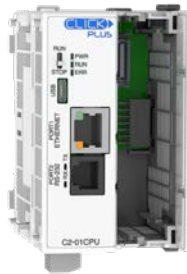


# CLICK PLC Family Overview

## CLICK PLUS PLC Units

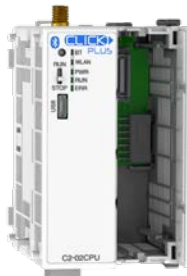
CLICK PLUS PLC Units											
PLC	Number of Option Slots	Communication Ports						MicroSD Slot	Battery Backup	Run-Time Edit	Price
		USB	Ethernet (Port 1)	RS-232 (Port 2)	RS-485 (Port 3)	Bluetooth	WLAN				
<a href="#"><u>C2-01CPU</u></a>	1	Yes (MicroB)	Yes (10/100)	Yes	None	None	None	None	Yes	Yes	\$97.00
<a href="#"><u>C2-01CPU-2</u></a>	2			Yes	None	None	None				\$136.00
<a href="#"><u>C2-02CPU</u></a>	1		None	None	None	Yes (external antenna required)	Yes (external antenna required)	None			\$151.00
<a href="#"><u>C2-02CPU-2</u></a>	2		Yes (external antenna required)	Yes (external antenna required)	Yes	Yes	Yes	\$193.00			
<a href="#"><u>C2-03CPU</u></a>	1		Yes (10/100)	Yes	Yes	Yes	Yes	\$205.00			
<a href="#"><u>C2-03CPU-2</u></a>	2		Yes (10/100)	Yes	Yes	Yes	Yes	\$255.00			



**C2-01CPU**



**C2-01CPU-2**



**C2-02CPU**



**C2-02CPU-2**



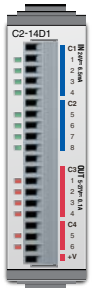
**C2-03CPU**



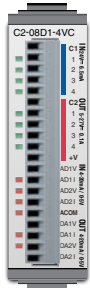
**C2-03CPU-2**

# CLICK PLC Family Overview

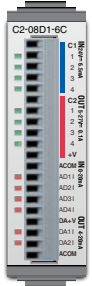
## CLICK PLUS Option Slot Modules



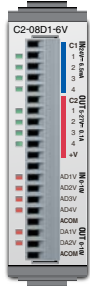
C2-14xx



C2-08xx-4VC



C2-08xx-6C

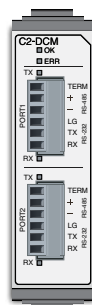


C2-08xx-6V

CLICK PLUS Option Slot I/O Modules					
Part Number	Discrete Input Types	Discrete Output Types	Analog Input Types	Analog Output Types	Price
<b>C2-14D1</b>	8 DC (sink/source) 8 points high-speed**	6 DC (sink) 3 points high-speed**	None	None	\$58.00
<b>C2-14D2</b>		6 DC (source) 3 points high-speed**			\$58.00
<b>C2-14DR</b>		6 relay			\$70.00
<b>C2-14AR</b>		8 AC			\$70.00
<b>C2-14TTL</b>	8 TTL (sink/source) 8 points high-speed**	6 TTL (source) 3 points high-speed**			\$65.00
<b>C2-08D1-4VC*</b>	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	2 channel; voltage (0-5 VDC) / current (4-20 mA); selectable separately per channel, 12-bit	2 channel; voltage (0-5 VDC) / current (4-20 mA); selectable separately per channel, 12-bit	\$90.00
<b>C2-08D2-4VC*</b>		4 DC (source) 2 points high-speed**			\$90.00
<b>C2-08DR-4VC*</b>		4 relay			\$103.00
<b>C2-08AR-4VC*</b>		4 AC			\$103.00
<b>C2-08D1-6C</b>	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	4 channel; current (0-20 mA), 12-bit	2 channel; current (4-20 mA), 12-bit	\$90.00
<b>C2-08D2-6C</b>		4 DC (source) 2 points high-speed**			\$90.00
<b>C2-08DR-6C</b>		4 relay			\$103.00
<b>C2-08AR-6C</b>		4 AC			\$103.00
<b>C2-08D1-6V</b>	4 DC (sink/source) 4 points high-speed**	4 DC (sink) 2 points high-speed**	4 channel; voltage (0-10 VDC), 12-bit	2 channel; voltage (0-10 VDC), 12-bit	\$90.00
<b>C2-08D2-6V</b>		4 DC (source) 2 points high-speed**			\$90.00
<b>C2-08DR-6V</b>		4 relay			\$103.00
<b>C2-08AR-6V</b>		4 AC			\$103.00

\* -4VC Option Slot modules require that you select analog I/O type (voltage or current) in the CLICK programming software.

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



C2-DCM



C2-NRED

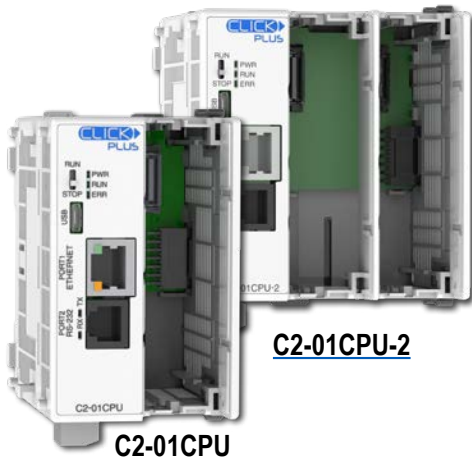


C2-OPCUA

CLICK PLUS Option Slot Intelligent Modules		
Part Number	Description	Price
<b>C2-DCM</b>	CLICK PLUS communication module, Modbus RTU and ASCII, 2 ports, (2) RS-232/RS-485 (6-pin terminal) port(s). For use with all CLICK PLUS PLCs. (2) C2-6TB terminal blocks included.	\$118.00
<b>C2-NRED</b>	CLICK PLUS Node-RED module, Node-RED and JavaScript, microSD card slot, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.	\$235.00
<b>C2-OPCUA</b>	CLICK PLUS communication module, OPC-UA Server and SNMP Client, 1 port, (1) microB-USB and (1) Ethernet 10/100Base-T (RJ45) port(s). For use with all CLICK PLUS PLCs.	\$195.00

# CLICK PLUS PLC Specifications

## PLC Unit Specifications (continued)



**C2-01CPU-2**

**C2-01CPU**



**C2-02CPU-2**

**C2-02CPU**



**C2-03CPU-2**

**C2-03CPU**

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

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

# CLICK PLUS PLC Specifications

## PLC Unit Specifications (continued)

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

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

# CLICK PLUS PLC Specifications

## General Specifications For All CLICK PLUS PLC Products

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

General Specifications	
<b>Operating Temperature</b>	32°F to 131°F [0°C to 55°C]
<b>Storage Temperature</b>	-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)
<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>Environment</b>	For Indoor Use Only
<b>Vibration</b>	IEC60068-2-6 (Test Fc) 5-9Hz:3.5mm amplitude, 9-150Hz 1.0G 10 sweep cycles per axis on each of 3 mutually perpendicular axes.
<b>Shock</b>	IEC60068-2-27 (Test Ea) 15G peak, 11ms duration, 3 shocks in each direction per axis, on 3 mutually perpendicular axes.
<b>Voltage Withstand (Dielectric)</b>	1000VAC, 1 minute (between G and 24V IN)
<b>Insulation Resistance</b>	500VDC, 10M ohm (between G and 24V IN)
<b>Noise Immunity</b>	<EN61131-2> EN61000-4-2 (ESD): 4kV(Contact Discharge) 8kV(Air Discharge) EN61000-4-3 (RFI): 10V/m (80MHz-1GHz) ,3V/m (1.4 GHz-2.0 GHz) 1V/m (2.0 GHz-2.7 GHz) EN61000-4-4 (FTB) : 2kV ,positive/negative , 5kHz (DC Power Port) 1kV ,positive/negative, 5kHz (I/O and Communication Port) EN61000-4-5 (Surge): 0.5 kV/1kV line to line 0.5 kV/1kV line to earth EN61000-4-6 (Conducted): 10V ,0.15 MHz – 80MHz EN61000-4-8 (Power frequency magnetic field immunity) : 30A/m <Local Test> Impulse Immunity : 1000V @ 1µs pulse
<b>Emissions</b>	EN55011 Class A (Radiated RF emission)
<b>Agency Approvals</b>	UL61010 (File No. E157382, E316037); CE (EN61131-2); CUL Canadian C22.2
<b>Radio Standards</b>	FCC part15C (US), RED Article3.2 (CE), IC RSS-247 (Canada), MIC Item 19 of Article 2-1 (Japan), AS/NZS 4268 (Australia/New Zealand)
<b>Other</b>	RoHS 2011/65/EU Amendment (EU)2015/863

# CLICK PLUS PLC Specifications

## CLICK PLUS PLC Hardware/Software Compatibility

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

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

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

# CLICK PLC Family Overview

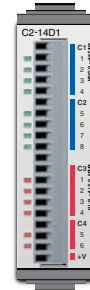
## What you'll need

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

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



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



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



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



or



### 5. Download the **FREE CLICK** programming software. [support.automationdirect.com/products/clickplcs.html](http://support.automationdirect.com/products/clickplcs.html)



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



# CLICK PLC Family Overview

## What you'll need (continued)

### 7. Select your PC-to-PLC programming cable.

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

**[USB-CBL-AMICB6](#)**



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

**[C5E-STPYL-C3](#) (crossover)  
[C5E-STPYL-S3](#) (straight through)**



**For Ethernet PLC Unit**

**OR**

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



**OR**

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



**[D2-DSCBL](#)**



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

**OR**

**[EA-MG-PGM-CBL](#)**



**Connects to PC USB Port**

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

**Screwdriver  
[TW-SD-MSL-2](#)**



**Wire Strippers  
[DN-WS](#)**



**Hookup Wire**



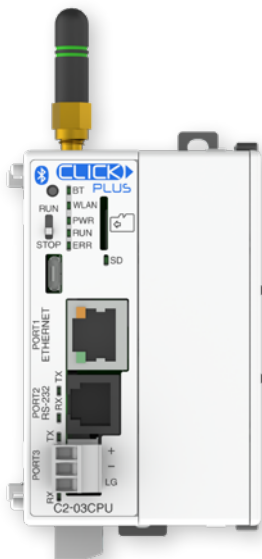


# CLICK PLUS Provisioning Mobile App

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

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

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



# CLICK Remote PLC Mobile App

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

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

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

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



# 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.

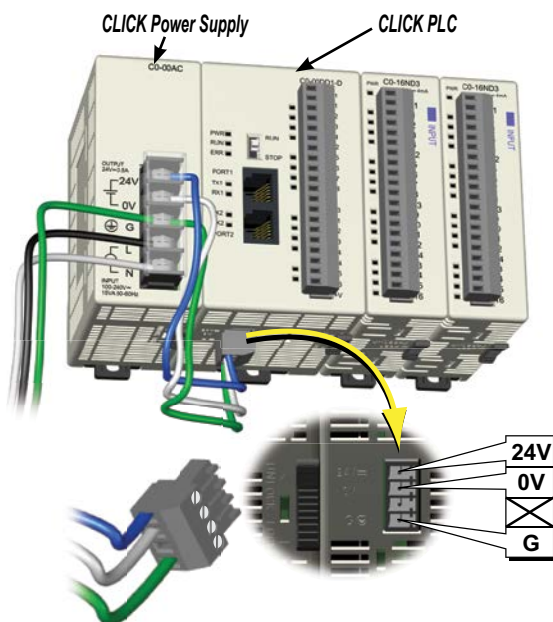
### PSP24-DC12-1 DC-DC Converter

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

CO-00AC



CO-01AC



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

## 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, 0.2 A @ 200VAC	0.9 A @ 100VAC, 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 (automatic recovery)	@ 1.6 A (automatic recovery)
Over Voltage Protection	@ 27.6 V (clamped by Zener diode)	
Start-up Time	1000ms max at rated input and load	
Hold-up Time	10ms minimum at 85VAC, I=max	

## Power Supply General Specs

Part Number	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

## 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]

# 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

## Power Consumption for CLICK PLUS Option Slot Modules

PLC Current Consumption (mA)		
Part Number	Power Budget 24VDC (Logic Side)	External 24VDC (Field Side)
<b>Basic PLC Units</b>		
<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>		
<b>Standard PLC Units</b>		
<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>		
<b>Analog PLC Units</b>		
<a href="#">C0-02DD1-D</a>	140	60
<a href="#">C0-02DD2-D</a>	140	0
<a href="#">C0-02DR-D</a>		
<b>Ethernet Basic PLC Units</b>		
<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>		
<b>Ethernet Standard PLC Units</b>		
<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 24VDC (Logic Side)	External 24VDC (Field Side)
<b>Ethernet Analog PLC Units</b>		
<a href="#">C0-12DD1E-D</a>	140	60
<a href="#">C0-12DD2E-D</a>		
<a href="#">C0-12DRE-D</a>	160	0
<a href="#">C0-12ARE-D</a>		
<a href="#">C0-12DD1E-1-D</a>	140	60
<a href="#">C0-12DD2E-1-D</a>		
<a href="#">C0-12DRE-1-D</a>	160	0
<a href="#">C0-12ARE-1-D</a>		
<a href="#">C0-12DD1E-2-D</a>	140	60
<a href="#">C0-12DD2E-2-D</a>		
<a href="#">C0-12DRE-2-D</a>	160	0
<a href="#">C0-12ARE-2-D</a>		
<b>CLICK PLUS PLCs</b>		
<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	

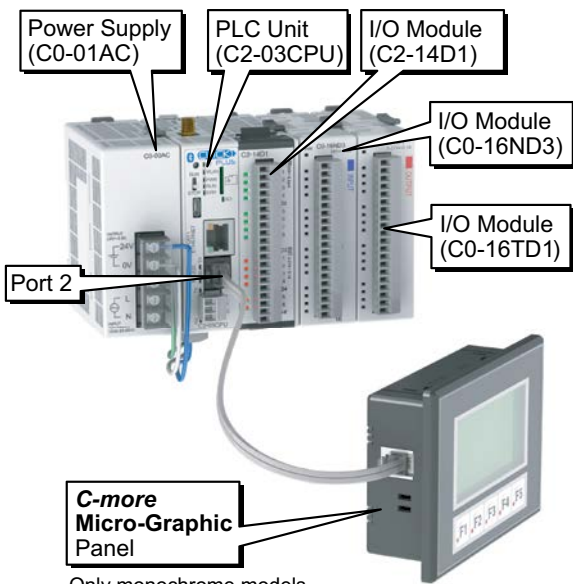
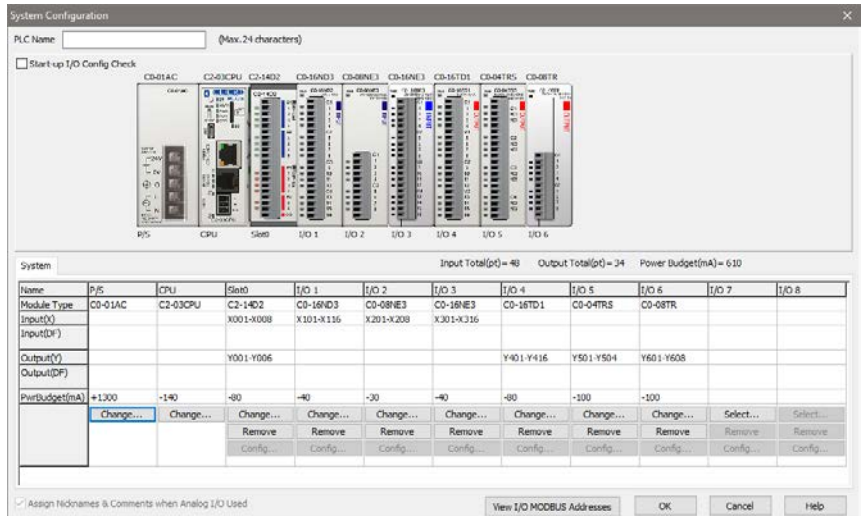
CLICK PLUS Option Slot Modules Current Consumption (mA)		
Part Number	Power Budget 24VDC (Logic Side)	External 24VDC (Field Side)
<b>Option Slot I/O Modules</b>		
<a href="#">C2-14D1</a>	50	60
<a href="#">C2-14D2</a>	50	0
<a href="#">C2-14DR</a>	75	0
<a href="#">C2-14AR</a>	75	0
<a href="#">C2-14TTL</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



Only monochrome models can be powered from port 2.

### Power Budgeting Example

Current Consumption (mA) Example		
Part Number	Power Budget 24VDC (logic side)	External 24VDC (field side)
<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.

# Accessories

## **C2-USER-M**     **\$0.00** **CLICK PLUS PLC Hardware User Manual**

Manual covers all CLICK PLUS PLC and I/O module installation and wiring, specifications, error codes and troubleshooting guide. The CLICK PLUS PLC Hardware User Manual can be downloaded free at the AutomationDirect Web site; [www.AutomationDirect.com](http://www.AutomationDirect.com)



## **C0-USER-M**     **\$0.00** **CLICK PLC Hardware User Manual**

Manual covers all CLICK PLC and I/O module installation and wiring, specifications, error codes and troubleshooting guide. The CLICK PLC Hardware User Manual can be downloaded free at the AutomationDirect Web site; [www.AutomationDirect.com](http://www.AutomationDirect.com)



## **C0-PGMSW**     **\$12.00** **Programming Software USB**

The programming software can be downloaded free at the AutomationDirect Web site, or the USB can be purchased from the AutomationDirect online Web store. [www.AutomationDirect.com](http://www.AutomationDirect.com)



## **EA-MG-PGM-CBL**     **\$52.00** **PC to Panel Programming Cable Assembly for C-more Micro-Graphic Panels and CLICK/CLICK PLUS PLCs**

The 6-ft cable assembly connects a personal computer to any **C-more** Micro-Graphic panel, CLICK PLC, or select CLICK PLUS PLC for setup and programming.

*Note: This cable assembly uses the PC's USB port and converts the signals to serial transmissions. The USB port supplies 5VDC to the Micro-Graphic panel for configuration operations.*

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



## **USB-CBL-AMICB6**     **\$5.25** **USB A to USB microB Programming Cable Assembly (CLICK PLUS Only)**

Programming cable, USB A to USB microB, 6ft (1.83 m) length. For use with CLICK PLUS PLCs and most USB devices. The USB port supplies 5VDC to the CLICK PLUS CPU for programming.



## **D2-DSCBL**     **\$35.00** **Programming Cable for CLICK/CLICK PLUS and DirectLOGIC PLCs**

12ft. (3.66 m) RS232 shielded PC programming cable for CLICK, select CLICK PLUS PLCs, DL05, DL06, DL105, DL205, D3-350, D4-450, D4-454, and Do-more H2 and T1H series CPUs. 9-pin D-shell female connector to an RJ12 6P6C connector.



*Note: If your PC has a USB port but does not have a serial port, you must use programming cable EA-MG-PGM-CBL to connect to CLICK PLCs. For CLICK PLUS PLCs, you may also use USB-CBL-AMICB6*

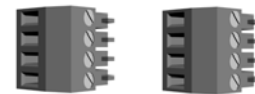
## **C0-3TB**     **\$10.00** **Spare 3-Pole Terminal Block**

Replacement 3-pole terminal block for the 3-wire RS-485 Port 3 on CLICK Standard and Analog PLCs as well as the CLICK PLUS C2-03CPU. Sold in packs of 2.



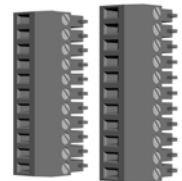
## **C0-4TB**     **\$10.00** **Spare 24VDC Power Terminal Block**

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



## **C0-8TB**     **\$16.50** **Spare 8-Point I/O Terminal Block**

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



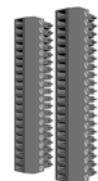
## **C0-8TB-1**     **\$19.50** **Spare 13-Point I/O Terminal Block**

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



## **C0-16TB**     **\$23.00** **Spare 16-Point I/O Terminal Block**

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



## **C2-6TB**     **\$16.50** **Spare 6-pt Terminal Block**

Replacement terminal block for the C2-DCM serial ports. Sold in packs of 2.



# Accessories

**SE-ANT250 \$37.00**  
**Wi-Fi/Bluetooth Dome Antenna**

2.4 GHz antenna, IP67, panel mount, 9.8 ft (3m) cable length, for external mounting when CLICK PLUS PLC is installed in a metallic enclosure.



**C2-FILL \$8.50**  
**CPU Option Slot Cover**

Snap-on cover for CLICK PLUS CPU Option Slot in applications without an Option Slot module present.



**MSD-SLC16G \$100.00**  
16GB microSD card, industrial grade, 3D NAND Flash (with SLC Mode), 85°C [185°F] max operating temp.



**SE-ANT210 \$10.50**  
**Wi-Fi/Bluetooth Whip Antenna**

Whip/straight 2.4 GHz antenna, IP65, connector mount. Not recommended for installation in a metallic enclosure.



**D2-BAT-1 \$6.50**  
Replacement CR2354 battery for Standard, Analog, Ethernet Standard and Ethernet Analog PLC units.



**TW-SD-MSL-2 \$4.00**  
**Insulated Slotted Screwdriver**  
0.4 x 2.5 x 80 mm slotted screwdriver for terminal blocks.



**DN-EB35MN \$31.50**  
**DINector End Bracket**



**D0-MC-BAT \$3.00**  
Replacement CR2032 battery for CLICK PLUS PLC units.



**DN-WS \$72.00**  
**Wire Stripper**



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



**ZIPLink Wiring Systems**



**Ethernet Cables**  
Pre-terminated Cat5e Ethernet patch cables with RJ45 connectors provide dependable communication in industrial applications. These cables are available in various lengths and support transmission speeds of 10/100/1000 Mbps.

