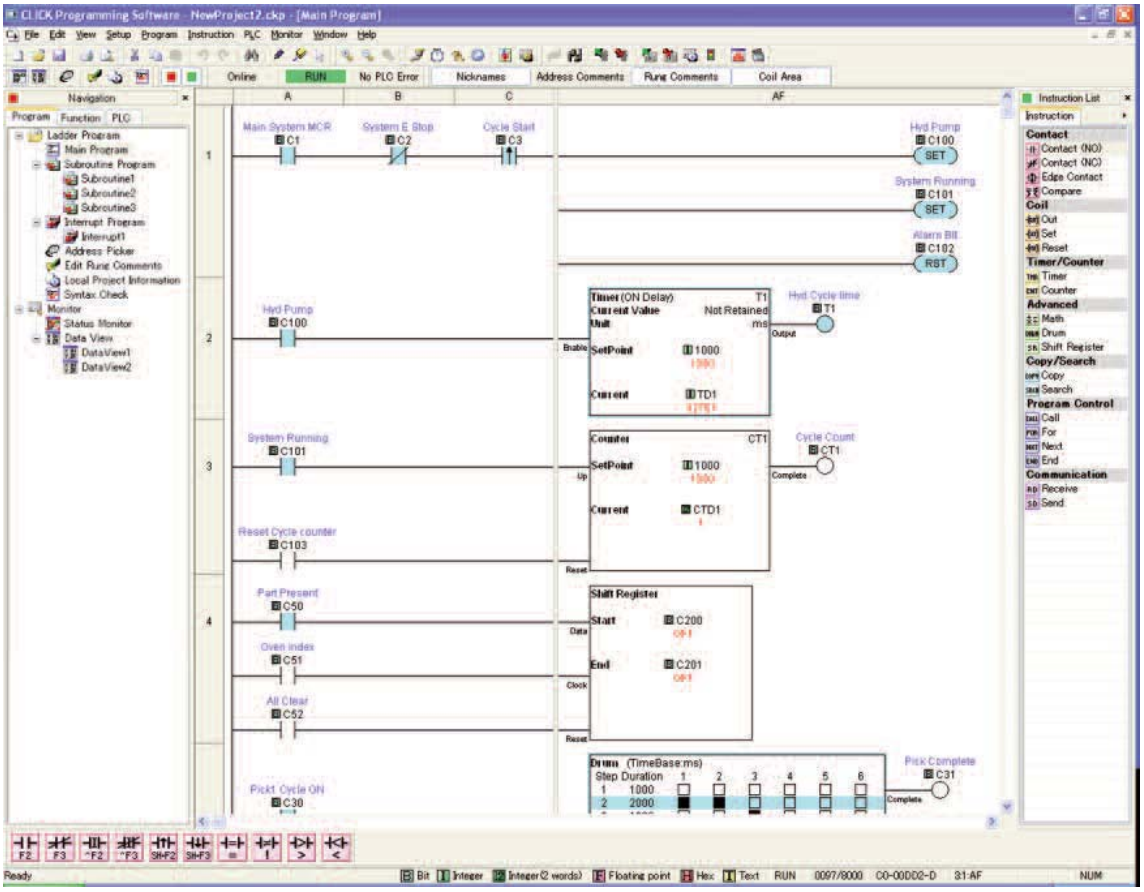
CLICK to get FREE Programming Software!



Simple to learn ...

The CLICK PLC programming tool was designed with the user in mind. We have simplified the programming process to make it easier to learn, faster to program, and capable of completing most of your discrete application needs with only 21 instructions!

This combination of RLL (Relay Ladder Logic) and Function block programming offers you a comprehensive programming environment with easy navigation and a familiar Windows look and feel.

... Easy to use

We listened to our customers and tried to address what they felt were the inhibitors to a simplistic programming environment. This includes more intuitive instructions that are not only easier to use but also offer more functionality at the same time. We worked to create one of the best help files of any software in the industry. We offer you enough options to easily address the majority of your needs during all phases of programming (learning, coding, commissioning, troubleshooting), while keeping it structured enough to make the basic operations obvious.

Action-packed

The CLICK PLC Programming tool allows each individual to set up their programming environment to suit their needs. Beginners may choose to program almost exclusively via the mouse by clicking on icons, instructions, drop-down menus, and selecting PLC addresses from the "Address Picker". As programmers become more experienced, the time-saving keyboard shortcuts can greatly enhance productivity, and speed development/debug times. Many of the instruction entry shortcuts are even the same as those used in our *Direct*LOGIC PLC software.

Either way, you can select the option that suits your style of programming.

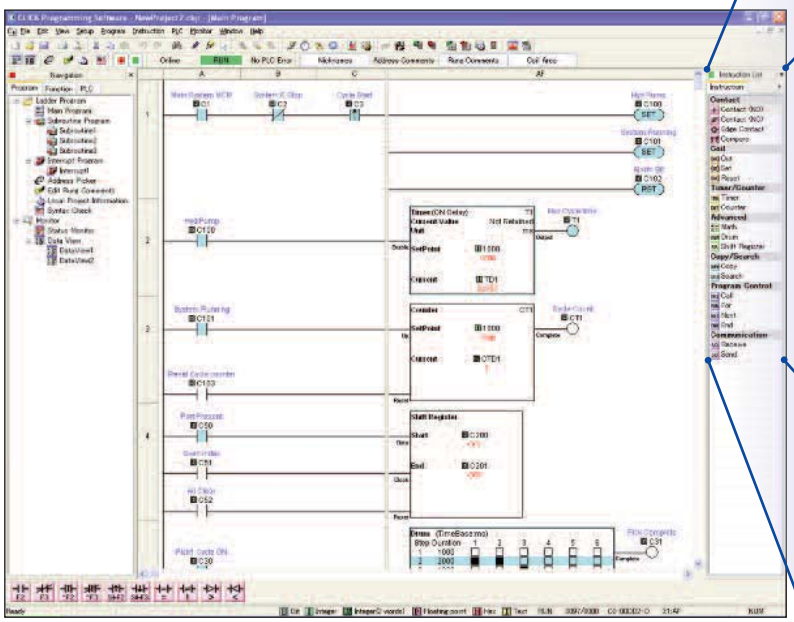
Simply download your free software at:

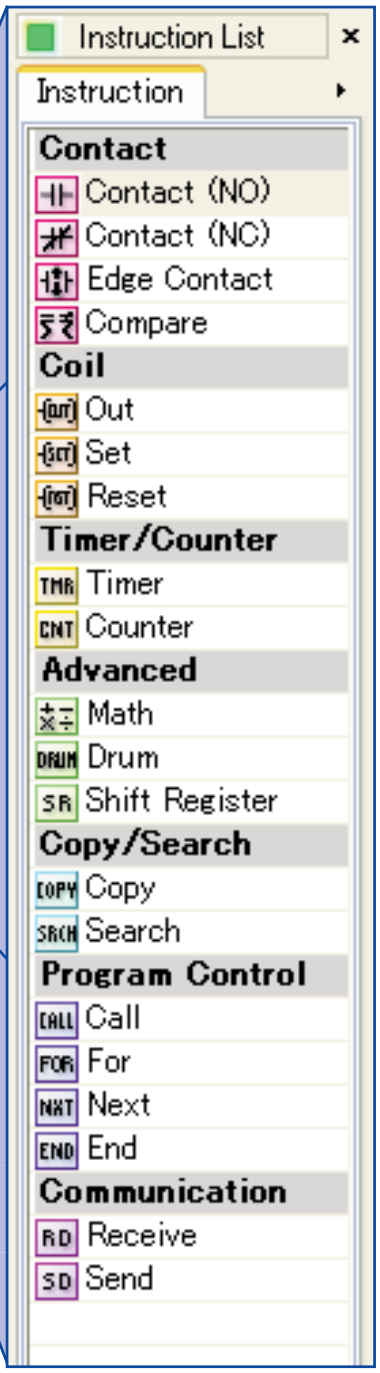
www.clickplcs.com

Simplified instruction set reduces your programming time

Instruction List

The CLICK PLC programming software offers 21 extremely powerful instructions! This instruction set offers the same flexible control you might expect from over 150 instructions in a traditional controller. Simply drag and drop these instructions onto the ladder view (the center section of the screen), and a helpful dialog box will guide you through each instruction's configuration.





Note: The RETURN instruction is not included in this list because it is used in the Subroutine and Interrupt programs only.

What's included?

The 21 CLICK PLC instructions include everything you would typically expect:

- Contacts*
- Coils
- Compare
- Set/Reset
- Timer
- Counter
- Math**
- For/Next

Then there are some advanced instuctions you might not expect:

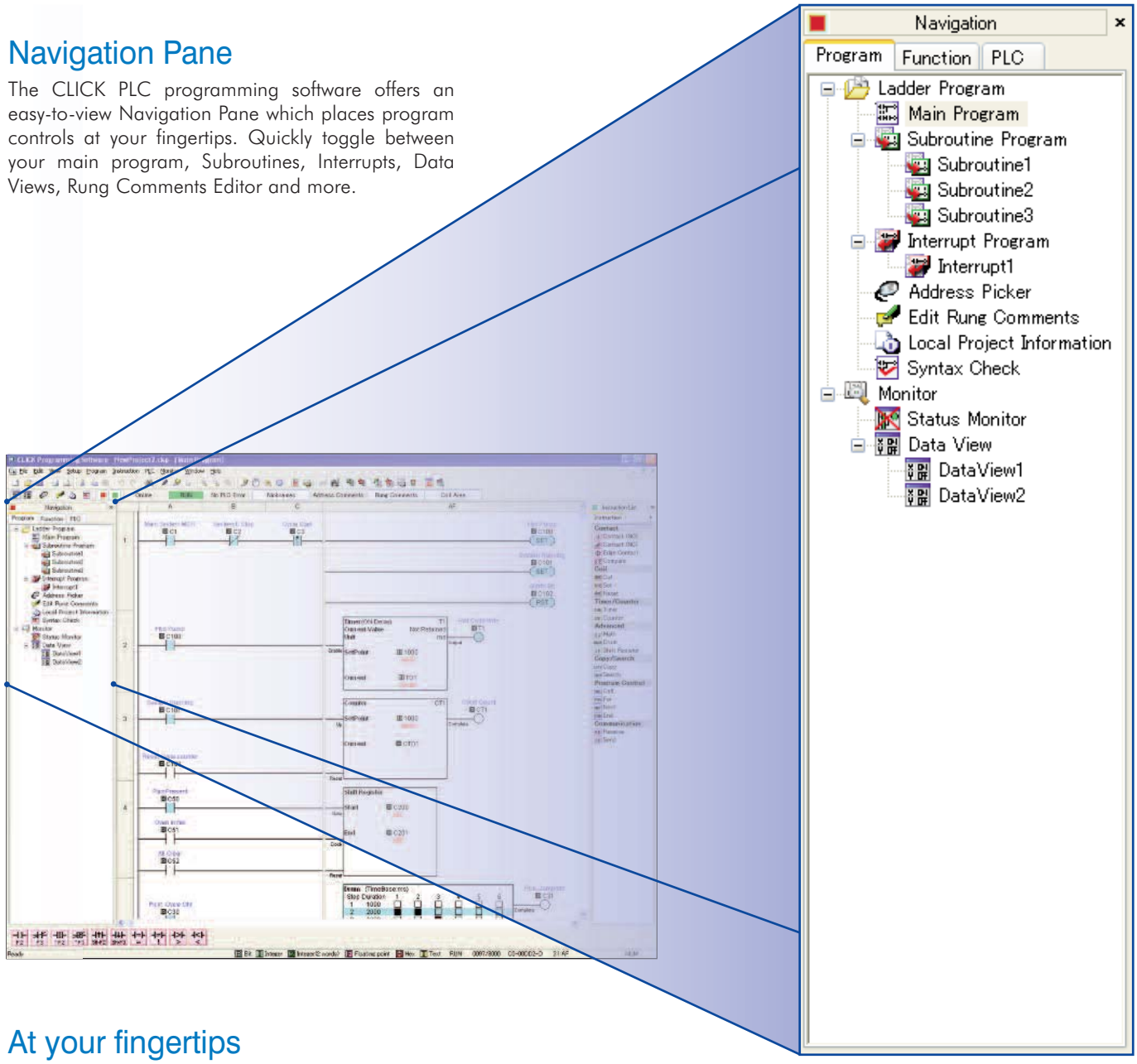
- DRUM
- Send/Receive
- Copy
- Shift Register
- Call/Return(Subroutine)
- Search

* Contacts include Normally Open, Normally Closed, Edge-triggered and Compare
** Math includes Decimal, Floating Point and HEX math. Supports free-form formula entry.

CLICK offers intuitive navigation

Navigation Pane

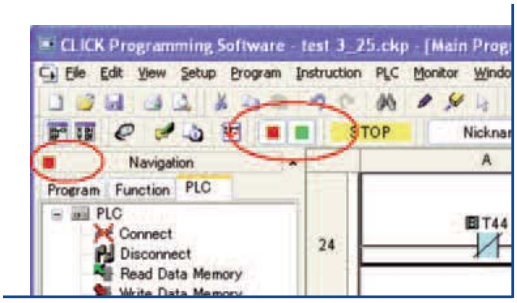
The CLICK PLC programming software offers an easy-to-view Navigation Pane which places program controls at your fingertips. Quickly toggle between your main program, Subroutines, Interrupts, Data Views, Rung Comments Editor and more.



At your fingertips

The Navigation Pane puts many practical and frequently used functions within one CLICK of your mouse during configuration, commissioning and troubleshooting. Quickly move between your Main Ladder Program and Subroutines and Interrupt routines within your project. Access frequently used system functions such as System Setup, Password utility, Comm Port Configuration, PLC Connection, Data and Project Transfer, Firmware Update and many more. Many of these functions are also available via drop-down menus. It's your choice!

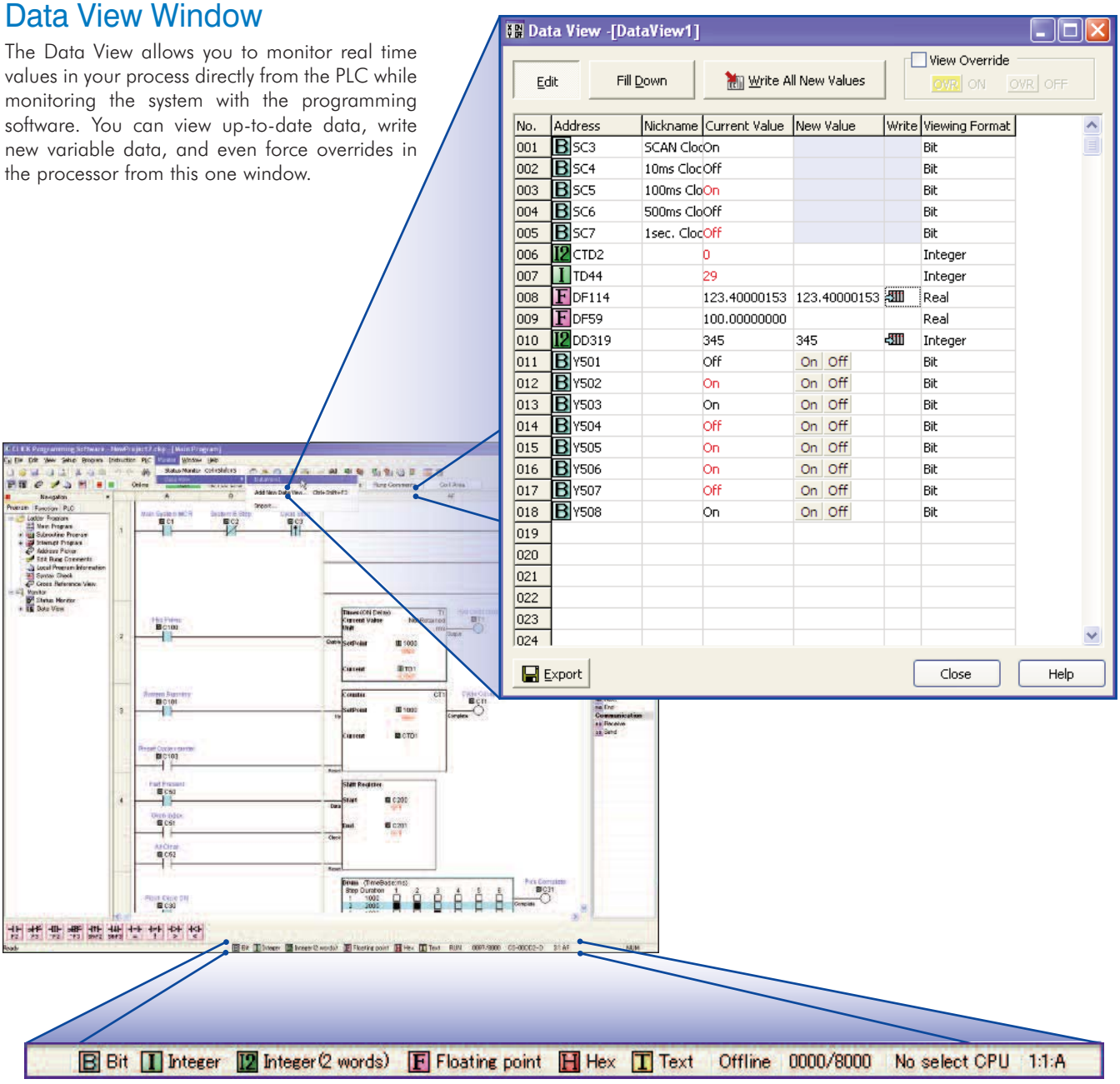
Use the color-coded Window Control Toolbar to quickly and easily hide the navigation (and/or instruction) pane to maximize your ladder programming work space.



Monitor your program with a **CLICK**

Data View Window

The Data View allows you to monitor real time values in your process directly from the PLC while monitoring the system with the programming software. You can view up-to-date data, write new variable data, and even force overrides in the processor from this one window.



What is included?

The Data View allows you to monitor data as you would expect ... but what else can you do?

- Auto Fill Down feature allows you to quickly populate your addresses
- View data types as either Integer, Real (floating point), Exponential or Hex.
- Force values with the Override feature.
- Import/Export your data View to exchnage the setup.
- Save and create multiple Data View files for separate process applications.
- Data types are easily identifed by the Data Type icons on the Status Bar.

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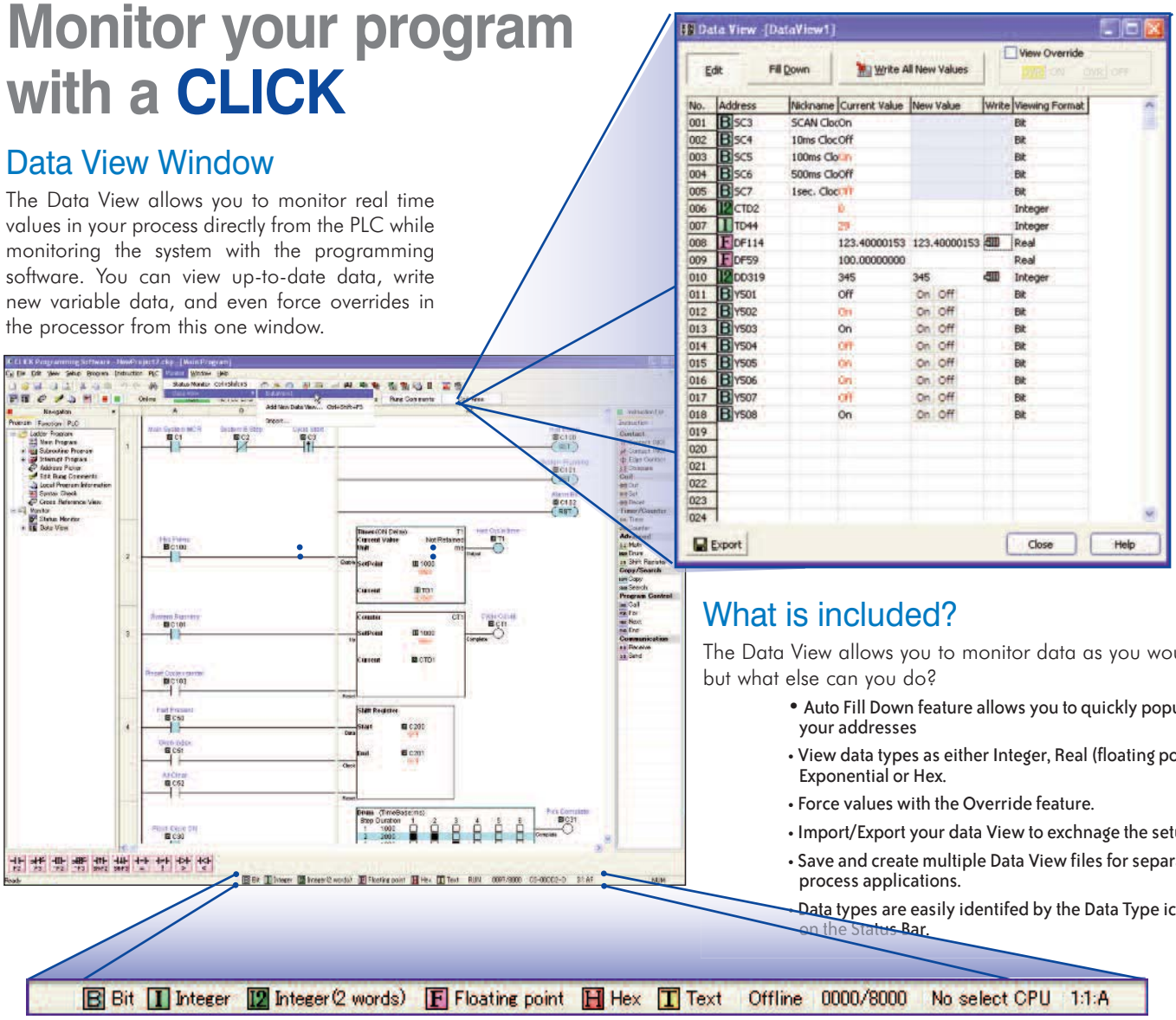

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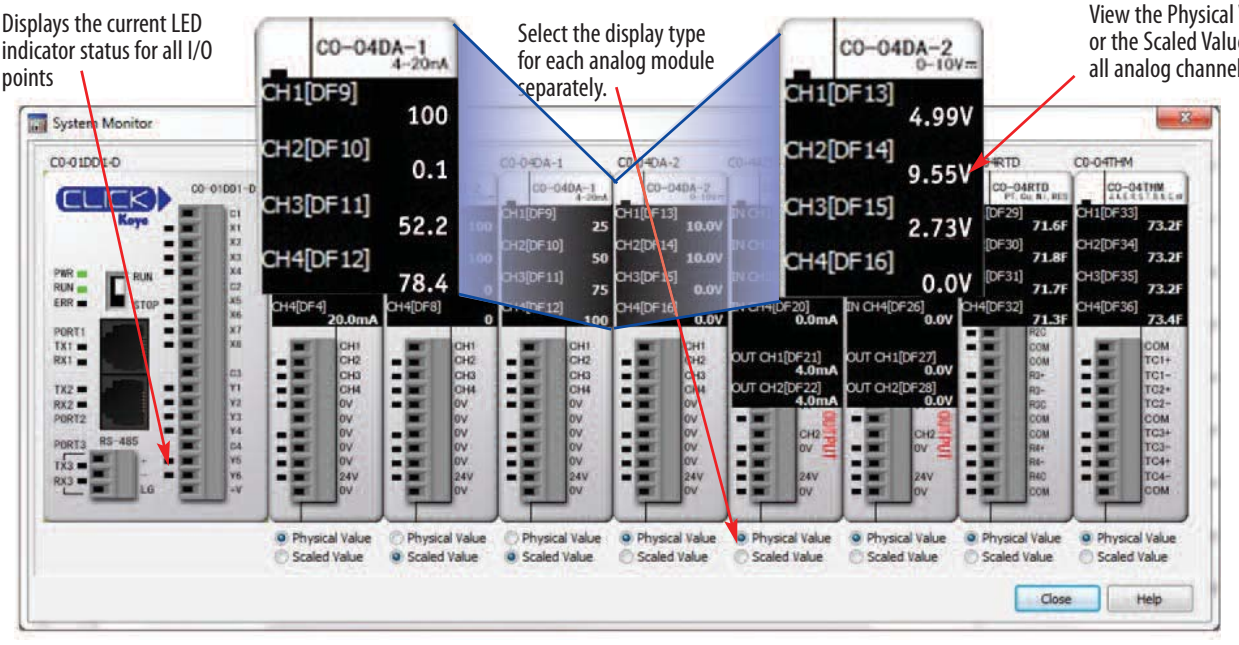
Check I/O status with a **CLICK**

Displays the current LED indicator status for all I/O points

Select the display type for each analog module separately.

View the Physical Values or the Scaled Values for all analog channels



CLICK on a practical instruction

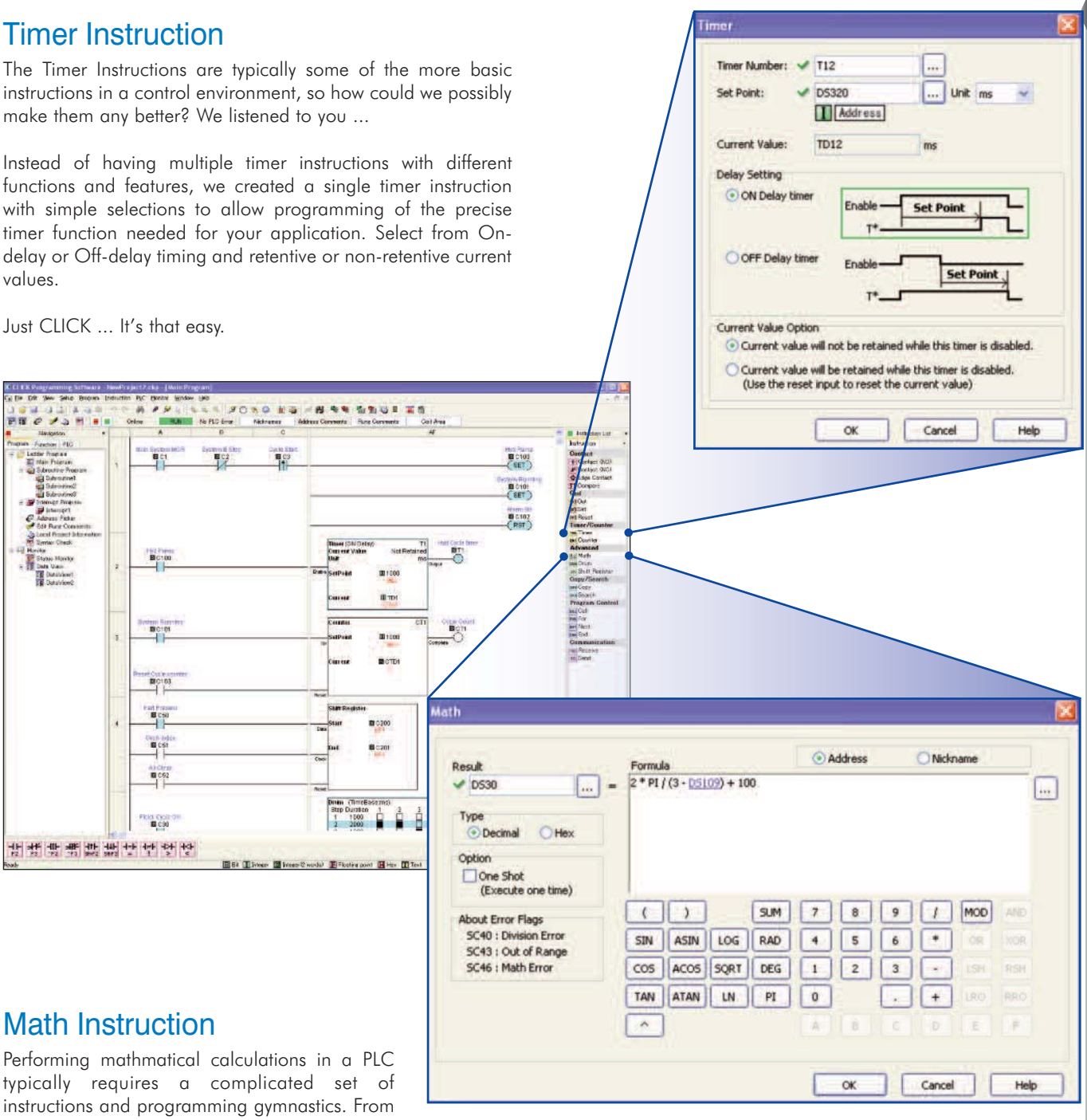
For example ...

Timer Instruction

The Timer Instructions are typically some of the more basic instructions in a control environment, so how could we possibly make them any better? We listened to you ...

Instead of having multiple timer instructions with different functions and features, we created a single timer instruction with simple selections to allow programming of the precise timer function needed for your application. Select from On-delay or Off-delay timing and retentive or non-retentive current values.

Just CLICK ... It's that easy.



Math Instruction

Performing mathmatical calculations in a PLC typically requires a complicated set of instructions and programming gymnastics. From mixing process variable data with constants in multiple formats, to calculating complex logarithmic formulas, math computations in ladder logic can be complex, so how could we possibly make it any better? We listened to you...

Instead of having a full set of various math instructions you string together to perform complex mathmatical equations, we created a single instruction that allows you to enter formulas directly or select from the familiar calculator style layout to create your formula.

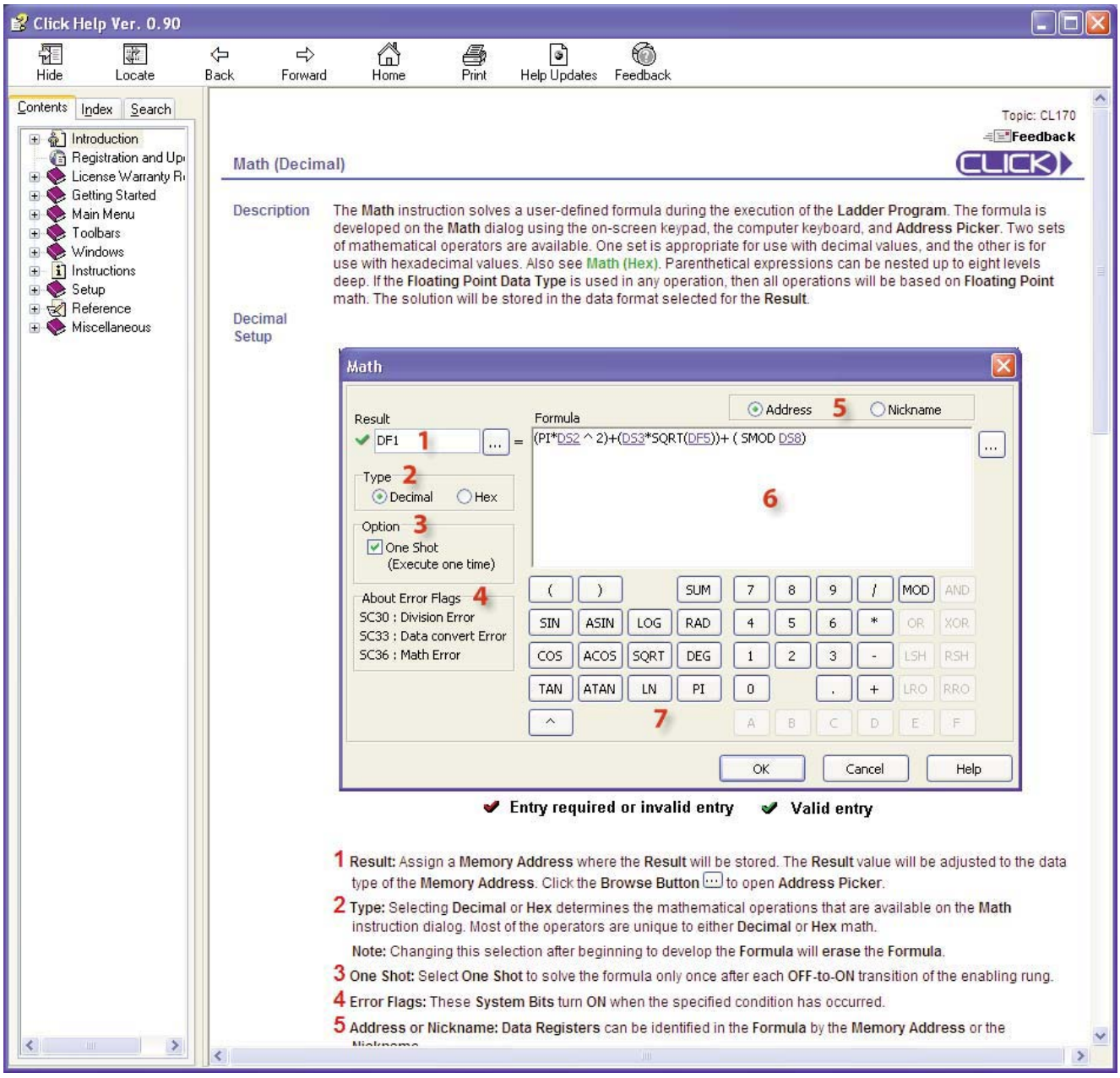
Just CLICK ... It's that easy.

CLICK for great help!

Detailed Help Files

We wanted your programming experience to be the easiest and most productive of any PLC you have ever programmed. So we spent a lot of time creating the content for the help file that gives you clear and concise definitions of the features and functionality for each instruction and the operation of the software.

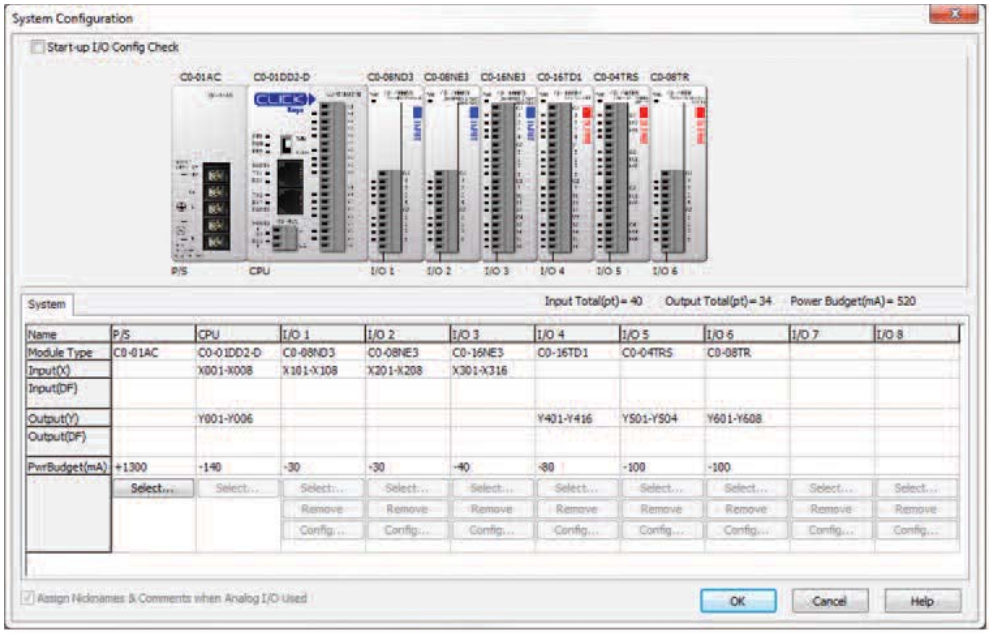
Just CLICK Help ... It's that easy.



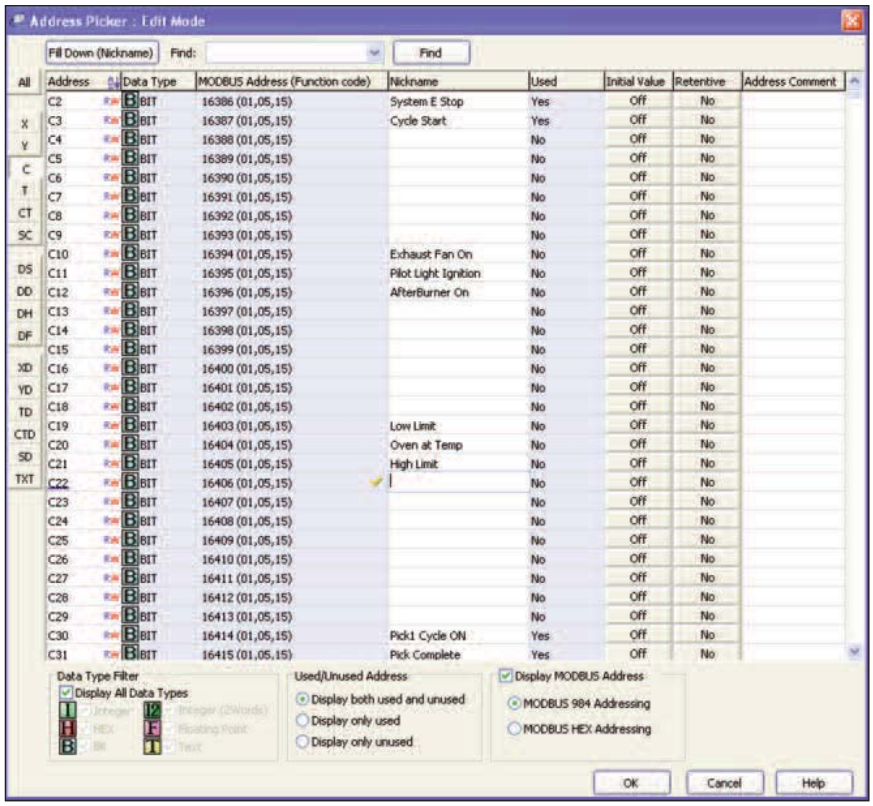
CLICK to configure the hardware

System Configuration

The CLICK software includes a configuration tool that helps you configure a CLICK PLC quickly and easily. Select the CPU, power supply, and modules you need - the software calculates your I/O count, address list, and Power Budget automatically.



CLICK to configure the PLC tags



Address Picker

- Assign nicknames
  (use autofill for sequential names)
- Create address comments
- Powerful search, sort, filter, and categorize options
- Modbus addresses
  (HEX or 984 style)
- Establish initial values for specific memory locations
- Make memory locations retentive
  (during power outages)

CLICK has practical accessories

The ZIPLink wiring system eliminates the normally tedious process of wiring PLC I/O to terminal blocks. Simply plug one end of a ZIPLink pre-wired terminal block cable into your I/O module and the other end into a ZIPLink connector module. It's that easy. ZIPLinks use half the space, at a fraction of the total cost of terminal blocks.

Three ZIPLink cable lengths are available: 0.5m (1.6ft.), 1.0m (3.3ft.), and 2.0m (6.6ft.). See Wiring Solutions section of catalog.

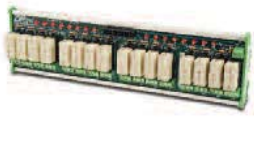
Other accessories include a hardware manual, programming cables, spare terminal blocks, and replacement batteries for analog CPU modules

I/O Module

ZIPLink Cable

ZIPLink Connector Module

ZIPLink Sensor Input Module



ZIPLink Fuse Module

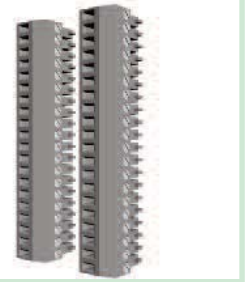
Programming Cables

EA-MG-PGM-CBL
$39

D2-DSCBL
$10

Hardware User Manual

Spare Terminal Blocks



Replacement Battery

CLICK PLC Overview

PLC System

The CLICK PLC family of components is designed to offer practical PLC features in a compact and expandable design and, at the same time, offer the best ease-of-use.

System Configuration

A powered CLICK CPU module by itself can be used as a complete PLC system with 8 input points and 6 output points built-in (Basic and Standard CPUs) or with 4 output points, 2 analog input points and 2 analog output points (Analog CPUs). The system can also be expanded with the addition of up to 8 I/O modules. A variety of discrete and analog I/O modules are available for flexible and optimal system configuration.

Decimal Memory Addressing

The I/O numbering system and memory addressing are decimal to make it easier to count the number of I/O points and data registers.

Communications

All CPUs have two built-in RS-232 communications ports. Standard and Analog CPUs also have one built-in RS-485 communications port. One RS-232 port supports the Modbus RTU protocol only and can be used as the programming port. The other ports support either Modbus RTU or ASCII protocol. Both RS-232 ports supply 5 VDC, so you can connect a monochrome C-more Micro HMI panel without an additional power supply.

Analog I/O

Analog CPU modules have built-in analog I/O (2-channel analog inputs and 2-channel analog outputs). Analog input, output and combo I/O modules are also available.

Calendar / Clock & Battery Backup

Standard and Analog CPU modules include the real time clock and battery backup for the internal SRAM. Battery allows data to be stored for 5 years (Battery sold separately).

FREE Programming Software

The CLICK programming software can be downloaded free from our Web site and provides an intuitive programming tool that will get you up and running quickly.

Easy-to-Use Instructions

The CLICK PLC supports a very simple but practical instruction set. The easy-to-use instructions can cover most applications that are suitable for this class of PLC (the CLICK PLC does not support DirectLOGIC instructions).

8,000 Steps Program Memory

The CLICK CPU module can store up to 8,000 steps of ladder program in its flash EEPROM memory.

2 Year Warranty

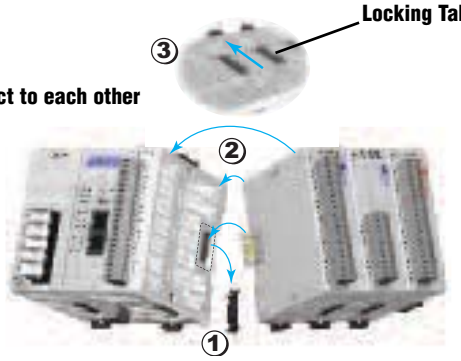
All CLICK PLC modules are covered under a 2 year warranty.

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

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

Locking Tabs

Modules easily connect to each other



FREE programming software!

CLICK PLC Overview

CPU Modules

The eleven CLICK CPU modules are available with different combinations of built-in I/O types.

Basic CPU

CLICK Basic CPU Modules			
Part Number	**Inputs (8 points)**	**Outputs (6 points)**	**Price**
C0-00DD1-D	DC (24 VDC, sink/source)	DC (0.1 A, 5-24 VDC, Sink)	<--->
C0-00DD2-D		DC (0.1 A, 24 VDC, Source)	<--->
C0-00DR-D		Relay (1 A@6-27 VDC/6-240 VAC)	<--->
C0-00AR-D	AC (100-120 VAC)		<--->

Basic CPU Module Features:

- Eight discrete input points
- Six discrete output points
- Two RS-232 communications ports

Standard CPU

CLICK Standard CPU Modules			
Part Number	**Inputs (8 points)**	**Outputs (6 points)**	**Price**
C0-01DD1-D	DC (24 VDC, sink/source)	DC (0.1 A, 5-24 VDC, Sink)	<--->
C0-01DD2-D		DC (0.1 A, 24 VDC, Source)	<--->
C0-01DR-D		Relay (1 A@6-27 VDC/6-240 VAC)	<--->
C0-01AR-D	AC (100-120 VAC)		<--->

Standard CPU Module Features:

- Eight discrete input points
- Six discrete output points
- Two RS-232 communications ports
- One RS-485 communications port
- Calendar / clock
- Battery backup (Battery sold separately)

Analog CPU

CLICK Analog CPU Modules				
Part Number	**Inputs (4 points)**	**Outputs (4 points)**	***Analog Inputs, Outputs***	**Price**
C0-02DD1-D	DC (24 VDC, sink/source)	DC (0.1 A, 5-24 VDC, 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	<--->
C0-02DD2-D		DC (0.1 A, 24 VDC, Source)		<--->
C0-02DR-D		Relay (1 A@6-27 VDC/6-240 VAC)		<--->

Analog CPU Module 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 sold separately)

CLICK PLC 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 PLC from 12 VDC input power.

PSP24-DC12-1

CLICK Power Supplies			
Part Number	Input Voltage	Output Current	Price
C0-00AC	85-264 VAC	0.5A @ 24 VDC	<--->
C0-01AC	85-264 VAC	1.3A @ 24 VDC	<--->

12 VDC-to-24 VDC Converter			
Part Number	Input Voltage	Output Current	Price
PSP24-DC12-1	9.5-18 VDC	1.0A @ 24 VDC	<--->

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)	<--->
C0-08ND3-1	DC (8 pts, 3.3-5 VDC)	<--->
C0-16ND3	DC (16 pts, 24 VDC)	<--->
C0-08NE3	AC/DC (8 pts, 24 VAC/VDC)	<--->
C0-16NE3	AC/DC (16 pts, 24 VAC/VDC)	<--->
C0-08NA	AC (8 pts, 100-120 VAC)	<--->

Discrete Output Modules

There are seven discrete output modules available.

C0-08TD1

C0-08TD2

C0-16TD1

C0-16TD2

C0-08TA

C0-04TRS

C0-08TR

CLICK Discrete Output Modules		
Part Number	Outputs	Price
C0-08TD1	DC (8 pts, 0.3 A @ 3.3-27 VDC, Sink)	<--->
C0-08TD2	DC (8 pts, 0.3 A @ 12-24 VDC, Source)	<--->
C0-16TD1	DC (16 pts, 0.1 A @ 5-27 VDC, Sink)	<--->
C0-16TD2	DC (16 pts, 0.1 A @ 12-24 VDC, Source)	<--->
C0-08TA	AC (8 pts, 0.3A @ 17-240 VAC)	<--->
C0-04TRS*	Relay (4 pts, 7A @ 6-27 VDC/6-240 VAC)	<--->
C0-08TR	Relay (8 pts, 1A @ 6-27 VDC/6-240 VAC)	<--->

* 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 ZIPLink relay module and the correct ZIPLink cable (see Wiring System for CLICK PLCs later in this section).

CLICK PLC Overview

Discrete Combo I/O Modules

There are three discrete combo modules available.

C0-16CDD1

C0-16CDD2

C0-08CDR

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

Analog Input Modules

There are four analog input modules available.

C0-04AD-1

C0-04AD-2

C0-04RTD

C0-04THM

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

Analog Output Modules

There are two analog output modules available.

C0-04DA-1

C0-04DA-2

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

Analog Combo I/O Modules

There are two analog combo modules available.

C0-4AD2DA-1

C0-4AD2DA-2

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	<--->
C0-4AD2DA-2	4 channel, voltage (0-10 V), 13 bit	2 channel, voltage (0-10 V), 12 bit	<--->

CLICK PLC 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 CPU module.**

2. **If you need additional I/O, select from thirteen types of I/O modules.**

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

or

4. **Download the FREE CLICK programming software.**

5. **Select your PC-to-PLC programming cable.**

If your PC has a USB port, use cable EA-MG-PGM-CBL to connect to the CPU module port. If your PC has a 9-pin serial communications port, use programming cable D2-DSCBL.

EA-MG-PGM-CBL

or

D2-DSCBL

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

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

Screwdriver
DN-SS1

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.

PC Requirements

CLICK PLC Windows-based programming software works with Windows® 2000 Service Pack 4, XP Home or Professional, Vista (32 bit), and Windows 7 and Windows 8 (32 bit and 64 bit for both). These are the minimum system requirements:

- Personal Computer with a 333 MHz (2000 SP4/XP), 800 MHz (Vista), 1 GHz (Windows 7 and Windows 8) or higher processor (CPU) clock speed recommended; Intel Pentium/Celeron family or AMD K6/Athlon/Duron family, or compatible processor recommended
- SVGA 1024x768 pixels resolution. (1280x1024 pixels resolution recommended)
- 150MB free hard-disk space
- Memory (free RAM): 128MB (512MB recommended) for 2000 SP4/XP; 512 MB (1 GB recommended) for Vista, 1 GB (2 GB for 64 bit) for Windows 7 and Windows 8
- CD-ROM or DVD drive (only if installing software from a CD-ROM)
- 9-pin serial port or USB port for project transfer to PLC (USB port communications also requires USB-to-serial converter. Note: USB-to-serial convertor does not support XP Mode of Windows 7.)

The CLICK Programming Software can be downloaded free at the *AutomationDirect* Web site:

www.support.automationdirect.com/products/clickplcs.html

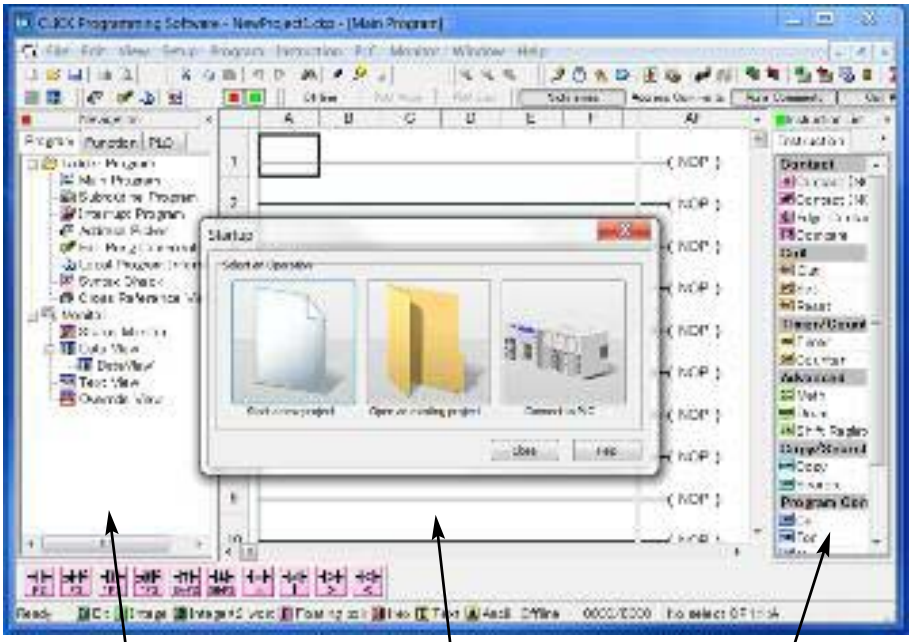
C0-PGMSW <--->

The programming software is also available for purchase on a CD-ROM.

NOTE: CLICK PLCs cannot be programmed using *Direct*SOFT programming software, which is used to program our *Direct*LOGIC PLCs; you must use the CLICK programming software.

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.

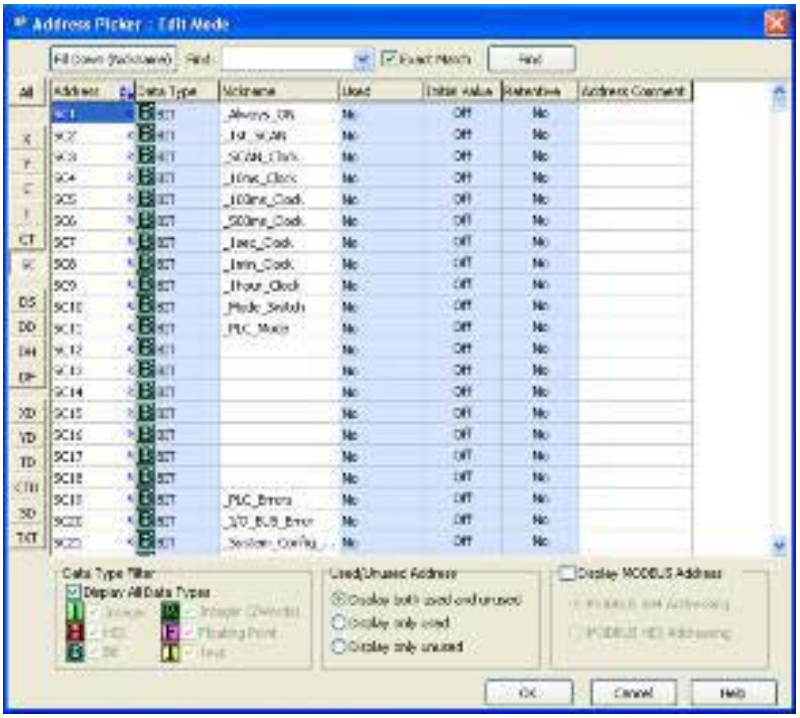
Powerful Features!

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.

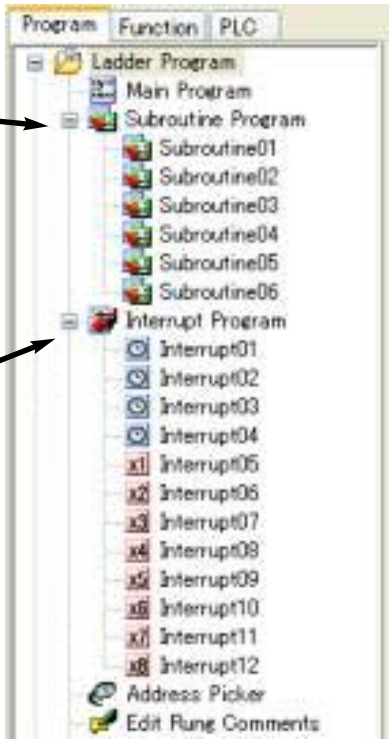


Subroutine Programs

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. The Basic and Standard CPU modules support up to 12 interrupt programs. The Analog CPU modules support up to 8 interrupt programs.



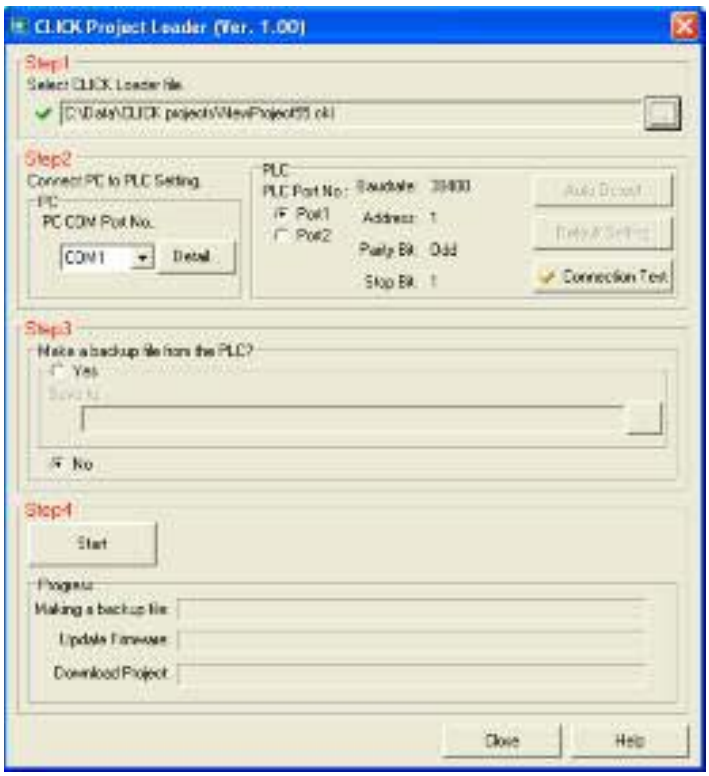
CLICK Programming Software

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.

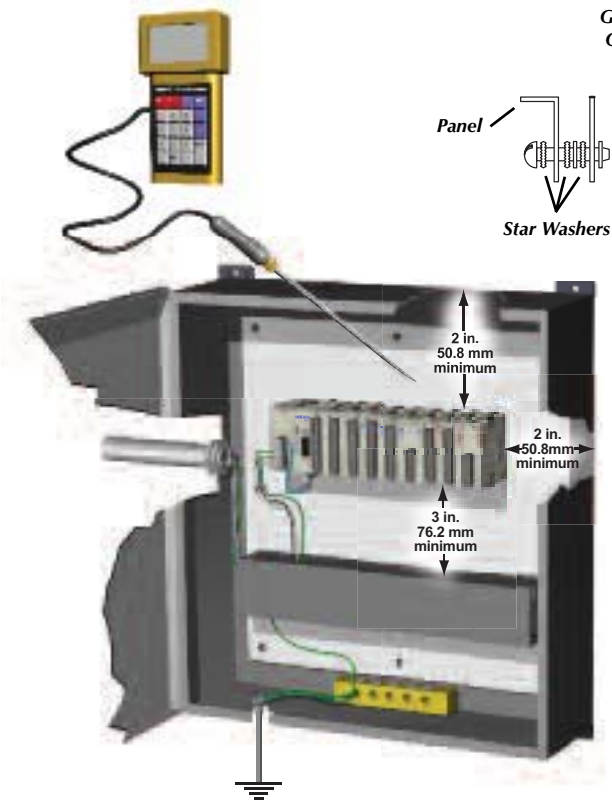
Product Dimensions and Installation

It is important to understand the installation requirements for your CLICK system. Your knowledge of these requirements will help ensure that your system operates within its environmental and electrical limits.

Plan for Safety

This catalog should never be used as a replacement for the user manual.

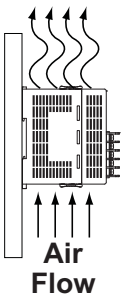
You can purchase, download free, or view online the user manuals for these products. Manual C0-USER-M is the user manual for the CLICK PLC. This user manual contains important safety information that must be followed. The system installation should comply with all appropriate electrical codes and standards.

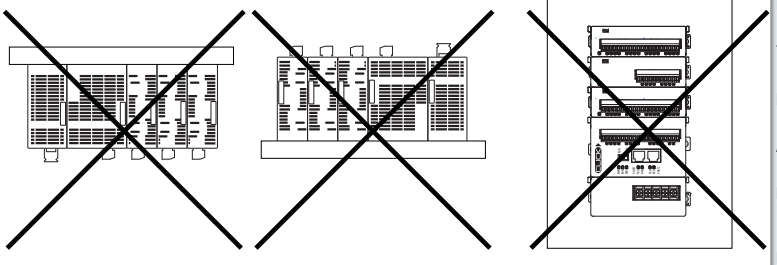


NOTE: THERE IS A MIMIMUM CLEARANCE REQUIREMENT OF 2 INCHES(51 MM) BETWEEN THE CLICK PLC AND THE PANEL DOOR OR ANY DEVICES MOUNTED IN THE PANEL DOOR. THE SAME CLEARANCE IS REQUIRED BETWEEN THE PLC AND ANY SIDE OF THE ENCLOSURE. A MINIMUM CLEARANCE OF 3 INCHES (76 MM) IS REQUIRED BETWEEN THE PLC AND A WIREWAY OR ANY HEAT PRODUCING DEVICE.

Mounting Orientation

CLICK PLCs must be mounted properly to ensure ample airflow for cooling purposes. It is important to follow the unit orientation requirements and to verify that the PLC's dimensions are compatible with your application. Notice particularly the grounding requirements and the recommended cabinet clearances.



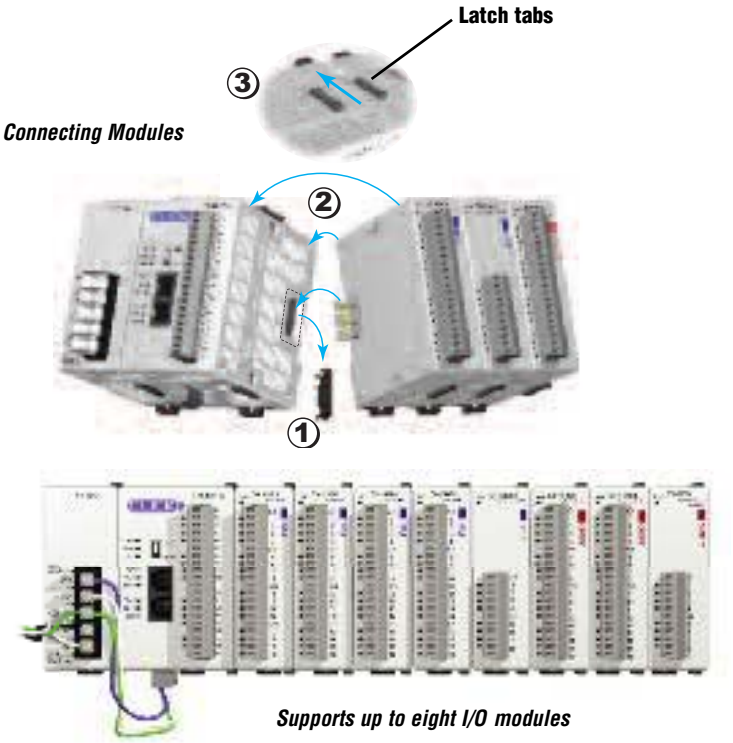


Product Dimensions and Installation

Connecting the Modules Together

CLICK CPUs, I/O modules and power supplies connect together using the extension ports that are located on the side panels of the modules (no PLC backplane/base required).

1. Remove extension port covers and slide the latch tabs forward.
2. Align the module pins and connection plug, and press the I/O module onto the right side of the CPU.
3. Slide the latch tabs backward to lock the modules together.



Connecting Modules

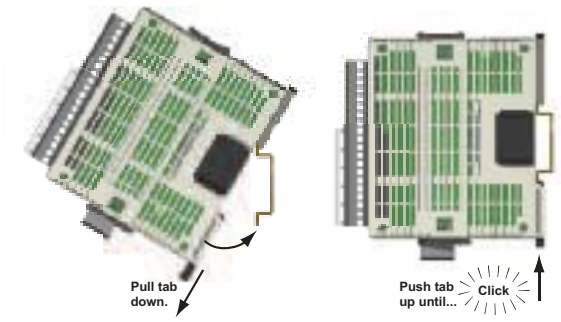
Supports up to eight I/O modules

Mounting

The CLICK PLC system, which includes the CLICK power supplies, CPU modules, and I/O modules, can be mounted in one of two ways.

1. DIN rail mounted
2. Surface mounted using the built-in upper and lower mounting tabs.

DIN Rail Mounting



Surface Mounting

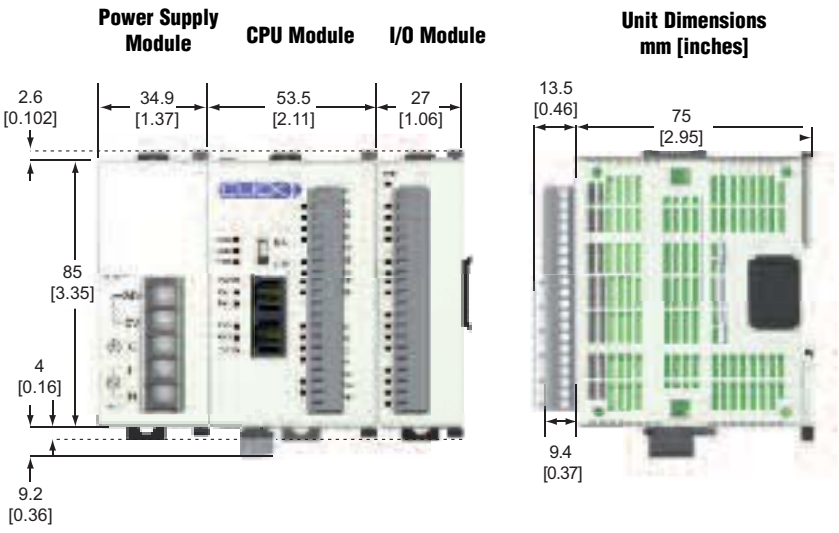
Unit Dimensions

These diagrams show the outside dimensions of the CLICK power suppy, CPU, and I/O modules. The CLICK PLC system is designed to be mounted on standard 35mm DIN rail, or it can be surface mounted.

Allow proper spacing from other components within an enclosure.

Maximum system:

Power Supply + CPU + 8 I/O modules.

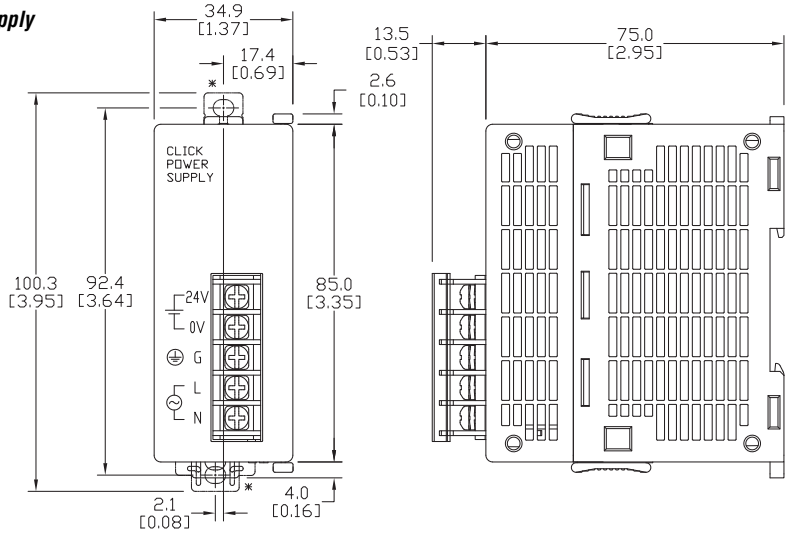


Product Dimensions and Installation

Unit Dimensions

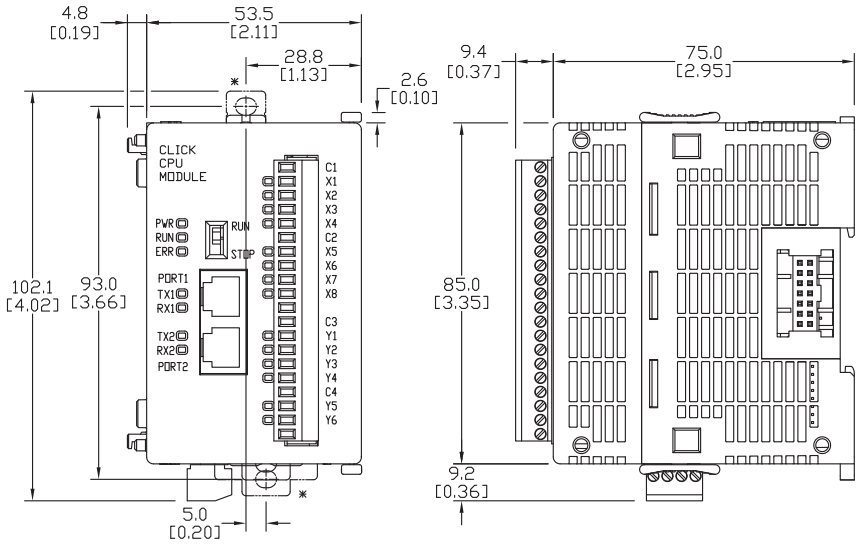
mm [inches]

Power Supply



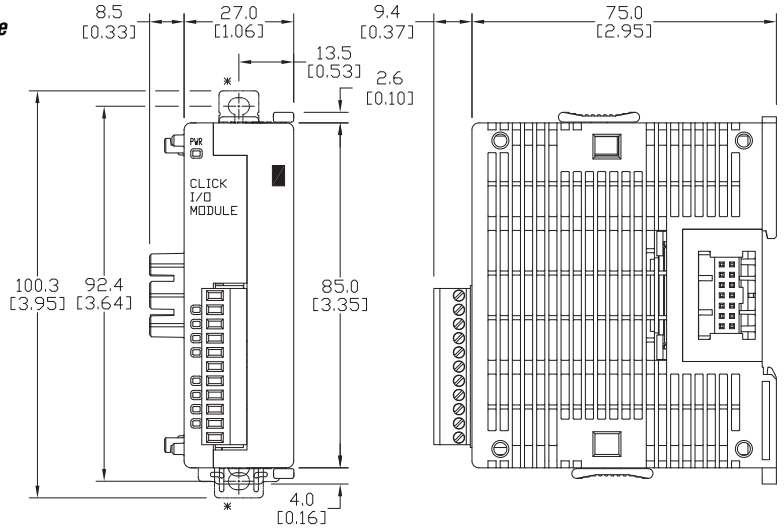
*Use size M4 screws for tab mounting.

CPU Module



*Use size M4 screws for tab mounting.

I/O Module



*Use size M4 screws for tab mounting.

Networking the CLICK PLC

Built-in Communications Ports

All CPUs have two built-in RS-232 communications ports. Standard and Analog CPUs also have one built-in RS-485 communications port. One RS-232 port supports the Modbus RTU protocol only and can be used as the programming port. The other ports support either Modbus RTU or ASCII protocol. Both RS-232 ports supply 5 VDC, so you can connect a monochrome C-more Micro HMI panel without an additional power supply.

LED Status Indicators

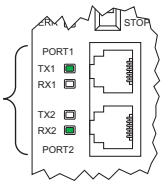
There are LED indicators located to the left of each communication port to indicate when the port is transmitting or receiving.

Basic CPUs

Port 1 & 2 LED Status Indicators

TX1 and TX2 (Green)	
On	The Comm Port is sending data.
Off	The Comm Port is not sending data.

RX1 and RX2 (Green)	
On	The Comm Port is receiving data.
Off	The Comm Port is not receiving data.

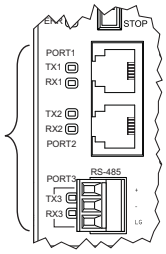


Standard and Analog CPUs

Port 1, 2, & 3 LED Status Indicators

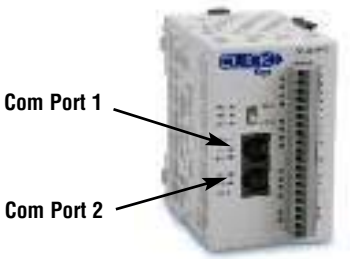
TX1, TX2 and TX3 (Green)	
On	The Comm Port is sending data.
Off	The Comm Port is not sending data.

RX1, RX2 and RX3 (Green)	
On	The Comm Port is receiving data.
Off	The Comm Port is not receiving data.

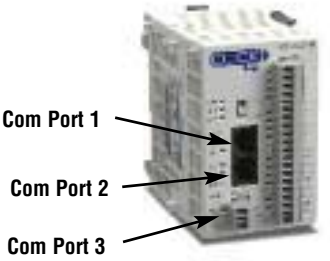


Port Setup

Use CLICK programming software to easily configure the communication ports.



Basic CPU

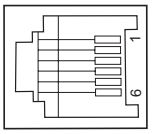


Standard and Analog CPUs

Com Port 1 Specifications
Use: Programming Port
Physical: 6 pin, RJ12, RS-232
Communication speed (baud): 38400 (fixed)
Parity: Odd
Station Address: 1
Data length: 8 bits
Stop bit: 1
Protocol: Modbus RTU (slave only)

Port 1

6 pin RJ12 Phone Type Jack

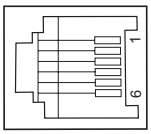


Port 1 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	NC	No connection
6	0V	Power (-) connection (GND)

Com Port 2 Specifications	Default
Use: Serial Communication	-
Physical: 6 pin, RJ12, RS-232	-
Communication speed (baud): 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	38400
Parity: odd, even, none	Odd
Station Address: 1 to 247	1
Data length: 8 bits (Modbus RTU) or 7, 8 bits (ASCII)	8 bits
Stop bit: 1,2	1
Protocol: Modbus RTU (master/slave) or ASCII in/out	Modbus RTU

Port 2

6 pin RJ12 Phone Type Jack

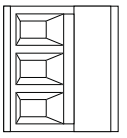


Port 2 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	RTS	Request to send
6	0V	Power (-) connection (GND)

Com Port 3 Specifications	Default
Use: Serial Communication	-
Physical: 3 pin, RS-485	-
Communication speed (baud): 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	38400
Parity: odd, even, none	Odd
Station Address: 1 to 247	1
Data length: 8 bits (Modbus RTU) or 7, 8 bits (ASCII)	8 bits
Stop bit: 1,2	1
Protocol: Modbus RTU (master/slave) or ASCII in/out	Modbus RTU

Port 3

RS-485



Port 3 Pin Descriptions		
1	+ (plus)	Signal A (RS-485)
2	- (minus)	Signal B (RS-485)
3	LG	Logic Ground(0 V)

Networking the CLICK PLC

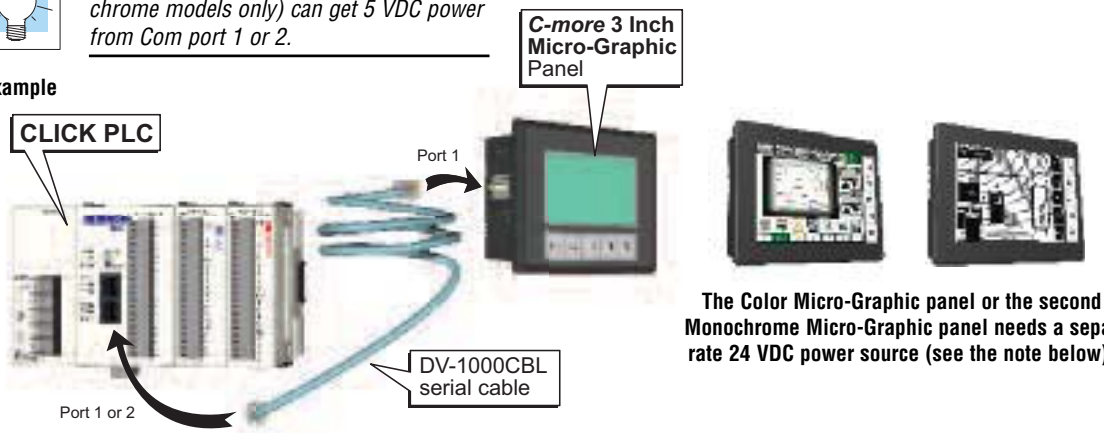
Typical Serial Communication Applications

The diagrams on these two pages illustrate the typical uses for the CLICK CPU's communication ports.

Port 1 (RS-232) – Modbus RTU Slave Mode Only

C-more Micro-Graphic panels (monochrome models only) can get 5 VDC power from Com port 1 or 2.

Example

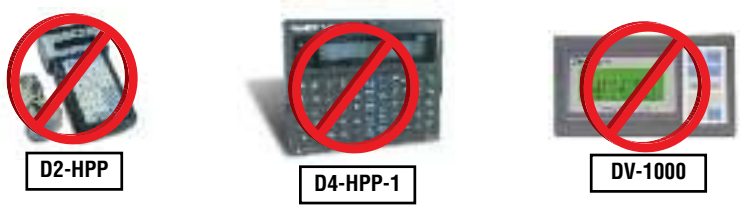


The Color Micro-Graphic panel or the second Monochrome Micro-Graphic panel needs a separate 24 VDC power source (see the note below).

NOTE: CLICK's Port 1 and Port 2 can provide 5 VDC to power the panel, but not at the same time. If a C-more Micro-Graphic panel is connected to both ports, then at least one of the panels must be powered by a C-more Micro DC power adapter, EA-MG-P1 or EA-MG-SP1, or another 24 VDC power source. Color C-more Micro-Graphic panels must also be powered from a separate 24 VDC source.

Do not use the following *Direct*LOGIC devices with CLICK's Port 1 or 2:

Warning: The following *Direct*LOGIC PLC devices cannot be used with a CLICK CPU's Port 1 or Port 2:
Handheld Programmer for DL05, DL06, DL105, DL205 & D3-350 CPUs, p/n D2-HPP
Handheld Programmer for DL405 CPUs, p/n D4-HPP-1
Timer/Counter Access for DL05, DL06, DL105, DL205, DL405 & D3-350 CPUs, p/n DV-1000

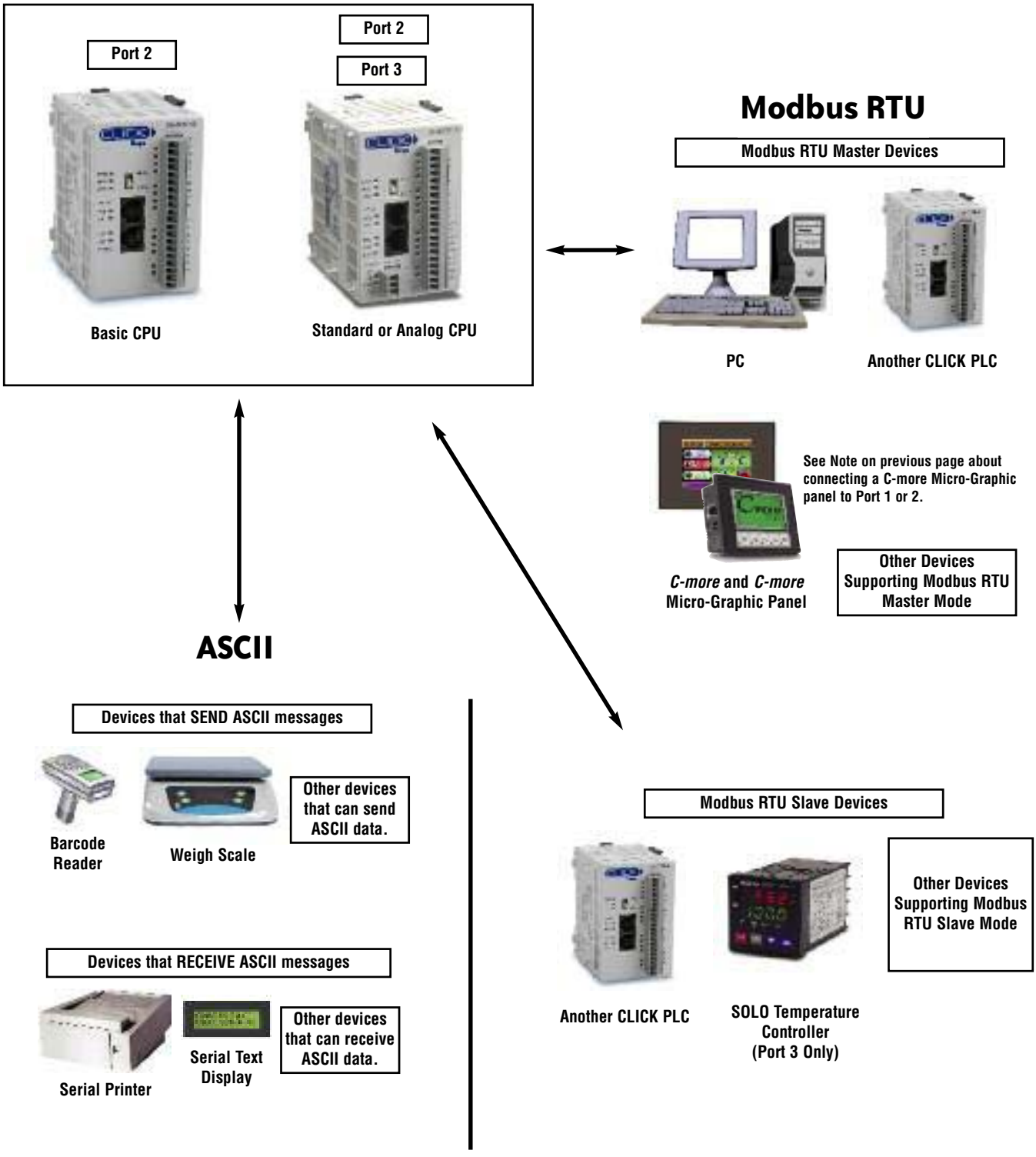


Networking the CLICK PLC

Port 2 (RS-232) – Modbus RTU or ASCII

Port 3 (RS-485; Standard and Analog CPUs Only) – Modbus RTU or ASCII

All CPUs have RS-232 port 2, but only Standard and Analog CPUs have RS-485 port 3.
Ports 2 and 3 allow networking to similar devices.



Power Supplies

Power Supplies

The CLICK PLC family offers two 24 VDC 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 PLC system. You can use any other 24 VDC power supply that Automationdirect.com offers, including the PSP24-DC12-1 12 VDC to 24 VDC converter shown below.

C0-00AC Power Supply

Limited auxiliary AC power supply allows you to power the 24 VDC CLICK C0 series CPUs with 100-240 VAC supply power. The 0.5A DC power supply is capable of controlling the CPU 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 24 VDC CLICK C0 series CPUs with 100-240 VAC supply power. The 1.3A 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 PLC with 12 VDC input power.

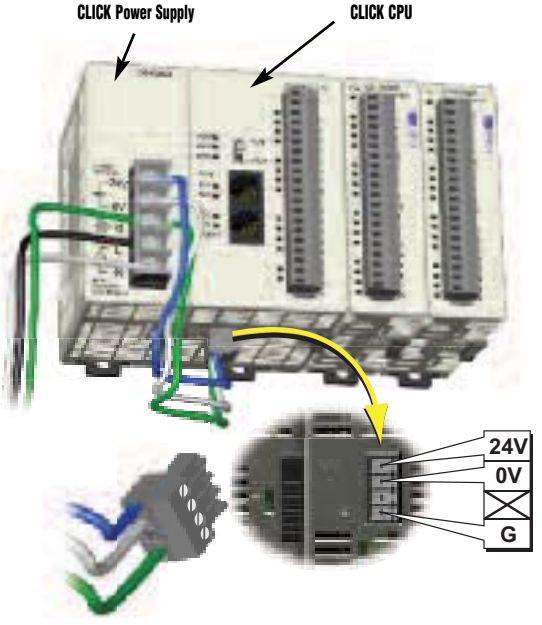
PSP24-DC12-1

CLICK 24 VDC Power Supply Ratings	
Part Number	**Output Current**
C0-00AC	0.5 A
C0-01AC	1.3 A

C0-00AC Power Supply Specifications	
Input Voltage Range	85-264 VAC
Input Frequency	47-63 Hz.
Input Current (typical)	0.3 A @ 100 VAC, 0.2 A @ 200 VAC
Inrush Current	30 A
Output Voltage Range	23-25 VDC
Output Current	0.5 A
Over Current Protection	@ 0.65 A (automatic recovery)
Weight	5.3 oz (150g)

C0-01AC Power Supply Specifications	
Input Voltage Range	85-264 VAC
Input Frequency	47-63 Hz.
Input Current (typical)	0.9 A @ 100 VAC, 0.6 A @ 200 VAC
Inrush Current	30 A
Output Voltage Range	23-25 VDC
Output Current	1.3 A
Over Current Protection	@ 1.6 A (automatic recovery)
Weight	6.0 oz (170g)

PSP24-DC12-1 DC-DC Converter Specifications	
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
Weight	7.5. oz (213g)



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

C0-00AC

24 VDC Output Power Terminals (for CLICK PLC, I/O or field device, etc.)

85-264 VAC Power Source Input Terminals

C0-01AC

24 VDC Output Power Terminals (for CLICK PLC, I/O or field device, etc.)

85-264 VAC Power Source Input Terminals

Power Budgeting

Power Budgeting

There are two areas to be considered when determining the power required to operate a CLICK PLC system. The first area is the power required by the CLICK CPU, along with the internal logic side power that the CPU provides to its own I/O and any connected I/O modules that are powered through the CPU's expansion port; plus any device, such as a C-more Micro-Graphic panel, that is powered through one of the CPU's communication 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 the calculated load rating of the connected device.

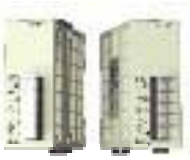
It is strongly recommended that the power source for the logic side be separate from the power source for the field side to help eliminate possible electrical noise.

Power budgeting requires the calculation of the total current that the 24 VDC power source needs to provide to CLICK's logic side, and also a separate calculation of the total current required for all devices operating from the field side of the PLC system.

See the Power Budgeting Example shown to the right. The table shows current requirements for a CLICK CPU, two I/O modules, and a C-more Micro. Use the total amperage values to select a proper sized power supply.

Power Budgeting Using the CLICK Programming Software

The CLICK Programming software can also be used for power budgeting. Based on the amperage rating of the power supply selected in the first column, your power budget is calculated by subtracting each consecutive module's power consumption from the total available power budget. If you exceed the maximum allowable power consumption the power budget row is highlighted in red.



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

Other 24 VDC Power Supply
Example: PSP24-60S

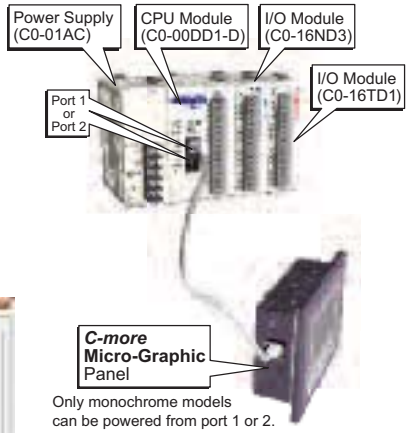
CPU Current Consumption (mA)		
Part Number	Power Budget 24 VDC (logic side)	External 24 VDC (field side)
Basic CPU Modules		
C0-00DD1-D	120	60
C0-00DD2-D	120	0
C0-00DR-D	120	0
C0-00AR-D	120	0
Standard CPU Modules		
C0-01DD1-D	140	60
C0-01DD2-D	140	0
C0-01DR-D	140	0
C0-01AR-D	140	0
Analog CPU Modules		
C0-02DD1-D	140	60
C0-02DD2-D	140	0
C0-02DR-D	140	0

I/O Module Current Consumption (mA)		
Part Number	Power Budget 24 VDC (logic side)	External 24 VDC (field side)
Discrete Input Modules		
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
C0-08TR	100	0

I/O Module Current Consumption (continued) (mA)		
Part Number	Power Budget 24 VDC (logic side)	External 24 VDC (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
C0-04RTD	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

Power Budgeting Example

Current Consumption (mA) Example		
Part Number	Power Budget 24 VDC (logic side)	External 24 VDC (field side)
C0-00DD1-D	120	60
C0-16ND3	40	0
C0-16TD1	80	100
C-more Micro	90	0
Total:	330	160 *
* Plus calculated load of connected I/O devices.		



Only monochrome models can be powered from port 1 or 2.

Choosing the I/O Type

Three types of CPU modules are available:

- Basic CPUs with discrete-only inputs and outputs.
- Standard CPUs with discrete-only inputs and outputs, plus an extra communications port and battery backup.
- Analog CPUs with both discrete and analog inputs and outputs, plus an extra communications port and battery backup.

All CLICK CPU modules offer the same performance, use the same instruction set, and support all optional I/O modules.

Basic and Standard CPU Modules

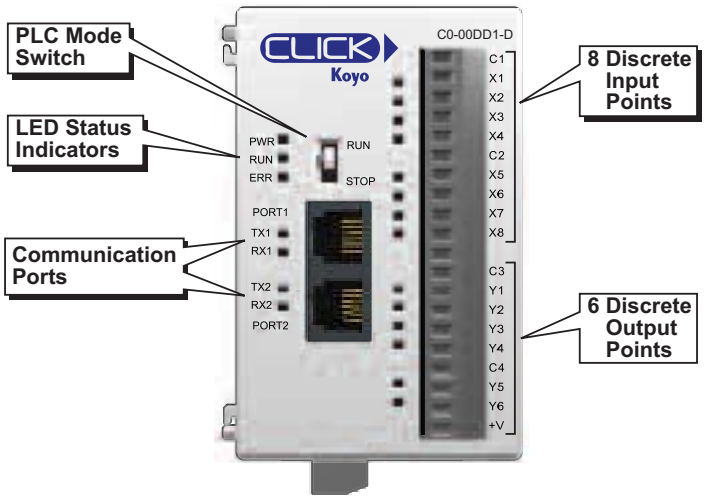
The Basic and Standard CLICK CPU modules are available with different combinations of built-in I/O types (i.e. DC input/DC output, DC input/relay output, and AC input/relay output). With the 14 built-in I/O points (8 inputs/6 outputs), the CPU can be used as a ready-to-go PLC control system without any additional I/O modules. The CPU module just needs 24 VDC, but it can be expanded in the future if the need arises.

The tables list the part numbers showing the various I/O type combinations.

Standard CPU Modules Only

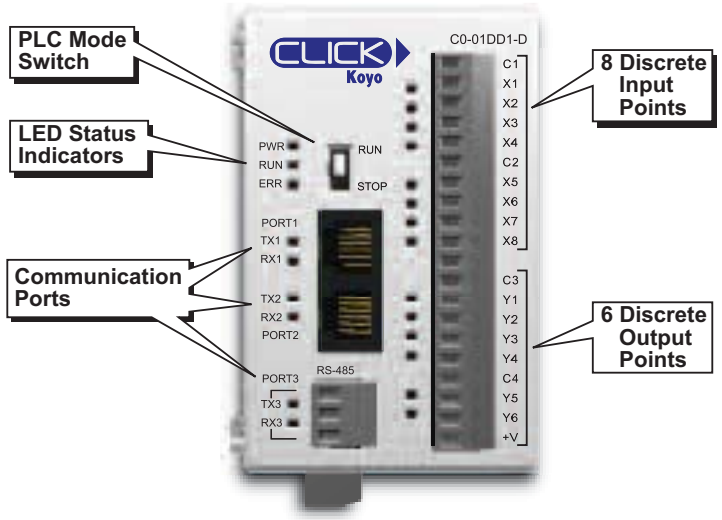
Standard CPU modules also have an RS-485 port for Modbus and ASCII communications, and the battery backup feature which will retain the data in SRAM for 5 years (battery sold separately; part no. D2-BAT-1).

Basic CPU



Basic CLICK CPUs			
Part Number	**Discrete Input Type**	**Discrete Output Type**	**External Power**
C0-00DD1-D	8 DC (sink/source)	6 DC (sink)	24V DC (required for all CPUs)
C0-00DD2-D		6 DC (source)	
C0-00DR-D		6 Relay	
C0-00AR-D	8 AC		

Standard CPU



Standard CLICK CPUs			
Part Number	**Discrete Input Type**	**Discrete Output Type**	**External Power**
C0-01DD1-D	8 DC (sink/source)	6 DC (sink)	24V DC (required for all CPUs)
C0-01DD2-D		6 DC (source)	
C0-01DR-D		6 Relay	
C0-01AR-D	8 AC		

Choosing the I/O Type

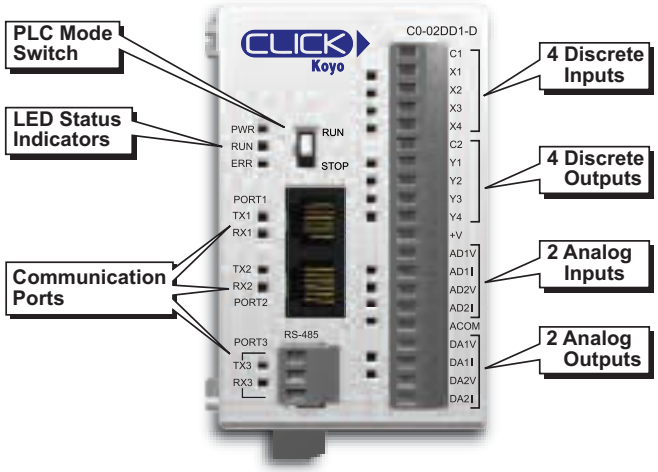
Analog CPU Modules

The Analog CLICK CPU modules are available with different combinations of DC in, DC sinking, sourcing or relay out, and analog in and out.

They also have an RS-485 port for Modbus and ASCII communications, and the battery backup feature which will retain the data in SRAM for 5 years (battery sold separately; part no. D2-BAT-1).

The table lists the part numbers showing the various I/O type combinations.

Analog CPU



Analog CLICK CPUs					
Part Number	Discrete Input Types	Discrete Output Types	Analog Input Types	Analog Output Types	External Power
C0-02DD1-D	4 DC (sink/source)	4 DC (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	24 VDC (required for all CPUs)
C0-02DD2-D		4 DC (source)			
C0-02DR-D		4 relay			

I/O Modules

A variety of discrete, combo, and analog I/O modules are available for the CLICK PLC system. Up to eight I/O modules can be connected to a CLICK CPU module to expand the system I/O count and meet the needs of a specific application. Complete I/O module specifications and wiring diagrams can be found later in this section.

Discrete Input Modules

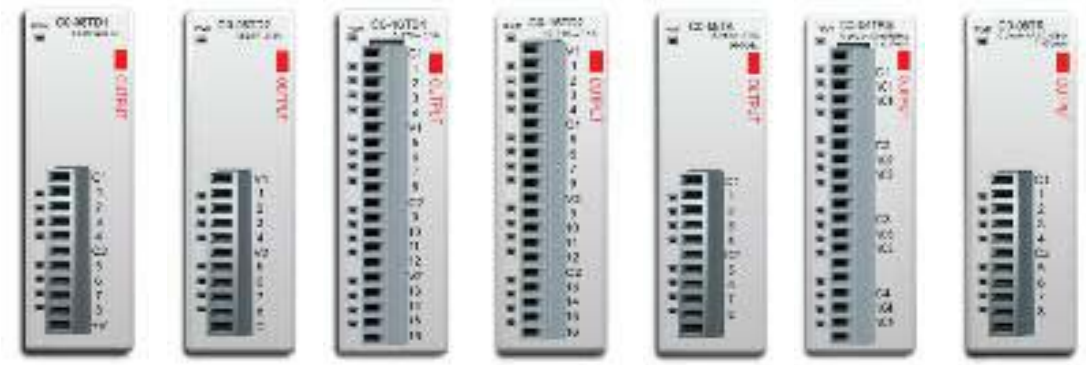
C0-08ND3 C0-08ND3-1 C0-16ND3 C0-08NE3 C0-16NE3 C0-08NA

Discrete Input Modules			
Part Number	I/O Type/ Number/Commons	Sink or Source	Voltage Ratings
C0-08ND3	DC/8/2	Sink or Source	12-24 VDC
C0-08ND3-1	DC/8/2	Sink or Source	3.3-5 VDC
C0-16ND3	DC/16/4	Sink or Source	24 VDC
C0-08NE3	AC/DC / 8/2	Sink or Source	24 VAC/VDC
C0-16NE3	AC/DC / 16/4	Sink or Source	24 VAC/VDC
C0-08NA	AC/8/2	N/A	100-120 VAC

Choosing the I/O Type

Discrete I/O Modules (continued)

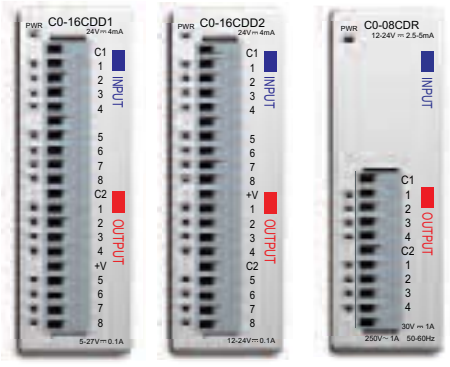
Discrete Output Modules



C0-08TD1 C0-08TD2 C0-16TD1 C0-16TD2 C0-08TA C0-04TRS C0-08TR

Discrete Output Modules			
Part Number	**I/O Type/ Number/ Commons**	**Sink or Source**	**Voltage/Current Ratings**
C0-08TD1	DC/8/2	Sink	3.3-27 VDC, 0.3 A
C0-08TD2	DC/8/1	Source	12-24 VDC, 0.3 A
C0-16TD1	DC/16/2	Sink	5-27 VDC, 0.1 A
C0-16TD2	DC/16/2	Source	12-24 VDC, 0.1 A
C0-08TA	AC/8/2	N/A	17-240 VAC, 0.3 A
C0-04TRS	Relay/4/4	N/A	6-27 VDC, 7 A 6-240 VAC, 7 A
C0-08TR	Relay/8/2	N/A	6-27 VDC, 1 A 6-240 VAC, 1 A

Discrete Combo I/O Modules



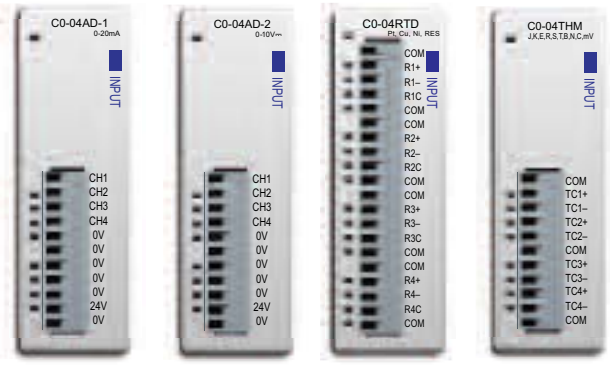
C0-16CDD1 C0-16CDD2 C0-08CDR

Discrete Combo I/O Modules				
Part Number	**Input Type**	**Input Voltage**	**Output Type**	**Output Voltage / Current Ratings**
C0-16CDD1	8 DC (source/sink)	24 VDC	8 DC (sink)	5-27 VDC / 0.1 A
C0-16CDD2	8 DC (source/sink)	24 VDC	8 DC (source)	12-24 VDC / 0.1 A
C0-08CDR	4 DC (source/sink)	12-24 VDC	4 (relay)	6.25-24 VDC, 1 A 6-240 VAC, 1 A

Choosing the I/O Type

Analog I/O Modules

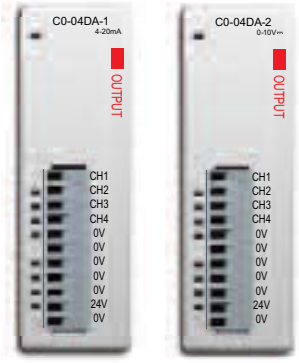
Analog Input Modules



C0-04AD-1 C0-04AD-2 C0-04RTD C0-04THM

Analog Input Modules		
Part Number	**Analog Input Types**	**External Power Required**
C0-04AD-1	4 channel, current (0-20 mA), 13 bit	24 VDC
C0-04AD-2	4 channel, voltage (0-10 V), 13 bit	24 VDC
C0-04RTD	4 channel RTD input (0.1 degree °C/°F resolution), or resistive input (0 to 3125 ohms)	None
C0-04THM	4 channel thermocouple input (0.1 degree °C/°F resolution), or voltage input (-156.25 mV to 1.25 V), 16 bit	None

Analog Output Modules



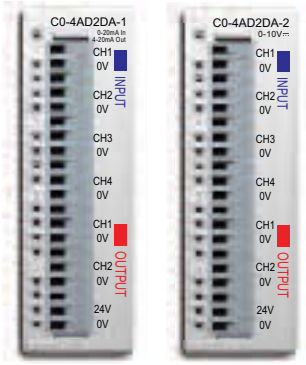
C0-04DA-1 C0-04DA-2

Analog Output Modules		
Part Number	**Analog Output Types**	**External Power Required**
C0-04DA-1	4 channel, current sourcing (4-20 mA), 12 bit	24 VDC
C0-04DA-2	4 channel, voltage (0-10 V), 12 bit	24 VDC

Choosing the I/O Type / Specifications

Analog I/O Modules (continued)

Analog Combo I/O Modules



C0-4AD2DA-1 **C0-4AD2DA-2**

Analog Combo I/O Modules			
Part Number	**Analog Input Type**	**Analog Output Type**	**External Power Required**
C0-4AD2DA-1	4 channel, current (0-20 mA), 13 bit	2 channel, current sourcing (4-20 mA), 12 bit	24 VDC
C0-4AD2DA-2	4 channel, voltage (0-10 V), 13 bit	4 channel, voltage (0-10 V), 12 bit	24 VDC

General Specifications For All CLICK PLC Products

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

General Specifications	
Power Input Voltage Range	20-28 VDC
Maximum Power Consumption	5 W (No 5 V use from communication port)
Maximum Inrush Current	30 A (less than 1ms)
Acceptable External Power Drop	Max 10 ms
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, EC60068-2-6 JIS C60068-2-6 (Sine wave vibration test)
Shock	MIL STD 810C, Method 516.2, IEC60068-2-27, JIS C60068-2-27
Noise Immunity	Comply with NEMA ICS3-304, Impulse noise 1µs, 1000V 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) RFI: No interference measured at 150 and 450 MHz (5w/15cm)
Emissions	EN55011:1998 Class A
Agency Approvals	UL508 (File No. E157382, E316037); CE (EN61131-2)
Other	RoHS

CLICK Specifications

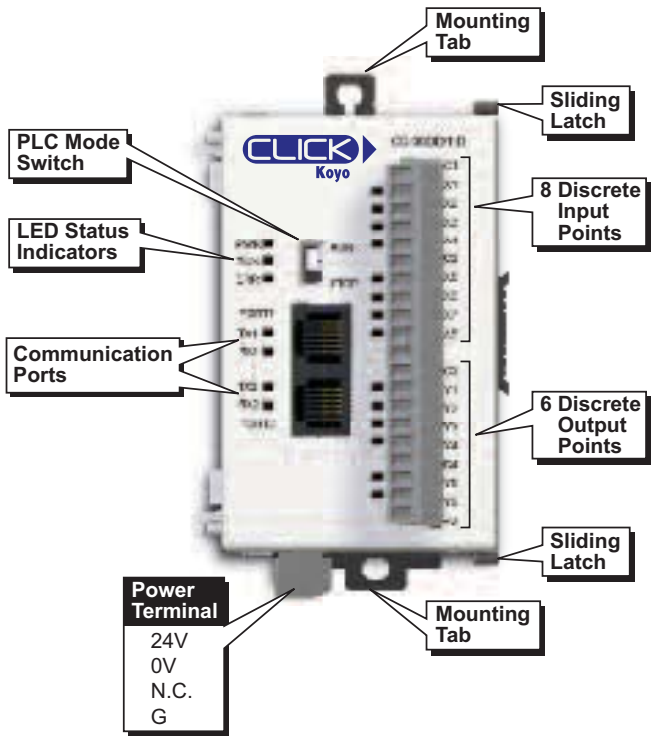
CPU Module Specifications

CPU Module Specifications			
	Basic CPU	**Standard CPU**	**Analog CPU**
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)	< 0.6us	< 0.6us	< 0.6us
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)
FLASH Memory	Standard on CPU	Standard on CPU	Standard on CPU
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
Interrupt	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	ADC p/n C0-16TB	ADC p/n C0-16TB	ADC p/n C0-16TB
Communication Port & Terminal Block Replacement	N/A	ADC p/n C0-03TB	ADC p/n C0-03TB
24 VDC Power Terminal Block Replacement	ADC p/n C0-4TB	ADC p/n C0-4TB	ADC p/n C0-4TB

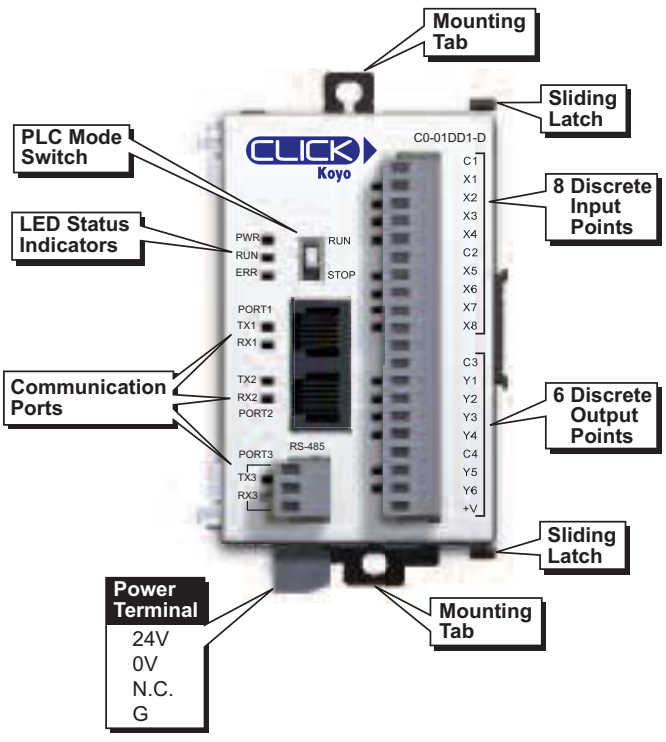
CLICK Specifications

CPU Features

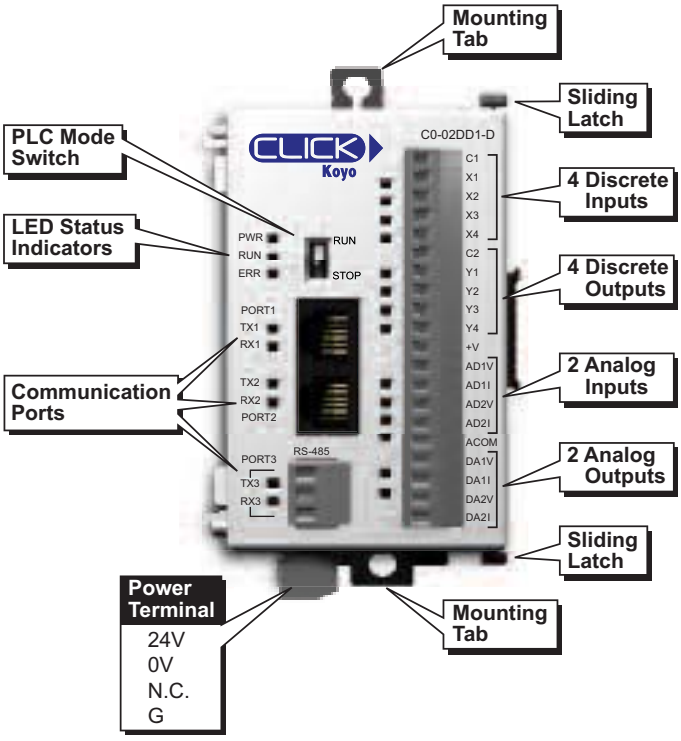
Basic CPUs



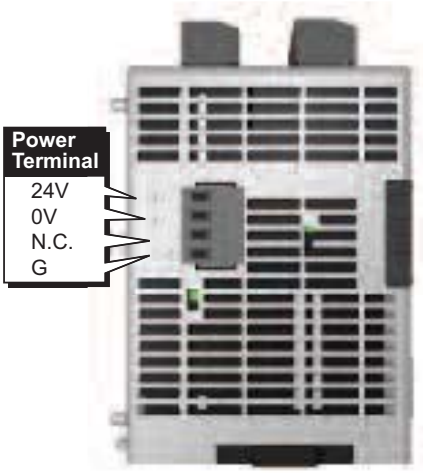
Standard CPUs



Analog CPUs



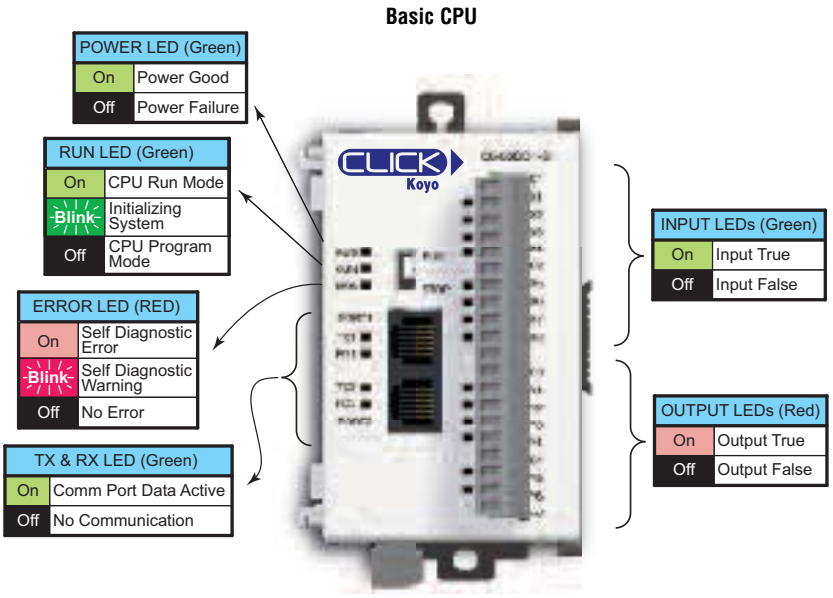
Bottom of CPU (Same on all models)



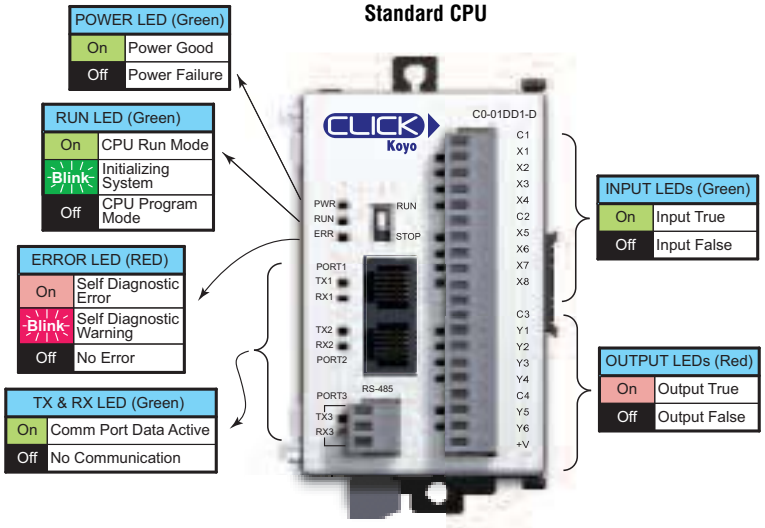
CLICK Specifications

CPU LED Status Indicators

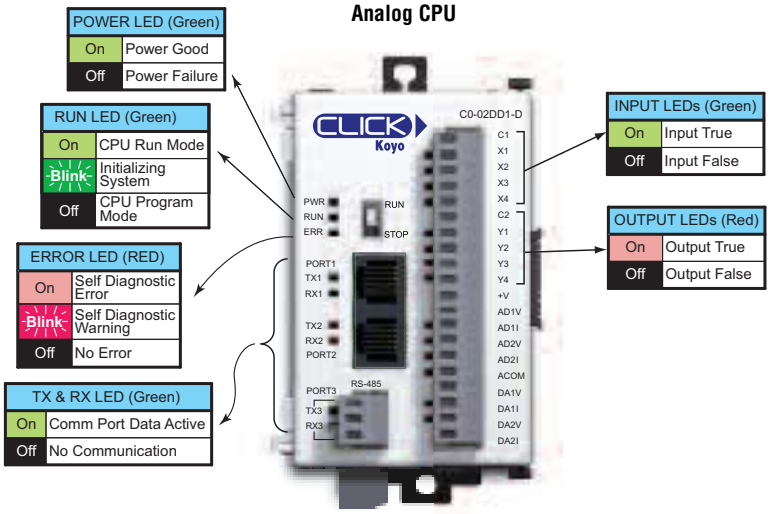
Basic CPU



Standard CPU



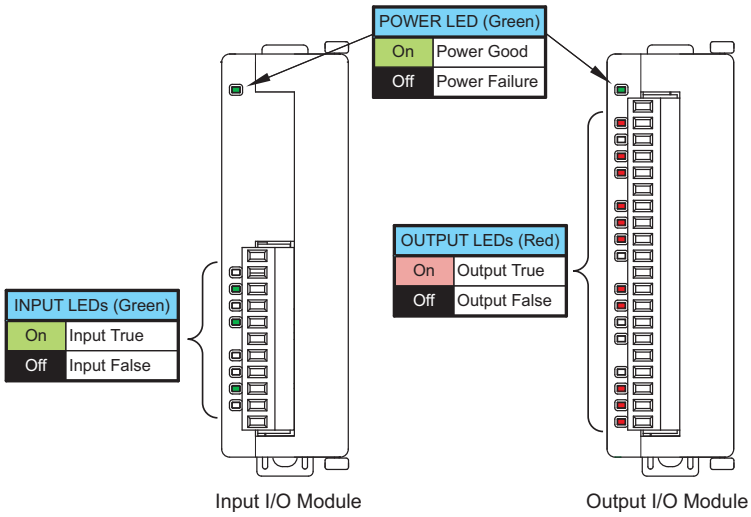
Analog CPU



CLICK Specifications

I/O Module LED Status Indicators

I/O Module LED Status Indicators



Note: There are no LED indications on the Analog I/O modules.

I/O Terminal Block Specifications for CPUs and I/O Modules

11-Pin Terminal Block, C0-8TB

11-pin Terminal Block Specifications	
Connector Type	Pluggable Terminal Block
Number of Pins	11 pt
Pitch	3.50 mm
Wire Range	28-16 AWG
Wire Strip Length	7 mm
Screw Size	M2.0
Screw Torque	Analog, analog combo I/O modules only: 1.7 lb-in; All other modules: 2.0 to 2.2 lb-in
ADC Part Number	C0-8TB

20-Pin Terminal Block, C0-16TB

20-pin Terminal Block Specifications	
Connector Type	Pluggable Terminal Block
Number of Pins	20 pt
Pitch	3.50 mm
Wire Range	28-16 AWG
Wire Strip Length	7 mm
Screw Size	M2.0
Screw Torque	Analog, analog combo I/O modules only: 1.7 lb-in; All other modules: 2.0 to 2.2 lb-in
ADC Part Number	C0-16TB

Wiring System for CLICK PLCs

Wiring Solutions using the *ZIP*Link Wiring System

*ZIP*Links 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.

*ZIP*Links are available in a variety of styles to suit your needs, including feedthrough connector module. *ZIP*Links are available for all Basic and Standard CLICK CPU modules and most discrete and analog 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 CPU and I/O Modules to *ZIP*Link 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.

Using the PLC CPU and I/O Modules to *ZIP*Link Connector Modules selector tables located in this section,

1. Locate your CPU or I/O module.
2. Select a *ZIP*Link Module.
3. Select a corresponding *ZIP*Link Cable.

Solution 2: CLICK CPU and I/O Modules to 3rd Party Devices

When wanting to connect I/O to another device within close proximity of the I/O modules, 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.

Using the I/O Modules to 3rd Party Devices selector tables located in the *ZIP*Link section,

1. Locate your CPU or I/O module.
2. 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?

*ZIP*Link cables are available in a wide range of configurations for connecting to PLCs and *Sure*Servo, *Sure*Step, Stellar Soft Starter and AC drives. Add a *ZIP*Link communications module to quickly and easily set up a multi-device network.

Using the Drives Communication selector tables located in the *ZIP*Link section,

1. Locate your Drive and type of communications.
2. Select a *ZIP*Link cable and other associated hardware.

Solution 4: Serial Communications Cables

*ZIP*Link offers communications cables for use with CLICK CPUs 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.

Using the Serial Communications Cables selector table located in the *ZIP*Link section,

1. Locate your connector type
2. Select a cable.

ZIPLink Wiring System for CLICK PLCs

CLICK PLC CPU Module ZIPLink Selector				
PLC		ZIPLink		
CPU Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-00DD1-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-00DD2-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-00DR-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-00AR-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-01DD1-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-01DD2-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-01DR-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-01AR-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-02DD1-D	20	No ZIPLinks are available for analog CPU modules.		
C0-02DD2-D	20			
C0-02DR-D	20			

CLICK PLC Discrete Input Module ZIPLink Selector				
I/O Module		ZIPLink		
Input Module	# of Terms	Component	Module Part No.	Cable Part No.
C0-08ND3	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-08ND3-1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-08NE3	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-08NA	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-16ND3	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Sensor	ZL-LTB16-24	ZL-C0-CBL20*
C0-16NE3	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Sensor	ZL-LTB16-24	ZL-C0-CBL20*

CLICK PLC Discrete Output Module ZIPLink 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	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-08TR	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-08TA	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*
C0-16TD1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Fuse	ZL-RFU20[2]	ZL-C0-CBL20*
		Relay (sinking)	ZL-RRL16-24-1	ZL-C0-CBL20*
C0-16TD2	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Fuse	ZL-RFU20[2]	ZL-C0-CBL20*
		Relay (sourcing)	ZL-RRL16-24-2	ZL-C0-CBL20*
C0-04TRS[1]	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*

[1] *Note: The C0-04TRS relay output is derated not to exceed 2A per point maximum when used with the ZIPLink wiring system.*

[2] *Note: Fuses (5 x 20 mm) are not included. See Edison Electronic Fuse section for (5 x 20 mm) fuse. S500 and GMA electronic circuit protection for fast-acting maximum protection. S506 and GMC electronic circuit protection for time-delay performance. Ideal for inductive circuits.*
To ensure proper operation, do not exceed the voltage and current rating of ZIPLink module. ZL-RFU20 = 2A per circuit.

CLICK PLC Combo I/O Module ZIPLink 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	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
C0-08CDR	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11*

CLICK PLC Analog I/O Module ZIPLink 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*
C0-04RTD	20	No ZIPLinks are available for RTD and thermocouple modules.		
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*

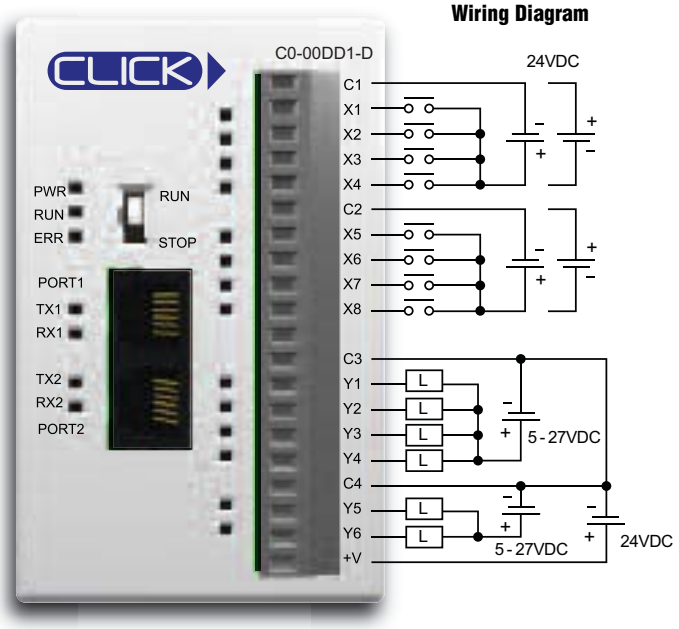
** Select the cable length by replacing the * with: Blank = 0.5m, -1 = 1.0m, or -2 = 2.0m.*

Basic CPU Module Specifications

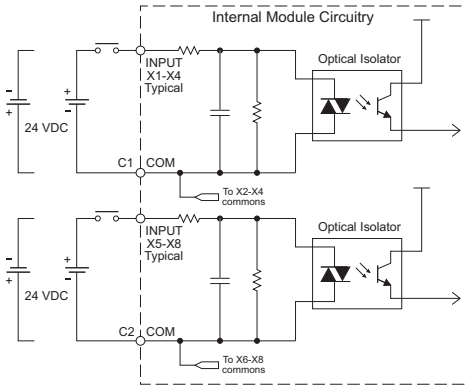
C0-00DD1-D <--->

8 DC Input/6 Sinking DC Output Micro PLC

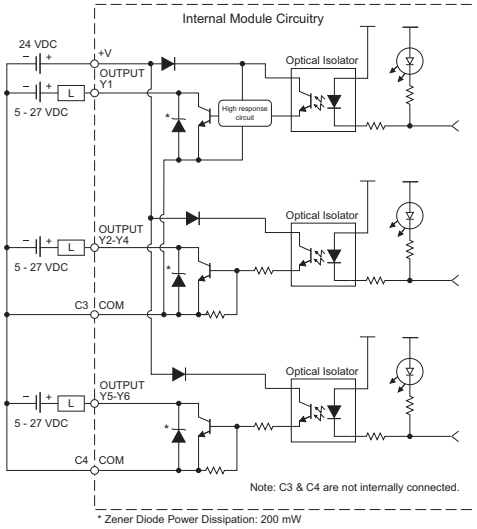
Wiring Diagram



Equivalent Input Circuit



Equivalent Output Circuit



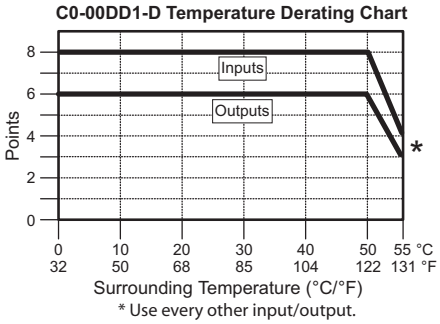
* Zener Diode Power Dissipation: 200 mW

C0-00DD1-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-8: 5.0 mA @ 26.4 VDC
Input Imp edance	X1-2: 4.7 kΩ @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-00DD1-D 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	150 mA for 10 ms
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 @ 60 mA (All Points On)

General Specifications	
Current Consumption at 24VDC	120 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.0 oz (140 g)

C0-00DD1-D Temperature Derating Chart



* Use every other input/output.

ZipLink Pre-Wired PLC Connection Cables and Modules

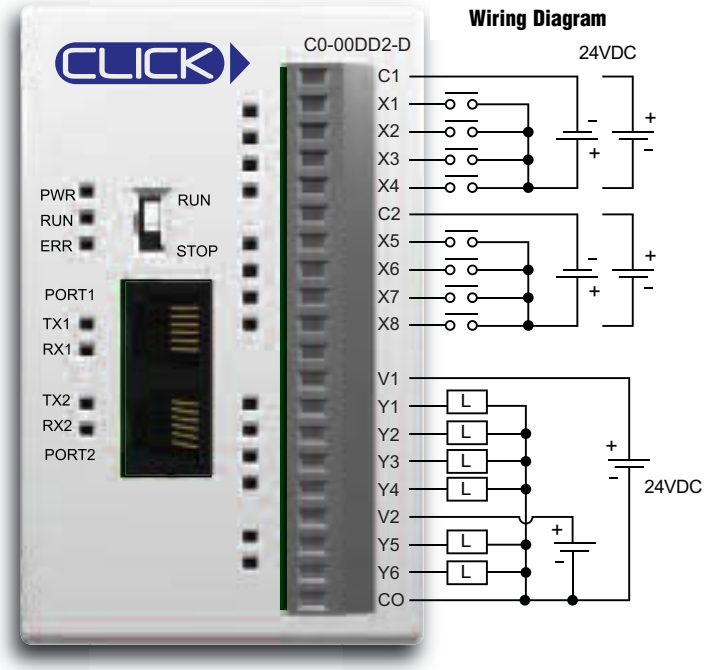
ZL-RTB20 20-pin feed-through connector module

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)

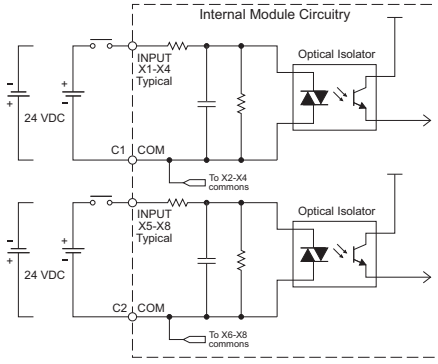
Basic CPU Module Specifications

C0-00DD2-D <--->

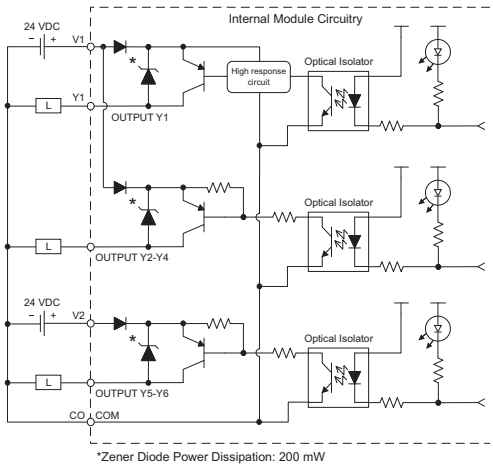
8 DC Input/6 Sourcing DC Output Micro PLC



Equivalent Input Circuit



Equivalent Output Circuit



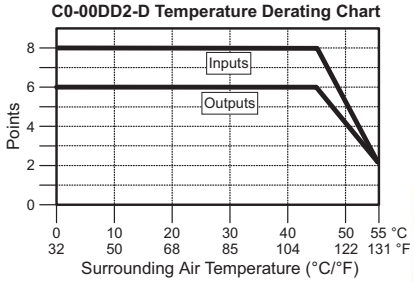
*Zener Diode Power Dissipation: 200 mW

C0-00DD2-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
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 @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	1 (6 points/common)

C0-00DD2-D Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24 VDC
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 @ 30 VDC
On Voltage Drop	Y1: 1.0 VDC @ 0.1 A Y2-6: 0.5 VDC @ 0.1 A
Maximum Inrush Current	150 mA for 10 ms
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	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	120 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.0 oz (140 g)

C0-00DD2-D Temperature Derating Chart



ZipLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

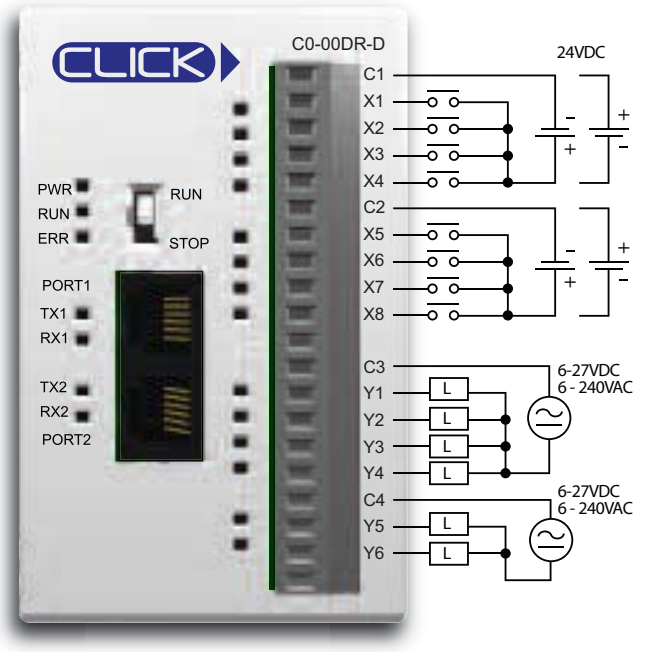
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Basic CPU Module Specifications

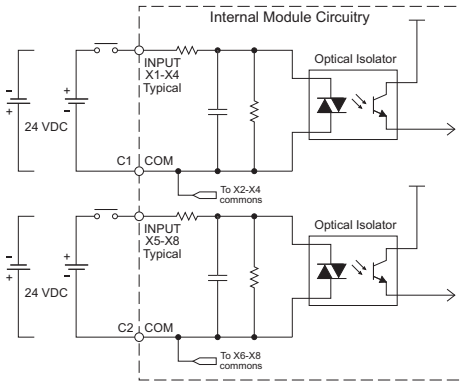
C0-00DR-D <--->

8 DC Input/6 Relay Output Micro PLC

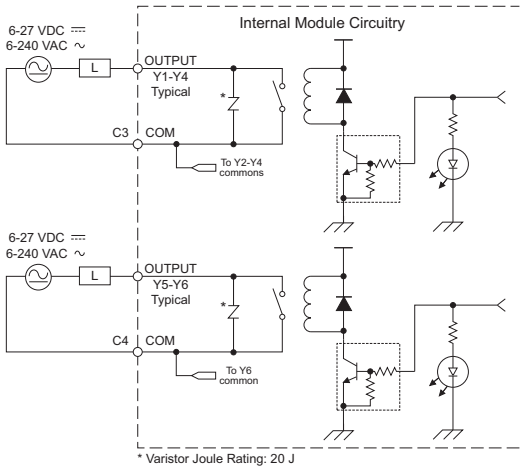
Wiring Diagram



Equivalent Input Circuit



Equivalent Output Circuit



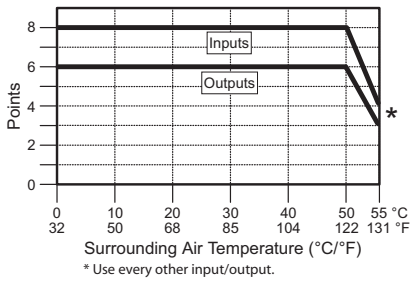
* Varistor Joule Rating: 20 J

C0-00DR-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6-26.4VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
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 @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-00DR-D 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	5 mA @ 5 VDC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

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

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**
30 VDC Resistive	300,000 cycles
30 VDC Solenoid	50,000 cycles
250 VAC Resistive	500,000 cycles
250 VAC Solenoid	200,000 cycles
ON to OFF = 1 cycle	

ZipLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

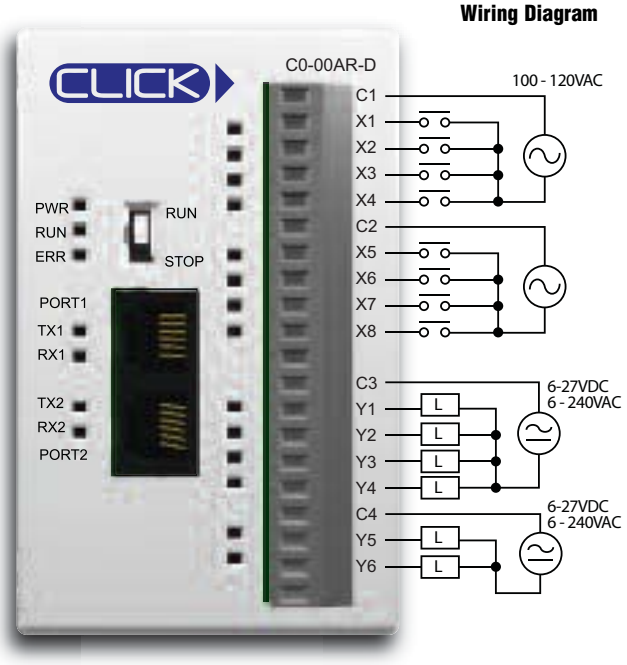
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Basic CPU Module Specifications

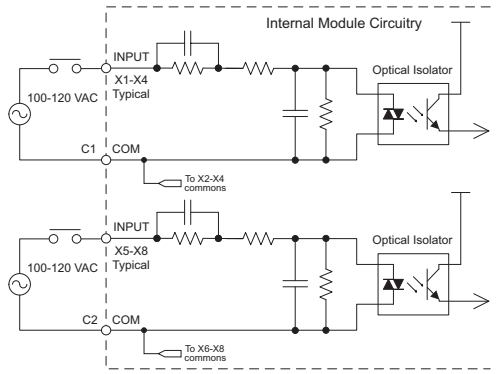
C0-00AR-D <--->

8 AC Input/6 Relay Output Micro PLC

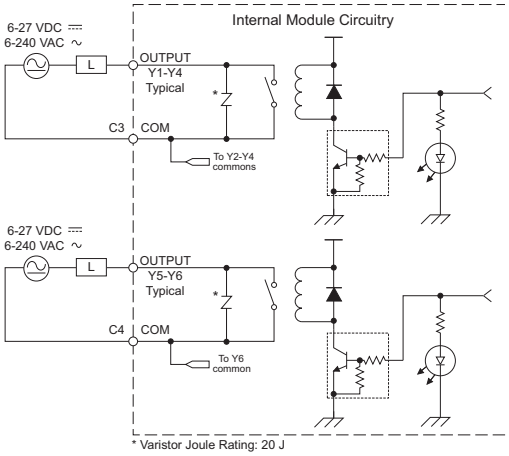
Wiring Diagram



Equivalent Input Circuit



Equivalent Output Circuit



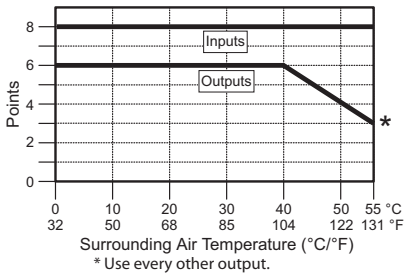
* Varistor Joule Rating: 20 J

C0-00AR-D 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 @ 100 VAC at 50 Hz 10 mA @ 100 VAC at 60 Hz
Maximum Input Current	16 mA @ 144 VAC at 55°C or 131°F
Input Impedance	15 kΩ @ 50 Hz 12 kΩ @ 60 Hz
ON Voltage Level	> 60 VAC
OFF Voltage Level	< 20 VAC
Minimum ON Current	5 mA
Maximum OFF Current	2 mA
OFF to ON Response	< 40 ms
ON to OFF Response	< 40 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-00AR-D 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	5 mA @ 5 VDC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

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

C0-00AR-D Temperature Derating Chart



* Use every other output.

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

ZipLink Pre-Wired PLC Connection Cables and Modules

ZL-RTB20 20-pin feed-through connector module

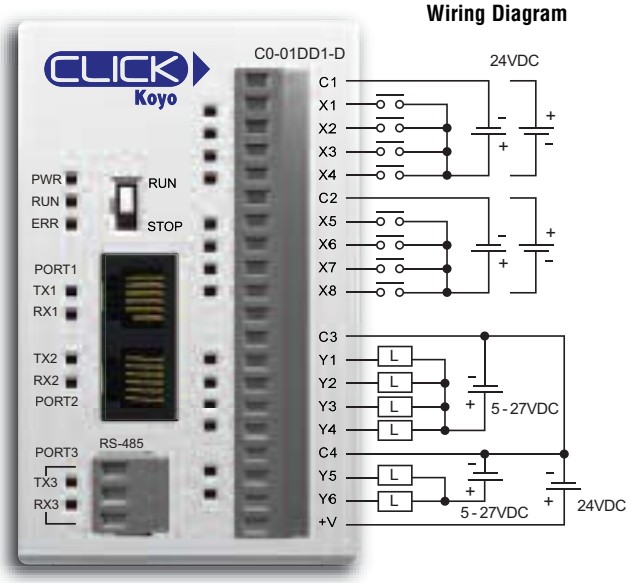
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard CPU Module Specifications

C0-01DD1-D <--->

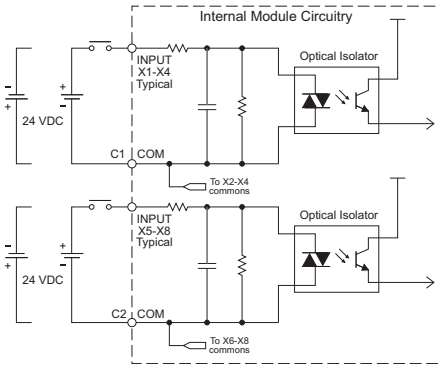
8 DC Input/6 Sinking DC Output Micro PLC

Wiring Diagram

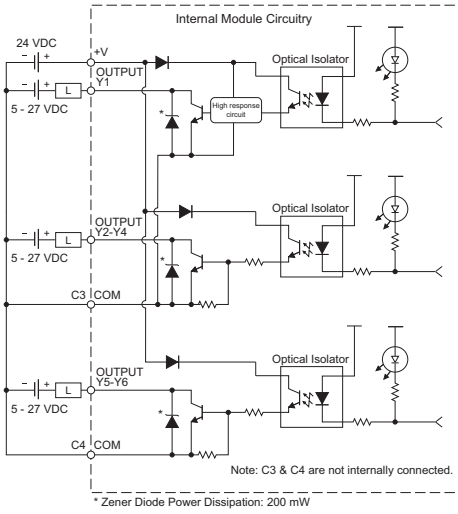


NOTE: When using Standard CPUs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



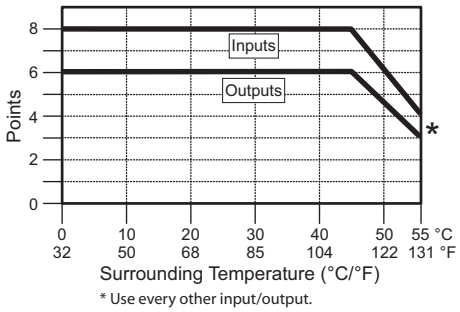
* Zener Diode Power Dissipation: 200 mW

C0-01DD1-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
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 @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-01DD1-D 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	150 mA for 10 ms
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)
External DC Power Required	20-28 VDC Maximum @ 60 mA (All Points On)

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.0 oz (140 g)

C0-01DD1-D Temperature Derating Chart



* Use every other input/output.

ZipLink Pre-Wired PLC Connection Cables and Modules

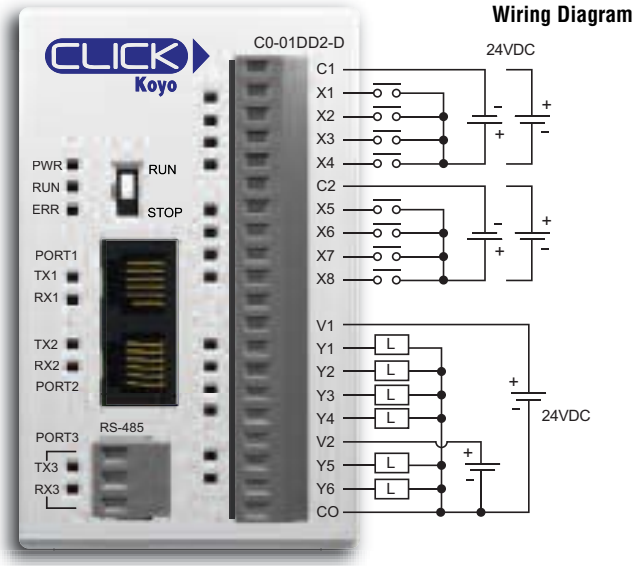
ZL-RTB20 20-pin feed-through connector module

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 CPU Module Specifications

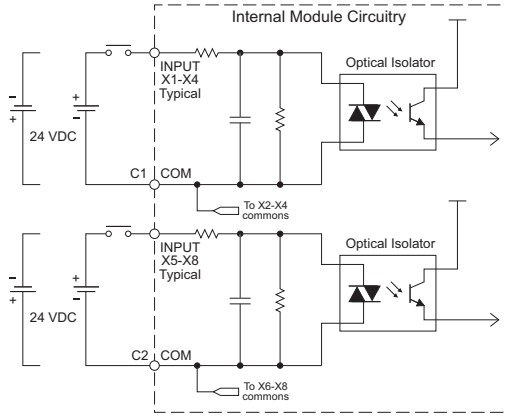
C0-01DD2-D <--->

8 DC Input/6 Sourcing DC Output Micro PLC

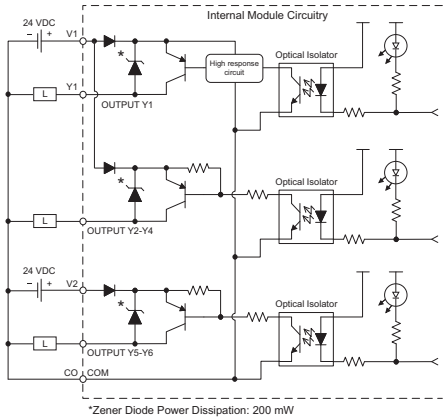


NOTE: When using Standard CPUs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



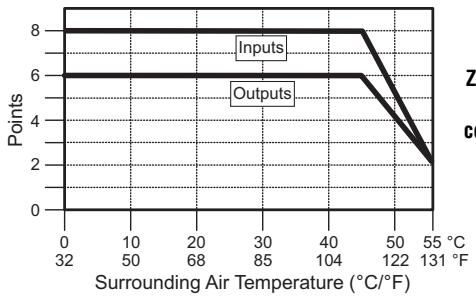
*Zener Diode Power Dissipation: 200 mW

C0-01DD2-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
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 @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-01DD2-D Built-in I/O Specifications - Outputs	
Outputs per Module	6 (Source)
Operating Voltage Range	24 VDC
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 @ 30 VDC
On Voltage Drop	Y1: 1.0 VDC @ 0.1 A Y2-6: 0.5 VDC @ 0.1 A
Maximum Inrush Current	150 mA for 10 ms
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	1 (6 points/common)

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.0 oz (140 g)

C0-01DD2-D Temperature Derating Chart



ZipLink Pre-Wired PLC Connection Cables and Modules

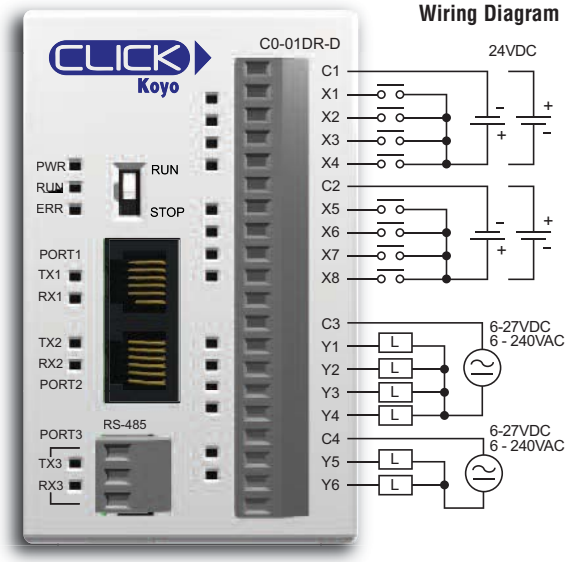
ZL-RTB20 20-pin feed-through connector module

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 CPU Module Specifications

C0-01DR-D <--->

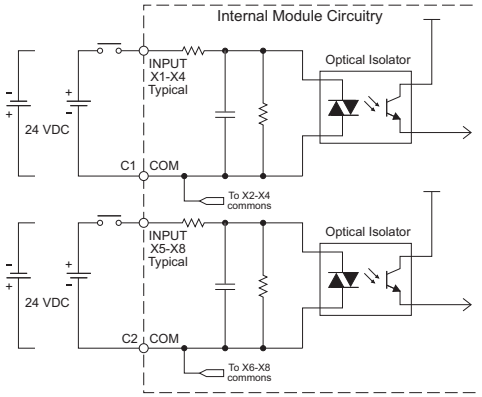
8 DC Input/6 Relay Output Micro PLC



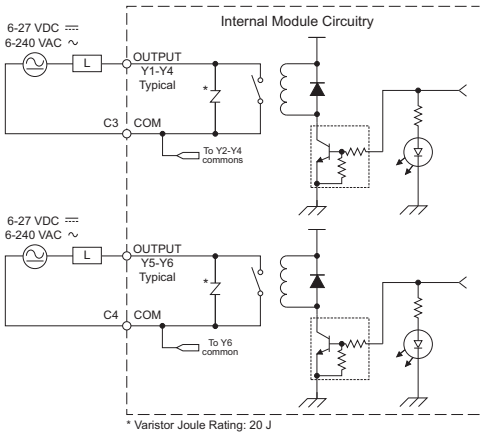
Wiring Diagram

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

Equivalent Input Circuit



Equivalent Output Circuit



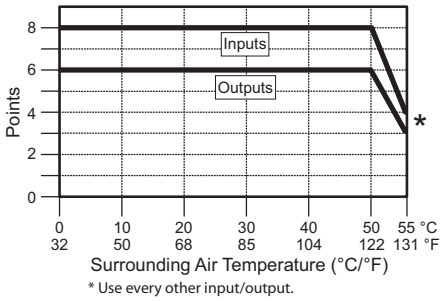
* Varistor Joule Rating: 20 J

C0-01DR-D Built-in I/O Specifications - Inputs	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6-26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-8: Typ 4 mA @ 24 VDC
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 @ 24 VDC X3-8: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-8: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-8: < 7 VDC
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 5 µs Max 20 µs X3-8: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs X3-8: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-01DR-D 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	5 mA @ 5 VDC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.6 oz (160 g)

C0-01DR-D Temperature Derating Chart



* Use every other input/output.

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

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

ZL-RTB20
20-pin feed-through connector module

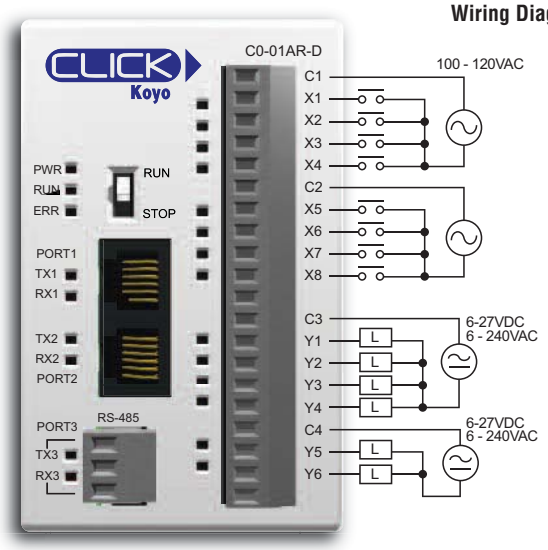
20-pin connector cable
ZL-C0-CBL20 (0.5 m length)
ZL-C0-CBL20-1 (1.0 m length)
ZL-C0-CBL20-2 (2.0 m length)

Standard CPU Module Specifications

C0-01AR-D <--->

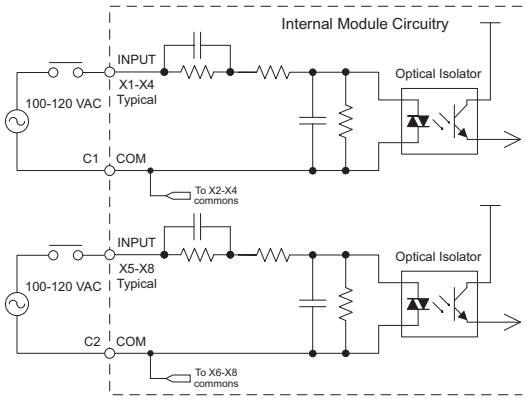
8 AC Input/6 Relay Output Micro PLC

Wiring Diagram

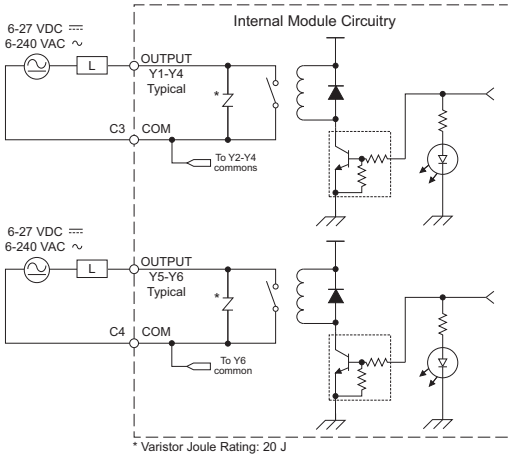


NOTE: When using Standard CPUs, you must use CLICK programming software version V1.20 or later.

Equivalent Input Circuit



Equivalent Output Circuit



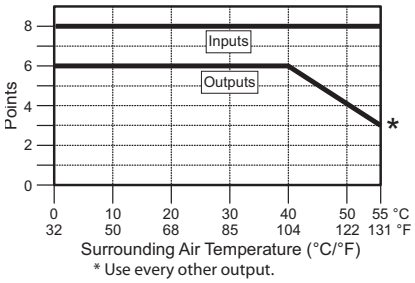
* Varistor Joule Rating: 20 J

C0-01AR-D 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 @ 100 VAC at 50 Hz 10 mA @ 100 VAC at 60 Hz
Maximum Input Current	16 mA @ 144 VAC
Input Impedance	15 kΩ @ 50 Hz 12 kΩ @ 60 Hz
ON Voltage Level	> 60 VAC
OFF Voltage Level	< 20 VAC
Minimum ON Current	5 mA
Maximum OFF Current	2 mA
OFF to ON Response	< 40 ms
ON to OFF Response	< 40 ms
Status Indicators	Logic Side (8 points, green LED)
Commons	2 (4 points/common) Isolated

C0-01AR-D 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	5 mA @ 5 VDC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (6 points, red LED)
Commons	2 (4 points/com & 2 points/com) Isolated

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.6 oz (160 g)

C0-01AR-D Temperature Derating Chart



* Use every other output.

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

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

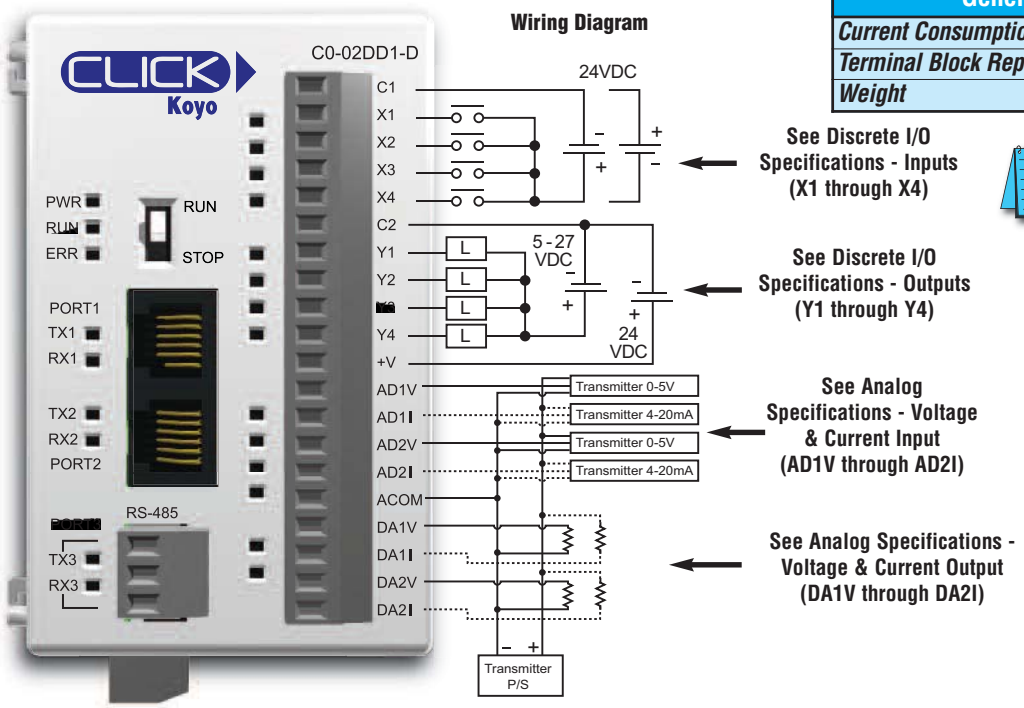
ZL-RTB20
20-pin feed-through connector module

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

Analog CPU Module Specifications

C0-02DD1-D <--->

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



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

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

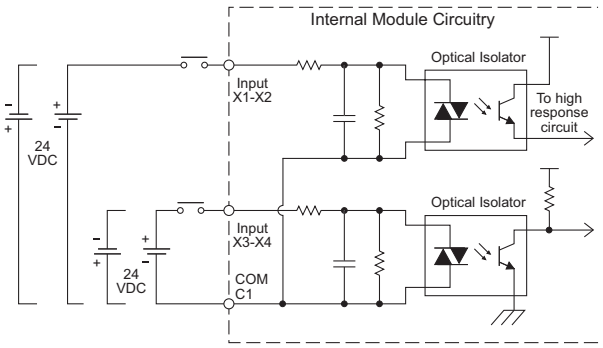
IMPORTANT: YOU CAN USE ONLY ONE TERMINAL (VOLTAGE OR CURRENT) PER CHANNEL. YOU MUST ALSO SELECT THE ANALOG TYPE (VOLTAGE OR CURRENT) IN THE CPU BUILT-IN I/O SETUP IN THE CLICK PROGRAMMING SOFTWARE (PULL-DOWN MENU SETUP > CPU BUILT-IN I/O SETUP).

X1 - X4

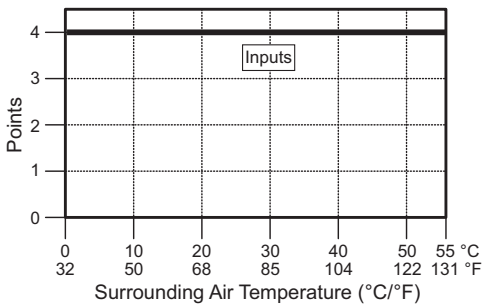
C0-02DD1-D Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-4: Typ 4 mA @ 24 VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-4: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: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

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

Equivalent Discrete Input Circuit



C0-02DD1-D Temperature Derating Chart



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

Analog CPU Module Specifications

C0-02DD1-D (cont'd)

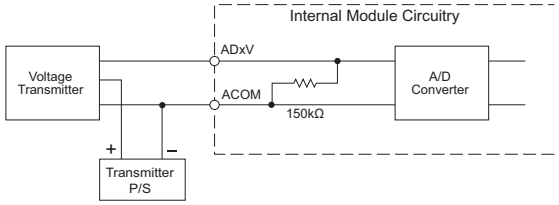
Y1 - Y4

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

AD1V - AD2I

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

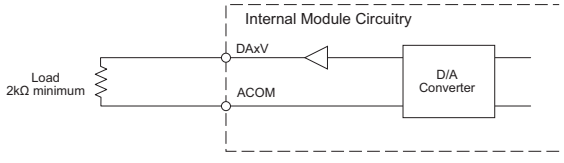
Analog Voltage Input



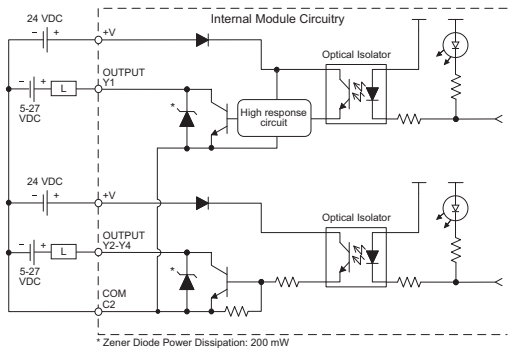
DA1V - DA2I

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

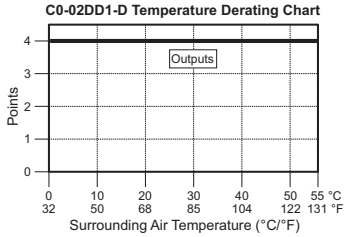
Analog Voltage Output Circuit



Equivalent Discrete Output Circuit

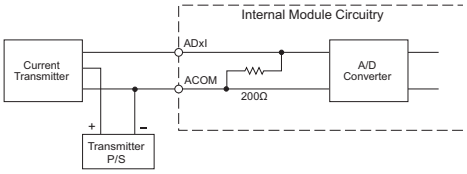


C0-02DD1-D Temperature Derating Chart



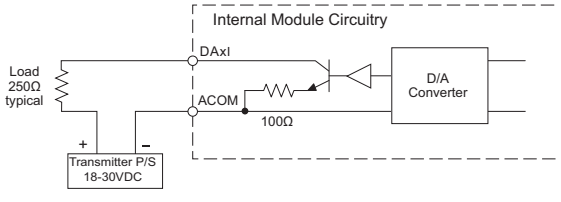
C0-02DD1-D Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	200Ω
Input Stability	±2 LSB
Full-Scale Calibration Error	±1% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy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

Analog Current Input Circuit



C0-02DD1-D Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	1 ms
Loop Supply Voltage	DC 18 - 30 V
Load Impedance	250 ohms Load Power Supply: DC 18V: 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	±100 ppm / °C maximum

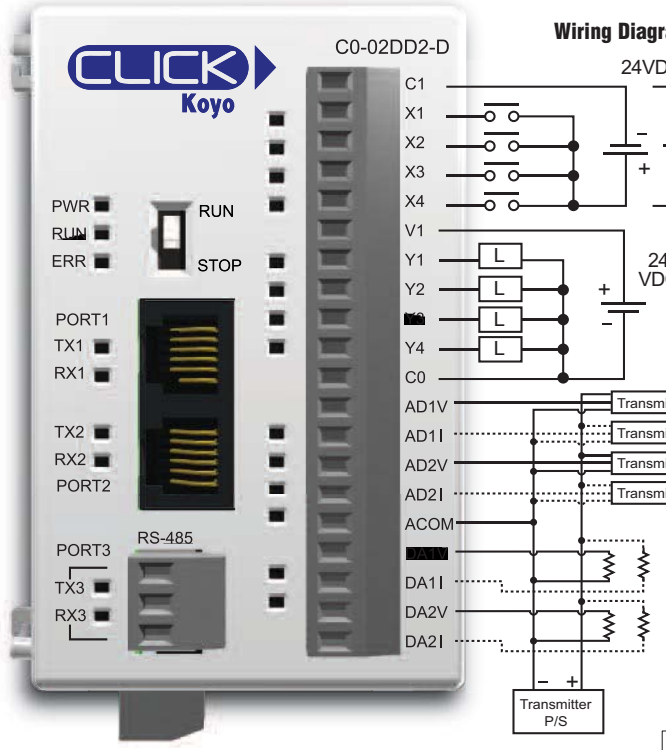
Analog Current Output Circuit



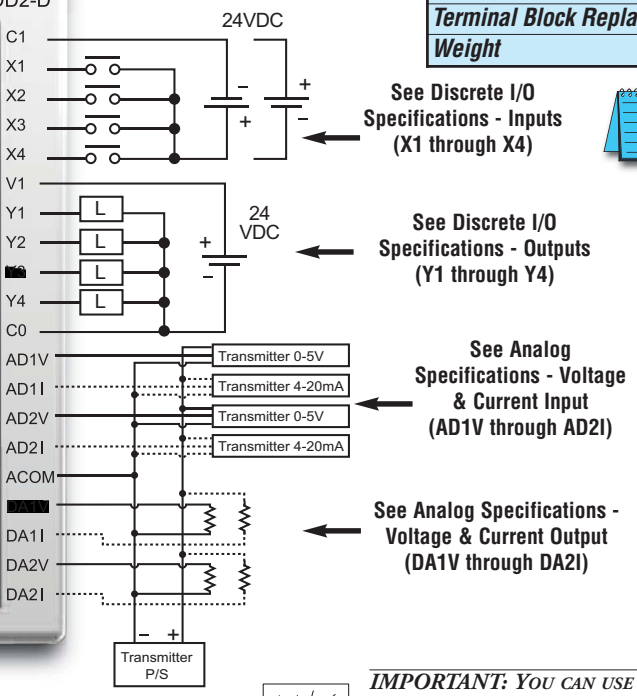
Analog CPU Module Specifications

C0-02DD2-D <--->

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



Wiring Diagram



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

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

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

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

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

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

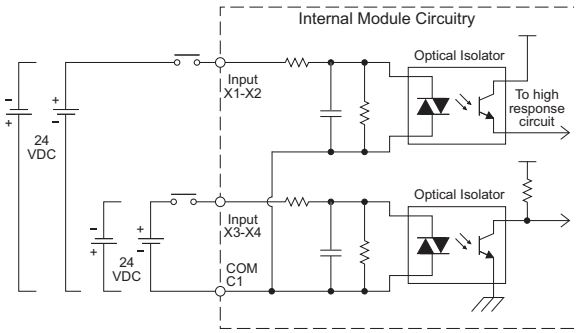
IMPORTANT: YOU CAN USE ONLY ONE TERMINAL (VOLTAGE OR CURRENT) PER CHANNEL. YOU MUST ALSO SELECT THE ANALOG TYPE (VOLTAGE OR CURRENT) IN THE CPU BUILT-IN I/O SETUP IN THE CLICK PROGRAMMING SOFTWARE (PULL-DOWN MENU SETUP > CPU BUILT-IN I/O SETUP).

X1 - X4

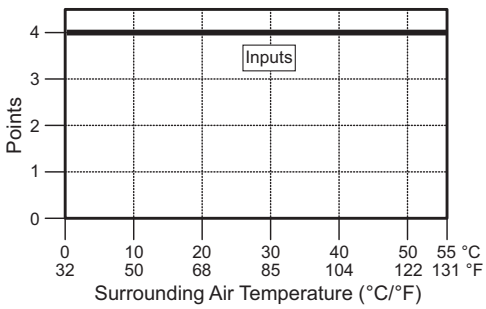
C0-02DD2-D Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Sink/Source)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-4: Typ 4 mA @ 24 VDC
Maximum Input Current	X1-2: 6.0 mA @ 26.4 VDC X3-4: 5.0 mA @ 26.4 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24 VDC X3-4: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC X3-4: > 19 VDC
OFF Voltage Level	X1-2: < 4 VDC X3-4: < 7 VDC
Minimum ON Current	X1-2: 4.5 mA X3-4: 3.5 mA
Maximum OFF Current	X1-2: 0.1 mA X3-4: 0.5 mA
OFF to ON Response	X1-2: Typ 5 µs Max 20 µs* X3-4: Typ 2 ms Max 10 ms
ON to OFF Response	X1-2: Typ 5 µs Max 20 µs* X3-4: Typ 3 ms Max 10 ms
Status Indicators	Logic Side (4 points, green LED)
Commons	1 (4 points/common)

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

Equivalent Discrete Input Circuit



C0-02DD2-D Temperature Derating Chart



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

Analog CPU Module Specifications

C0-02DD2-D (cont'd)

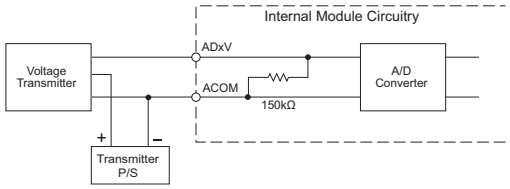
Y1 - Y4

C0-02DD2-D Discrete I/O Specifications - Outputs	
Outputs per Module	4 (Source)
Operating Voltage Range	24 VDC
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 : 0.1mA @ 30VDC; Y2-4 : 0.1mA @ 30VDC
On Voltage Drop	Y1: 1 VDC @ 0.1A; Y2-4 : 0.5VDC@ 0.1mA
Maximum Inrush Current	150 mA for 10 ms
OFF to ON Response	Y1: typ 5 µs; max 20 µs; Y2-4: < 0.5 ms
ON to OFF Response	Y1: typ 5 µs; max 20 µs; Y2-4: < 0.5 ms
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

AD1V - AD2I

C0-02DD2-D Analog Specifications - Voltage Input	
Number of Channels	2 (voltage/current selectable)
Input Range	0 - 5 VDC (6 VDC Max.)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	150 kΩ
Input Stability	±2 LSB maximum
Full-Scale Calibration Error	±1.2% maximum
Offset Calibration Error	±5 mV maximum
Accuracy vs. Temperature Error	±100 ppm / °C maximum

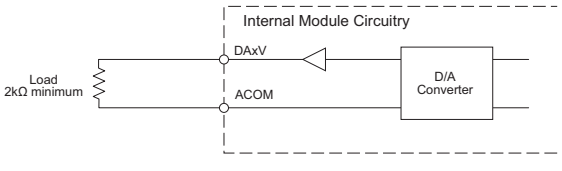
Analog Voltage Input Circuit



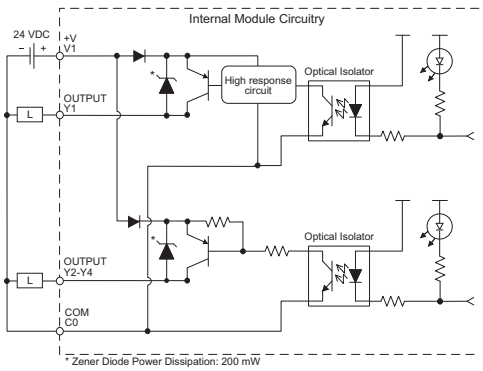
DA1V - DA2I

C0-02DD2-D Analog Specifications - Voltage Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	0 - 5 VDC
Resolution	12 bit
Conversion Time	1 ms
Load Impedance	2 kΩ minimum (output current 2.5 mA maximum)
Full-Scale Calibration Error	±0.8% maximum
Offset Calibration Error	±5 mV maximum
Accuracy vs. Temperature Error	±100 ppm / °C maximum

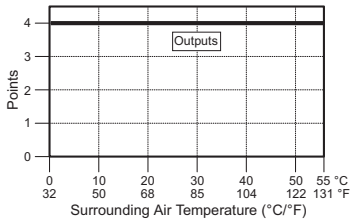
Analog Voltage Output Circuit



Equivalent Output Circuit

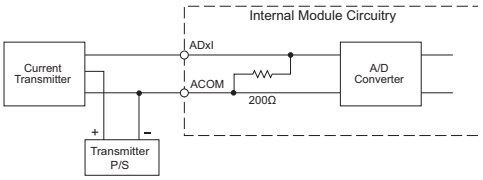


C0-02DD2-D Temperature Derating Chart



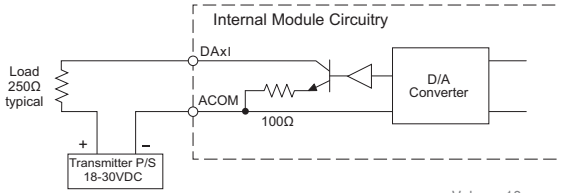
C0-02DD2-D Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	200 Ω
Input Stability	±2 LSB
Full-Scale Calibration Error	±1% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy vs. Temperature Error	±100 ppm / °C maximum

Analog Current Input Circuit



C0-02DD2-D Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	1 ms
Loop Supply Voltage	DC 18 - 30 V
Load Impedance	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	±100 ppm / °C maximum

Analog Current Output Circuit

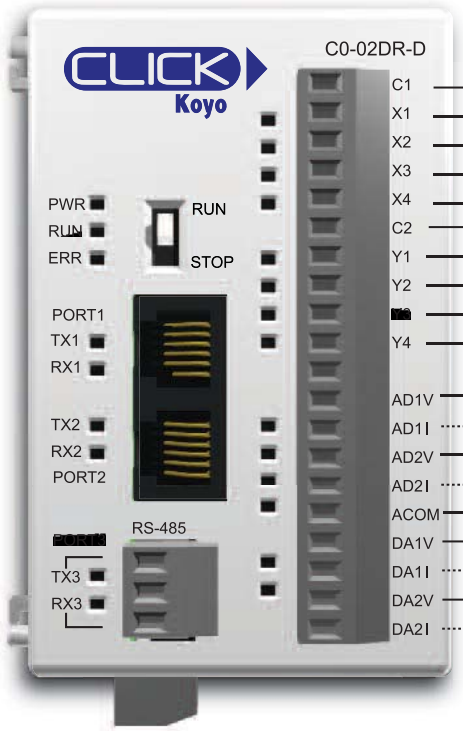


Analog CPU Module Specifications

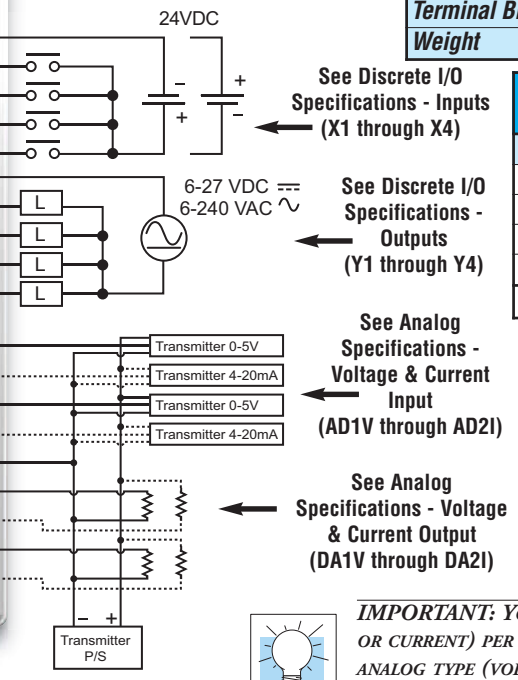
C0-02DR-D <--->

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

CLICK PLC CPU, 4 DC in / 4 relay out, 2-Ch Analog In / 2-Ch Analog out (current/voltage selectable), requires a 24 VDC power supply,



Wiring Diagram



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

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

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

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

General Specifications	
Current Consumption at 24VDC	140 mA
Terminal Block Replacement Part No.	C0-16TB
Weight	5.6 oz (160 g)

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

NOTE: When using analog CPUs, you must use CLICK programming software version V1.12 or later.

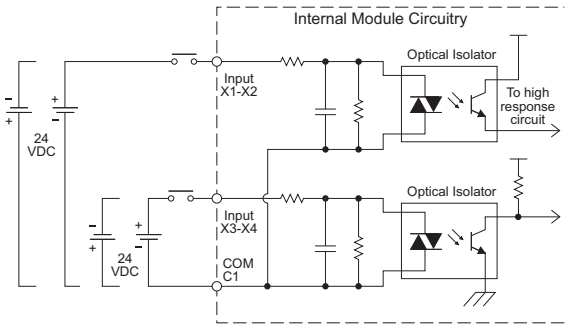
IMPORTANT: You can use only one terminal (voltage or current) per channel. You must also select the analog type (voltage or current) in the CPU built-in I/O setup in the CLICK programming software (pull-down menu Setup > CPU Built-in I/O Setup).

X1 - X4

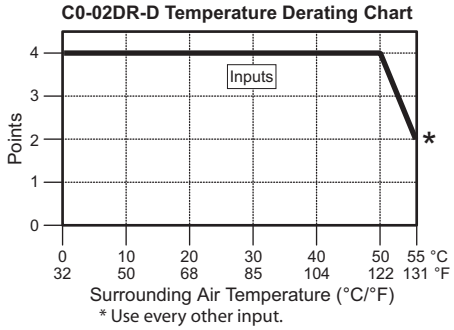
C0-02DR-D Discrete I/O Specifications - Inputs	
Inputs per Module	4 (Source/Sink)
Operating Voltage Range	24 VDC
Input Voltage Range	21.6 - 26.4 VDC
Input Current	X1-2: Typ 5 mA @ 24 VDC X3-4: Typ 4 mA @ 24 VDC
Input Impedance	X1-2: 4.7 kΩ @ 24 VDC X3-4: 6.8 kΩ @ 24 VDC
ON Voltage Level	X1-2: > 19 VDC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

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

Equivalent Discrete Input Circuit



C0-02DR-D Temperature Derating Chart



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

Analog CPU Module Specifications

C0-02DR-D (cont'd)

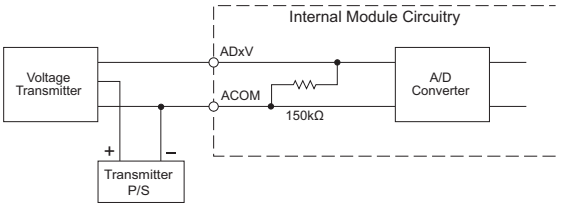
Y1 - Y4

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

AD1V - AD2I

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

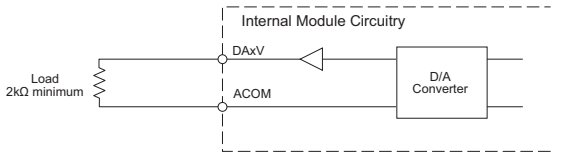
Analog Voltage Input Circuit



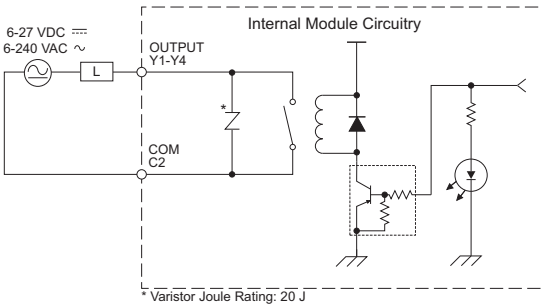
DA1V - DA2I

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

Analog Voltage Output Circuit



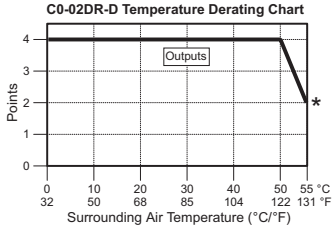
Equivalent Output Circuit



* Varistor Joule Rating: 20 J

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

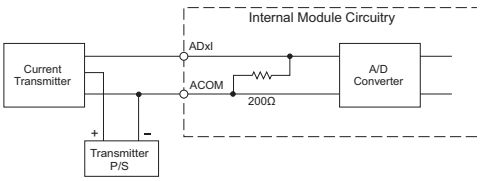
C0-02DR-D Temperature Derating Chart



* Use every other output.

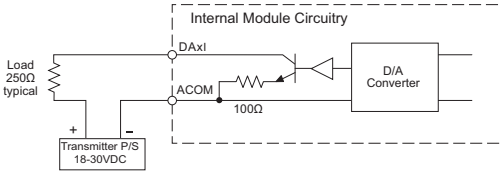
C0-02DR-D Analog Specifications - Current Input	
Inputs per Module	2 (voltage/current selectable)
Input Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	50 ms
Input Impedance	200 Ω
Input Stability	±2 LSB
Full-Scale Calibration Error	±1% maximum
Offset Calibration Error	±0.1 mA maximum
Accuracy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

Analog Current Input Circuit



C0-02DR-D Analog Specifications - Current Output	
Outputs per Module	2 (voltage/current selectable)
Output Range	4 - 20 mA (sink)
Resolution	12 bit
Conversion Time	1 ms
Loop Supply Voltage	DC 18 - 30 V
Load Impedance	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	±100 ppm / °C maximum

Analog Current Output Circuit



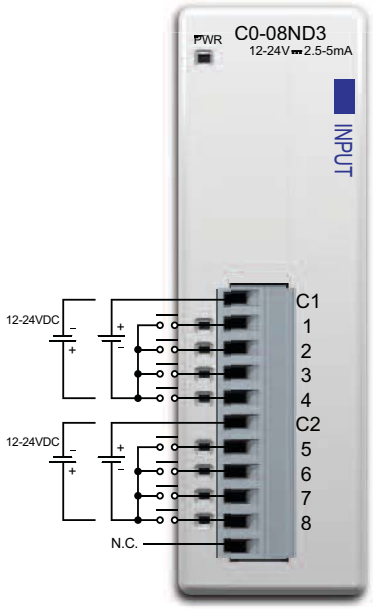
CLICK I/O Module Specifications

C0-08ND3 <--->

8-Point Sink/Source DC Input Module

8-pt 12-24 VDC current sinking or sourcing input module, 2 commons, isolated, removable terminal block included (replacement ADC p/n C0-08TB).

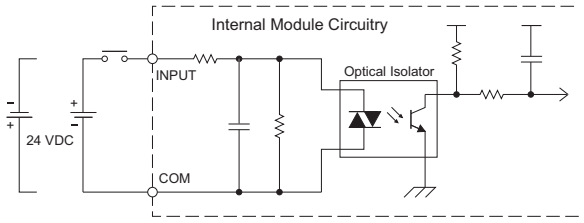
Wiring Diagram



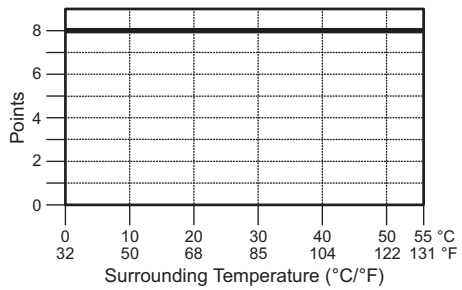
N.C. = Not Connected

C0-08ND3 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 5 mA @ 24 VDC
Maximum Input Current	7 mA @ 26.4 VDC
Input Impedance	4.7 kΩ @ 24 VDC
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 (24 VDC)	Max. 30 mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.8 oz (80 g)

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)

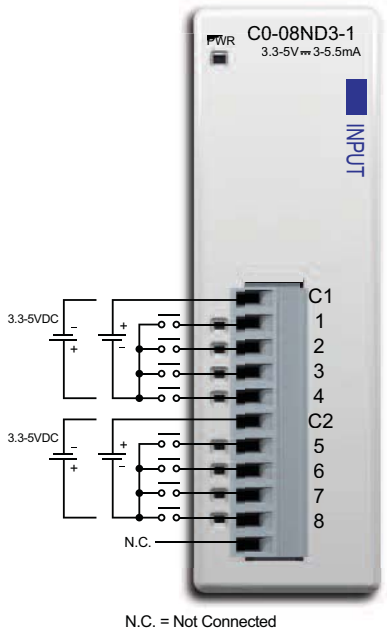
CLICK I/O Module Specifications

C0-08ND3-1 <--->

8-Point Sink/Source DC Input Module

8-pt 3.3-5 VDC current sinking or sourcing input module, 2 commons, isolated, removable terminal block included (replacement ADC p/n C0-08TB).

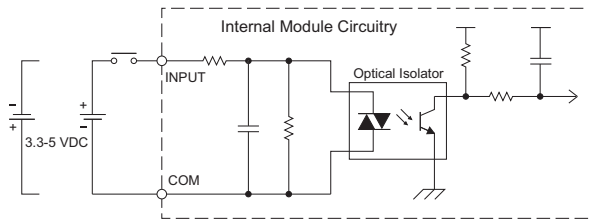
Wiring Diagram



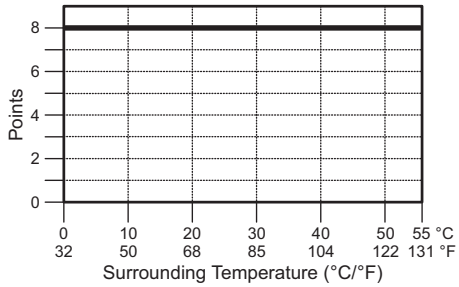
N.C. = Not Connected

C0-08ND3-1 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 5 mA @ 5 VDC
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. 3 ms Typ. 1.6 ms
ON to OFF Response	Max. 4 ms 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 (24 VDC)	Max. 30 mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.8 oz (80 g)

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)

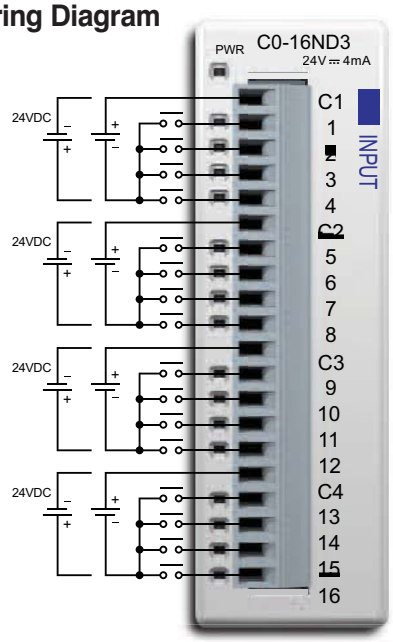
CLICK I/O Module Specifications

C0-16ND3 <--->

16-Point Sink/Source DC Input Module

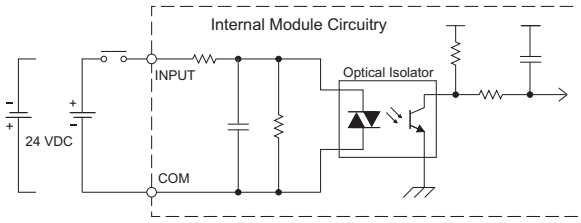
16-pt 24 VDC current sinking or sourcing input module, 4 commons, isolated, removable terminal block included (replacement ADC p/n C0-16TB).

Wiring Diagram

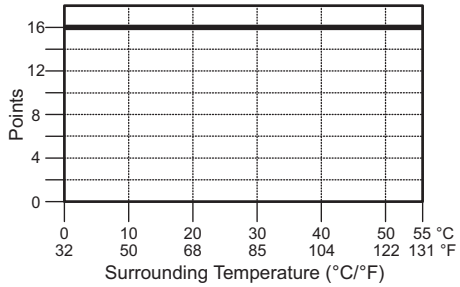


C0-16ND3 Input Specifications	
Inputs per Module	16 (Sink/Source)
Input Voltage Range	21.6-26.4 VDC
Operating Voltage Range	24 VDC
Input Current	Typ 4.0 mA @ 24 VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24 VDC
ON Voltage Level	> 19 VDC
OFF Voltage Level	< 7 VDC
Minimum ON Current	3.5 mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 10 ms Typ. 2 ms
ON to OFF Response	Max. 10 ms Typ. 3 ms
Status Indicators	Logic Side (16 points, green LED) Power Indicator (green LED)
Commons	4 (4 points/common) Isolated
Bus Power Required (24 VDC)	Max. 40 mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

Equivalent Input Circuit



Input Module Temperature Derating Chart



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

ZL-LTB16-24 sensor input module

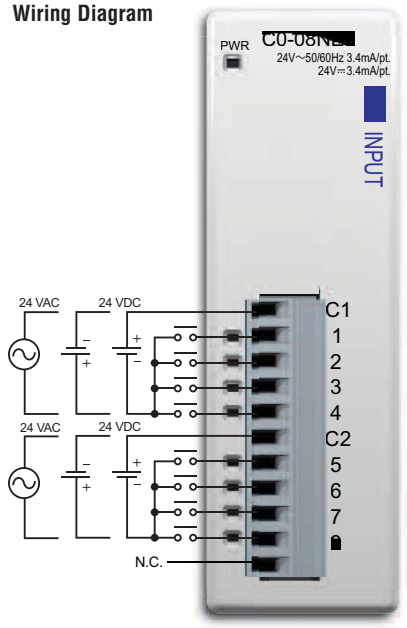
CLICK I/O Module Specifications

C0-08NE3 <--->

8-Point Sink/Source AC/DC Input Module

8-pt 24 VAC/24 VDC current sinking or sourcing input module, 2 commons, 4 points per common, removable terminal block included. (replacement ADC p/n C0-08TB).

Wiring Diagram

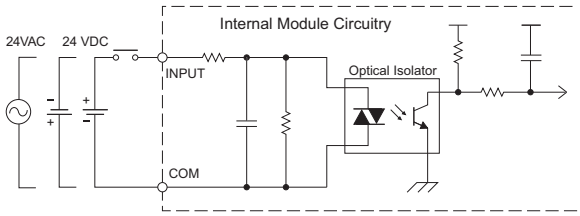


N.C. = Not Connected

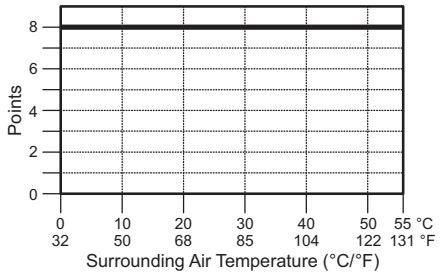
C0-08NE3 Input Specifications	
Inputs per Module	8 (Sink/Source)
Operating Voltage Range	24 VAC/VDC
Input Voltage Range	20.4 - 27.6 VAC/VDC
Peak Voltage	27.6 VAC/VDC
AC Frequency	47-63 Hz
Input Current	Typ 3.4 mA @ 24 VAC/VDC
Maximum Input Current	5.0 mA @ 27.6 VAC/VDC
Input Impedance	6.8 kΩ @ 24 VAC/VDC
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 (24 VDC)	Max. 30 mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.9 oz (82 g)

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



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)

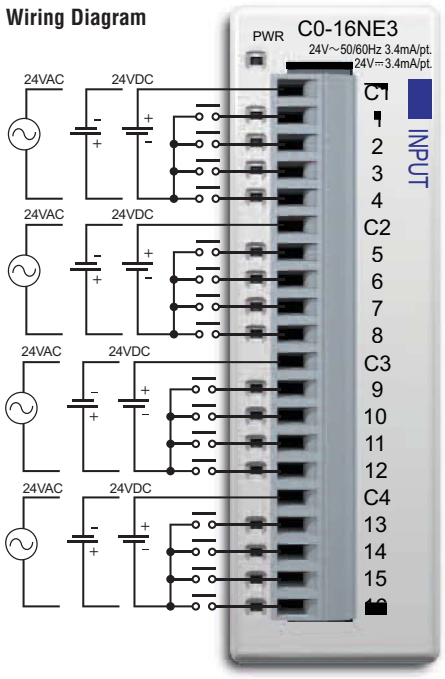
CLICK I/O Module Specifications

C0-16NE3 <--->

16-Point Sink/Source AC/DC Input Module

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

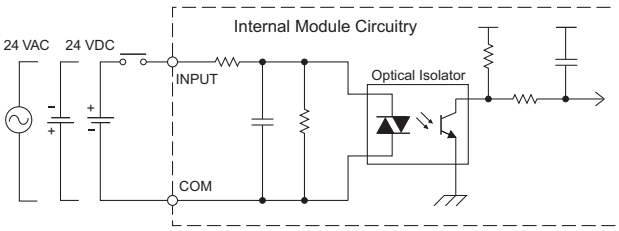
Wiring Diagram



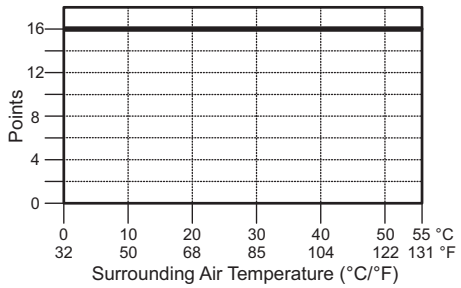
C0-16NE3 Input Specifications	
Inputs per Module	16 (Sink/Source)
Operating Voltage Range	24 VAC/VDC
Input Voltage Range	20.4 - 27.6 VAC/VDC
Peak Voltage	27.6 VAC/VDC
AC Frequency	47-63 Hz
Input Current	Typ 3.4 mA @ 24 VAC/VDC
Maximum Input Current	5.0 mA @ 27.6 VAC/VDC
Input Impedance	6.8 kΩ @ 24 VAC/VDC
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 (24 VDC)	Max. 40 mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

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



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

ZL-LTB16-24 sensor input module

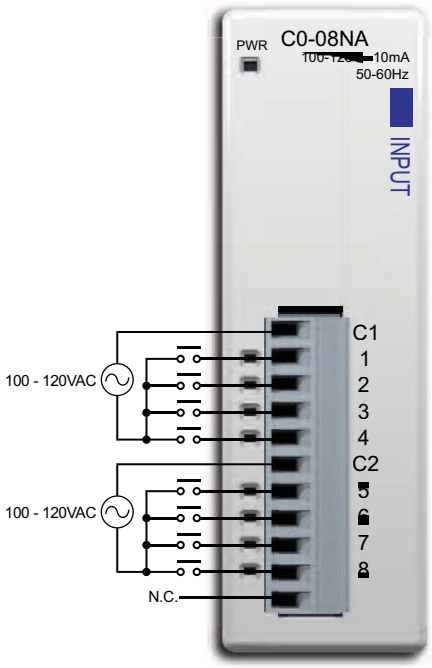
CLICK I/O Module Specifications

C0-08NA <--->

8-Point AC Input Module

8-pt 100-120 VAC input module, 2 commons, isolated, removable terminal block included (replacement ADC p/n C0-08TB).

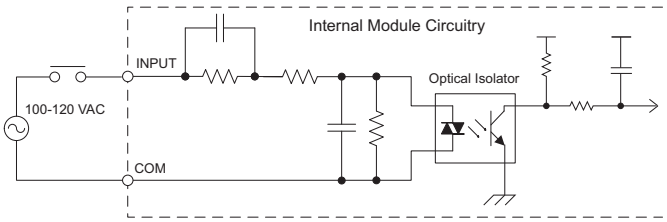
Wiring Diagram



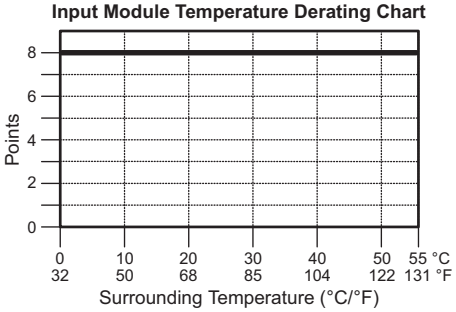
N.C. = Not Connected

C0-08NA 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 @ 100 VAC (50Hz) Typ 10 mA @ 100 VAC (60Hz)
Maximum Input Current	16 mA @ 144 VAC
Input Impedance	15 kΩ (50 Hz), 12 kΩ (60 Hz)
ON Voltage Level	> 70 VAC
OFF Voltage Level	< 20 VAC
Minimum ON Current	5 mA
Maximum OFF Current	2 mA
OFF to ON Response	< 40 ms
ON to OFF Response	< 40 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24 VDC)	Max. 30mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.8 oz (80 g)

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)

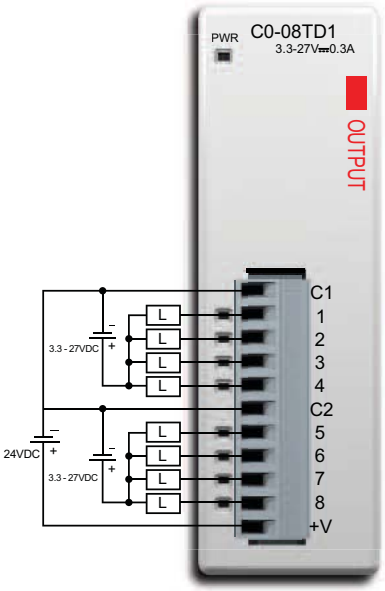
CLICK I/O Module Specifications

C0-08TD1 <--->

8-Point Sinking DC Output Module

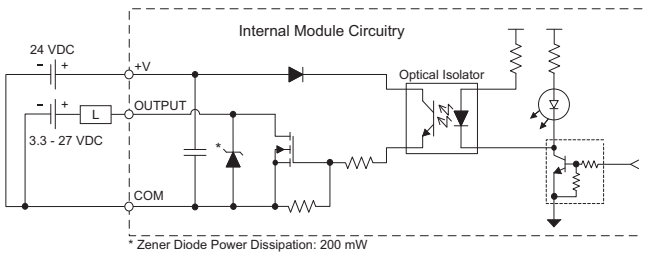
8-pt 3.3-27 VDC current sinking output module, 2 commons, 0.3 A/pt, removable terminal block included (replacement ADC p/n C0-08TB).

Wiring Diagram

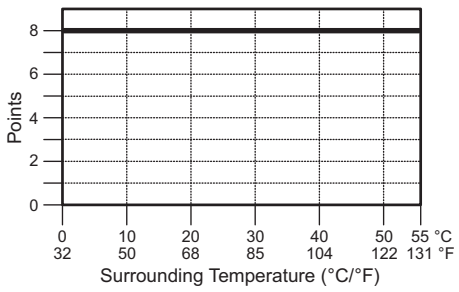


C0-08TD1 Output Specifications	
Outputs per Module	8 (Sink)
Operating Voltage Range	3.3-27 VDC
Output Voltage Range	2.8-30 VDC
Maximum Output Current	0.3 A/point , 1.2 A/common
Minimum Output Current	0.5 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	1.5 VDC @ 0.3 A
Maximum Inrush Current	1 A for 10 ms
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 15 mA (All Outputs On)
Bus Power Required (24 VDC)	Max. 50 mA (All Outputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.8 oz (80 g)

Equivalent Output Circuit



Output 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)

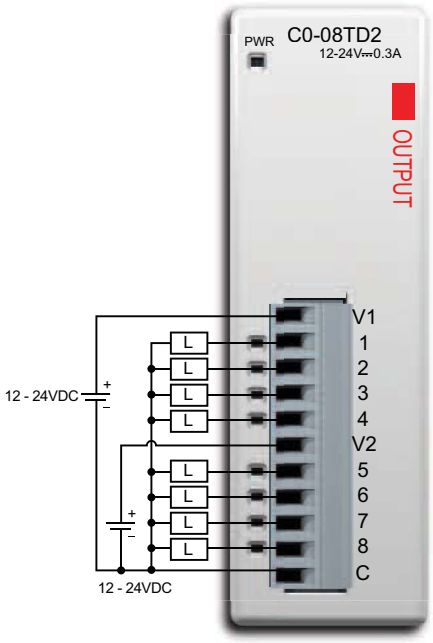
CLICK I/O Module Specifications

C0-08TD2 <--->

8-Point Sourcing DC Output Module

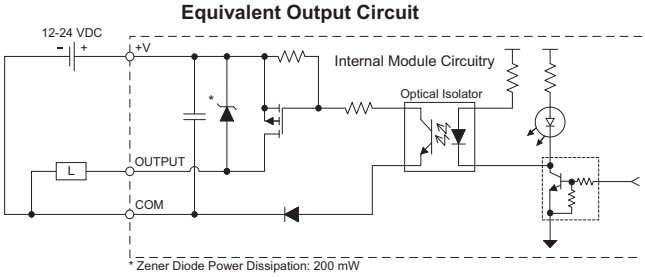
8-pt 12-24 VDC current sourcing output module, 1 common, 0.3 A/pt, removable terminal block included (replacement ADC p/n C0-08TB).

Wiring Diagram

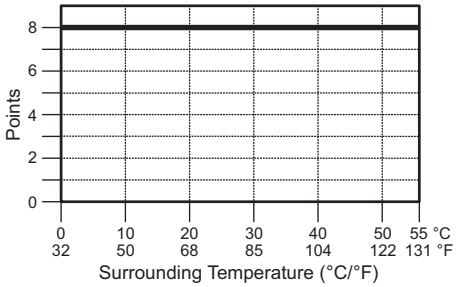


C0-08TD2 Output Specifications	
Outputs per Module	8 (Source)
Operating Voltage Range	12-24 VDC
Output Voltage Range	9.6-30 VDC
Maximum Output Current	0.3 A/point , 1.2 A/common
Minimum Output Current	0.5 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	1.5 VDC @ 0.3 A
Maximum Inrush Current	1 A for 10 ms
OFF to ON Response	< 1 ms
ON to OFF Response	< 1 ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	1 (8 points/common)
Bus Power Required (24 VDC)	Max. 50 mA (All Outputs On)
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.8 oz (80 g)

Equivalent Output Circuit



Output 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)

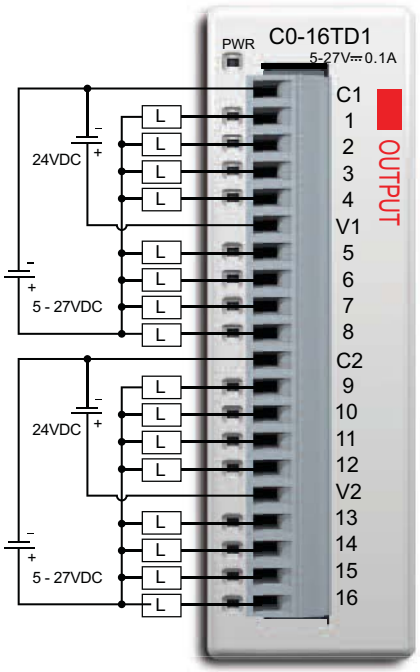
CLICK I/O Module Specifications

C0-16TD1 <--->

16-Point Sinking DC Output Module

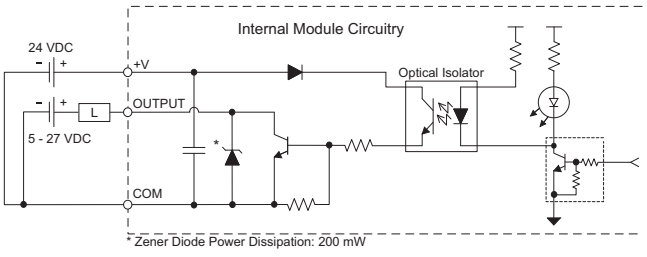
16-pt 5-27 VDC current sinking output module, 2 commons, isolated, 0.1 A/pt, removable terminal block included (replacement ADC p/n C0-16TB).

Wiring Diagram

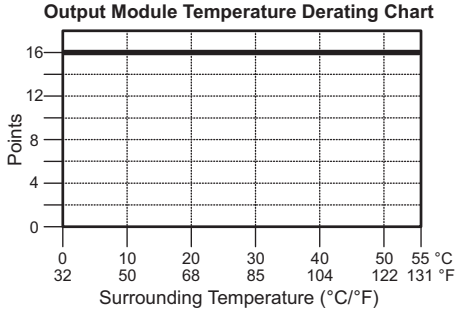


C0-16TD1 Output Specifications	
Outputs per Module	16 (Sink)
Operating Voltage Range	5-27 VDC
Output Voltage Range	4-30 VDC
Maximum Output Current	0.1 A/point , 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30.0 VDC
On Voltage Drop	0.5 VDC @ 0.1 A
Maximum Inrush Current	150 mA for 10 ms
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 100 mA (All Outputs On)
Bus Power Required (24 VDC)	Max. 80 mA (All Outputs On)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

Equivalent Output Circuit



Output Module Temperature Derating Chart

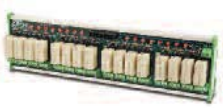


ZipLink Pre-Wired PLC Connection Cables and Modules for CLICK PLC

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

ZL-RFU20 fuse module



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

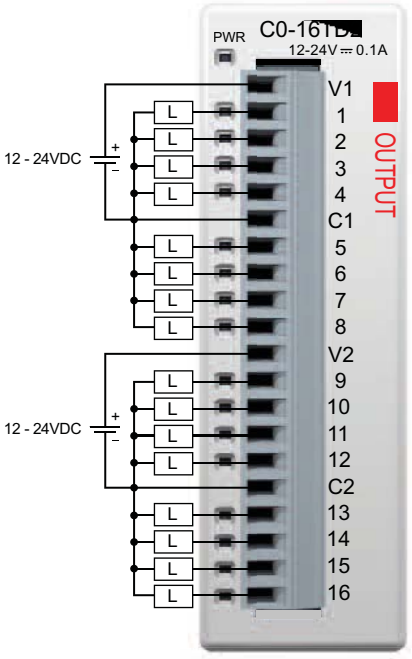
CLICK I/O Module Specifications

C0-16TD2 <--->

16-Point Sourcing DC Output Module

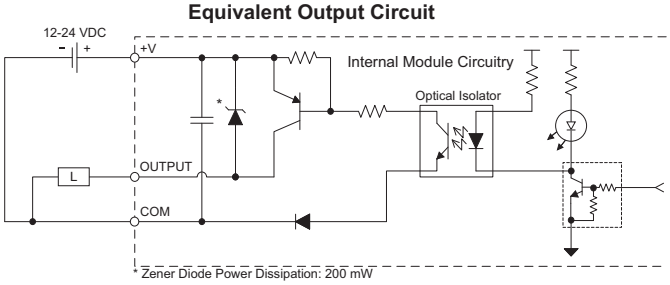
16-pt 12-24 VDC current sourcing output module, 2 commons, isolated, 0.1 A/pt, removable terminal block included (replacement ADC p/n C0-16TB).

Wiring Diagram



C0-16TD2 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	150 mA for 10 ms
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 (24 VDC)	Max. 80 mA (All Outputs On)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

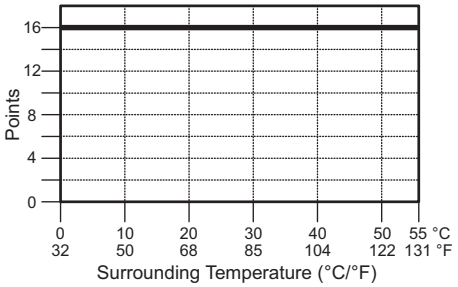
Equivalent Output Circuit



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)

Output Module Temperature Derating Chart



ZL-RTB20 20-pin feed-through connector module

ZL-RFU20 fuse module

ZL-RRL16-24-2 relay module
Note: 10A/Point (DC)
8A/Point (AC)
(Replaceable relays)

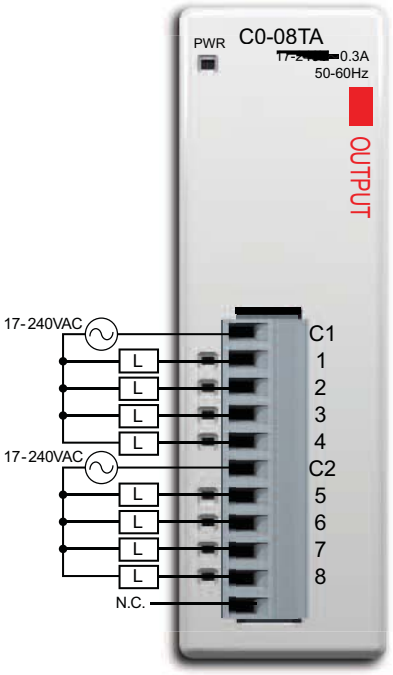
CLICK I/O Module Specifications

C0-08TA <--->

8-POINT AC OUTPUT MODULE

8-pt 17-240 VAC triac output module, 2 commons, isolated, 0.3 A/pt, removable terminal block included (replacement ADC p/n C0-08TB).

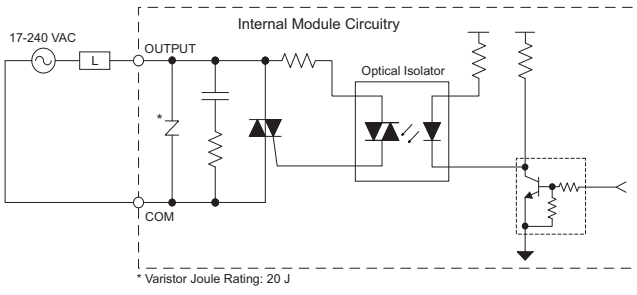
Wiring Diagram



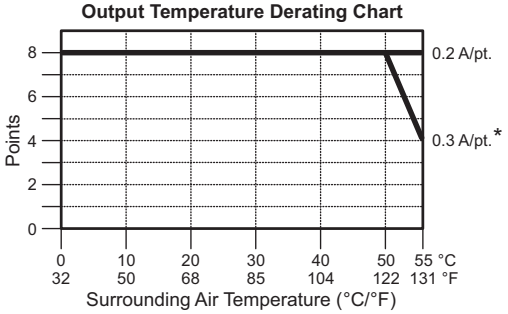
N.C. = Not Connected

C0-08TA 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	10 mA
Maximum Leakage Current	4 mA @ 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 (24 VDC)	Max. 80 mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse.
Terminal Block Replacement	ADC p/n C0-8TB
Weight	3.5 oz (100 g)

Equivalent Output Circuit



Output Temperature Derating Chart



* Use every other output.

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)

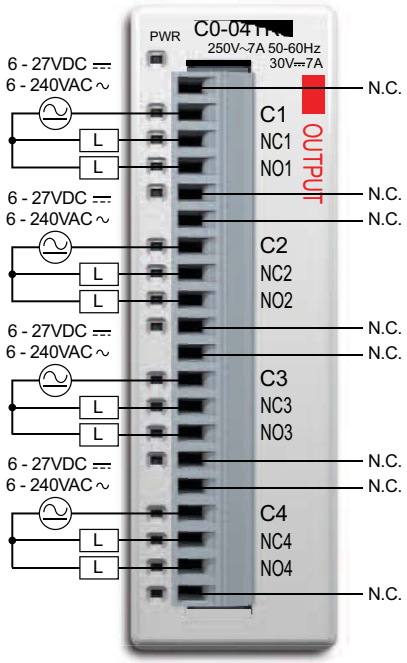
CLICK I/O Module Specifications

C0-04TRS <--->

4-Point Relay Output Module

4-pt 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 ADC p/n C0-16TB).

Wiring Diagram

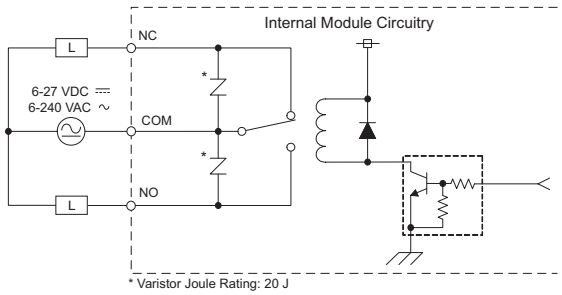


N.C. = Not Connected

C0-04TRS 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	100 mA @ 5 VDC
Maximum Leakage Current	0.1 mA @ 264 VAC
Maximum Inrush Current	12 A
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (4 points, red LED) Power Indicator (green LED)
Commons	4 (1 point/common) Isolated
Bus Power Required (24 VDC)	Max. 100 mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	ADC p/n C0-16TB
Weight	4.4 oz (125 g)

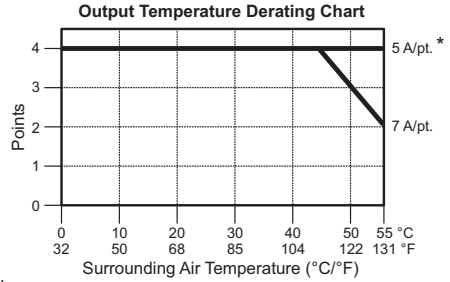
Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type	**Relay Life**
30 VDC, 7 A Resistive	100,000 cycles
250 VAC, 7 A Resistive	100,000 cycles
250 VAC, 4.9 A Solenoid	90,000 cycles
250 VAC, 2.9 A Solenoid	100,000 cycles
ON to OFF = 1 cycle	

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.

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)

NOTE: *THE C0-04TRS RELAY OUTPUT MODULE IS DERATED TO 2A PER POINT MAXIMUM WHEN USED WITH THE ZIPLINK WIRING SYSTEM.*

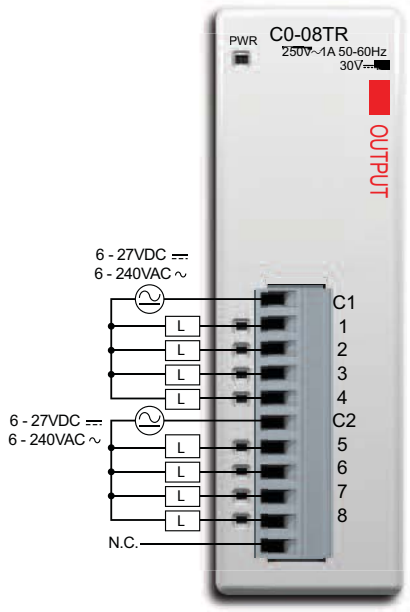
CLICK I/O Module Specifications

C0-08TR <--->

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 ADC p/n C0-08TB).

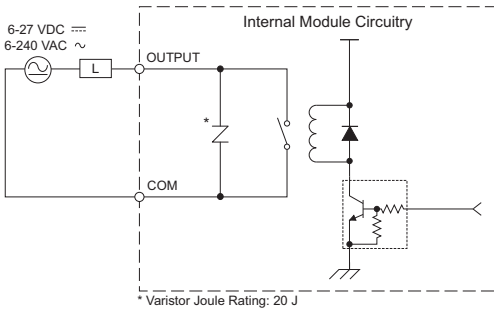
Wiring Diagram



N.C. = Not Connected

C0-08TR 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	5 mA @ 5 VDC
Maximum Leakage Current	0.1 mA @ 264 VAC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	< 15 ms
ON to OFF Response	< 15 ms
Status Indicators	Logic Side (8 points, red LED) Power Indicator (green LED)
Commons	2 (4 points/common) Isolated
Bus Power Required (24 VDC)	Max. 100 mA (All Outputs On)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	ADC p/n C0-8TB
Weight	3.9 oz (110 g)

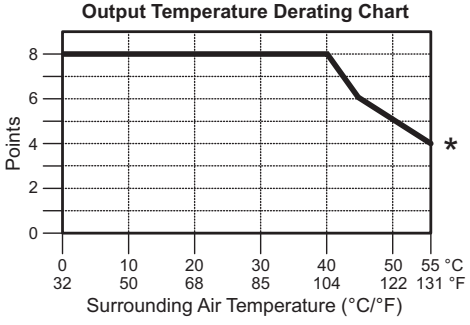
Equivalent Output Circuit



* Varistor Joule Rating: 20 J

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

Output Temperature Derating Chart



* Use every other output.

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)

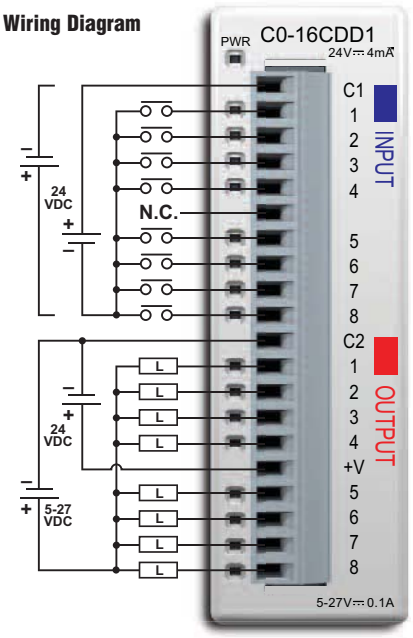
CLICK I/O Module Specifications

C0-16CDD1 <--->

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 ADC p/n C0-16TB).

Wiring Diagram



N.C. = Not Connected

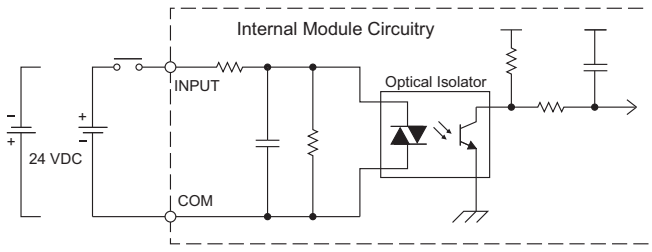
NOTE: When using this module you must also use CLICK programming software and CPU firmware version V1.40 or later.

C0-16CDD1 Input Specifications	
Inputs per Module	8 (Source/Sink)
Operating Voltage Range	CE: 24 VDC (-10%/+10%) UL: 24 VDC (-10%/+10%)
Input Voltage Range	21.6 - 26.4 VDC
Input Current	Typ 4.0 mA @ 24 VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24 VDC
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. 10 ms Typ. 2 ms
ON to OFF Response	Max. 10 ms Typ. 3 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	1 (8 points/common)

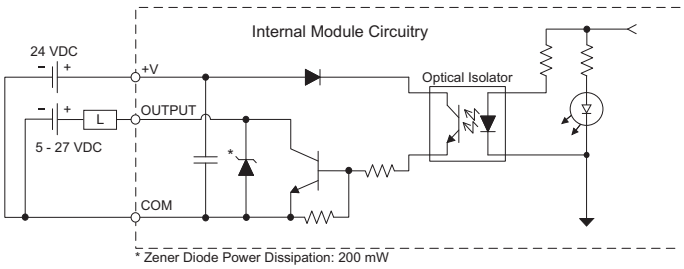
C0-16CDD1 Output Specifications	
Outputs per Module	8 (sink)
Operating Voltage Range	CE: 5-24 VDC (-15%/+20%) UL: 5-27 VDC (-15%/+20%)
Output Voltage Range	4-30 VDC
Maximum Output Current	0.1 A/point, 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30 VDC
On Voltage Drop	0.5 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	24 VDC (-10%/+10%) max. 50 mA (all points on)

C0-16CDD1 General Specifications	
Bus Power Required (24 VDC)	Max. 80 mA (all points on)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

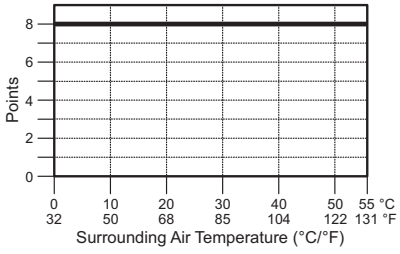
Equivalent Input Circuit



Equivalent Output Circuit



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-CBL20-2 (2.0 m length)

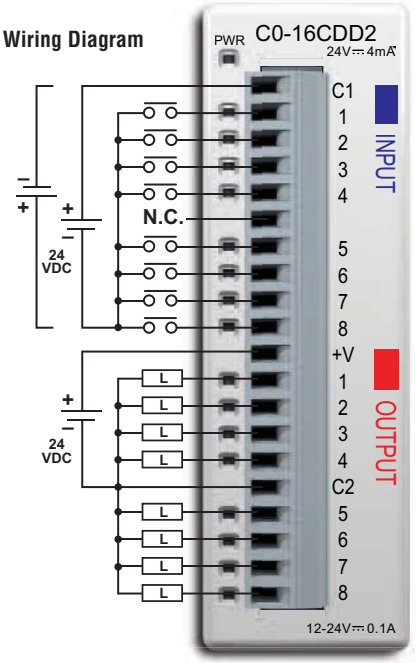
CLICK I/O Module Specifications

C0-16CDD2 <--->

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, 0.1A/pt., 1 common, non-fused, removable terminal block included. (replacement ADC p/n C0-16TB).

Wiring Diagram



N.C. = Not Connected

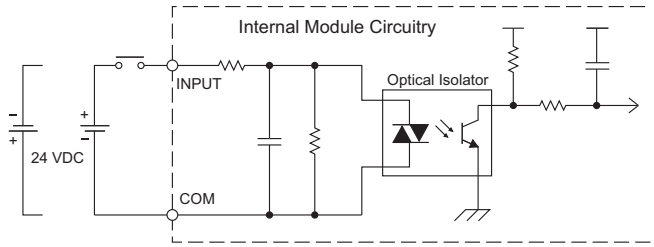
NOTE: When using this module you must also use CLICK programming software and CPU firmware version V1.40 or later.

C0-16CDD2 Input Specifications	
Inputs per Module	8 (source/sink)
Operating Voltage Range	CE: 24 VDC (-10%/+10%) UL: 24 VDC (-10%/+10%)
Input Voltage Range	21.6 - 26.4 VDC
Input Current	Typ 4.0 mA @ 24 VDC
Maximum Input Current	5.0 mA @ 26.4 VDC
Input Impedance	6.8 kΩ @ 24 VDC
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. 10 ms Typ. 2 ms
ON to OFF Response	Max. 10 ms Typ. 3 ms
Status Indicators	Logic Side (8 points, green LED) Power Indicator (green LED)
Commons	1 (8 points/common)

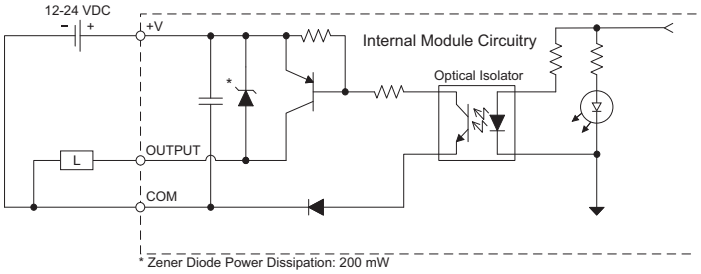
C0-16CDD2 Output Specifications	
Outputs per Module	8 (Source)
Operating Voltage Range	CE: 12-24 VDC (-15%/+20%) UL: 12-24 VDC (-20%/+25%)
Output Voltage Range	9.6 - 30 VDC
Maximum Output Current	0.1 A/point , 0.8 A/common
Minimum Output Current	0.2 mA
Maximum Leakage Current	0.1 mA @ 30 VDC
On Voltage Drop	0.6 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)

C0-16CDD2 General Specifications	
Bus Power Required (24 VDC)	Max. 80 mA (all points on)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90 g)

Equivalent Input Circuit

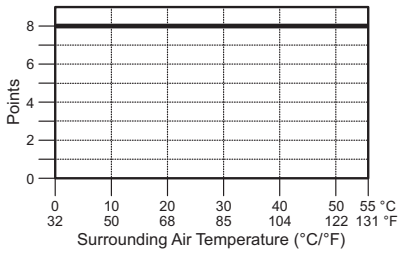


Equivalent Output Circuit



* Zener Diode Power Dissipation: 200 mW

Input / Output Temperature Derating Chart



ZL-RTB20 20-pin feed-through connector module

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)

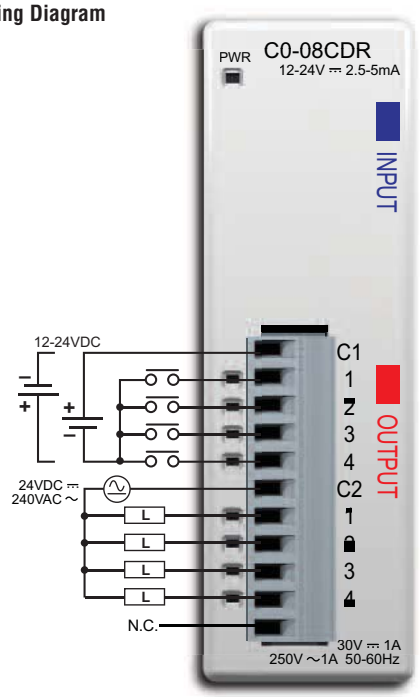
CLICK I/O Module Specifications

C0-08CDR <--->

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 ADC p/n C0-8TB).

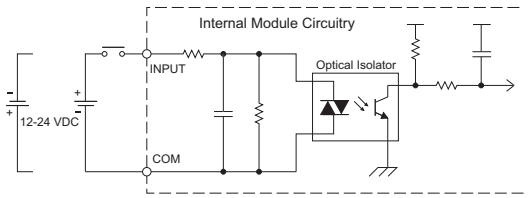
Wiring Diagram



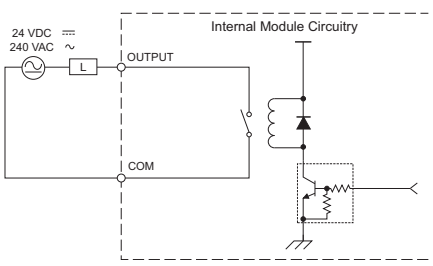
N.C. = Not Connected

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

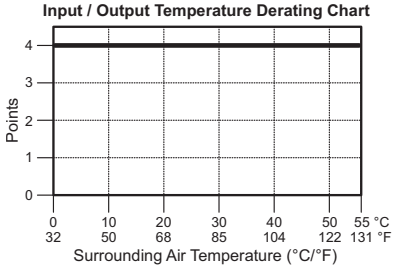
Equivalent Input Circuit



Equivalent Output Circuit



Input / Output Temperature Derating Chart



C0-08CDR 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 @ 24 VDC
Maximum Input Current	7.0 mA @ 26.4 VDC
Input Impedance	4.7 kΩ @ 24 VDC
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 (4 points, green LED) Power Indicator (green LED)
Commons	1 (4 points/common)

C0-08CDR Output Specifications	
Outputs per Module	4 (Relay)
Operating Voltage Range	CE: 6.25 - 24 VDC (-15%/+10%) / 6 - 240 VAC (-15%/+10%) UL: 24 VDC (-15%/+10%) / 240 VAC (-10%/+10%)
Peak Voltage	30 VDC / 264 VAC
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 @ 264 VAC
Maximum Inrush Current	3 A for 10 ms
OFF to ON Response	<15 ms
ON to OFF Response	<15 ms
Status Indicators	Logic Side (4 points, red LED)
Commons	1 (4 points/common)

C0-08CDR General Specifications	
Bus Power Required (24 VDC)	Max. 80 mA (all points on)
Protection Circuit	Not built into the module - Install protection elements such as external fuse
Terminal Block Replacement	ADC p/n C0-8TB
Weight	3.2 oz (90 g)

C0-08CDR Typical Relay Life (Operations) at Room Temperature	
Voltage & Load Type*	**Relay Life (ON to OFF = 1 cycle)**
30 VDC, 1A, Resistive	80,000 cycles
30 VDC, 1A, Solenoid	80,000 cycles
250 VAC, 1A, Resistive	80,000 cycles
250 VAC, 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)

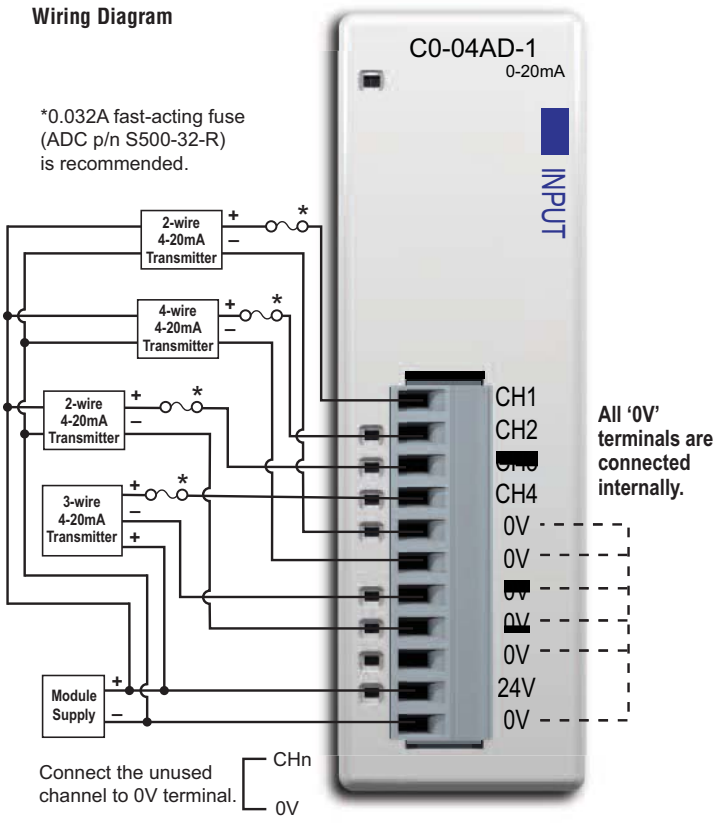
CLICK I/O Module Specifications

C0-04AD-1 <--->

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 ADC p/n C0-8TB).

Wiring Diagram



C0-04AD-1 Input Specifications	
Inputs per Module	4
Input Range	0-20 mA (sink)
Resolution	13-bit, 2.44 uA/count
Input Type	Single ended (one common)
Maximum Continuous Overload	±44 mA
Input Impedance	124Ω, 0.5 W current input
Filter Charactistics	Low pass, -3 dB at 120 Hz
Sample Duration Time	2 ms
All Channel Update Rate	25 ms
Open Circuit Detection Time	Zero reading within 100 ms
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, 50/60 Hz	±2 count maximum
Field to Logic Side Isolation	1800 VAC for 1 sec.
Recommended Fuse (external)	ADC p/n S500-32-R (0.032A fuse)
External 24 VDC Power Required	65 mA
Bus Power Required (24 VDC)	20 mA
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.9 oz (82 g)

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

ZipLink 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

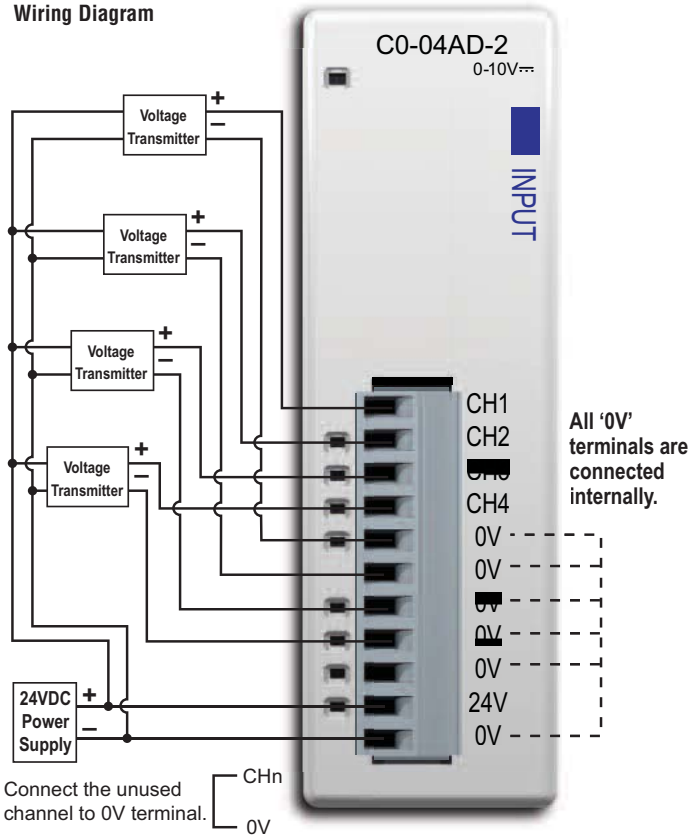
CLICK I/O Module Specifications

C0-04AD-2 <--->

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 ADC p/n C0-8TB).

Wiring Diagram



C0-04AD-2 Input Specifications	
Inputs per Module	4
Input Range	0-10 V
Resolution	13-bit, 1.22 mV per count
Input Type	Single ended (one common)
Maximum Continuous Overload	±100 VDC
Input Impedance	>150kΩ
Filter Charactistics	Low pass, -3 dB at 500 Hz
Sample Duration Time	6.25 ms
All Channel Update Rate	25 ms
Open Circuit Detection Time	Zero reading within 100 ms
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, 50/60 Hz	±2 count maximum
Field to Logic Side Isolation	1800 VAC for 1 sec.
External 24 VDC Power Required	65 mA
Base Power Required (24 VDC)	23 mA
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.9 oz (82 g)

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

ZipLink 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 I/O Module Specifications

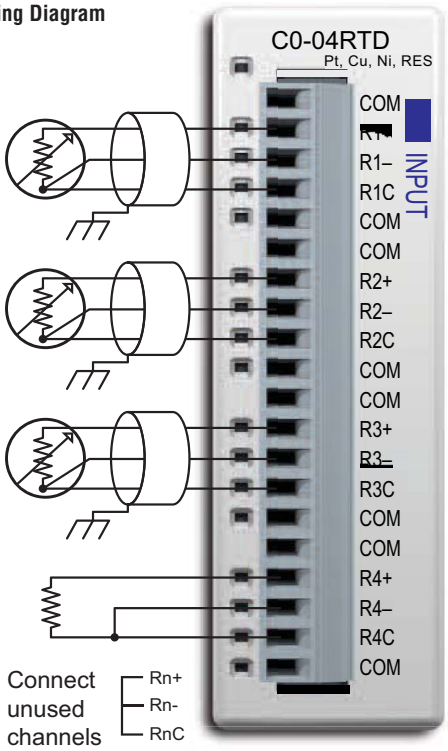
C0-04RTD <--->

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 ADC 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 CPU 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 CPU module 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

C0-04RTD Input Specifications	
Inputs per Module	4
Common Mode Range	±2.5 V
Common Mode Rejection	100 dB at DC and 100 dB at 50/60 Hz
Input Impedance	>5 MΩ
Maximum Ratings	Fault protected inputs to ±50 VDC
Resolution	±0.1°C or °F, 0.1Ω or 0.01Ω
*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 3125.0Ω : Resolution 0.1Ω 0 to 1562.5Ω : Resolution 0.1Ω 0 to 781.2Ω : Resolution 0.1Ω 0 to 390.62Ω : Resolution 0.01Ω 0 to 195.31Ω : Resolution 0.01Ω
RTD Linearization	Automatic
Excitation Current (All Ranges)	210 µA
Accuracy vs. Temperature	±10 ppm 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
Sample Duration Time	240 ms
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.

C0-04RTD General Specifications	
Field to Logic Side Isolation	No isolation
External DC Power Required	None
Bus Power Required (24 VDC)	25 mA
Thermal Dissipation	2.047 BTU per hour
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.1 oz (86 g)

Not Compatible with ZipLink Pre-Wired PLC Connection Cables and Modules.

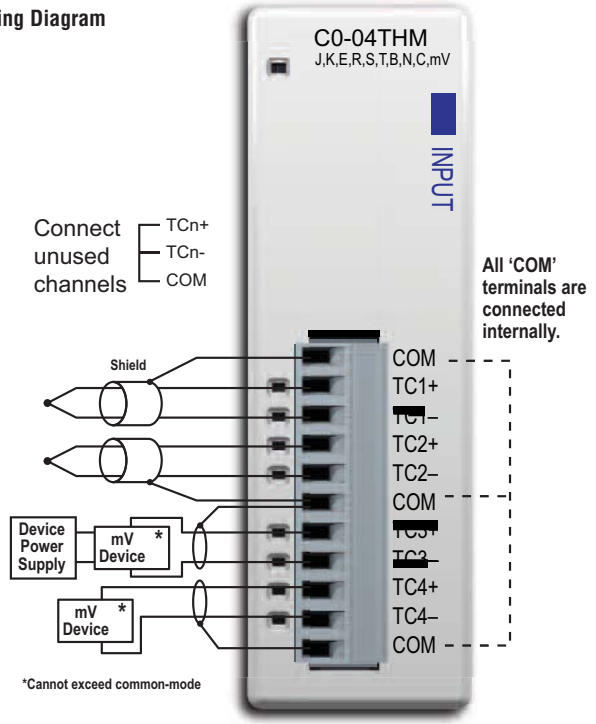
CLICK I/O Module Specifications

C0-04THM <--->

4-Channel Thermocouple Input Module

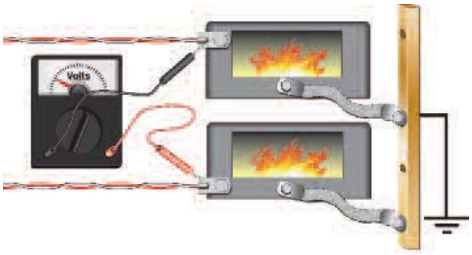
4-channel thermocouple input module, 16-bit resolution (+/-0.1 degrees Celsius or Fahrenheit), Supports: J, K, E, R, S, T, B, N, C type thermocouples; voltage ranges are also supported, removable terminal block included. (replacement ADC p/n C0-8TB).

Wiring Diagram



NOTE: When using this module you must also use CLICK programming software and CPU 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 -1.3V or greater than +3.8V between tips will skew measurements.



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

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

C0-04THM Input Specifications	
Inputs per Module	4
Common Mode Range	-1.3 to +3.8 V
Common Mode Rejection	100 dB at DC and 130 dB at 60 Hz
Input Impedance	>5 MΩ
Maximum Ratings	Fault protected inputs to ±50 VDC
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 Inaccuracy	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
Sample Duration Time	400 ms
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

C0-04THM General Specifications	
Field to Logic Side Isolation	1800 VAC applied for 1 second (100% tested)
External DC Power Required	None
Bus Power Required (24 VDC)	25 mA
Thermal Dissipation	0.175 BTU per hour
Terminal Block Replacement	ADC p/n C0-8TB
Weight	3.1 oz (86 g)

Not Compatible with ZipLink Pre-Wired PLC Connection Cables and Modules.

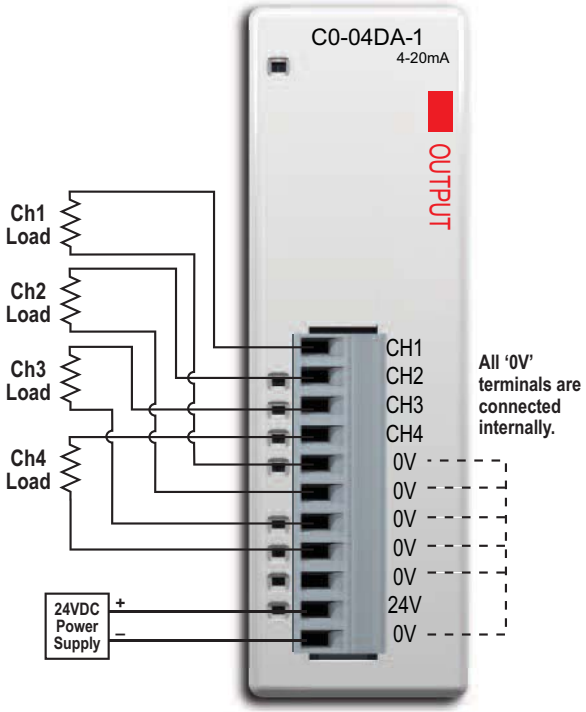
CLICK I/O Module Specifications

C0-04DA-1 <--->

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 ADC p/n C0-8TB).

Wiring Diagram



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

C0-04DA-1 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 20 mA max. (one common)
Output Value in Fault Mode	Less than 4mA
Load Impedance	0-600Ω at 24 VDC; minimum load: 0Ω 32° to 131°F (0° to 55°C) ambient temp.
Maximum Inductive Load	1 mH
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, 50/60 Hz	-72 dB, 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, 5 µs min. (full scale range)
All Channel Update Rate	10 ms
Max. Continuous Overload	Outputs open circuit protected
Field to Logic Side Isolation	1800 VAC applied for 1 second (100% tested)
Type of Output Protection	Electronically limited to 20 mA or less
Output Signal at Power Up and Power Down	4 mA
External VDC Power Required	145 mA
Base Power Required (24 VDC)	20 mA
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.9 oz (82 g)

ZipLink 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

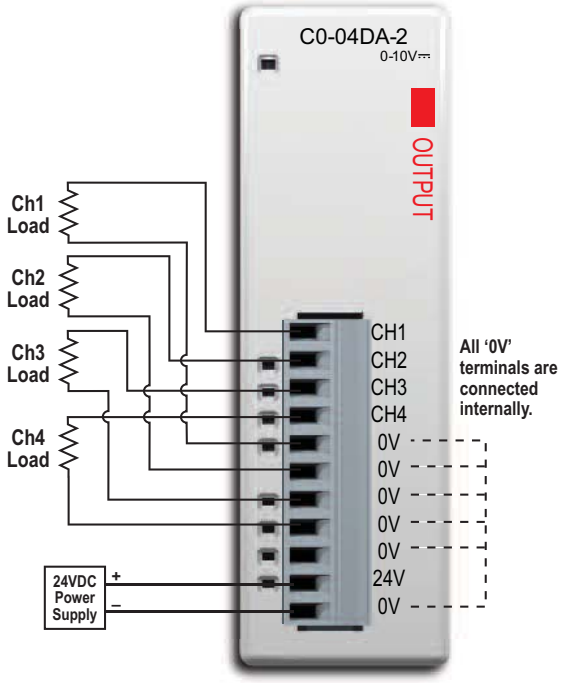
CLICK I/O Module Specifications

C0-04DA-2 <--->

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 ADC p/n C0-8TB).

Wiring Diagram



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

C0-04DA-2 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. (one common)
Output Value in Program Mode	Determined by CPU
Output Value in Fault Mode	0 V
Output Impedance	0.2Ω 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, 50/60 Hz	-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, 5 µs minimum (full scale range)
All Channel Update Rate	10 ms
Max. Continuous Overload	Outputs current limited to 40 mA 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 24 VDC Power Required	85 mA
Base Power Required (24 VDC)	20 mA
Terminal Block Replacement	ADC p/n C0-8TB
Weight	2.9 oz (82 g)

ZipLink 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

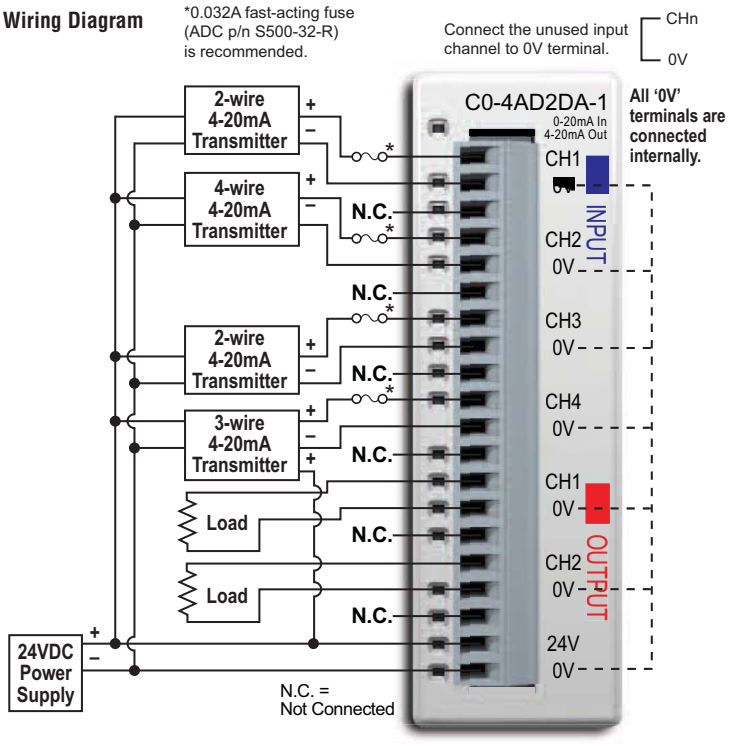
CLICK I/O Module Specifications

C0-4AD2DA-1 <--->

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 ADC p/n C0-16TB).

Wiring Diagram



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

C0-4AD2DA-1 General Specifications	
Field to Logic Side Isolation	1800 VAC for 1 sec.
External 24 VDC Power Required	75 mA
Bus Power Required (24 VDC)	25 mA
Recommended Fuse (External)	ADC p/n S500-32-R (0.032A fuse)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.1 oz (86 g)

ZL-RTB20 20-pin feed-through connector module

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)

C0-4AD2DA-1 Input Specifications	
Inputs per Module	4
Input Range	0-20 mA (sink)
Resolution	13-bit, 2.44 uA per count
Input Type	Single ended (one common)
Maximum Continuous Overload	±44 mA
Input Impedance	124Ω, 0.5 W current input
Filter Charactistics	Low pass, -3 dB at 400 Hz
PLC Data Format	16-bit unsigned Integer, range is 0-8191
Sample Duration Time	5 ms
All Channel Update Rate	20 ms (input plus output maximum time)
Open Circuit Detection Time	Zero reading within 20 ms
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, 50/60 Hz	±2 count maximum

C0-4AD2DA-1 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 20 mA max. (one common)
PLC Data Format	12-bit unsigned integer, 0-4095 counts
Output Value in Fault Mode	Less than 4 mA
Load Impedance	0-600Ω at 24 VDC; 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	1 mH
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, 50/60 Hz	-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	±0.1% of full scale
Output Settling Time	0.2 ms maximum, 5 µs min. (full scale range)
All Channel Update Rate	20 ms
Max. Continuous Overload	Outputs open circuit protected
Type of Output Protection	Electronically limited to 20 mA or less
Output Signal at Power Up or Power Down	4 mA

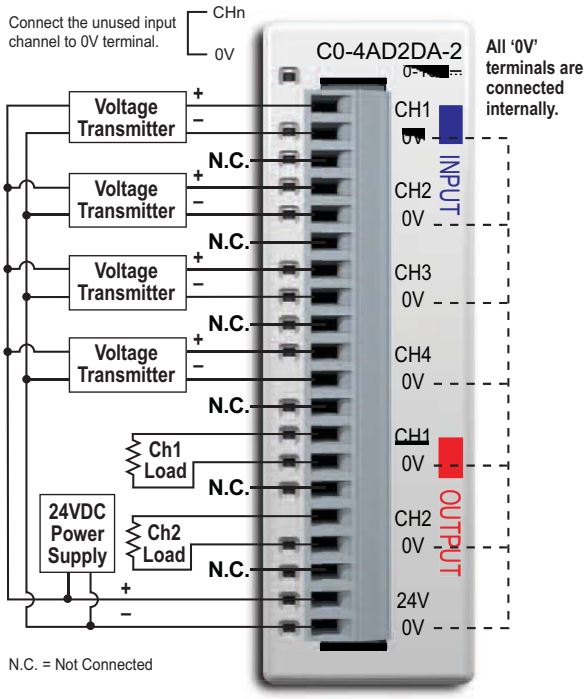
CLICK I/O Module Specifications

C0-4AD2DA-2 <--->

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 ADC p/n C0-16TB).

Wiring Diagram



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

C0-4AD2DA-2 General Specifications	
Field to Logic Side Isolation	1800 VAC
External 24 VDC Power Required	65 mA
Base Power Required (24 VDC)	15 mA
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.1 oz (86 g)

ZL-RTB20 20-pin feed-through connector module

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)

C0-4AD2DA-2 Input Specifications	
Inputs per Module	4
Input Range	0-10 V
Resolution	13-bit, 1.22 mV per count
Input Type	Single ended (one common)
Maximum Continuous Overload	±100 VDC
Input Impedance	>150 kΩ
Filter Charactistics	Low pass, -3 dB at 500 Hz
Sample Duration Time	5 ms
All Channel Update Rate	20 ms
Open Circuit Detection Time	Zero reading within 100 ms
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, 50/60 Hz	±2 count maximum

C0-4AD2DA-2 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. (one common)
Output Value in Program Mode	Determined by CPU
Output Value in Fault Mode	0 V
Output Impedance	0.2Ω 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, 50/60 Hz	-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, 5 µs minimum (full scale range)
All Channel Update Rate	20 ms
Max. Continuous Overload	Outputs current limited to 40 mA 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

Accessories

C0-USER-M **<---->**

CLICK PLC Hardware User Manual

Manual covers all CLICK CPU and I/O module installation and wiring, specifications, error codes and trouble shooting guide. Sold separately from hardware.

The CLICK PLC Hardware User Manual can be downloaded free at the *AutomationDirect* Web site, or purchased from the *AutomationDirect* online Web store. www.automationdirect.com

C0-PGMSW **<---->**

Programming Software CD-ROM

The programming software can be downloaded free at the *AutomationDirect* Web site, or purchased from the *AutomationDirect* online Web store. www.automationdirect.com

EA-MG-PGM-CBL **<---->**

PC to Panel Programming Cable Assembly for C-more Micro-Graphic Panels and CLICK PLCs

6-ft. cable assembly to connect a personal computer to any C-more Micro-Graphic panel or CLICK 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 5 VDC to the Micro-Graphic panel for configuration operations.

Assembly includes standard USB A-type connector to B-type connector cable, custom converter, and a RS232C cable with RJ12 modular connector on each end.

D2-DSCBL **<---->**

Programming Cable for CLICK and *Direct*LOGIC PLCs

12 ft. (3.66m) RS232 shielded PC programming cable for CLICK, DL05, DL06, DL105, DL205, D3-350, and D4-450 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.

C0-3TB **<---->**

Spare 3-Pole Terminal Block

Replacement 3-pole terminal block for the 3-wire RS-485 Port 3 on CLICK Standard and Analog CPUs. Sold in packs of 2.

C0-4TB **<---->**

Spare 24 VDC Power Terminal Block

Replacement terminal block for the 24 VDC supply power to the CPU. Sold in packs of 2.

C0-8TB **<---->**

Spare 8-Point I/O Terminal Block

Replacement terminal block for the 8-point I/O modules. Sold in packs of 2.

D2-BAT-1 **<---->**

Replacement battery for Standard and Analog CPU modules.

C0-16TB **<---->**

Spare 16-Point I/O Terminal Block

Replacement terminal block for the 16-point I/O modules and CPU built-in I/O. Sold in packs of 2.

DN-SS1 **<---->**

Insulated Slotted Screwdriver 0.4 x 2.5 x 75 mm

DN-WS **<---->**

Wire Stripper

DN-EB35MN **<---->**

DINnectors End Bracket

C-more and *C-more* Micro Graphic Operator Interfaces

ZIPLink Wiring Systems