C2-DCM Option Slot Module PLUS Installation Instructions



C2-DCM OPTION SLOT MODULE

- 2 RS-232/RS-485 communications ports
- Modbus RTU or ASCII protocols

General Specifications		
Operating Temperature	32°F to 131°F [0°C to 55°C]	
Storage Temperature	-4°F to 158°F [-20°C to 70°C]	
Ambient Humidity	30% to 95% relative humidity (non–condensing)	
Environmental Air	No corrosive gases Pollution Degree 2 (UL840)	
Environment	For Indoor Use Only	
Vibration	5–9Hz: 3.5 mm amplitude; 9–150Hz: 1.0 G 10 sweep cycles per axis on each of 3 mutually perpendicular axes.	
Shock	15G peak, 11ms duration, 3 shocks in each direction per axis, on 3 mutually perpendicular axes.	
Weight	41g	
Bus Power Required	Max 60mA	
Agency Approvals	UL61010 (File No. E157382); CE (EN61131-2); CUL Canadian C22.2	
Other	RoHS 2011/65/EU Amendment (EU)2015/863	

Please read and understand the information in these installation instructions prior to installation, operation, or servicing this equipment. This module is intended to be used with a CLICK PLUS CPU. Ensure the CPU is installed in accordance with its installation and safety instructions.

PLEASE REVIEW SAFETY WARNINGS ON PAGE 2!

Port Specifications		
Number of Ports	2	
Port Types	RS-232, RS-485 (2-wire)	
Supported Protocols	Modbus RTU, ASCII (user-defined)	
Baud Rate	2400, 4800, 9600, 19200, 38400 (default), 57600, 115.2k bps	
Data Bits	7 bits, 8 bits (default)	
Parity	None, Odd (default), Even	
Stop Bits	1 bit (default), 2 bits	
Flow Control	None	
RS-485 Terminating Resistor	120Ω, Internal	
Status Indicator LEDs	OK, ERR, TX (per port), RX (per port)	

Modbus Specifications		
Station Number Range	1–247	
Timeout Setting	100ms, 200ms, 500ms, 1s, 2s, 5s, 10s, 20s, 30s	
Character Timeout	2–1000ms	
Response Delay Time	0–5000ms	
Modbus Function Codes	Master/Slave: 01 - Read Coil Status 02 - Read Input Bits 03 - Read Holding Register 04 - Read Input Register 05 - Write Single Coil 06 - Write Single Register 15 - Write Multiple Coils 16 - Write Multiple Registers	

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Safety Warnings

Please follow these instructions for personal and operational safety.



WARNING Assumes that incorrect handling may cause hazardous conditions, resulting in severe injury or death.

CAUTION Assumes that incorrect handling may cause hazardous conditions, resulting in medium or slight injury, or may cause equipment damage.



- Don't use this equipment in a flammable or explosive environment in order to avoid accidental injury or fire.
- You should use external electromechanical devices that are independent of the PLC (Programmable Logic Controller) system to provide protection for any part of the system; otherwise malfunction or output failures may result in a hazardous accident.
- 24VDC power is required from a secondary circuit or a specific power supply unit only.
- Ensure the Ground Terminal of the Power Supply (C0-00AC/ C0-01AC) for the CLICK PLUS CPU is connected to Earth Ground to avoid electric shock or equipment damage during a short circuit.
- Don't operate the equipment with a nonconforming external power supply to avoid electric shock, equipment damage or fire.
- Don't intentionally fault the wiring; this may cause equipment damage or fire.
- To avoid electric shock or malfunctions which might result in an accident, don't touch any terminal while the PLC power is on.
- Don't put metals (e.g. screwdriver) into vent holes, or drop trash or foreign objects (e.g. wire cut-offs) into the device, in order to avoid electric shock or equipment damage.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be invalidated.



- For use in Pollution Degree 2 Environment. Use and store the equipment in an environment described in the specifications (regarding temperature, humidity, vibrations, shock, etc.) in order to avoid equipment damage or fire.
- Ensure all wiring has strain reliefs in order to avoid damage to insulation that might result in electric shock or fire.
- Ensure secondary external power circuits are only live after PLC control program is started; otherwise a malfunction or output failure may result in a hazardous accident.
- Don't block the vent holes. This may cause an increase of internal temperature resulting in equipment damage or fire.
- Don't disassemble or modify equipment so as to avoid electric shock, equipment damage, or fire.
- Cut off all phases of the external power source before maintenance work, thus avoiding electric shock or equipment damage.

Hardware Installation



CAUTION Discharge static electricity before installation or wiring to avoid electric equipment damage.



CAUTION Cut off all phases of the power source externally and wait 5 seconds before installing or removing the Option Slot Module of a running system.

INSTALL OR REMOVE THE OPTION SLOT MODULE



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Hardware Installation, continued

WIRING

16–28 AWG wiring is supported. We recommend using crimping ferrules on all wire terminations for a more secure connection. The following crimping ferrules are recommended for the I/O terminals.

Company	Туре	Model No.	Compliant Wire
AutomationDirect	Ferrule	V30AE000009 V30AE000041	0.2–0.5 mm ² (22–26AWG)

* Rated torque is 0.22 to 0.25 N·m. Take care not to contact adjacent terminal.

Terminal Block Specifications		
Connector Type	Pluggable Terminal Block	
Number of Pins	6 (x2 terminal blocks)	
Pitch	3.50 mm	
Wire Size Range	22–26 AWG	
Stripping Length	7.0 mm	
Wire Specification	Lead-free, heat resistant, polyvinyl chloride insulated copper wire, rated over 80°C	
Screw Thread	M2.0	
Tightening Torque	1.7 inch-lb [0.19 N·m]	

RS-485 Port on

another device

I G

RS-485 Port on

another device

IG

Add a termination

the last device.

Optional (Some devices may

not have this terminal.)

resistor between the

+ and - terminals on

LED INDICATORS

LED Indicators			
	ON	Normal Operation	
ОК	BLINK	Updating	
	OFF	Power off or program stopped	
ERR	BLINK	Port Communication Error	
	OFF	Normal Operation	
TX BLINK OFF	Transmitting		
	OFF	No communication	
RX	BLINK	Receiving	
TUX	OFF	No communication	



Port Pinout		
TERM	Internal 120Ω resistor	
+	Signal A (RS-485)	
-	Signal B (RS-485)	
LG	Logic Ground	
тх	RS-232 Transmit	
RX	RS-232 Receive	

Replacement Terminal Block



Recommended low capacitance data cable (AutomationDirect part # <u>Q8105-1</u> and <u>Q8302-1</u>.

RS-232 WIRING

RS-485 WIRING

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Internal

Resistor

120Ω

C2-DCM

TERM

+

LG

ΤХ

RX



Connect TERM

to + to terminate

end of run

Symbols listed on the equipment are shown below.

•			
Name	Description	Symbol	
DC	DC power supply		IEC60417 No. 5031
CAUTION	 Refer to QR code link for product handling Use Copper Conductor Only 	\triangle	ISO 7000 No.0434B



For programming and operations, see the <u>CLICK PLUS User Manual</u>. For additional technical support or questions, call our Technical Support team at 1-800-633-0405 or 770-844-4200.

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