

C-more Micro-Graphic Panel Accessories

8-Button Keypad Bezel

The 8-button keypad bezel can be used with both the touch and non-touch Micro-Graphic panels. The keypad includes four directional arrow cursor buttons, and one each of an ESCAPE, MENU, CLEAR and ENTER button. The keypad is intended to be used with the numeric entry object to allow changing of a value.

The cursor left and right buttons are used to select a digit and the cursor up and down buttons to change the value, along with the ENTER and CLEAR buttons. It can also be used to access and navigate the screen selector feature. The keypad bezel is designed for easy drop-in of a C-more Micro-Graphic panel.

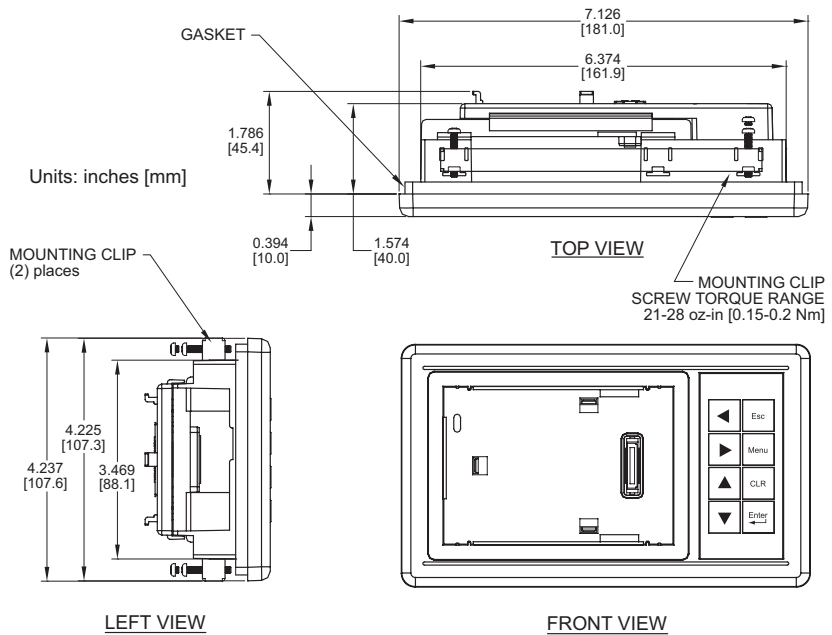
Part No. EA-MG-BZ1



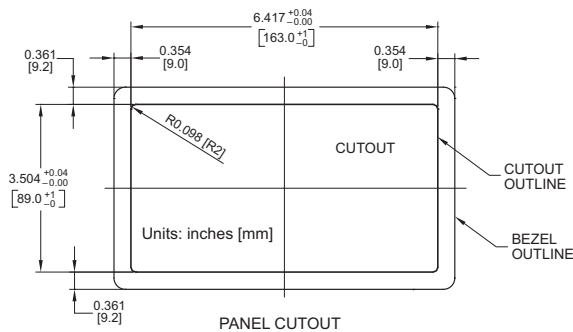
Four directional cursor buttons, and ESC, MENU, CLEAR and ENTER buttons.



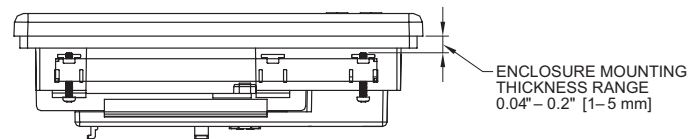
Dimensions



Panel Cutout



Panel Thickness



8-Button Keypad Bezel Specifications

Part Number	EA-MG-BZ1
General	
C-more Micro-Graphic Panels Supported	EA1-S3ML, EA1-S3ML-N
Connection	Connects with expansion connector on the rear of the C-more Micro-Graphic panel. An expansion connector is also located on the rear of the keypad bezel to allow the EA-MG-P1 DC Power Adapter, or the EA-MG-SP1 Serial Port with DC Power Adapter to be attached.
Power Consumption	None
Keypad Button Life	Minimum of 500,000 cycles
Enclosure Mounting	(2) mounting clips, EA-MG-BZ1-BRK, included. Note: The C-more Micro-Graphic panel is installed into the keypad bezel using the EA-MG-S3ML-BRK mounting clips that are supplied with the panel.
Physical	
Dimensions	7.126" (W) x 4.225" (H) x 2.180" (D) [181.0 mm x 107.3 mm x 55.4 mm]
Weight	7.05 oz. [200 g]
Environmental	See Micro-Graphic panel specifications at the beginning of this catalog section.

C-more Micro-Graphic Panel Accessories

20-Button Keypad Bezel

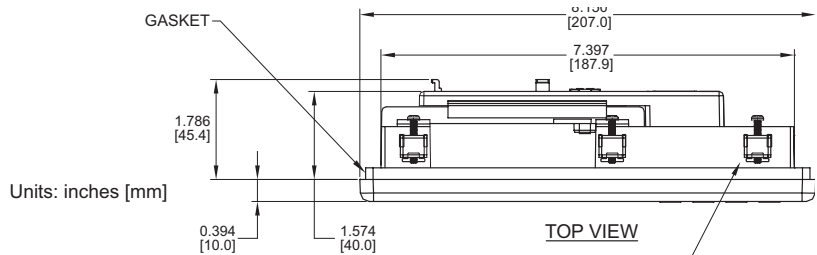
The 20-button keypad bezel can be used with both the touch and non-touch Micro-Graphic panels. The keypad includes four directional arrow cursor buttons, a full numeric keypad, and one each of an ESCAPE, MENU, CLEAR and ENTER button. The keypad is intended to be used with the numeric entry object to allow changing of a value. The numeric buttons can be used to

enter a new value, or use the cursor left and right buttons to select a digit and the cursor up and down buttons to change the value, along with the ENTER and CLEAR buttons. It can also be used to access and navigate the screen selector feature. The keypad bezel is designed for easy drop-in of a C-more Micro-Graphic panel.

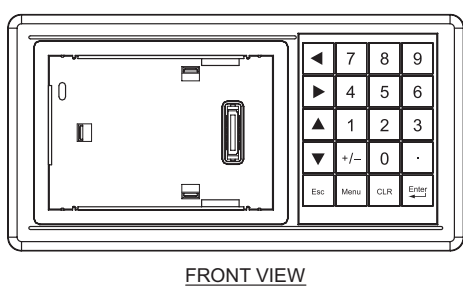
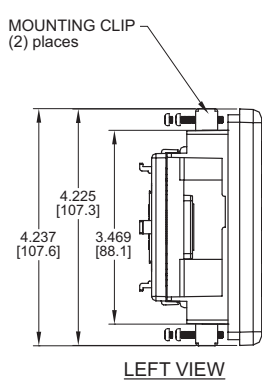
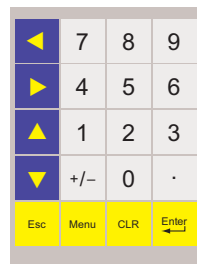
Part No. EA-MG-BZ2



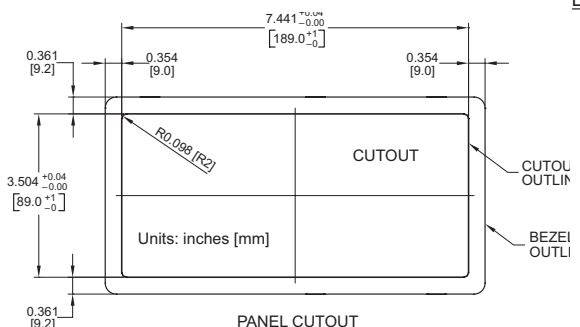
Dimensions



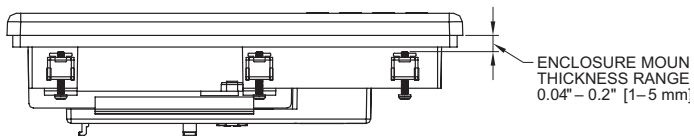
Four directional cursor buttons, numeric buttons, and ESC, MENU, CLEAR and ENTER buttons.



Panel Cutout



Panel Thickness



20-Button Keypad Bezel Specifications	
Part Number	EA-MG-BZ2
	General
C-more Micro-Graphic Panels Supported	EA1-S3ML, EA1-S3ML-N
Connection	Connects with expansion connector on the rear of the C-more Micro-Graphic panel. An expansion connector is also located on the rear of the keypad bezel to allow the EA-MG-P1 DC Power Adapter, or the EA-MG-SP1 Serial Port with DC Power Adapter to be attached.
Power Consumption	None
Keypad Button Life	Minimum of 500,000 cycles
Enclosure Mounting	(2) mounting clips, EA-MG-BZ1-BRK, included. Note: The C-more Micro-Graphic panel is installed into the keypad bezel using the EA-MG-S3ML-BRK mounting clips that are supplied with the panel.
	Physical
Dimensions	8.150" (W) x 4.225" (H) x 2.180" (D) [207.0 mm x 107.3 mm x 55.4 mm]
Weight	7.40 oz. [210 g]
Environmental	See Micro-Graphic panel specifications at the beginning of this catalog section.

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C-more Micro-Graphic Panel Accessories

DC Power Adapter

The **C-more** Micro-Graphic panel is designed to use the 5 VDC power that is available from an RJ12 serial communications port of a **Direct** LOGIC PLC from **AutomationDirect**. However, when connecting to a PLC port that does not supply this power, the DC Power Adapter module can be used to provide this

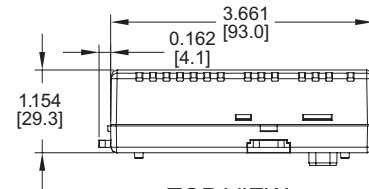
power. The adapter requires power from a 12-24 VDC source. This optional DC Power Adapter for **C-more** Micro-Graphic panels is designed to easily snap on to the rear of a **C-more** Micro-Graphic panel or the rear of an optional Keypad Bezel being used with a Micro-Graphic panel.

Part No. EA-MG-P1

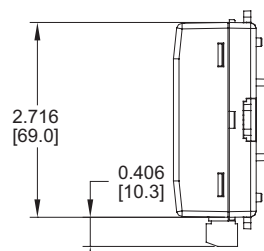


Dimensions

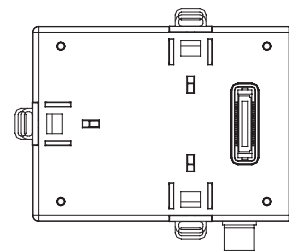
Units: inches [mm]



TOP VIEW

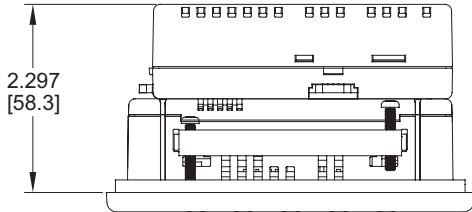


LEFT VIEW

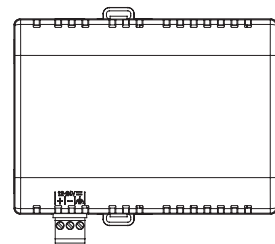


REAR VIEW

Panel Overall Depth with Adapter Installed



Units: inches [mm]



FRONT VIEW

DC Power Adapter Specifications

Part Number	EA-MG-P1
	Electrical
Input Voltage	12-24 VDC
Input Voltage Range	10.8-26.4 VDC
Power Consumption	100 mA @ 24 VDC
Maximum Power	2.90 Watts
Maximum Inrush Current	5 A @ 500 μ s with 12 VDC applied, 10 A @ 500 μ s with 24 VDC applied
Connector Type	3-pin screw type terminal block
	Physical
Dimensions	3.823" (W) x 3.284" (H) x 1.331" (D) [97.1 mm x 83.4 mm x 33.8 mm]
Weight	2.8 oz. [80 g]
Environmental	See Micro-Graphic panel specifications at the beginning of this catalog section.



NOTE: Recommended DC power supply to power either DC Power Adapter, AutomationDirect Part No. PSP24-024S or PSP24-024C.

C-more Micro-Graphic Panel Accessories

Serial Port with DC Power Adapter

The **C-more** Micro-Graphic panel is designed to use the 5 VDC power that is available from an RJ12 serial communications port of a **Direct**LOGIC PLC from **AutomationDirect**. However, for other PLC brands that do not supply power through their serial communication ports, the DC Power Adapter module can be used to provide this power. The adapter, with D-Sub 15-pin RS-232/RS-422/485 serial port, can be used to connect to a PLC using

RS-232 or RS-422/485. The adapter requires power from a 12-24 VDC source. This optional Serial Port with DC Power Adapter for **C-more** Micro-Graphic panels is designed to easily snap on to the rear of a **C-more** Micro-Graphic panel or the rear of an optional Keypad Bezel being used with a Micro-Graphic panel.

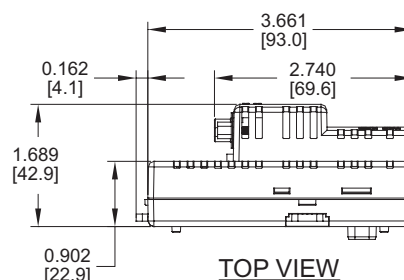
Part No. EA-MG-SP1



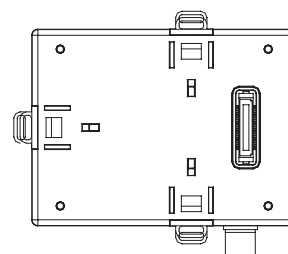
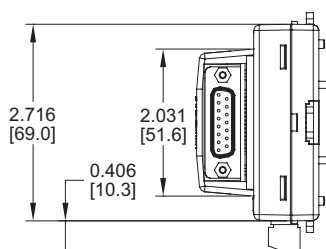
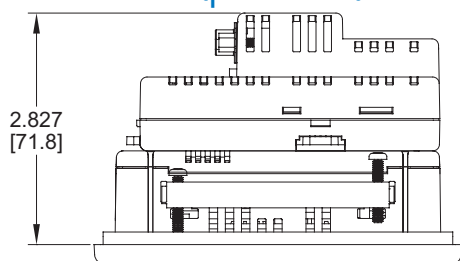
Supports:
RS-232,
RS-485,
& RS-422

Dimensions

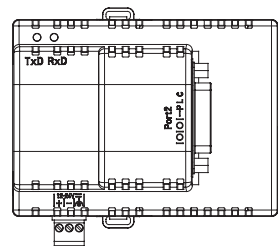
Units: inches [mm]



Panel Overall Depth with Adapter Installed



PLC Drivers	
Serial	Avail.
Direct LOGIC K-sequence	Yes
Direct NET	Yes
Modbus (Koyo Addressing)	Yes
Modbus RTU	Yes
Entivity Modbus RTU	Yes

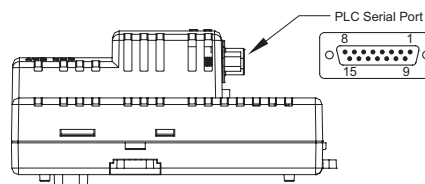


Serial Port w/ DC Power Adapter Specifications	
Part Number	EA-MG-SP1
Serial PLC Interface	
Interface Standard	RS-232 & RS-485/422
Adjustable Settings from Software (Dependent on PLC Protocol)	Baud rate: 9600, 19200 or 38400 bits/sec Data bits: 7/8 bits Parity: None, Odd/Even Stop bits: 2/1 bits
Connector Type	15-pin D-sub connector (female)
Electrical	
Input Voltage	12-24 VDC
Input Voltage Range	10.8-26.4 VDC
Power Consumption	100 mA @ 24 VDC
Maximum Power	2.90 Watts
Maximum Inrush Current	5 A @ 500 μs with 12 VDC applied, 10 A @ 500 μs with 24 VDC applied
Connector Type	3-pin screw type terminal block
Physical	
Dimensions	3.823" (W) x 3.284" (H) x 1.331" (D) [97.1 mm x 83.4 mm x 33.8 mm]
Weight	2.8 oz. [80 g]
Environmental	See Micro-Graphic panel specifications at the beginning of this catalog section.

NOTE: Recommended DC power supply to power either DC Power Adapter, AutomationDirect Part No. PSP24-024S or PSP24-024C.

PLC Serial Communications Port

Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD- (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	Vcc	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD- (422/485)	15	do not use



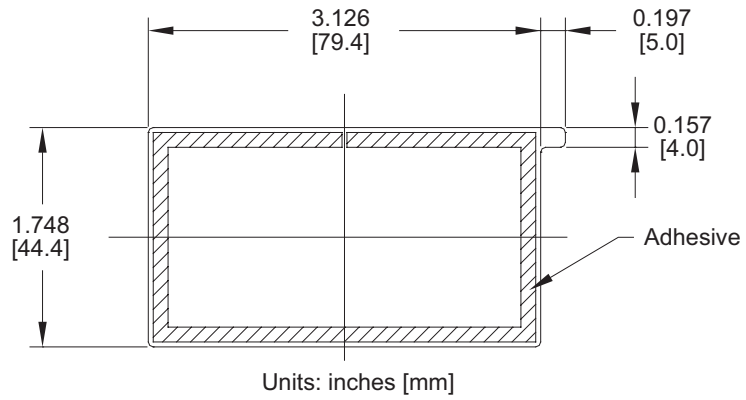
C-more Micro-Graphic Panel Accessories

Clear Screen Overlay

Optional clear screen overlay used to protect C-more Micro-Graphic displays from minor scratches and wear. Package contains 5 clear screen overlays.

Part No. EA-MG-COV-CL

Dimensions

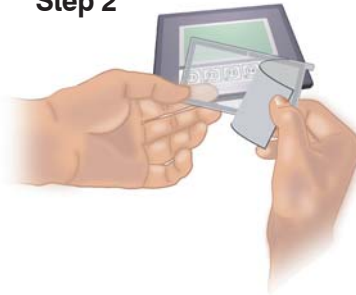


Overlay Cover Installation

Step 1



Step 2



Step 3

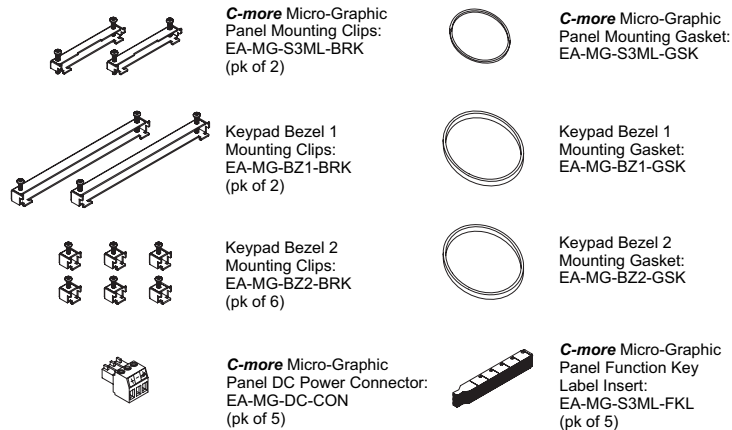


C-more Micro-Graphic Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost C-more Micro-Graphic panel components.

Part Number	Description
EA-MG-S3ML-BRK	Replacement mounting clip for C-more Micro-Graphic panels (pk of 2)
EA-MG-BZ1-BRK	Replacement mounting clip for C-more Micro-Graphic keypad bezel p/n EA-MG-BZ1 (pk of 2)
EA-MG-BZ2-BRK	Replacement mounting clip for C-more Micro-Graphic keypad bezel p/n EA-MG-BZ2 (pk of 6)
EA-MG-DC-CON	Replacement adapter DC power connector for optional p/n EA-MG-P1 and p/n EA-MG-SP1 power adapters used with C-more Micro-Graphic panels (pk of 5)
EA-MG-S3ML-GSK	Replacement mounting gasket for C-more Micro-Graphic panels
EA-MG-BZ1-GSK	Replacement mounting gasket for C-more Micro-Graphic keypad bezel p/n EA-MG-BZ1
EA-MG-BZ2-GSK	Replacement mounting gasket for C-more Micro-Graphic keypad bezel p/n EA-MG-BZ2
EA-MG-S3ML-FKL	Replacement function key label insert for C-more Micro-Graphic panels (pk of 5)

Replacement parts at a glance:



Note: Please refer to the individual data sheet inserts that are included with each replacement part for additional details.

Panel Mounting Clips
Part No. EA-MG-S3ML-BRK



Keypad Bezel 1 Mounting Clips
Part No. EA-MG-BZ1-BRK



Keypad Bezel 2 Mounting Clips
Part No. EA-MG-BZ2-BRK



DC Power Connector
Part No. EA-MG-DC-CON



Panel Gasket
Part No. EA-MG-S3ML-GSK



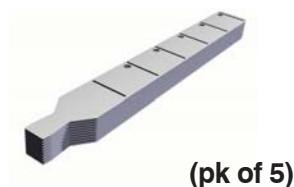
Keypad Bezel 1 Gasket
Part No. EA-MG-BZ1-GSK



Keypad Bezel 2 Gasket
Part No. EA-MG-BZ2-GSK



Function Keys Label Inserts
Part No. EA-MG-S3ML-FKL



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C-more PLC Communication Protocols & Cables

PLC Compatibility Table			
PLC / Network	Model	Protocols	
Allen-Bradley	MicroLogix 1000/1200/1500, SLC 500, 5/01, /02, /03	DH485/AIC/AIC+	
	MicroLogix 1000, 1200 and 1500	DF1 Half Duplex; DF1 Full Duplex	
	SLC 5/03, /04, /05	DF1 Half Duplex; DF1 Full Duplex	
	PLC-5	DF1 Full Duplex	
Ethernet/IP	Ethernet/IP (ControlLogix™ and CompactLogix™ only)	EtherNet/IP™	
Modbus TCP/IP	Modbus TCP/IP devices	Modbus TCP/IP	
GE	90/30 and 90/70	SNPX	
Mitsubishi	FX Series	FX, Direct	
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU	
Omron	C200, C500	Host Link	
DirectLOGIC	DL05/DL06	K-Sequence	
		DirectNET	
		Modbus (Koyo addressing)	
	H0-ECOM/H0-ECOM100	DirectLOGIC Ethernet	
	DL105	K-Sequence	
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence
		D2-250/D2-250-1/D2-260	DirectNET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 Using DCM	DirectNET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	DirectLOGIC Ethernet
		DL305	D3-330/330P (Requires the use of a Data Communications Unit)
	D3-340		DirectNET
	D3-350		K-Sequence
			DirectNET
	D3-350 DCM		Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence
		D4-440	DirectNET
			K-Sequence
		D4-450	K-Sequence
DirectNET			
Modbus (Koyo addressing)			
All with DCM		DirectNET	
Modbus (Koyo addressing)			
H4-ECOM/H4-ECOM100	DirectLOGIC Ethernet		
H2-WinPLC (Think & Do) Live V5.2 or later and Studio any version	Think & Do Modbus RTU (serial port)		
H2-WinPLC (Think & Do) Live V5.5.1 or later and Studio V7.2.1 or later	Think & Do Modbus TCP/IP (Ethernet port)		

Cable Description	Cable Part Number
DirectLOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232)	EA-2CBL
DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232)	EA-2CBL-1
DirectLOGIC PLC RJ-11 port, D3-340 (RS-232)	EA-3CBL
DirectLOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232)	EA-4CBL-1
DirectLOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232)	EA-4CBL-2
Allen-Bradley MicroLogix 1000, 1200 & 1500 (RS-232)	EA-MLOGIX-CBL
Allen-Bradley SLC 5-03/04/05 DF1 port (RS-232)	EA-SLC-232-CBL
Allen-Bradley PLC-5 DF1 port (RS-232)	EA-PLC5-232-CBL
Allen-Bradley SLC 500 DH485 port (RS-232)	EA-DH485-CBL
GE 90/30 and 90/70 15-pin D-sub port (RS-422)	EA-90-30-CBL
MITSUBISHI FX Series 25-pin port (RS-422)	EA-MITSU-CBL
MITSUBISHI FX Series 8-pin mini-DIN (RS-422)	EA-MITSU-CBL-1
OMRON C200, C500 (RS-232)	EA-OMRON-CBL

NOTE: EZTouch serial PLC communication cables are compatible with C-more touch panels.



EA-2CBL-1



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C-more Computer Programming Connections

Using the **C-more** Programming Software for project development, the touch panel can be connected to a PC (personal computer) in one of several ways:

- Connect a USB Programming Cable (USB-CBL-AB15) from a USB port type A on the PC to the USB type B programming port on the C-more touch panel. The USB connection is for direct connection only and does not support USB hubs.
- Connect the **C-more** touch panel to a PC via an Ethernet hub or switch, and CAT5 Ethernet cables (full feature panels only). Multiple panels can be programmed in this configuration.
- Use an Ethernet crossover cable directly between the **C-more** touch panel's Ethernet port and the PC Ethernet port (full feature panels only).

Following are the minimum system requirements for running **C-more** Programming Software, p/n EA-PGMSW, on a PC:

- Personal Computer with a 333 MHz or higher processor (CPU) clock speed recommended; Intel® Pentium/Celeron family, or AMD® K6/Athlon/Duron family, or compatible processor recommended
- Keyboard and Mouse or compatible pointing device
- Super VGA color video adapter and monitor with at least 800 x 600 pixels resolution (1024 x 768 pixels recommended) 64K color minimum
- 300 MB free hard-disk space
- 128 MB free RAM (512 MB recommended)
- CD-ROM or DVD drive for installing software from the CD
- USB port or Ethernet 10/100 Mbps port for project transfer from software to touch panel (Ethernet port not available on -R models)
- Operating System - Windows® XP Home / Professional Edition Service Pack 2 or Windows® 2000 with Service Pack 4

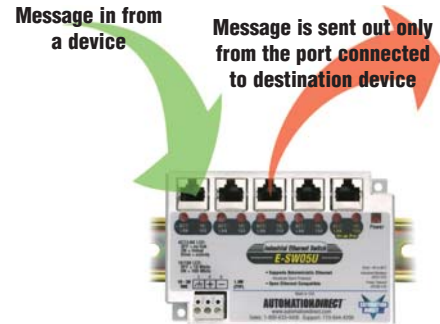
USB Programming Cable



Part No. USB-CBL-AB15

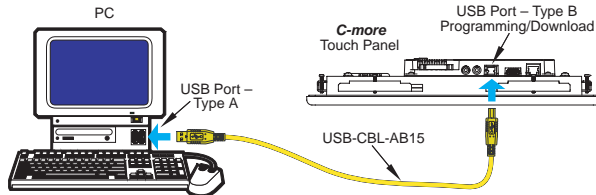
Other lengths available see USB-CBL-AB3, USB-CBL-AB6, USB-CBL-AB10 on page 9-27

Ethernet Switch (switching hub)

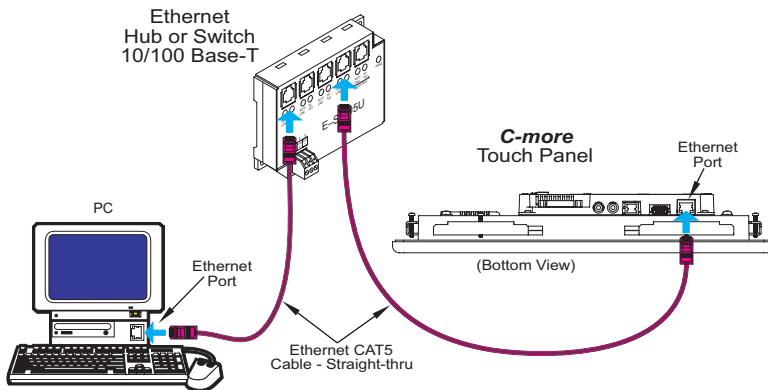


Part No. E-SW05U

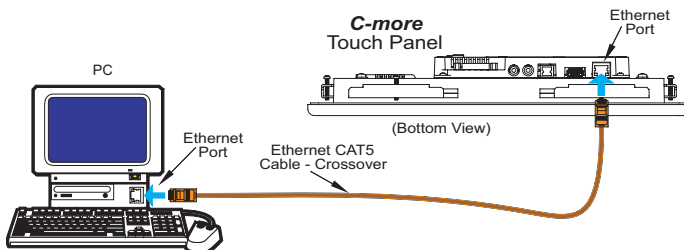
USB Connectivity



Ethernet Connectivity via a Hub or Switch



Ethernet Direct Connection



Ethernet Configuration Kit



Part No. RT-CNFGKIT

The Ethernet Configuration Kit includes a five-port 10/100 Base-T Ethernet switch, four straight-through cables, and one crossover cable. (The cables are at least five feet in length.) The kit provides a great convenience for configuring systems, demonstration systems or basic control projects using Ethernet.