

CLICK Stackable I/O Module Specifications

C0-04POT

\$-6gpi:

8-Point Specialty Analog Input Module

CLICK simulator input module, 4-channel, potentiometer, 12-bit.



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

CLICK Stackable I/O Module Specifications

General Specifications For All CLICK Stackable I/O Modules

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



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

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

Power Budgeting

Power Budgeting

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

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

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

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

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



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



Other 24VDC Power Supply
Example: PSP24-060S

Power Consumption for CLICK and CLICK PLUS PLC Units

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

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

Power Consumption for CLICK PLUS Option Slot Modules

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

Power Budgeting

Power Consumption for CLICK Stackable I/O Modules

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

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

System Configuration

PLC Name: (Max. 24 characters)

☐ Start-up I/O Config Check

System Configuration Diagram:

System Configuration Table:

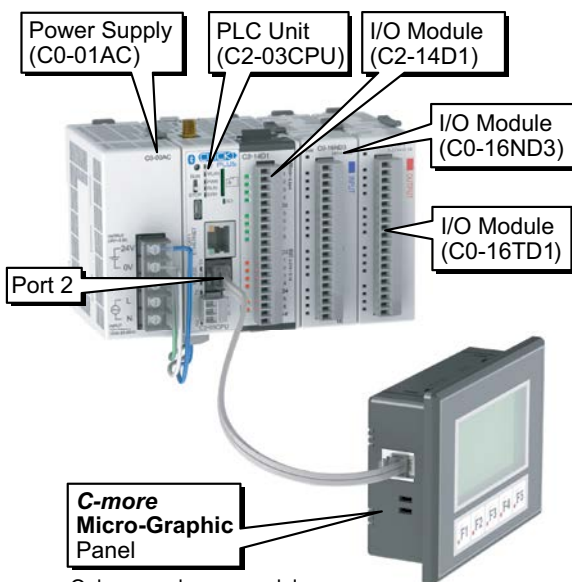
Name	P/S	CPU	Slot	I/O 1	I/O 2	I/O 3	I/O 4	I/O 5	I/O 6	I/O 7	I/O 8
C0-01AC	C2-03CPU	X001-X008	X101-X116	X201-X208	X301-X316						
C2-14D1											
C0-16ND3											
C0-16TD1											
C0-08TR											

Input Total(pI)=48 Output Total(pO)=24 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)
C2-03CPU	130	0
C2-14D1	50	60
C0-16ND3	40	0
C0-16TD1	80	100
C-more Micro	90	0
Total:	390	160 *

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