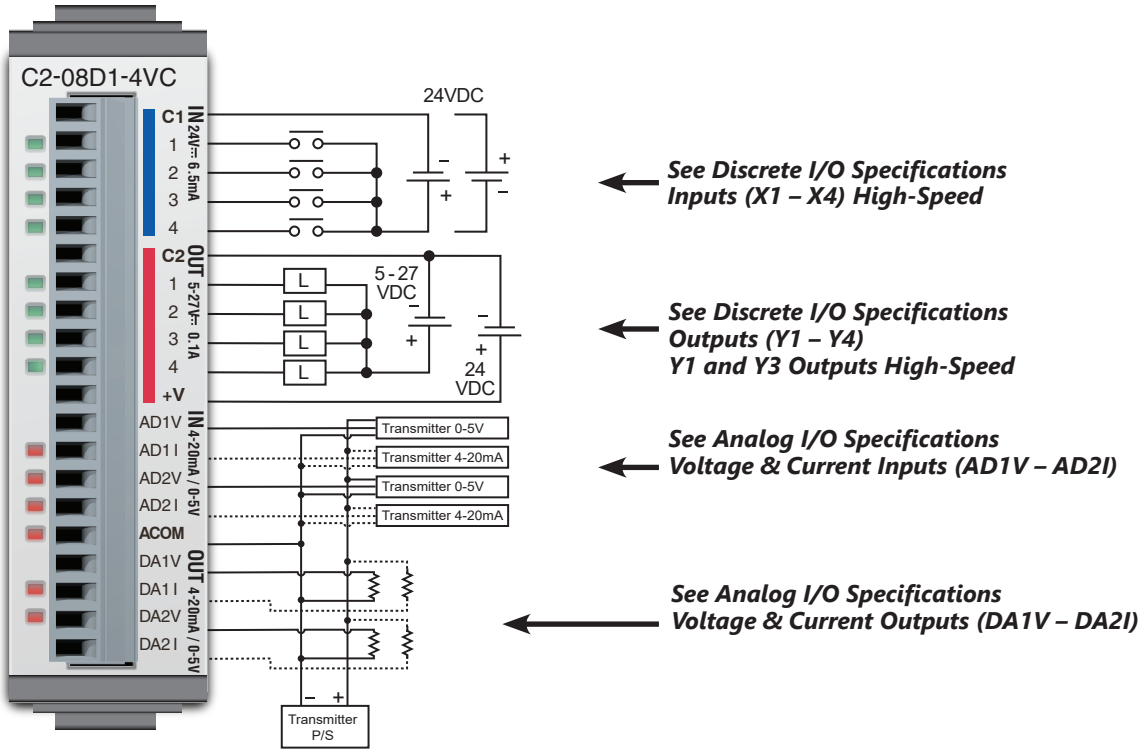
CLICK PLUS Option Slot Module Specifications

C2-08D1-4VC $100.00

4 DC Input / 4 Sinking DC Output
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD1E-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

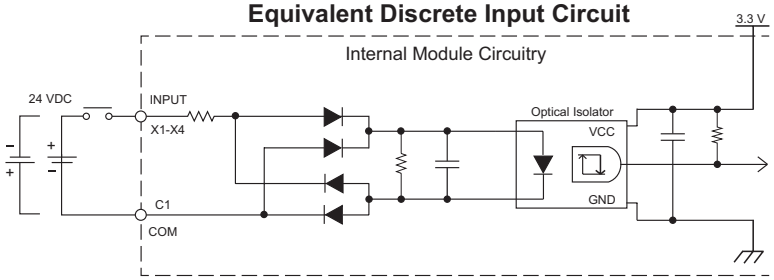
C2-08D1-4VC (cont'd)

X1 - X4 (High-Speed)

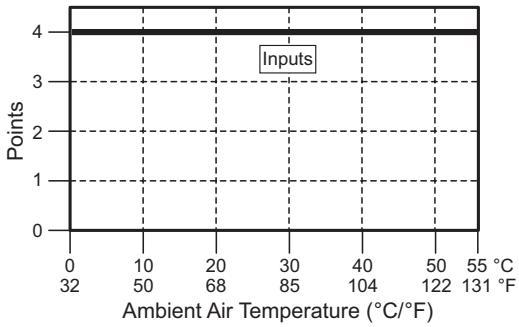
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D1-4VC Temperature Derating Chart

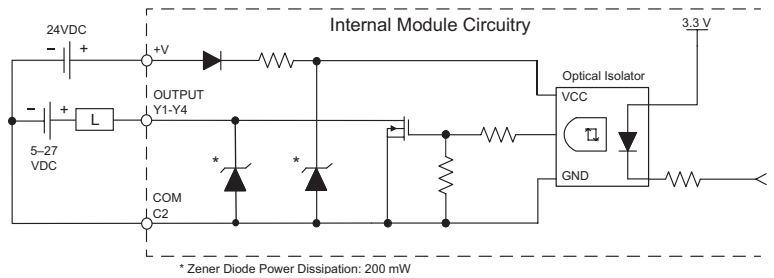


Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points ON)

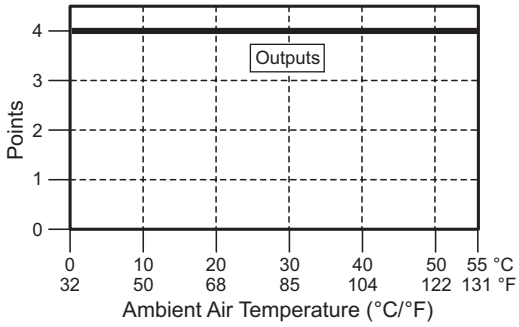
Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



* Zener Diode Power Dissipation: 200 mW

C2-08D1-4VC Temperature Derating Chart



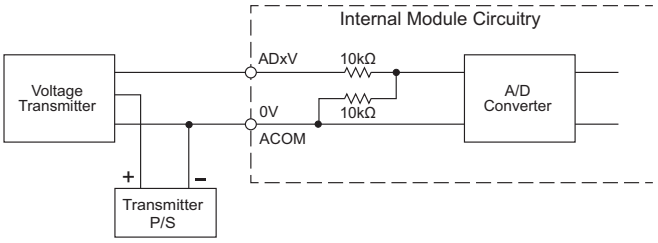
CLICK PLUS Option Slot Module Specifications

C2-08D1-4VC (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

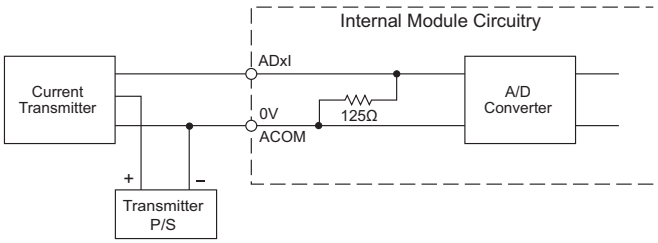
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

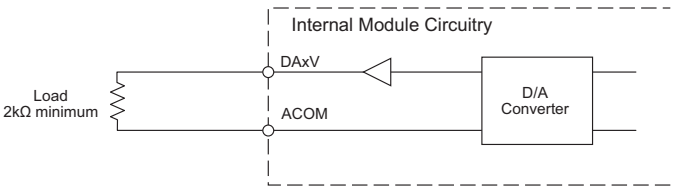
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs Temperature Error	±100ppm/°C maximum

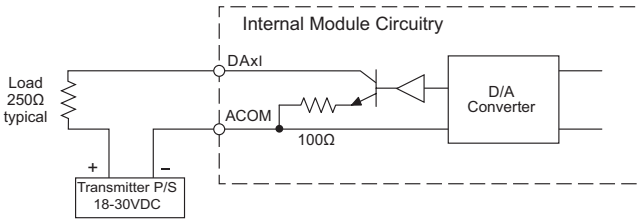
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs Temperature Error	±100ppm/°C maximum

Analog Current Output Circuit



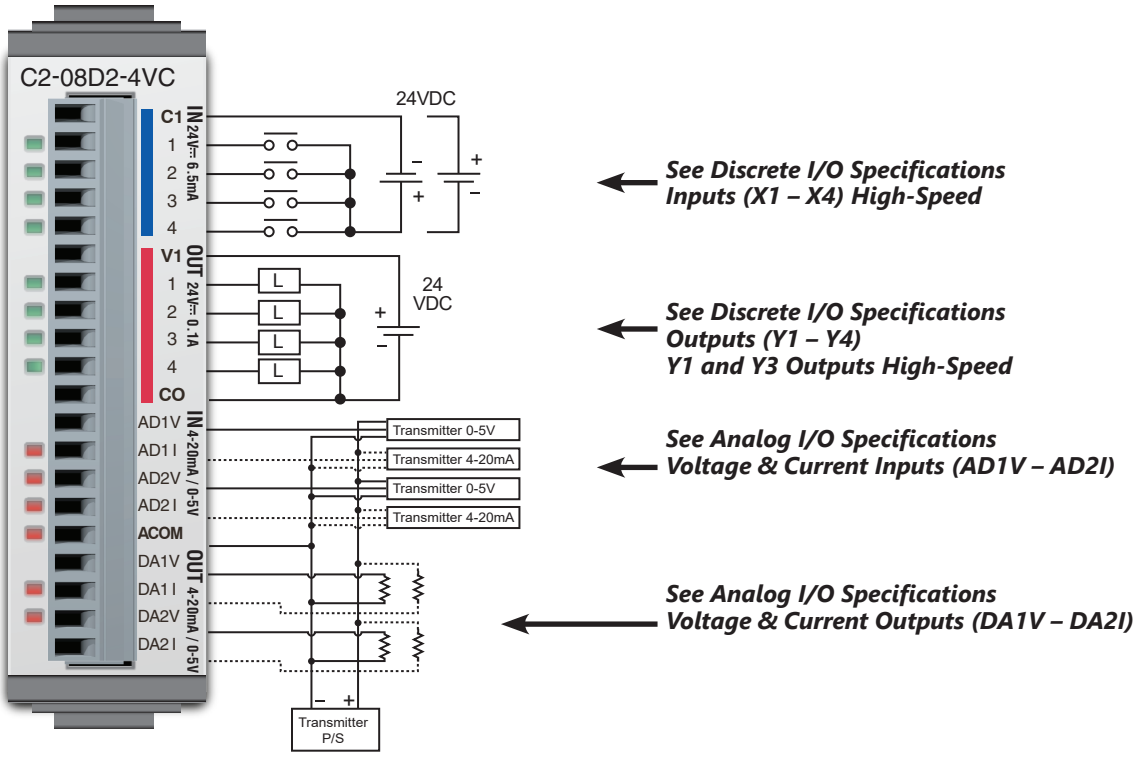
CLICK PLUS Option Slot Module Specifications

C2-08D2-4VC $100.00

4 DC Input / 4 Sourcing DC Output
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD2E-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

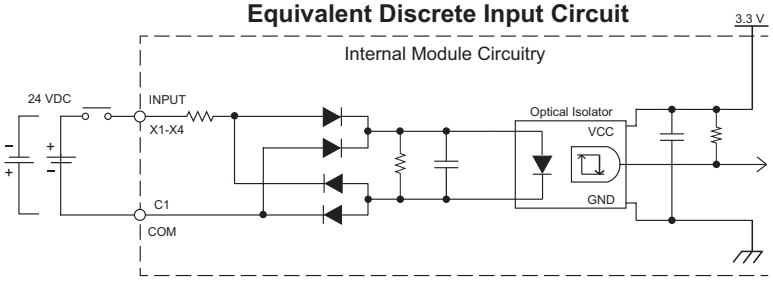
C2-08D2-4VC (cont'd)

X1 - X4 (High-Speed)

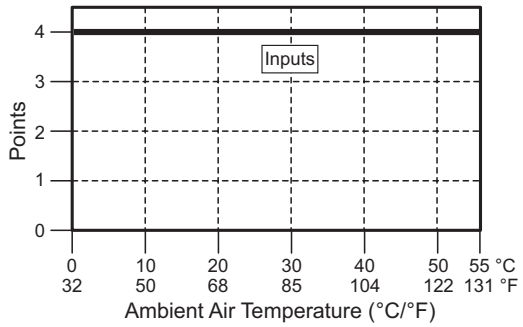
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D2-4VC Temperature Derating Chart

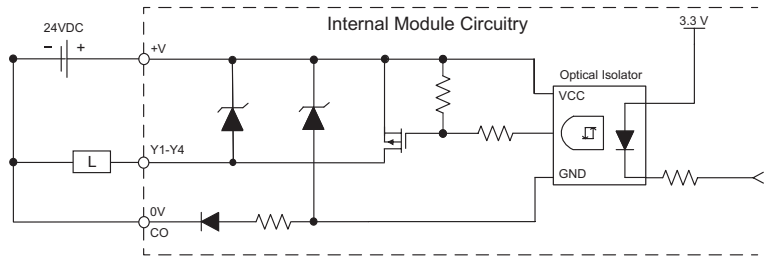


Y1 - Y4

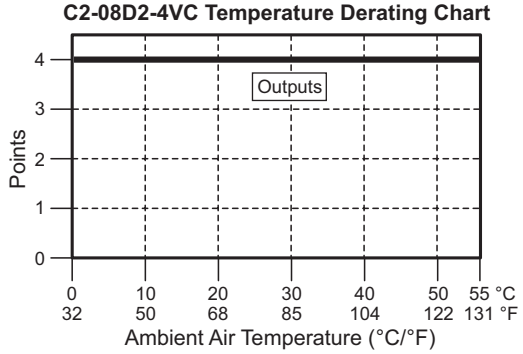
Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 A
Maximum Inrush Current	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 pts or 1 pt/common)

Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



C2-08D2-4VC Temperature Derating Chart



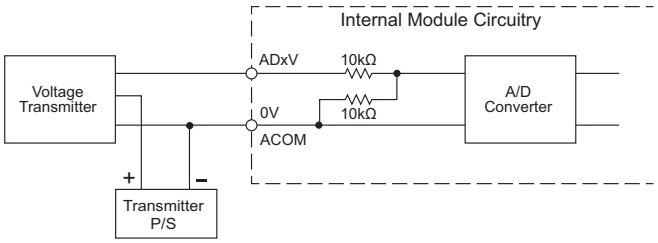
CLICK PLUS Option Slot Module Specifications

C2-08D2-4VC (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

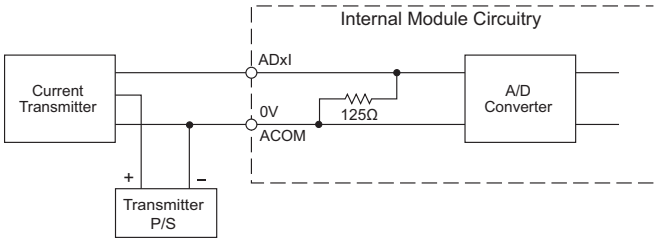
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

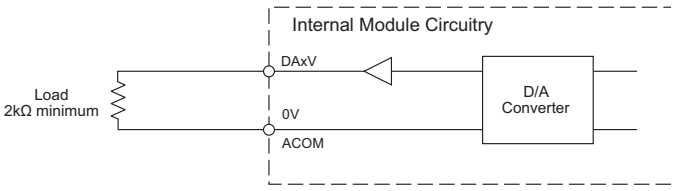
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

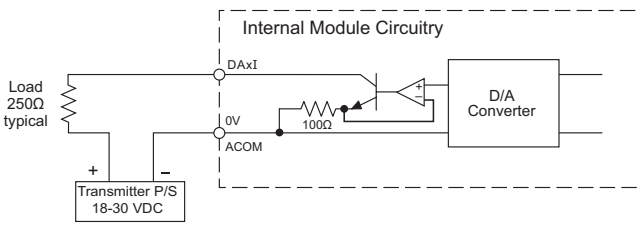
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Current Output Circuit



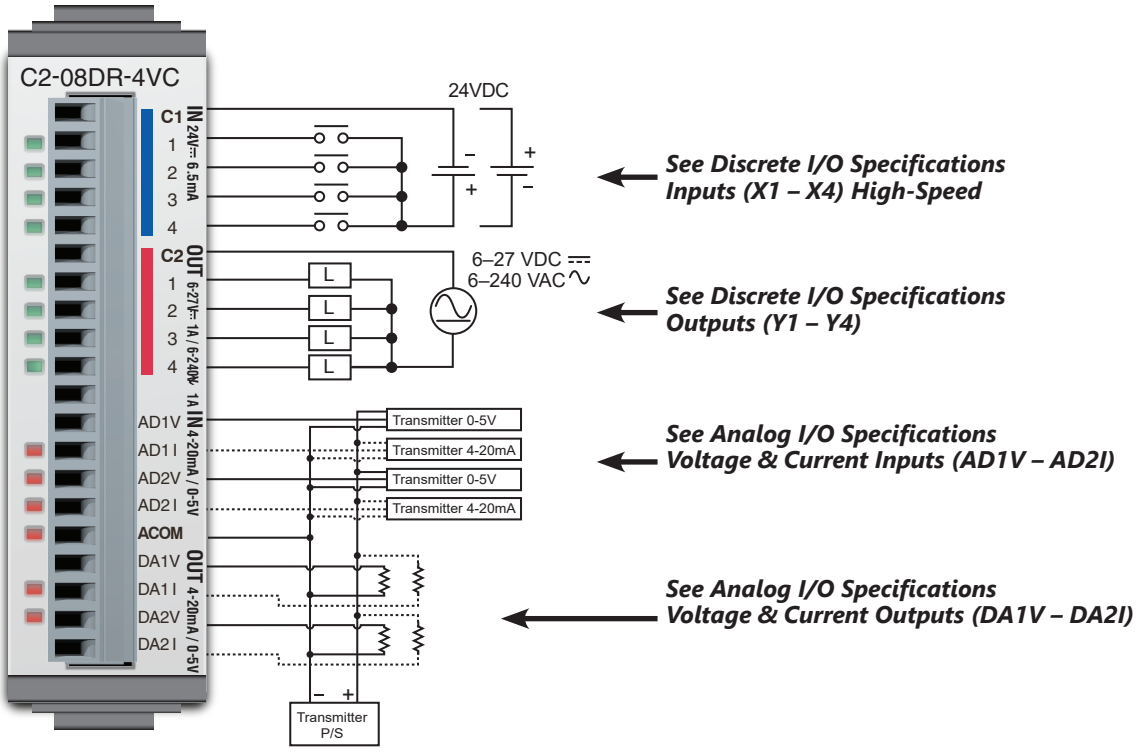
CLICK PLUS Option Slot Module Specifications

C2-08DR-4VC $112.00

4 DC Input / 4 Relay Output
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DRE-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	100mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	58g

CLICK PLUS Option Slot Module Specifications

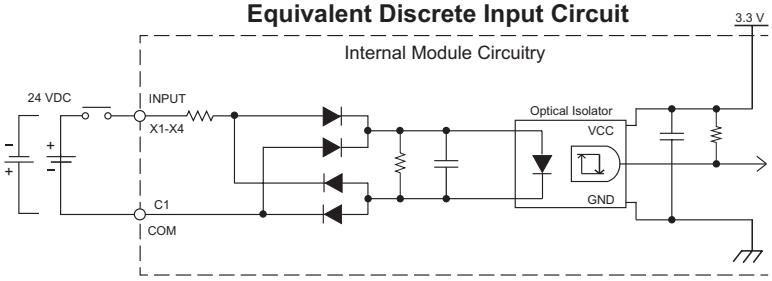
C2-08DR-4VC (cont'd)

X1 - X4 (High-Speed)

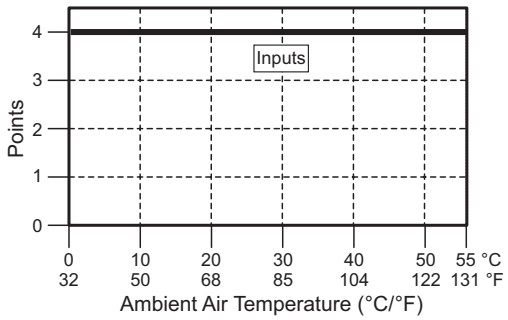
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08DR-4VC Temperature Derating Chart



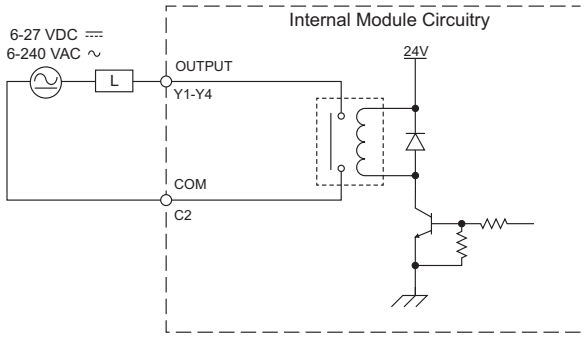
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/ common)

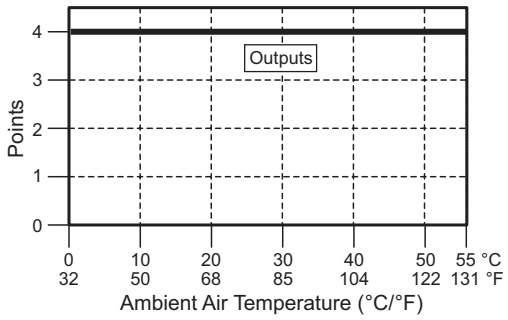
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C2-08DR-4VC Temperature Derating Chart



CLICK PLUS Option Slot Module Specifications

C2-08DR-4VC (cont'd)

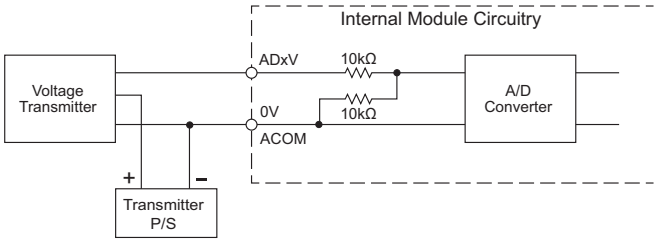
AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

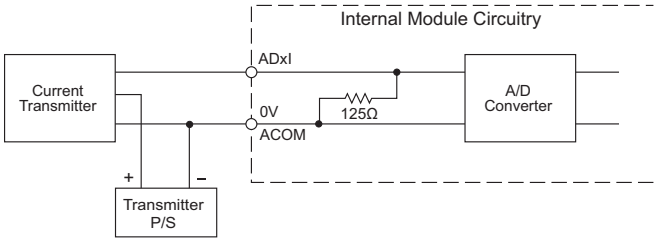
AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Input Circuit



Analog Current Input Circuit



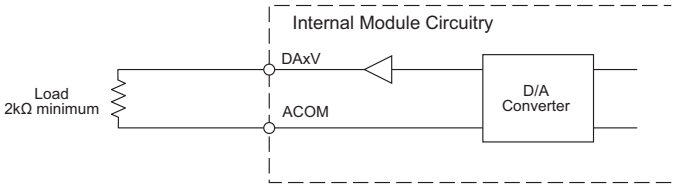
DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

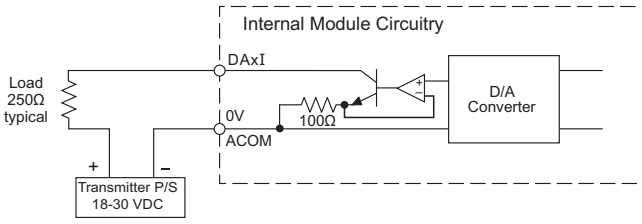
DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Output Circuit



Analog Current Output Circuit



CLICK PLUS Option Slot Module Specifications

C2-08DR-4VC (cont'd)

Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

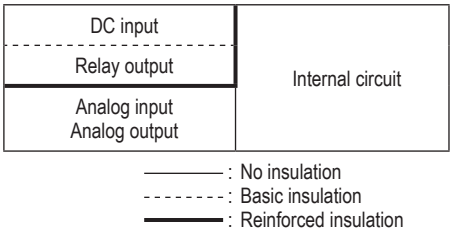
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



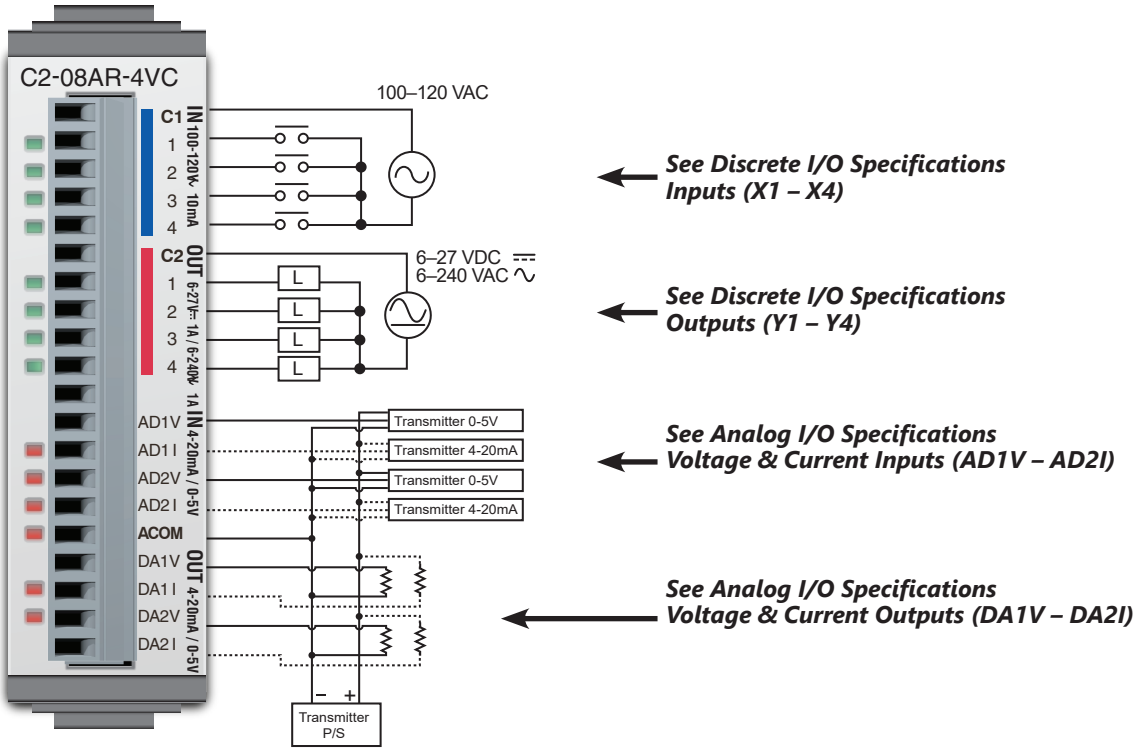
CLICK PLUS Option Slot Module Specifications

C2-08AR-4VC $112.00

4 AC Input / 4 Relay Output
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12ARE-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	100mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	58g

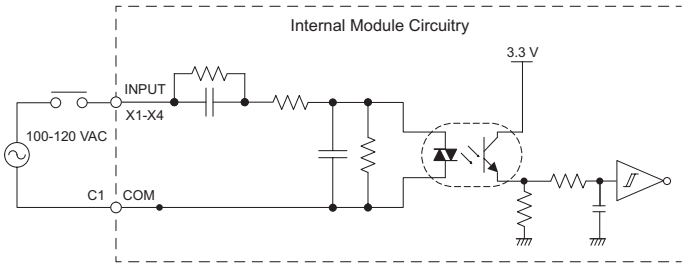
CLICK PLUS Option Slot Module Specifications

C2-08AR-4VC (cont'd)

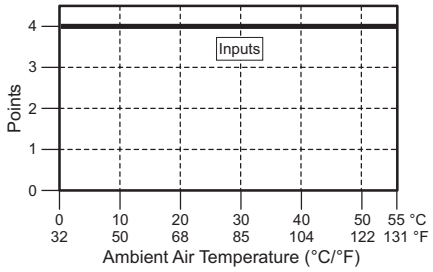
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C2-08AR-4VC Temperature Derating Chart



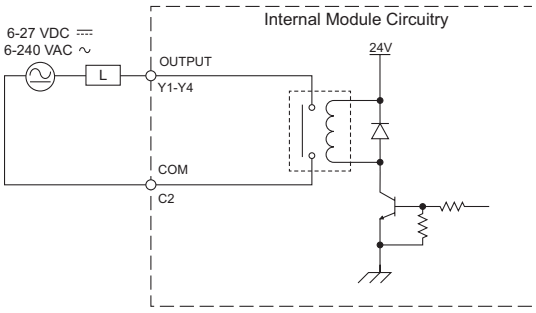
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

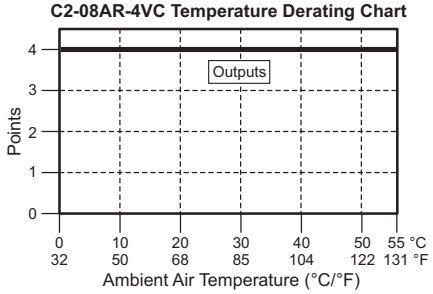
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C2-08AR-4VC Temperature Derating Chart



CLICK PLUS Option Slot Module Specifications

C2-08AR-4VC (cont'd)

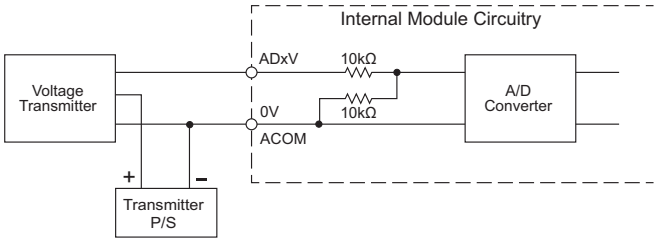
AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs Temperature Error	±100ppm/°C maximum

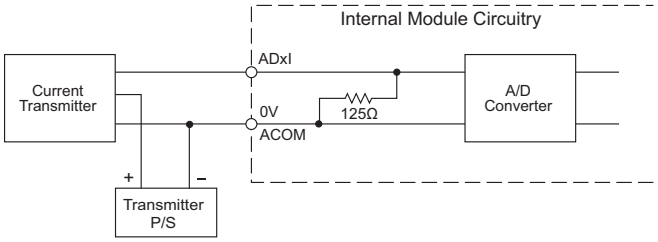
AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Input Circuit



Analog Current Input Circuit



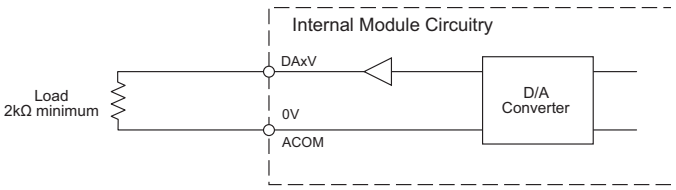
DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

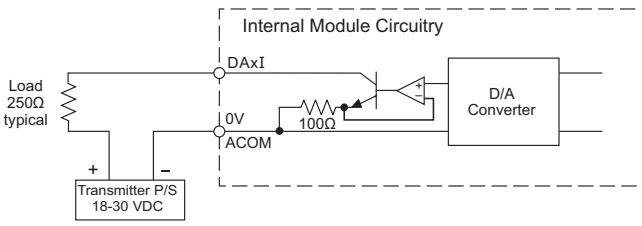
DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Output Circuit



Analog Current Output Circuit



CLICK PLUS Option Slot Module Specifications

C2-08AR-4VC (cont'd)

Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

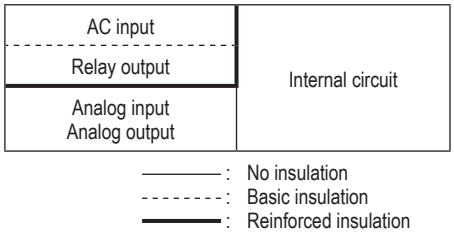
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



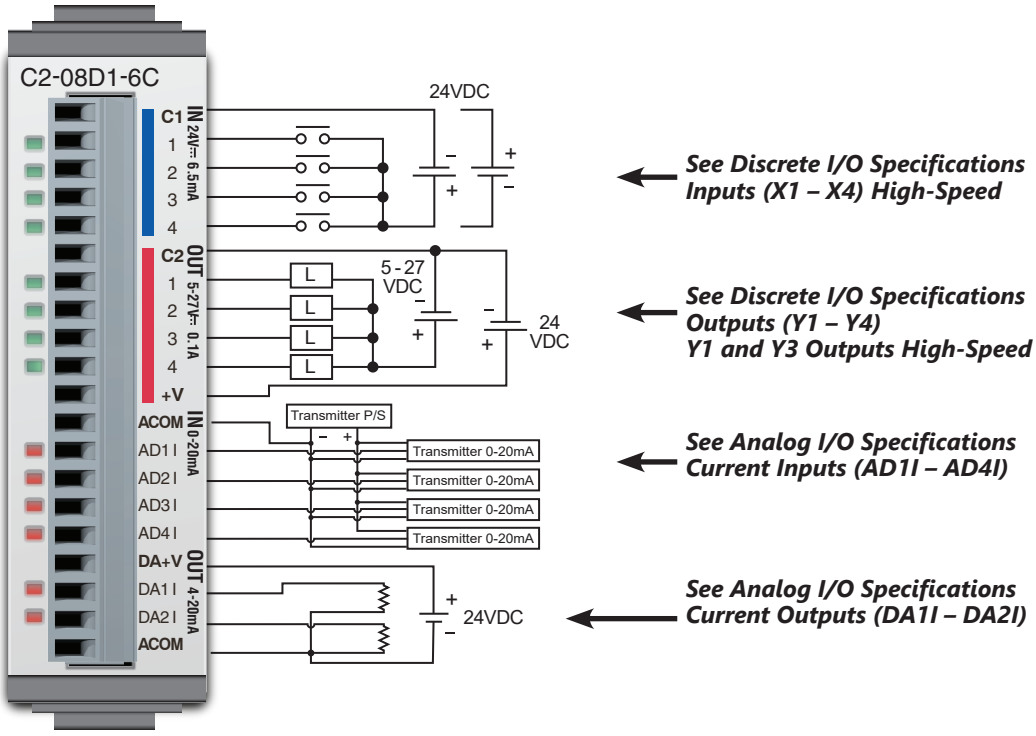
CLICK PLUS Option Slot Module Specifications

C2-08D1-6C $100.00

4 DC Input / 4 Sinking DC Output
4 Analog Current Input
2 Analog Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD1E-1-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

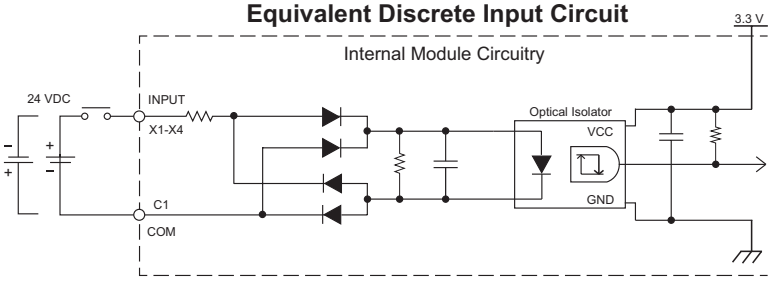
C2-08D1-6C (cont'd)

X1 - X4 (High-Speed)

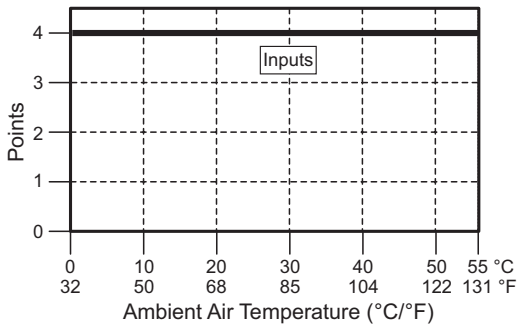
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D1-6C Temperature Derating Chart

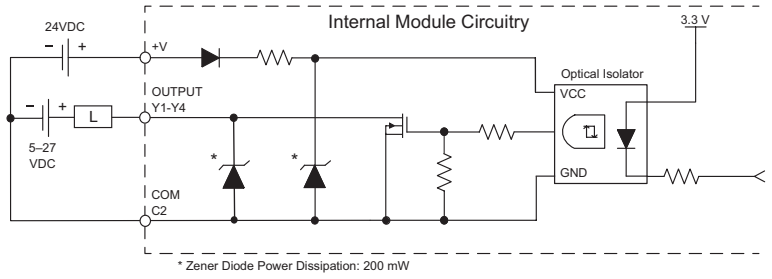


Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points on)

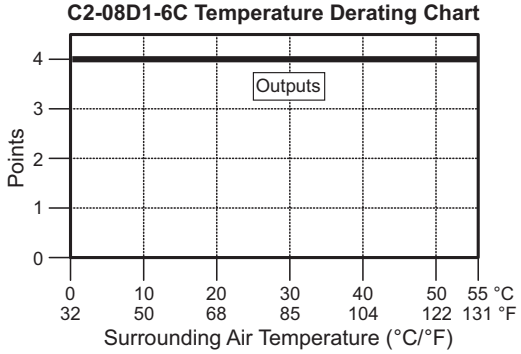
Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



* Zener Diode Power Dissipation: 200 mW

C2-08D1-6C Temperature Derating Chart



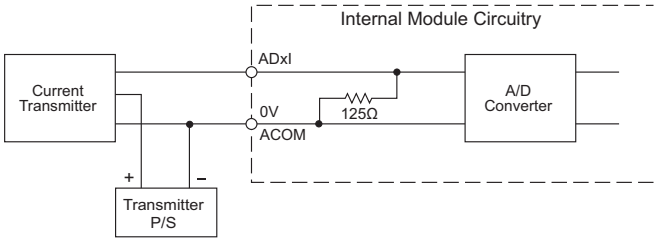
CLICK PLUS Option Slot Module Specifications

C2-08D1-6C (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

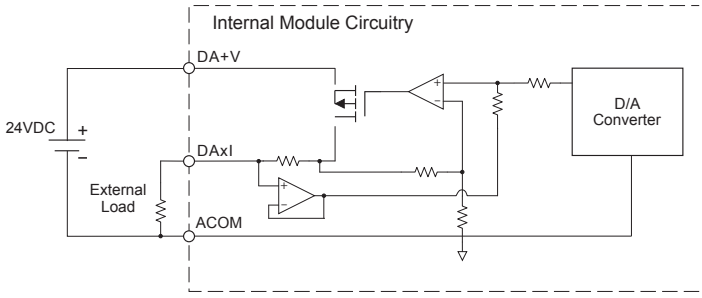
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω TYP (200–800 Ω)
Loop Supply Voltage	DC 24V TYP (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum
External DC Power Required	21.6–26.4 VDC

Analog Current Output Circuit



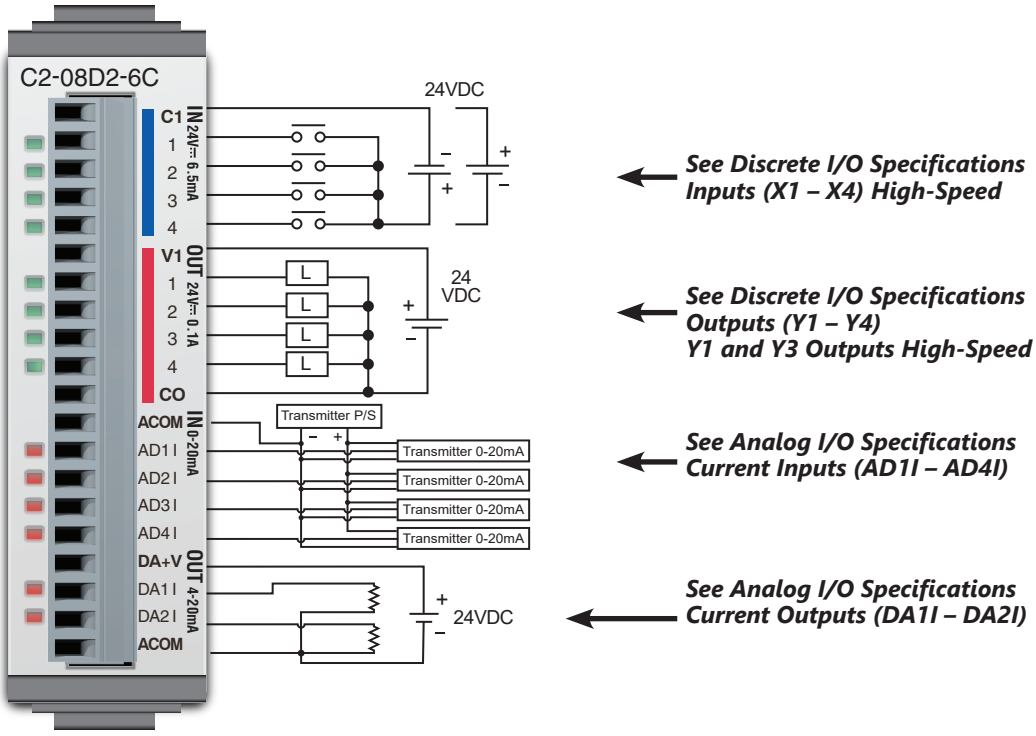
CLICK PLUS Option Slot Module Specifications

C2-08D2-6C $100.00

4 DC Input / 4 Sourcing DC Output
4 Analog Current Input
2 Analog Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD2E-1-D PLC.

Wiring Diagram



See Discrete I/O Specifications Inputs (X1 – X4) High-Speed

See Discrete I/O Specifications Outputs (Y1 – Y4) Y1 and Y3 Outputs High-Speed

See Analog I/O Specifications Current Inputs (AD1I – AD4I)

See Analog I/O Specifications Current Outputs (DA1I – DA2I)

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

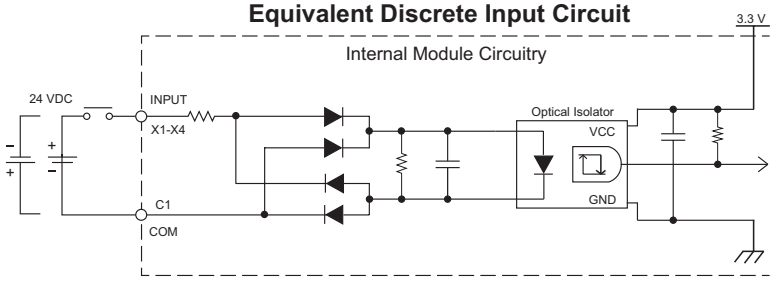
C2-08D2-6C (cont'd)

X1 - X4 (High-Speed)

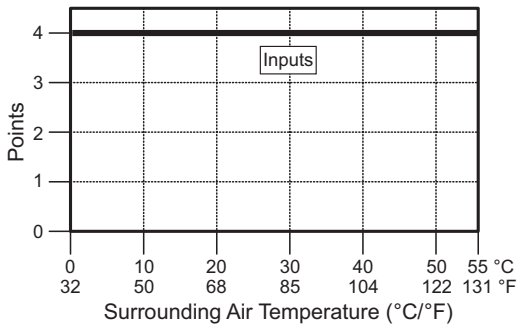
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D2-6C Temperature Derating Chart

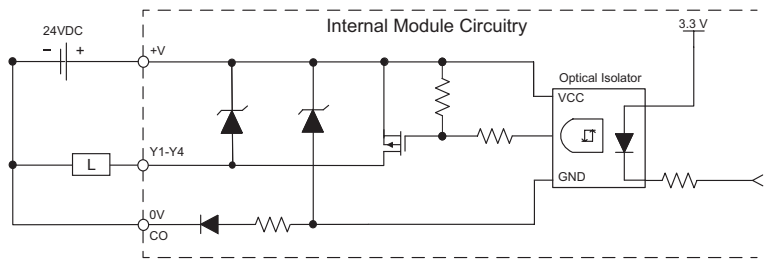


Y1 - Y4

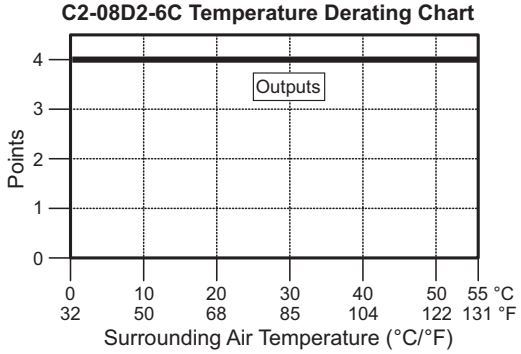
Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common CO
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 A
Maximum Inrush Current	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points on)

Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



C2-08D2-6C Temperature Derating Chart



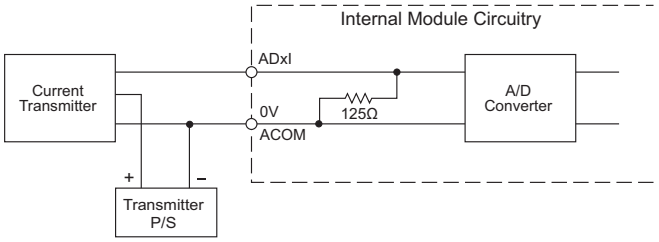
CLICK PLUS Option Slot Module Specifications

C2-08D2-6C (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

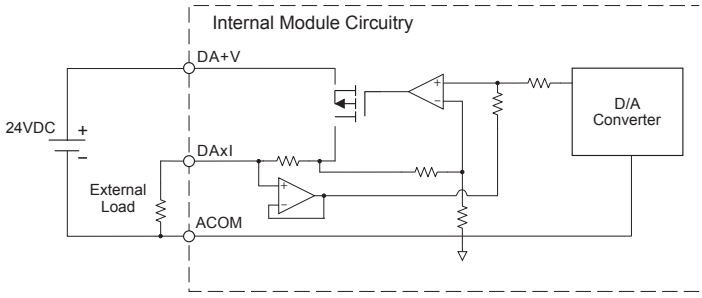
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω TYP (200–800 Ω)
Loop Supply Voltage	DC 24V TYP (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum
External DC Power Required	21.6–26.4 VDC

Analog Current Output Circuit



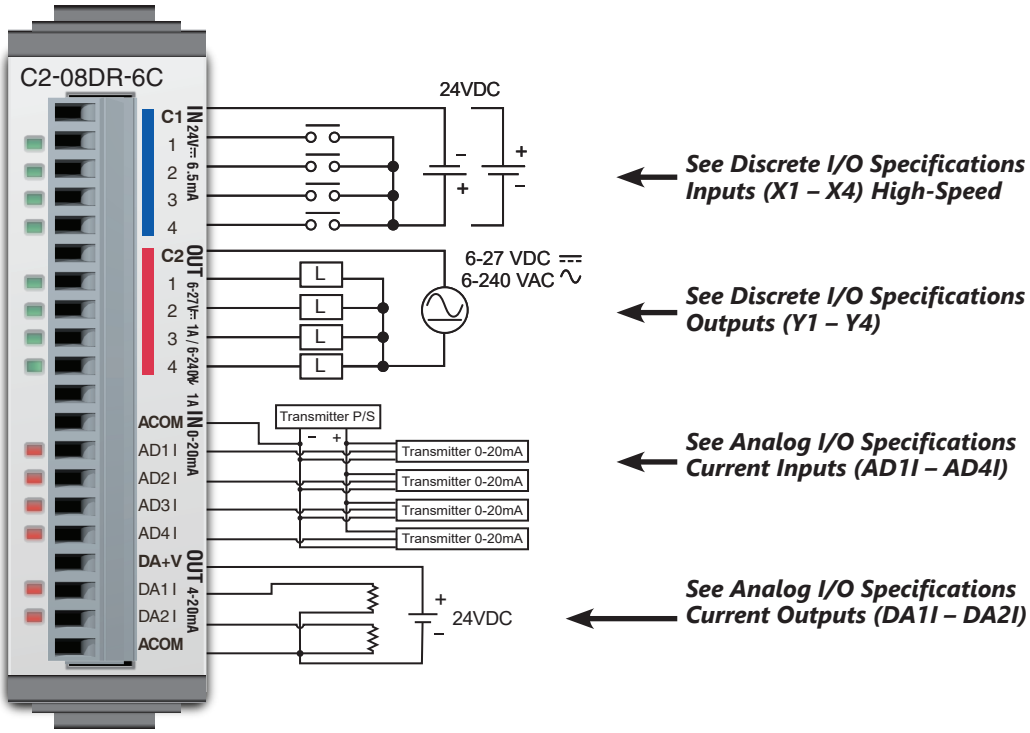
CLICK PLUS Option Slot Module Specifications

C2-08DR-6C $113.00

4 DC Input / 4 Relay Output
4 Analog Current Input
2 Analog Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DRE-1-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	100mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	58g

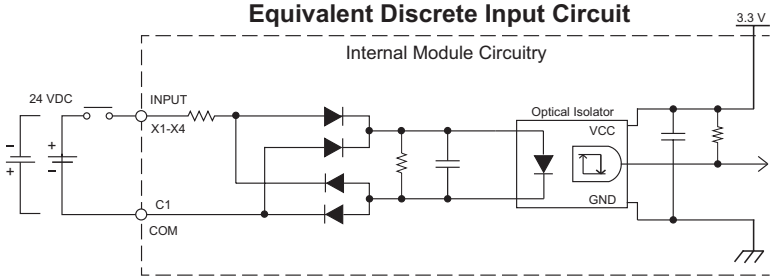
CLICK PLUS Option Slot Module Specifications

C2-08DR-6C (cont'd)

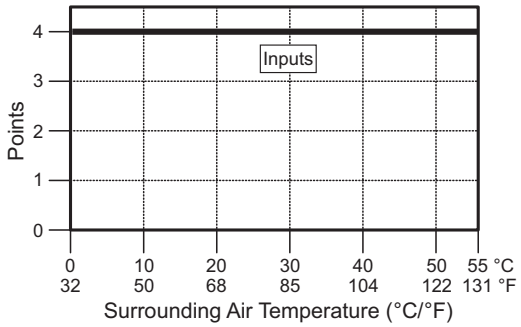
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C2-08DR-6C Temperature Derating Chart

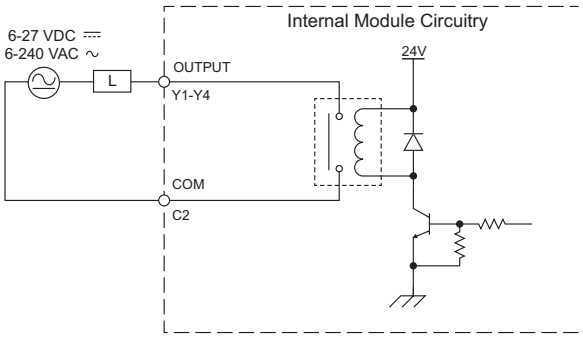


Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/ common)

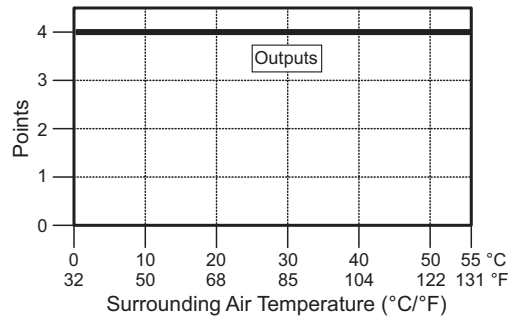
Equivalent Discrete Output Circuit



Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

C2-08DR-6C Temperature Derating Chart



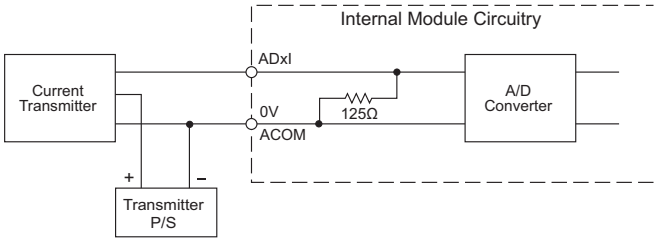
CLICK PLUS Option Slot Module Specifications

C2-08DR-6C (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

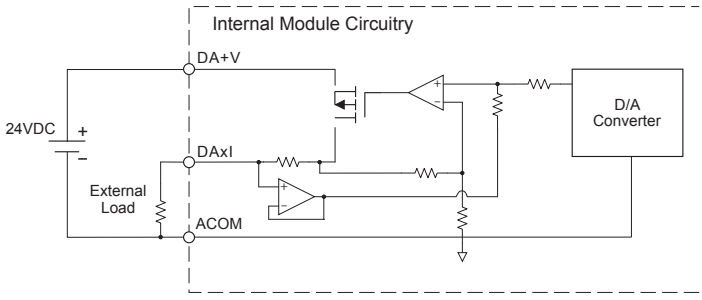
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω TYP (200–800 Ω)
Loop Supply Voltage	DC 24V TYP (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum
External DC Power Required	21.6–26.4 VDC

Analog Current Output Circuit



Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

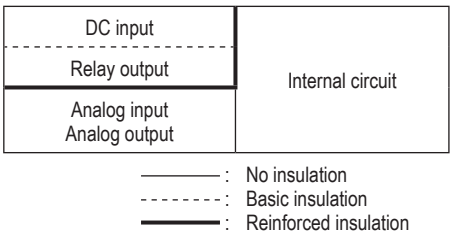
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



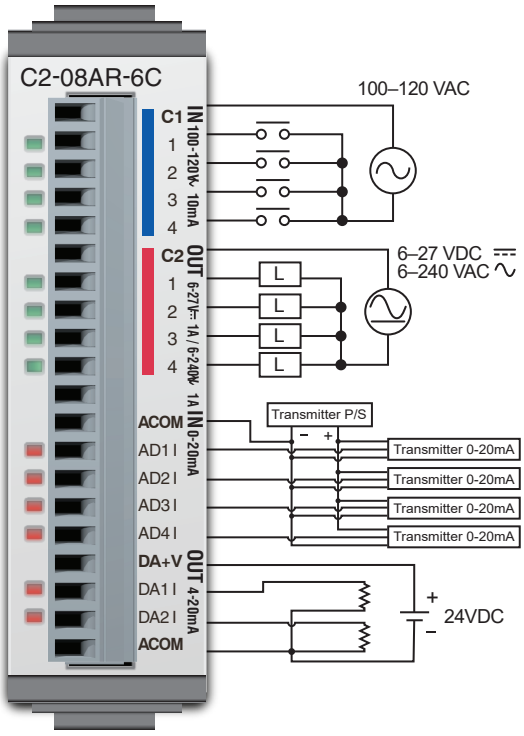
CLICK PLUS Option Slot Module Specifications

C2-08AR-6C $113.00

4 AC Input / 4 Relay Output
4 Analog Current Input
2 Analog Current Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12ARE-1-D PLC.

Wiring Diagram



See Discrete I/O Specifications Inputs (X1 – X4)

See Discrete I/O Specifications Outputs (Y1 – Y4)

See Analog I/O Specifications Current Inputs (AD1I – AD4I)

See Analog I/O Specifications Current Outputs (DA1I – DA2I)

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	100mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	58g

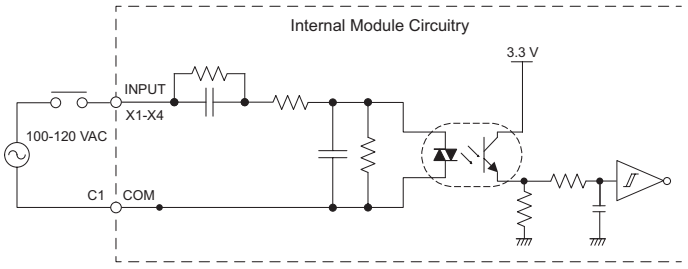
CLICK PLUS Option Slot Module Specifications

C2-08AR-6C (cont'd)

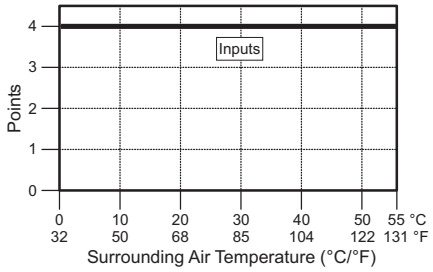
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C2-08AR-6C Temperature Derating Chart



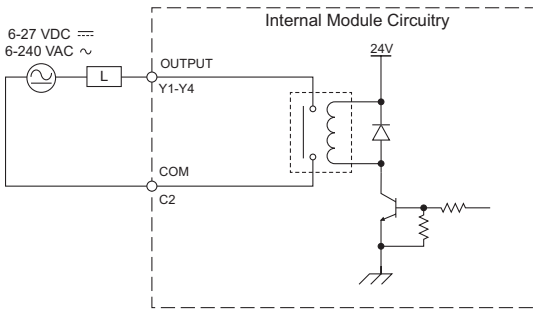
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

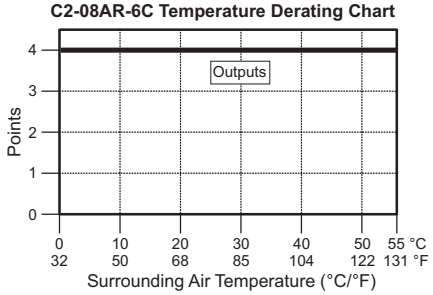
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C2-08AR-6C Temperature Derating Chart



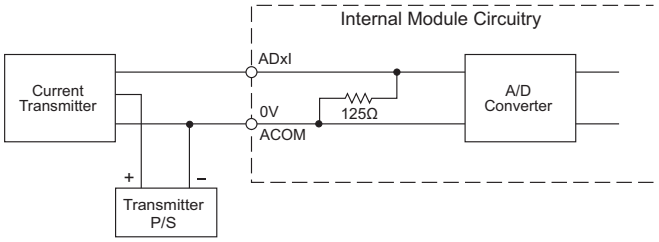
CLICK PLUS Option Slot Module Specifications

C2-08AR-6C (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

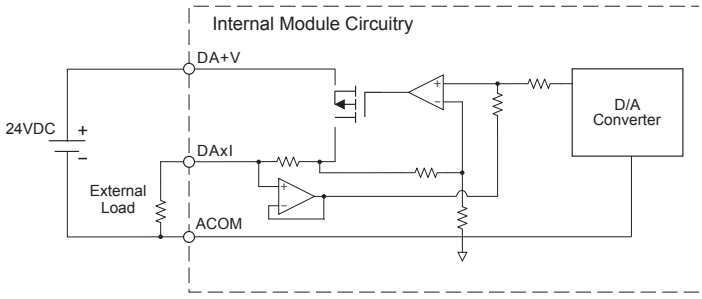
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω TYP (200–800 Ω)
Loop Supply Voltage	DC 24V TYP (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum
External DC Power Required	21.6–26.4 VDC

Analog Current Output Circuit



Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

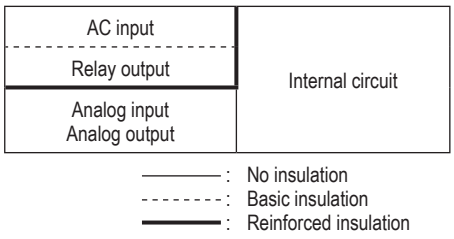
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



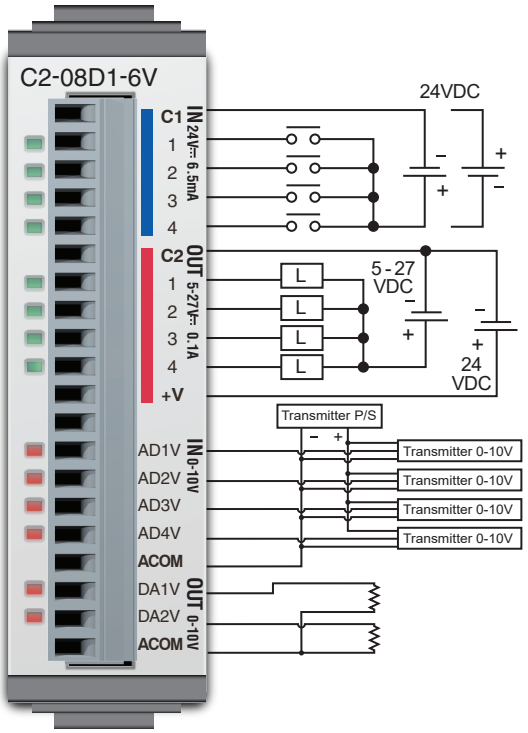
CLICK PLUS Option Slot Module Specifications

C2-08D1-6V $99.00

4 DC Input / 4 Sinking DC Output
4 Analog Voltage Input
2 Analog Voltage Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD1E-2-D PLC.

Wiring Diagram



See Discrete I/O Specifications Inputs (X1 – X4) High-Speed

See Discrete I/O Specifications Outputs (Y1 – Y4) Y1 and Y3 Outputs High-Speed

See Analog I/O Specifications Voltage Inputs (AD1V – AD4V)

See Analog I/O Specifications Voltage Outputs (DA1V – DA2V)

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

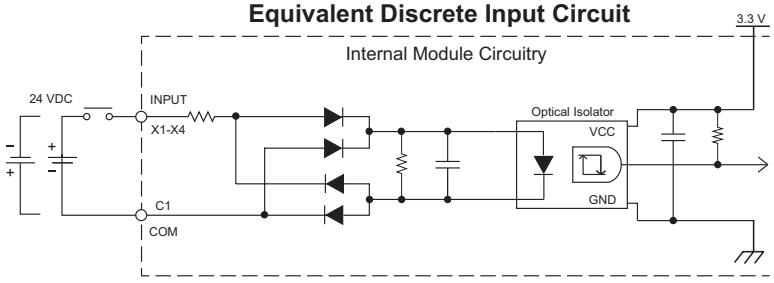
C2-08D1-6V (cont'd)

X1 - X4 (High-Speed)

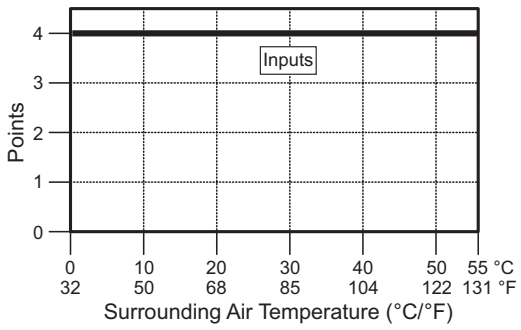
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D1-6V Temperature Derating Chart

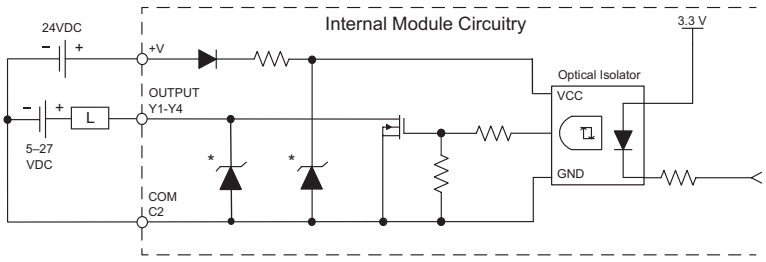


Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points on)

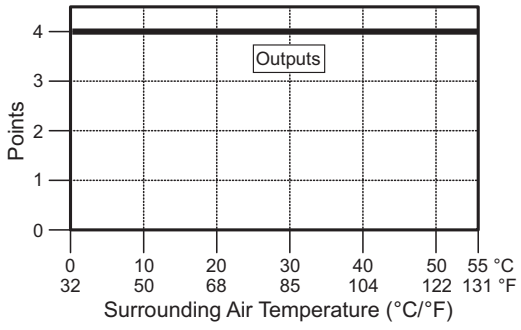
Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



* Zener Diode Power Dissipation: 200 mW

C2-08D1-6V Temperature Derating Chart



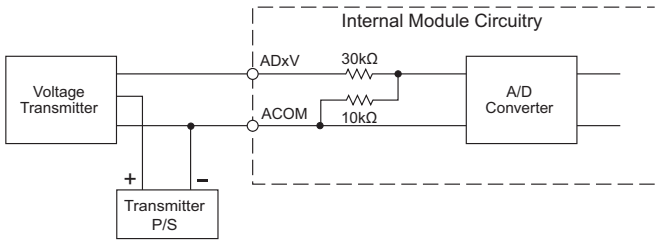
CLICK PLUS Option Slot Module Specifications

C2-08D1-6V (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

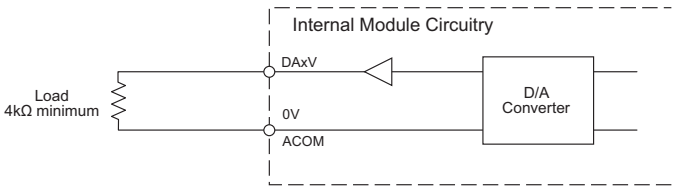
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Output Circuit



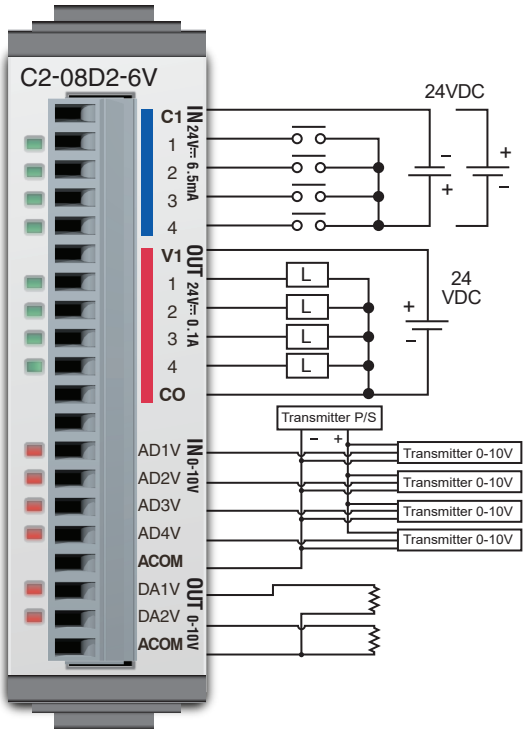
CLICK PLUS Option Slot Module Specifications

C2-08D2-6V $99.00

4 DC Input / 4 Sourcing DC Output
4 Analog Voltage Input
2 Analog Voltage Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DD2E-2-D PLC.

Wiring Diagram



See Discrete I/O Specifications Inputs (X1 – X4) High-Speed

See Discrete I/O Specifications Outputs (Y1 – Y4) Y1 and Y3 Outputs High-Speed

See Analog I/O Specifications Voltage Inputs (AD1V – AD4V)

See Analog I/O Specifications Voltage Outputs (DA1V – DA2V)

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	48g

CLICK PLUS Option Slot Module Specifications

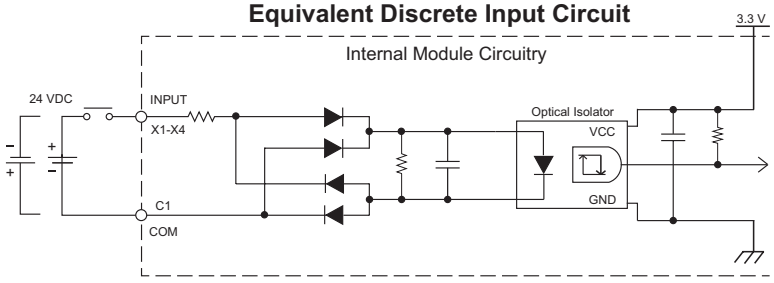
C2-08D2-6V (cont'd)

X1 - X4 (High-Speed)

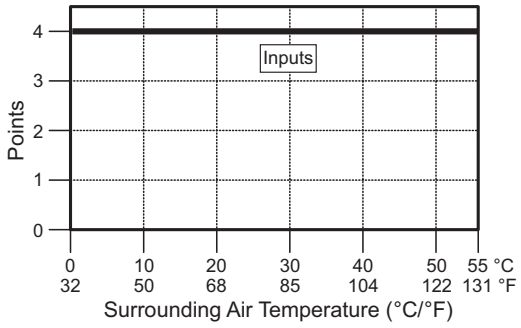
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08D2-6V Temperature Derating Chart

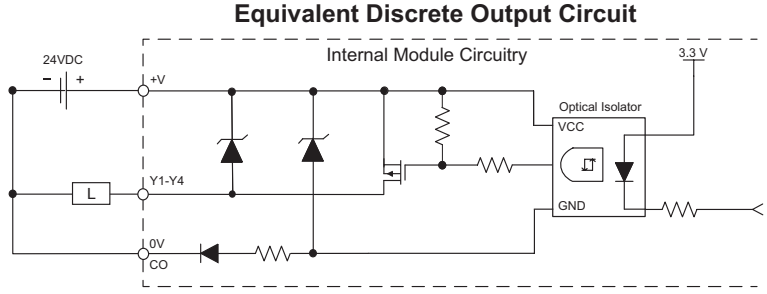


Y1 - Y4

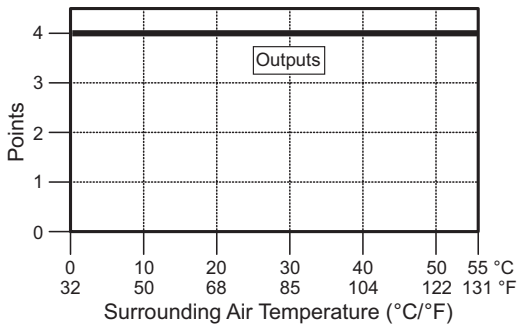
Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common CO
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 A
Maximum Inrush Current	150mA for 10ms
Output Frequency (Max)	Y1, Y3: 100kHz (3m cable)
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points on)

Maximum Number of High Speed Outputs	
Pulse Train	2
Pulse Width Modulation	2

Equivalent Discrete Output Circuit



C2-08D2-6V Temperature Derating Chart



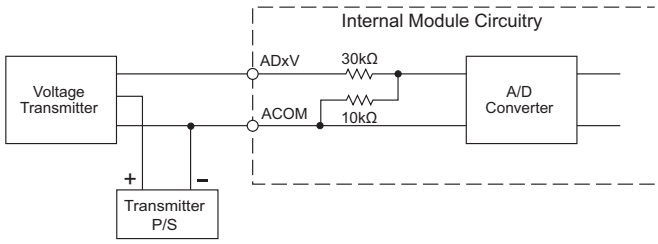
CLICK PLUS Option Slot Module Specifications

C2-08D2-6V (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

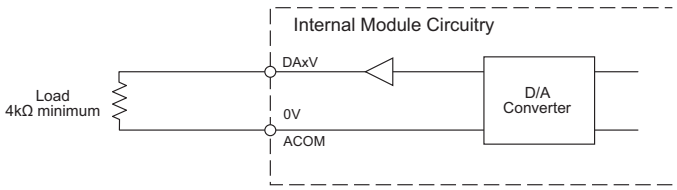
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Output Circuit



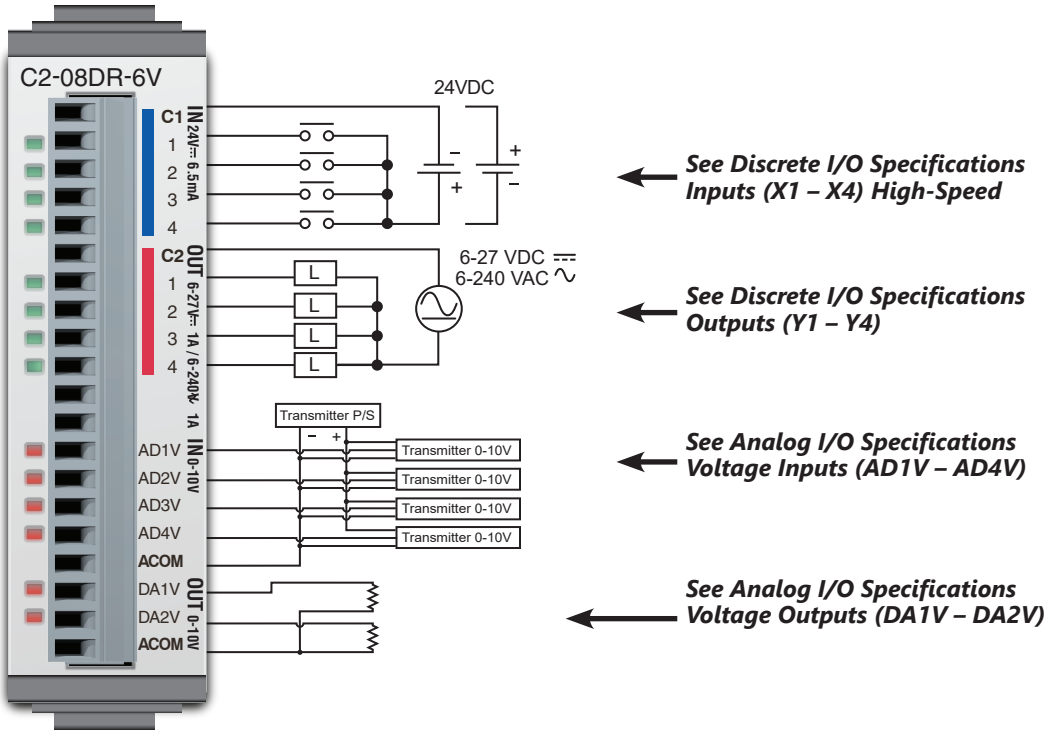
CLICK PLUS Option Slot Module Specifications

C2-08DR-6V $112.00

4 DC Input / 4 Relay Output
4 Analog Voltage Input
2 Analog Voltage Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12DRE-2-D PLC.

Wiring Diagram



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	80mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	57g

CLICK PLUS Option Slot Module Specifications

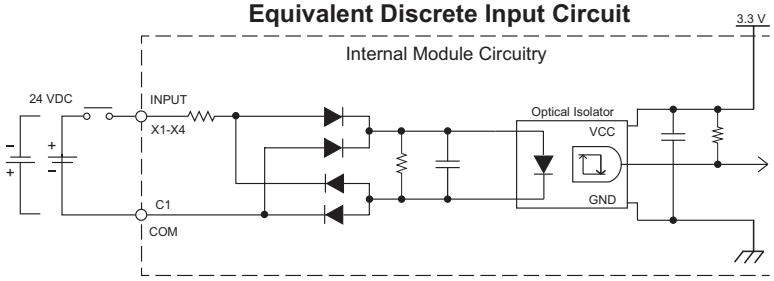
C2-08DR-6V (cont'd)

X1 - X4 (High-Speed)

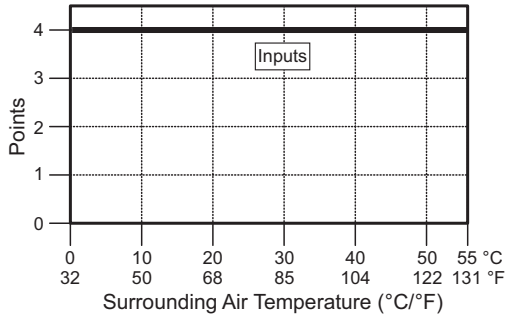
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz (3m cable)
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Maximum Number of High Speed Counters	
Up	4
Down	4
Up/Down	2
Pulse/Direction	2
Quadrature A-B	2
Quadrature A-B+Z	1

Equivalent Discrete Input Circuit



C2-08DR-6V Temperature Derating Chart



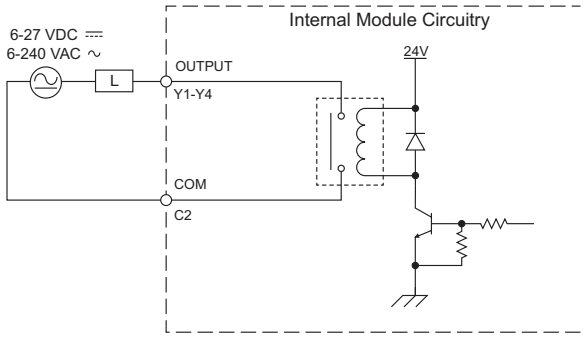
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/ common)

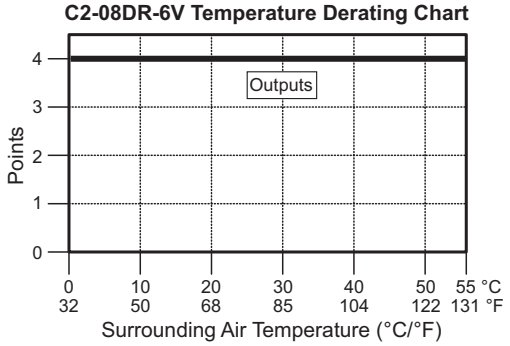
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C2-08DR-6V Temperature Derating Chart



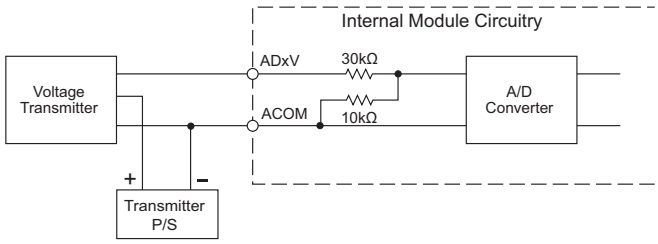
CLICK PLUS Option Slot Module Specifications

C2-08DR-6V (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

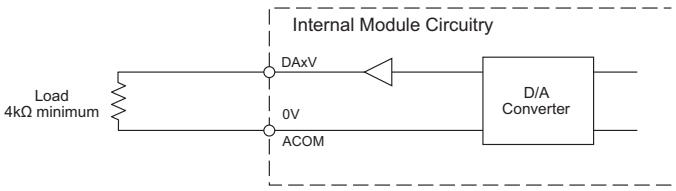
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm/°C maximum

Analog Voltage Output Circuit



Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

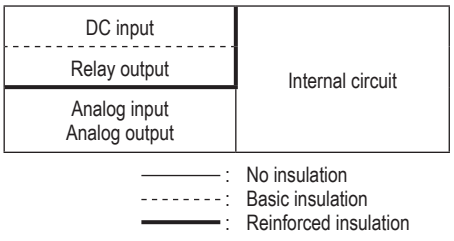
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



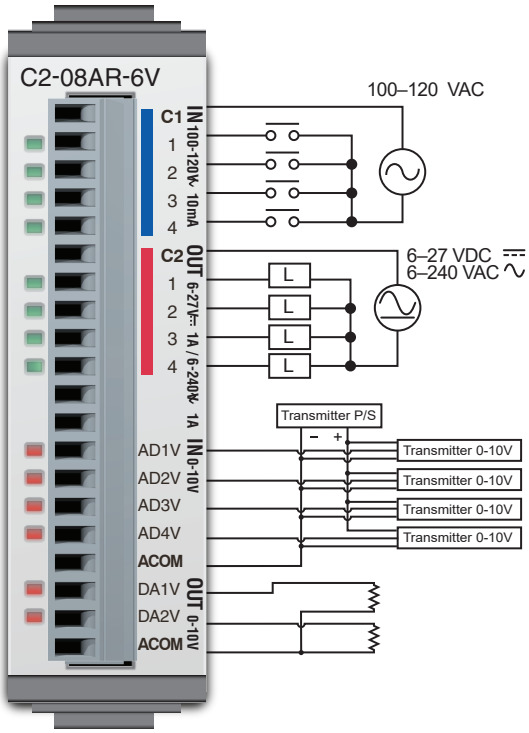
CLICK PLUS Option Slot Module Specifications

C2-08AR-6V $112.00

4 AC Input / 4 Relay Output
4 Analog Voltage Input
2 Analog Voltage Output
Option Slot I/O Module

NOTE: Use this module and a CLICK PLUS CPU as a comparable replacement for the existing C0-12ARE-2-D PLC.

Wiring Diagram



See Discrete I/O Specifications Inputs (X1 – X4)

See Discrete I/O Specifications Outputs (Y1 – Y4)

See Analog I/O Specifications Voltage Inputs (AD1V – AD4V)

See Analog I/O Specifications Voltage Outputs (DA1V – DA2V)

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog Option Slot Modules (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

General Specifications	
Current Consumption at 24VDC	100mA max (All Points On)
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	58g

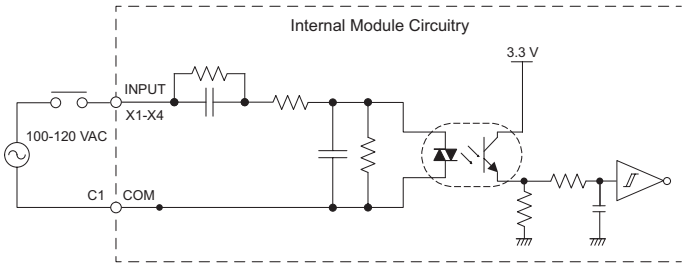
CLICK PLUS Option Slot Module Specifications

C2-08AR-6V (cont'd)

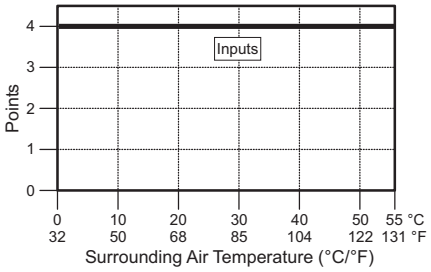
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C2-08AR-6V Temperature Derating Chart



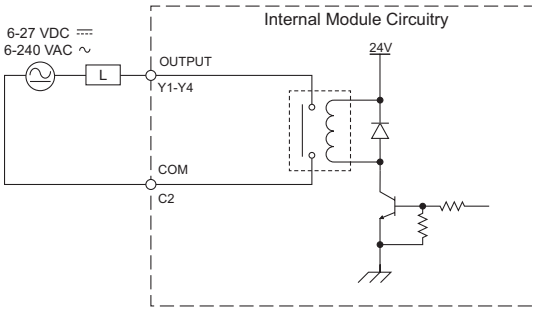
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

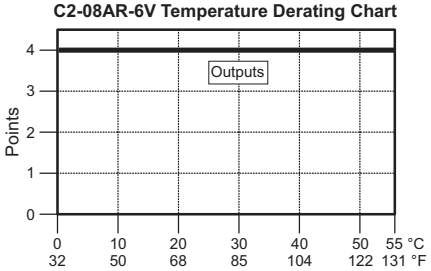
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	200,000 cycles*
30VDC Inductive	100,000 cycles*
250VAC Resistive	200,000 cycles*
250VAC Inductive	50,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C2-08AR-6V Temperature Derating Chart



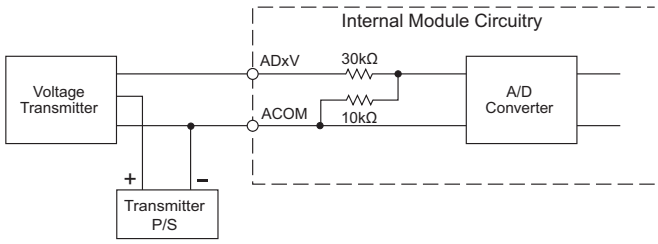
CLICK PLUS Option Slot Module Specifications

C2-08AR-6V (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

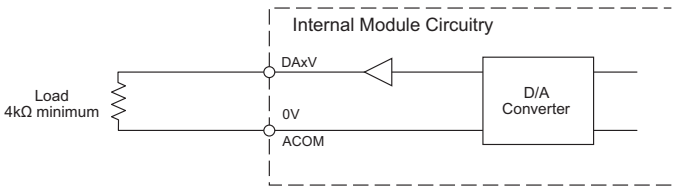
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

Analog Voltage Output Circuit



Insulation Requirements for IEC/UL 61010-1 and 61010-2-201 (sections 6.5 and 6.7)

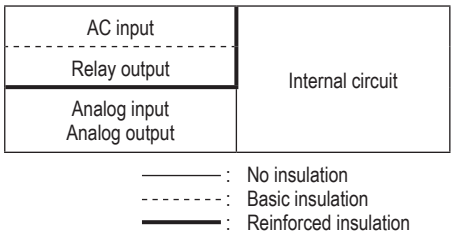
Input to Output Insulation

Basic insulation is provided between the Relay Output and the closest Input terminal. When connecting the Relay Output to a circuit that exceeds 100VAC (141VDC) more than the closest input circuit an additional basic insulation layer must be added to the input circuit.

Additional Basic Insulation Examples

- Supplementary Insulation: Interposing relay, additional insulating material,... (sec. 6.5.3)
- Automatic Disconnection of the Supply: Properly sized breaker (sec. 6.5.5)
- Current or Voltage Limiting device: Properly sized fuse (sec. 6.5.6)

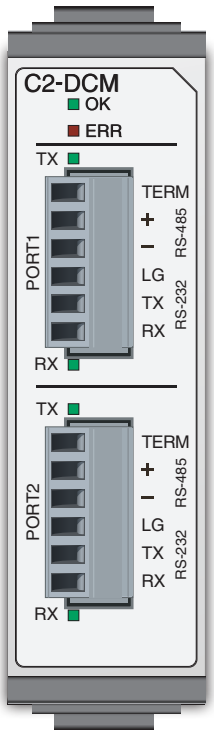
Basic insulation requires a clearance distance of 1.5 mm or more, a creepage distance of 2.5 mm or more, and dielectric voltage withstand of 1500Vrms.



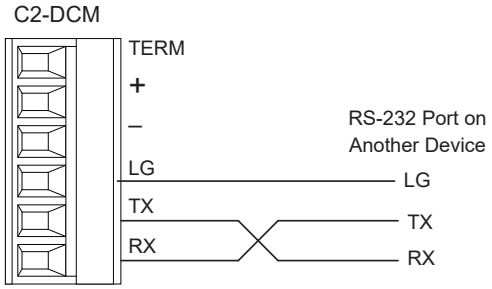
CLICK PLUS Option Slot Module Specifications

C2-DCM $127.00

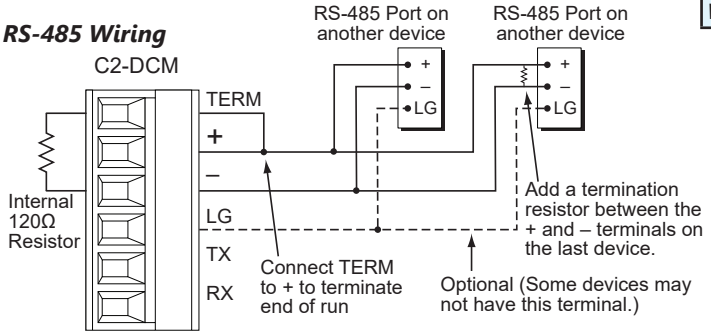
Communications Module
CLICK PLUS communication module, Modbus RTU and ASCII, 2 ports, (2) RS-232/RS-485 (6-pin terminal) port(s). For use with all CLICK PLUS PLCs. (2) C2-6TB terminal blocks included.



RS-232 Wiring



RS-485 Wiring



Port Specifications	
Number of Ports	2
Port Types	RS-232, RS-485 (2-wire)
Supported Protocols	Modbus RTU, ASCII (user-defined)
Baud Rate	2400, 4800, 9600, 19200, 38400 (default), 57600, 115.2k bps
Data Bits	7 bits, 8 bits (default)
Parity	None, Odd (default), Even
Stop Bits	1 bit (default), 2 bits
Flow Control	None
RS-485 Terminating Resistor	120Ω, Internal
Status Indicator LEDs	OK, ERR, TX (per port), RX (per port)

Modbus Specifications	
Station Number Range	1–247
Timeout Setting	100ms, 200ms, 500ms, 1s, 2s, 5s, 10s, 20s, 30s
Character Timeout	2–1000ms
Response Delay Time	0–5000ms
Modbus Function Codes	Master/Slave: 01 - Read Coil Status 02 - Read Input Bits 03 - Read Holding Register 04 - Read Input Register 05 - Write Single Coil 06 - Write Single Register 15 - Write Multiple Coils 16 - Write Multiple Registers

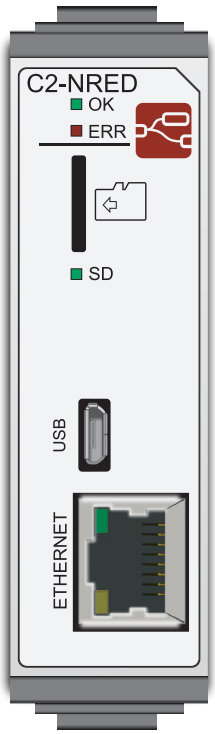
General Specifications	
Operating Temperature	32°F to 131°F [0°C to 55°C]
Storage Temperature	–4°F to 158°F [–20°C to 70°C]
Ambient Humidity	30% to 95% relative humidity (non–condensing)
Environmental Air	No corrosive gases Pollution Degree 2 (UL840)
Environment	For indoor use only
Vibration	5–9 Hz: 3.5 mm amplitude; 9–150 Hz: 1.0 G 10 sweep cycles per axis on each of 3 mutually perpendicular axes.
Shock	15G peak, 11ms duration, 3 shocks in each direction per axis, on 3 mutually perpendicular axes.
Bus Power Required	Max 60mA
Drawing Link	PDF
Weight	41g

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the C2-DCM.

CLICK PLUS Option Slot Module Specifications

C2-NRED $241.00

Communications Module
CLICK PLUS Node-RED module, Node-RED and JavaScript, microSD card slot, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.



Configure, monitor, connect and debug a Node-RED application through USB and/or Ethernet port with web browser.

New Node-RED Nodes for CLICK	
CLICK Write	**CLICK Write** Write a value to any relay/register in the PLC.
CLICK Read	**CLICK Read** Read a value from any relay/register in the PLC.
CLICK SystemInfo Read	**CLICK SystemInfo Read** Read a value from any special relay/register in the PLC.

General Specifications	
24VDC Bus Power Required	Max 3W*
Drawing Link	PDF
Weight	41g

*** Due to the large current consumption of NRED, it does not support USB low power mode with C2-CPU. Requires 24V power supply.**

SD Card Slot Specifications		
Supported Card Type	microSDHC	
Format	FAT32	
Capacity	32GB maximum	
Recommended Card	MSD-SLC16G	
Status Indicator (GREEN)	ON	SD card mounted
	Blinking	SD card activity
	OFF	SD card not mounted

Micro USB Port Specifications	
Communications Rating	USB 2.0 High speed (480Mbps)
Connector	Micro USB Type B
5V Bus Power	No
USB Cable	Maximum length 3m Shielded cable recommended
Communication Method	Virtual Ethernet over USB
Default Settings	IP address acquisition by APIPA. PC-side IP address automatically assigned by DHCP server function.
Protocols	Node-RED TCP/UDP DHCP Client

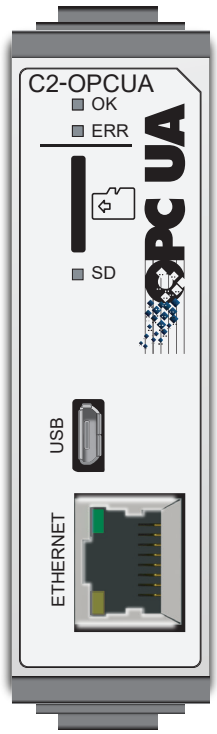
Ethernet Port Specifications			
Communications Rating		10/100Base-T	
Cable Specification		Category 5	
Auto MDI/MDI-X		Yes	
Connector		RJ45	
IP Address		DHCP (default), fixed address, manual address	
Protocols		Node-RED TCP/UDP SNTP Client DHCP Client DNS	
Status Indicator	***LINK/ACT (GREEN)***	ON	Link established
		Blinking	Activity
		OFF	No link
	SPEED (YELLOW)	ON	100Mbps
		OFF	10Mbps

General Status Indicators		
OK (GREEN)	ON	Application operating
	Fast Blinking (200ms)	Application disabled
	Slow Blinking (500ms)	U-boot/kernel booting Application booting
	OFF	Power off
ERR (RED)	ON	Self-diagnostic Error (ERROR)
	Slow Blinking (500ms)	Self-diagnostic Error (WARNING) or Application disabled
	OFF	Power off Operating Application (no error)

CLICK PLUS Option Slot Module Specifications

C2-OPCUA $202.00

Communications Module
CLICK PLUS communication module, OPC-UA Server and SNTP Client, 1 port, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.



OPC UA Specifications		
OPC UA Version	1.04	
Type	Server	
Profile	Embedded 2017 UA Server Profile	
Number of Client Connections	5 maximum	
Number of Data Items	1024 maximum	
Total Data Size	4096 bytes maximum	
Security	Sign, Sign and Encrypt, None	
Authentication	User and Password, Anonymous	
Data Access	Can access all bit and data memory of CLICK PLUS	
	Read	X, T, CT, XD, some SC, some SD
	Read/Write	Y, C, DS, DD, DH, DF, YD, TD, CTD, TXT, some SC, some SD

SD Card Slot Specifications		
Supported Card Type	microSDHC	
Format	FAT32	
Capacity	32GB maximum	
Recommended Card	MSD-SLC16G	
Status Indicator (GREEN)	ON	SD card mounted
	Blinking	SD card activity
	OFF	No SD card not mounted

Micro USB Port Specifications	
Communications Rating	USB 2.0 High speed (480Mbps)
Connector	Micro USB Type B
5V Bus Power	No
USB Cable	Maximum length 3m Shielded cable recommended
Communication Method	Virtual Ethernet over USB
Default Settings	IP address acquisition by APIPA. PC-side IP address automatically assigned by DHCP server function.
Protocols	OPC UA Server

Ethernet Port Specifications			
Communications Rating		10/100Base-T	
Cable Specification		Category 5	
Auto MDI/MDI-X		Yes	
Connector		RJ45	
IP Address		Fixed address (default), manual address	
Protocols		OPC UA Server SNTP Client DNS	
Status Indicator	***LINK/ACT (GREEN)***	ON	Link established
		Blinking	Activity
		OFF	No link
	SPEED (YELLOW)	ON	100Mbps
		OFF	10Mbps

General Status Indicators		
OK (GREEN)	ON	Application operating
	Fast Blinking (200ms)	Application disabled
	Slow Blinking (500ms)	U-boot/kernel booting Application booting
	OFF	Power off
ERR (RED)	ON	Self-diagnostic Error (ERROR)
	Slow Blinking (500ms)	Self-diagnostic Error (WARNING) or Application disabled
	OFF	Power off Operating Application (no error)

General Specifications	
24VDC Bus Power Required	Max 3W*
Drawing Link	PDF
Weight	41g

*** Due to the large current consumption of OPCUA, it does not support USB low power mode with C2-CPU. Requires 24V power supply.**

CLICK PLC Specifications

General Specifications For All CLICK PLC Products

These general specifications apply to all CLICK PLCs and optional power supply products. Please refer to the appropriate I/O temperature derating charts under both the PLC and I/O module specifications to determine best operating conditions based on the ambient temperature of your particular application.

General Specifications	
Operating Temperature	Analog, analog combo I/O modules only: 32°F to 140°F [0°C to 60°C]; All other modules: 32°F to 131°F [0°C to 55°C], IEC 60068-2-14 (Test Nb, Thermal Shock)
Storage Temperature	–4°F to 158°F [–20°C to 70°C] IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)
Ambient Humidity	30% to 95% relative humidity (non–condensing)
Environmental Air	No corrosive gases. Environmental pollution level is 2 (UL840)
Vibration	MIL STD 810C, Method 514.2, EC60068-2-27, Category [f], Procedure[VIII] JIS C60068-2-27 (Sine wave vibration test)
Shock	MIL STD 810C, Method 516.2, IEC60068-2-27, JIS C60068-2-27, Category [f], Procedure[VIII]
Noise Immunity	<EN61131-2> EN61000-4-2 (ESD) EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-5 (Surge) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity) <Local Test> Impulse noise 1µs, 1000V RFI: No interference measured at 150 and 450 MHz (5w/15cm)
Emissions	EN55011:1998 Class A; EN61000-6-4:2007+A1:2011
Agency Approvals	UL508, UL61010-2-201 (File No. E157382, E316037); CE (EN61131-2); CUL Canadian C22.2
Other	RoHS 2011/65/EU Amendment (EU)2015/863

CLICK PLC Specifications

PLC Unit Specifications

Basic, Standard and Analog PLC Unit Specifications			
	Basic PLC	***Standard PLC***	***Analog PLC***
Control Method	Stored Program/Cyclic execution method	Stored Program/Cyclic execution method	Stored Program/Cyclic execution method
I/O Numbering System	Fixed in Decimal	Fixed in Decimal	Fixed in Decimal
Ladder Memory (steps)	8000	8000	8000
Total Data Memory (words)	8000	8000	8000
Contact Execution (Boolean)	< 0.6 us	< 0.6 us	< 0.6 us
Typical Scan (1K Boolean)	1-2 ms	1-2 ms	1-2 ms
RLL Ladder Style Programming	Yes	Yes	Yes
Run Time Edits	No	No	No
Scan	Variable / fixed	Variable / fixed	Variable / fixed
CLICK Programming Software for Windows	Yes	Yes	Yes
Built-in Communication Ports	Yes (two RS-232 ports)	Yes (two RS-232 ports and one RS-485 port)	Yes (two RS-232 ports and one RS-485 port)
Protocols	Protocols: Modbus RTU (master/slave) and ASCII (in/out)		
FLASH Memory	Standard on PLC	Standard on PLC	Standard on PLC
Built-in Discrete I/O points	8 inputs, 6 outputs	8 inputs, 6 outputs	4 inputs, 4 outputs
Built-in Analog I/O Channels	No	No	2 inputs, 2 outputs
Number of Instructions Available	21	21	21
Control Relays	2000	2000	2000
System Control Relays	1000	1000	1000
Timers	500	500	500
Counters	250	250	250
Interrupts	Yes (external: 8 / timed: 4)	Yes (external: 8 / timed: 4)	Yes (external: 4 / timed: 4)
Subroutines	Yes	Yes	Yes
For/Next Loops	Yes	Yes	Yes
Math (Integer and Hex)	Yes	Yes	Yes
Drum Sequencer Instruction	Yes	Yes	Yes
Internal Diagnostics	Yes	Yes	Yes
Password Security	Yes	Yes	Yes
System Error Log	Yes	Yes	Yes
User Error Log	No	No	No
Memory Backup	Super Capacitor	Super Capacitor + Battery	Super Capacitor + Battery
Battery Backup	No	Yes (battery sold separately; part # D2-BAT-1)	Yes (battery sold separately; part # D2-BAT-1)
Calendar/Clock	No	Yes	Yes
I/O Terminal Block Replacement	AutomationDirect p/n C0-16TB	AutomationDirect p/n C0-16TB	AutomationDirect p/n C0-16TB
Communication Port & Terminal Block Replacement	N/A	AutomationDirect p/n C0-3TB	AutomationDirect p/n C0-3TB
24VDC Power Terminal Block Replacement	AutomationDirect p/n C0-4TB	AutomationDirect p/n C0-4TB	AutomationDirect p/n C0-4TB

CLICK PLC Specifications

PLC Unit Specifications

Ethernet Basic, Standard and Analog PLC Unit Specifications			
	Ethernet Basic PLC	***Ethernet Standard PLC***	***Ethernet Analog PLC***
Control Method	Stored Program/Cyclic execution method	Stored Program/Cyclic execution method	Stored Program/Cyclic execution method
I/O Numbering System	Fixed in Decimal	Fixed in Decimal	Fixed in Decimal
Ladder Memory (steps)	8000	8000	8000
Total Data Memory (words)	8000	8000	8000
Contact Execution (Boolean)	< 0.2 µs	< 0.2 µs	< 0.2 µs
Typical Scan (1K Boolean)	< 1ms	< 1ms	< 1ms
RLL Ladder Style Programming	Yes	Yes	Yes
Run Time Edits	Yes	Yes	Yes
Scan	Variable / fixed	Variable / fixed	Variable / fixed
CLICK Programming Software for Windows	Yes	Yes	Yes
Built-in Communication Ports	Yes (one Ethernet port and one RS-232 port)	Yes (one Ethernet port, one RS-232 port and one RS-485 port)	Yes (one Ethernet port, one RS-232 port and one RS-485 port)
Protocols	Modbus RTU (master/slave) and ASCII (in/out), Modbus TCP (client/server), EtherNet/IP Implicit and Explicit (adapter server)		
FLASH Memory	Standard on PLC	Standard on PLC	Standard on PLC
Built-in Discrete I/O points	8 inputs, 6 outputs	8 inputs, 6 outputs	4 inputs, 4 outputs
Built-in Analog I/O Channels	No	No	2 or 4 inputs; 2 outputs
Number of High-Speed Input Points	4	8	4
Number of High-Speed Counters	4	6	4
PID Control Loops	8	8	8
Number of Instructions Available	21	21	21
Control Relays	2000	2000	2000
System Control Relays	1000	1000	1000
Timers	500	500	500
Counters	250	250	250
Interrupts	Yes (external: 8 / timed: 4)	Yes (external: 8 / timed: 4)	Yes (external: 4 / timed: 4)
Subroutines	Yes	Yes	Yes
For/Next Loops	Yes	Yes	Yes
Math (Integer and Hex)	Yes	Yes	Yes
Drum Sequencer Instruction	Yes	Yes	Yes
Internal Diagnostics	Yes	Yes	Yes
Password Security	Yes	Yes	Yes
System Error Log	Yes	Yes	Yes
User Error Log	No	No	No
Memory Backup	Super Capacitor + Battery	Super Capacitor + Battery	Super Capacitor + Battery
Battery Backup	Yes (battery part # D2-BAT-1)	Yes (battery part # D2-BAT-1)	Yes (battery part # D2-BAT-1)
Calendar/Clock	Yes	Yes	Yes
I/O Terminal Block Replacement	AutomationDirect p/n C0-16TB	AutomationDirect p/n C0-16TB	AutomationDirect p/n C0-16TB
Communication Port & Terminal Block Replacement	N/A	AutomationDirect p/n C0-3TB	AutomationDirect p/n C0-3TB
24VDC Power Terminal Block Replacement	AutomationDirect p/n C0-4TB	AutomationDirect p/n C0-4TB	AutomationDirect p/n C0-4TB

CLICK Specifications

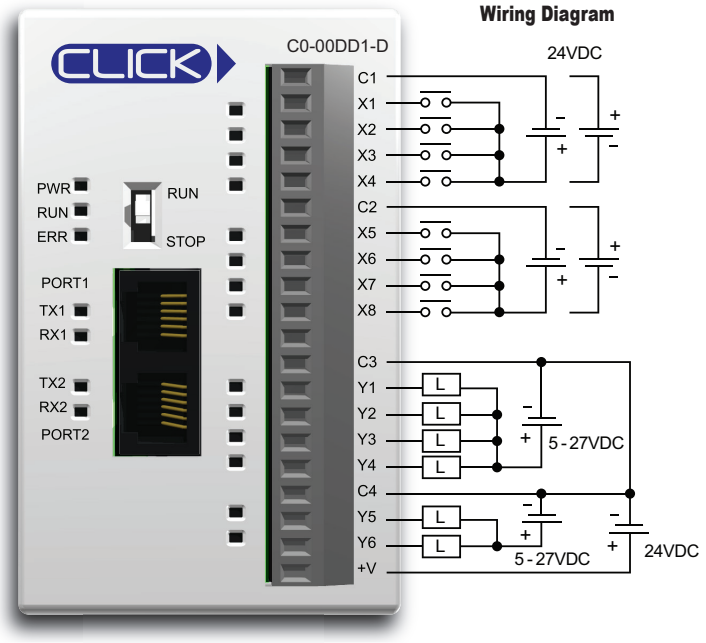
CLICK PLC Hardware/Software Compatibility

CLICK PLCs require a minimum software version of v2.50 for the PID function. The table below shows the most recent software and hardware versions required for the High-Speed input operation capability to be accessible.

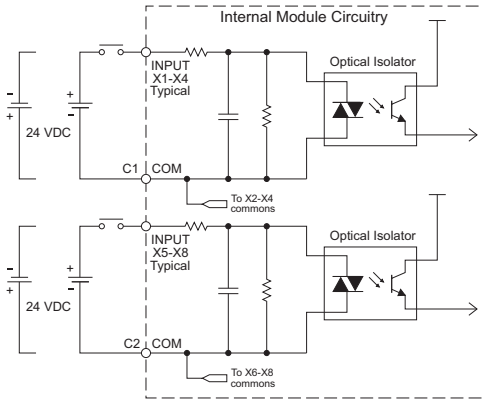
CLICK PLC Features Software Compatibility						
CPU Type	*Part Number*	*Minimum CLICK Software Version*				
		Hardware	*High-Speed Inputs*	*EtherNet/IP*	*PID*	*DHCP*
Basic	C0-00DD1-D	v1.00	N/A	N/A	N/A	N/A
	C0-00DD2-D					
	C0-00DR-D					
	C0-00AR-D					
Standard	C0-01DD1-D	v1.20	N/A	N/A	N/A	N/A
	C0-01DD2-D					
	C0-01DR-D					
	C0-01AR-D					
Analog	C0-02DD1-D (before SN 171208001)	v1.12	N/A	N/A	N/A	N/A
	C0-02DD1-D (after SN 171208001)	v2.10				
	C0-02DD2-D (before SN 174018001)	v1.12				
	C0-02DD2-D (after SN 174018001)	v2.10				
	C0-02DR-D (before SN 173158001)	v1.12				
	C0-02DR-D (after SN 173158001)	v2.10				
Ethernet CPUs	Ethernet CPUs require v2.40 for EtherNet/IP communications					
Ethernet Basic	C0-10DD1E-D	v2.00	v2.30	v2.40	v2.50	v3.00
	C0-10DD2E-D					
	C0-10DRE-D					
	C0-10ARE-D		N/A			
Ethernet Standard	C0-11DD1E-D	v2.00	v2.30	v2.40	v2.50	v3.00
	C0-11DD2E-D					
	C0-11DRE-D					
	C0-11ARE-D		N/A			
Ethernet Analog	C0-12DD1E-D	v2.20	v2.30	v2.40	v2.50	v3.00
	C0-12DD2E-D					
	C0-12DRE-D					
	C0-12ARE-D		N/A			
	C0-12DD1E-1-D		v2.30			
	C0-12DD2E-1-D					
	C0-12DRE-1-D					
	C0-12ARE-1-D		N/A			
	C0-12DD1E-2-D		v2.30			
	C0-12DD2E-2-D					
	C0-12DRE-2-D					
	C0-12ARE-2-D		N/A			
I/O Modules	C0-08NE3	v1.20	N/A	N/A	N/A	N/A
	C0-16NE3					
	C0-04AD-1	v1.40				
	C0-04AD-2					
	C0-04DA-1					
	C0-04DA-2					
	C0-4AD2DA-1					
	C0-4AD2DA-2					
	C0-04RTD					
	C0-04THM					
	C0-08CDR					
	C0-16CDD1					
	C0-16CDD2					
	C0-04POT	v3.70				
	Other modules	v1.00				

C0-00DD1-D $104.00

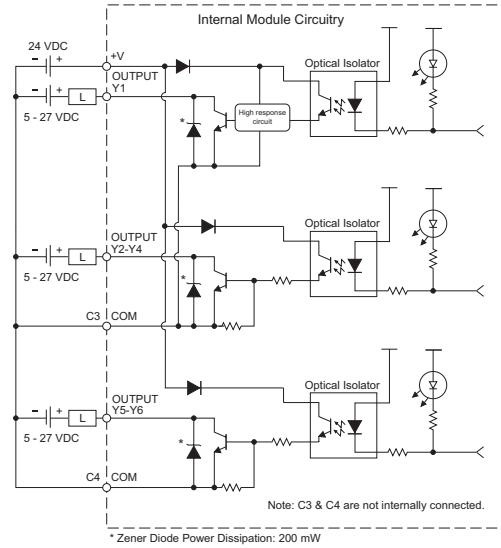
8 DC Input/6 Sinking DC Output Micro PLC



Equivalent Input Circuit



Equivalent Output Circuit



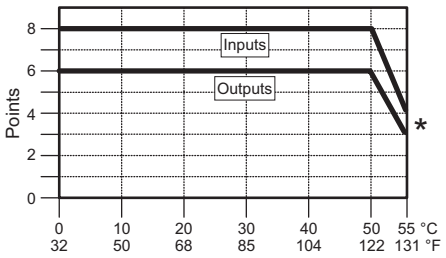
* Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30VDC
Maximum Output Current	0.1 A/point; C3: 0.4 A/common, C4: 0.2 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	150mA for 10ms
OFF to ON Response	Y1: typ 5 µs; max 20 µs Y2-6: < 0.5 ms
ON to OFF Response	Y1: typ 5 µs; max 20 µs Y2-6: < 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated
External DC Power Required	20–28 VDC Maximum @ 60mA (All Points On)

General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-00DD1-D Temperature Derating Chart



* Use every other input/output.

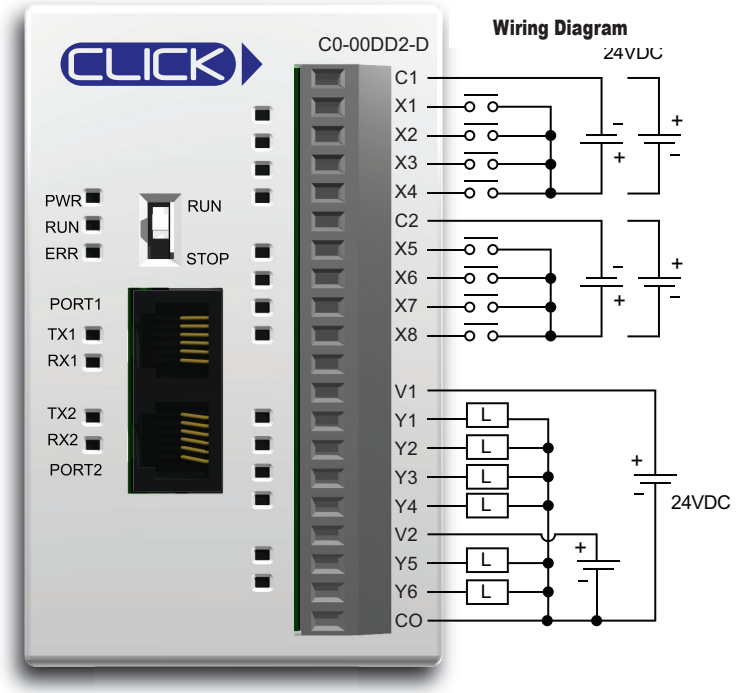
***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

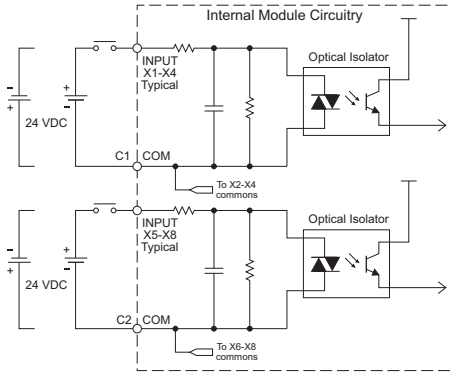
C0-00DD2-D $104.00

8 DC Input/6 Sourcing DC Output Micro PLC

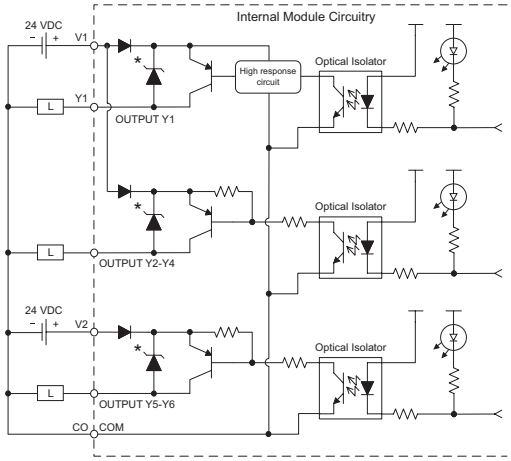


Wiring Diagram

Equivalent Input Circuit



Equivalent Output Circuit



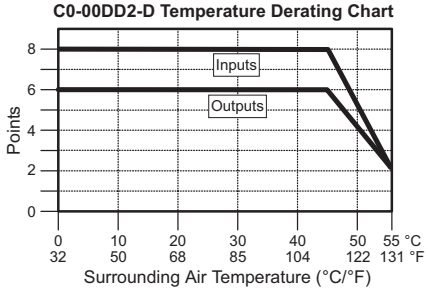
*Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	1 (6 points/common)

Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2- 30VDC
Maximum Output Current	0.1 A/point, 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	Y1: 1.0 VDC @ 0.1 A Y2-6: 0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
ON to OFF Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-00DD2-D Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

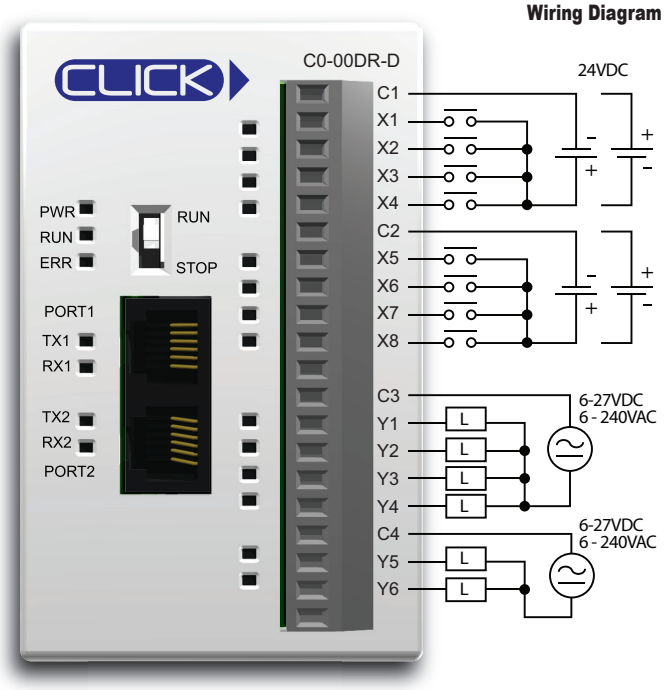
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Basic PLC

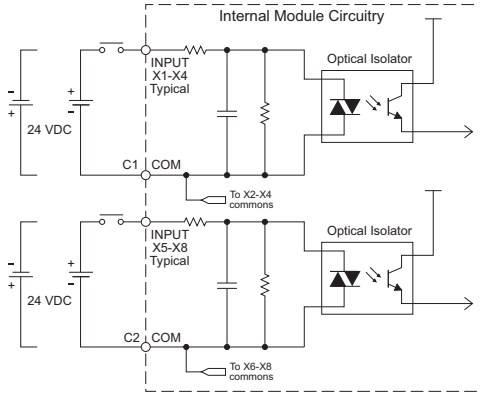
C0-00DR-D $133.00

8 DC Input/6 Relay Output Micro PLC

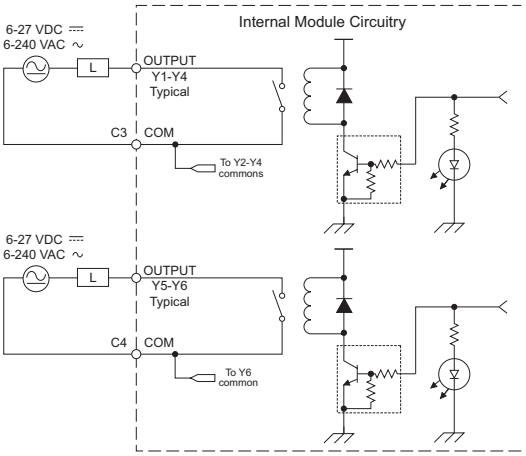
Wiring Diagram



Equivalent Input Circuit



Equivalent Output Circuit

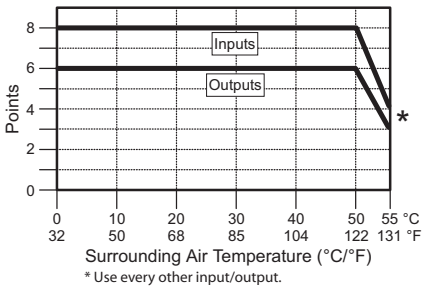


Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30VDC
Output Type	Relay, form A (SPST)
Maximum Current	1A/point; C3: 4A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

C0-00DR-D Temperature Derating Chart



* Use every other input/output.

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
250VAC Resistive	500,000 cycles*
250VAC Solenoid	200,000 cycles*

***ON to OFF = 1 cycle**

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

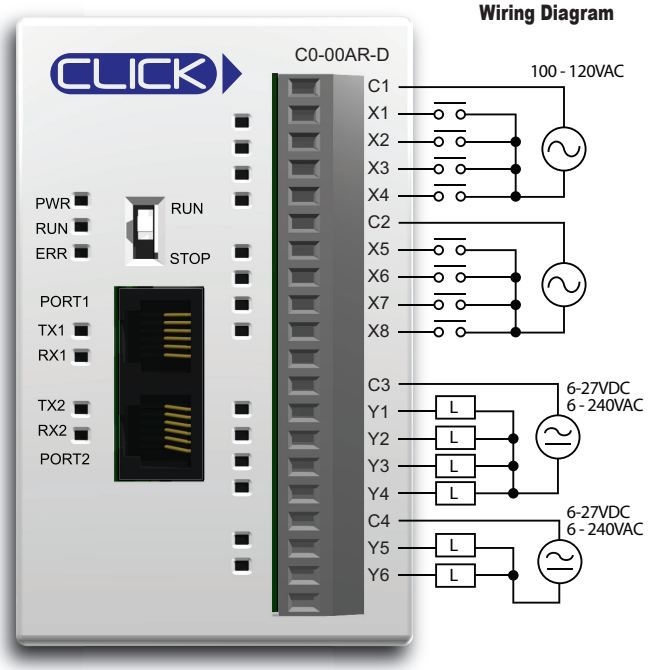
NOTE: The C0-00DR-D is derated to 2A maximum per Common when used with the ***ZIP***Link wiring system.

Basic PLC

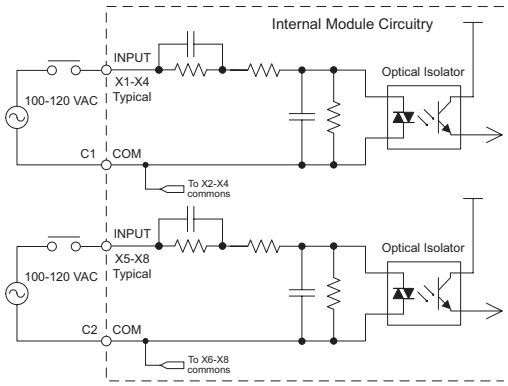
C0-00AR-D $141.00

8 AC Input/6 Relay Output Micro PLC

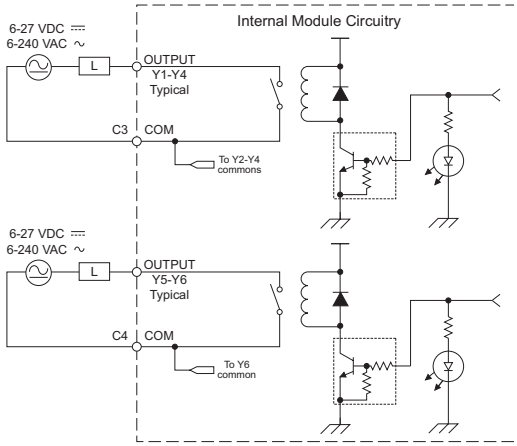
Wiring Diagram



Equivalent Input Circuit



Equivalent Output Circuit

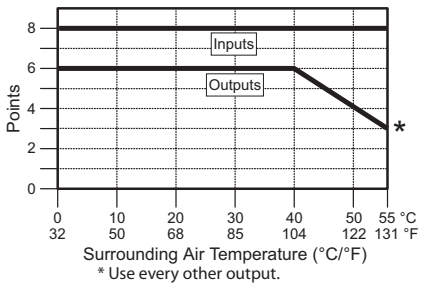


Built-in I/O Specifications - Inputs	
Inputs per Module	8
Operating Voltage Range	100-120 VAC
Input Voltage Range	80-144 VAC
AC Frequency	47-63 Hz
Input Current	8.5 mA @ 100VAC at 50Hz 10mA @ 100VAC at 60Hz
Maximum Input Current	16mA @ 144VAC at 55°C or 131°F
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	Max 40ms
ON to OFF Response	Max 40ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30VDC
Output Type	Relay, form A (SPST)
Maximum Current	1A/point; C3: 4A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

C0-00AR-D Temperature Derating Chart



* Use every other output.

NOTE: The C0-00AR-D is derated to 2A maximum per Common when used with the ***ZIP***Link wiring system.

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
250VAC Resistive	500,000 cycles*
250VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

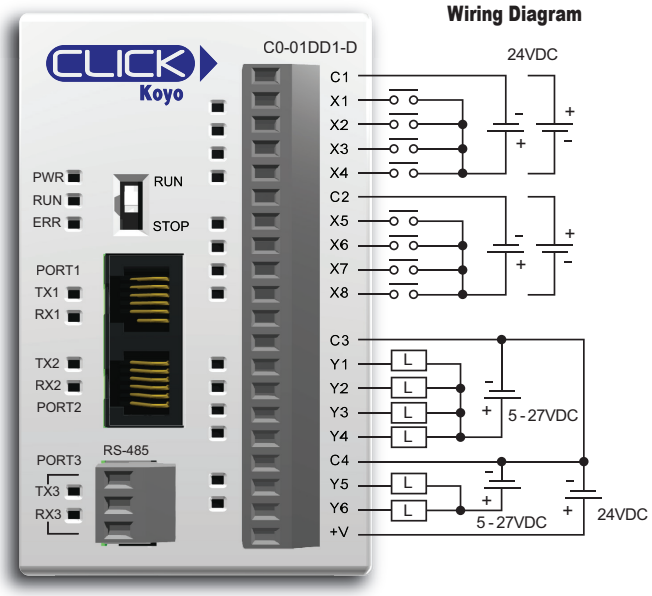
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard PLC

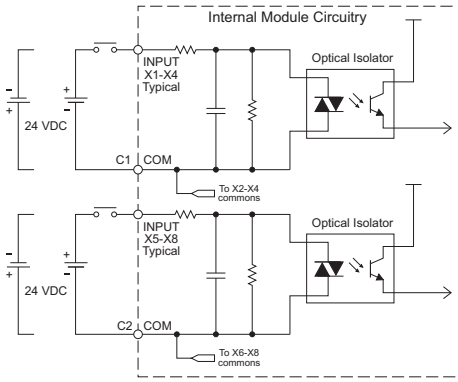
C0-01DD1-D $153.00

8 DC Input/6 Sinking DC Output Micro PLC

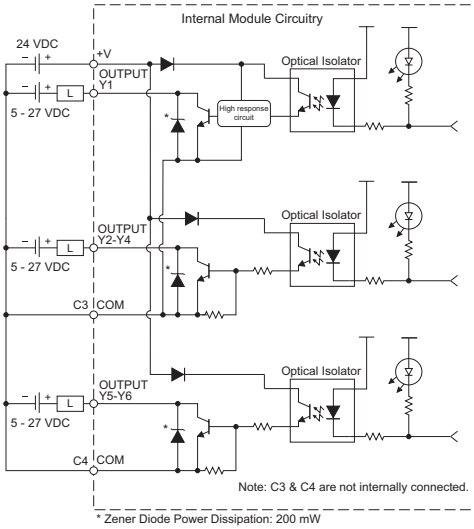


NOTE: When using Standard PLCs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



* Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs

Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

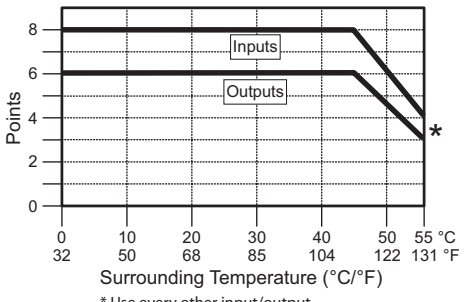
Built-in I/O Specifications - Outputs

Outputs per Module	6 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point; C3: 0.4 A/common, C4: 0.2 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	150mA for 10ms
OFF to ON Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
ON to OFF Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com)
External DC Power Required	20–28 VDC Maximum @ 60mA (All Points On)

General Specifications

Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-01DD1-D Temperature Derating Chart



* Use every other input/output.

ZIPLink Pre-Wired PLC Connection Cables and Modules

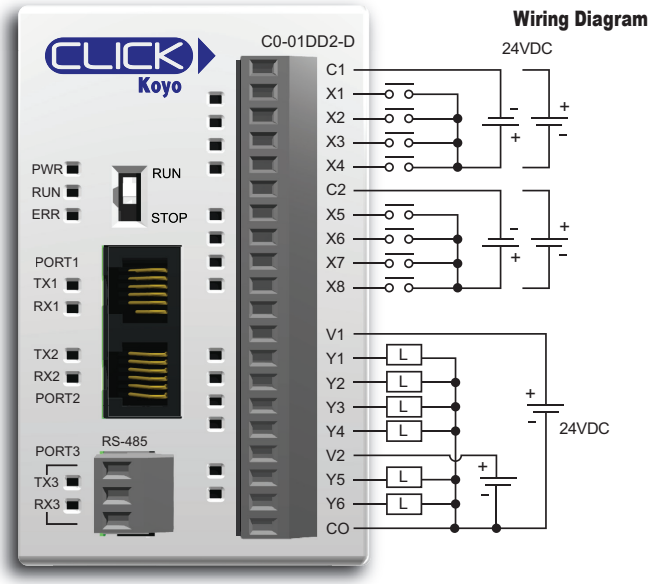
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard PLC

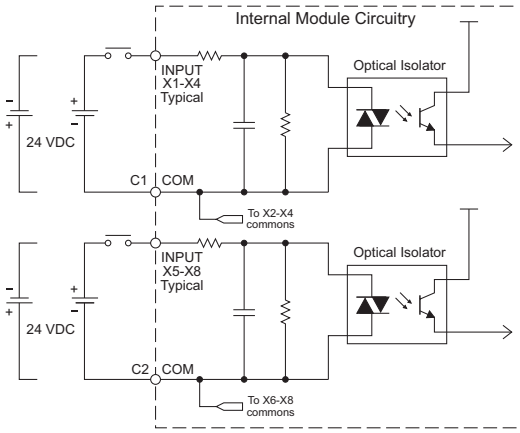
C0-01DD2-D $157.00

8 DC Input/6 Sourcing DC Output Micro PLC

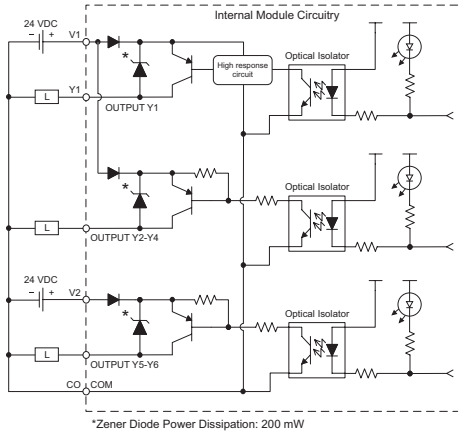


NOTE: When using Standard PLCs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



*Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs

Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

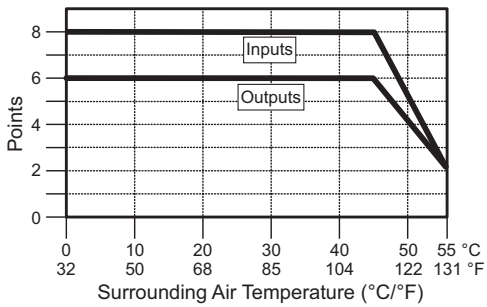
Built-in I/O Specifications - Outputs

Outputs per Module	6 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2-30 VDC
Maximum Output Current	0.1 A/point , 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	Y1: 1.0 VDC @ 0.1 A Y2-6: 0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
ON to OFF Response	Y1: typ 5µs; max 20µs Y2-6: < 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications

Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-01DD2-D Temperature Derating Chart



*ZIP*Link Pre-Wired PLC Connection Cables and Modules

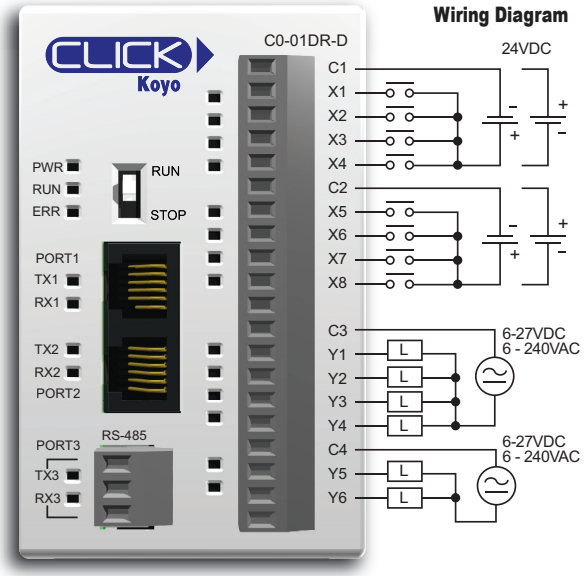
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard PLC

C0-01DR-D $172.00

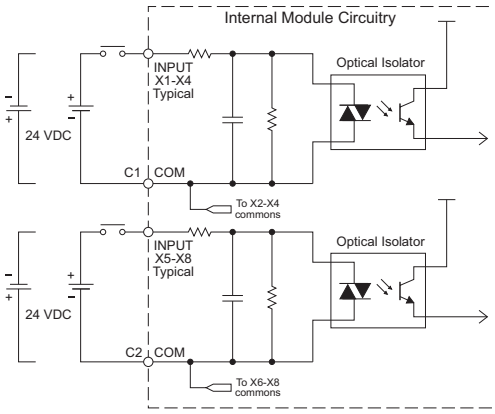
8 DC Input/6 Relay Output Micro PLC



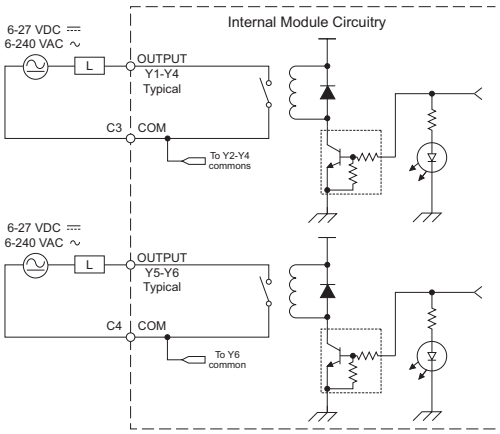
Wiring Diagram

NOTE: When using Standard PLCs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit

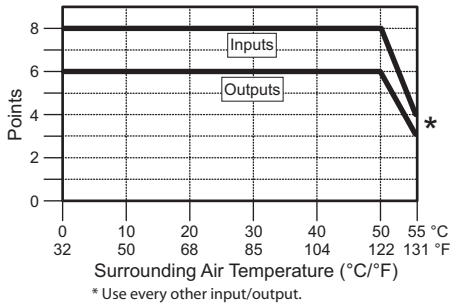


Equivalent Output Circuit



NOTE: The C0-01DR-D is derated to 2A maximum per Common when used with the *ZIP*Link wiring system.

C0-01DR-D Temperature Derating Chart



* Use every other input/output.

Built-in I/O Specifications - Inputs

Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-8: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-8: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-8: < 7VDC
Minimum ON Current	X1-2: 4.5 mA X3-8: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-8: 0.5 mA
OFF to ON Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs X3-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs

Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30 VDC
Output Type	Relay, form A (SPST)
Maximum Current	1 A/point; C3: 4 A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications

Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	***Relay Life****
30VDC, 1A Resistive	300,000 cycles
30VDC, 1A Solenoid	50,000 cycles
250VAC, 1A Resistive	500,000 cycles
250VAC, 1A Solenoid	200,000 cycles

*ON to OFF = 1 cycle

ZL-RTB20
20-pin feed-through connector module

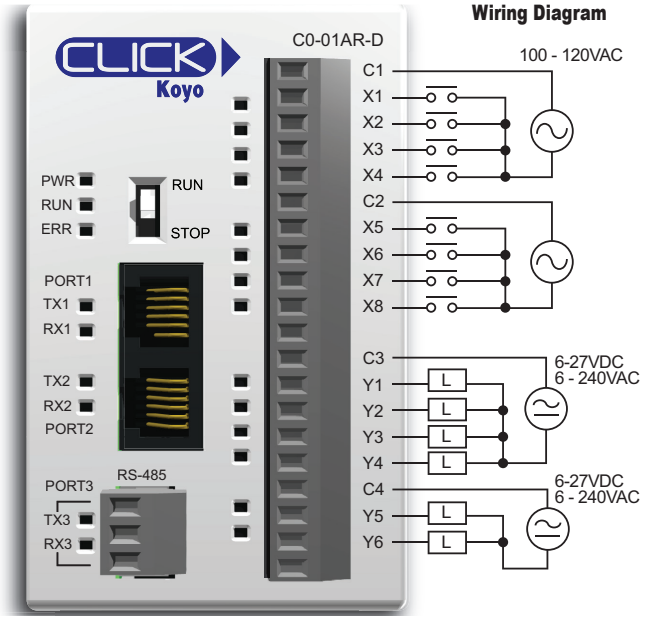
***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard PLC

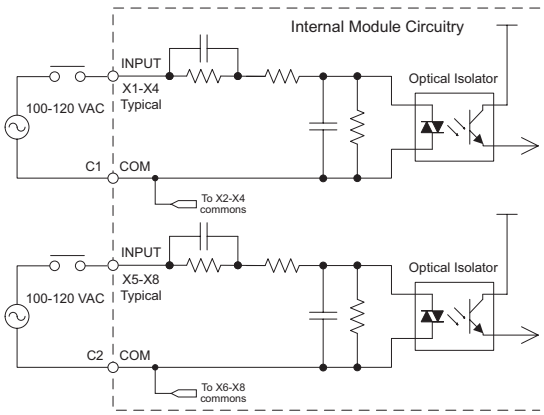
C0-01AR-D $172.00

8 AC Input/6 Relay Output Micro PLC

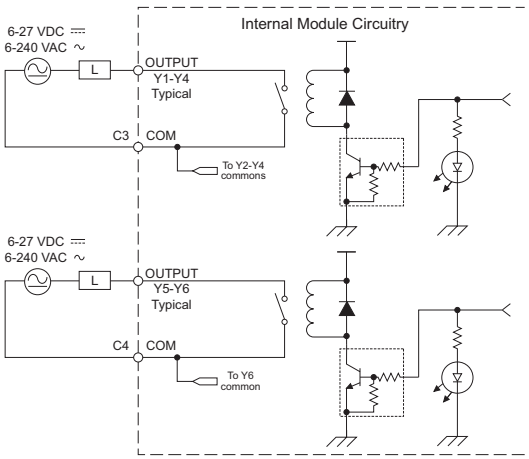


NOTE: When using Standard PLCs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



Built-in I/O Specifications - Inputs

Inputs per Module	8
Operating Voltage Range	100-120 VAC
Input Voltage Range	80-144 VAC
AC Frequency	47-63 Hz
Input Current	8.5 mA @ 100VAC at 50Hz 10mA @ 100VAC at 60Hz
Maximum Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	Max 40ms
ON to OFF Response	Max 40ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

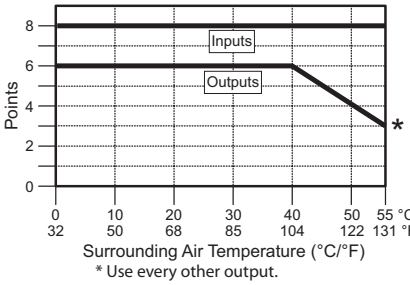
Built-in I/O Specifications - Outputs

Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30VDC
Output Type	Relay, form A (SPST)
Maximum Current	1 A/point; C3: 4A/common, C4: 2A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications

Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

C0-01AR-D Temperature Derating Chart



* Use every other output.

Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	***Relay Life****
30VDC, 1A Resistive	300,000 cycles
30VDC, 1A Solenoid	50,000 cycles
250VAC, 1A Resistive	500,000 cycles
250VAC, 1A Solenoid	200,000 cycles

***ON to OFF = 1 cycle**

NOTE: The C0-01AR-D is derated to 2A maximum per Common when used with the ***ZIP***Link wiring system.

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

ZL-RTB20
20-pin feed-through connector module

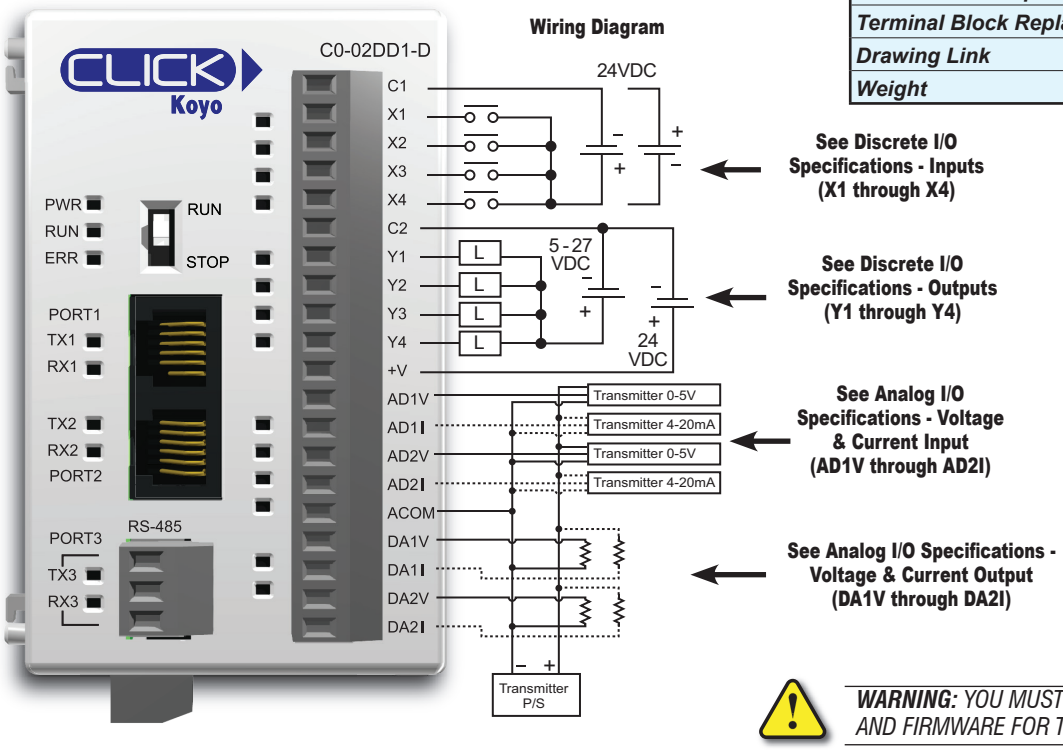
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Analog PLC

C0-02DD1-D $212.00

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

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.3 oz [150g]



WARNING: *YOU MUST USE PROPER SOFTWARE AND FIRMWARE FOR THIS PLC UNIT.*

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).*

Serial Number*	Software	Firmware
Before 171208001	V1.12 or later	V1.10 or later
171208001 or later	V2.10 or later	V2.10 or later

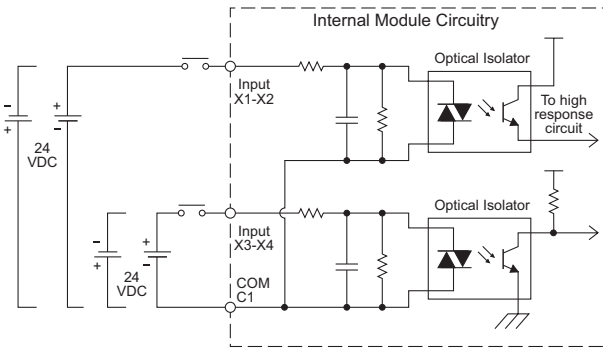
***You can find the serial number on the bottom of the product label.**

X1 - X4

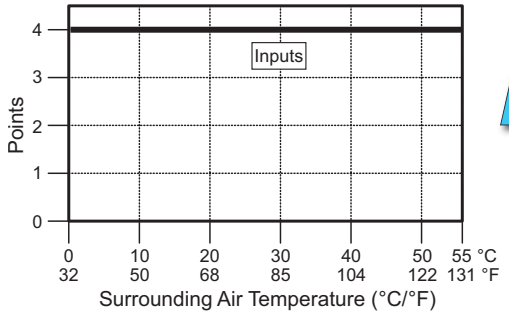
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-4: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-4: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-4: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-4: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-4: < 7VDC
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 5µs Max 20µs* X3-4: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs* X3-4: Typ 3ms Max 10ms
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



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

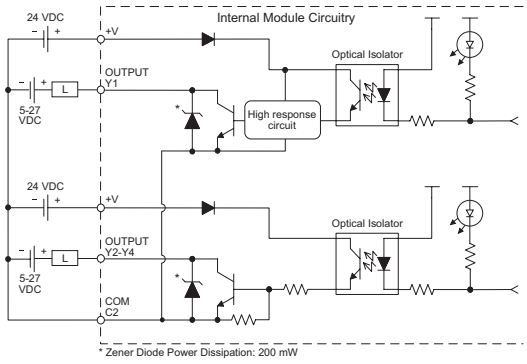
Analog PLC

C0-02DD1-D (cont'd)

Y1 - Y4

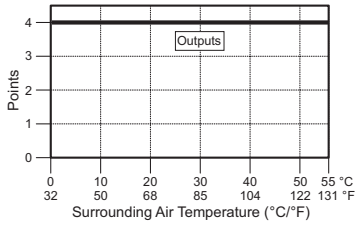
Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point; 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Y1: typ 5µs; max 20µs; Y2-4: < 0.5 ms
ON to OFF Response	Y1: typ 5µs; max 20µs; 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 @ 60mA (all points on)

Equivalent Discrete Output Circuit



* Zener Diode Power Dissipation: 200 mW

C0-02DD1-D Temperature Derating Chart

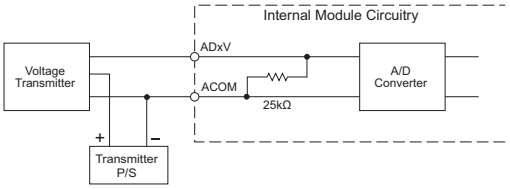


AD1V - AD2I

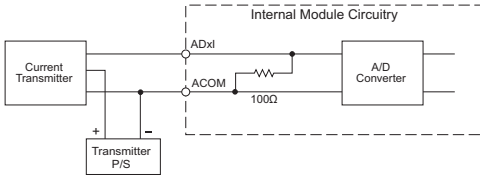
Analog Specifications - Voltage Input	
Number of Channels	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	25kΩ 150kΩ (Serial numbers prior to 171208001)
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±1.2% maximum
Offset Calibration Error	±5mV maximum
Accuracy vs Temperature Error	±100ppm / °C maximum

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	100Ω 200Ω (Serial numbers prior to 171208001)
Input Stability	± 2 LSB
Full-Scale Calibration Error	± 1% maximum
Offset Calibration Error	± 0.1 mA maximum
Accuracy vs Temperature Error	± 100ppm / °C maximum

Analog Voltage Input Circuit



Analog Current Input Circuit

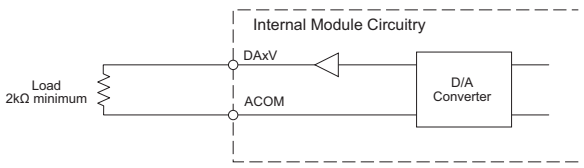


DA1V - DA2I

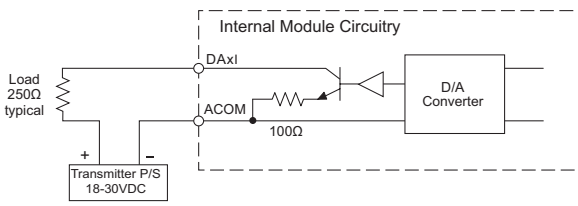
Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±0.8% maximum
Offset Calibration Error	±5mV maximum
Accuracy vs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

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

Analog Voltage Output Circuit



Analog Current Output Circuit

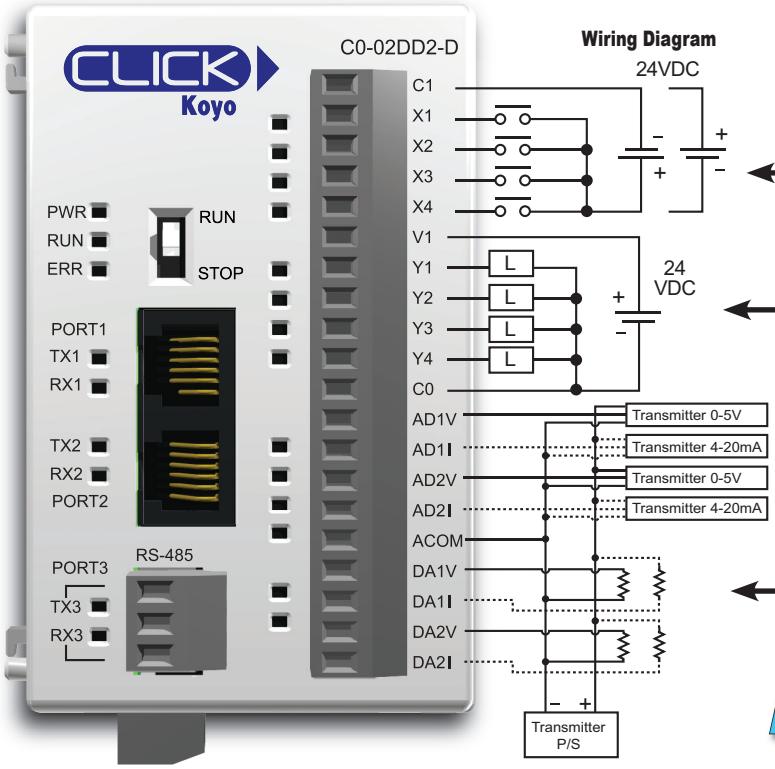


Analog PLC

C0-02DD2-D $215.00

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

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.3 oz [150g]



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).*

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

WARNING: *YOU MUST USE PROPER SOFTWARE AND FIRMWARE FOR THIS PLC UNIT.*

Serial Number*	Software	Firmware
Before 174018001	V1.12 or later	V1.10 or later
174018001 or later	V2.10 or later	V2.10 or later

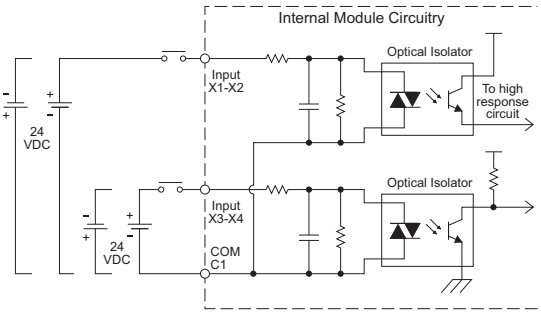
***You can find the serial number on the bottom of the product label.**

X1 - X4

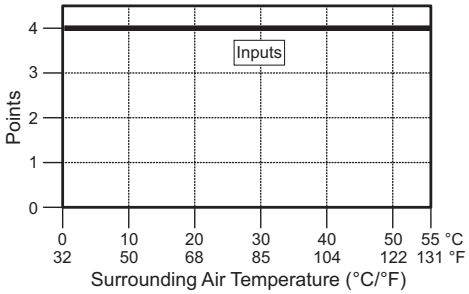
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-4: Typ 4mA @ 24VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-4: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC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

*** Threshold level is 70% amplitude.**

Equivalent Discrete Input Circuit



C0-02DD2-D Temperature Derating Chart

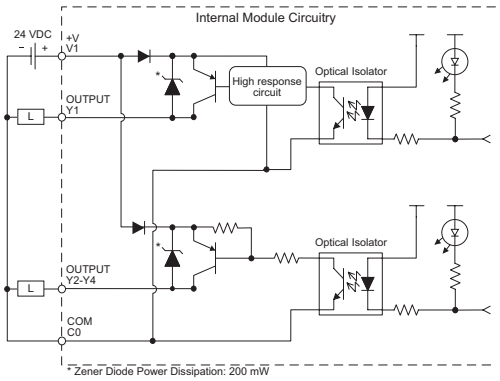


C0-02DD2-D (cont'd)

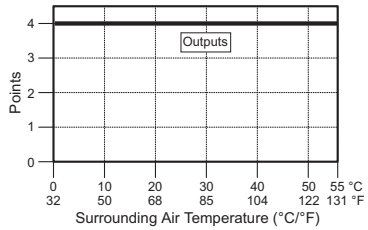
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	Y1 : 0.1 mA @ 30VDC; Y2-4 : 0.1 mA @ 30VDC
On Voltage Drop	Y1: 1VDC @ 0.1 A; Y2-4 : 0.5 VDC@ 0.1 mA
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Y1: typ 5µs; max 20µs; Y2-4: < 0.5 ms
ON to OFF Response	Y1: typ 5µs; max 20µs; Y2-4: < 0.5 ms
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

Equivalent Output Circuit



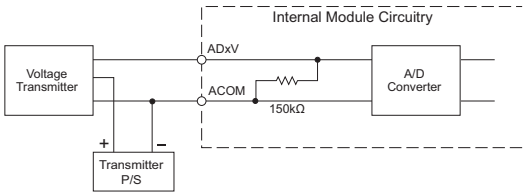
C0-02DD2-D Temperature Derating Chart



AD1V - AD2I

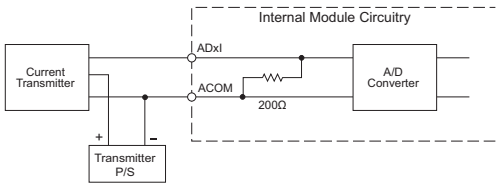
Analog Specifications - Voltage Input	
Number of Channels	2 (voltage/current selectable)
Input Range	0–5 VDC (6 VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	25kΩ 150kΩ (Serial numbers prior to 174018001)
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±1.2% maximum
Offset Calibration Error	±5mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

Analog Voltage Input Circuit



Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	100Ω 200Ω (Serial numbers prior to 174018001)
Input Stability	±2 LSB
Full-Scale Calibration Error	±1% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs Temperature Error	±100 ppm / °C maximum

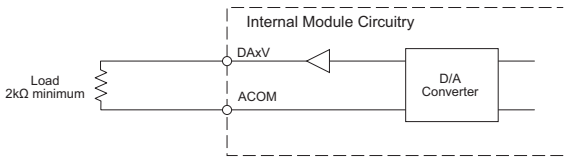
Analog Current Input Circuit



DA1V - DA2I

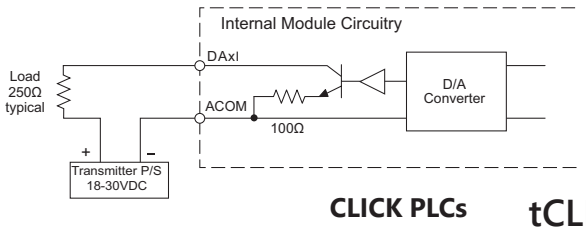
Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±0.8% maximum
Offset Calibration Error	±5mV maximum
Accuracy vs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

Analog Voltage Output Circuit



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

Analog Current Output Circuit

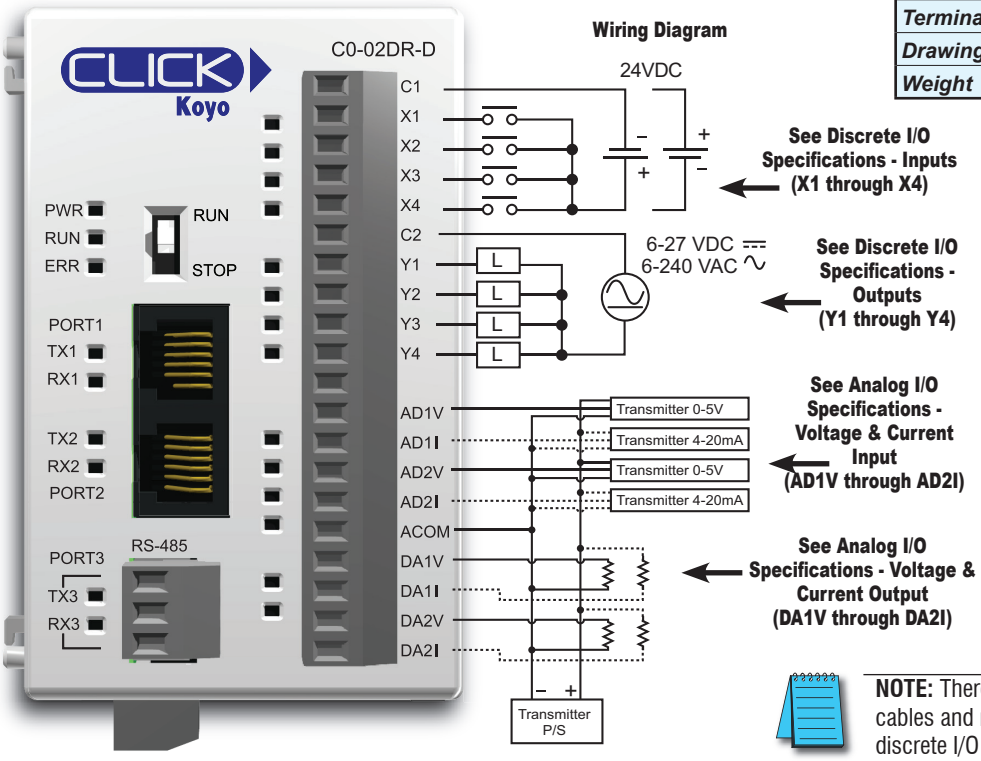


Analog PLC

C0-02DR-D $225.00

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

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]



Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	*Relay Life**
30VDC, 1A Resistive	300,000 cycles
30VDC, 1A Solenoid	50,000 cycles
120VAC, 1A Resistive	500,000 cycles
120VAC, 1A Solenoid	200,000 cycles

*ON to OFF = 1 cycle

NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).

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).*

WARNING: *YOU MUST USE PROPER SOFTWARE AND FIRMWARE FOR THIS PLC UNIT.*

Serial Number*	Software	Firmware
Before 173158001	V1.12 or later	V1.10 or later
173158001 or later	V2.10 or later	V2.10 or later

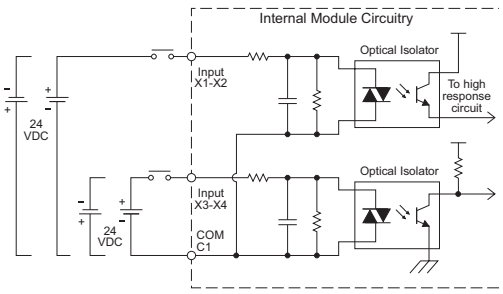
***You can find the serial number on the bottom of the product label.**

X1 - X4

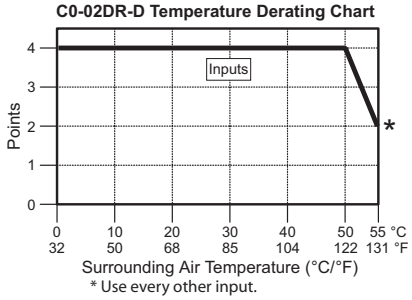
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-2: Typ 5mA @ 24VDC X3-4: Typ 4mA @ 24VDC
Input Impedance	X1-2: 4.7 kΩ @ 24VDC X3-4: 6.8 kΩ @ 24VDC
ON Voltage Level	X1-2: > 19VDC X3-4: > 19VDC
OFF Voltage Level	X1-2: < 4VDC X3-4: < 7VDC
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 5µs Max 20µs* X3-4: Typ 2ms Max 10ms
ON to OFF Response	X1-2: Typ 5µs Max 20µs* X3-4: Typ 3ms Max 10ms
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



Analog PLC

C0-02DR-D (cont'd)

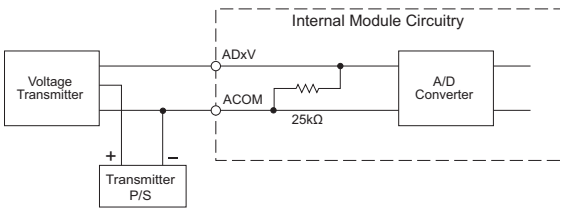
Y1 - Y4

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	1A/point
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)
Fuse	None

AD1V - AD2I

Analog Specifications - Voltage Input	
Number of Channels	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	25kΩ 150kΩ (Serial numbers prior to 173158001)
Input Stability	± 2 LSB maximum
Full-Scale Calibration Error	± 1.2% maximum
Offset Calibration Error	± 5mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

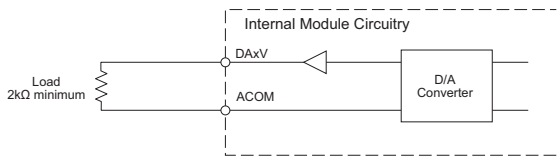
Analog Voltage Input Circuit



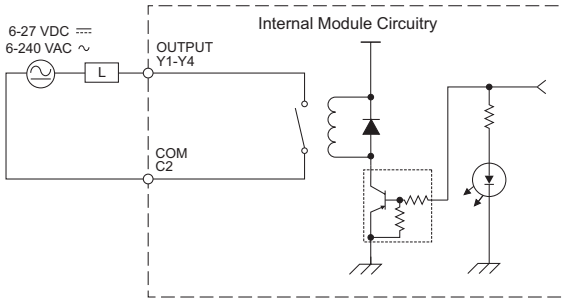
DA1V - DA2I

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

Analog Voltage Output Circuit

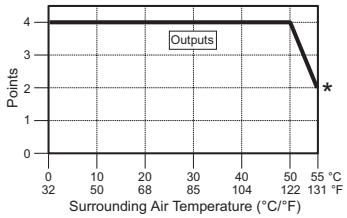


Equivalent Output Circuit



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

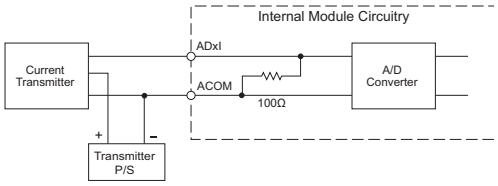
C0-02DR-D Temperature Derating Chart



* Use every other output.

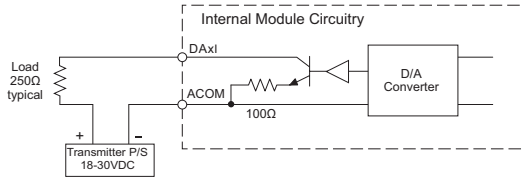
Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	100Ω 200Ω (Serial numbers prior to 173158001)
Input Stability	± 2 LSB
Full-Scale Calibration Error	± 1% maximum
Offset Calibration Error	± 0.1 mA maximum
Accuracy vs. Temperature Error	± 100ppm / °C maximum

Analog Current Input Circuit



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

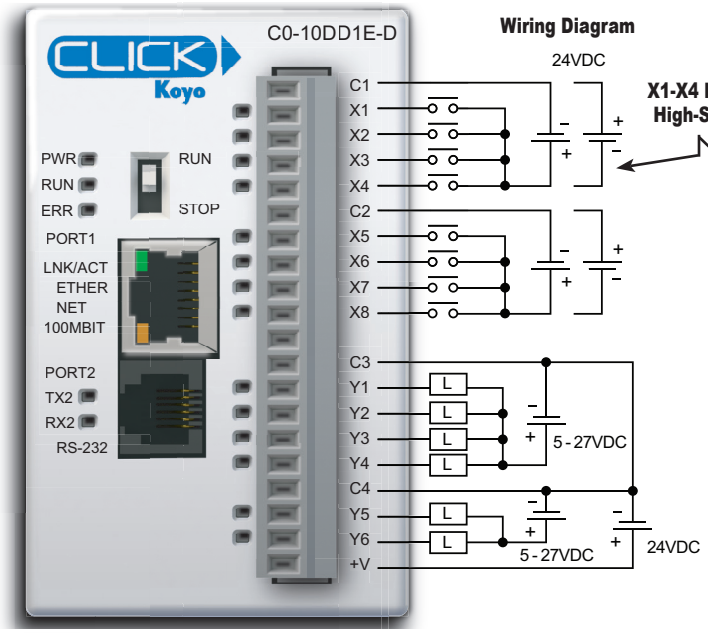
Analog Current Output Circuit



Ethernet Basic PLC

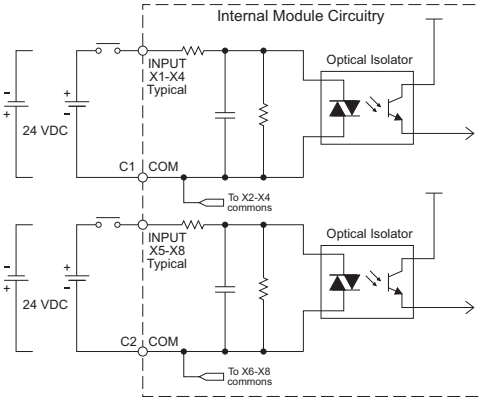
C0-10DD1E-D $201.00

8 DC Input/6 Sinking DC Output Micro PLC

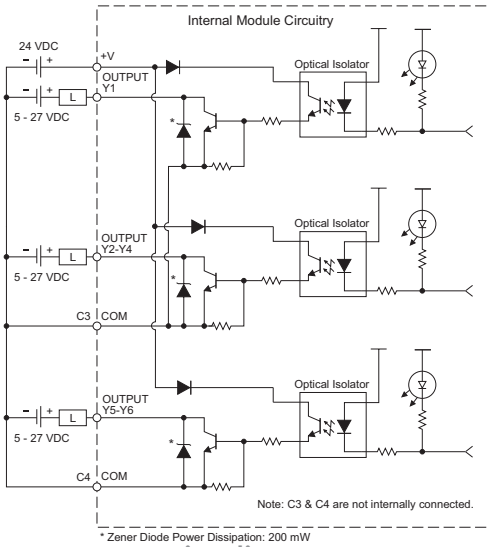


NOTE: When using Ethernet Basic PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit



Equivalent Output Circuit



* Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs

Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-4: Typ 6.5 mA @ 24VDC X5-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-4: 7.0 mA @ 26.4 VDC X5-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-4: 3.9 kΩ @ 24VDC X5-8: 6.8 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	X1-4: < 2VDC X5-8: < 7VDC
Minimum ON Current	X1-4: 4.5 mA X5-8: 3.5 mA
Maximum OFF Current	X1-4: 0.5 mA X5-8: 1.5 mA
OFF to ON Response	X1-4: Typ 3µs Max 5µs X5-8: Typ 2ms Max 10ms
ON to OFF Response	X1-4: Typ 1µs Max 3µs X5-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

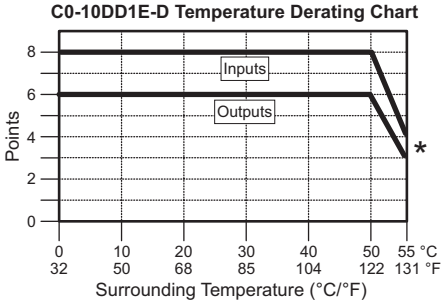
Built-in I/O Specifications - Outputs

Outputs per Module	6 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point; C3: 0.4 A/common, C4: 0.2 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.5 mA @ 30.0 VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Max. 0.5 ms
ON to OFF Response	Max. 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com)
External DC Power Required	20–28 VDC Maximum @ 60mA (All Points On)

General Specifications

Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-10DD1E-D Temperature Derating Chart



* Use every other input/output.

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

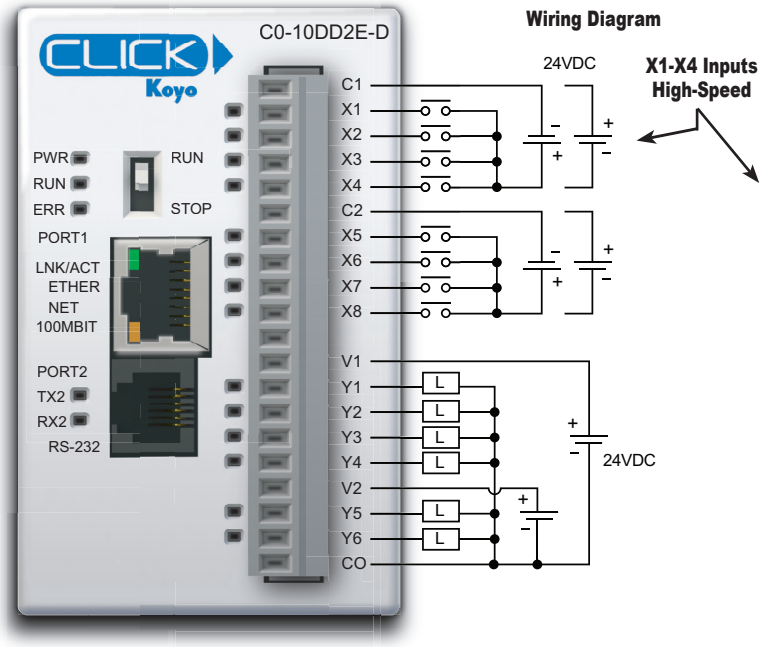
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Basic PLC

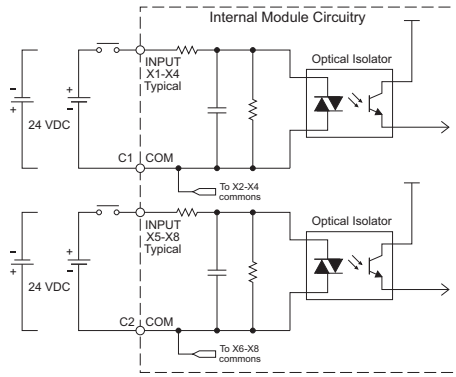
C0-10DD2E-D $201.00

8 DC Input/6 Sourcing DC Output Micro PLC

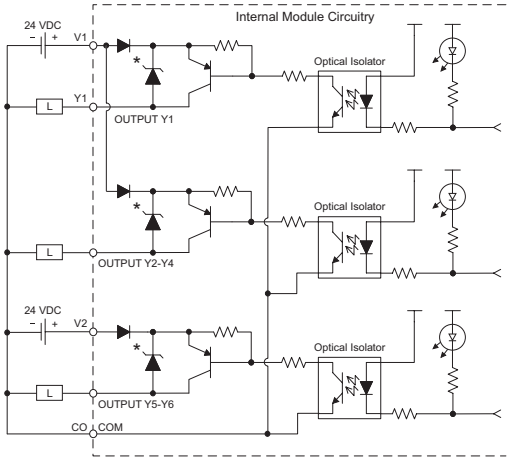


NOTE: When using Ethernet Basic PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit

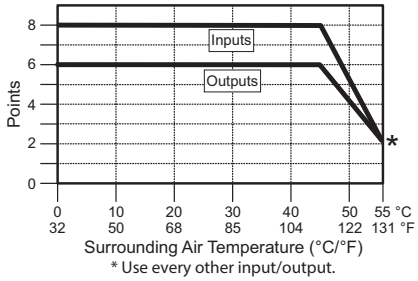


Equivalent Output Circuit



*Zener Diode Power Dissipation: 200 mW

C0-10DD2E-D Temperature Derating Chart



Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	X1-4: Typ 6.5 mA @ 24VDC X5-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-4: 7.0 mA @ 26.4 VDC X5-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-4: 3.9 kΩ @ 24VDC X5-8: 6.8 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	X1-4: < 2VDC X5-8: < 7VDC
Minimum ON Current	X1-4: 4.5 mA X5-8: 3.5 mA
Maximum OFF Current	X1-4: 0.5 mA X5-8: 1.5 mA
OFF to ON Response	X1-4: Typ 3µs Max 5µs X5-8: Typ 2ms Max 10ms
ON to OFF Response	X1-4: Typ 1µs Max 3µs X5-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Max. 0.5 ms
ON to OFF Response	Max 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

ZL-RTB20 20-pin feed-through connector module

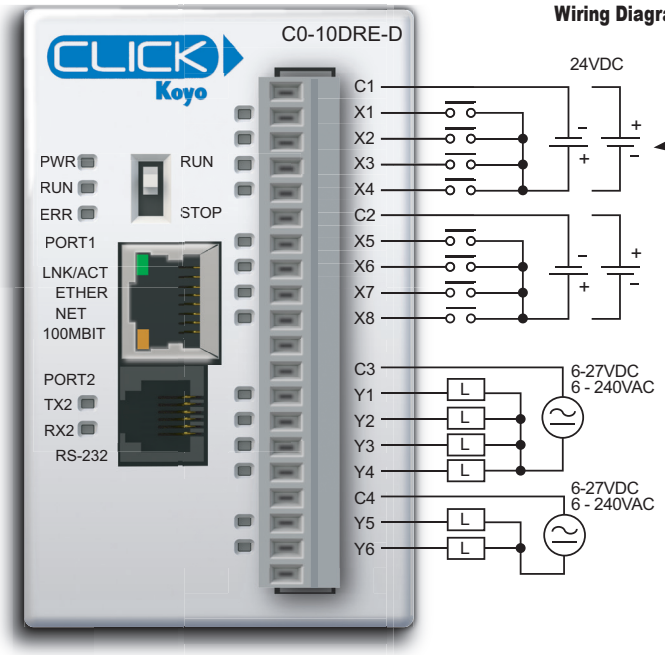
***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Basic PLC

C0-10DRE-D $216.00

8 DC Input/6 Relay Output Micro PLC



Wiring Diagram

X1-X4 Inputs High-Speed

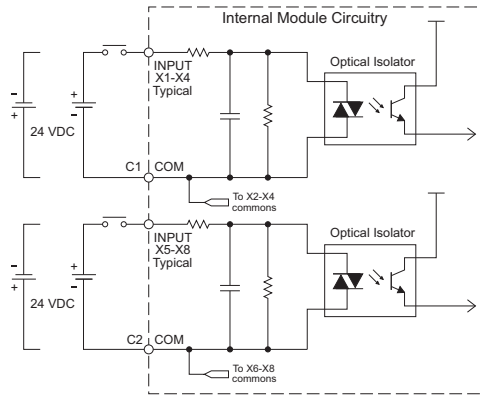
Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6-26.4 VDC
Input Current	X1-4: Typ 6.5 mA @ 24VDC X5-8: Typ 4mA @ 24VDC
Maximum Input Current	X1-4: 7.0 mA @ 26.4 VDC X5-8: 5.0 mA @ 26.4 VDC
Input Impedance	X1-4: 3.9 kΩ @ 24VDC X5-8: 6.8 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	X1-4: < 2VDC X5-8: < 7VDC
Minimum ON Current	X1-4: 4.5 mA X5-8: 3.5 mA
Maximum OFF Current	X1-4: 0.5 mA X5-8: 1.5 mA
OFF to ON Response	X1-4: Typ 3µs Max 5µs X5-8: Typ 2ms Max 10ms
ON to OFF Response	X1-4: Typ 1µs Max 3µs X5-8: Typ 3ms Max 10ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30VDC
Output Type	Relay, form A (SPST)
Maximum Current	1 A/point; C3: 4 A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

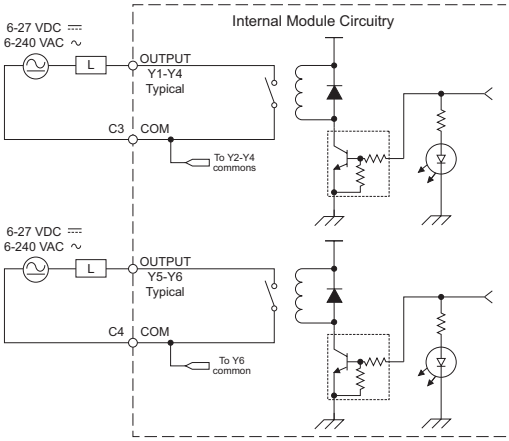
General Specifications	
Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

NOTE: When using Ethernet Basic PLCs, you must use CLICK programming software version V2.00 or later.

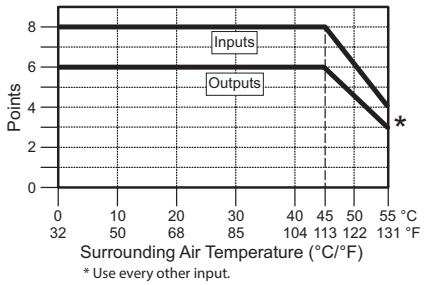
Equivalent Input Circuit



Equivalent Output Circuit



C0-10DRE-D Temperature Derating Chart



NOTE: The C0-10DRE-D is derated to 2A maximum per Common when used with the *ZIP*Link wiring system.

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life****
30VDC 1A Resistive	300,000 cycles
30VDC 1A Solenoid	50,000 cycles
250VAC 1A Resistive	500,000 cycles
250VAC 1A Solenoid	200,000 cycles

*ON to OFF = 1 cycle

ZL-RTB20 20-pin feed-through connector module

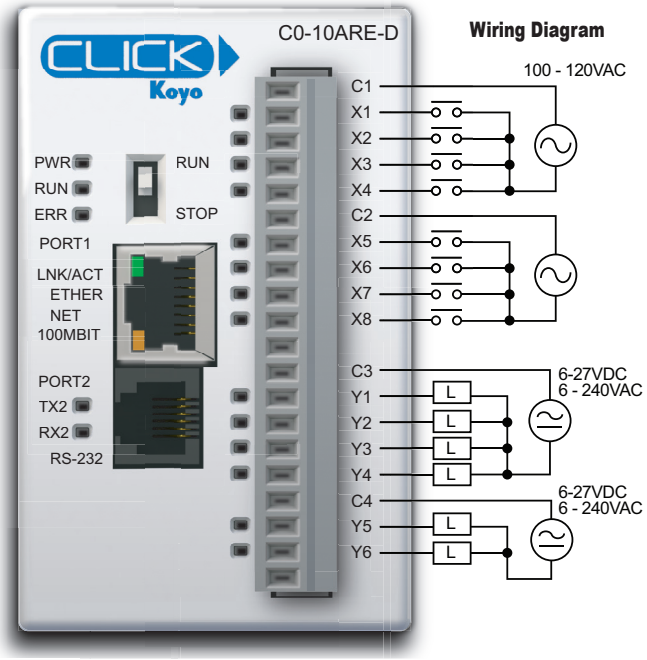
***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Basic PLC

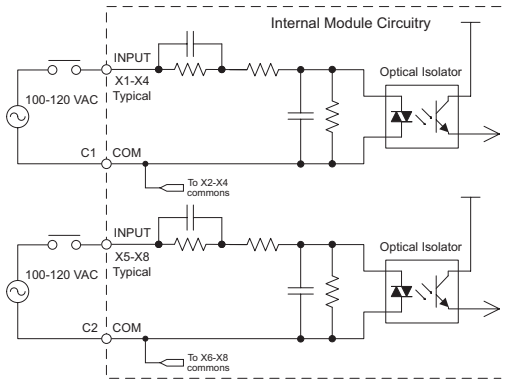
C0-10ARE-D $217.00

8 AC Input/6 Relay Output Micro PLC

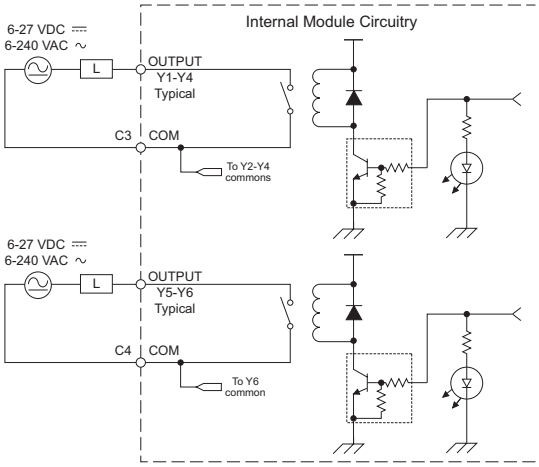


NOTE: When using Ethernet Basic PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit



Equivalent Output Circuit



Built-in I/O Specifications - Inputs

Inputs per Module	8
Operating Voltage Range	100-120 VAC
Input Voltage Range	80-144 VAC
AC Frequency	47-63 Hz
Input Current	8.5 mA @ 100VAC at 50Hz 10mA @ 100VAC at 60Hz
Maximum Input Current	16mA @ 144VAC at 55°C or 131°F
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

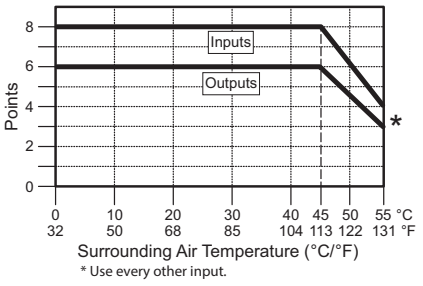
Built-in I/O Specifications - Outputs

Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz) 5-30 VDC
Output Type	Relay, form A (SPDT)
Maximum Current	1 A/point; C3: 4 A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications

Current Consumption at 24VDC	120mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

C0-10ARE-D Temperature Derating Chart



Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	***Relay Life****
30VDC 1A Resistive	300,000 cycles
30VDC 1A Solenoid	50,000 cycles
250VAC 1A Resistive	500,000 cycles
250VAC 1A Solenoid	200,000 cycles

***ON to OFF = 1 cycle**

NOTE: The C0-10ARE-D is derated to 2A maximum per Common when used with the ***ZIP***Link wiring system.

ZIPLink Pre-Wired PLC Connection Cables and Modules

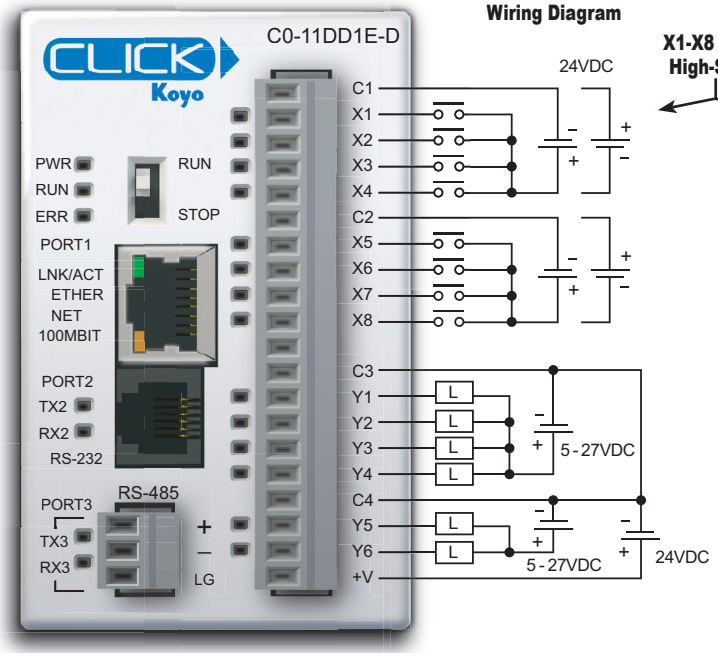
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Standard PLC

C0-11DD1E-D $233.00

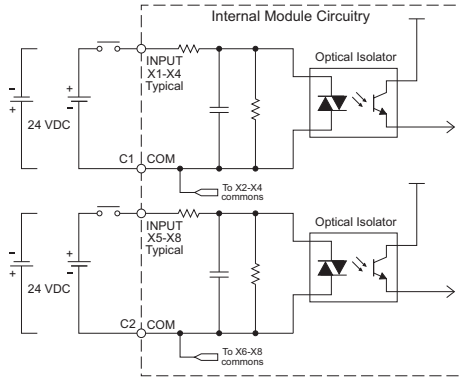
8 DC Input/6 Sinking DC Output Micro PLC



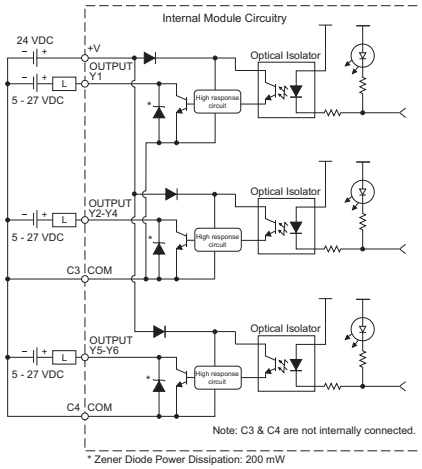
Wiring Diagram

NOTE: When using Ethernet Standard PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit



Equivalent Output Circuit



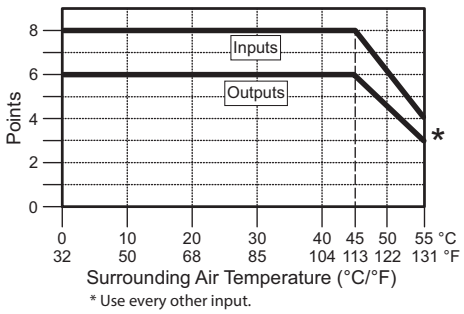
* Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point; C3: 0.4 A/common, C4: 0.2 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	150mA for 10ms
OFF to ON Response	Max. 0.5 ms
ON to OFF Response	Max. 0.5 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com)
External DC Power Required	20–28 VDC Maximum @ 60mA (All Points On)

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-11DD1E-D Temperature Derating Chart



* Use every other input.

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

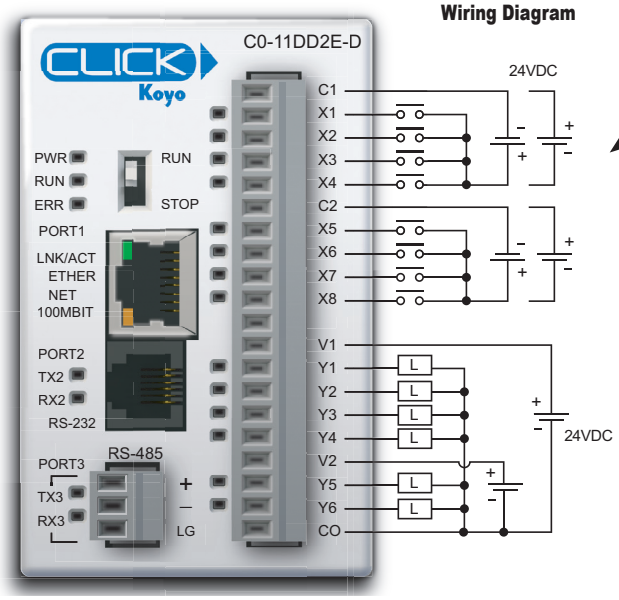
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Standard PLC

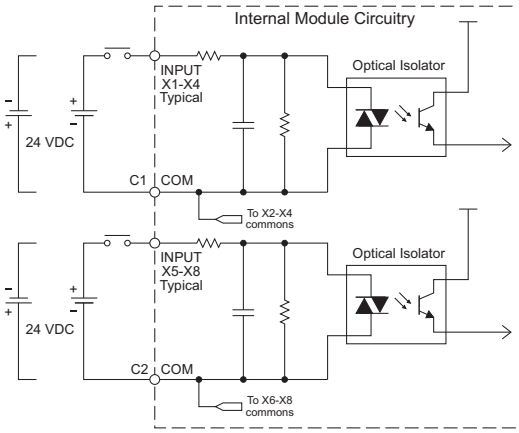
C0-11DD2E-D $233.00

8 DC Input/6 Sourcing DC Output Micro PLC

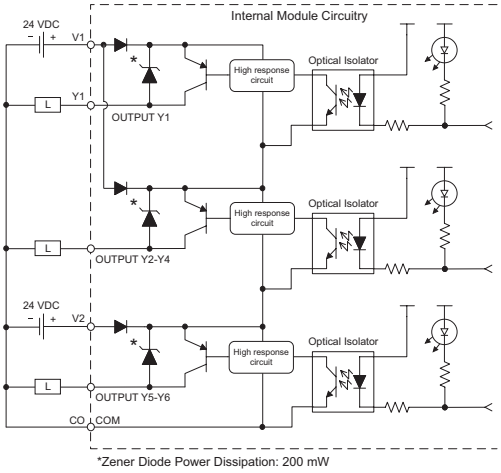


NOTE: When using Ethernet Standard PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit



Equivalent Output Circuit



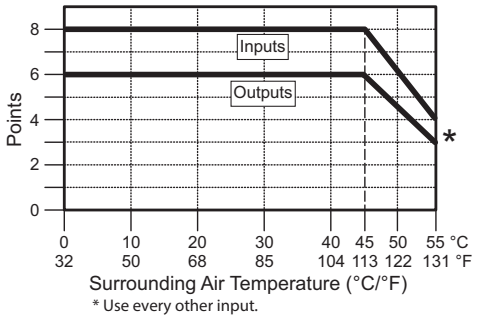
*Zener Diode Power Dissipation: 200 mW

Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point, 0.6 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	Max. 0.5 µs
ON to OFF Response	Max. 0.5 µs
Status Indicators	Logic Side (6 points, red LED)
Commons	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.0 oz [140g]

C0-11DD2E-D Temperature Derating Chart



* Use every other input.

***Z*IPLink Pre-Wired PLC Connection Cables and Modules**

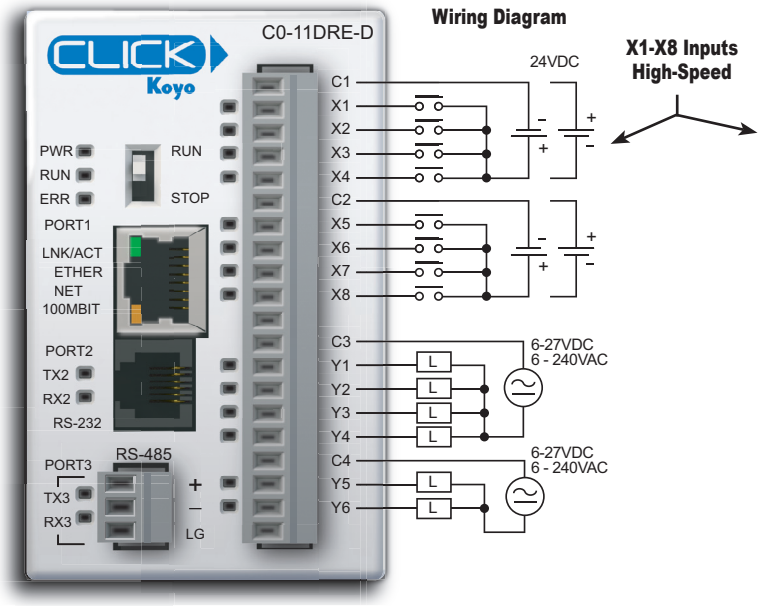
ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Standard PLC

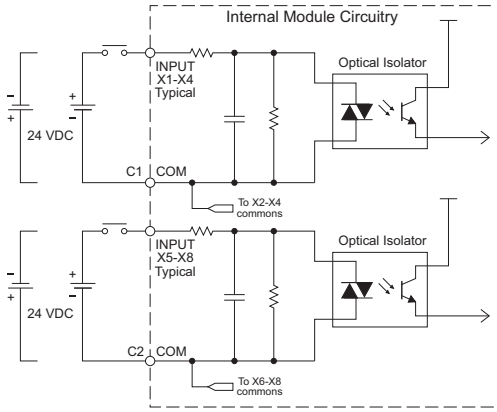
C0-11DRE-D $247.00

8 DC Input/6 Relay Output Micro PLC

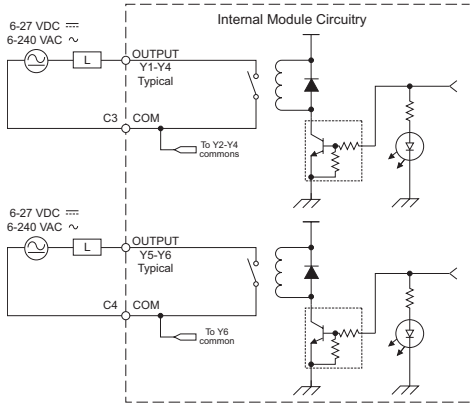


NOTE: When using Ethernet Standard PLCs, you must use CLICK programming software version V2.00 or later.

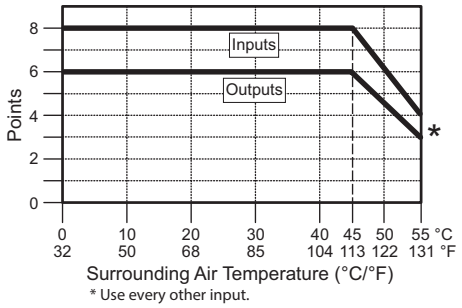
Equivalent Input Circuit



Equivalent Output Circuit



C0-11DRE-D Temperature Derating Chart



NOTE: The C0-11DRE-D is derated to 2A maximum per Common when used with the ***ZIP***Link wiring system.

Built-in I/O Specifications - Inputs

Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X8: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs

Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30 VDC
Output Type	Relay, form A (SPST)
Maximum Current	1 A/point; C3: 4 A/common, C4: 2 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications

Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	***Relay Life****
30VDC 1A Resistive	300,000 cycles
30VDC 1A Solenoid	50,000 cycles
250VAC 1A Resistive	500,000 cycles
250VAC 1A Solenoid	200,000 cycles

*ON to OFF = 1 cycle

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

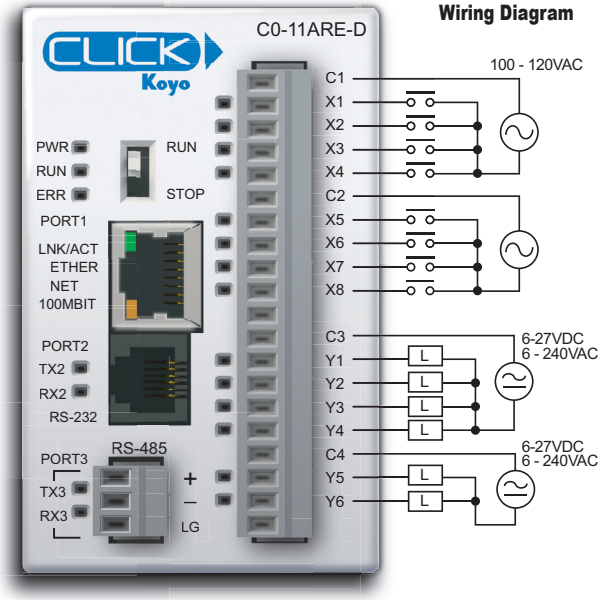
ZL-RTB20
20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Ethernet Standard PLC

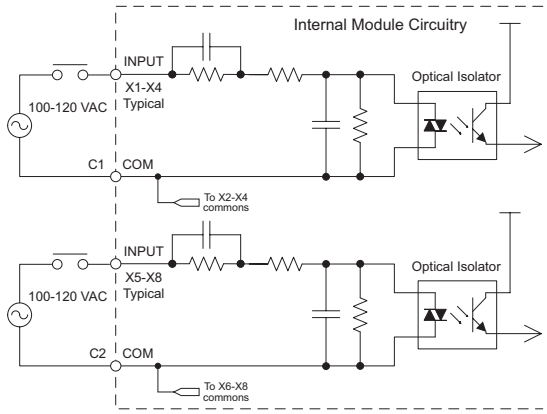
C0-11ARE-D $247.00

8 AC Input/6 Relay Output Micro PLC

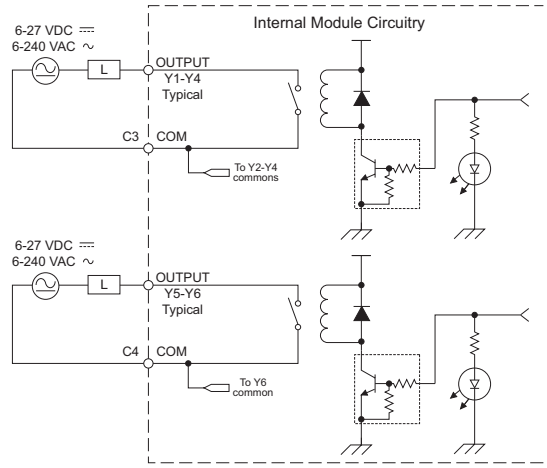


NOTE: When using Ethernet Standard PLCs, you must use CLICK programming software version V2.00 or later.

Equivalent Input Circuit



Equivalent Output Circuit



Built-in I/O Specifications - Inputs	
Inputs per Module	8
Operating Voltage Range	100-120 VAC
Input Voltage Range	80-144 VAC
AC Frequency	47-63 Hz
Input Current	8.5 mA @ 100VAC at 50Hz 10mA @ 100VAC at 60Hz
Maximum Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

Built-in I/O Specifications - Outputs	
Outputs per Module	6
Operating Voltage Range	6-240 VAC (47-63 Hz), 6-27 VDC
Output Voltage Range	5-264 VAC (47-63 Hz), 5-30 VDC
Output Type	Relay, form A (SPST)
Maximum Current	1 A/point; C3: 4A/common, C4: 2A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.6 oz [160g]

ZIPLink Pre-Wired PLC Connection Cables and Modules for CLICK PLC

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

ZL-RTB20
20-pin feed-through connector module

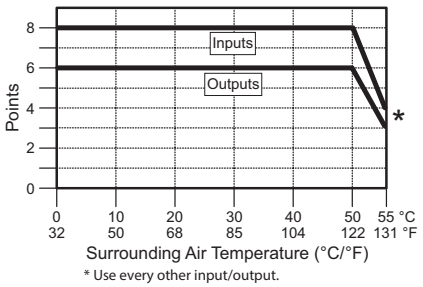
NOTE: The C0-11ARE-D is derated to 2A maximum per Common when used with the *ZIP*Link wiring system.

Typical Relay Life (Operations) at Room Temperature

Voltage & Load Type	*Relay Life**
30VDC 1A Resistive	300,000 cycles
30VDC 1A Solenoid	50,000 cycles
250VAC 1A Resistive	500,000 cycles
250VAC 1A Solenoid	200,000 cycles

*ON to OFF = 1 cycle

C0-11ARE-D Temperature Derating Chart

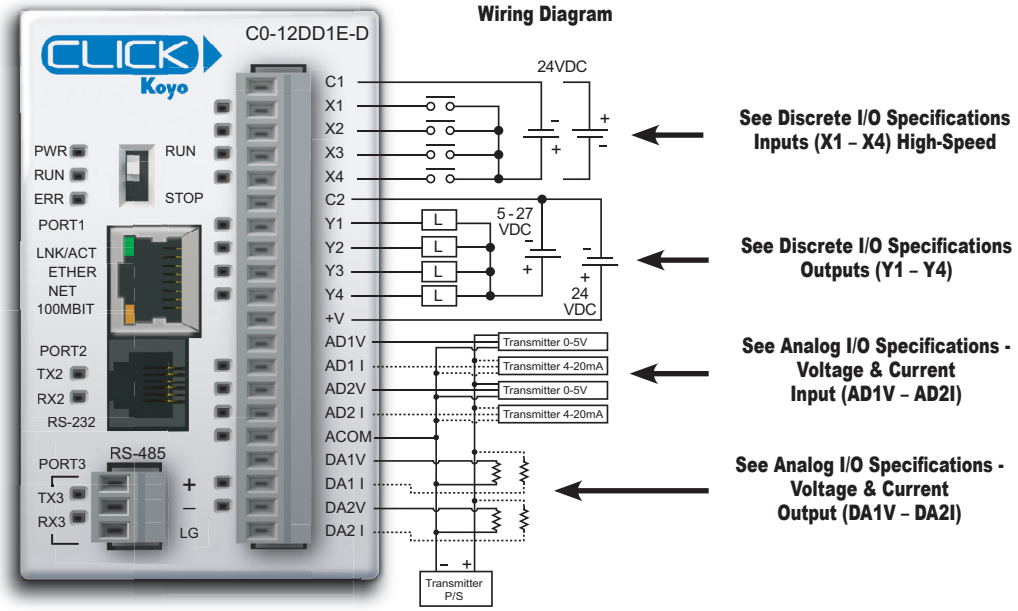


* Use every other input/output.

Ethernet Analog PLC

C0-12DD1E-D $278.00

4 DC Input (Sink/Source)/4 Sinking DC Output;
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

IMPORTANT: *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).*

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.1 oz [145g]

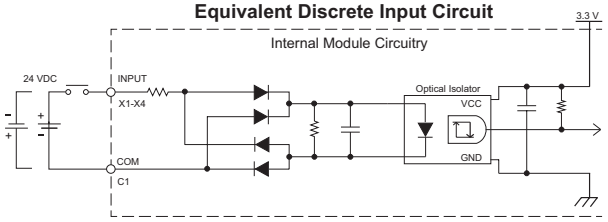
Ethernet Analog PLC

C0-12DD1E-D (cont'd)

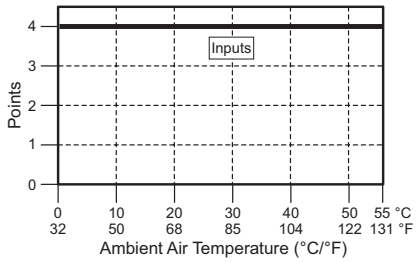
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



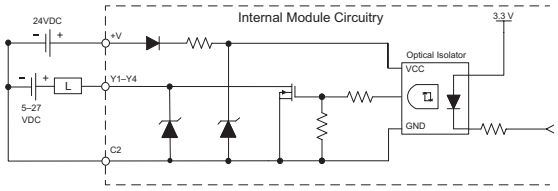
C0-12DD1E-D Temperature Derating Chart



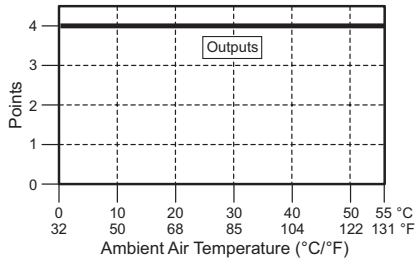
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (all points on)

Equivalent Discrete Output Circuit



C0-12DD1E-D Temperature Derating Chart



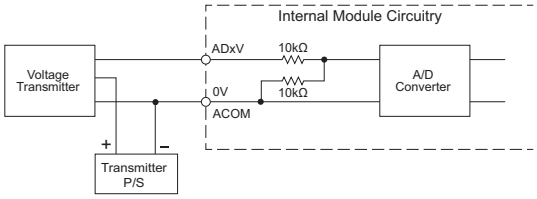
Ethernet Analog PLC

C0-12DD1E-D (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

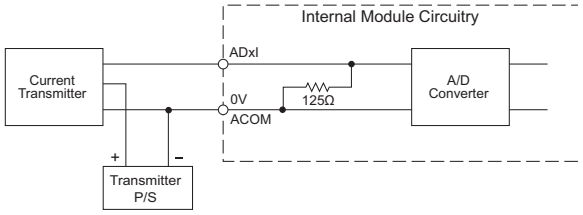
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

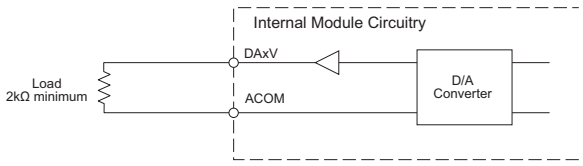
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs Temperature Error	±100ppm / °C maximum

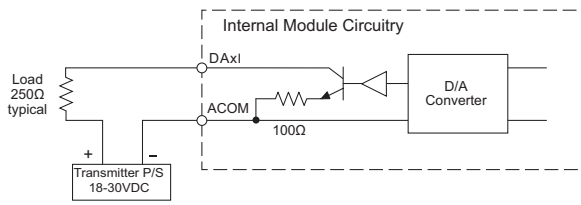
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250 ohms Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs Temperature Error	±100ppm / °C maximum

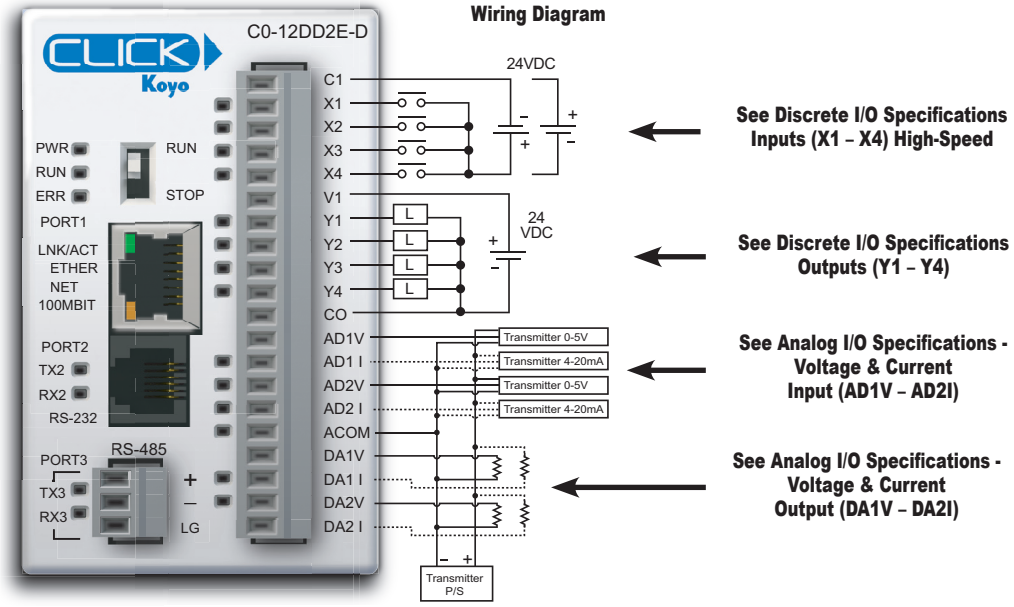
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DD2E-D $276.00

4 DC Input (Sink/Source)/ 4 Sourcing DC Output
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

IMPORTANT: *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).*

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.08 oz [144g]

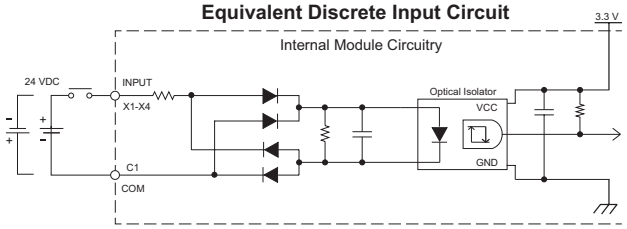
Ethernet Analog PLC

C0-12DD2E-D (cont'd)

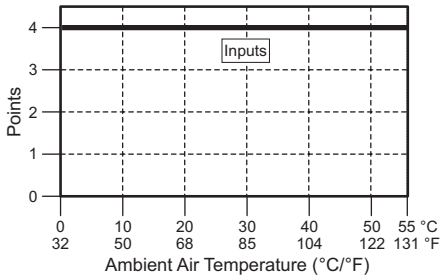
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



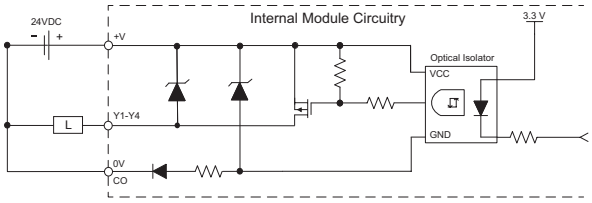
C0-12DD2E-D Temperature Derating Chart



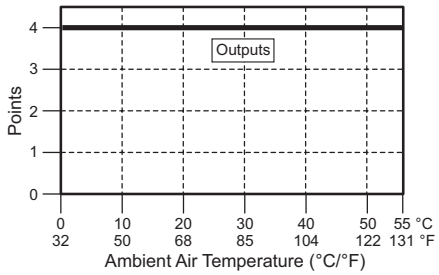
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 pts or 1 pt/common)

Equivalent Discrete Output Circuit



C0-12DD2E-D Temperature Derating Chart



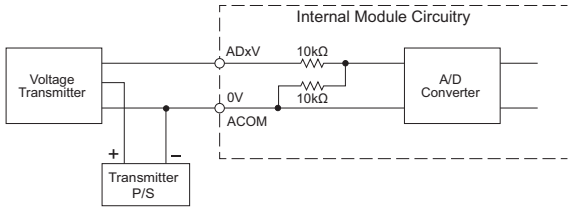
Ethernet Analog PLC

C0-12DD2E-D (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

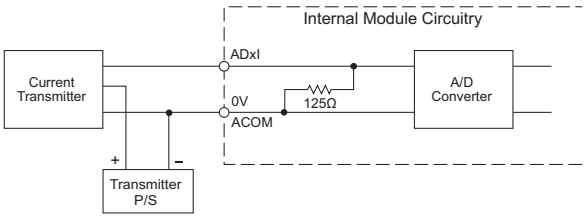
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

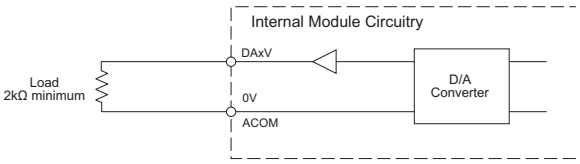
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

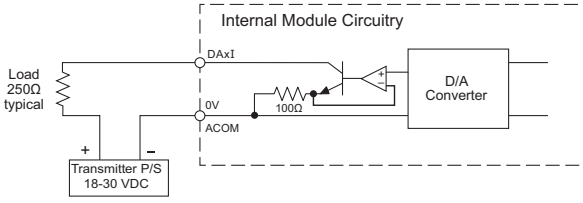
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

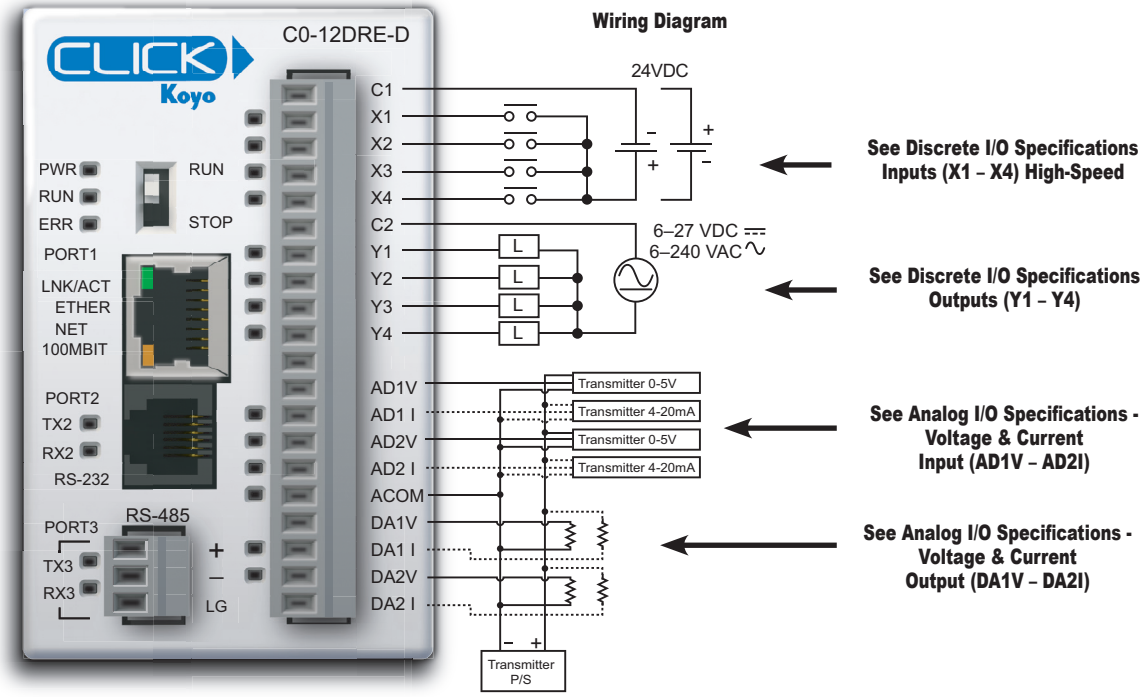
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DRE-D $293.00

4 DC Input (Sink/Source)/4 Relay Output;
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

IMPORTANT: *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).*

General Specifications	
Current Consumption at 24VDC	160mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.4 oz [155g]

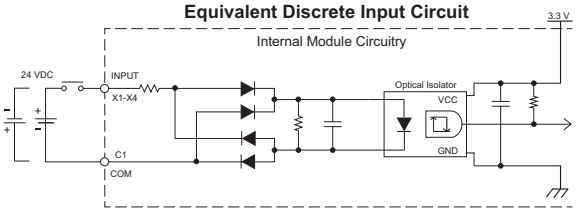
Ethernet Analog PLC

C0-12DRE-D (cont'd)

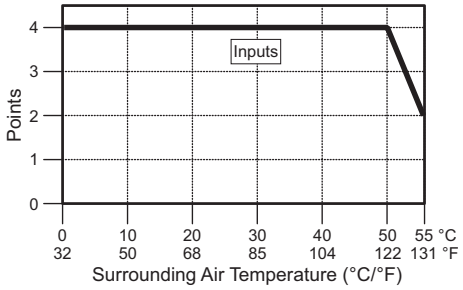
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C0-12DRE-D Temperature Derating Chart



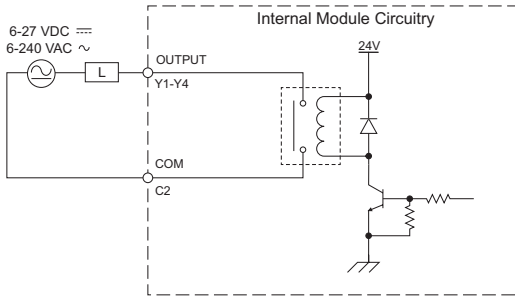
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/ common)

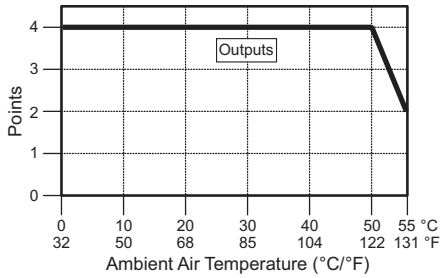
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
120VAC Resistive	500,000 cycles*
120VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C0-12DRE-D Temperature Derating Chart



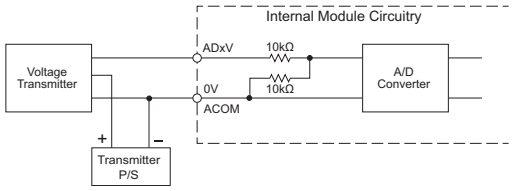
Ethernet Analog PLC

C0-12DRE-D (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

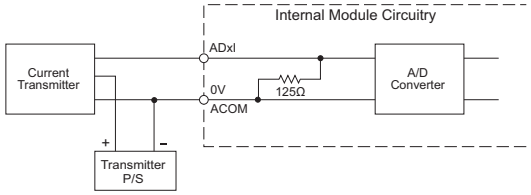
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

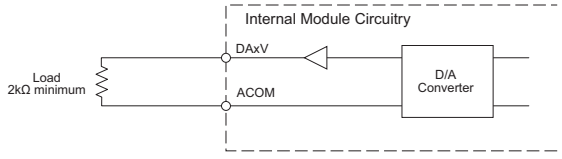
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

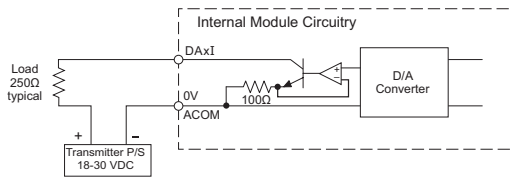
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

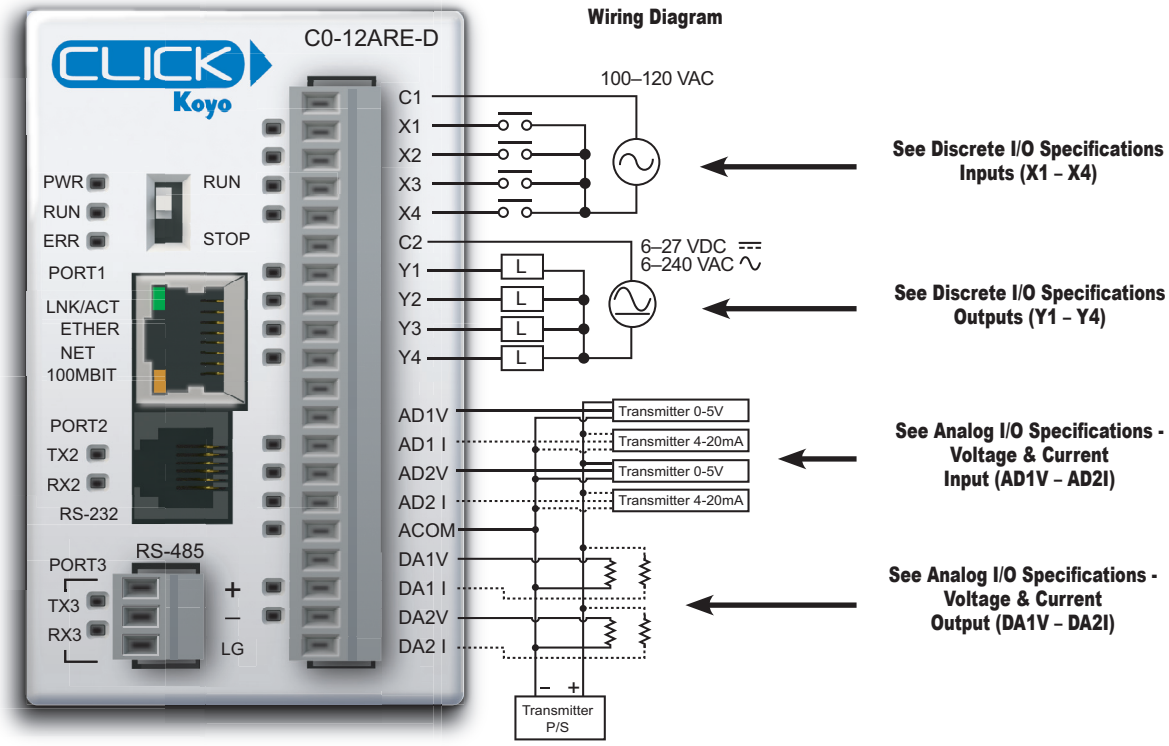
Analog Current Output Circuit



Ethernet Analog PLC

C0-12ARE-D $294.00

4 AC Input (Sink/Source)/4 Relay Output;
2 Analog Voltage/Current Input
2 Analog Voltage/Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

IMPORTANT: *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).*

General Specifications	
Current Consumption at 24VDC	160mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.4 oz [154g]

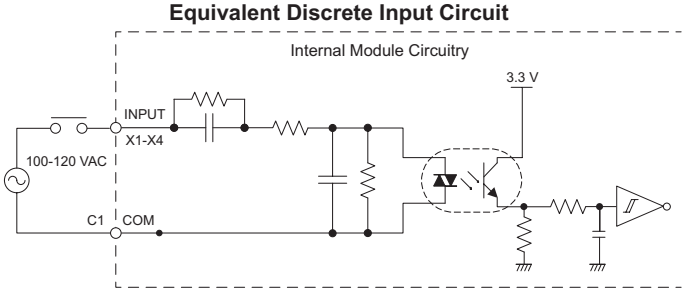
Ethernet Analog PLC

C0-12ARE-D (cont'd)

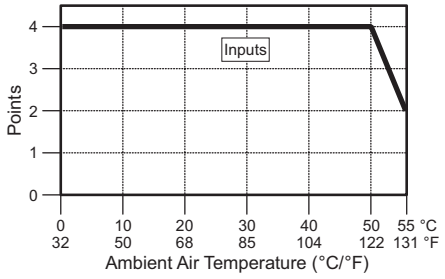
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C0-12ARE-D Temperature Derating Chart



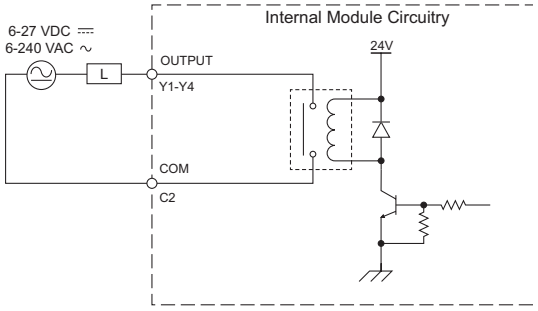
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

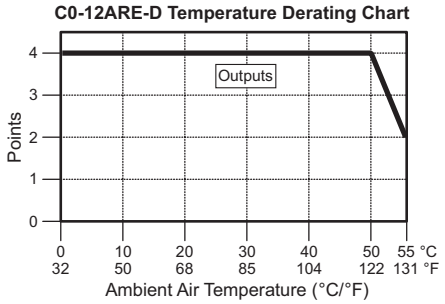
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
120VAC Resistive	500,000 cycles*
120VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C0-12ARE-D Temperature Derating Chart



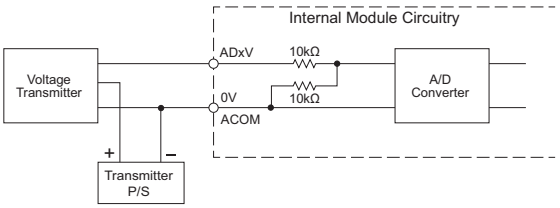
Ethernet Analog PLC

C0-12ARE-D (cont'd)

AD1V - AD2V

Analog Specifications - Voltage Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	0–5 VDC (6VDC Max.)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	20kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs Temperature Error	±100ppm / °C maximum

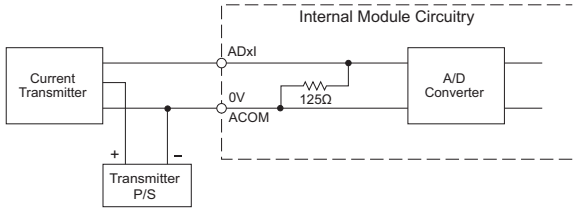
Analog Voltage Input Circuit



AD1I - AD2I

Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

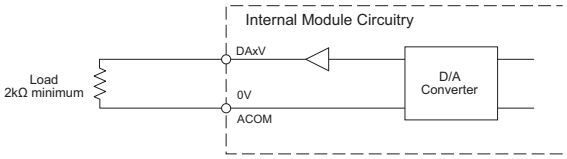
Analog Current Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0–5 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	2kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

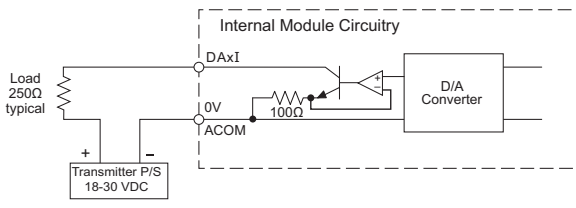
Analog Voltage Output Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4–20 mA (sink)
Resolution	12-bit
Conversion Time	1ms
Loop Supply Voltage	DC 18–30 V
Load Impedance	250Ω Load Power Supply: DC 18V: 600Ω maximum DC 24V: 900Ω maximum DC 30V: 1200Ω maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

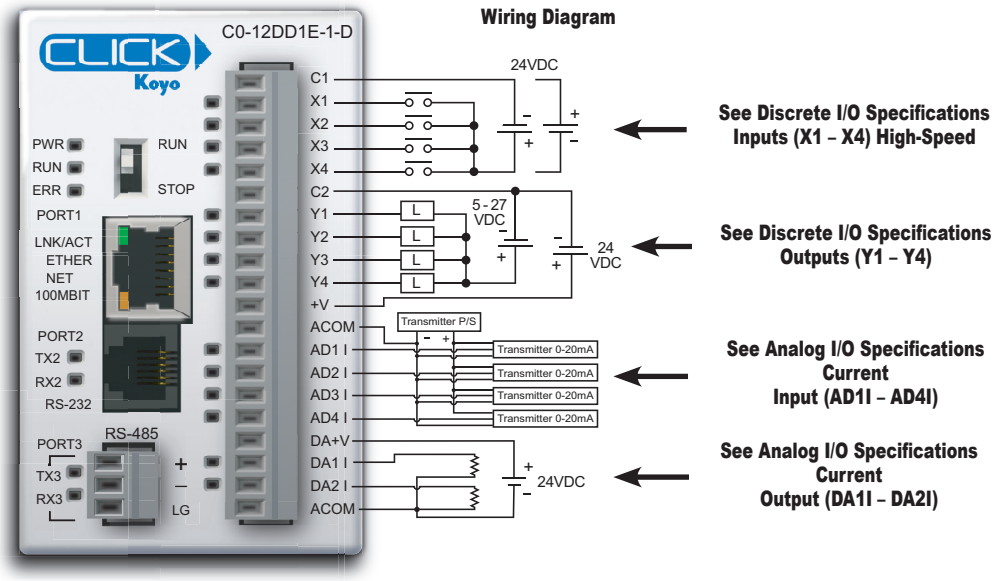
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DD1E-1-D $278.00

4 DC Input (Sink/Source)/4 Sinking DC Output
4 Analog Current Input
2 Analog Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.08 oz [144g]

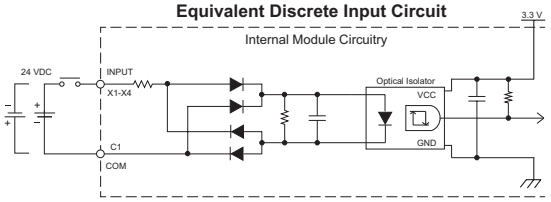
Ethernet Analog PLC

C0-12DD1E-1-D (cont'd)

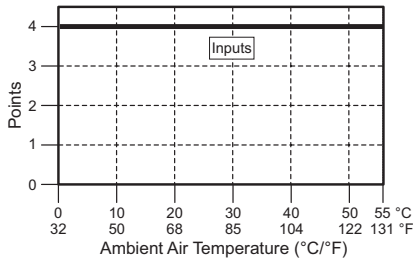
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



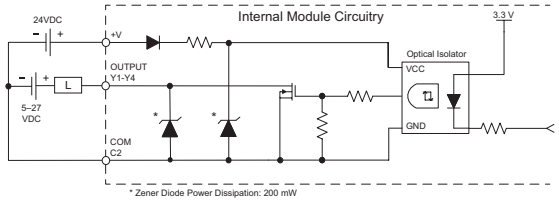
C0-12DD1E-1-D Temperature Derating Chart



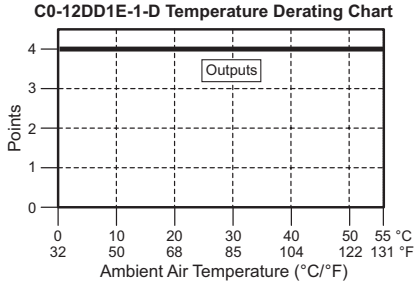
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (All points on)

Equivalent Discrete Output Circuit



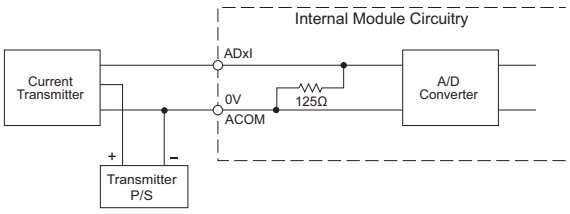
C0-12DD1E-1-D Temperature Derating Chart



AD1V - AD4V

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

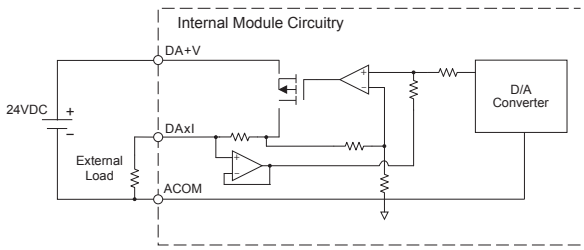
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω TYP (200–800 Ω)
Loop Supply Voltage	DC 24V TYP (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum
External DC Power Required	21.6–26.4 VDC

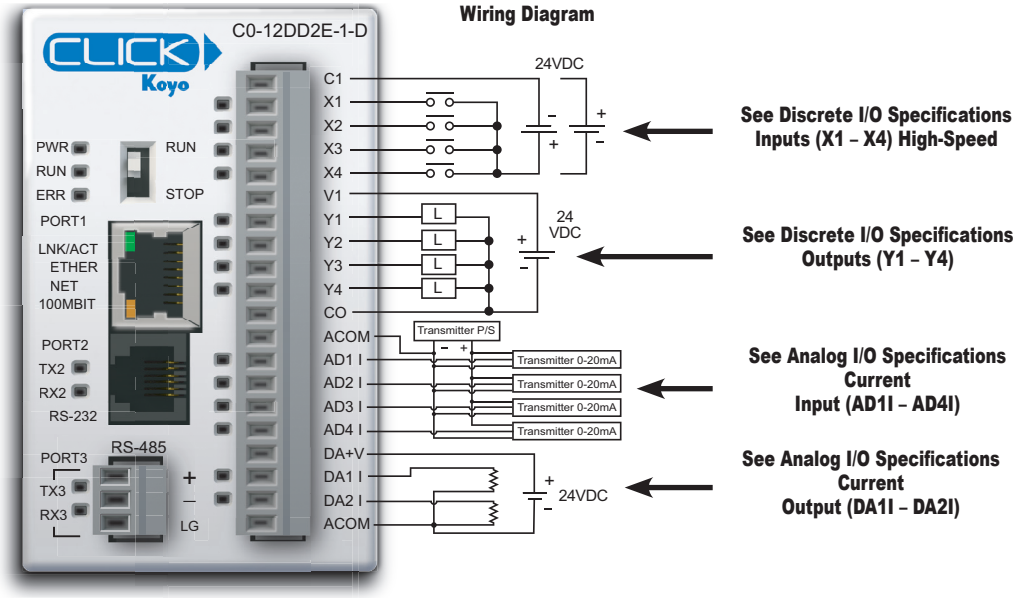
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DD2E-1-D $277.00

4 DC Input (Sink/Source)/ 4 Sourcing DC Output
4 Analog Current Input
2 Analog Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.08 oz [144g]

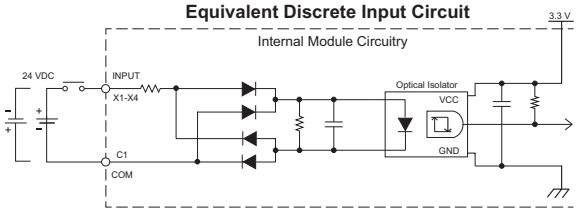
Ethernet Analog PLC

C0-12DD2E-1-D (cont'd)

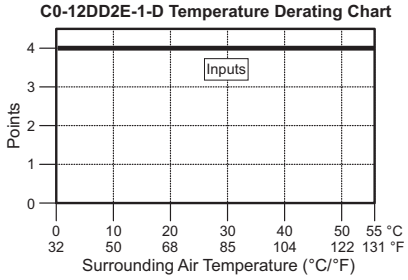
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



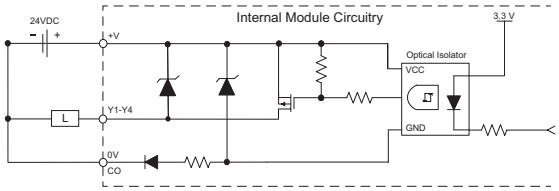
C0-12DD2E-1-D Temperature Derating Chart



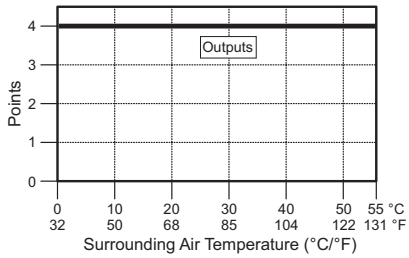
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common CO
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

Equivalent Discrete Output Circuit



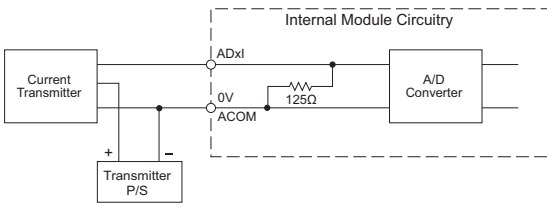
C0-12DD2E-1-D Temperature Derating Chart



AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

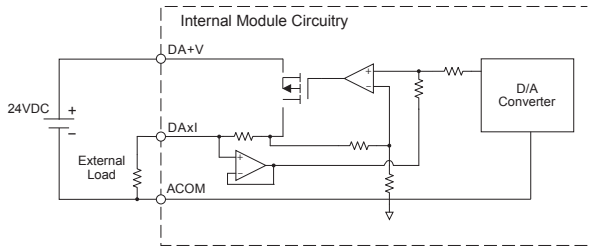
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω Typ (200Ω to 800Ω)
Loop Supply Voltage	24VDC Typ (21.6–26.4 VDC)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±120ppm / °C maximum
External DC Power Required	21.6–26.4 VDC

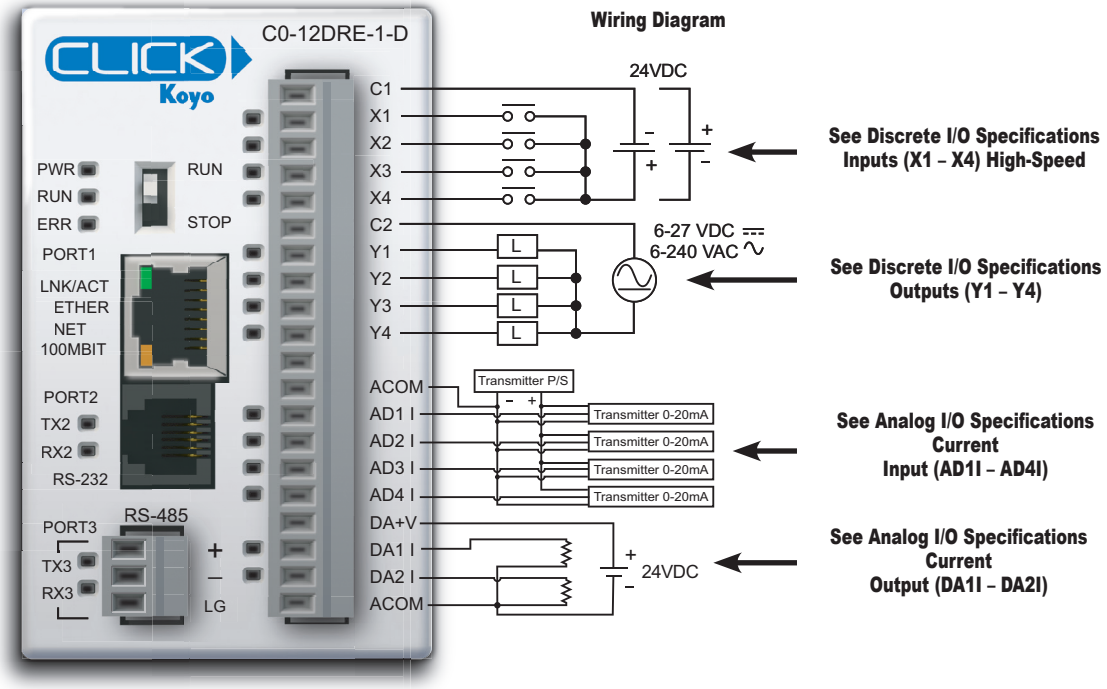
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DRE-1-D $293.00

4 DC Input (Sink/Source)/4 Relay Output
4 Analog Current Input
2 Analog Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	160mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.3 oz [151g]

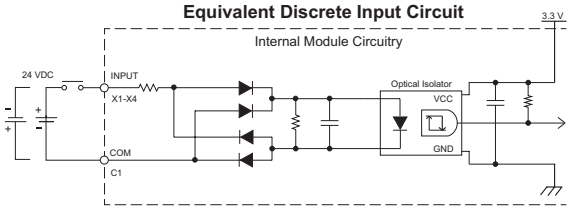
Ethernet Analog PLC

C0-12DRE-1-D (cont'd)

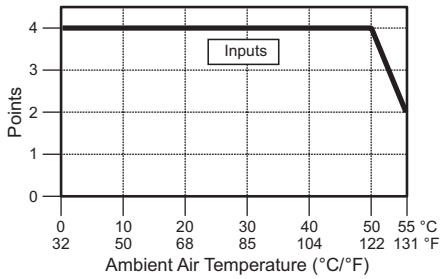
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Input Impedance	3.9 kΩ @ 24VDC
Input Frequency (Max)	X1-X4: 100kHz
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



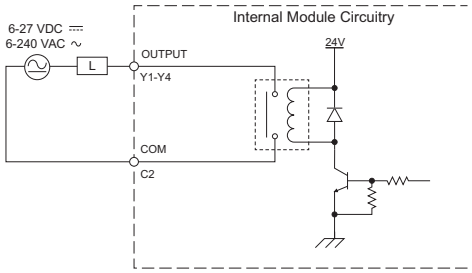
C0-12DRE-1-D Temperature Derating Chart



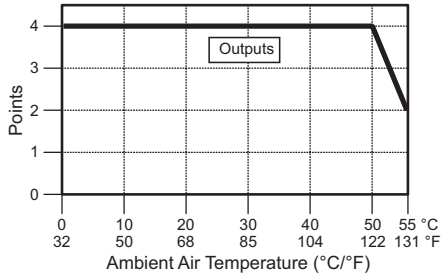
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

Equivalent Discrete Output Circuit



C0-12DRE-1-D Temperature Derating Chart



Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
120VAC Resistive	500,000 cycles*
120VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

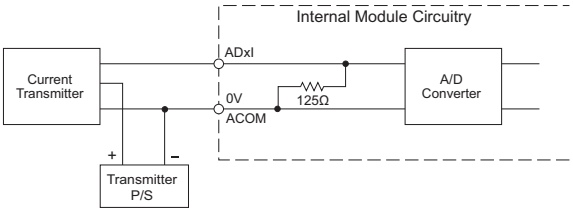
Ethernet Analog PLC

C0-12DRE-1-D (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (Current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

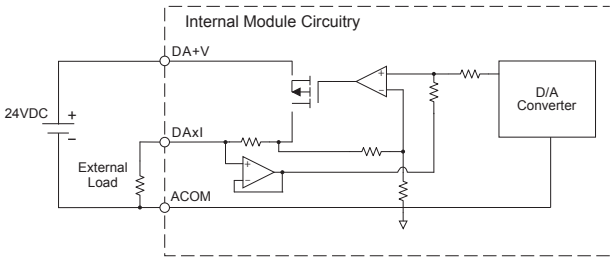
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	1ms
Load Impedance	250Ω Typ (200Ω to 800Ω)
Loop Supply Voltage	24VDC Typ (21.6–26.4)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±120ppm / °C maximum
External DC Power Required	21.6–26.4 VDC

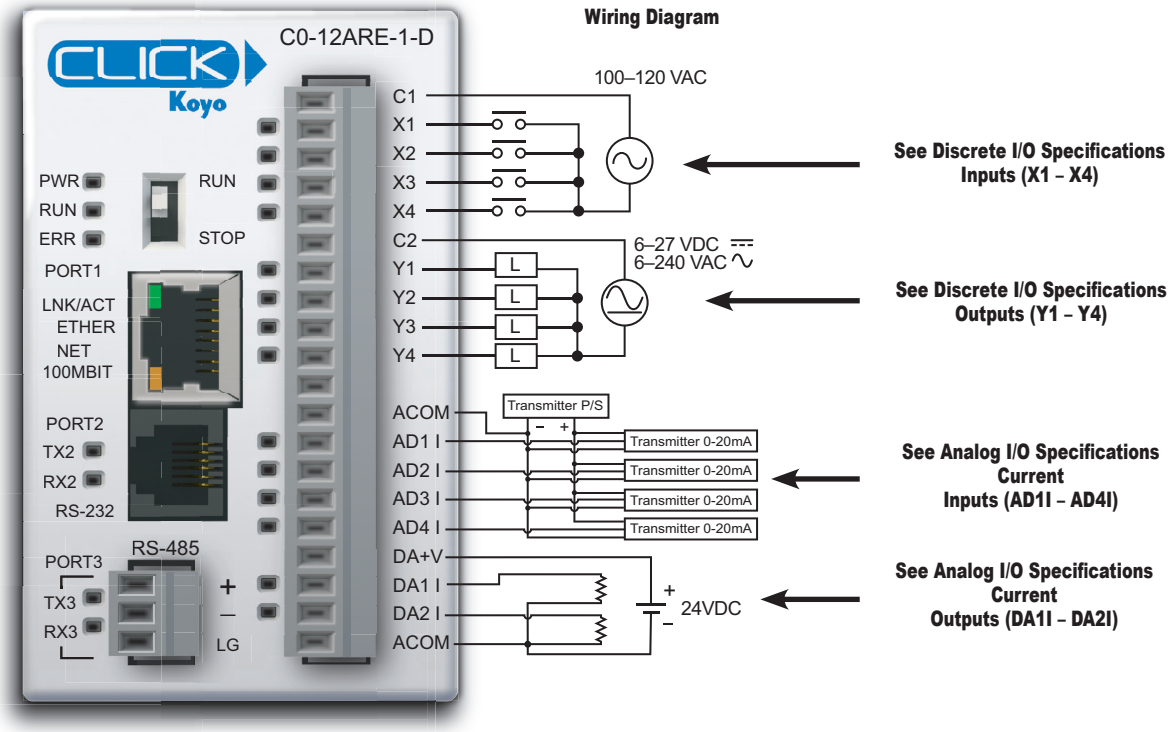
Analog Current Output Circuit



Ethernet Analog PLC

C0-12ARE-1-D $294.00

4 AC Input (Sink/Source)/4 Relay Output
4 Analog Current Input
2 Analog Current Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	160mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.4 oz [154g]

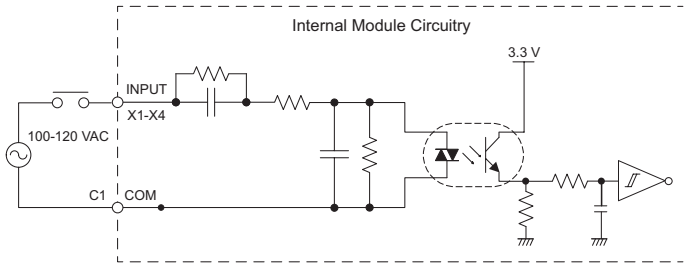
Ethernet Analog PLC

C0-12ARE-1-D (cont'd)

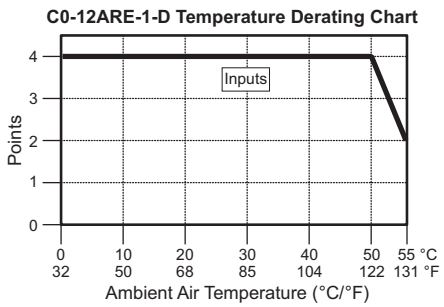
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C0-12ARE-1-D Temperature Derating Chart



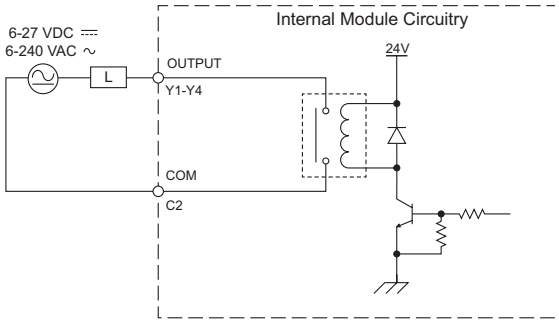
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

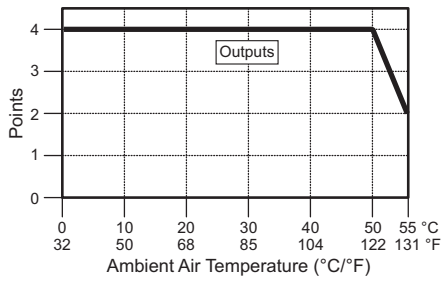
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
120VAC Resistive	500,000 cycles*
120VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C0-12ARE-1-D Temperature Derating Chart



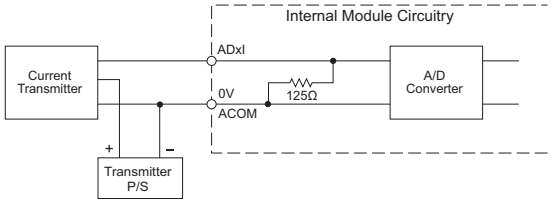
Ethernet Analog PLC

C0-12ARE-1-D (cont'd)

AD1I - AD4I

Analog Specifications - Current Input	
Inputs per Module	4 (current)
Input Range	0–20 mA (sink)
Resolution	12-bit
Conversion Time	50ms
Input Impedance	125Ω
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

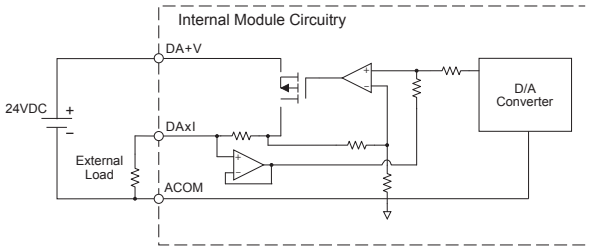
Analog Current Input Circuit



DA1I - DA2I

Analog Specifications - Current Output	
Outputs per Module	2 (current)
Output Range	4–20 mA (source)
Resolution	12-bit
Conversion Time	2.5 ms
Load Impedance	250Ω Typ (200Ω to 800Ω)
Loop Supply Voltage	DC 24V Typ (21.6–26.4 V)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mA maximum
Accuracy vs. Temperature Error	±120ppm / °C maximum
External DC Power Required	21.6–26.4 VDC

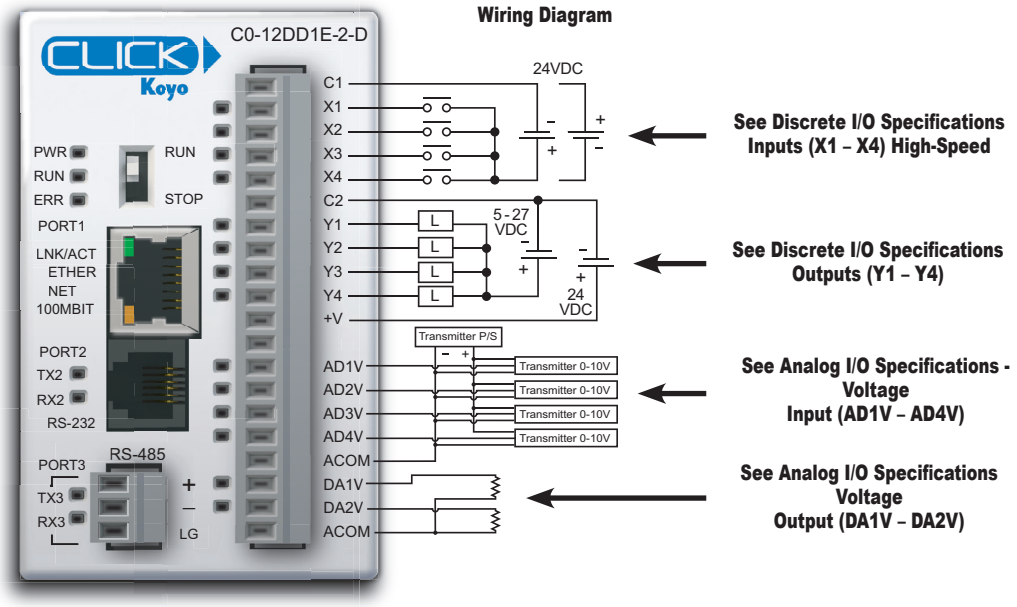
Analog Current Output Circuit



Ethernet Analog PLC

C0-12DD1E-2-D $278.00

4 DC Input (Sink/Source)/4 Sinking DC Output
4 Analog Voltage Input
2 Analog Voltage Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

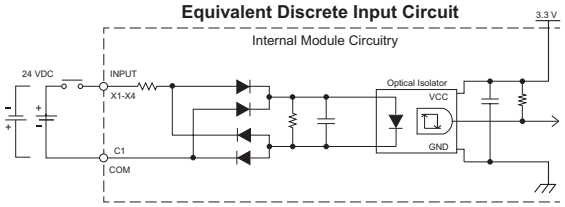
General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.08 oz [144g]

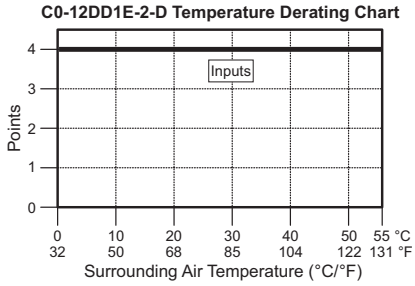
Ethernet Analog PLC

C0-12DD1E-2-D (cont'd)

X1 - X4 (High-Speed)

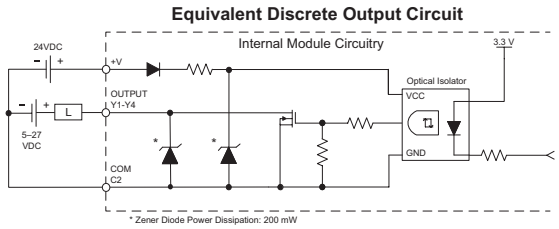
Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs Max 5µs
ON to OFF Response	Typ 1µs Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

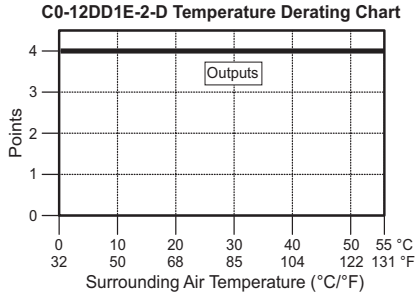




Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Sink)
Operating Voltage Range	5–27 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	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)
External DC Power Required	20–28 VDC Maximum @ 60mA (all points on)





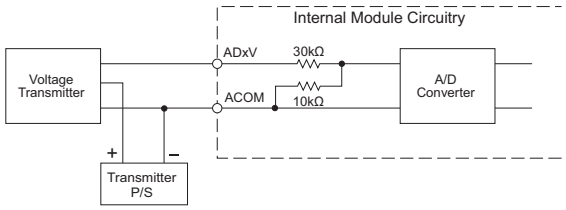
Ethernet Analog PLC

C0-12DD1E-2-D (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

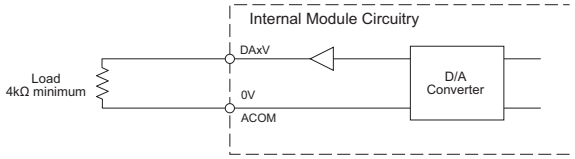
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

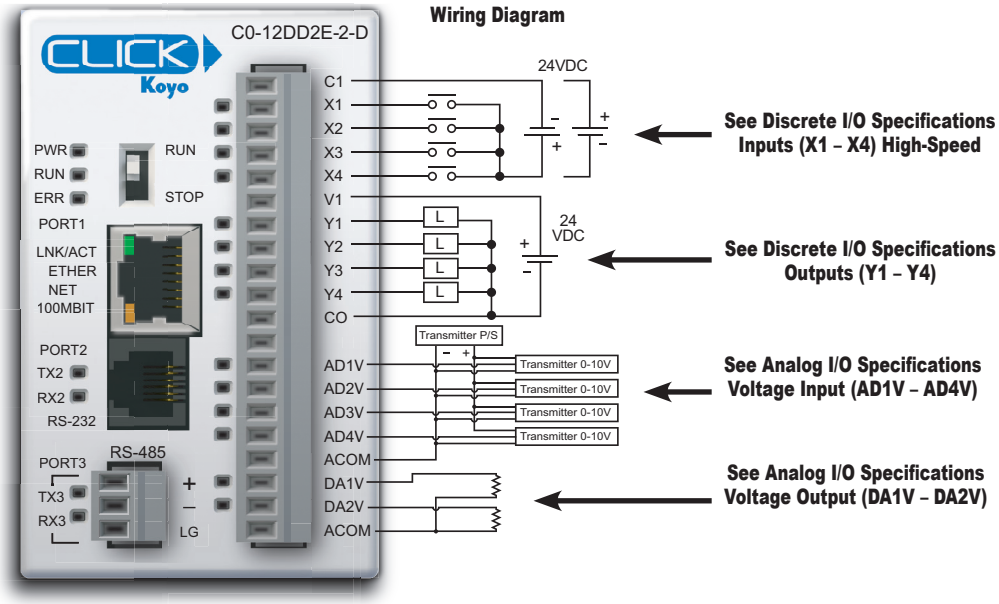
Analog Voltage Output Circuit



Ethernet Analog PLC

C0-12DD2E-2-D $276.00

4 DC Input (Sink/Source)/ 4 Sourcing DC Output;
4 Analog Voltage Input
2 Analog Voltage Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.08 oz [144g]

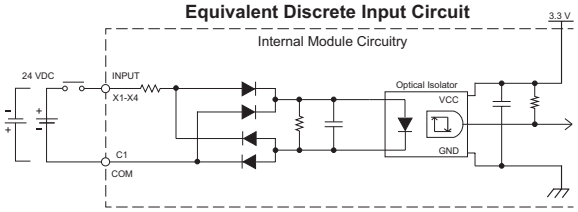
Ethernet Analog PLC

C0-12DD2E-2-D (cont'd)

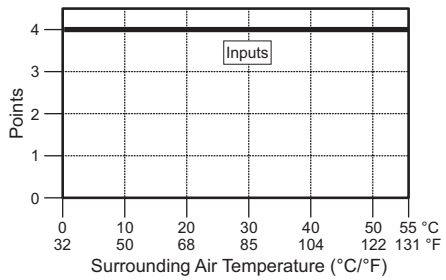
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



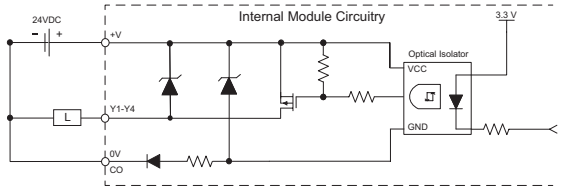
C0-12DD2E-2-D Temperature Derating Chart



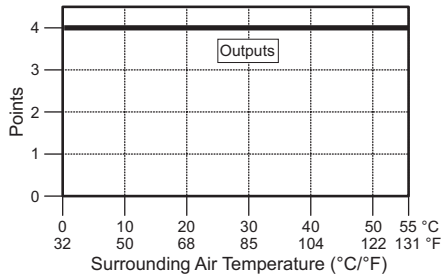
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Operating Voltage Range	24VDC
Output Voltage Range	19.2–30 VDC
Maximum Output Current	0.1 A/point , 0.4 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC@ 0.1 mA
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	< 5µs
ON to OFF Response	< 5µs
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

Equivalent Discrete Output Circuit



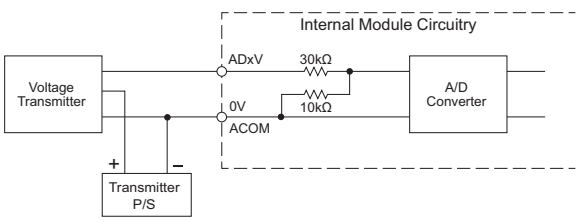
C0-12DD2E-2-D Temperature Derating Chart



AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

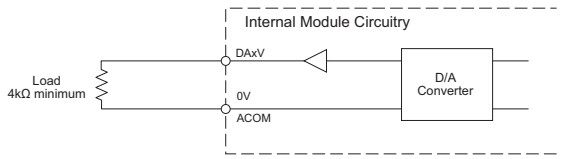
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

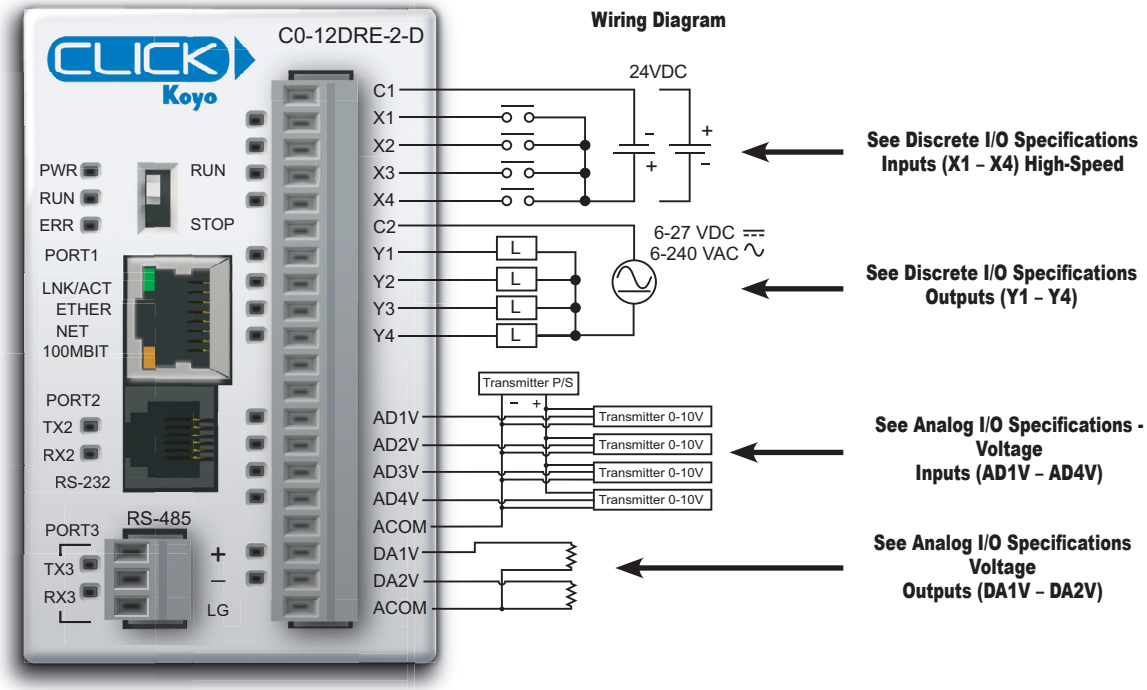
Analog Voltage Output Circuit



Ethernet Analog PLC

C0-12DRE-2-D $292.00

4 DC Input (Sink/Source)/4 Relay Output
4 Analog Voltage Input/
2 Analog Voltage Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	160mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.4 oz [154g]

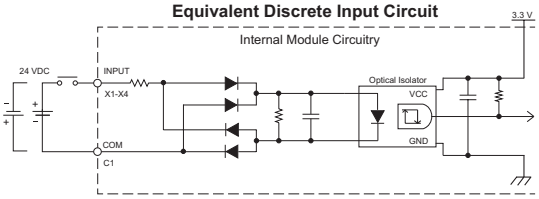
Ethernet Analog PLC

C0-12DRE-2-D (cont'd)

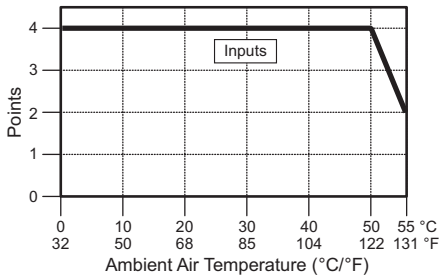
X1 - X4 (High-Speed)

Discrete I/O Specifications - Inputs	
Inputs per Module	4 (sink/source)
Operating Voltage Range	24VDC
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 6.5 mA @ 24VDC
Maximum Input Current	7mA @ 26.4 VDC
Input Impedance	3.9 kΩ @ 24VDC
ON Voltage Level	> 19VDC
OFF Voltage Level	< 2VDC
Minimum ON Current	4.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Typ 3µs, Max 5µs
ON to OFF Response	Typ 1µs, Max 3µs
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



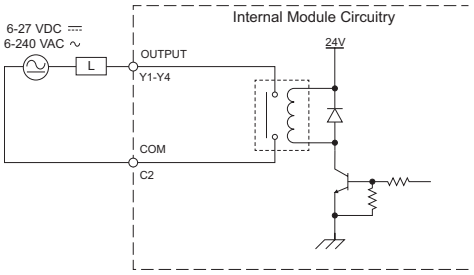
C0-12DRE-2-D Temperature Derating Chart



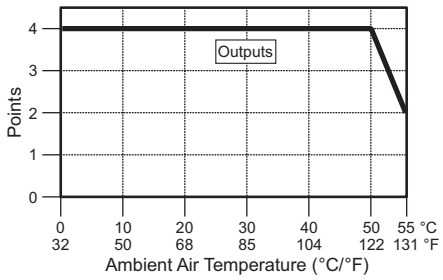
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC / 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point (resistive)
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

Equivalent Discrete Output Circuit



C0-12DRE-2-D Temperature Derating Chart



Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles*
30VDC Solenoid	50,000 cycles*
120VAC Resistive	500,000 cycles*
120VAC Solenoid	200,000 cycles*

*ON to OFF = 1 cycle

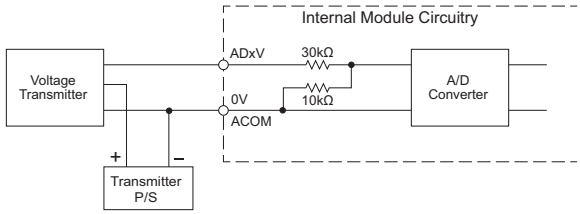
Ethernet Analog PLC

C0-12DRE-2-D (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

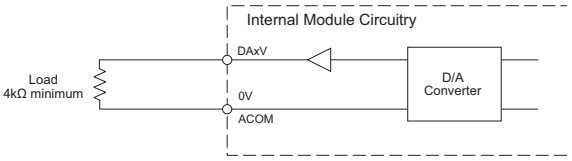
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

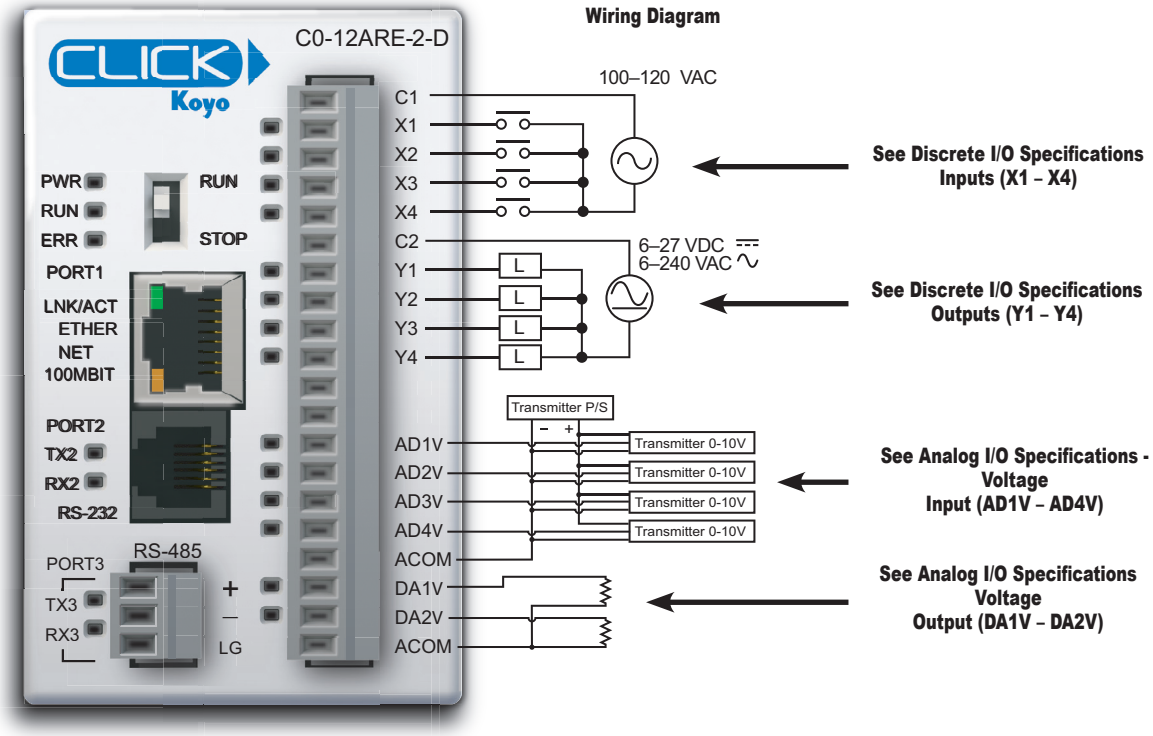
Analog Voltage Output Circuit



Ethernet Analog PLC

C0-12ARE-2-D $294.00

4 AC Input (Sink/Source)/4 Relay Output;
4 Analog Voltage Input
2 Analog Voltage Output Micro PLC



NOTE: There are no ***ZIP***Link pre-wired PLC connection cables and modules for the Analog PLCs (cannot mix discrete I/O and analog I/O signals in a ***ZIP***Link cable).
NOTE: When using Ethernet Analog PLCs, you must use CLICK programming software version V2.20 or later.

General Specifications	
Current Consumption at 24VDC	140mA
Terminal Block Replacement Part No.	C0-16TB
Drawing Link	PDF
Weight	5.4 oz [155g]

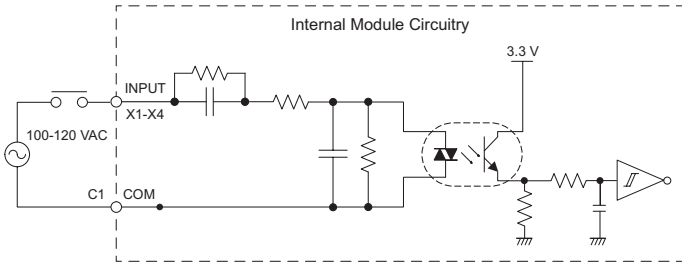
Ethernet Analog PLC

C0-12ARE-2-D (cont'd)

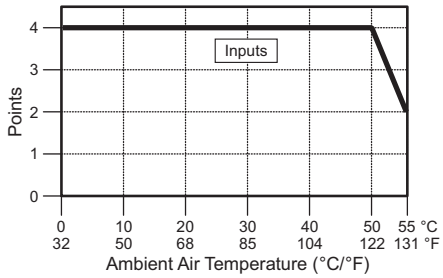
X1 - X4

Discrete I/O Specifications - Inputs	
Inputs per Module	4
Operating Voltage Range	100–120 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @100VAC (60Hz)
Max. Input Current	16mA @ 144VAC
Input Impedance	15kΩ @ 50Hz 12kΩ @ 60Hz
ON Voltage Level	> 60VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

Equivalent Discrete Input Circuit



C0-12ARE-2-D Temperature Derating Chart



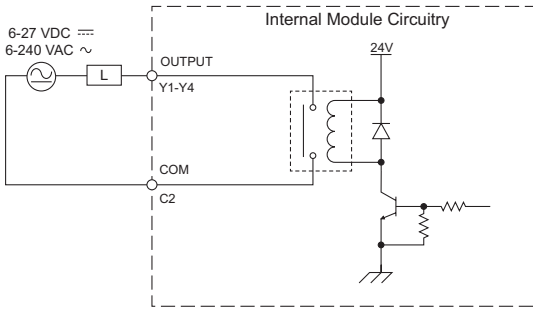
Y1 - Y4

Discrete I/O Specifications - Outputs	
Outputs per Module	4
Operating Voltage Range	6–27 VDC, 6–240 VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1A/point
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED)
Commons per Module	1 (4 points/common)

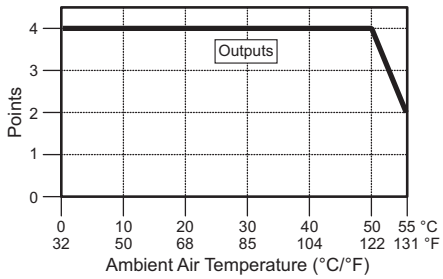
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1A***
30VDC Resistive	300,000 cycles
30VDC Solenoid	50,000 cycles
120VAC Resistive	500,000 cycles
120VAC Solenoid	200,000 cycles

ON to OFF = 1 cycle

Equivalent Discrete Output Circuit



C0-12ARE-2-D Temperature Derating Chart



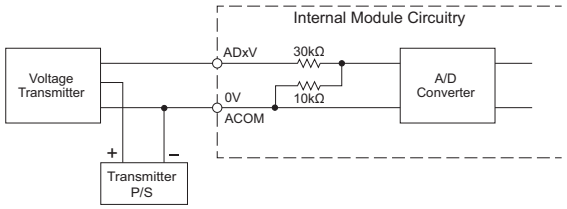
Ethernet Analog PLC

C0-12ARE-2-D (cont'd)

AD1V - AD4V

Analog Specifications - Voltage Input	
Inputs per Module	4 (voltage)
Input Range	0–10 VDC
Resolution	12-bit
Conversion Time	50ms
Input Impedance	40kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs Temperature Error	±100ppm / °C maximum

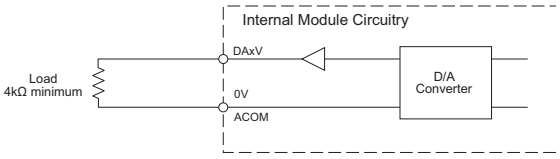
Analog Voltage Input Circuit



DA1V - DA2V

Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage)
Output Range	0–10 VDC
Resolution	12-bit
Conversion Time	1ms
Load Impedance	4kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±25mV maximum
Accuracy vs. Temperature Error	±100ppm / °C maximum

Analog Voltage Output Circuit



CLICK Stackable I/O Module Specifications

General Specifications For All CLICK Stackable I/O Modules

These general specifications apply to all CLICK Stackable I/O Modules. Please refer to the appropriate I/O temperature derating charts under the PLC (CLICK PLC with built-in I/O), Option Slot module (CLICK PLUS only), and Stackable I/O module specification to determine best operating conditions based on the ambient temperature of your particular application.

NOTE: These modules are available to use with CLICK or CLICK PLUS systems.

General Specifications	
Operating Temperature	Analog, analog combo I/O modules only: 32°F to 140°F [0°C to 60°C]; All other modules: 32°F to 131°F [0°C to 55°C], IEC 60068-2-14 (Test Nb, Thermal Shock)
Storage Temperature	–4°F to 158°F [–20°C to 70°C] IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)
Ambient Humidity	30% to 95% relative humidity (non–condensing)
Environmental Air	No corrosive gases. Environmental pollution level is 2 (UL840)
Vibration	C0-04POT: IEC60068-2-6 (Test Fc) All other modules: MIL STD 810C, Method 514.2, EC60068-2-27, Category [f], Procedure[VIII] JIS C60068-2-27 (Sine wave vibration test)
Shock	MIL STD 810C, Method 516.2, IEC60068-2-27, JIS C60068-2-27, Category [f], Procedure[VIII]
Noise Immunity	<EN61131-2> EN61000-4-2 (ESD) EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-5 (Surge) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity) <Local Test> Impulse noise 1µs, 1000V RFI: No interference measured at 150 and 450 MHz (5w/15cm)
Emissions	EN55011:1998 Class A; EN61000-6-4:2007+A1:2011
Agency Approvals	UL508 (excluding C0-04POT), UL61010-2-201 (File No. E157382); CE (EN61131-2); CUL Canadian C22.2
Other	RoHS 2011/65/EU Amendment (EU)2015/863

CLICK Stackable I/O Module Specifications

C0-08SIM $57.00

8-Point Specialty Toggle Switch Input Module
8-point toggle switch input module

Input Specifications	
Inputs per Module	8 Toggle Switches
OFF to ON Response	Max 140ms, Typ 90ms
ON to OFF Response	Max 110ms, Typ 60ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Bus Power Required	Max. 50mA (All points ON)
Drawing Link	PDF
Weight	2.9 oz [84g]

CAUTION: *THE C0-08SIM UNIT TOGGLE SWITCH CAN GET HOT WHEN MOUNTED IN HOT ENVIRONMENT. WEAR HEAT-RESISTANT GLOVES BEFORE USE, AS IT MAY CAUSE BURNS.*

CLICK Stackable I/O Module Specifications

C0-04POT $73.00

8-Point Specialty Analog Input Module
CLICK simulator input module, 4-channel, potentiometer, 12-bit.

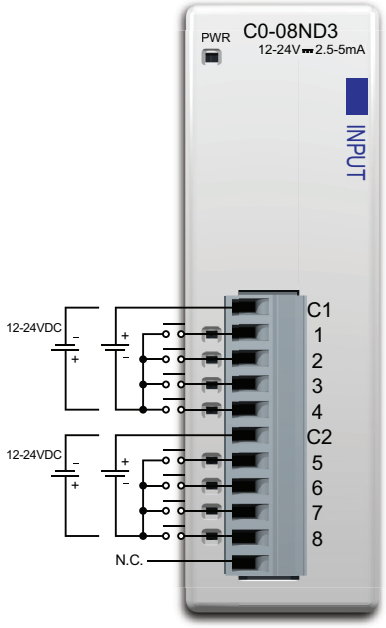
Input Specifications	
Inputs per Module	4 Potentiometers
Resolution	12-bit
Total Rotation Angle	280° ±10°
Conversion Time	25ms
Input Stability	±2LSB maximum
Full-Scale Calibration Error	±2% maximum
Offset Calibration Error	±13LSB maximum
Accuracy vs Temperature Error	±100ppm/°C maximum
Instantaneous Deviation During Noise Test	±20% of full scale maximum
Bus Power Required	30mA maximum
Drawing Link	PDF
Weight	2.9 oz [84g]

CLICK Stackable I/O Module Specifications

C0-08ND3 $53.00

8-Point Sink/Source DC Input Module
8-point 12–24 VDC current sinking or sourcing input module, 2 commons, isolated, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

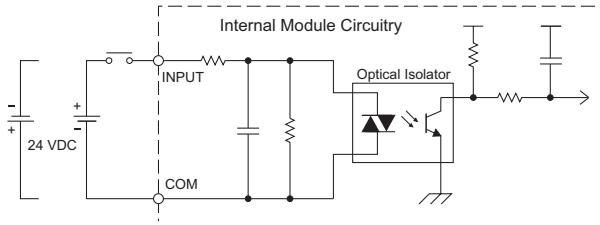
Wiring Diagram



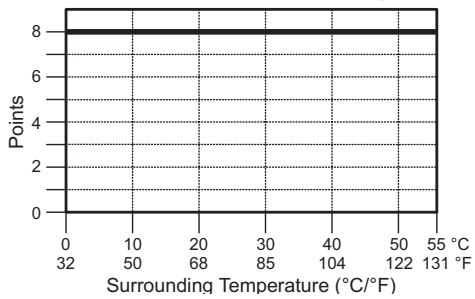
N.C. = Not Connected

Input Specifications	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	12–24 VDC
Input Voltage Range	10.8-26.4 VDC
Input Current	Typ 5mA @ 24VDC
Maximum Input Current	7 mA @ 26.4 VDC
Input Impedance	4.7 kΩ @ 24VDC
ON Voltage Level	> 8.0 VDC
OFF Voltage Level	< 3.0 VDC
Minimum ON Current	1.4 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max 3.5 ms, Typ 2 ms
ON to OFF Response	Max 4 ms, Typ 2.5 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 30mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.8 oz [80g]

Equivalent Input Circuit



Input Module Temperature Derating Chart



ZIPLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

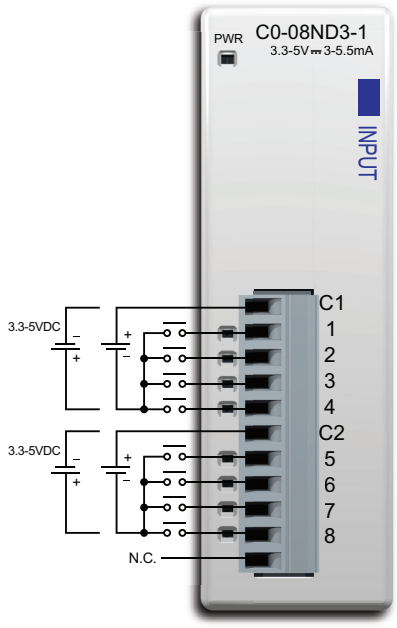
CLICK Stackable I/O Module Specifications

C0-08ND3-1 $53.00

8-Point Sink/Source DC Input Module

8-point 3.3–5 VDC current sinking or sourcing input module, 2 commons, isolated, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

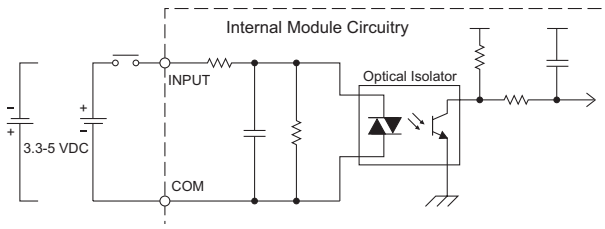
Wiring Diagram



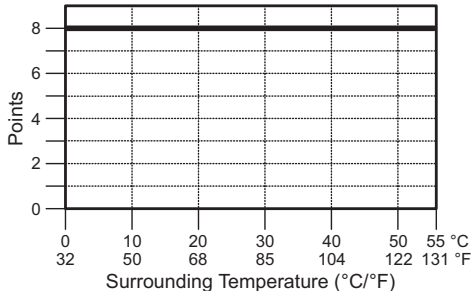
N.C. = Not Connected

Input Specifications	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	3.3-5 VDC
Input Voltage Range	2.8-5.5 VDC
Input Current	Typ 5mA @ 5VDC
Maximum Input Current	7.5 mA @ 5.5 VDC
Input Impedance	680Ω
ON Voltage Level	> 2.2 VDC
OFF Voltage Level	< 0.8 VDC
Minimum ON Current	1.4 mA
Maximum OFF Current	0.2 mA
OFF to ON Response	Max. 3ms Typ. 1.6 ms
ON to OFF Response	Max. 4ms Typ. 2.3 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 30mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.8 oz [80g]

Equivalent Input Circuit



Input Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

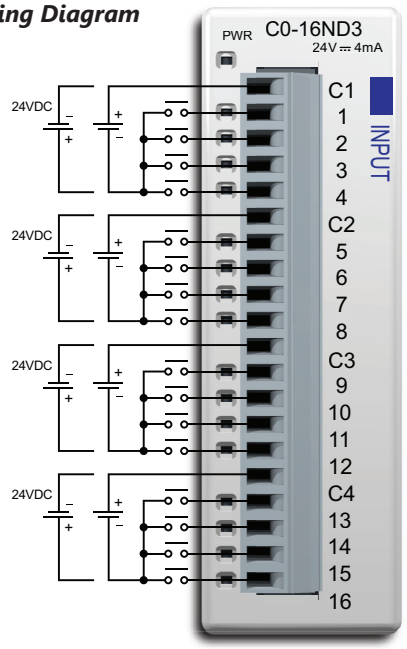
CLICK Stackable I/O Module Specifications

C0-16ND3 $69.00

16-Point Sink/Source DC Input Module

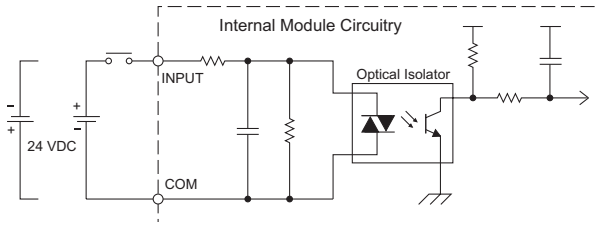
16-point 24VDC current sinking or sourcing input module, 4 commons, isolated, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram

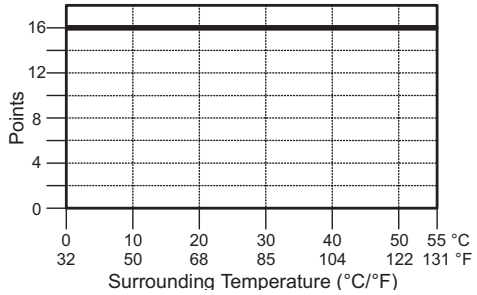


Input Specifications	
Inputs per Module	16 (Sink/Source)
Input Voltage Range	21.6–26.4 VDC
Operating Voltage Range	24VDC
Input Current	Typ 4.0 mA @ 24VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24VDC
ON Voltage Level	> 19VDC
OFF Voltage Level	< 7VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 10ms Typ. 2ms
ON to OFF Response	Max. 10ms Typ. 3ms
Status Indicators	Logic Side (16 points, green LED) Power Indicator (green LED)
Commons	4 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 40mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

Equivalent Input Circuit



Input Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

ZL-LTB16-24-1 sensor input module

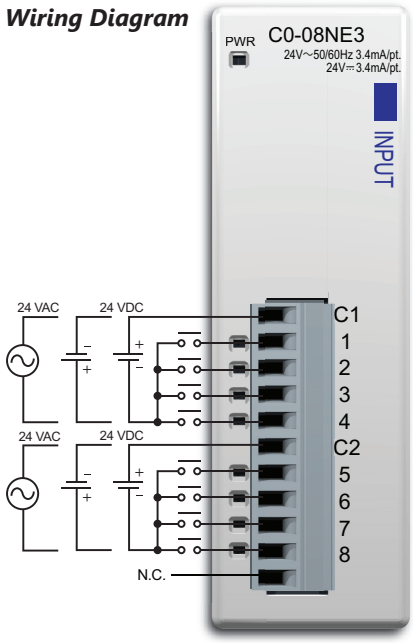
CLICK Stackable I/O Module Specifications

C0-08NE3 $57.00

8-Point Sink/Source AC/DC Input Module

8-point 24VAC / 24VDC current sinking or sourcing input module, 2 commons, 4 points per common, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram

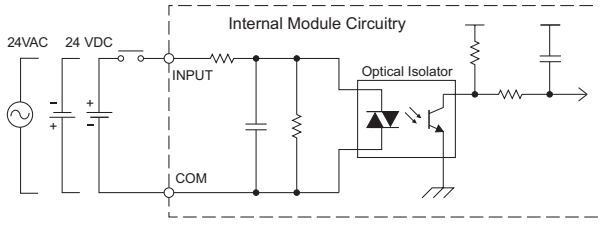


N.C. = Not Connected

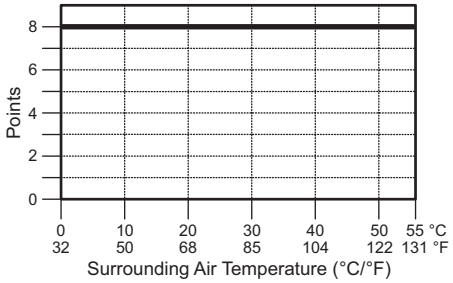
NOTE: When using this module you must also use CLICK programming software version V1.20 or later.

Input Specifications	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VAC/VDC
Input Voltage Range	20.4–27.6 VAC/VDC
Peak Voltage	27.6 VAC/VDC
AC Frequency	47-63 Hz
Input Current	Typ 3.4 mA @ 24 VAC/VDC
Maximum Input Current	5.0 mA @ 27.6 VAC/VDC
Input Impedance	6.8 kΩ @ 24 VAC/VDC
ON Voltage Level	> 18.0 VAC/VDC
OFF Voltage Level	< 4.0 VAC/VDC
Minimum ON Current	2.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	5-40 ms
ON to OFF Response	10-50 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 30mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.9 oz [82g]

Equivalent Input Circuit



Input Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

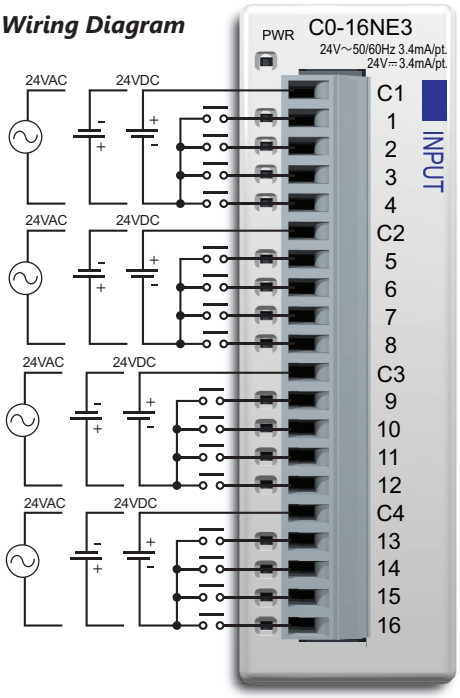
CLICK Stackable I/O Module Specifications

C0-16NE3 $78.00

16-Point Sink/Source AC/DC Input Module

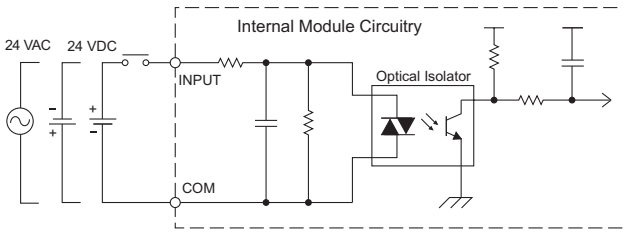
16-point 24VAC / 24VDC current sinking or sourcing input module, 4 commons, 4 points per common, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram

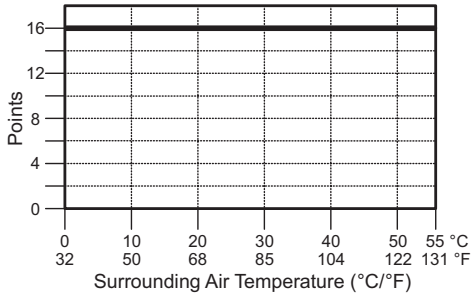


NOTE: When using this module you must also use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Input Module Temperature Derating Chart



Input Specifications	
Inputs per Module	16 (Sink/Source)
Operating Voltage Range	24 VAC/VDC
Input Voltage Range	20.4–27.6 VAC/VDC
Peak Voltage	27.6 VAC/VDC
AC Frequency	47-63 Hz
Input Current	Typ 3.4 mA @ 24 VAC/VDC
Maximum Input Current	5.0 mA @ 27.6 VAC/VDC
Input Impedance	6.8 kΩ @ 24 VAC/VDC
ON Voltage Level	> 18.0 VAC/VDC
OFF Voltage Level	< 4.0 VAC/VDC
Minimum ON Current	2.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	5-40 ms
ON to OFF Response	10-50 ms
Status Indicators	Logic Side (16 points, green LED) Power Indicator (green LED)
Commons	4 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 40mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

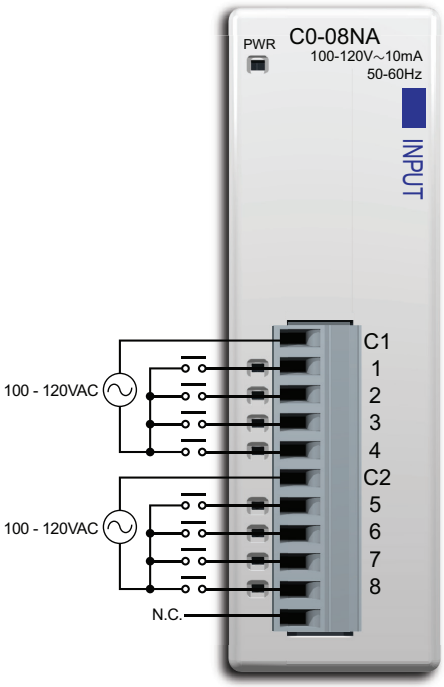
ZL-LTB16-24-1 sensor input module

CLICK Stackable I/O Module Specifications

C0-08NA $63.00

8-Point AC Input Module
8-point 100–120 VAC input module, 2 commons, isolated, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

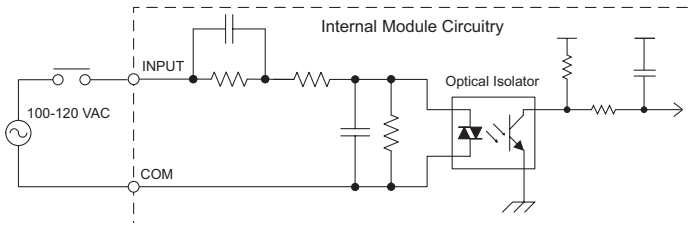
Wiring Diagram



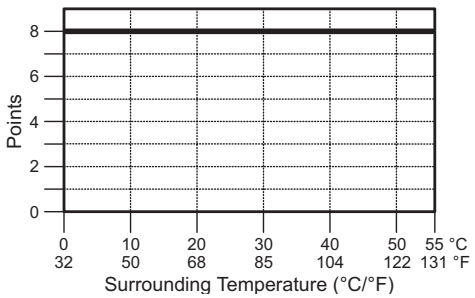
N.C. = Not Connected

Input Specifications	
Inputs per Module	8
Operating Voltage Range	100–120 VAC
Input Voltage Range	80–144 VAC
AC Frequency	47–63 Hz
Input Current	Typ 8.5 mA @ 100VAC (50Hz) Typ 10mA @ 100VAC (60Hz)
Maximum Input Current	16mA @ 144VAC
Input Impedance	15kΩ (50Hz), 12kΩ (60Hz)
ON Voltage Level	> 70VAC
OFF Voltage Level	< 20VAC
Minimum ON Current	5mA
Maximum OFF Current	2mA
OFF to ON Response	< 40ms
ON to OFF Response	< 40ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 30mA (All Inputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.8 oz [80g]

Equivalent Input Circuit



Input Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

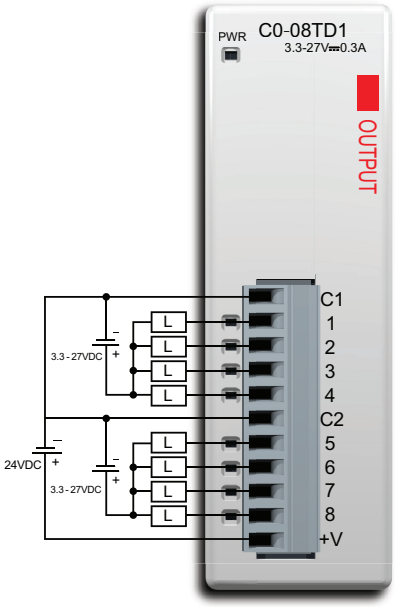
CLICK Stackable I/O Module Specifications

C0-08TD1 $55.00

8-Point Sinking DC Output Module

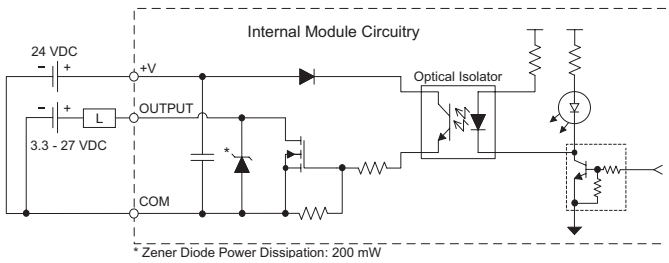
8-point 3.3-27 VDC current sinking output module, 2 commons, 0.3 A/pt, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram

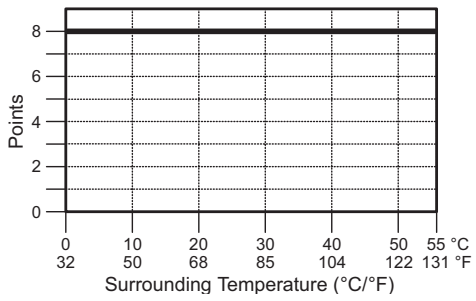


Output Specifications	
Outputs per Module	8 (Sink)
Operating Voltage Range	3.3–27 VDC
Output Voltage Range	2.8–30 VDC
Maximum Output Current	0.3 A/point , 1.2 A/common
Minimum Output Current	0.5 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	1.5 VDC @ 0.3 A
Maximum Inrush Current	1 A for 10ms
OFF to ON Response	< 0.5 ms
ON to OFF Response	< 0.5 ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	2 (4 points/common)
External DC Power Required	21.6–26.4 VDC Max. 15mA (All Outputs ON)
Bus Power Required (24VDC)	Max. 50mA (All Outputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.8 oz [80g]

Equivalent Output Circuit



Output Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

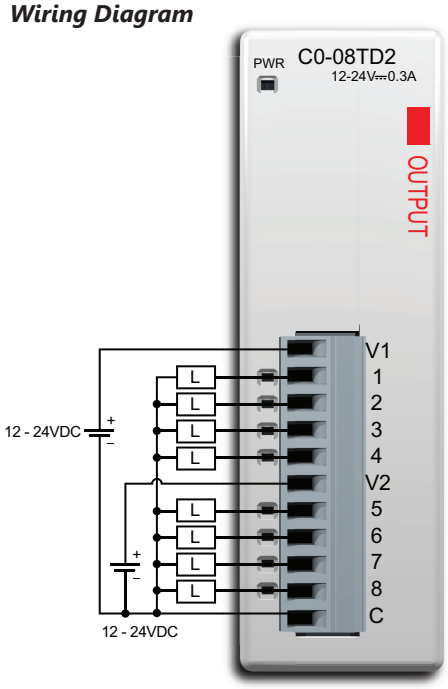
11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

CLICK Stackable I/O Module Specifications

C0-08TD2 $57.00

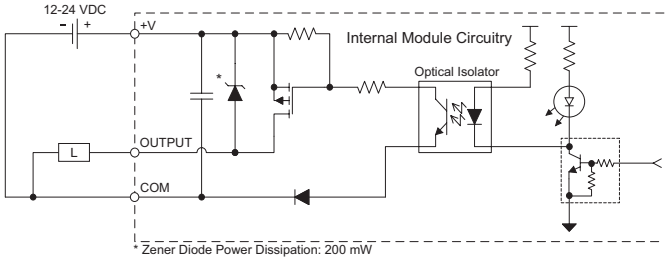
8-Point Sourcing DC Output Module
8-point 12–24 VDC current sourcing output module, 1 common, 0.3 A/pt, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram

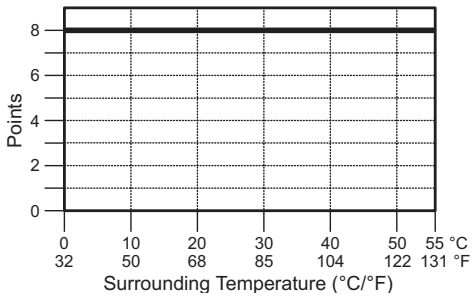


Output Specifications	
Outputs per Module	8 (Source)
Operating Voltage Range	12–24 VDC
Output Voltage Range	9.6–30 VDC
Maximum Output Current	0.3 A/point , 1.2 A/common
Minimum Output Current	0.5 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	1.5 VDC @ 0.3 A
Maximum Inrush Current	1A for 10ms
OFF to ON Response	< 1ms
ON to OFF Response	< 1ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	1 (8 points/common)
Bus Power Required (24VDC)	Max. 50mA (All Outputs On)
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.8 oz [80g]

Equivalent Output Circuit



Output Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

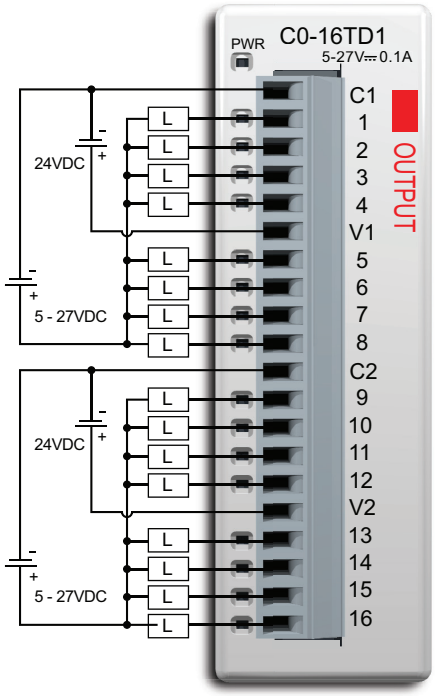
CLICK Stackable I/O Module Specifications

C0-16TD1 $70.00

16-Point Sinking DC Output Module

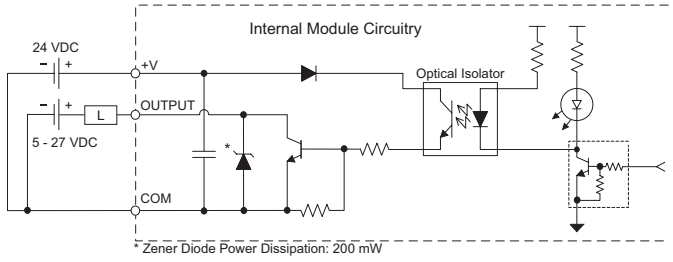
16-point 5–27 VDC current sinking output module, 2 commons, isolated, 0.1 A/pt, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram

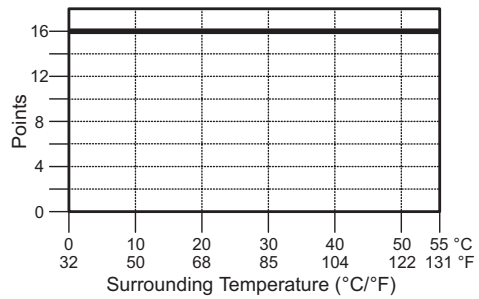


Output Specifications	
Outputs per Module	16 (Sink)
Operating Voltage Range	5–27 VDC
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point , 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	< 0.5 ms
ON to OFF Response	< 0.5 ms
Status Indicators	Logic Side (16 points, red LED) Power Indicator (green LED)
Commons	2 (8 Points/common) Isolated
External DC Power Required	21.6-26.4 VDC Max 100mA (All Outputs On)
Bus Power Required (24VDC)	Max. 80mA (All Outputs On)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

Equivalent Output Circuit



Output Module Temperature Derating Chart



***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-1 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

ZL-RFU20 fuse module

ZL-RRL16-24-1 relay module
Note: 10A/Point (DC)
8A/Point (AC)
(Replaceable relays)

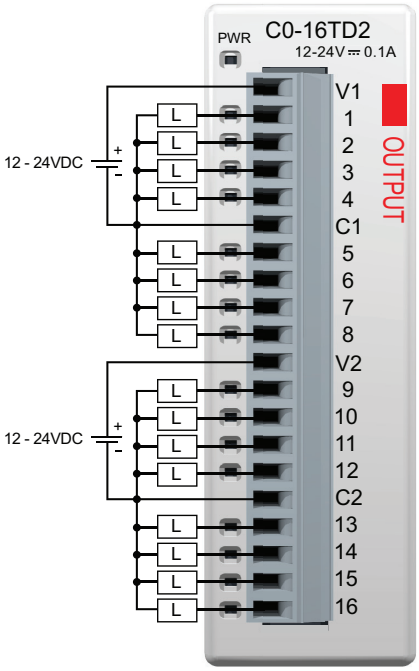
CLICK Stackable I/O Module Specifications

C0-16TD2 $69.00

16-Point Sourcing DC Output Module

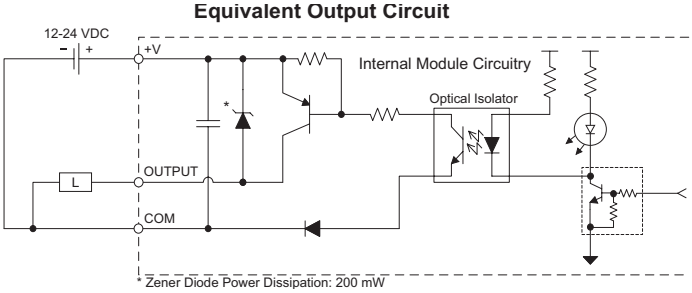
16-point 12–24 VDC current sourcing output module, 2 commons, isolated, 0.1 A/pt, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



Output Specifications	
Outputs per Module	16 (Source)
Operating Voltage Range	12–24 VDC
Output Voltage Range	9.6–30.0 VDC
Maximum Output Current	0.1 A/point , 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	0.6 VDC @ 0.1 A
Maximum Inrush Current	150mA for 10ms
OFF to ON Response	< 0.5 ms
ON to OFF Response	< 0.5 ms
Status Indicators	Logic Side (16 points, red LED) Power Indicator (green LED)
Commons	2 (8 points/common) Isolated
Bus Power Required (24VDC)	Max. 80mA (All Outputs On)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

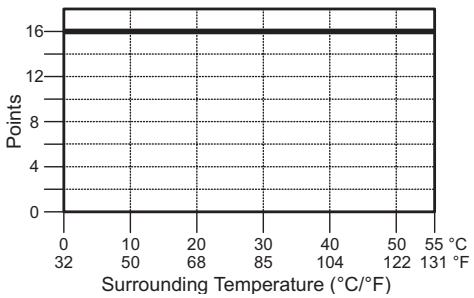
Equivalent Output Circuit



***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-1 (2.0 m length)

Output Module Temperature Derating Chart



ZL-RTB20 20-pin feed-through connector module

ZL-RFU20 fuse module

ZL-RRL16-24-1 relay module
Note: 10A/Point (DC)
8A/Point (AC)
(Replaceable relays)

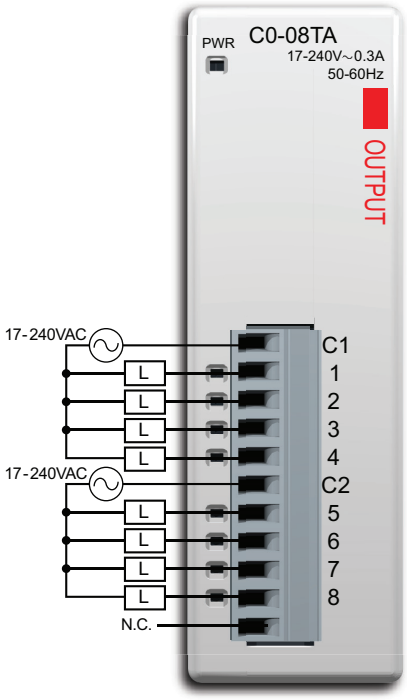
CLICK Stackable I/O Module Specifications

C0-08TA $80.00

8-Point AC Output Module

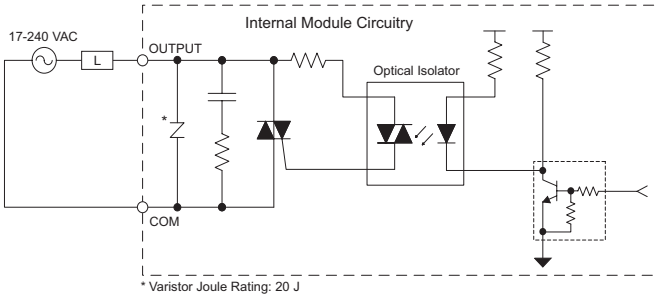
8-point 17–240 VAC triac output module, 2 commons, isolated, 0.3 A/pt, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



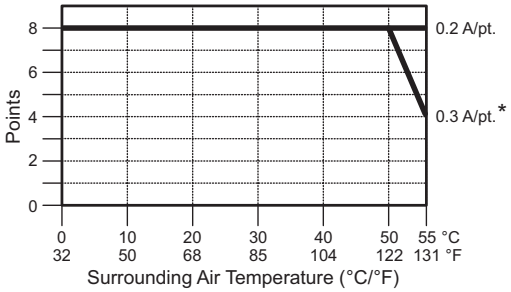
N.C. = Not Connected

Equivalent Output Circuit



* Varistor Joule Rating: 20 J

Output Temperature Derating Chart



* Use every other output.

Output Specifications	
Outputs per Module	8
Operating Voltage Range	17-240 VAC
Output Voltage Range	13.5-288 VAC
AC Frequency	47–63 Hz
Maximum Output Current	0.3 A/point, 1.2 A/common
Minimum Load	10mA
Maximum Leakage Current	4mA @ 288 VAC
On Voltage Drop	1.5 VAC @ > 0.1 A 3.0 VAC @ < 0.1 A
Maximum Inrush Current	10 A for 10 ms
OFF to ON Response	1 ms
ON to OFF Response	1 ms + 1/2cycle
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 80mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse.
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	3.5 oz [100g]

ZIPLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

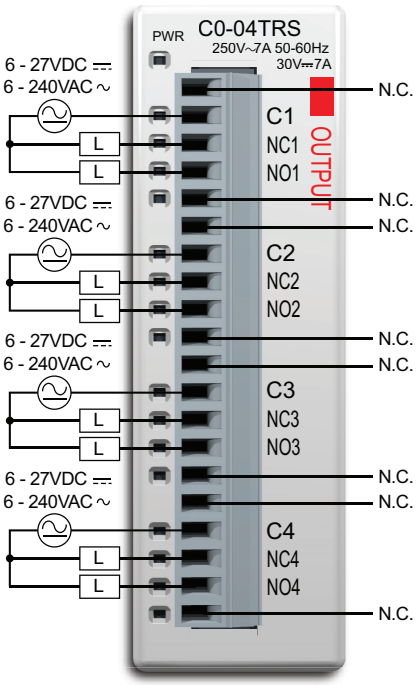
CLICK Stackable I/O Module Specifications

C0-04TRS $68.00

4-Point Relay Output Module

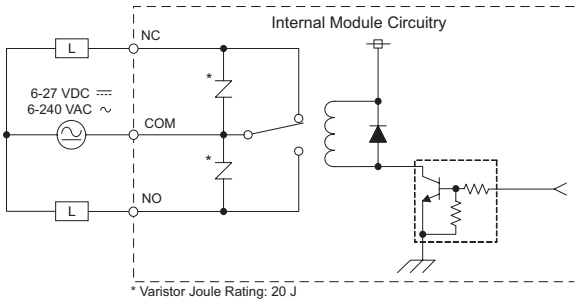
4-point 6-240 VAC/6-27 VDC Isolated relay output module, 4 Form C (SPDT) relays, 4 isolated commons, 7 A/point, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



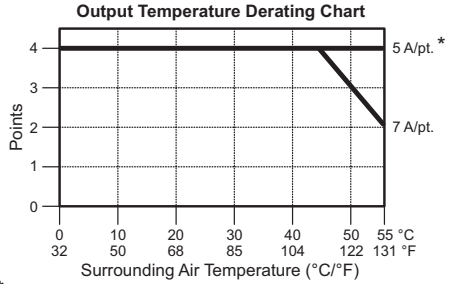
N.C. = Not Connected

Equivalent Output Circuit



* Varistor Joule Rating: 20 J

Output Temperature Derating Chart



* No derating when the load current is 5A or less for each output point.

Output Specifications	
Outputs per Module	4
Operating Voltage Range	6-27 VDC / 6-240 VAC
Output Voltage Range	5-30 VDC / 5-264 VAC
Output Type	Relay, form C (SPDT)
AC Frequency	47–63 Hz
Maximum Current	7 A/point, 7 A/common
Minimum Load Current	100mA @ 5VDC
Maximum Leakage Current	0.1 mA @ 264VAC
Maximum Inrush Current	12A
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED) Power Indicator (green LED)
Commons	4 (1 point/common) Isolated
Bus Power Required (24VDC)	Max. 100mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	4.4 oz [125g]

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life***
30VDC, 7 A Resistive	100,000 cycles
250VAC, 7 A Resistive	100,000 cycles
250VAC, 4.9 A Solenoid	90,000 cycles
250VAC, 2.9 A Solenoid	100,000 cycles

ON to OFF = 1 cycle

ZIPLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-1 (2.0 m length)

NOTE: The C0-04TRS relay output module is derated to 2A per point maximum when used with the ***ZIP***Link wiring system.

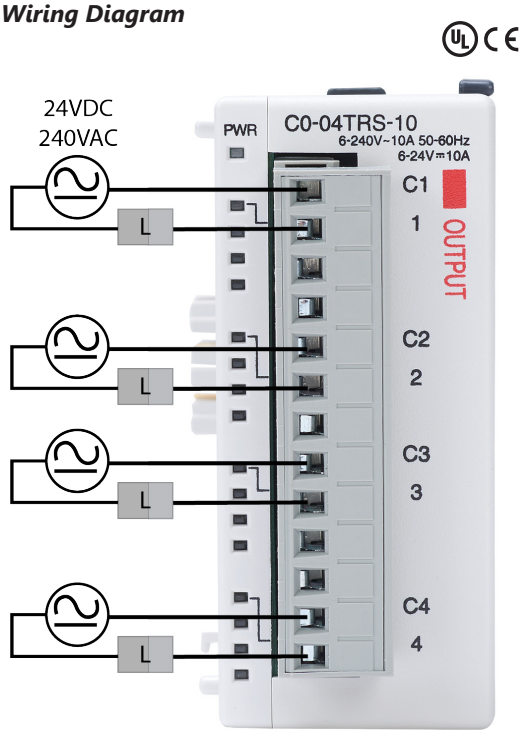
CLICK Stackable I/O Module Specifications

C0-04TRS-10 $78.00

4-Point Relay Output Module

4-point 6-24 VDC/6-240 VAC Isolated relay output module, 4 Form A (SPST) relays, 4 isolated commons, 10 A/point, removable terminal block included (replacement AutomationDirect p/n C0-8TB-1).

Wiring Diagram

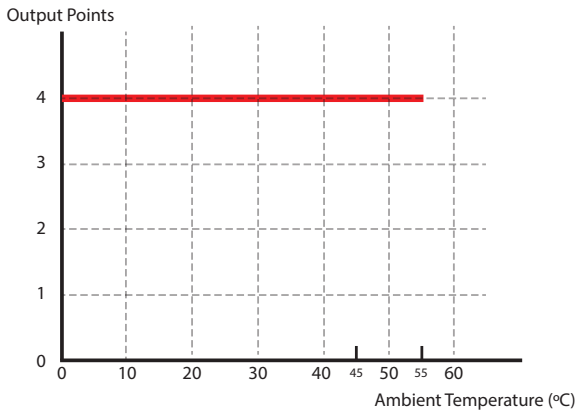


Output Specifications	
Outputs per Module	4
Operating Voltage Range	6-24 VDC / 6-240 VAC
Peak Voltage	24VDC / 264VAC
Output Type	Relay, form A (SPST)
AC Frequency	47–63 Hz
Maximum Output Current	10 A/point, 10 A/common
Minimum Load Current	100mA @ 5VDC
Maximum Inrush Current	16A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (4 points, red LED) Power Indicator (green LED)
Commons	4 (1 point/common)
Bus Power Required (24VDC)	Max. 120mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	AutomationDirect p/n C0-8TB-1
Drawing Link	PDF
Weight	5.2 oz. [148g]

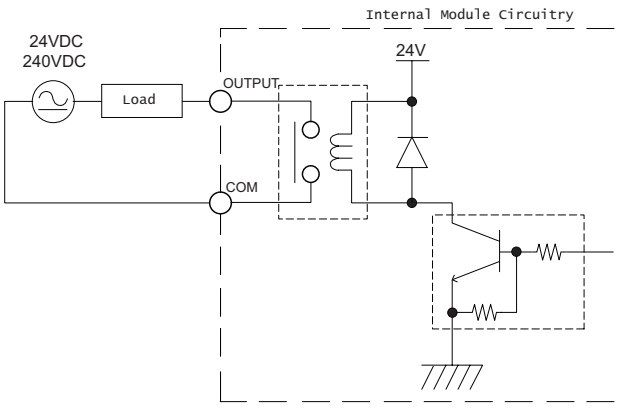
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life***
24VDC, 10A Resistive	120,000 cycles
24VDC, 10A Inductive	60,000 cycles
110VAC, 10A Resistive	120,000 cycles
110VAC, 10A Inductive	35,000 cycles
220VAC, 10A Resistive	120,000 cycles
220VAC, 10A Inductive	35,000 cycles

ON to OFF = 1 cycle

Output Temperature Derating Chart



Equivalent Output Circuit



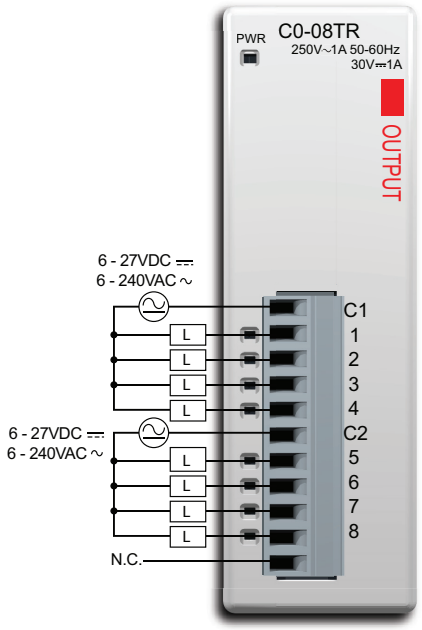
CLICK Stackable I/O Module Specifications

C0-08TR $63.00

8-Point Relay Output Module

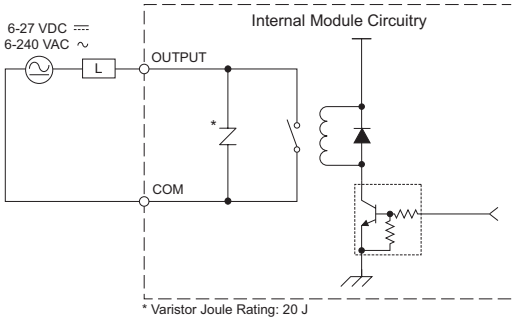
8-point 6-240 VAC/6-27 VDC relay output module, 8 Form A (SPST) relays, 2 commons, isolated, 1 A/point, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



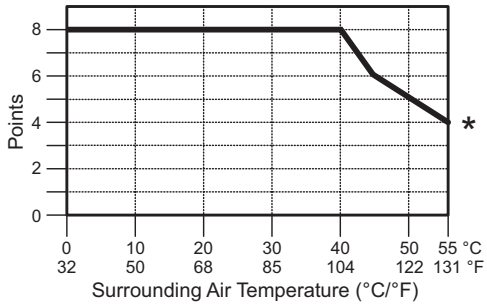
N.C. = Not Connected

Equivalent Output Circuit



* Varistor Joule Rating: 20 J

Output Temperature Derating Chart



* Use every other output.

Output Specifications	
Outputs per Module	8
Operating Voltage Range	6-27 VDC / 6-240 VAC
Output Voltage Range	5-30 VDC / 5-264 VAC
Output type	Relay, form A (SPST)
AC Frequency	47-63 Hz
Maximum Current (resistive)	1 A/point, 4 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Leakage Current	0.1 mA @ 264VAC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 100mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	3.9 oz [110g]

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Load Current: 1 A***
30VDC Resistive	300,000 cycles
30VDC Solenoid	50,000 cycles
250VAC Resistive	500,000 cycles
250VAC Solenoid	200,000 cycles

ON to OFF = 1 cycle

***ZIP*Link Pre-Wired PLC Connection Cables and Modules**

ZL-RTB20 20-pin feed-through connector module

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

NOTE: The C0-08TR is derated to 2A maximum per Common when used with the ***ZIP*Link wiring system.

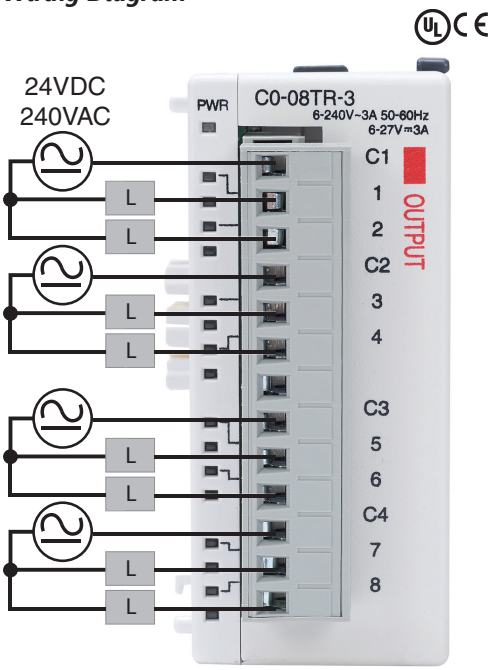
CLICK Stackable I/O Module Specifications

C0-08TR-3 $67.00

8-Point Relay Output Module

8-point 6-27 VDC/6-240 VAC relay output module, 8 Form A (SPST) relays, 4 commons, isolated, 3 A/point, removable terminal block included (replacement AutomationDirect p/n C0-8TB-1).

Wiring Diagram

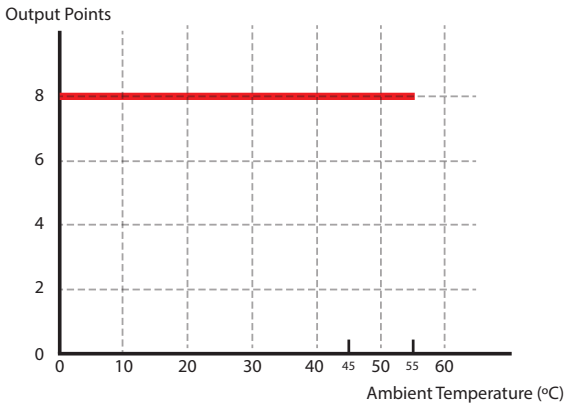


Output Specifications	
Outputs per Module	8
Operating Voltage Range	6-27 VDC / 6-240 VAC
Peak Voltage	30 VDC / 264 VAC
Output type	Relay, form A (SPST)
AC Frequency	47-63 Hz
Maximum Current (resistive)	3A/point, 6A/common
Minimum Load Current	5mA @ 5VDC
Maximum Inrush Current	5A for 10ms
OFF to ON Response	< 15ms
ON to OFF Response	< 15ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	4 (2 points/common)
Bus Power Required (24VDC)	Max. 90mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	AutomationDirect p/n C0-8TB-1
Drawing Link	PDF
Weight	4.1 oz [117g]

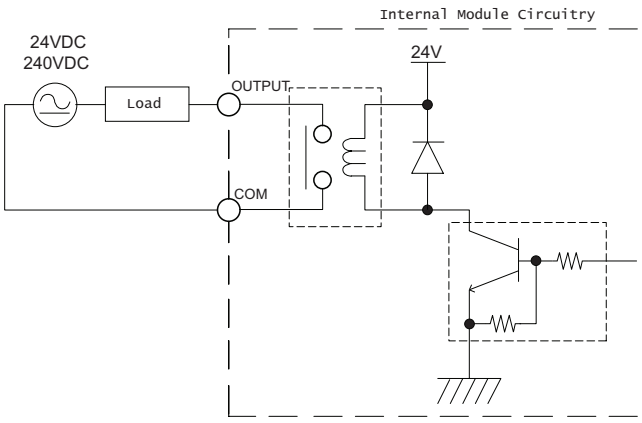
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	***Relay Life***
24VDC, 3A Resistive	100,000 cycles
24VDC, 3A Inductive	50,000 cycles
110VAC, 3A Resistive	100,000 cycles
110VAC, 3A Inductive	25,000 cycles
220VAC, 3A Resistive	100,000 cycles
220VAC, 3A Inductive	25,000 cycles

ON to OFF = 1 cycle

Output Temperature Derating Chart



Equivalent Output Circuit

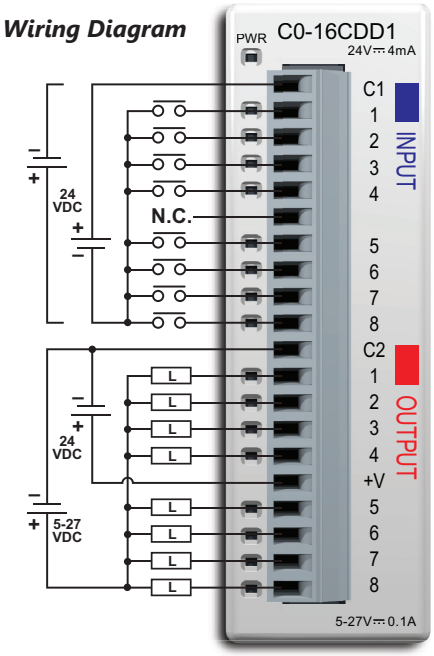


CLICK Stackable I/O Module Specifications

C0-16CDD1 $90.00

8-Point DC Input and 8-Point DC Sinking Output Module
8-point 24VDC current sinking/sourcing input, 1 common, 8-point 5–27 VDC sinking output, 0.1A/pt., 1 common, non-fused, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

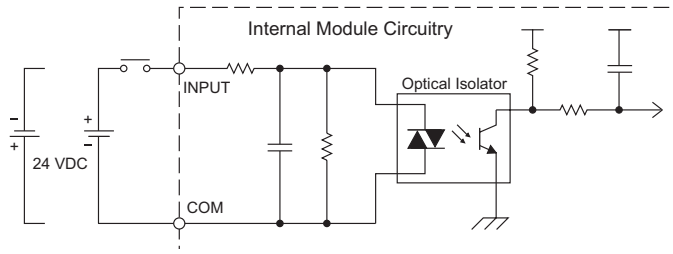
Wiring Diagram



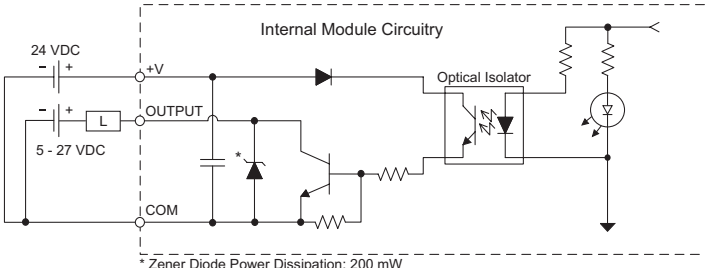
N.C. = Not Connected

NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Equivalent Input Circuit



Equivalent Output Circuit



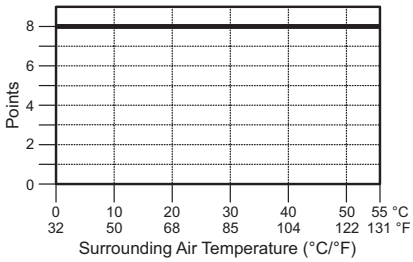
* Zener Diode Power Dissipation: 200 mW

Input Specifications	
Inputs per Module	8 (Source/Sink)
Operating Voltage Range	CE: 24VDC (-10%/+10%) UL: 24VDC (-10%/+10%)
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 4.0 mA @ 24VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24VDC
ON Voltage Level	>19.0 VDC
OFF Voltage Level	<7.0 VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 10ms Typ. 2ms
ON to OFF Response	Max. 10ms Typ. 3ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	1 (8 points/common)

Output Specifications	
Outputs per Module	8 (sink)
Operating Voltage Range	CE: 5-24 VDC (-15%/+20%) UL: 5–27 VDC (-15%/+20%)
Output Voltage Range	4–30 VDC
Maximum Output Current	0.1 A/point, 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	0.15 A for 10 ms
OFF to ON Response	< 0.5 ms
ON to OFF Response	< 0.5 ms
Status Indicators	Logic Side (8 points, red LED)
Commons	1 (8 points/common)
External DC Power Required	24VDC (-10%/+10%) max. 50mA (all points on)

General Specifications	
Bus Power Required (24VDC)	Max. 80 mA (all points on)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

Input / Output Temperature Derating Chart



ZIPLink Pre-Wired PLC Connection Cables and Modules for CLICK PLC

ZL-RTB20 20-pin feed-through connector module

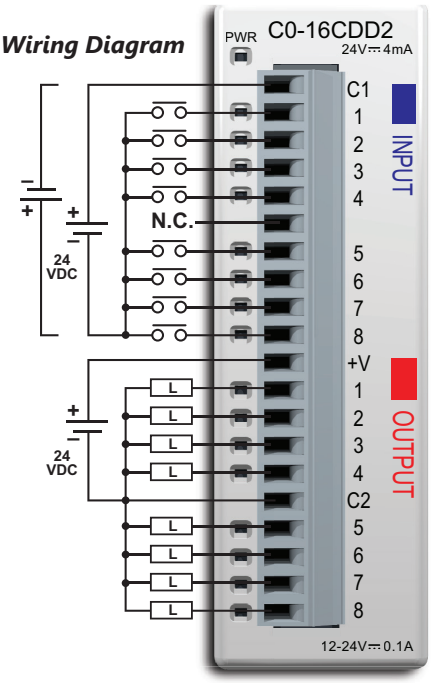
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-1 (2.0 m length)

CLICK Stackable I/O Module Specifications

C0-16CDD2 $90.00

8-Point DC Input and 8-Point DC Sourcing Output Module
8-point 24VDC current sinking/sourcing input , 1 common, 8-point 12–24 VDC sourcing output, 0.1 A/pt., 1 common, non-fused, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

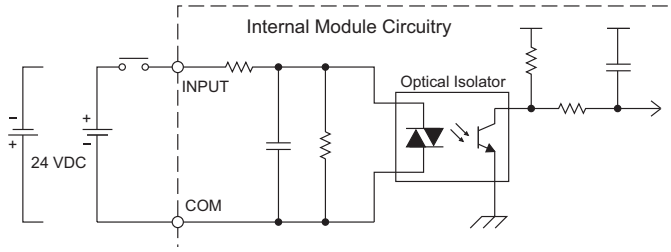
Wiring Diagram



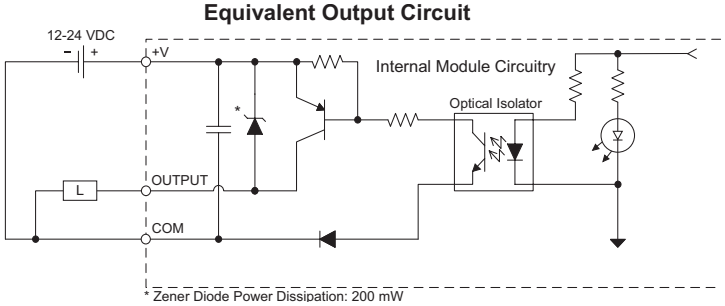
N.C. = Not Connected

NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Equivalent Input Circuit



Equivalent Output Circuit



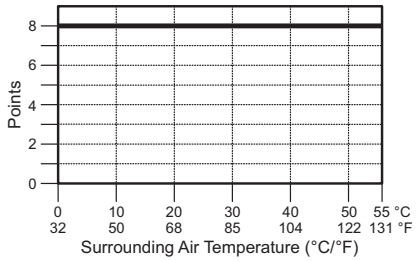
* Zener Diode Power Dissipation: 200 mW

Input Specifications	
Inputs per Module	8 (source/sink)
Operating Voltage Range	CE: 24VDC (-10%/+10%) UL: 24VDC (-10%/+10%)
Input Voltage Range	21.6–26.4 VDC
Input Current	Typ 4.0 mA @ 24VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24VDC
ON Voltage Level	>19.0 VDC
OFF Voltage Level	<7.0 VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 10ms Typ. 2ms
ON to OFF Response	Max. 10ms Typ. 3ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	1 (8 points/common)

Output Specifications	
Outputs per Module	8 (Source)
Operating Voltage Range	CE: 12–24 VDC (-15%/+20%) UL: 12–24 VDC (-20%/+25%)
Output Voltage Range	9.6–30 VDC
Maximum Output Current	0.1 A / point , 0.8 A / common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30VDC
On Voltage Drop	0.6 VDC @ 0.1 A
Maximum Inrush Current	0.15 A for 10ms
OFF to ON Response	<0.5 ms
ON to OFF Response	<0.5 ms
Status Indicators	Logic Side (8 points, red LED)
Commons	1 (8 points/common)

General Specifications	
Bus Power Required (24VDC)	Max. 80mA (all points on)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.2 oz [90g]

Input / Output Temperature Derating Chart



ZL-RTB20 20-pin feed-through connector module

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-1 (2.0 m length)

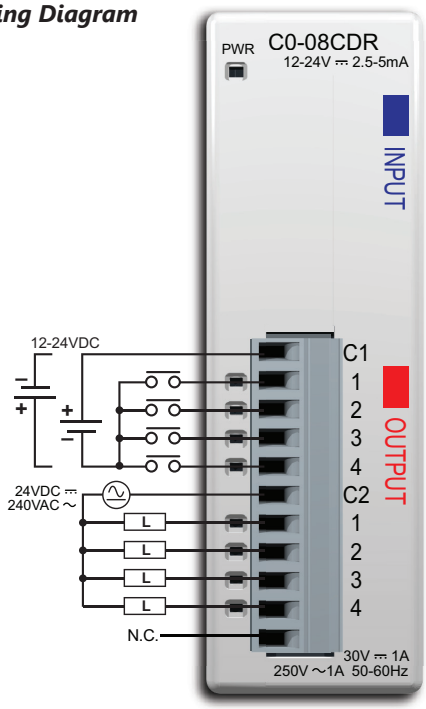
CLICK Stackable I/O Module Specifications

C0-08CDR $81.00

4-Point DC Input and 4-Point Relay Output Module

4-point 12–24 VDC current sinking/sourcing input, 1 common, 4-point 6.25–24 VDC / 6-240 VAC relay output, Form A (SPST) relays 1A/pt., 1 common, non-fused, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

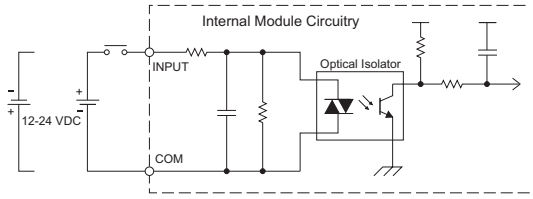
Wiring Diagram



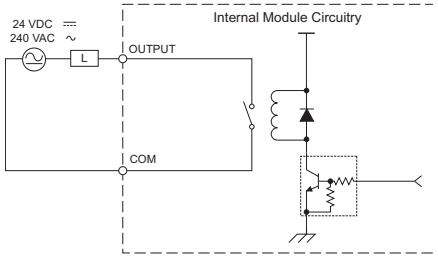
N.C. = Not Connected

NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

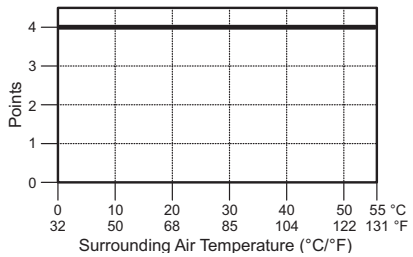
Equivalent Input Circuit



Equivalent Output Circuit



Input / Output Temperature Derating Chart



Input Specifications	
Inputs per Module	4 (source/sink)
Operating Voltage Range	CE: 12–24 VDC (-10%/+10%) UL: 12–24 VDC (-10%/+10%)
Input Voltage Range	10.8 - 26.4 VDC
Input Current	Typ 5.0 mA @ 24VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	4.7 kΩ @ 24VDC
ON Voltage Level	>8.0 VDC
OFF Voltage Level	<3.0 VDC
Minimum ON Current	1.4 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 3.5 ms Typ. 2ms
ON to OFF Response	Max. 4ms Typ. 2.5 ms
Status Indicators	Logic Side (4 points, green LED) Power Indicator (green LED)
Commons	1 (4 points/common)

Output Specifications	
Outputs per Module	4 (Relay)
Operating Voltage Range	CE: 6.25–24VDC (-15%/+10%) / 6–240 VAC (-15%/+10%) UL: 24VDC (-15%/+10%) / 240 VAC (-10%/+10%)
Peak Voltage	30VDC / 264VAC
Output Type	Relay, Form A (SPST)
AC Frequency	47–63 Hz
Maximum Current	1 A/point, 4 A/common
Minimum Load Current	5mA @ 5VDC
Maximum Leakage Current	0.1 mA @ 264VAC
Maximum Inrush Current	3A for 10ms
OFF to ON Response	<15ms
ON to OFF Response	<15ms
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

General Specifications	
Bus Power Required (24VDC)	Max. 80 mA (all points on)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	3.2 oz [90g]

Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type*	***Relay Life (ON to OFF = 1 cycle)***
30VDC, 1A, Resistive	80,000 cycles
30VDC, 1A, Solenoid	80,000 cycles
250VAC, 1A, Resistive	80,000 cycles
250VAC, 1A, Solenoid	80,000 cycles

*** These relay outputs support both inductive (solenoid) and resistive loads.**

ZIPLink Pre-Wired PLC Connection Cables and Modules for CLICK PLC

ZL-RTB20 20-pin feed-through connector module

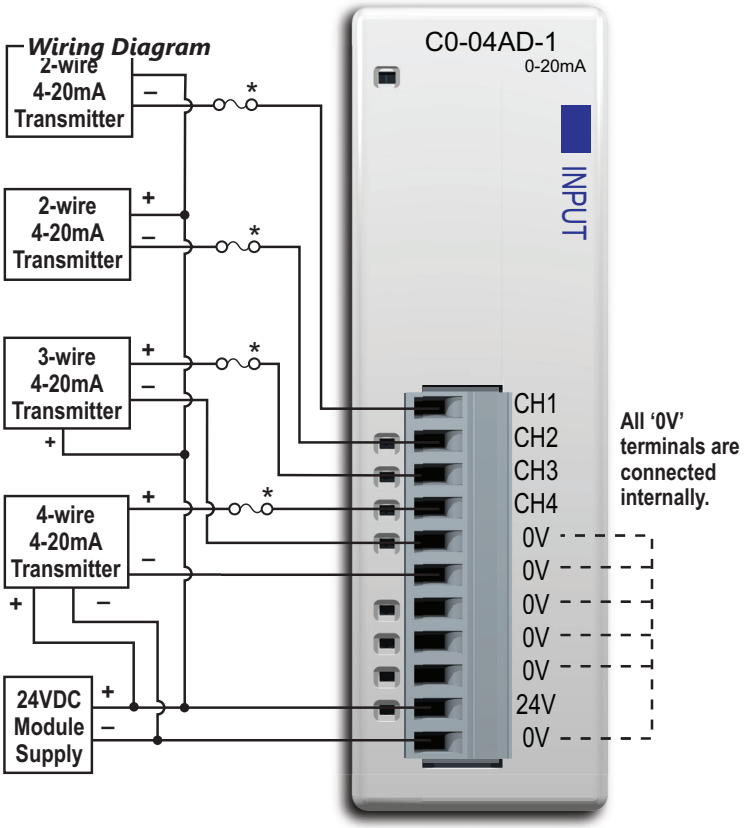
11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

CLICK Stackable I/O Module Specifications

C0-04AD-1 $128.00

4-Channel Analog Current Input Module

4-channel analog current sinking input module, 13-bit resolution, range: 0-20 mA. External 24VDC power required, removable terminal block included (replacement AutomationDirect p/n C0-8TB).



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Input Specifications	
Inputs per Module	4
Input Range	0-20 mA (sink)
Resolution	13-bit, 2.44 uA/count
Input Type	Single ended (1 common)
Maximum Continuous Overload	±44 mA
Input Impedance	124Ω, 0.5 W current input
Filter Charactistics	Low pass, -3dB at 120Hz
Sample Duration Time	2ms
All Channel Update Rate	25ms
Open Circuit Detection Time	Zero reading within 100ms
Accuracy vs. Temperature	±75 PPM/°C maximum
Maximum Inaccuracy	0.5% of range (including temperature changes)
Linearity Error (End to End)	±3 count maximum, monotonic with no missing codes
Input Stability and Repeatability	±2 count maximum
Full Scale Calibration Error (including Offset)	±8 count maximum
Offset Calibration Error	±8 count maximum
Maximum Crosstalk at DC, 50/60Hz	±2 count maximum
Field to Logic Side Isolation	1800 VAC for 1 sec.
Recommended Fuse (external)	AutomationDirect p/n S500-32-R (0.032A fuse)
External 24VDC Power Required	65mA
Bus Power Required (24VDC)	20mA
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.9 oz [82g]

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

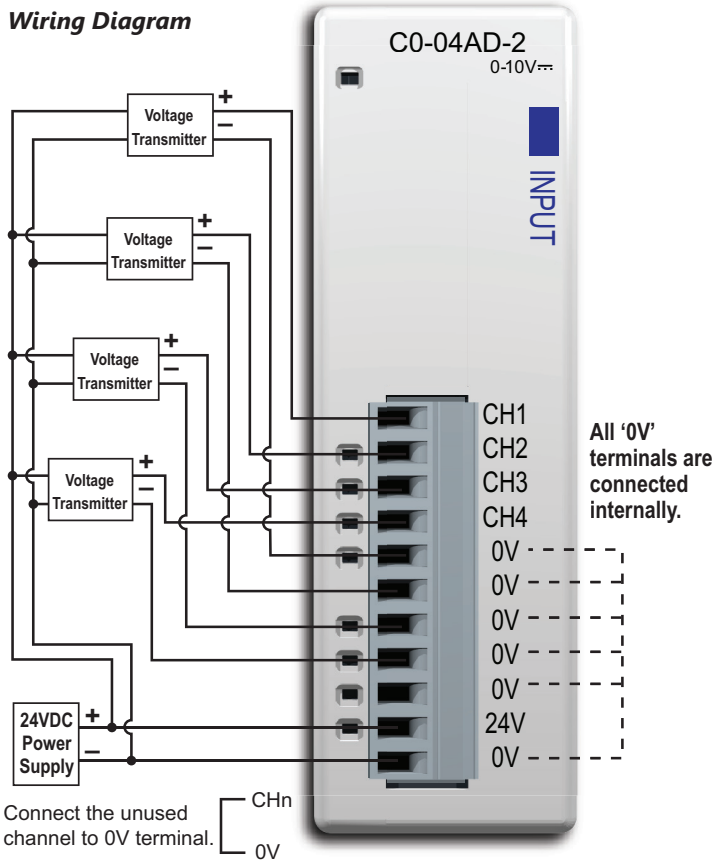
ZL-RTB20 20-pin feed-through connector module

CLICK Stackable I/O Module Specifications

C0-04AD-2 $129.00

4-Channel Analog Voltage Input Module
4-channel analog voltage input module, 13-bit resolution, range: 0-10V.
External 24VDC power required, removable terminal block included
(replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Input Specifications	
Inputs per Module	4
Input Range	0-10 V
Resolution	13-bit, 1.22 mV per count
Input Type	Single ended (1 common)
Maximum Continuous Overload	±100 VDC
Input Impedance	>150kΩ
Filter Charactistics	Low pass, -3dB at 500Hz
Sample Duration Time	6.25 ms
All Channel Update Rate	25ms
Open Circuit Detection Time	Zero reading within 100ms
Accuracy vs. Temperature	±75 PPM/°C maximum
Maximum Inaccuracy	0.5% of range (including temperature changes)
Linearity Error (End to End)	±3 count maximum, monotonic with no missing codes
Input Stability and Repeatability	±2 count maximum
Full Scale Calibration Error (Including Offset)	±8 count maximum
Offset Calibration Error	±8 count maximum
Maximum Crosstalk at DC, 50/60Hz	±2 count maximum
Field to Logic Side Isolation	1800 VAC for 1 sec.
External 24VDC Power Required	65mA
Base Power Required (24VDC)	23mA
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.9 oz [82g]

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

CLICK Stackable I/O Module Specifications

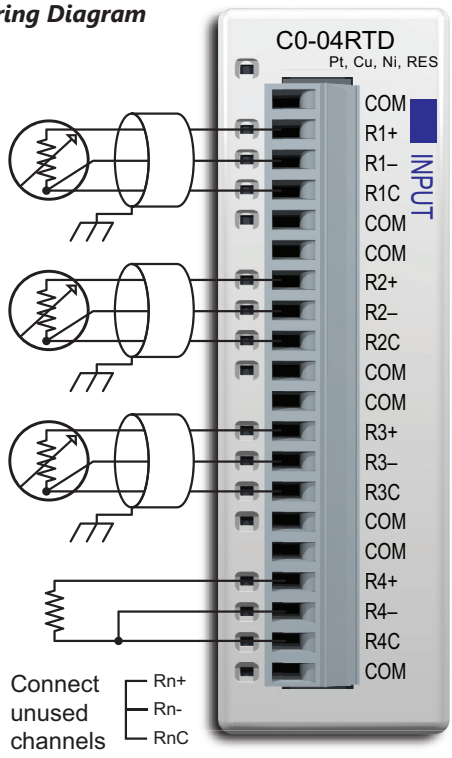
C0-04RTD $217.00

4-Channel RTD Input Module

4-channel RTD input module, 16-bit resolution (+/-0.1 degrees Celsius or Fahrenheit), supports: Pt100, Pt1000, JPt100, Cu10, Cu25, Ni120. Resistive ranges also supported, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

NOTE: The C0-04RTD module cannot be used with thermistors.

Wiring Diagram



These COM terminals are isolated.

NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

NOTE: When this module is used in a CLICK PLC system, it may take up to 24 seconds for initialization after power-up (see the table below). During this time period, the RUN LED on the PLC Unit blinks to indicate the initialization process.

C0-04RTD Initialization Time

The Number of Channels Used	The same Input Type is selected for all Channels	Mixed Input Types are selected
1	4 sec	N/A
2	5 sec	May take up to 13 sec
3	6 sec	May take up to 18 sec
4	7 sec	May take up to 24 sec

Input Specifications

Inputs per Module	4
Common Mode Range	±2.5 V
Common Mode Rejection	100dB at DC and 100 dB at 50/60Hz
Input Impedance	>5MΩ
Maximum Ratings	Fault protected inputs to ±50VDC
Resolution	±0.1°C or °F, 0.1 Ω or 0.01 Ω
Input Ranges*	Pt100: -200 to 850°C [-328 to 1562°F] Pt1000: -200 to 595°C [-328 to 1103°F] JPt100: -100 to 450°C [-148 to 842°F] 10Ω Cu: -200 to 260°C [-328 to 500°F] 25Ω Cu: -200 to 260°C [-328 to 500°F] 120Ω Ni: -80 to 260°C [-112 to 500°F] 0 to 3125.0 Ω : Resolution 0.1 Ω 0 to 1562.5 Ω : Resolution 0.1 Ω 0 to 781.2 Ω : Resolution 0.1 Ω 0 to 390.62 Ω : Resolution 0.01 Ω 0 to 195.31 Ω : Resolution 0.01 Ω
RTD Linearization	Automatic
Excitation Current (All Ranges)	210 µA
Accuracy vs. Temperature	±10ppm per °C maximum
RTD Input Maximum Inaccuracy	±3°C (excluding RTD error); ±5°C (ranges Cu10 and Cu25)
RTD Linearity Error (End to End)	±2°C maximum, ±0.5°C typical, monotonic with no missing codes
Resistance Input Maximum Zero Scale Error	±0.0015% of full scale range in ohms (negligible)
Resistance Input Maximum Full Scale Error	±0.02% of full scale range
Maximum Linearity Error	±0.015% of full scale range maximum at 25°C, monotonic with no missing codes
Resistance Maximum Input Inaccuracy	0.1% at 0 to 60°C (32° to 140° F), typical 0.04% at 25°C (77° F)
Warm Up Time	30 minutes for ±1°C repeatability
Single Channel Update Rate	240ms
All Channel Update Rate	Single Channel Update Rate times the number of enabled channels on the module
Open Circuit Detection Time	Positive full-scale reading within 2 seconds
Conversion Method	Sigma - Delta

*** While it is possible to use different resistive ranges, we recommend using the narrowest range that covers the resistance being measured. For example, if measuring approximately 100 ohms resistance, use the 0 to 195.31 ohms range. While the resolution is the same as the 0 to 390.62 ohms range, output RMS noise will be lower and stability will be improved.**

General Specifications

Field to Logic Side Isolation	No isolation
External DC Power Required	None
Bus Power Required (24VDC)	25mA
Thermal Dissipation	2.047 BTU per hour
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.1 oz [86g]

Not Compatible with Z/PLink Pre-Wired PLC Connection Cables and Modules.

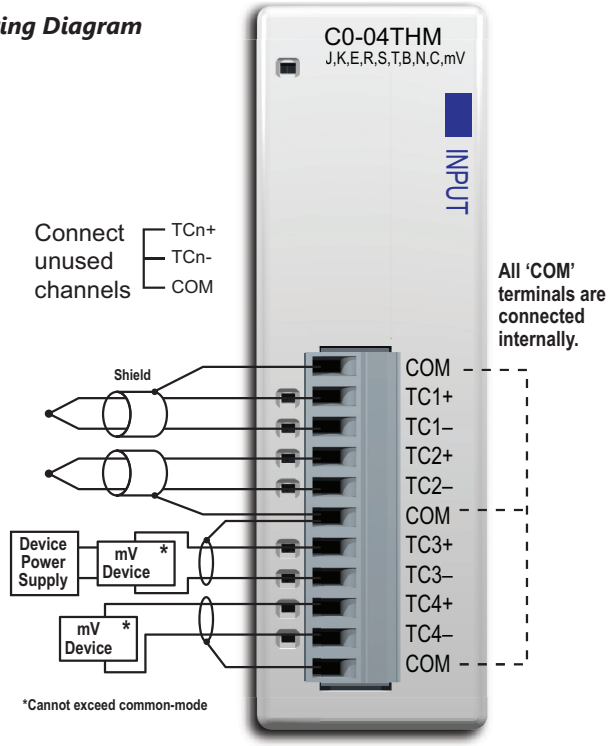
CLICK Stackable I/O Module Specifications

C0-04THM $217.00

4-Channel Thermocouple Input Module

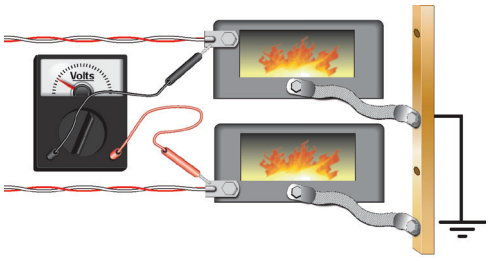
4-channel thermocouple input module, 16-bit resolution (+/-0.1 degrees Celsius or Fahrenheit), Supports: J, K, E, R, S, T, B, N, C type thermocouples; voltage ranges are also supported, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

NOTE: With grounded thermocouples, take precautions to prevent having a voltage potential between thermocouple tips. A voltage less than -1.3 V or greater than +3.8 V between tips will skew measurements.



NOTE: When this module is used in a CLICK PLC system, it may take up to 11 seconds for initialization after power-up (see the table at right). During this time period, the RUN LED on the PLC Unit blinks to indicate the initialization process.

Input Specifications	
Inputs per Module	4
Common Mode Range	-1.3 to +3.8 V
Common Mode Rejection	100dB at DC and 130 dB at 60Hz
Input Impedance	>5 MΩ
Maximum Ratings	Fault protected inputs to ±50VDC
Resolution	±0.1°C or °F, 16 bit
Input Ranges	Type J: -190 to 760°C [-310 to 1400°F] Type K: -150 to 1372°C [-238 to 2502°F] Type E: -210 to 1000°C [-346 to 1832°F] Type R: 65 to 1768°C [149 to 3214°F] Type S: 65 to 1768°C [149 to 3214°F] Type T: -230 to 400°C [-382 to 752°F] Type B: 529 to 1820°C [984 to 3308°F] Type N: -70 to 1300°C [-94 to 2372°F] Type C: 65 to 2320°C [149 to 4208°F] 0 to 39.0625 mV ±39.0625 mV ±78.125 mV 0 to 156.25 mV ±156.25 mV 0 to 1.25 V
Cold Junction Compensation	Automatic
Thermocouple Linearization	Automatic
Accuracy vs. Temperature	±25 ppm per °C maximum
Linearity Error	±2°C maximum, ±1°C typical, monotonic with no missing codes
Maximum Inaccuracy	±3°C maximum (excluding thermocouple error)
Maximum Voltage Input Offset Error	0.05% at 0° to 55°C [32° to 131° F] typical 0.04% at 25°C [77°F]
Maximum Voltage Input Gain Error	0.06% at 25°C [77°F]
Maximum Voltage Input Linearity Error	0.05% at 0° to 55°C [32° to 131°F], typical 0.03% at 25°C [77°F]
Maximum Voltage Input Inaccurracy	0.1% at 0° to 55°C [32° to 131°F], typical 0.04% at 25°C [77°F]
Warm Up Time	30 minutes for ±1°C repeatability
Single Channel Update Rate	400ms
All Channel Update Rate	Single Channel Update Rate times the number of enabled channels on the module
Open Circuit Detection Time	Burn Out flag set and zero scale reading within 3 seconds
Conversion Method	Sigma - Delta

General Specifications	
Field to Logic Side Isolation	1800 VAC applied for 1 second (100% tested)
External DC Power Required	None
Bus Power Required (24VDC)	25mA
Thermal Dissipation	0.175 BTU per hour
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	3.1 oz [86g]

C0-04THM Initialization Time	
The Number of Channels Used	***With any Configuration***
1	5 sec
2	7 sec
3	9 sec
4	11 sec

Not Compatible with Z/PLink Pre-Wired PLC Connection Cables and Modules.

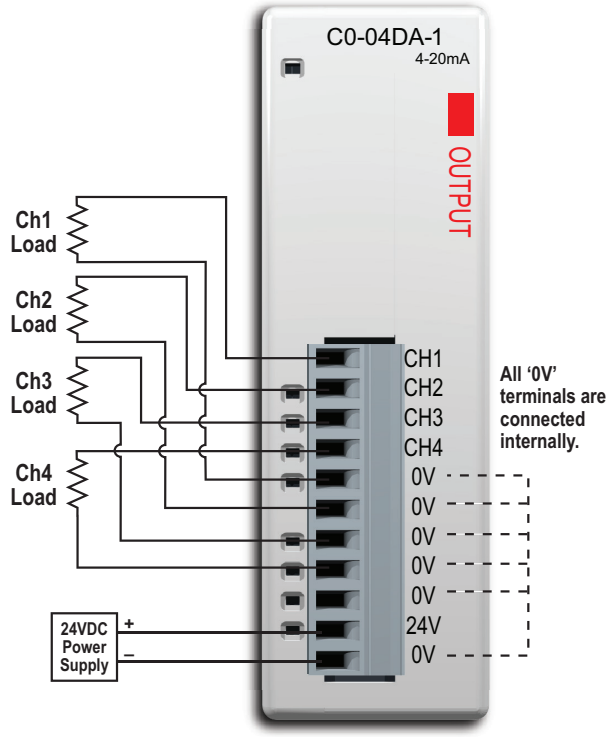
CLICK Stackable I/O Module Specifications

C0-04DA-1 $175.00

4-Channel Analog Current Output Module

4-channel analog current sourcing output module, 12-bit resolution, range: 4-20 mA. External 24VDC power required, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Output Specifications	
Outputs per Module	4
Output Range	4-20 mA (source)
Resolution	12-bit, 3.9 uA per count
Output Type	Current sourcing at 20mA max. (1 common)
Output Value in Fault Mode	Less than 4mA
Load Impedance	0-600Ω at 24VDC; minimum load: 0Ω 32° to 131°F [0° to 55°C] ambient temp.
Maximum Inductive Load	1mH
Allowed Load Type	Grounded
Maximum Inaccuracy	±1% of range
Max. Full Scale Calibration Error (Including Offset)	±0.2% of range maximum
Max. Offset Calibration Error	±0.2% of range maximum
Accuracy vs. Temperature	±75 PPM/°C maximum full scale calibration change (±0.005% of range/°C)
Max. Crosstalk at DC, 50/60Hz	-72dB, 1 LSB
Linearity Error (End to End)	±4 LSB max., (±0.1% of full scale)
Output Stability and Repeatability	±2% LSB after 10 minute warmup period typical
Output Ripple	±0.1% of full scale
Output Settling Time	0.3 ms maximum, 5µs min. (full scale range)
All Channel Update Rate	10ms
Max. Continuous Overload	Outputs open circuit protected
Field to Logic Side Isolation	1800VAC applied for 1 second (100% tested)
Type of Output Protection	Electronically limited to 20mA or less
Output Signal at Power Up and Power Down	4mA
External VDC Power Required	145mA
Base Power Required (24VDC)	20mA
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.9 oz [82g]

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

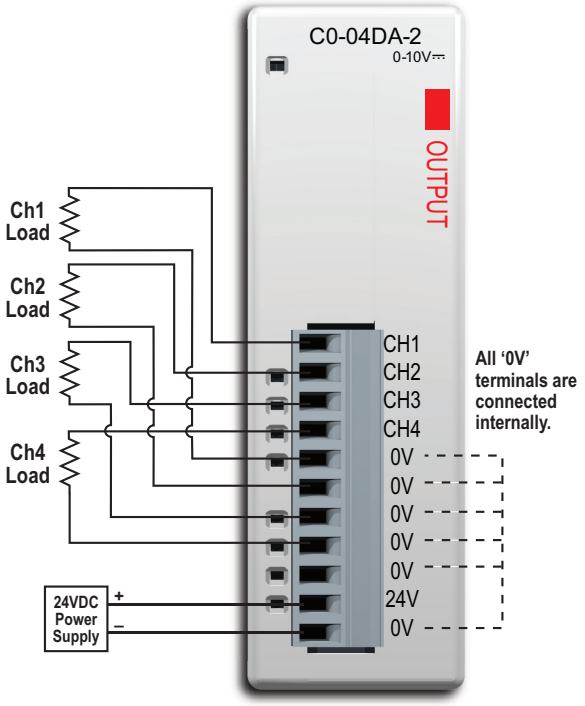
CLICK Stackable I/O Module Specifications

C0-04DA-2 $175.00

4-Channel Analog Voltage Output Module

4-channel analog voltage output module, 12-bit resolution, range: 0-10V. External 24VDC power required, removable terminal block included (replacement AutomationDirect p/n C0-8TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

Output Specifications	
Outputs per Module	4
Output Range	0-10 V
Resolution	12-bit, 2.44 mV per count
Output Type	Voltage sourcing at 10mA max. (1 common)
Output Value in Program Mode	Determined by CPU
Output Value in Fault Mode	0 V
Output Impedance	0.2 Ω typical
Load Impedance	>1000Ω
Maximum Capacitive Load	0.01 uF maximum
Allowed Load Type	Grounded
Maximum Inaccuracy	0.5% of range
Max. Full Scale Calibration Error (Not including Offset)	±0.2% of range maximum voltage
Max. Offset Calibration Error	±0.2% of range maximum
Accuracy vs. Temperature	±75 PPM/°C maximum full scale calibration change (±0.0025% of range/°C)
Max. Crosstalk at DC, 50/60Hz	-72 dB, 1 LSB
Linearity Error (End to End)	±4 LSB max., (±0.1% of full scale); monotonic with no missing codes
Output Stability and Repeatability	±2% LSB after 10 minute warmup period typical
Output Ripple	0.1% of full scale
Output Settling Time	0.3 ms maximum, 5µs minimum (full scale range)
All Channel Update Rate	10ms
Max. Continuous Overload	Outputs current limited to 40mA typical; continuous overloads on multiple outputs can damage module.
Field to Logic Side Isolation	1800 VAC applied for 1 second (100% tested)
Type of Output Protection	0.1 µF transient suppressor
Output Signal at Power Up and Power Down	0 V
External 24VDC Power Required	85mA
Base Power Required (24VDC)	20mA
Terminal Block Replacement	AutomationDirect p/n C0-8TB
Drawing Link	PDF
Weight	2.9 oz [82g]

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

11-pin connector cable
ZL-C0-CBL11 (0.5 m length)
ZL-C0-CBL11-1 (1.0 m length)
ZL-C0-CBL11-2 (2.0 m length)

ZL-RTB20 20-pin feed-through connector module

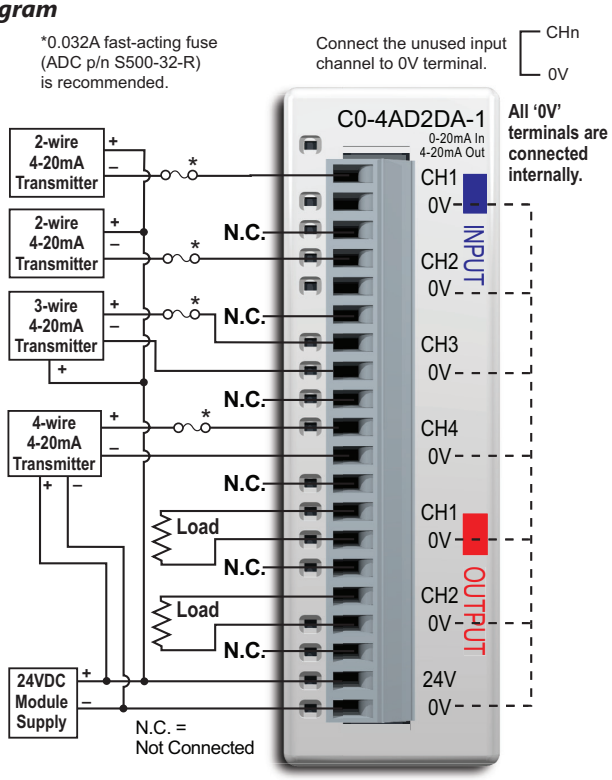
CLICK Stackable I/O Module Specifications

C0-4AD2DA-1 $226.00

4-Channel Analog Current Input and
2-Channel Analog Current Output Module

4-channel analog current sinking input (13-bit resolution) and 2-channel analog current sourcing output (12-bit resolution) module, range: 0–20 mA (inputs), 4–20 mA (outputs). External 24VDC power required, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

General Specifications	
Field to Logic Side Isolation	1800VAC for 1 sec.
External 24VDC Power Required	75mA
Bus Power Required (24VDC)	25mA
Recommended Fuse (External)	AutomationDirect p/n S500-32-R (0.032A fuse)
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.1 oz [86g]

Input Specifications	
Inputs per Module	4
Input Range	0-20 mA (sink)
Resolution	13-bit, 2.44 uA per count
Input Type	Single ended (1 common)
Maximum Continuous Overload	±44mA
Input Impedance	124Ω, 0.5 W current input
Filter Characteristics	Low pass, -3dB at 400Hz
PLC Data Format	13-bit unsigned Integer, range is 0-8191
Sample Duration Time	5ms
All Channel Update Rate	20ms (input plus output maximum time)
Open Circuit Detection Time	Zero reading within 20ms
Conversion Method	Successive approximation
Accuracy vs. Temperature	±75 PPM/°C maximum
Maximum Inaccuracy	0.5% of range (including temperature changes)
Linearity Error (End to End)	±3 count maximum, monotonic with no missing codes
Input Stability and Repeatability	±2 count maximum
Full Scale Calibration Error (Including Offset)	±8 count maximum
Offset Calibration Error	±8 count maximum
Maximum Crosstalk at DC, 50/60Hz	±2 count maximum

Output Specifications	
Outputs per Module	2
Output Range	4-20 mA (source)
Resolution	12-bit, 3.9 uA per count
Output Type	Current sourcing at 20mA max. (1 common)
PLC Data Format	12-bit unsigned integer, 0-4095 counts
Output Value in Fault Mode	Less than 4mA
Load Impedance	0-600 Ω at 24VDC; minimum load: 0Ω 32° to 113°F [0° to 45°C]; 125Ω 113° to 131°F [45° to 55°C] ambient temp.
Maximum Inductive Load	1mH
Allowed Load Type	Grounded
Maximum Inaccuracy	±1% of range
Max. Full Scale Calibration Error (Including Offset)	±0.2% of range maximum
Max. Offset Calibration Error	±0.2% of range maximum
Accuracy vs. Temperature	±50 PPM/°C maximum full scale calibration change (±0.005% of range/°C)
Max. Crosstalk at DC, 50/60Hz	-72dB, 1 LSB
Linearity Error (End to End)	±4 LSB maximum, (±0.1% of full scale), monotonic with no missing codes
Output Stability and Repeatability	±2% LSB after 10 minute warmup period typical
Output Ripple	±0.1% of full scale
Output Settling Time	0.2 ms maximum, 5µs min. (full scale range)
All Channel Update Rate	20ms
Max. Continuous Overload	Outputs open circuit protected
Type of Output Protection	Electronically limited to 20mA or less
Output Signal at Power Up or Power Down	4mA

ZL-RTB20 20-pin feed-through connector module

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

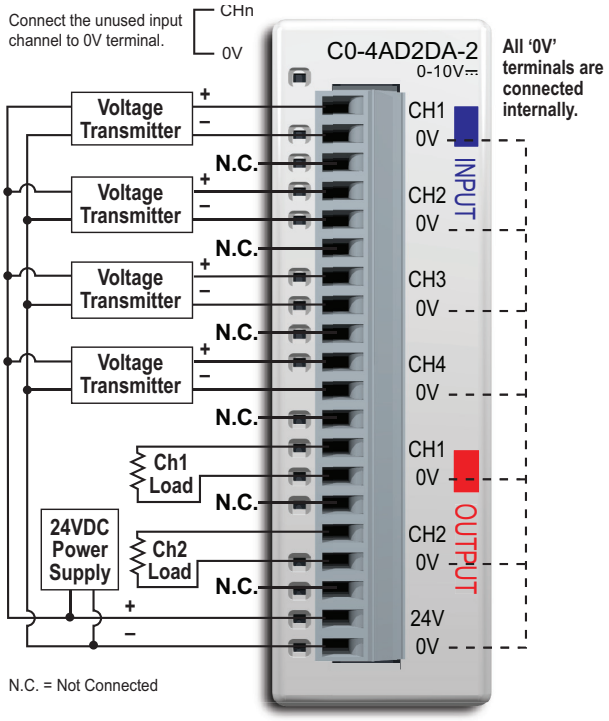
CLICK Stackable I/O Module Specifications

C0-4AD2DA-2 $217.00

4-Channel Analog Voltage Input and
2-Channel Analog Voltage Output Module

4-channel analog voltage input (13-bit resolution) and 2-channel analog voltage output (12-bit resolution) module, range: 0–10V. External 24VDC power required, removable terminal block included (replacement AutomationDirect p/n C0-16TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and PLC firmware version V1.40 or later.

General Specifications	
Field to Logic Side Isolation	1800VAC
External 24VDC Power Required	65mA
Base Power Required (24VDC)	15mA
Terminal Block Replacement	AutomationDirect p/n C0-16TB
Drawing Link	PDF
Weight	3.1 oz [86g]

ZL-RTB20 20-pin feed-through connector module

***ZIP*Link Pre-Wired PLC Connection Cables and Modules for CLICK PLC**

20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Input Specifications	
Inputs per Module	4
Input Range	0-10 V
Resolution	13-bit, 1.22 mV per count
Input Type	Single ended (1 common)
Maximum Continuous Overload	±100VDC
Input Impedance	>150kΩ
Filter Characteristics	Low pass, -3 dB at 500Hz
Sample Duration Time	5ms
All Channel Update Rate	20ms
Open Circuit Detection Time	Zero reading within 100ms
Conversion Method	Successive approximation
Accuracy vs. Temperature	±75 PPM/°C maximum
Maximum Inaccuracy	0.5% of range (including temperature changes)
Linearity Error (End to End)	±3 count maximum, monotonic with no missing codes
Input Stability and Repeatability	±2 count maximum
Full Scale Calibration Error (including Offset)	±8 count maximum
Offset Calibration Error	±8 count maximum
Maximum Crosstalk at DC, 50/60Hz	±2 count maximum

Output Specifications	
Outputs per Module	2
Output Range	0-10 V
Resolution	12-bit, 2.44 mV per count
Output Type	Voltage sourcing at 10mA max. (1 common)
Output Value in Program Mode	Determined by CPU
Output Value in Fault Mode	0 V
Output Impedance	0.2 Ω typical
Load Impedance	>1000Ω
Maximum Capacitive Load	0.01 uF maximum
Allowed Load Type	Grounded
Maximum Inaccuracy	1% of range
Max. Full Scale Calibration Error (Not including Offset)	±0.2% of range maximum voltage
Max. Offset Calibration Error	±0.2% of range maximum
Accuracy vs. Temperature	±75 PPM/°C maximum full scale calibration change (±0.0025% of range/°C)
Max. Crosstalk at DC, 50/60Hz	-72 dB, 1 LSB
Linearity Error (End to End)	±4 LSB maximum, (±0.1% of full scale); monotonic with no missing codes
Output Stability and Repeatability	±2% LSB after 10 minute warmup period typical
Output Ripple	0.5% of full scale
Output Settling Time	0.3 ms maximum, 5µs minimum (full scale range)
All Channel Update Rate	20ms
Max. Continuous Overload	Outputs current limited to 40mA typical; continuous overloads on multiple outputs can damage module.
Type of Output Protection	0.1 µF transient suppressor
Output Signal at Power Up or Power Down	0 V

ZIPLink® Wiring System for CLICK PLC Family

Wiring Solutions using the *ZIP*Link Wiring System

ZIPLinks eliminate the normally tedious process of wiring between devices by utilizing prewired cables and DIN rail mount connector modules. It's as simple as plugging in a cable connector at either end or terminating wires at only one end. Prewired cables keep installation clean and efficient, using half the space at a fraction of the cost of standard terminal blocks.

ZIPLinks are available in a variety of styles to suit your needs, including feedthrough connector module. ***ZIP***Links are available for all Basic, Standard and Ethernet CLICK PLC units, select CLICK PLUS option slot modules, and most discrete and analog stackable I/O modules. Pre-printed I/O-specific adhesive label strips for quick marking of ***ZIP***Link modules are provided with ***ZIP***Link cables.

Solution 1: CLICK PLC, CLICK PLUS PLC with Option Slot Module, and Stackable I/O Modules to ZIPLink Connector Modules

When looking for quick and easy I/O-to-field termination, a ***ZIP***Link connector module used in conjunction with a prewired ***ZIP***Link cable, consisting of an I/O terminal block at one end and a multi-pin connector at the other end, is the best solution.

Use the "CLICK PLC PLC Unit ***ZIP***Link Selector" table and CLICK I/O ***ZIP***Link selector tables located in this section:

- Locate your PLC or I/O module.
- Select a ***ZIP***Link Module.
- Select a corresponding ***ZIP***Link Cable.

Solution 2: CLICK/CLICK PLUS PLC I/O to 3rd Party Devices

When wanting to connect PLC I/O (built-in, option slot module, or stackable) to another device within close proximity, no extra terminal blocks are necessary when using the ***ZIP***Link Pigtail Cables. ***ZIP***Link Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.

Use the I/O Modules to 3rd Party Devices selector tables located in the ***ZIP***Link section:

- Locate your PLC or I/O module.
- Select a ***ZIP***Link Pigtail Cable that is compatible with your 3rd party device

Solution 3: GS Series and DuraPulse Drives Communication Cables

Need to communicate via Modbus RTU to a drive or a network of drives?

ZIPLink cables are available in a wide range of configurations for connecting to PLCs and SureServo, SureStep, Stellar Soft Starter and AC drives. Add a ***ZIP***Link communications module to quickly and easily set up a multi-device network.

Use the Drives Communication selector tables located in the ***ZIP***Link section:

- Locate your Drive and type of communications.
- Select a ***ZIP***Link cable and other associated hardware.

Solution 4: Serial Communications Cables

ZIPLink offers communications cables for use with CLICK PLCs and select CLICK PLUS PLCs that can also be used with other communications devices. Connections include a 6-pin RJ12 connector which can be used in conjunction with the RJ12 Feedthrough module.

Use the Serial Communications Cables selector table located in the ***ZIP***Link section:

- Locate your connector type
- Select a cable.

ZIPLink® Wiring System for CLICK PLC Family

CLICK PLC & CLICK PLUS Option Slot *ZIP*Link Selector

PLC or Option Slot Module		ZIPLink			
CLICK PLC Unit	CLICK PLUS Option Slot Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-00DD1-D	NA	20	Feedthrough	ZL-RTB20, ZL-RTB20-1	ZL-C0-CBL20 *
C0-00DD2-D	NA				
C0-00DR-D	NA				
C0-00AR-D	NA				
C0-01DD1-D	NA				
C0-01DD2-D	NA				
C0-01DR-D	NA				
C0-01AR-D	NA				
C0-02DD1-D	NA	No *ZIP*Links are available for CLICK Analog PLC units.			
C0-02DD2-D	NA				
C0-02DR-D	NA				
C0-10DD1E-D	NA	20	Feedthrough	ZL-RTB20, ZL-RTB20-1	ZL-C0-CBL20 *
C0-10DD2E-D	NA				
C0-10DRE-D	NA				
C0-10ARE-D	NA				
C0-11DD1E-D	C2-14D1				
C0-11DD2E-D	C2-14D2				
C0-11DRE-D	C2-14DR				
C0-11ARE-D	C2-14AR				
NA	C2-14TTL				
C0-12DD1E-D	C2-08D1-4VC	No *ZIP*Links are available for CLICK Ethernet Analog PLC units or CLICK PLUS Option Slot Modules with analog I/O.			
C0-12DD2E-D	C2-08D2-4VC				
C0-12DRE-D	C2-08DR-4VC				
C0-12ARE-D	C2-08AR-4VC				
C0-12DD1E-1-D	C2-08D1-6C				
C0-12DD2E-1-D	C2-08D2-6C				
C0-12DRE-1-D	C2-08DR-6C				
C0-12ARE-1-D	C2-08AR-6C				
C0-12DD1E-2-D	C2-08D1-6V				
C0-12DD2E-2-D	C2-08D2-6V				
C0-12DRE-2-D	C2-08DR-6V				
C0-12ARE-2-D	C2-08AR-6V				
NA	C2-DCM	No *ZIP*Links are available for CLICK PLUS Option Slot Communications Module			
	C2-NRED				
	C2-OPCUA				

Table Notes:

* Select the cable length by replacing the * with: Blank = 0.5 m, -1 = 1.0 m, or -2 = 2.0 m.

1 Note: The C0-04TRS relay output is derated not to exceed 2A per point maximum when used with the *ZIP*Link wiring system.

2 Note: Fuses (5x20 mm) are not included. See Edison Electronic Fuse section for 5x20 mm fuse. S500 and GMA electronic circuit protection is recommended for fast-acting maximum protection. S506 and GMC electronic circuit protection is recommended for time-delay performance. Ideal for inductive circuits. To ensure proper operation, do not exceed the voltage and current rating of the *ZIP*Link module. ZL-RFU20 = 2A per circuit.

CLICK/CLICK PLUS PLC Discrete Input Module *ZIP*Link Selector

I/O Module	ZIPLink			
Input Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-08SIM	Not supported by *ZIP*Link			
C0-08ND3	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-08ND3-1				
C0-08NE3				
C0-08NA				
C0-16ND3	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
		Sensor	ZL-LTB16-24-1	
C0-16NE3	20	Feedthrough	ZL-RTB20	
		Sensor	ZL-LTB16-24-1	

CLICK/CLICK PLUS PLC Discrete Output Module *ZIP*Link Selector

I/O Module	ZIPLink			
Output Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-08TD1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-08TD2				
C0-08TR				
C0-08TR-3	Not supported by *ZIP*Link			
C0-08TA				
C0-16TD1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Fuse	ZL-RFU20 2	
		Relay (sinking)	ZL-RRL16-24-1	
C0-16TD2	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Fuse	ZL-RFU20 2	
		Relay (sourcing)	ZL-RRL16-24-2	
C0-04TRS1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-04TRS-10	Not supported by *ZIP*Link			

CLICK/CLICK PLUS PLC Combo I/O Module *ZIP*Link Selector

I/O Module	ZIPLink			
Combo Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-16CDD1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
C0-16CDD2				
C0-08CDR	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *

CLICK/CLICK PLUS PLC Analog I/O Module *ZIP*Link Selector

I/O Module	ZIPLink			
Analog Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-04AD-1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04AD-2	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04POT	0	No *ZIP*Links are available for RTD and thermocouple modules.		
C0-04RTD	20			
C0-04THM	11			
C0-04DA-1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04DA-2	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-4AD2DA-1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
C0-4AD2DA-2	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *

Accessories

C2-USER-M $0.00
CLICK PLUS PLC Hardware User Manual

Manual covers all CLICK PLUS PLC and I/O module installation and wiring, specifications, error codes and troubleshooting guide. The CLICK PLUS PLC Hardware User Manual can be downloaded free at the AutomationDirect Web site; www.AutomationDirect.com

C0-USER-M $0.00
CLICK PLC Hardware User Manual

Manual covers all CLICK PLC and I/O module installation and wiring, specifications, error codes and troubleshooting guide. The CLICK PLC Hardware User Manual can be downloaded free at the AutomationDirect Web site; www.AutomationDirect.com

C0-PGMSW $12.00
Programming Software USB

The programming software can be downloaded free at the AutomationDirect Web site, or the USB can be purchased from the AutomationDirect online Web store. www.AutomationDirect.com

EA-MG-PGM-CBL $56.00
PC to Panel Programming Cable Assembly for C-more Micro-Graphic Panels and CLICK/CLICK PLUS PLCs

The 6-ft cable assembly connects a personal computer to any ***C-more*** Micro-Graphic panel, CLICK PLC, or select CLICK PLUS PLC for setup and programming.

Note: This cable assembly uses the PC's USB port and converts the signals to serial transmissions. The USB port supplies 5VDC to the Micro-Graphic panel for configuration operations.

Assembly includes standard USB A-type connector to B-type connector cable, custom converter, and an RS232C cable with an RJ12 modular connector on each end.

USB-CBL-AMICB6 $5.75
USB A to USB microB Programming Cable Assembly (CLICK PLUS Only)

Programming cable, USB A to USB microB, 6ft (1.83 m) length. For use with CLICK PLUS PLCs and most USB devices. The USB port supplies 5VDC to the CLICK PLUS CPU for programming.

D2-DSCBL $41.50
Programming Cable for CLICK/CLICK PLUS and DirectLOGIC PLCs

12ft. (3.66 m) RS232 shielded PC programming cable for CLICK, select CLICK PLUS PLCs, DL05, DL06, DL105, DL205, D3-350, D4-450, D4-454, and Do-more H2 and T1H series CPUs. 9-pin D-shell female connector to an RJ12 6P6C connector.

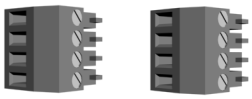
Note: If your PC has a USB port but does not have a serial port, you must use programming cable EA-MG-PGM-CBL to connect to CLICK PLCs. For CLICK PLUS PLCs, you may also use USB-CBL-AMICB6

C0-3TB $11.50
Spare 3-Pole Terminal Block

Replacement 3-pole terminal block for the 3-wire RS-485 Port 3 on CLICK Standard and Analog PLCs as well as the CLICK PLUS C2-03CPU. Sold in packs of 2.

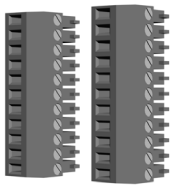
C0-4TB $11.50
Spare 24VDC Power Terminal Block

Replacement terminal block for the 24VDC supply power to the PLC. Sold in packs of 2.



C0-8TB $17.50
Spare 8-Point I/O Terminal Block

Replacement terminal block for the 8-point I/O modules. Sold in packs of 2.

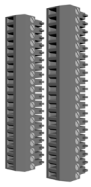


C0-8TB-1 $20.50
Spare 13-Point I/O Terminal Block

Replacement terminal block for the 8-point I/O relay modules. Sold in packs of 2.

C0-16TB $25.00
Spare 16-Point I/O Terminal Block

Replacement terminal block for the 16-point I/O modules and PLC built-in I/O. Sold in packs of 2.



C2-6TB $17.50
Spare 6-pt Terminal Block

Replacement terminal block for the C2-DCM serial ports.
Sold in packs of 2.

Accessories

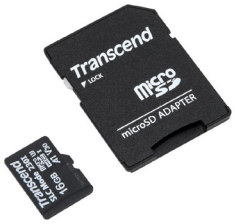
SE-ANT250 ***$48.00***
Wi-Fi/Bluetooth Dome Antenna

2.4 GHz antenna, IP67, panel mount, 9.8 ft (3m) cable length, for external mounting when CLICK PLUS PLC is installed in a metallic enclosure.

C2-FILL ***$9.50***
CPU Option Slot Cover

Snap-on cover for CLICK PLUS CPU Option Slot in applications without an Option Slot module present.

MSD-SLC16G ***$89.00***
16GB microSD card, industrial grade, 3D NAND Flash (with SLC Mode), 85 °C [185 °F] max operating temp.



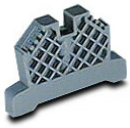
SE-ANT210 ***$13.00***
Wi-Fi/Bluetooth Whip Antenna

Whip/straight 2.4 GHz antenna, IP65, connector mount. Not recommended for installation in a metallic enclosure.

D2-BAT-1 ***$9.75***
Replacement CR2354 battery for Standard, Analog, Ethernet Standard and Ethernet Analog PLC units.

TW-SD-MSL-2 ***$4.00***
Insulated Slotted Screwdriver
0.4 x 2.5 x 80 mm slotted screwdriver for terminal blocks.

DN-EB35MN ***$36.50***
DIN*nector* ***End Bracket***



D0-MC-BAT ***$3.25***
Replacement CR2032 battery for CLICK PLUS PLC units.

DN-WS ***$87.00***
Wire Stripper

C-more and C-more Micro Graphic Operator Interfaces

ZIPLink Wiring Systems

Ethernet Cables
Pre-terminated Cat5e Ethernet patch cables with RJ45 connectors provide dependable communication in industrial applications. These cables are available in various lengths and support transmission speeds of 10/100/1000 Mbps.