TOPCO
It's all about control

מבחר בקרי קליק עם כניסות ויציאות
אנאלוגיות, דיסקרטיות וחיבורי אטרנט

CLICK Specifications

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

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רחוב בזלת 14 א. התעשייה מצפה ספיר
ת.ד. 12373 צור יגאל מיקוד 4486200

CLICK Specifications

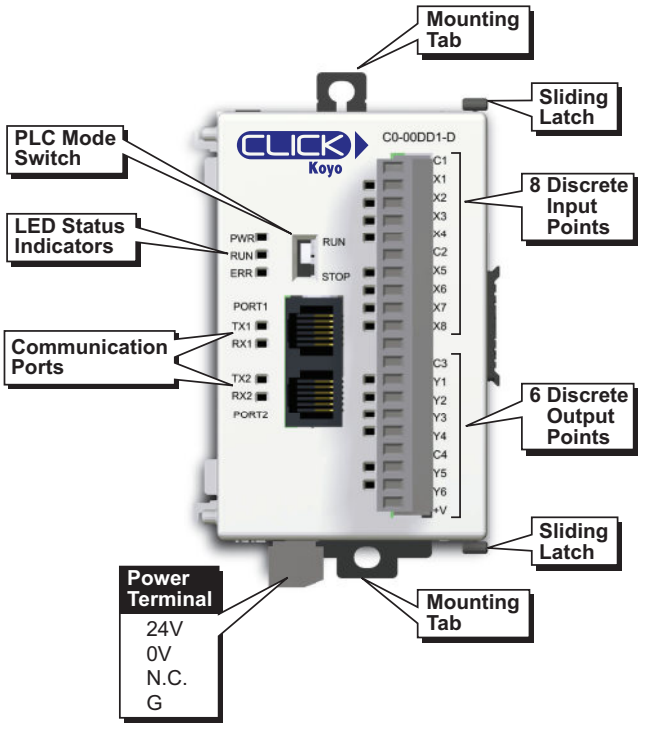
PLC Units Specifications (continued)

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

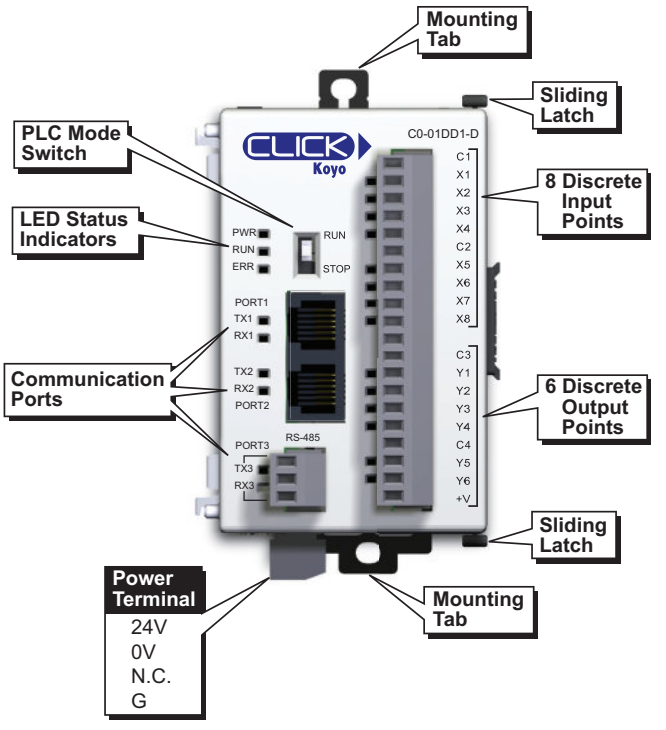
CLICK Specifications

PLC Features

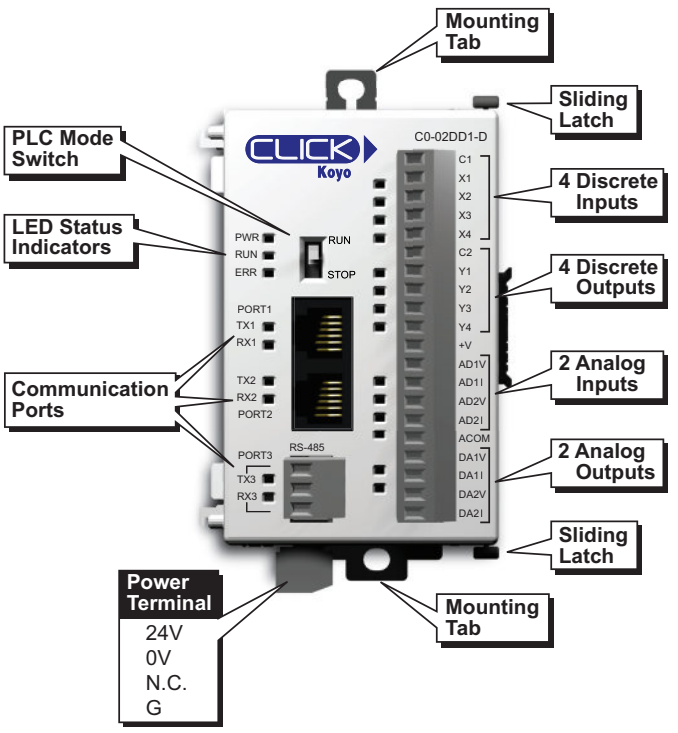
Basic PLCs



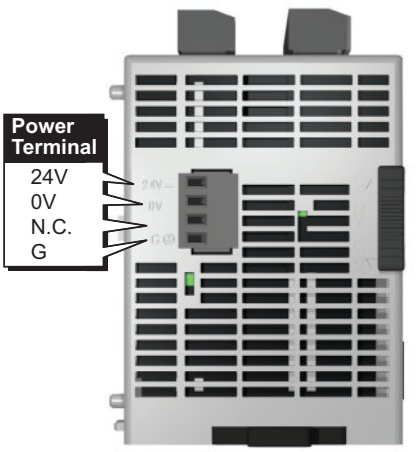
Standard PLCs



Analog PLCs



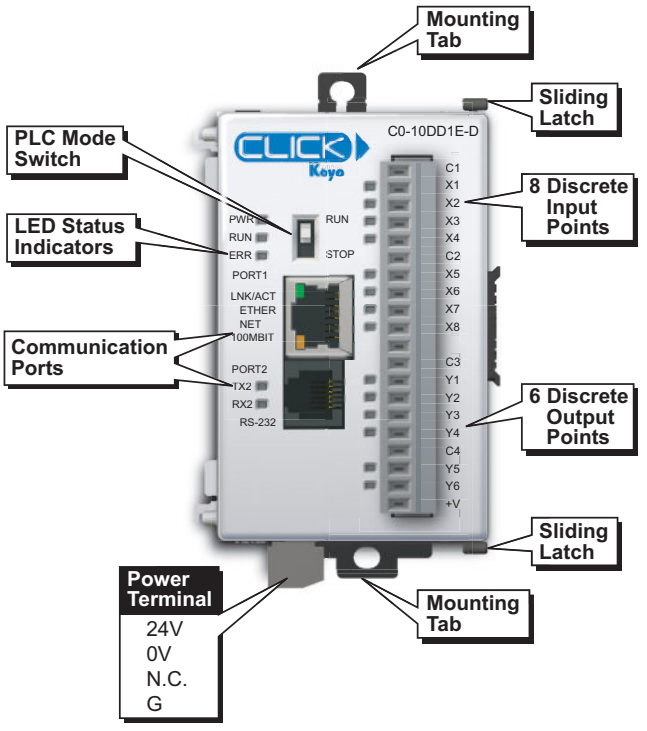
Bottom of PLC (Same on all models)



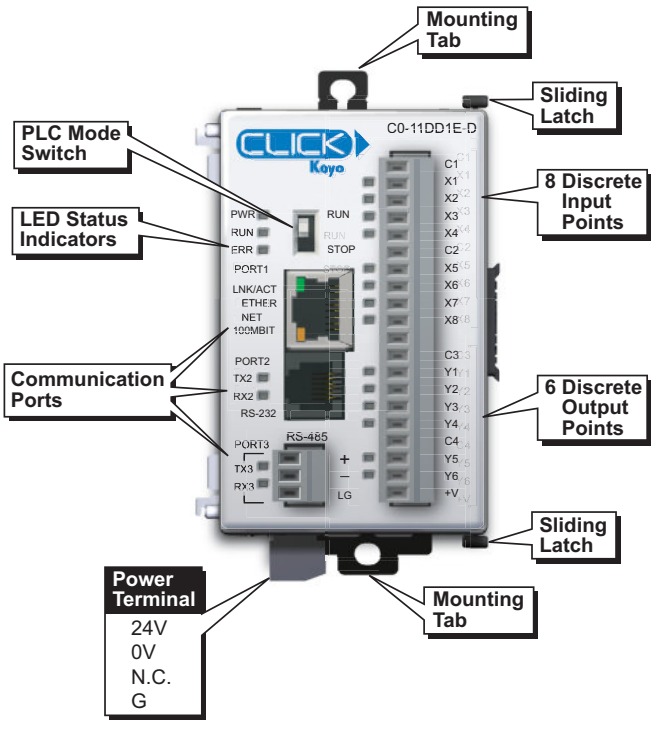
CLICK Specifications

PLC Features (continued)

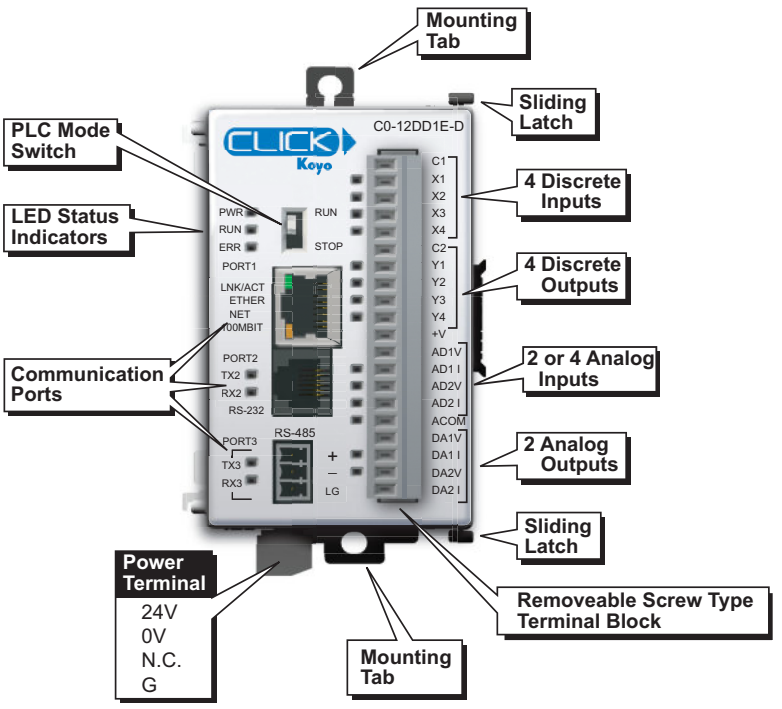
Ethernet Basic PLCs



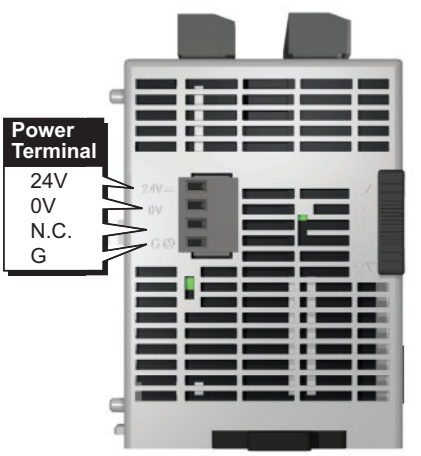
Ethernet Standard PLCs



Ethernet Analog PLCs

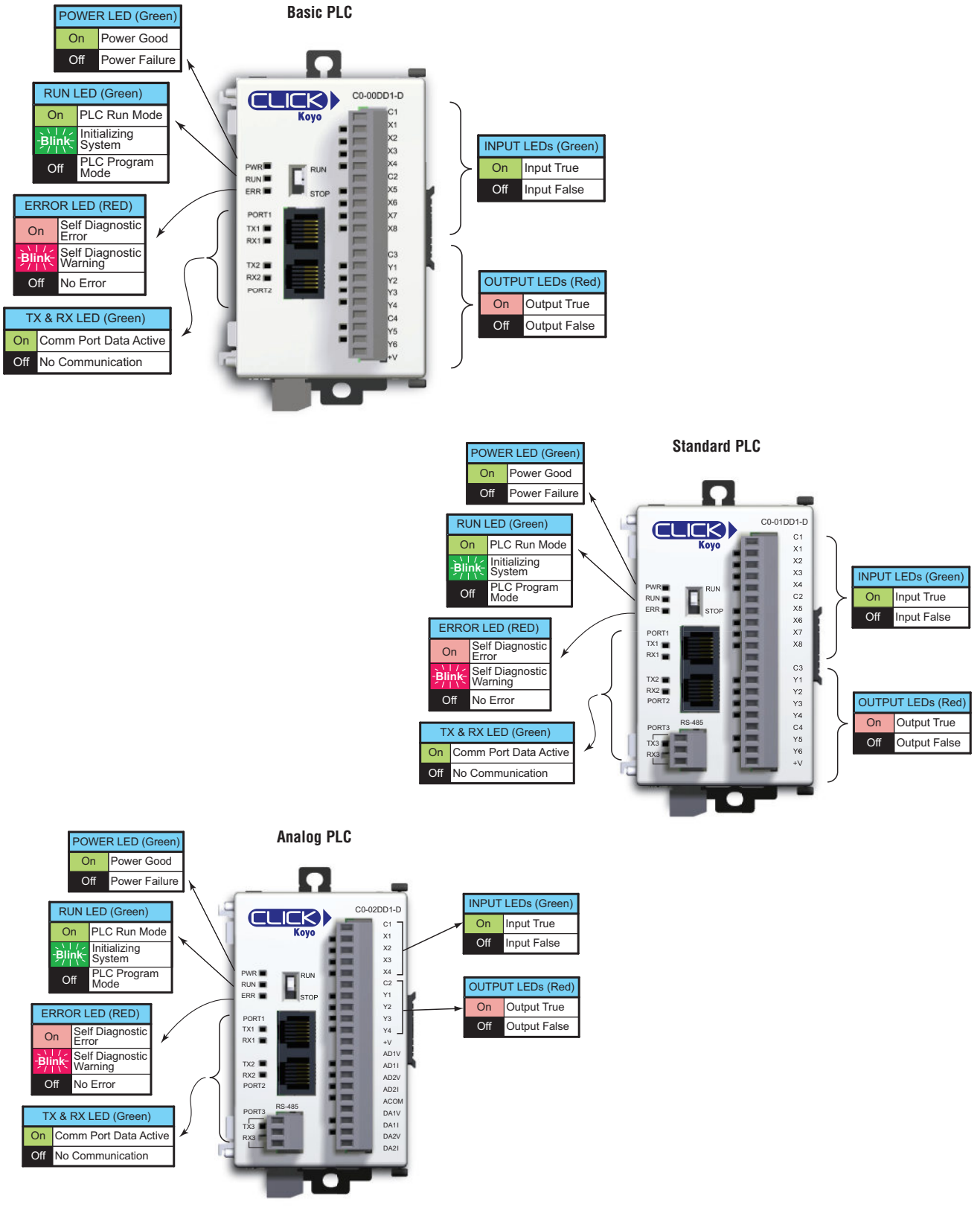


Bottom of Ethernet PLC (Same on all models)



CLICK Specifications

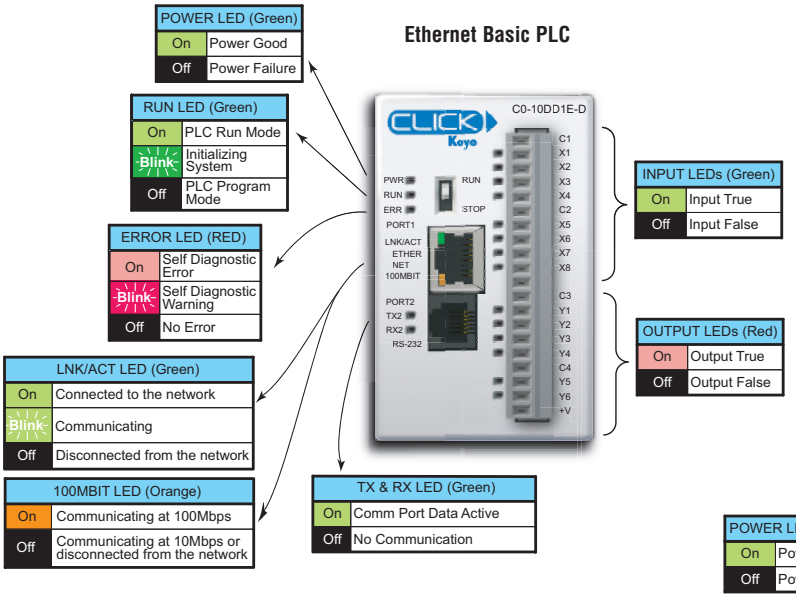
PLC LED Status Indicators



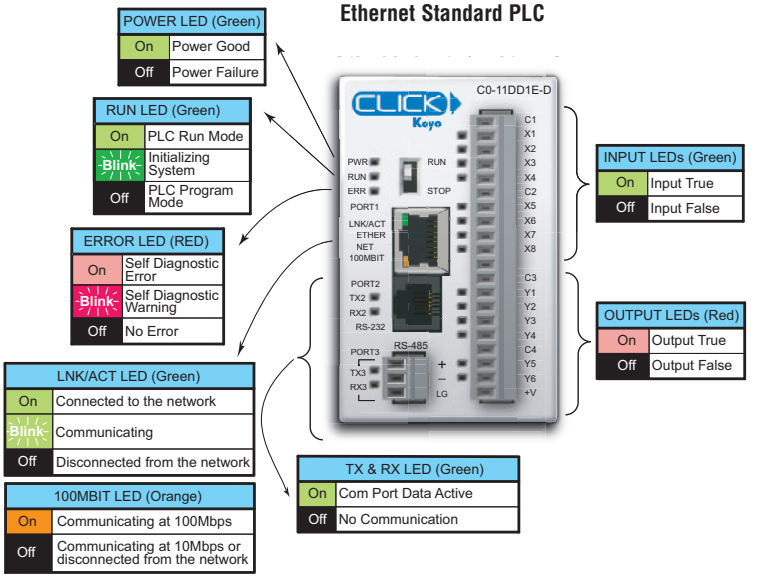
CLICK Specifications

PLC LED Status Indicators

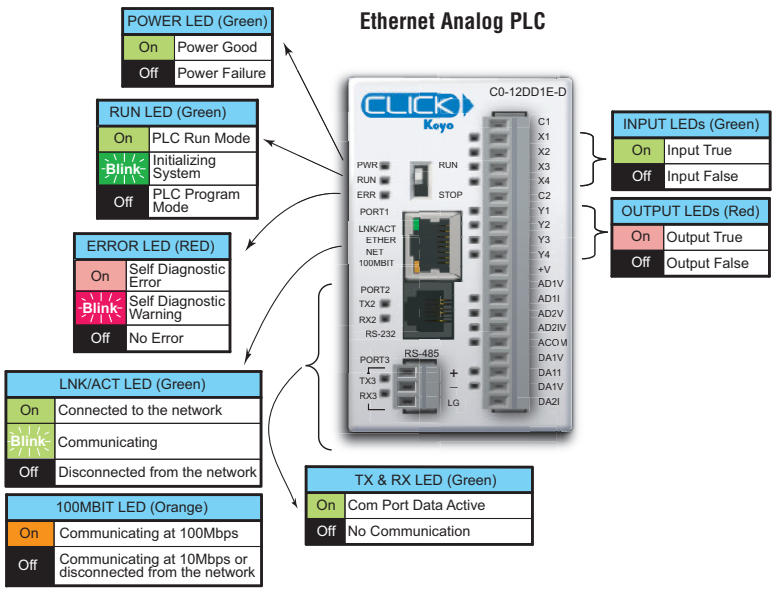
Ethernet Basic PLC



Ethernet Standard PLC



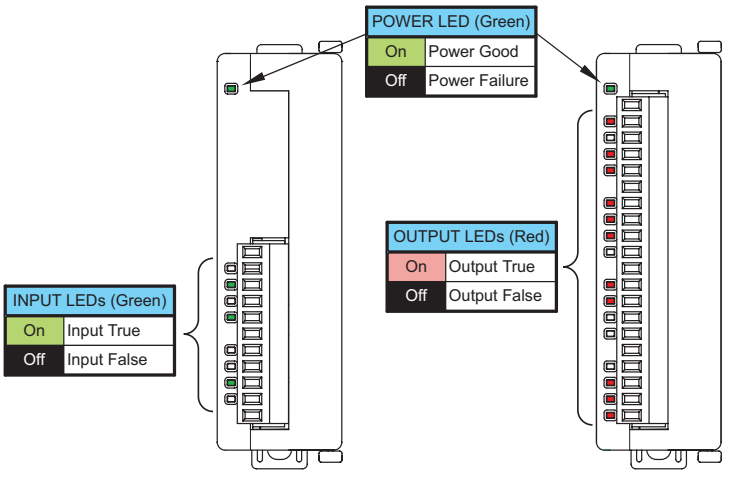
Ethernet Analog PLC



CLICK Specifications

I/O Module LED Status Indicators

I/O Module LED Status Indicators



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

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

11-Pin Terminal Block, C0-8TB

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

20-Pin Terminal Block, C0-16TB

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

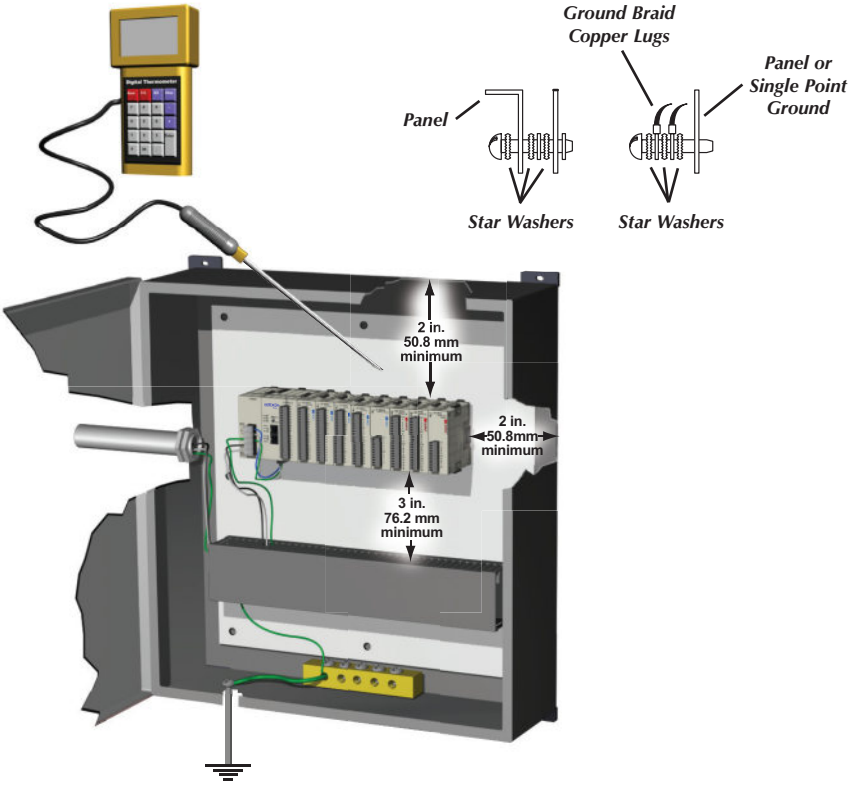
Product Dimensions and Installation

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

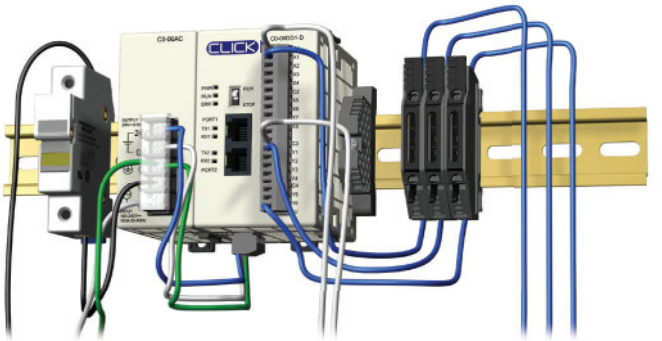
Plan for Safety

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

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

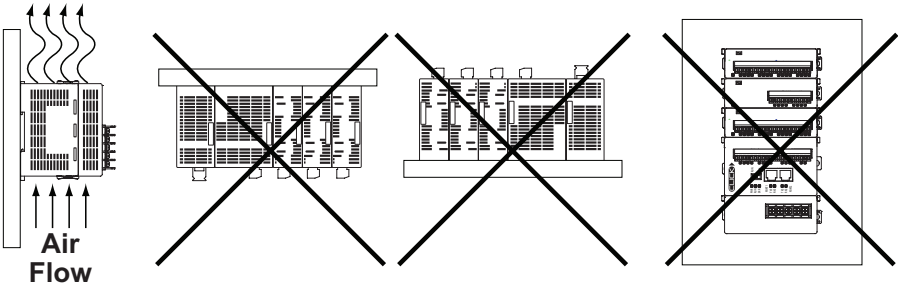


NOTE: THERE IS A MIMIMUM CLEARANCE REQUIREMENT OF 2 INCHES(51 MM) BETWEEN THE CLICK PLC AND THE PANEL DOOR OR ANY DEVICES MOUNTED IN THE PANEL DOOR. THE SAME CLEARANCE IS REQUIRED BETWEEN THE PLC AND ANY SIDE OF THE ENCLOSURE. A MINIMUM CLEARANCE OF 3 INCHES (76 MM) IS REQUIRED BETWEEN THE PLC AND A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



Mounting Orientation

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

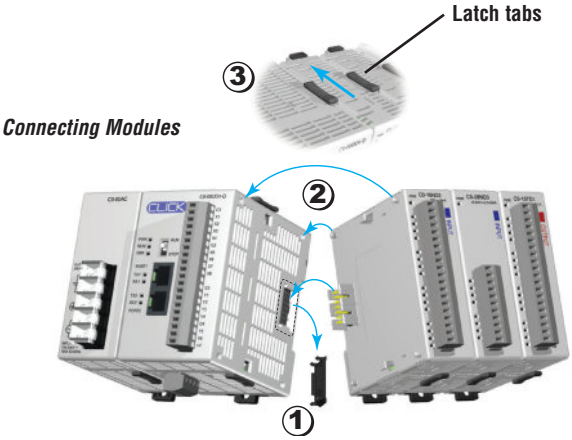


Product Dimensions and Installation

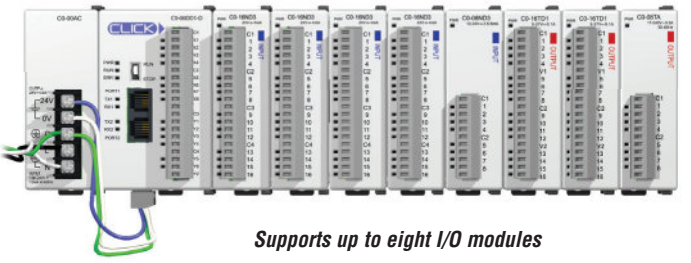
Connecting the Modules Together

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

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



Connecting Modules



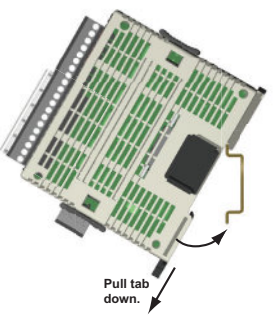
Supports up to eight I/O modules

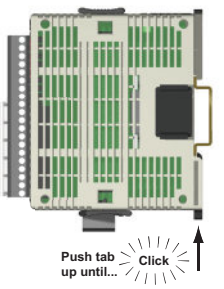
Mounting

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

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

DIN Rail Mounting





Surface Mounting

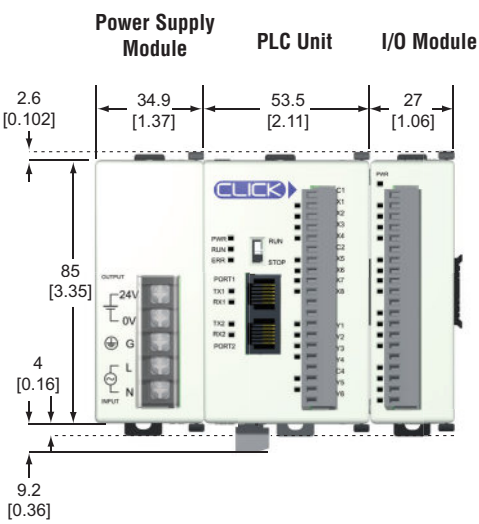
Unit Dimensions

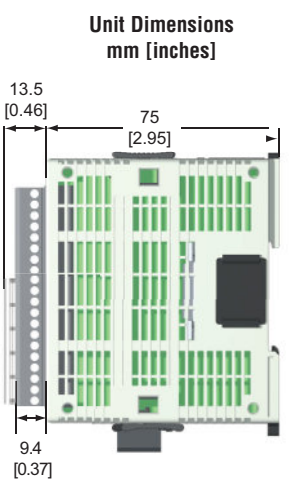
The dimensional drawings here and on the next page show the outside dimensions of the CLICK power suppy, PLC, and I/O modules. The CLICK PLC system is designed to be mounted on standard 35mm DIN rail, or it can be surface mounted.

Allow proper spacing from other components within an enclosure.

Maximum system:

Power Supply + PLC + 8 I/O modules.



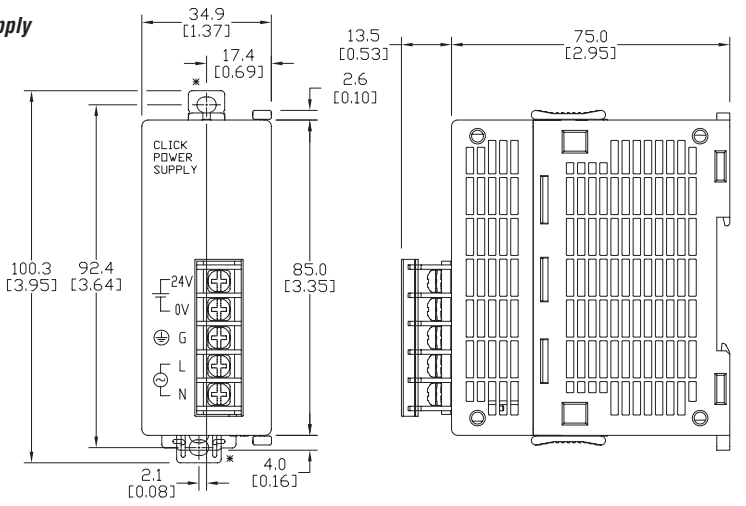


Product Dimensions and Installation

Unit Dimensions

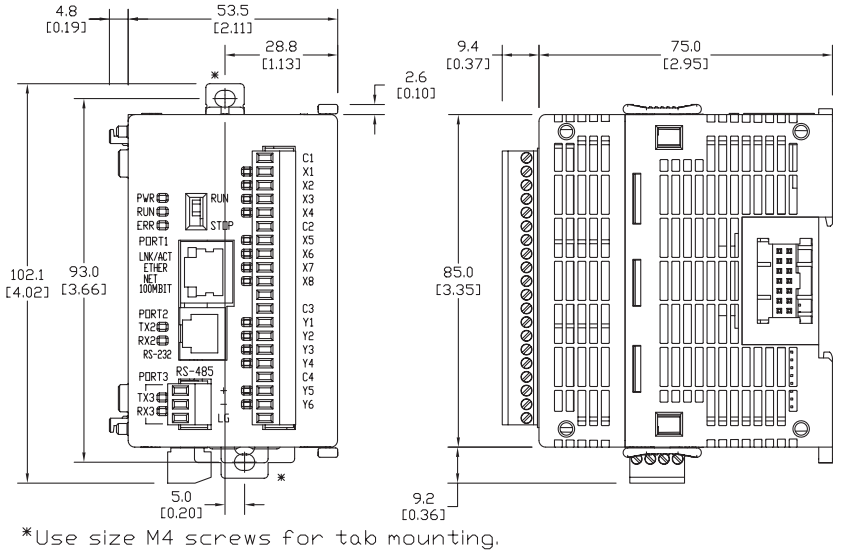
mm [inches]

Power Supply



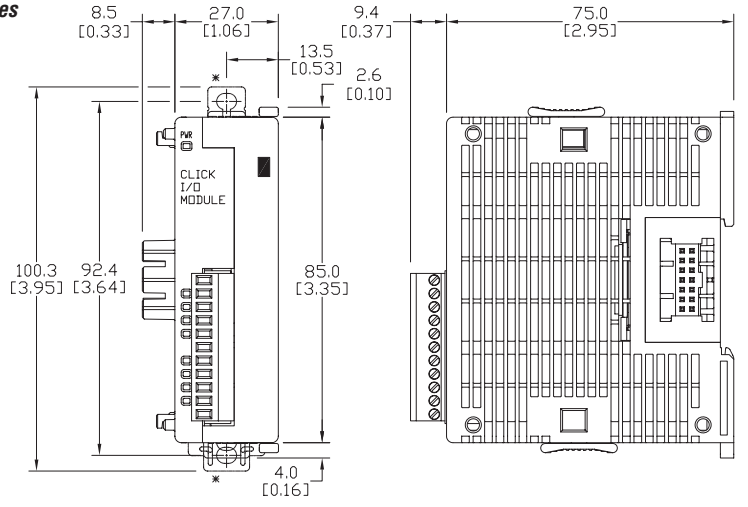
*Use size M4 screws for tab mounting.

PLC Units



*Use size M4 screws for tab mounting.

I/O Modules



*Use size M4 screws for tab mounting.

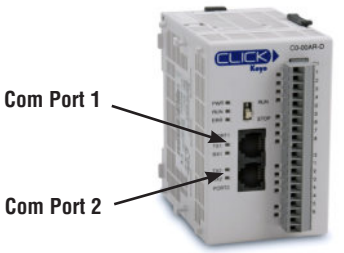
Networking the CLICK PLC

Built-in Communications Ports

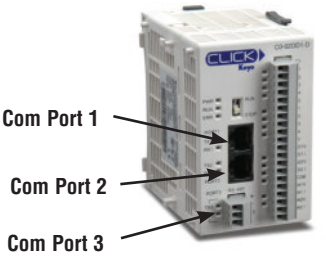
Basic, Standard and Analog PLCs have two built-in RS-232 communications ports. Standard and Analog PLCs also have one built-in RS-485 communications port. One RS-232 port supports the Modbus RTU protocol only and can be used as the programming port. The other ports support either Modbus RTU or ASCII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

LED Status Indicators

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



Basic PLC

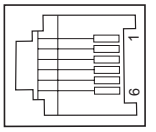


Standard and Analog PLCs

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

Port 1

6 pin RJ12 Phone Type Jack

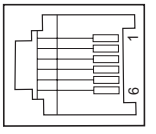


Port 1 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	NC	No connection
6	0V	Power (-) connection (GND)

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

Port 2

6 pin RJ12 Phone Type Jack



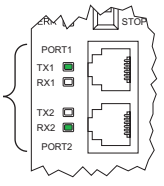
Port 2 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	RTS	Request to send
6	0V	Power (-) connection (GND)

Basic PLCs

Port 1 & 2 LED Status Indicators

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

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

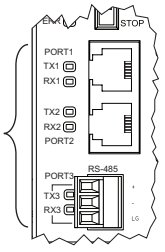


Standard and Analog PLCs

Port 1, 2, & 3 LED Status Indicators

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

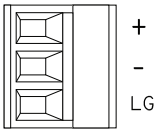
RX1, RX2 and RX3 (Green)	
On	The Comm Port is receiving data.
Off	The Comm Port is not receiving data.



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

Port 3

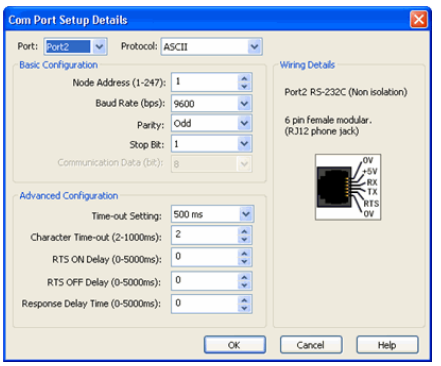
RS-485



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

Port Setup

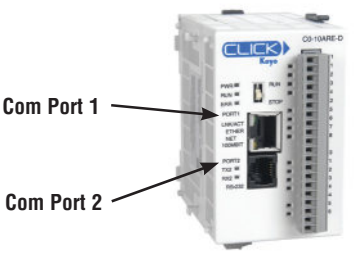
Use CLICK programming software to easily configure the communications ports.



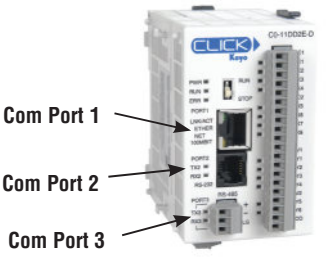
Networking the CLICK PLC

Built-in Communications Ports

Ethernet Basic, Standard and Analog PLCs have one built-in Ethernet communications port and one RS-232 communications port. Ethernet Standard and Analog PLCs also have one built-in RS-485 communications port. The Ethernet port supports the Modbus TCP protocol. The RS-232 and RS-485 ports support either Modbus RTU or ASCII protocol. The RS-232 port supplies 5 VDC, so you can connect a monochrome C-more Micro HMI panel without an additional power supply.



Ethernet Basic PLC



Ethernet Standard and Ethernet Analog PLCs

LED Status Indicators

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

Ethernet Basic PLCs

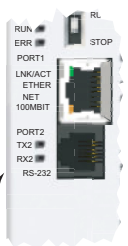
Port 1 & 2 LED Status Indicators

LNK/ACT LED (Green)	
On	Connected to the network
Blink	Communicating
Off	Disconnected from the network

100MBIT LED (Orange)	
On	Communicating at 100Mbps
Off	Communicating at 10Mbps or disconnected from the network

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

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



Ethernet Standard and Ethernet Analog PLCs

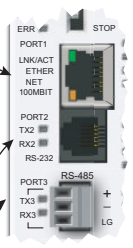
Port 1, 2 & 3 LED Status Indicators

LNK/ACT LED (Green)	
On	Connected to the network
Blink	Communicating
Off	Disconnected from the network

100MBIT LED (Orange)	
On	Communicating at 100Mbps
Off	Communicating at 10Mbps or disconnected from the network

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

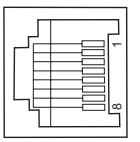
RX2 and RX3 (Green)	
On	The Comm Port is receiving data.
Off	The Comm Port is not receiving data.



Com Port 1 Specifications
Use: Programming and Ethernet Communication
Physical: 8 pin, RJ45, Ethernet
Communication speed (Mbps): 10/100
Protocol: Modbus TCP

Port 1

8 pin RJ45

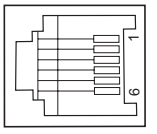


Port 1 Pin Descriptions		
1	TX+	Transmit Data (+)
2	TX-	Transmit Data (-)
3	RX+	Receive data (+)
4	NC	Not connected
5	NC	Not connected
6	RX-	Receive Data (-)
7	NC	No connection
8	NC	No connection

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

Port 2

6 pin RJ12 Phone Type Jack

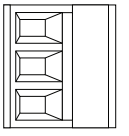


Port 2 Pin Descriptions		
1	0V	Power (-) connection (GND)
2	5V	Power (+) connection
3	RXD	Receive data (RS-232)
4	TXD	Transmit data (RS-232)
5	RTS	Request to send
6	0V	Power (-) connection (GND)

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

Port 3

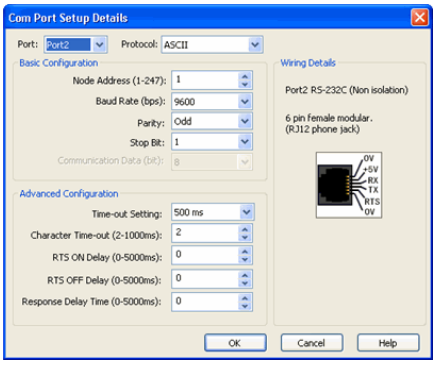
RS-485



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

Port Setup

Use CLICK programming software to easily configure the communication ports.



Networking the CLICK PLC

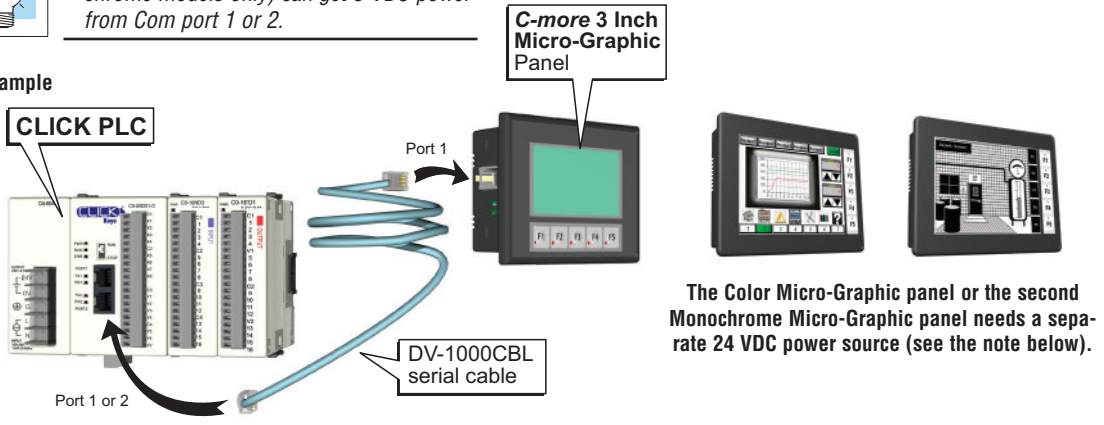
Typical Communication Applications

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

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

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

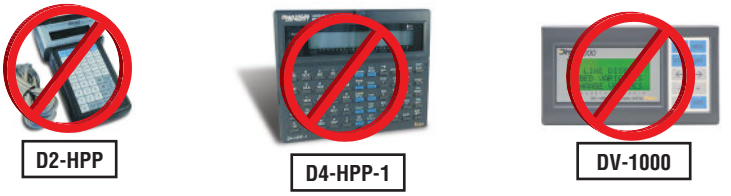
Example



NOTE: *CLICK's (RS-232) Port 1 and Port 2 can provide 5 VDC power to the panel, but not at the same time. If a C-more Micro-Graphic panel is connected to both ports, then at least one of the panels must be powered by a C-more Micro DC power adapter, EA-MG-P1 or EA-MG-SP1, or another 24 VDC power source. Color C-more Micro-Graphic panels must also be powered from a separate 24 VDC source.*

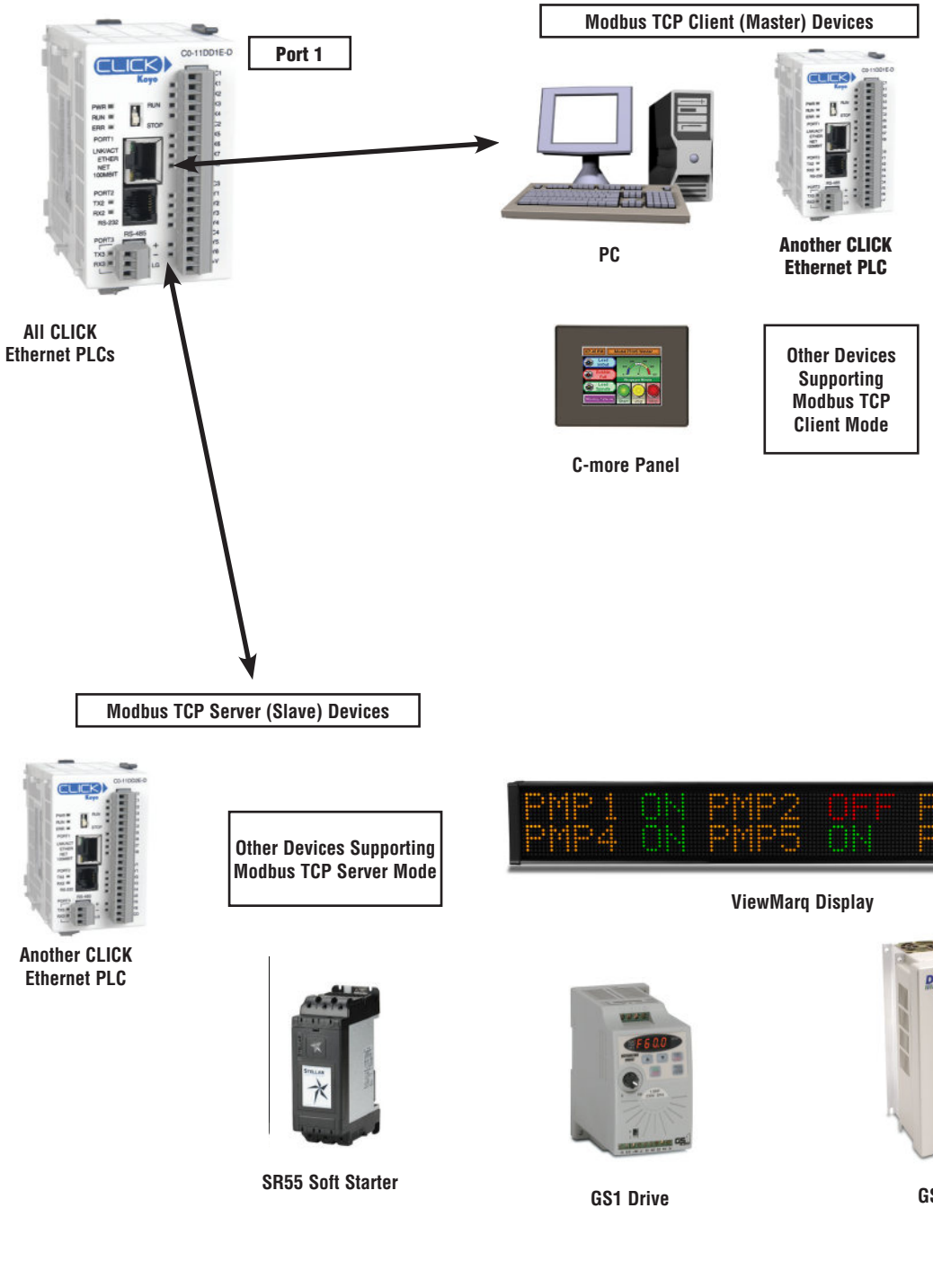
Do not use the following *Direct*LOGIC devices with CLICK's Port 1 or 2:

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



Networking the CLICK PLC

Port 1 (Ethernet) – Modbus TCP



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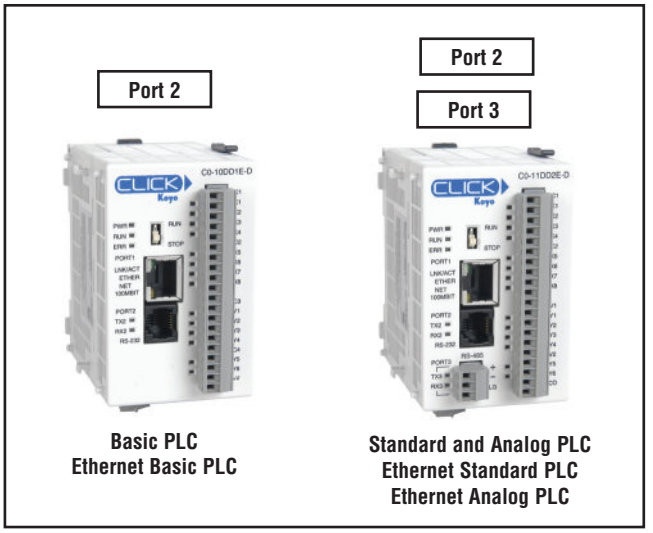
Networking the CLICK PLC

Port 2 (RS-232) – Modbus RTU or ASCII

Port 3 (RS-485; Standard, Analog, Ethernet Standard and Ethernet Analog PLCs) – Modbus RTU or ASCII

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



Modbus RTU

Modbus RTU Master Devices

PC

Another CLICK PLC

C-more and *C-more* Micro-Graphic Panel

See Note on previous page about connecting a C-more Micro-Graphic panel to Port 1 or 2.

Other Devices Supporting Modbus RTU Master Mode

ASCII

Devices that SEND ASCII messages

Barcode Reader

Weigh Scale

Other devices that can send ASCII data.

Devices that RECEIVE ASCII messages

Serial Printer

ViewMarq Display

Other devices that can receive ASCII data.

Modbus RTU Slave Devices

Another CLICK PLC

SOLO Temperature Controller (CLICK Port 3 Only)

Other Devices Supporting Modbus RTU Slave Mode

Power Supplies

Power Supplies

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

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

C0-00AC Power Supply

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

C0-01AC Power Supply

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

PSP24-DC12-1 DC-DC Converter

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

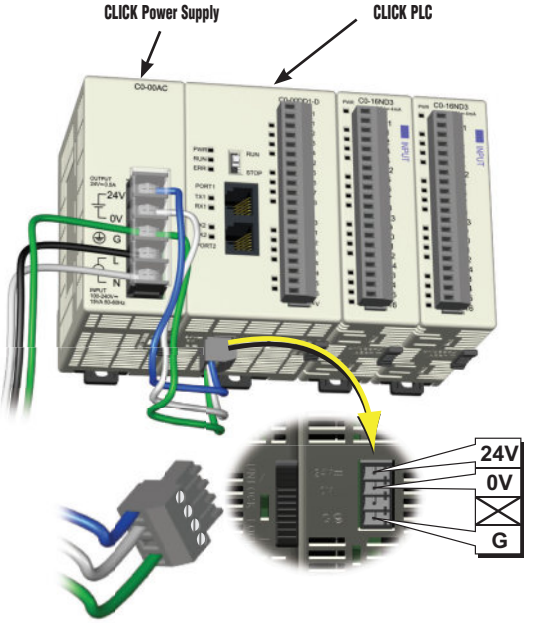
PSP24-DC12-1

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

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

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

PSP24-DC12-1 DC-DC Converter Specifications	
Input Voltage Range	9.5-18 VDC
Input Power (no load)	1.0 W max.
Startup Voltage	8.4 VDC
Undervoltage Shutdown	7.6 VDC
Output Voltage Range	24-28 VDC (adjustable)
Output Current	1.0 A
Short Circuit Protection	Current limited at 110% typical
Weight	7.5 oz (213g)



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

C0-00AC

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

85-264 VAC Power Source Input Terminals

C0-01AC

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

85-264 VAC Power Source Input Terminals

Power Budgeting

Power Budgeting

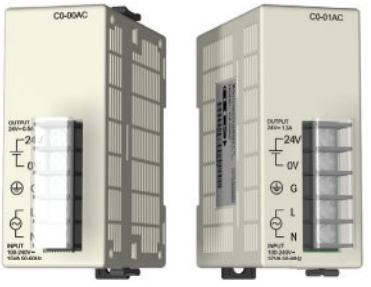
There are two areas to be considered when determining the power required to operate a CLICK PLC system. The first area is the power required by the CLICK PLC, along with the internal logic side power that the CPU provides to its own I/O and any connected I/O modules that are powered through the PLC expansion 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 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 24 VDC power source needs to provide to CLICK's logic side, and also a separate calculation of the total current required for all devices operating from the field side of the PLC system.

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



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

Other 24 VDC Power Supply
Example: PSP24-60S

Power Consumption for CLICK PLC Units

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

PLC Current Consumption (mA)		
Part Number	**Power Budget 24 VDC (logic side)**	**External 24 VDC (field side)**
Ethernet Analog PLC Units		
C0-12DD1E-D	140	60
C0-12DD2E-D		0
C0-12DRE-D	160	
C0-12ARE-D		
C0-12DD1E-1-D	140	60
C0-12DD2E-1-D		0
C0-12DRE-1-D	160	
C0-12ARE-1-D		
C0-12DD1E-2-D	140	60
C0-12DD2E-2-D		0
C0-12DRE-2-D	160	
C0-12ARE-2-D	140	

Power Budgeting

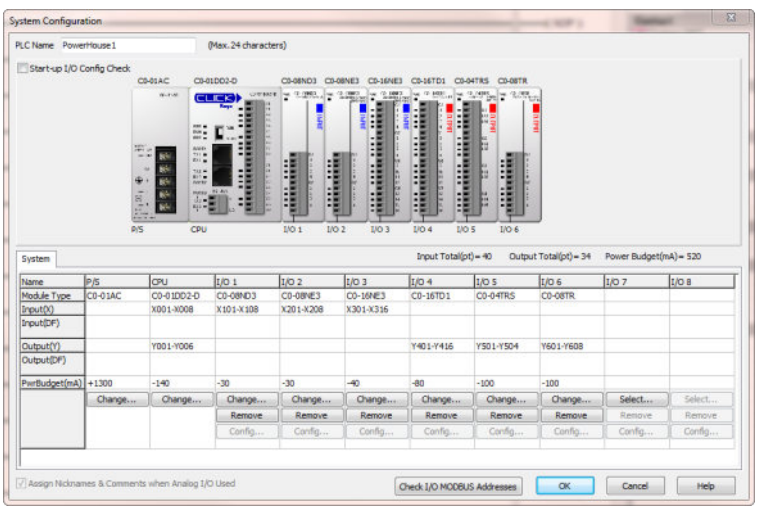
Power Consumption for CLICK I/O Expansion Modules

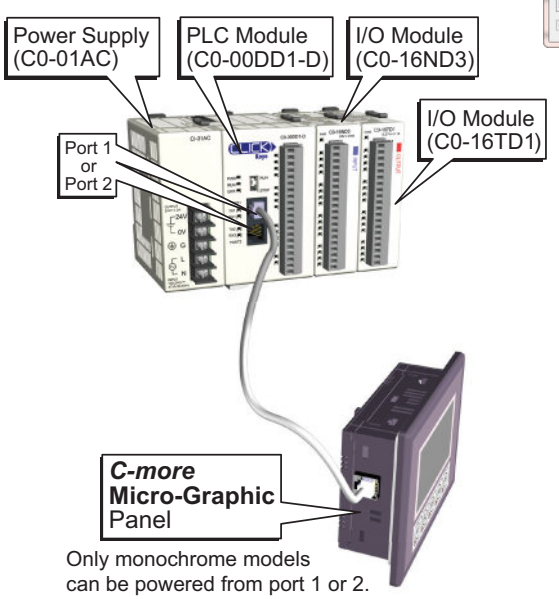
I/O Module Current Consumption (mA)		
Part Number	Power Budget 24 VDC (logic side)	External 24 VDC (field side)
Discrete Input Modules		
C0-08ND3	30	0
C0-08ND3-1	30	0
C0-16ND3	40	0
C0-08NE3	30	0
C0-16NE3	40	0
C0-08NA	30	0
Discrete Output Modules		
C0-08TD1	50	15
C0-08TD2	50	0
C0-16TD1	80	100
C0-16TD2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

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

Power Budgeting Using the CLICK Programming Software

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





Power Budgeting Example

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

Wiring System for CLICK PLCs

Wiring Solutions using the *ZIP*Link Wiring System

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

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

Solution 1: CLICK PLC and I/O Modules to *ZIP*Link Connector Modules

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

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

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

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

When wanting to connect I/O to another device within close proximity of the I/O modules, no extra terminal blocks are necessary when using the *ZIP*Link Pigtail Cables. *ZIP*Link Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.

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

1. Locate your PLC or I/O module.
2. Select a *ZIP*Link Pigtail Cable that is compatible with your 3rd party device.

Solution 3: GS Series and DuraPulse Drives Communication Cables

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

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

Use the Drives Communication selector tables located in the *ZIP*Link section:

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

Solution 4: Serial Communications Cables

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

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

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

Wiring System for CLICK PLCs

CLICK PLC *ZIP*Link Selector				
PLC		***ZIP*Link**		
PLC Unit	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No.***
C0-00DD1-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
C0-00DD2-D				
C0-00DR-D				
C0-00AR-D				
C0-01DD1-D				
C0-01DD2-D				
C0-01DR-D				
C0-01AR-D				
C0-02DD1-D	No *ZIP*Links are available for Analog PLC units.			
C0-02DD2-D				
C0-02DR-D				
C0-10DD1E-D	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
C0-10DD2E-D				
C0-10DRE-D				
C0-10ARE-D				
C0-11DD1E-D				
C0-11DD2E-D				
C0-11DRE-D				
C0-11ARE-D				
C0-12DD1E-D	No *ZIP*Links are available for Ethernet Analog PLC units.			
C0-12DD2E-D				
C0-12DRE-D				
C0-12ARE-D				
C0-12DD1E-1-D				
C0-12DD2E-1-D				
C0-12DRE-1-D				
C0-12ARE-1-D				
C0-12DD1E-2-D				
C0-12DD2E-2-D				
C0-12DRE-2-D				
C0-12ARE-2-D				

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

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

CLICK PLC Discrete Input Module *ZIP*Link Selector				
I/O Module		***ZIP*Link**		
Input Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No.***
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	
C0-16NE3	20	Feedthrough	ZL-RTB20	
		Sensor	ZL-LTB16-24	

CLICK PLC Discrete Output Module *ZIP*Link Selector				
I/O Module		***ZIP*Link**		
Output Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No.***
C0-08TD1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-08TD2				
C0-08TR				
C0-08TA				
C0-16TD1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20*
		Fuse	ZL-RFU20 [2]	
		Relay (sinking)	ZL-RRL16-24-1	
C0-16TD2	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
		Fuse	ZL-RFU20 [2]	
		Relay (sourcing)	ZL-RRL16-24-2	
C0-04TRS[1]	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *

CLICK PLC Combo I/O Module *ZIP*Link Selector				
I/O Module		***ZIP*Link**		
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 PLC Analog I/O Module *ZIP*Link Selector				
I/O Module		***ZIP*Link**		
Analog Module	***# of Terms***	***Component***	***Module Part No.***	***Cable Part No.***
C0-04AD-1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04AD-2	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04RTD	20	No *ZIP*Links are available for RTD and thermocouple modules.		
C0-04THM	11			
C0-04DA-1	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-04DA-2	11	Feedthrough	ZL-RTB20	ZL-C0-CBL11 *
C0-4AD2DA-1	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *
C0-4AD2DA-2	20	Feedthrough	ZL-RTB20	ZL-C0-CBL20 *

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