C-more Operator Panels Overview

Getting started

Installing the software and configuring the **C-more** panel is simple. You will need the following to successfully connect, configure and send a project to the panel:

- **C-more** touch panel - 6", 8", 10", 12" or 15" model
- **C-more** Programming Software, p/n EA9-PGMSW
- **C-more** programming cable, USB or Ethernet
- 12-24 VDC switching power supply or the optional **C-more** AC Power Adapter, p/n EA-AC
- Personal Computer - to run **C-more** programming software
- PLC communications cable (serial or Ethernet) to connect the **C-more** Touch Panel to your controller

Part Number	Description	Price
EA9-T6CL-R	**C-more** EA9 series touch screen interface panel, 6-inch color TFT (5.7 inch viewable screen), base model, 64k colors, 320 x 240 pixel QVGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (1) serial port, USB 2.0 Type A and B ports, supports SD memory card, no Ethernet support. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-T6CL	**C-more** EA9 series touch screen interface panel, 6-inch color TFT (5.7 inch viewable screen), 64k colors, 320 x 240 pixel QVGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB 2.0 Type A and B ports and Ethernet port; supports SD memory card. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-T8CL	**C-more** EA9 series touch screen interface panel, 8-inch color TFT (8.4 inch viewable screen), 64k colors, 800 x 600 pixel SVGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB 2.0 Type A and B ports and Ethernet port; supports SD memory card. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-T10CL	**C-more** EA9 series touch screen interface panel, 10-inch color TFT (10.4 inch viewable screen), 64k colors, 800 x 600 pixel SVGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB 2.0 Type A and B ports and Ethernet port; supports SD memory card. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-T12CL	**C-more** EA9 series touch screen interface panel, 12-inch color TFT (12.1 inch viewable screen), 64k colors, 800 x 600 pixel SVGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB 2.0 Type A and B ports and Ethernet port; supports (2) SD memory cards. Includes HDMI video out. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-T15CL	**C-more** EA9 series touch screen interface panel, 15-inch color TFT (15 inch viewable screen), 64k colors, 1024 x 768 pixel XGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB <None>2.0 Type A and B ports and Ethernet port; supports (2) SD memory cards. Includes HDMI video out. Compatible with EA9-PGMSW programming software version 5.0 or later.	<--->
EA9-PGMSW	**C-more** Windows-based programming software on CD for the **C-more** EA9 series touch panels. Requires Windows XP Pro 32-bit, Windows 7 (Pro, Ultimate, 32 or 64-bit) or Windows 8 (Pro, Ultimate, 32 or 64-bit). Requires USB or Ethernet connection to touch panel. Cables sold separately. (Does not support **C-more** EA7 series panels.)	<--->
USB-CBL-AB3	Standard 3-ft. (0.9m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any **C-more** touch panel for setup and programming. (Note: Touch panels require a power source for configuration and operation.)	<--->
USB-CBL-AB6	Standard 6-ft. (1.8m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any **C-more** touch panel for setup and programming. (Note: Touch panels require a power source for configuration and operation.)	<--->
USB-CBL-AB10	Standard 10-ft (3 meter) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any **C-more** touch panel for setup and programming. (Note: Touch panels require a power source for configuration and operation.)	<--->
USB-CBL-AB15	Standard 15-ft. (4.6m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any **C-more** touch panel for setup and programming. (Note: Touch panels require a power source for configuration and operation.)	<--->

Company Information

Systems Overview

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Photo Sensors

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Current Sensors

Pressure Sensors

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Terminal Blocks & Wiring

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C-more Selection Guide & Specifications

Specification \ Model	6" TFT color w/ base features	6" TFT color w/ full features	8" TFT color w/ full features	10" TFT color w/ full features	12" TFT color w/ full features	15" TFT color w/ full features
Part Number	EA9-T6CL-R	EA9-T6CL	EA9-T8CL	EA9-T10CL	EA9-T12CL	EA9-T15CL
Price	<--->	<--->	<--->	<--->	<--->	<--->
Display Actual Size and Type	5.7" TFT color		8.4" TFT color	10.4" TFT color	12.1" TFT color	15.0" TFT color
Display Viewing Area	4.54" x 3.40" [115.2 mm x 86.4 mm]		6.71" x 5.03" [170.4 mm x127.8mm]	8.31" x 6.24" [211.2 mm x 158.4 mm]	9.69" x 7.26" [246.0 mm x 184.5 mm]	11.97" x 8.98" [304.1 mm x 228.0 mm]
Weight	1.56 lb [710g]	1.59 lb [720g]	2.93 lb [1330g]	4.19 lb [1900g]	4.89 lb [2200g]	6.50 lb [2950g]
Screen Pixels	320 x 240 (QVGA)		800 x 600 (SVGA)			1024 x 768 (XGA)
Display Brightness	280 nits (typ)		310 nits (typ)	280 nits (typ)		
LCD Panel Dot Pitch	0.18 mm x 0.18 mm		0.213 mm x 0.213 mm	0.264 mm x 0.264 mm	0.3075 mm x 0.3075 mm	0.297 mm x 0.297 mm
Color Scale	65,536 colors					
Backlight Average Lifetime*	50,000 hours @ 25°C					
Touch Panel Type	Four-wire analog resistive					
Project Memory	26MB				82MB	
Number of Screens	Up to 999 screens – limited by project memory					
Realtime Clock	Realtime Clock Built into panel, backed up for 30 days at 25°C					
Calendar - Month / Day / Year	Yes - monthly deviation 60 sec (Reference)					
Serial Port 1	15-pin D-sub female - RS232C, RS-422/485					
Serial Port 2	N/A	3-wire terminal block - RS-485				
Serial Port 3	N/A	RJ-12 modular jack - RS-232C				
USB Port - Type B	USB 2.0 High speed (480 Mbps) Type B - Download/Program					
USB Port - Type A	USB 2.0 High speed (480 Mbps) Type A -for USB device options					
Ethernet Port	N/A	Ethernet Port Ethernet 10/100 Base-T, auto MDI/MDI-X				
Audio Line Out	N/A	3.5 mm mini jack – requires amplifier and speaker(s)				
Mic In	N/A	3.5 mm mini jack				
SD Card Slot	1 slot supports max 2 GB (SD,) max 32 GB (SDHC)				2 slots support max 2 GB (SD), max 32 GB (SDHC)	
HDMI Out	N/A				Yes	
Supply Power	12-24 VDC Class 2, or use the AC/DC Power Adapter, EA-AC, to power the touch panel from a 100-240 VAC, 50/60 Hz power source. Reverse Polarity Protected					
Power Consumption	16.0 W 1.30 A @ 12VDC 0.66 A @ 24VDC	18.0 W 1.50 A @ 12VDC 0.75 A @ 24VDC	18.0 W 1.50 A @ 12VDC 0.75 A @ 24VDC	21.0 W 1.75 A @ 12VDC 0.88 A @ 24VDC	29.0 W 2.40 A @ 12VDC 1.20 A @ 24VDC	
Internal Fuse (non-replaceable)	4.0 A		6.3 A			
Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50°C (122°F) IEC 60068-2-14 (Test Nb, Thermal Shock)					
Storage Temperature	−20 to +60°C (−4 to +140 °F) IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock)					
Humidity	5–95% RH (non-condensing)					
Environment	For use in Pollution Degree 2 environment, no corrosive gases permitted					
Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1mS pulse EN61000-4-2 (ESD), EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-5 (Serge) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity)					
Withstand Voltage	1000 VAC, 1 min. (FG to Power supply)					
Insulation Resistance	> 10M ohm @ 500VDC (FG to Power supply)					
Vibration	IEC60068-2-6 (Test Fc)					
Shock	IEC60068-2-27 (Test Ea)					
Emission	EN55011 Class A (Radiated RF emission)					
Enclosure	NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (When mounted correctly)					
Agency Approvals	UL508, E157382 CE (EN61131-2), RoHS (2011/65/EU) CUL Canadian C22.2					

* NOTE: The backlight average lifetime is defined as the average usage time it takes before the brightness becomes 50% of the initial brightness. The lifetime of the backlight depends on the ambient temperature. The lifetime will decrease under low or high temperature usage.

C-more 15" TFT Color Touch Panel - Full Model

C-more EA9 series touch screen interface panel, 15-inch color TFT (15 inch viewable screen), 64k colors, 1024 x 768 pixel XGA screen resolution, 800 MHz CPU, 12-24 VDC powered, NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight. Includes (3) serial ports, USB 2.0 Type A and B ports and Ethernet port; supports (2) SD memory cards. Includes HDMI video out. Compatible with EA9-PGMSW programming software version 5.0 or later.

Part No. EA9-T15CL

<---->

Features

- 15.0" diagonal color TFT (Thin Film Transfer) LCD display with 64K colors
- 1024x 768 pixel resolution
- 280 NITS display brightness
- 50,000 hour average backlight half-life
- Analog resistive (1024 X 1024) touch screen allowing unlimited touch areas
- USB port B (program/download) and USB port A (USB device options)
- Ethernet 10/100 Base-T port (program/download & PLC communication)
- Remote Internet Access
- Serial PLC interface (RS-232/422/485)
- Two built-in SD memory card slots.
- 12–24 VDC powered, 110VAC power adapter (optional)
- Audio Line Out, stereo - requires amplifier and speaker(s)
- Microphone in
- HDMI Port
- 82MB project memory
- Data logging
- 0 to 50°C [32 to 122°F] operating temperature range
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- Slim design saves panel space
- UL, cUL, CSA & CE agency approvals
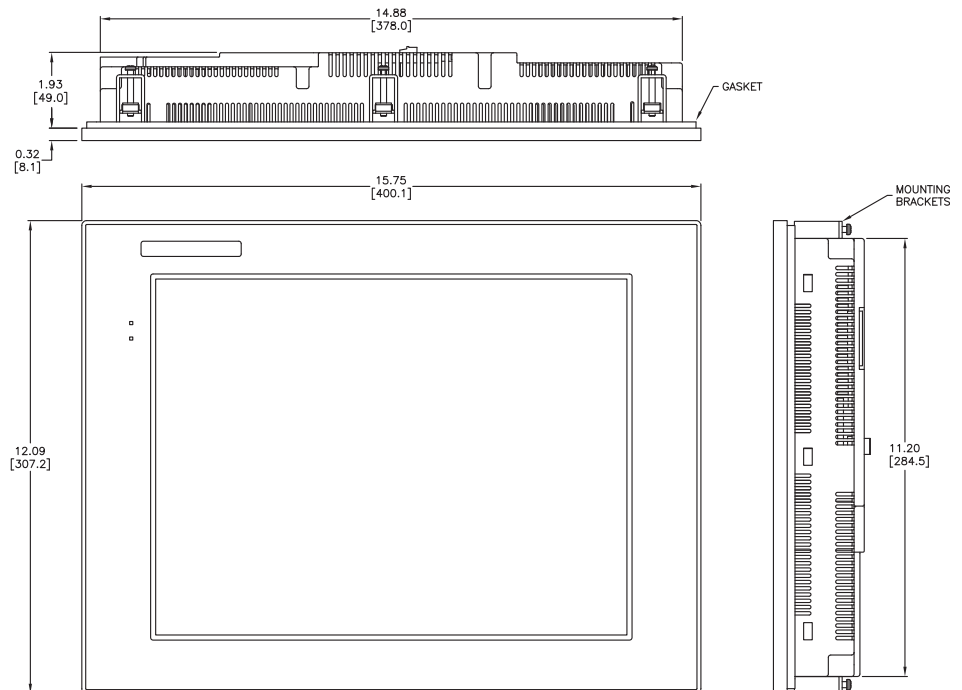- 2-year warranty from date of purchase

Function	Available
Ethernet	Yes
USB	Yes
SD Card	Yes
Audio Out	Yes
Mic In	Yes
HDMI Out	Yes

Dimensions
inches / [mm]

Mounting Cutout

C-more Communication Ports

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Port 2 — Serial Communication RS-485
+ / + / − / Logic Ground

Port 3 — RJ12 Serial Communication RS-232C

Pin	Signal
1	0V
2	N.C.
3	RXD
4	TXD
5	+5V
6	0V

SD Card Slot 1

SD Card Slot 2

USB Port - Type B Programming

Pin	Signal
1	N.C.
2	D–
3	D+
4	GND
Shell	Shield

Port 1 — PLC Serial Communications RS-232C / RS-485

Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE (for DH485)	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	N.C.
5	Logic GND	10	RXD– (422/485)	15	N.C.

HDMI Port Video Out

USB Port - Type A USB Device Options

Pin	Signal
1	Vbus
2	D–
3	D+
4	GND
SHELL	Shield

Ethernet 10/100 Base-T PLC Communications, Programming/Download

Pin	Signal	Pin	Signal
1	TD+	5	do not use
2	TD–	6	RD–
3	RD+	7	N.C.
4	do not use	8	N.C.

Link Status LED (Green)

On	Ethernet Linked
Off	No Ethernet Comm.
Blinking Green	Comm. Activity

Network Speed LED (Yellow)

On	100M
Off	10M

◇ Note: Device is not available on Base Feature touch panel EA9-T6CL-R

● Note: Device is only available on touch panels EA9-T12CL and EA9-T15CL.

Ethernet Port

The Ethernet port has several uses:
- Download program to panel
- Communicate to PLCs/PCs
- Send e-mail
- Access FTP server
- Act as a Web server
- Remote Internet Access

The Ethernet port has an RJ-45 8-wire modular connector with green and yellow LEDs.
- The yellow LED indicates network speed; off for a 10 Mbps connection and illuminated for a 100 Mbps connection.
- The green LED indicates link status and illuminates when a link is established.

Note: The base panels (-R part numbers) do not include an Ethernet port, and do not have these capabilities.

USB Port B

Program *C-more* via the USB programming port. It's fast and easy, with no baud rate settings, parity, or stop bits to worry about. We stock standard USB cables for your convenience. USB Port B can be used to upload or download projects to and from a PC.

USB Port A

The Universal Serial Bus (USB) Port A is a standard feature for all models and can be used to connect various USB HID (Human Input Device) devices to the panel, such as:
- USB pen drives, (USB-FLASH)
- USB keyboards
- USB barcode scanners
- USB card scanners

C-more can log data to the USB pen drive as well as load projects to the panel from the pen drive. You can also back up project files and panel firmware.

Sound Interface (Audio Line Out)

When attached to an amplifier and speaker(s), *C-more* can play warning sounds or pre-recorded messages such as: "conveyor is jammed". *C-more* supports WAV type files. The output is stereo.

Serial Port

Port 1 - Connect to your serial controller network via Port 1. Port 1 is a 15-pin port that supports RS-232 or RS-422/485.

Port 2 - Connect your RS-485 network via Port 2. Port 2 is provided with a 3-wire removable terminal block.

Port 3 - Connect to your RS-232C device via Port 3. Port 3 is an RJ12 connection.

HDMI Port

EA9-T12CL and EA9-T15CL include an HDMI Type A port to provide video output to a projector or remote monitor.

C-more Communication Protocols & Cables

Compatibility Table		
PLC Family	**Model**	**Protocols**
Allen-Bradley	MicroLogix 1000/1100/1200/1400/1500, SLC 5-/01/02/03, PLC5	DH485/AIC/AIC+
	MicroLogix 1000, 1100, 1200 and 1500	DF1 Half Duplex; DF1 Full Duplex
	SLC 5-/03/04/05	
	ControlLogix™, CompactLogix™, FlexLogix™	
	PLC-5	DF1 Full Duplex
	ControlLogix, CompactLogix, FlexLogix - Tag Based	DF1 Half Duplex; DF1 Full Duplex
	ControlLogix, CompactLogix, FlexLogix - Generic I/O Messaging	EtherNet/IP Server
	ControlLogix, CompactLogix, FlexLogix - Tag Based	EtherNet/IP Client
	MicroLogix 1100 & SLC 5/05, both via native Ethernet port	
	MicroLogix 1000, 1100, 1200, 1400,1500 & SLC 5-03/04/05, all via ENI Adapter	
	Micro 800 series	Modbus RTU
		Modbus TCP
Modbus TCP/IP	Modbus TCP/IP devices	Modbus TCP/IP
GE	90/30, 90/70, Micro 90, VersaMax Micro	SNPX
Mitsubishi	FX Series	FX Direct
	Q02, Q02H, Q06H, Q12H, Q25H	Q CPU
	Q, QnA Serial	QnA Serial
	Q, QnA Ethernet	QnA Ethernet
Omron	C200 Adapter, C500	Host Link
	CJ1/CS1 Serial, CJ1/CS1 Ethernet	FINS
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx	Modbus RTU
Siemens	S7-200 CPU, RS-485 Serial	PPI
	S7-200 CPU, S7-300 CPU, S7-400, S7-1200 CPU; Ethernet	Ethernet ISO over TCP
Productivity Series	Productivity3000 Serial (P3-550)	AutomationDirect P3000 Serial
	Productivity3000 Ethernet (P3-550)	AutomationDirect P3000 Ethernet
Do-more	all	Do-more Serial
		Do-more Ethernet
CLICK	all	AutomationDirect Modbus (CLICK)
DirectLOGIC	DL05/DL06	all	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		H0-ECOM/H0-ECOM100	*Direct*LOGIC Ethernet
	DL105	all	K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence
			*Direct*NET
		D2-250/D2-250-1/D2-260	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 using D2-DCM	*Direct*NET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	*Direct*LOGIC Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit)	*Direct*NET
		D3-340	*Direct*NET
		D3-350	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		D3-350 using D3-DCM	*Direct*NET
			Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence
			*Direct*NET
		D4-440	K-Sequence
			*Direct*NET
		D4-450	K-Sequence
			*Direct*NET
			Modbus (Koyo addressing)
		All with D4-DCM	*Direct*NET
			Modbus (Koyo addressing)
		H4-ECOM/H4-ECOM100	*Direct*LOGIC 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	Price
AutomationDirect Productivity Series, Do-more, CLICK, *Direct*LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	**EA-2CBL**	<--->
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C)	**EA-2CBL-1**	<--->
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C)	**EA-3CBL**	<--->
*Direct*LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C)	**EA-4CBL-1**	<--->
*Direct*LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232C)	**EA-4CBL-2**	<--->
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C)	**EA-MLOGIX-CBL**	<--->
Allen-Bradley SLC 5-03/04/05 ControlLogix, CompactLogix, FlexLogix, DF1 port (RS-232C)	**EA-SLC-232-CBL**	<--->
Allen-Bradley PLC-5 DF1 port (RS-232C)	**EA-PLC5-232-CBL**	<--->
Allen-Bradley SLC 500 DH485 port (RS-485A)	**EA-DH485-CBL**	<--->
GE 90/30, 90/70, Micro 90, VersaMax Micro 15-pin D-sub port (RS-422A)	**EA-90-30-CBL**	<--->
MITSUBISHI FX Series 25-pin port (RS-422A)	**EA-MITSU-CBL**	<--->
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	**EA-MITSU-CBL-1**	<--->
OMRON Host Link C200 Adapter, C500 (RS-232C)	**EA-OMRON-CBL**	<--->

Example Cables:

EA-2CBL

EA-2CBL-1

C-more Computer Programming Connections

Using the *C-more* Programming Software EA9-PGMSW for project development, the touch panel can be connected to a PC (personal computer) in one of several ways:

- Connect a USB Programming Cable such as (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 with a Cat5 Ethernet cable via an Ethernet switch. Multiple panels can be programmed in this configuration.

Following are the minimum system requirements for running *C-more* Programming Software, p/n EA9-PGMSW, on a PC:

- 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
- 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 Professional Edition (32 bit), Windows 7 (32 or 64 bit) or Windows 8 (32 or 64 bit)

> **NOTE: Regarding Ethernet access to a C-more panel.**
>
> **If you intend to take advantage of the methods of remote access to the panel, including the web server, PC remote access, FTP, iPhone or iPad app, you need to consider the security exposure in order to minimize the risks to your process and your C-more panel.**
>
> **Security measures may include password protection, changing the ports exposed on your network, including a VPN in your network, and other methods. Security should always be carefully evaluated for each installation.**

USB Connectivity

Ethernet Connectivity via a Hub or Switch

Ethernet Direct Connection

USB Programming Cable

Part No. USB-CBL-AB15

<--->

Other lengths available see
USB-CBL-AB3, USB-CBL-AB6, USB-CBL-AB10

Stride™ Ethernet Switch

Message is sent out only from the port connected to destination device

Message in from a device

Part No. SE-SW5U

<--->

Ethernet Configuration Kit

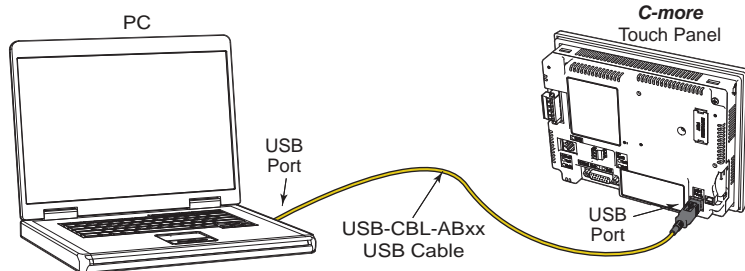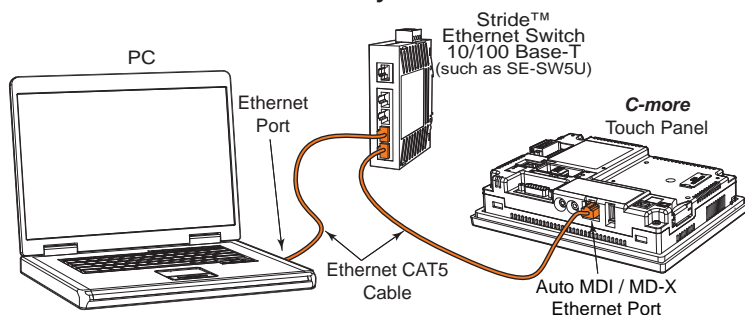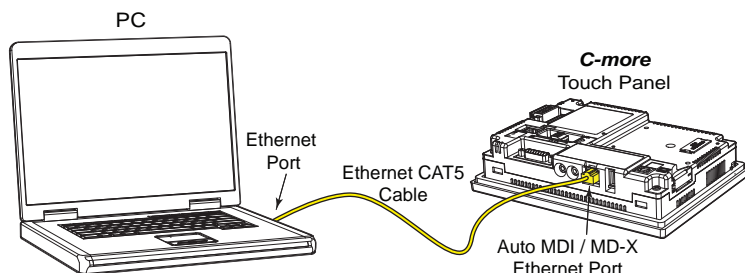
Part No. RT-CNFGKIT

<--->

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.

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Pressure Sensors
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C-more Power Connection Wiring

Providing Power to the Touch Panel

- Connect a dedicated 12–24 VDC Class 2 power supply to the DC connector on the rear of the *C-more* touch panel. Connect the ground terminal to a proper equipment ground.
- or, install a *C-more* AC Power Adapter (EA-AC) to the rear of the touch panel and connect an AC voltage source of 100-240 VAC, 50/60 Hz, to its AC connector.
- then, turn on the power source and check the LED status indicators on the front and rear of the *C-more* touch panel for proper operation.

DC Wiring
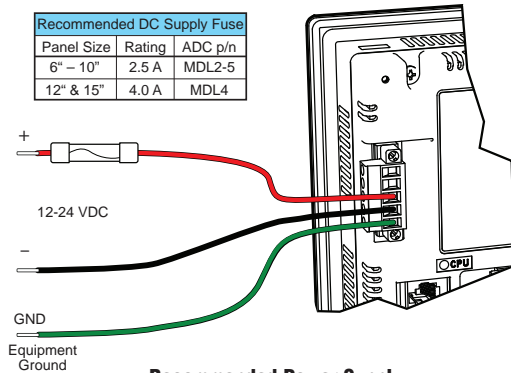
Recommended DC Supply Fuse		
Panel Size	Rating	ADC p/n
6" – 10"	2.5 A	MDL2-5
12" & 15"	4.0 A	MDL4

+

12-24 VDC

–

GND
Equipment Ground

Recommended Power Supply:
AutomationDirect Part No. PSC-24-060

DC-CON Tightening Torque	
Power connector screw torque	70.4 oz-in [0.5 Nm]
Power connector mounting torque	56 oz-in [0.4 Nm]

AC Wiring

AC Power Adapter EA-AC

L N

Recommended AC Supply Fuse
3.0A time delay, ADC p/n: MDL3

100 - 240 VAC
50 / 60 Hz

L

N

G
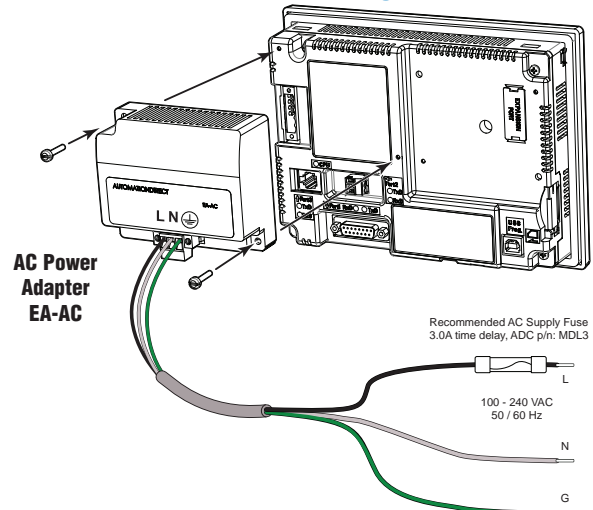
EA-AC Tightening Torque	
Power supply cable torque	71 - 85 oz-in [0.5 - 0.6 Nm]
Power connector mounting torque	71 - 85 oz-in [0.5 - 0.6 Nm]
Mounting flange screw torque	57 - 71 oz-in [0.4 - 0.5 Nm]

Power LED (Green)	
On	Power On
Off	Power Off

User Defined LED (Green, Orange & Red)	
Off	
Green	
Red	
Orange	User Defined (Refer to online help file for further details)
Blinking Red	
Blinking Orange	
Blinking Green	

Front View

Rear View

CPU Status LED (Green, Orange & Red)	
Off	Power Off
Green	Normal – CPU Run State
Red	Memory Error
Blinking Red	Watchdog Timer Error
Blinking Orange	OS Error
Blinking Green	Power Loss Detection

Serial TxD/RxD LED (Green)	
On	Comm. is active
Off	No communication

Port3
TxD
RxD

Port1 RxD TxD

Port2
TxD
RxD

CPU

WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to *personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.*

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 1-800-633-0405 or 770-844-4200.

This publication is based on information that was available at the time it was printed.

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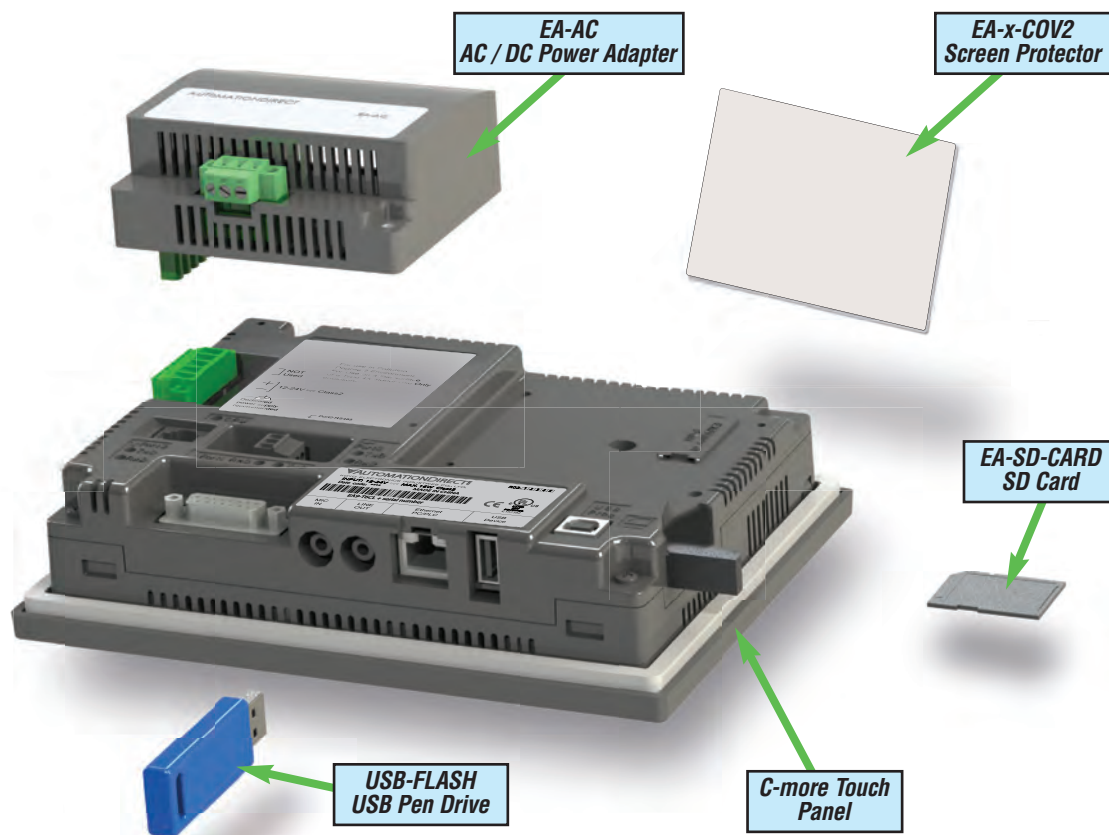
C-more Accessories

Accessories

The *C-more* touch panels can be enhanced with the accessories below:

Part Number	Description	Price
EA-AC	AC/DC Adapter for *C-more* EA7 and EA9 series touch panels; powered from a 100-240 VAC, 50/60 Hertz power source. Provides 24VDC at 1.5A. Power Fault features help protect data being logged to Compact Flash or SD card during power failures. *C-more* EA7 series panels must have firmware version 1.21 Build 6.18E or higher for proper operation.	<--->
EA-6-COV2	Non-glare protective overlay, 6-inch, protects *C-more* touch screen and helps reduce glare from external light sources. Compatible with *C-more* EA7 and EA9 series and *C-more* Micro-Graphic 6-inch panels. Package of 3.	<--->
EA-8-COV2	Non-glare protective overlay, 8-inch, protects *C-more* touch screen and helps reduce glare from external light sources. Compatible with *C-more* EA7 and EA9 series 8-inch panels. Package of 3.	<--->
EA-10-COV2	Non-glare protective overlay, 10-inch, protects *C-more* touch screen and helps reduce glare from external light sources. Compatible with *C-more* EA7 and EA9 series 10-inch panels. Package of 3.	<--->
EA-12-COV2	Non-glare protective overlay, 12-inch, protects *C-more* touch screen and helps reduce glare from external light sources. Compatible with *C-more* EA7 and EA9 series 12-inch panels. Package of 3.	<--->
EA-15-COV2	Non-glare protective overlay, 15-inch, protects *C-more* touch screen and helps reduce glare from external light sources. Compatible with *C-more* EA7 and EA9 series 15-inch panels. Package of 3.	<--->
EA-SD-CARD	SD memory card for non-volatile storage, 2GB industrial grade, 85 degrees C maximum operating temperature makes it suitable for data logging in industrial applications. Recommended for the *C-more* EA9 series touch panels.	<--->
USB-FLASH	USB Flash drive, SanDisk, 4GB (SanDisk P/N SDCZ50-004G-A46). Recommended for use with the C-more touch panels and Productivity3000 controllers.	<--->

Accessory Locations

EA-AC AC / DC Power Adapter

EA-x-COV2 Screen Protector

EA-SD-CARD SD Card

USB-FLASH USB Pen Drive

C-more Touch Panel

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C-more Accessories

AC/DC Power Adapter

The optional *C-more* AC/DC Power Adapter can be used to power the *C-more* touch panels from a 100-240 VAC, 50/60 Hertz, voltage source. The adapter provides 24 VDC @ 1.5 A to the touch panel's DC power connector and can be conveniently secured to the touch panel with two captive screws.

The adapter provides a power loss signal to the touch panel that causes the touch panel to stop writing data to SD memory devices providing a controlled shutdown for increased data logging reliability.

Part No. EA-AC   <--->

Overall Panel Depth w/ EA-AC Installed
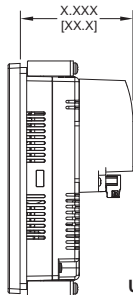
EA9-T6CL-R = 2.99 [75.9]
EA9-T6CL = 2.99 [75.9]
EA9-T8CL = 3.51 [89.2]
EA9-T10CL = 3.51 [89.2]
EA9-T12CL = 3.35 [85.1]
EA9-T15CL = 3.35 [85.1]

Units: inches[mm]

Dimensions
inches / [mm]
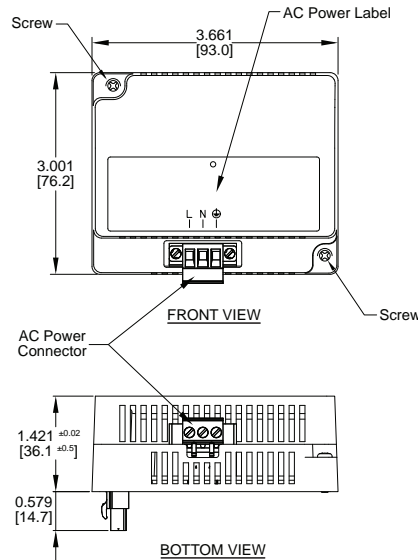
AC/DC Power Adapter Specifications			
Part Number	EA-AC	**Short Circuit Protection**	85VAC: 2.6 A, 100VAC: 2.8 A, 264VAC: 3.9 A
Input Voltage & Frequency	100-240 VAC +10% -15%; 50/60 Hertz	**Static Electricity Discharge Resistance**	Compliant with IEC61000-4-2, Contact: 4 kV, Air: 8 kV
Wire	24-14 AWG, 60 / 75°C Copper. Tighten to 72 oz-in (0.5 Nm)	**Agency Approvals**	UL508 - UL Recognized for use with C-more panels, cUL, CE, EMC EN61132-2
Permissible Momentary Power Failure	Within 40ms	**Environment**	For use in pollution degree 2 environment
Input Power	68VA or less	**Grounding**	Ground resistance: less than 100 ohm
Operating Temperature Range	0°C to 50°C [32 to 122°F] Maximum surrounding temperature rating, 50°C	**Dimensions - inches [mm]**	3.00" (H) x 3.66" (W) x 1.42" (D) [76.2 mm x 93.0 mm x 36.1 mm] (Excluding DC Power Connector.)
Storage Temperature Range	-20 to 60°C [-4 to 140°F]	**Weight**	6.13 oz. [175 g]
Operating & Storage Humidity	10-85% RH (non-condensing)	**Cooling Method**	Natural convection
Noise Immunity	1000VAC p-p (Pulse width 1 µs, rise time: 1 ns), with proper ground connection on AC terminal block.	**Removable AC Power Connector (included)**	EA-AC-CON or DECA Switchlab MC101-508-03G Secured with (2) captive M2.5 screws, torque to 70 oz-in [0.5 Nm]
Hi-Pot	1000VAC, 1 minute, with proper ground connection on AC terminal block.	**Output Voltage and Ripple**	21.6 - 26.4 VDC, Ripple < 100 mV p-p
Insulation Resistance	500VDC, 10 M ohm or above, with proper ground connection on AC terminal block.	**Output Current**	Maximum 1.5 A
Vibration	Compliant with IEC61131-2	**Inrush Current**	For 100VAC: 15A, 3ms or less For 240VAC: 20A, 3ms or less
Shock	Pulse shape: Sine half wave, Peak acceleration: 147 m/s² (15 G), X, Y, Z: 3 directions, 2 times each	**Mounting to Touch Panel**	Secure with (2) spring loaded captive M3-20 screws, torque to 50 oz-in (0.35 Nm)
Thermal Protection	140°C [284°F], with autorecovery	**Recommended External Fuse**	3.0A (ADC p/n: MDL3)

C-more Accessories

SD Card

Part No.
EA-SD-CARD

<---\>

SD memory card for non-volatile storage, 2GB industrial grade. 70 degrees C maximum operating temperature. Recommended for the *C-more* EA9 series touch panels. The SD card is the fastest option for writing data. If logged data is saved to external memory, AutomationDirect recommends using an EA-SD-CARD.
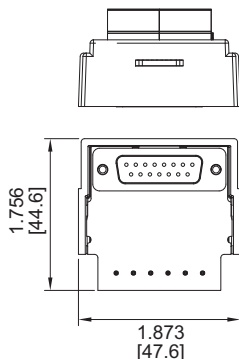
USB Pen Drive

Part No.
USB-FLASH

<---\>

USB flash drive for non-volatile storage, 4GB. Recommended for the *C-more* EA9 series touch panels.

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D-SUB 15-pin to Terminal Block Adapter

The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of the panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized for use with *C-more* panels.
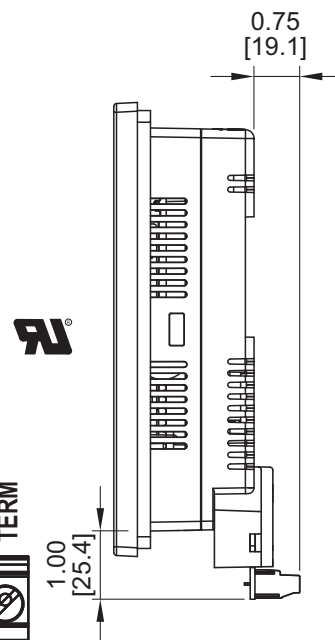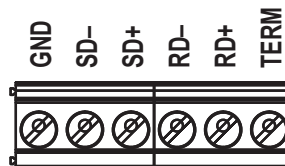
Part No.
EA-COMCON-3

<---->

Dimensions

Units: inches [mm]

1.756 [44.6]

1.873 [47.6]

1.126 [28.6]

0.75 [19.1]

1.00 [25.4]

EA-COMCON-3

Terminals

GND	SD–	SD+	RD–	RD+	TERM
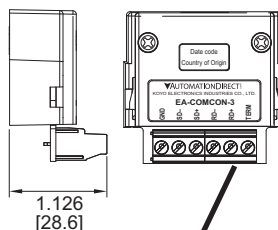
EA-COMCON-3 Wiring Specs	
Wire Size	**Screw Torque**
14-24 AWG	4.4 lb-in [0.5 Nm]

C-more Accessories

Non-glare Screen Covers (in packages of 3)

The non-glare screen covers are protective overlays used to protect the touch screen while helping to reduce the glare from external light sources.

Part Nos. EA-6-COV2, EA-8-COV2, EA-10-COV2, EA-12-COV2 and EA-15-COV2

Dimensions
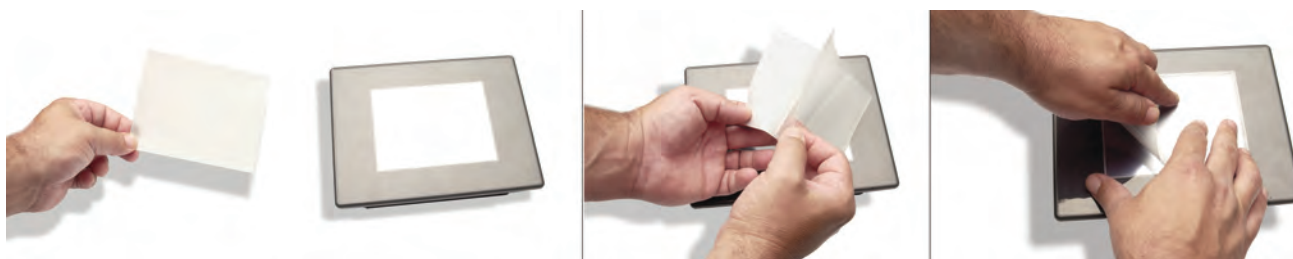inches / [mm]

EA-6-COV2   <--->
EA-8-COV2   <--->
EA-10-COV2   <--->
EA-12-COV2   <--->
EA-15-COV2   <--->
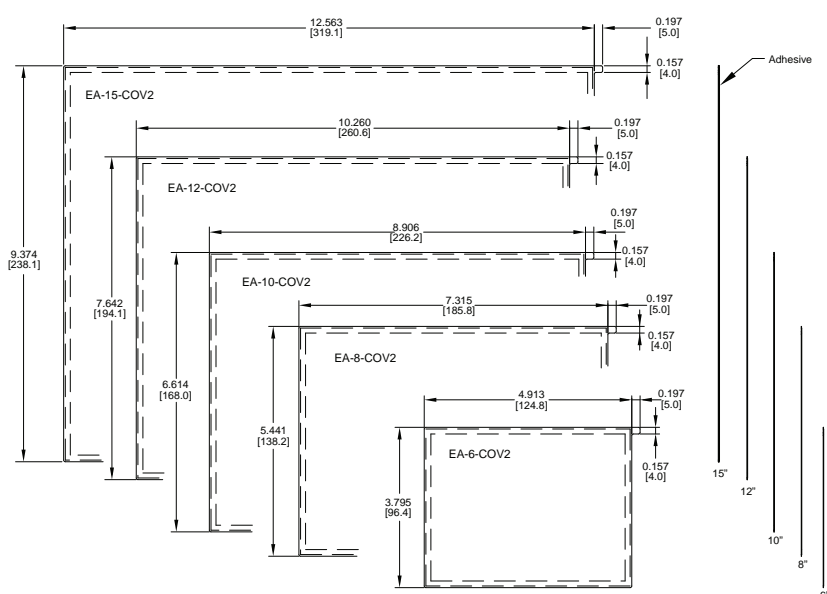
Installation

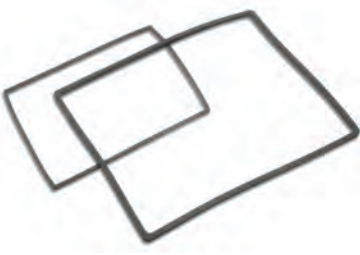

NOTE: The Protective Cover ships with a thin protective sheet on the face of the cover that needs to be carefully removed. If your panel is not clear, the protective sheet may not have been removed.

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C-more Replacement Parts

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

Replacement parts at a glance:

Part Number		Description
EA9-BRK		Panel mounting brackets, replacement, for C-more EA9 series touch panels. Package of 8 brackets and screws.
EA9-LBL		Blank label insert for front bezel, replacement, for C-more EA9 series touch panels. Package of 10.
EA9-3TB		3-pole terminal block, replacement, for 3-wire RS485 communications port on C-more EA9 series panels. Package of 2.
EA-DC-CON		5-terminal DC power connector, replacement, for C-more EA7 and EA9 series touch panels
EA-AC-CON		3-terminal AC power connector, replacement, for C-more EA7 and EA9 series touch panels
EA9-15-GSK		Panel mounting gasket, replacement, for C-more EA9-T15CL 15-inch touch panel, NEMA 4/4X
EA9-12-GSK		Panel mounting gasket, replacement, for C-more EA9-T12CL 12-inch touch panel, NEMA 4/4X
EA9-10-GSK		Panel mounting gasket, replacement, for C-more EA9-T10CL 10-inch touch panel, NEMA 4/4X
EA9-8-GSK		Panel mounting gasket, replacement, for C-more EA9-T8CL 8-inch touch panel, NEMA 4/4X
EA9-6-GSK		Panel mounting gasket, replacement, for C-more EA9-T6CL(-R) 6-inch touch panels, NEMA 4/4X