

# CLICK Stackable I/O Module Specifications

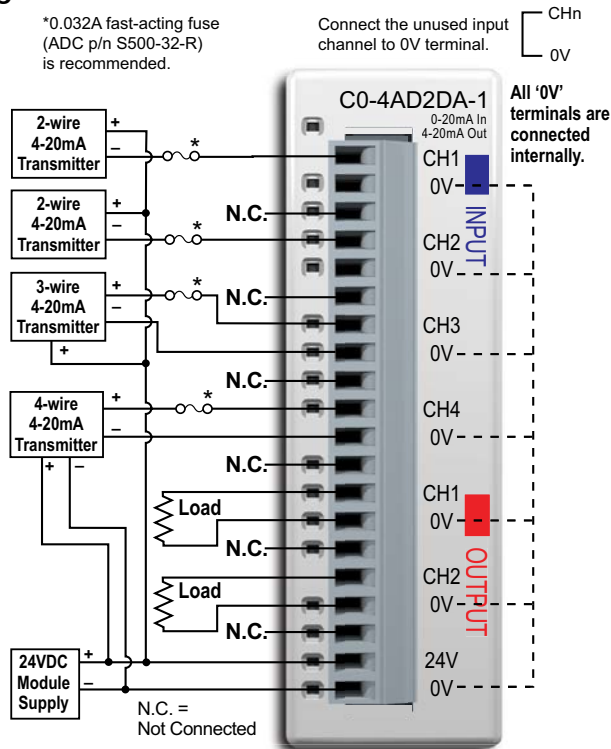
## C0-4AD2DA-1

\$226.00

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

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

### Wiring Diagram



### Input Specifications

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

### Output Specifications

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

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

### General Specifications

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

### 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 Stackable I/O Module Specifications

## General Specifications For All CLICK Stackable I/O Modules

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



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

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

# Power Supplies

## Power Supplies

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

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

### CO-00AC Power Supply

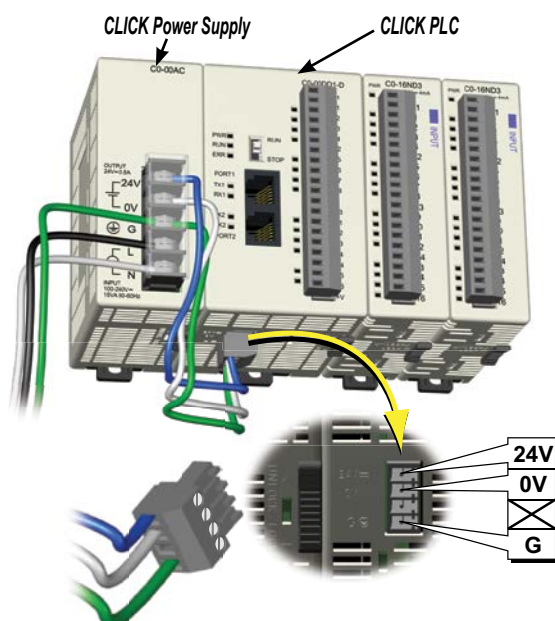
Limited auxiliary AC power supply allows you to power the 24VDC CLICK C0 and C2 series PLCs with 100–240 VAC supply power. The 0.5 A DC power supply is capable of controlling the PLC plus a limited configuration based on the power budget of each I/O module. The CO-00AC is a low-cost solution for applications 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.

### CO-01AC Power Supply

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

### PSP24-DC12-1 DC-DC Converter

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



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

CO-00AC



CO-01AC



## CLICK 24VDC Power Supply Ratings

| Part Number | Output Current | Price   |
|-------------|----------------|---------|
| CO-00AC     | 0.5 A          | \$51.00 |
| CO-01AC     | 1.3 A          | \$63.00 |

## Power Supply Input Specifications

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

## Power Supply Output Specs

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

## Power Supply General Specs

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

## PSP24-DC12-1 DC-DC Converter Specs

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



PSP24-DC12-1

# Power Budgeting

## Power Budgeting

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

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

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

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

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



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



**Other 24VDC Power Supply**  
Example: PSP24-060S

## Power Consumption for CLICK and CLICK PLUS PLC Units

| PLC Current Consumption (mA) |                                       |                                   |
|------------------------------|---------------------------------------|-----------------------------------|
| Part Number                  | Power Budget<br>24VDC<br>(Logic Side) | External<br>24VDC<br>(Field Side) |
| Basic PLC Units              |                                       |                                   |
| <a href="#">C0-00DD1-D</a>   | 120                                   | 60                                |
| <a href="#">C0-00DD2-D</a>   | 120                                   | 0                                 |
| <a href="#">C0-00DR-D</a>    |                                       |                                   |
| <a href="#">C0-00AR-D</a>    |                                       |                                   |
| Standard PLC Units           |                                       |                                   |
| <a href="#">C0-01DD1-D</a>   | 140                                   | 60                                |
| <a href="#">C0-01DD2-D</a>   | 140                                   | 0                                 |
| <a href="#">C0-01DR-D</a>    |                                       |                                   |
| <a href="#">C0-01AR-D</a>    |                                       |                                   |
| Analog PLC Units             |                                       |                                   |
| <a href="#">C0-02DD1-D</a>   | 140                                   | 60                                |
| <a href="#">C0-02DD2-D</a>   | 140                                   | 0                                 |
| <a href="#">C0-02DR-D</a>    |                                       |                                   |
| Ethernet Basic PLC Units     |                                       |                                   |
| <a href="#">C0-10DD1E-D</a>  | 120                                   | 60                                |
| <a href="#">C0-10DD2E-D</a>  | 120                                   | 0                                 |
| <a href="#">C0-10DRE-D</a>   |                                       |                                   |
| <a href="#">C0-10ARE-D</a>   |                                       |                                   |
| Ethernet Standard PLC Units  |                                       |                                   |
| <a href="#">C0-11DD1E-D</a>  | 140                                   | 60                                |
| <a href="#">C0-11DD2E-D</a>  | 140                                   | 0                                 |
| <a href="#">C0-11DRE-D</a>   |                                       |                                   |
| <a href="#">C0-11ARE-D</a>   |                                       |                                   |

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

## Power Consumption for CLICK PLUS Option Slot Modules

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

# Power Budgeting

## Power Consumption for CLICK Stackable I/O Modules

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

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

System Configuration

PLC Name:  (Max. 24 characters)

☐ Start-up I/O Config Check

System Configuration Diagram:

System Configuration Table:

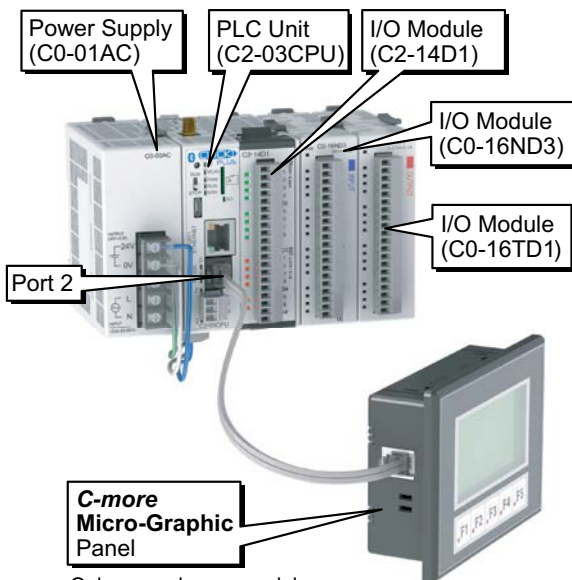
| Name     | P/S      | CPU       | Slot      | I/O 1     | I/O 2     | I/O 3 | I/O 4 | I/O 5 | I/O 6 | I/O 7 | I/O 8 |
|----------|----------|-----------|-----------|-----------|-----------|-------|-------|-------|-------|-------|-------|
| C0-01AC  | C2-03CPU | X001-X008 | X101-X116 | X201-X208 | X301-X316 |       |       |       |       |       |       |
| C2-14D1  |          |           |           |           |           |       |       |       |       |       |       |
| C0-16ND3 |          |           |           |           |           |       |       |       |       |       |       |
| C0-16TD1 |          |           |           |           |           |       |       |       |       |       |       |
| C0-08TR  |          |           |           |           |           |       |       |       |       |       |       |

Power Budget(mA) = 610

Change... Remove... Config... buttons for each module.

Assign Nicknames & Comments when Analog I/O Used

View I/O MODBUS Addresses OK Cancel Help



### Power Budgeting Example

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

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

# CLICK Specifications

## CLICK PLC Hardware/Software Compatibility

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

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



# Wiring System for CLICK PLC Family

## Wiring Solutions using the ZIPLink Wiring System

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



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

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

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

Use the "CLICK PLC PLC Unit **ZIPLink** Selector" table and CLICK I/O **ZIPLink** selector tables located in this section:

- Locate your PLC or I/O module.
- Select a **ZIPLink** Module.
- Select a corresponding **ZIPLink** Cable.

### **Solution 2: CLICK/CLICK PLUS PLC I/O to 3rd Party Devices**

When wanting to connect PLC I/O (built-in, option slot module, or stackable) to another device within close proximity, no extra terminal blocks are necessary when using the **ZIPLink** Pigtail Cables. **ZIPLink** Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.

Use the I/O Modules to 3rd Party Devices selector tables located in the **ZIPLink** section:

- Locate your PLC or I/O module.
- Select a **ZIPLink** Pigtail Cable that is compatible with your 3rd party device



### **Solution 3: GS Series and DuraPulse Drives Communication Cables**

Need to communicate via Modbus RTU to a drive or a network of drives?

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

Use the Drives Communication selector tables located in the **ZIPLink** section:

- Locate your Drive and type of communications.
- Select a **ZIPLink** cable and other associated hardware.



### **Solution 4: Serial Communications Cables**

**ZIPLink** offers communications cables for use with CLICK PLCs and select CLICK PLUS PLCs that can also be used with other communications devices. Connections include a 6-pin RJ12 connector which can be used in conjunction with the RJ12 Feedthrough module.

Use the Serial Communications Cables selector table located in the **ZIPLink** section:

- Locate your connector type
- Select a cable.





# Wiring System for CLICK PLC Family

## CLICK PLC & CLICK PLUS Option Slot ZIPLink Selector

| PLC or Option Slot Module     |                               | ZIPLink                                                                                                                 |             |                                                          |                                  |
|-------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------|----------------------------------|
| CLICK PLC Unit                | CLICK PLUS Option Slot Module | # of Terms                                                                                                              | Component   | Module Part No.                                          | Cable Part No.                   |
| <a href="#">C0-00DD1-D</a>    | NA                            | 20                                                                                                                      | Feedthrough | <a href="#">ZL-RTB20</a> ,<br><a href="#">ZL-RTB20-1</a> | <a href="#">ZL-C0-CBL20</a><br>* |
| <a href="#">C0-00DD2-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-00DR-D</a>     | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-00AR-D</a>     | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-01DD1-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-01DD2-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-01DR-D</a>     | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-01AR-D</a>     | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-02DD1-D</a>    | NA                            | No <b>ZIPLinks</b> are available for CLICK Analog PLC units.                                                            |             |                                                          |                                  |
| <a href="#">C0-02DD2-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-02DR-D</a>     | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-10DD1E-D</a>   | NA                            | 20                                                                                                                      | Feedthrough | <a href="#">ZL-RTB20</a> ,<br><a href="#">ZL-RTB20-1</a> | <a href="#">ZL-C0-CBL20</a><br>* |
| <a href="#">C0-10DD2E-D</a>   | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-10DRE-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-10ARE-D</a>    | NA                            |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-11DD1E-D</a>   | <a href="#">C2-14D1</a>       |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-11DD2E-D</a>   | <a href="#">C2-14D2</a>       |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-11DRE-D</a>    | <a href="#">C2-14DR</a>       |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-11ARE-D</a>    | <a href="#">C2-14AR</a>       |                                                                                                                         |             |                                                          |                                  |
| NA                            | <a href="#">C2-14TTL</a>      | No <b>ZIPLinks</b> are available for CLICK Ethernet Analog PLC units or CLICK PLUS Option Slot Modules with analog I/O. |             |                                                          |                                  |
| <a href="#">C0-12DD1E-D</a>   | <a href="#">C2-08D1-4VC</a>   |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DD2E-D</a>   | <a href="#">C2-08D2-4VC</a>   |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DRE-D</a>    | <a href="#">C2-08DR-4VC</a>   |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12ARE-D</a>    | <a href="#">C2-08AR-4VC</a>   |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DD1E-1-D</a> | <a href="#">C2-08D1-6C</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DD2E-1-D</a> | <a href="#">C2-08D2-6C</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DRE-1-D</a>  | <a href="#">C2-08DR-6C</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12ARE-1-D</a>  | <a href="#">C2-08AR-6C</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DD1E-2-D</a> | <a href="#">C2-08D1-6V</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DD2E-2-D</a> | <a href="#">C2-08D2-6V</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12DRE-2-D</a>  | <a href="#">C2-08DR-6V</a>    |                                                                                                                         |             |                                                          |                                  |
| <a href="#">C0-12ARE-2-D</a>  | <a href="#">C2-08AR-6V</a>    |                                                                                                                         |             |                                                          |                                  |
| NA                            | <a href="#">C2-DCM</a>        | No <b>ZIPLinks</b> are available for CLICK PLUS Option Slot Communications Module                                       |             |                                                          |                                  |
|                               | <a href="#">C2-NRED</a>       |                                                                                                                         |             |                                                          |                                  |
|                               | <a href="#">C2-OPCUA</a>      |                                                                                                                         |             |                                                          |                                  |

### Table Notes:

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

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

2 Note: Fuses (5x20 mm) are not included. See Edison Electronic Fuse section for 5x20 mm fuse. S500 and GMA electronic circuit protection is recommended for fast-acting maximum protection. S506 and GMC electronic circuit protection is recommended for time-delay performance. Ideal for inductive circuits. To ensure proper operation, do not exceed the voltage and current rating of the ZIPLink module. ZL-RFU20 = 2A per circuit.

## CLICK/CLICK PLUS PLC Discrete Input Module ZIPLink Selector

| I/O Module   |                          | ZIPLink     |                 |                |
|--------------|--------------------------|-------------|-----------------|----------------|
| Input Module | # of Terms               | Component   | Module Part No. | Cable Part No. |
| C0-08SIM     | Not supported by ZIPLink |             |                 |                |
| C0-08ND3     | 11                       | Feedthrough | ZL-RTB20        | ZL-C0-CBL11 *  |
| C0-08ND3-1   |                          |             |                 |                |
| C0-08NE3     |                          |             |                 |                |
| C0-08NA      |                          |             |                 |                |
| C0-16ND3     | 20                       | Feedthrough | ZL-RTB20        | ZL-C0-CBL20 *  |
|              |                          | Sensor      | ZL-LTB16-24-1   |                |
| C0-16NE3     | 20                       | Feedthrough | ZL-RTB20        |                |
|              |                          | Sensor      | ZL-LTB16-24-1   |                |

## CLICK/CLICK PLUS PLC Discrete Output Module ZIPLink Selector

| I/O Module    |                                 | ZIPLink          |                               |                               |
|---------------|---------------------------------|------------------|-------------------------------|-------------------------------|
| Output Module | # of Terms                      | Component        | Module Part No.               | Cable Part No.                |
| C0-08TD1      | 11                              | Feedthrough      | <a href="#">ZL-RTB20</a>      | <a href="#">ZL-C0-CBL11</a> * |
| C0-08TD2      |                                 |                  |                               |                               |
| C0-08TR       |                                 |                  |                               |                               |
| C0-08TR-3     | Not supported by <b>ZIPLink</b> |                  |                               |                               |
| C0-08TA       |                                 |                  |                               |                               |
| C0-16TD1      | 20                              | Feedthrough      | <a href="#">ZL-RTB20</a>      | <a href="#">ZL-C0-CBL20</a> * |
|               |                                 | Fuse             | <a href="#">ZL-RFU20 2</a>    |                               |
|               |                                 | Relay (sinking)  | <a href="#">ZL-RRL16-24-1</a> |                               |
| C0-16TD2      | 20                              | Feedthrough      | <a href="#">ZL-RTB20</a>      | <a href="#">ZL-C0-CBL20</a> * |
|               |                                 | Fuse             | <a href="#">ZL-RFU20 2</a>    |                               |
|               |                                 | Relay (sourcing) | <a href="#">ZL-RRL16-24-2</a> |                               |
| C0-04TRS1     | 20                              | Feedthrough      | <a href="#">ZL-RTB20</a>      | <a href="#">ZL-C0-CBL20</a> * |
| C0-04TRS-10   | Not supported by <b>ZIPLink</b> |                  |                               |                               |

## CLICK/CLICK PLUS 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    |            |             |                 |                |
| C0-08CDR     | 11         | Feedthrough | ZL-RTB20        | ZL-C0-CBL11 *  |

## CLICK/CLICK PLUS 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 *  |
| C0-04POT      | 0          | No ZIPLinks are available for RTD and thermocouple modules. |                 |                |
| C0-04RTD      | 20         |                                                             |                 |                |
| C0-04THM      | 11         |                                                             |                 |                |
| C0-04DA-1     | 11         | Feedthrough                                                 | ZL-RTB20        | ZL-C0-CBL11 *  |
| C0-04DA-2     | 11         | Feedthrough                                                 | ZL-RTB20        | ZL-C0-CBL11 *  |
| C0-4AD2DA-1   | 20         | Feedthrough                                                 | ZL-RTB20        | ZL-C0-CBL20 *  |
| C0-4AD2DA-2   | 20         | Feedthrough                                                 | ZL-RTB20        | ZL-C0-CBL20 *  |