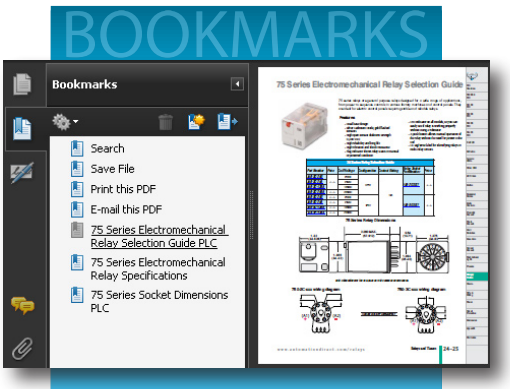
AUTOMATIONDIRECT.com

C-more® micro HMI: Operator Interface



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C-more Micro

It's a touch panel... at a text panel price

Do more with C-more Micro-Panels!

C-more Micro panels have become one of the most popular and most reliable value packed operator interfaces in the industrial market. After all, the low prices allow customers with tight budgets to take advantage of graphic control panel features that are most often found in more expensive touch screen products. The *C-more Micro* selection continues to expand as we now offer 3-inch, 4-inch, 6-inch, 8-inch and 10-inch panel sizes. With the addition of the larger 8-inch and 10-inch sizes, you can display even more text, graphics, or bitmaps to effectively communicate and display data to the operator. Touch and non-touch screen models are available in the 3-inch models.

The 3-inch STN monochrome versions offer five selectable background colors that allow you to use color to convey meaning. The 4-inch 6-inch, 8-inch, and 10-inch TFT full color versions offer up to 32,767 colors for more vibrant and colorful project screens.

Prices Starting at $161

4"TFT model Starting at $356

C-more Micro Panel Selection				
	C-more Micro EA1 Series Panels		C-more Micro EA3 Series Panels	
	3-inch STN Monochrome Models	4-inch and 6-inch TFT Color Models	6-inch TFT Color Models	8-inch and 10-inch TFT Color Models
Display Resolution & Type	128 x 64, touch or non-touch	320 x 240, touch	320 x 240, touch	800 x 600, touch
Ports	1 serial (RJ12) and Optional DSUB15	1 USB (Port 1: USB Type B) 1 Serial (DSUB15)	1 USB (Port 1: USB Type B) 2 Serial (RJ12 and DSUB15) Ethernet Option Module (EA-ECOM)	
User Project Memory	768KB	6.2MB User Project Memory	6MB	30MB
Portrait Mode	NO	YES	YES	
Colors	Monochrome; backlight can be configured per screen and/or per alarm as: red, green, amber, lime, or yellow (standard); or red, white or three shades of pink (high-contrast)	32,768 colors	32,768 colors	

FREE Configuration Software!

C-more Micro Programming Software is based on its powerful sibling, the *C-more* Touch Panel. It offers high end features designed to reduce your configuration time. Simply drag and drop the objects from the Object list (right side of screen) on to the screen construction area. Then configure your PLC tags and assign them to the objects. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the *C-more* Micro configuration software could easily pay for the panel.
Check out www.C-moreMicro.com for a demo.

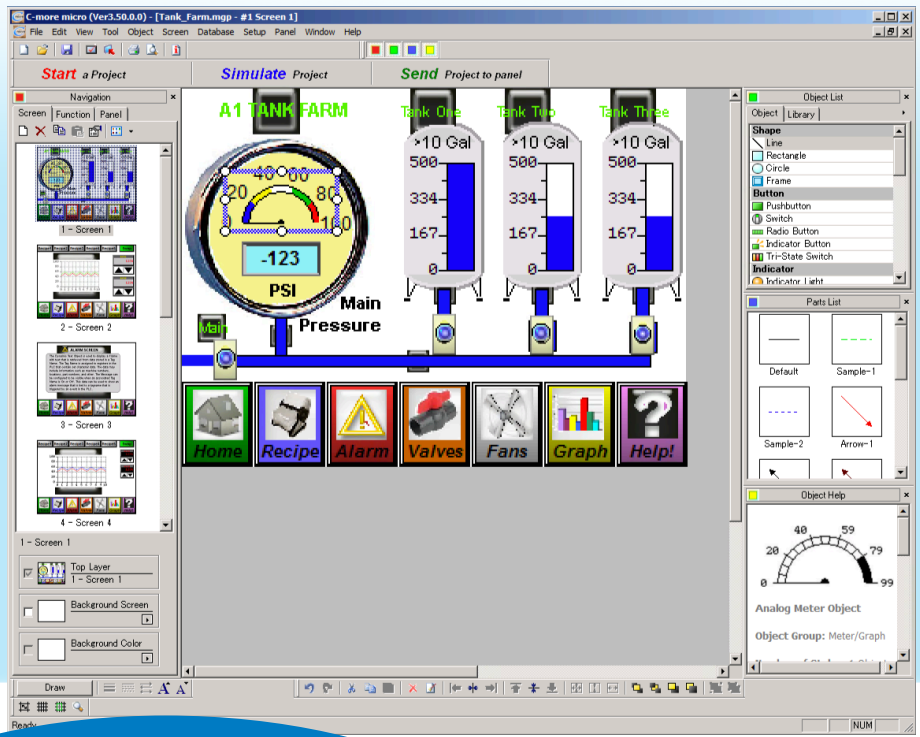
Built-in project simulator

- **Runs your project on your PC**
- **Test all of your screens before downloading**
- **Time savings pays for the panel!**

Built-in user object/screen libraries

Save time by re-using your custom objects and screens.

C-more Micro Programming Software



Thumbnail project preview pane

Helps keep track of multi-screen projects.

Scrolling object selection window

Lets you find the object you want fast. Just drag and drop it on the screen.

Scrolling help window

Gives you helpful information on each object

Download the Software!

C-more Micro Programming Software can be downloaded at no charge from the *AutomationDirect* web site, or a CD version may be purchased for $25 by ordering p/n EA-MG-PGMSW. The software requires a USB port on your PC to connect to the *C-more* Micro panel. Help files are included in the software. *This software can only be used to program the C-more Micro panels,* not *the* C-more *6" through 15" touch panels.*

Learn more! Go to:

www.C-moreMicro.automationdirect.com

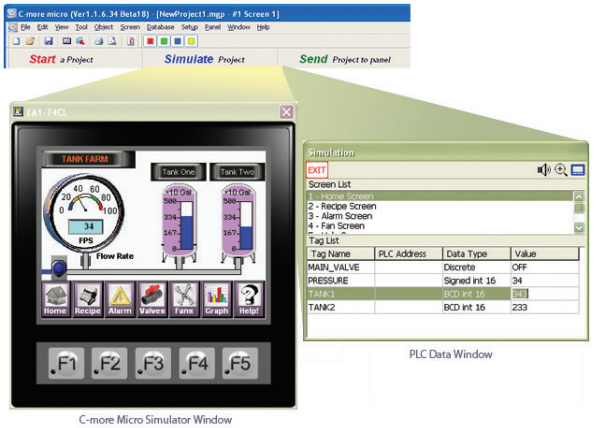
for detailed specifications, a virtual tour of the product, programming examples, newest communication drivers...

C-more Micro Productivity Tools

Built-in Project Simulator

The simulator is a real productivity booster that saves hours of trial-and-error programming and testing, with no need for a panel or controller.

The simulator pops up on your PC screen, along with the simulated controller Data Window. Use your mouse to activate objects on the simulated project screens while monitoring the simulated controller values in the data window. Another option is to adjust simulated values directly in the data window, and see how your *C-more* Micro screens will react in the simulator window.



C-more Micro Simulator Window

PLC Data Window

Build and Save Custom Objects

Store your objects in the library for fast and easy re-use.

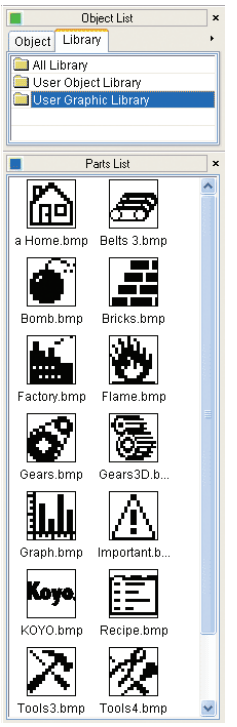
Once you've built a custom object, just right-click on it and select "Object -> Library"

You're then prompted to give your object a name, and you can choose whether to save the PLC tags with the object.

Drag and drop objects from the library onto the workspace.

It's easy to re-use an object. Just drag it from the library and drop it on the desired screen. Then double click it if you want to edit the tags or other options.

Download more objects and graphics from our online library at *www.c-moremicro.com*



Lots of memory lets you get creative

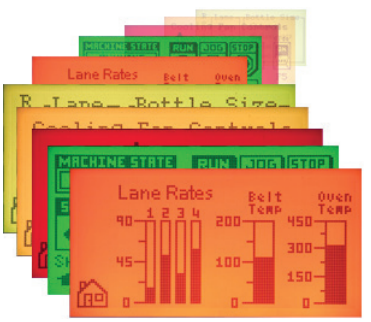
Screens

While many text panels are limited to 256 or fewer messages, *C-more* Micro allows up to 999 screens for every project. Create all the screens you need to control your machine or process.

Memory

Ample user memory allows tons of objects and graphics on your screens.

- Pictures and icons convey information faster than text
- Use bar graphs and indicator graphics to enhance comprehension



Note: Keep in mind that depending on the complexity of your screens, the limiting factor could be the 999 addressable screens or the panel's memory.

It's easy to track the size of your project:

When you download a project to a *C-more* Micro panel, the download dialog box shows you the current project size.

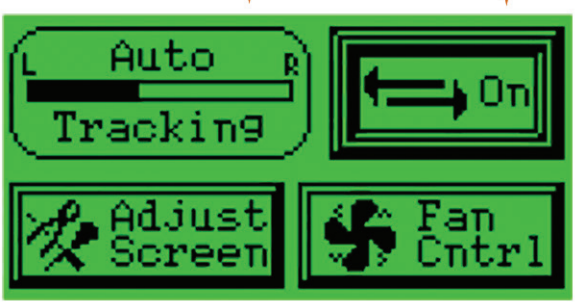
- If your project is large you may want to download only the Runtime File and the controller driver file, but not the entire Project File.
- If you download the Project File, you will be able to upload the entire project from the panel at a later date.

Overlapping Objects

Our customers loved overlapping objects on the larger *C-more* panels, and we knew you would expect the same capabilities with *C-more* Micro. Here are some examples of overlapping objects:

Several "Text" objects and a "Bar Graph" object overlapped on a "Rectangle" object.

"Dynamic Bitmap" object overlapped on an "Indicator Light" object



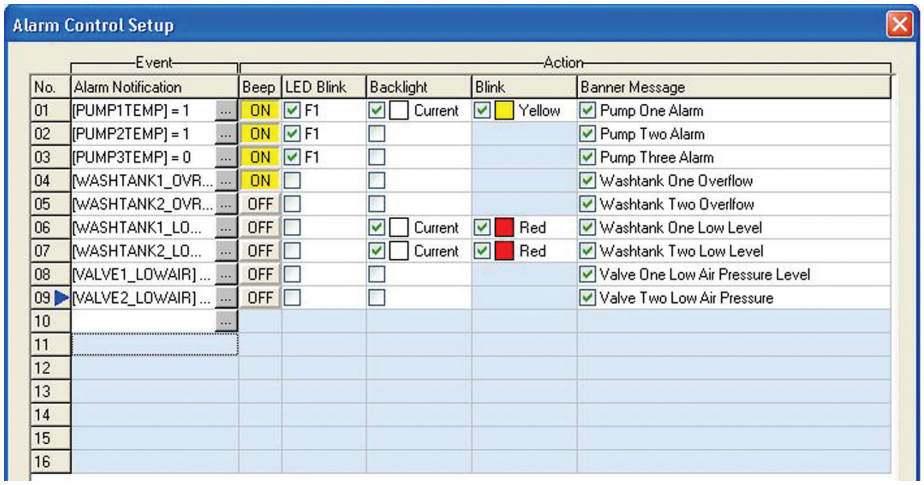
"Static Bitmap" object overlapped on a "Screen Change Pushbutton" object

C-more Micro Productivity Tools

Alarm Control Setup

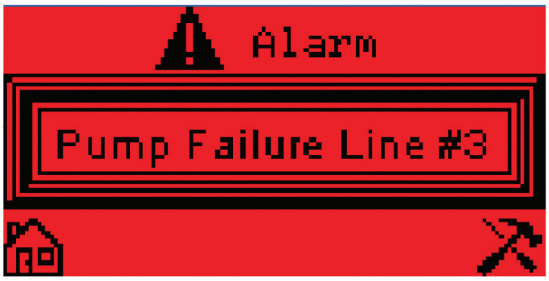
The Alarm Control Setup feature makes configuring alarms fast and easy. Use a controller tag to activate up to 16 alarm conditions with the built-in Alarm Control feature. Choose from:

- Beep
- LED Blink
- Change Backlight Color
- Blink Selectable Colors
- Show a Banner Message



Use the built-in alarm feature above or create a simple Alarm Screen (right) in conjunction with the message database to display **HUNDREDS** of different alarm messages.

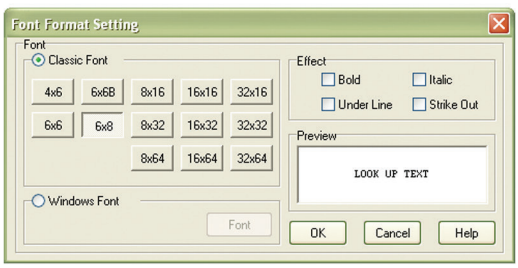
Look-up Text Object



Use any font on your PC

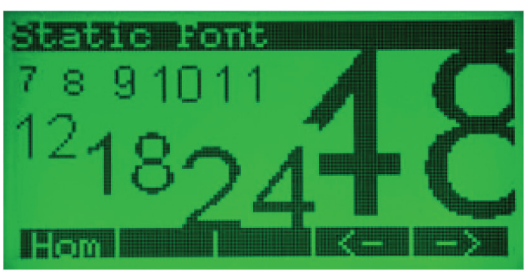
C-more Micro offers 10 built-in fixed-width "Classic" fonts and allows the use of any Windows fonts present on the programming computer.

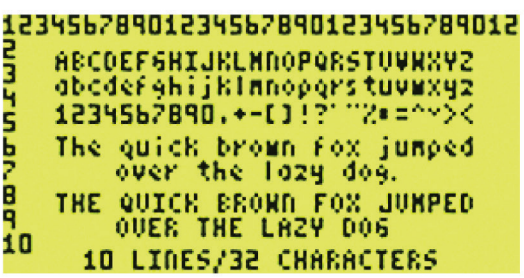
- Fixed-width fonts allow maximum lines and characters
- Windows fonts can be scaled to many sizes

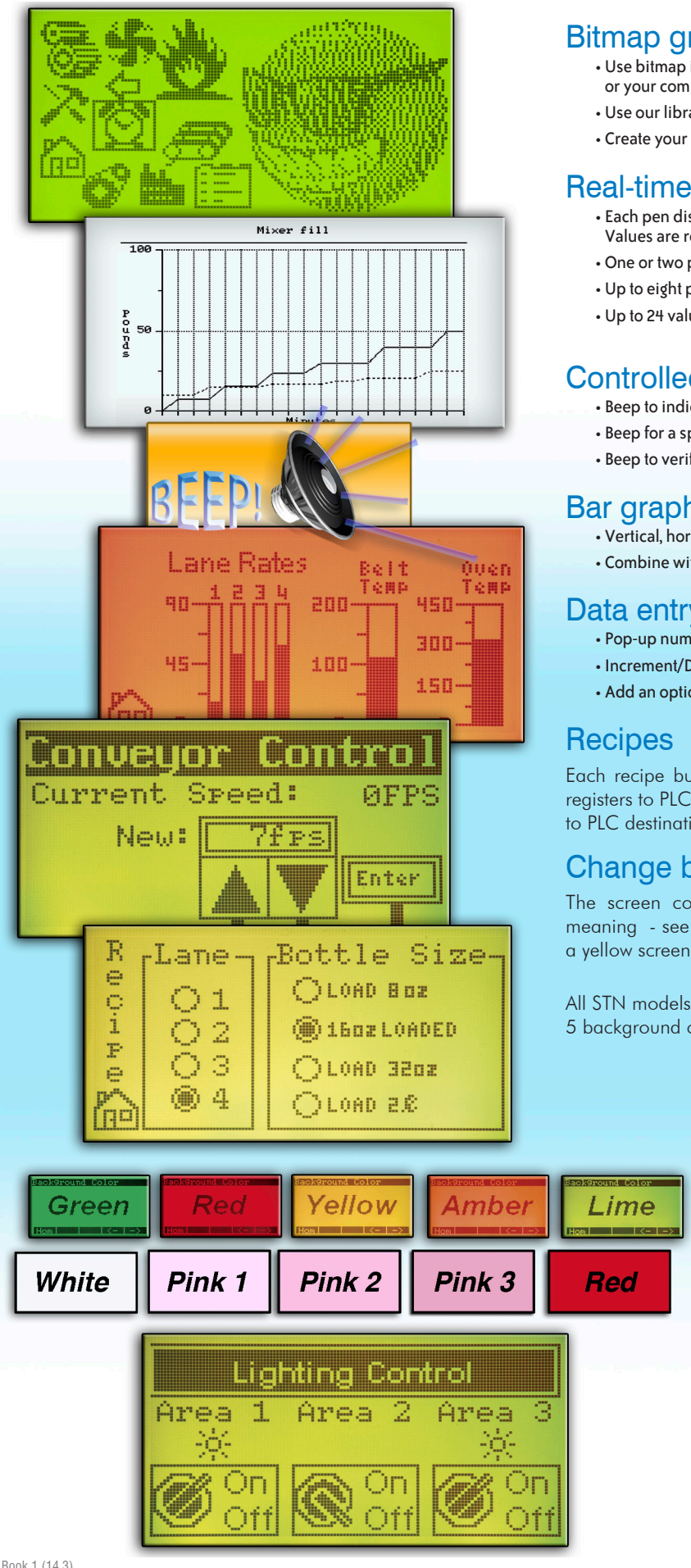


Windows fonts can be sized with their familiar "point" values.

For 3-inch units, the "4x6" fixed font allows a maximum of 32 characters per line and 10 lines for static text. The 6-inch units support up to 53 lines with 60 characters per line in portrait mode, or 40 lines with 80 characters per line in landscape mode.







Bitmap graphics

- Use bitmap images of pushbuttons, switches, indicators, or your company logo
- Use our library of bitmaps
- Create your own library of bitmaps

Real-time graph

- Each pen displays the value of a single PLC memory location. Values are refreshed by either time or a trigger tag.
- One or two pens can be displayed on the STN models
- Up to eight pens can be displayed on the TFT models
- Up to 24 values can be displayed for each pen

Controlled beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Vertical, horizontal, thin, wide, multiple
- Combine with a numeric display for digital readout

Data entry

- Pop-up numeric keypad on the screen
- Increment/Decrement a value by touching arrows
- Add an optional keypad bezel

Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

Change background colors

The screen colors are programmable! Use them to convey meaning - see a red alarm screen from across the room, or use a yellow screen as a caution.

All STN models support the following 5 background colors:

Green - Red - Yellow - Amber - Lime

All high-contrast STN models support the following 5 background colors:

White - Pink1 - Pink2 - Pink3 - Red

TFT models allow 32K colors to flash for the backround.

Alarm feature

C-more Micro has an Alarm action that can control:

- Backlight color change/flash
- Function Key LED flash
- Beep activation
- Custom alarm banner display
- Up to 16 configurable alarm actions

3-inch STN Monochrome *C-more* Micro Panels

3-inch C-more Micro with touch: $205.00
EA1-S3ML and EA1-S3MLW

3-inch C-more Micro: $161.00
EA1-S3ML-N and EA1-S3MLW-N

The choice is simple

Four 3-inch models are available, touch and non-touch, with either standard or high-contrast backgrounds, that offer the same base features. The touch units expand application possibilities for only a fraction more.

5 function keys and indicators

You can configure the five function keys to change meaning on every screen. The function key labels are simple to customize to your application. Use the programmable LEDs for alarms or status indication.

Optional keypads

8 key bezel: $64.00
EA-MG-BZ1

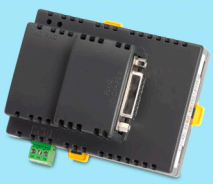
20 key bezel: $87.00
EA-MG-BZ2

Need a hardware keypad for your Micro panels? No problem! Just mount and go - no programming, no external power needed!

- 20-key bezel is great for applications requiring extensive numeric entry
- 8-key bezel works well for simple setpoint adjustment and data entry

Optional power adapters for other configurations

If you are connecting to another brand of PLC, or to a non-RJ12 port on an AutomationDirect PLC, you will need one of the optional snap-on 12-24 VDC power supply units. Two models are available:



EA-MG-SP1: 12-24 VDC power supply with 15-pin D-sub serial port

- 12-24 VDC power adapter with 15-pin D-sub RS-232/ RS-422/485 serial port used to connect to a PLC, which allows the panel's built-in port to be free for project development (EA-MG-SP1)
- 12-24 VDC power adapter only (EA-MG-P1)

UL, cUL, CE, NEMA 4, 4X indoor

No extra power supply needed when connecting to many of our PLCs

Most AutomationDirect PLCs have a 6-pin, modular RJ12 communication port. The *C-more* Micro panel can attach directly to this port for communications and power. In this configuration, no external power is needed, saving you time and money.

4- to 10-inch TFT Color C-more Micro Panels

The C-more Micro family offers some of the most competitive priced TFT 32,768 color touch screen HMI panels in the market. The C-more Micro operator panels are packed with features, yet priced for the tightest of budgets. With the addition of the larger 8-inch and 10-inch micro touch panel sizes, you can display even more text, graphics, or bitmaps to effectively communicate and display data to the operator.

Users can take advantage of the clear and colorful graphics to create vibrant and intuitive screens. The free programming software offers the choice of using many built-in graphics, or importing your own custom graphics.

All of the C-more micro panels are NEMA 4/4X, IP65 (when mounted according to specifications). All these features at a competitive price, in a rugged and reliable HMI platform, make the C-more Micro HMI's one of the best values for any application.

4-inch TFT: Standard ¼ DIN Cutout Size for only $356.00

EA1-T4CL features

- 32K Color TFT Display with Touch Screen
- LED backlight
- 320 x 240 resolution
- 3,276KB memory
- Portrait or landscape mounting
- LED backlights
- Standard Type B USB programming port
- Multistate bitmap support
- Five durable function keys with LED indicators
- Windows font support
- Enhanced objects and graphics

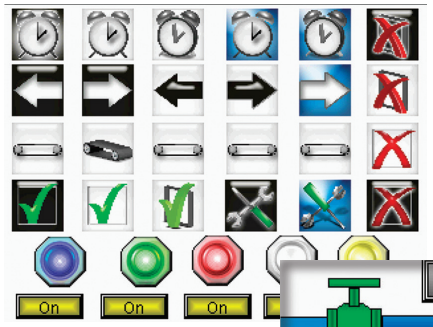
6-inch TFT: When you need a little more real estate for $299.00

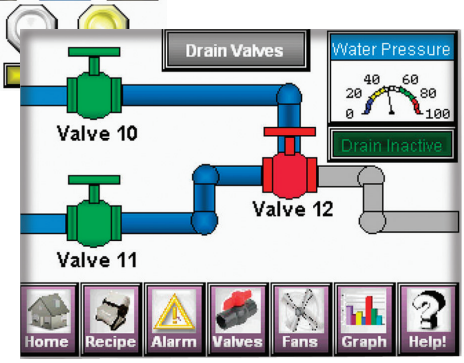
EA3-T6CL features

- 32K Color TFT Display with Touch Screen
- LED backlight
- 320 x 240 resolution
- 6MB memory
- 2 serial ports (RJ12 and DSUB15)
- Portrait or landscape mounting
- LED backlights
- Standard Type B USB programming port
- Multistate bitmap support
- Five durable function keys with LED indicators
- Windows font support
- Enhanced objects and graphics

Ethernet Support

The C-More Micro EA3 Series panels support the EA-ECOM Ethernet expansion module.

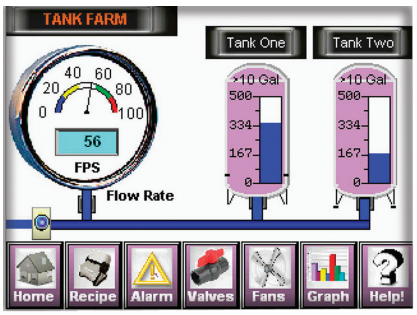




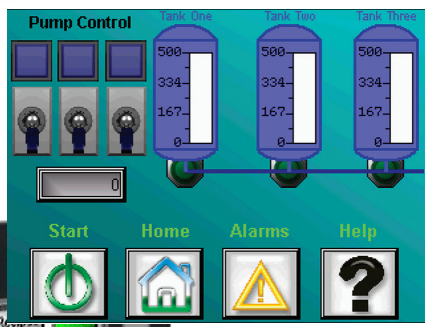
Use built-in or custom graphics

Create colorful projects

TFT panels support portrait or landscape mode



8-inch or 10-inch TFT: When you need a lot more real estate starting at $749.00



Ethernet Support

The C-More Micro EA3 Series panels support the EA-ECOM Ethernet expansion module.

Take a look at the C-more micro family average review scores from our web store.

Read Reviews **Write a Review**

Averages for C-more Micro-Graphic Panels

Overall Score (4.6)
(99 reviews)

Quality:
Ease of Use:
Value:

8- and 10-inch features

- 32K Color TFT Display with Touch Screen
- LED backlight
- 2 serial ports (RJ12 and DSUB15)
- 320 x 240 resolution
- 30MB memory
- Portrait or landscape mounting
- LED backlights
- Standard Type B USB programming port
- Multistate bitmap support
- Seven durable function keys with LED indicators
- Windows font support
- Enhanced objects and graphics

C-more Micro Ethernet Expansion Module

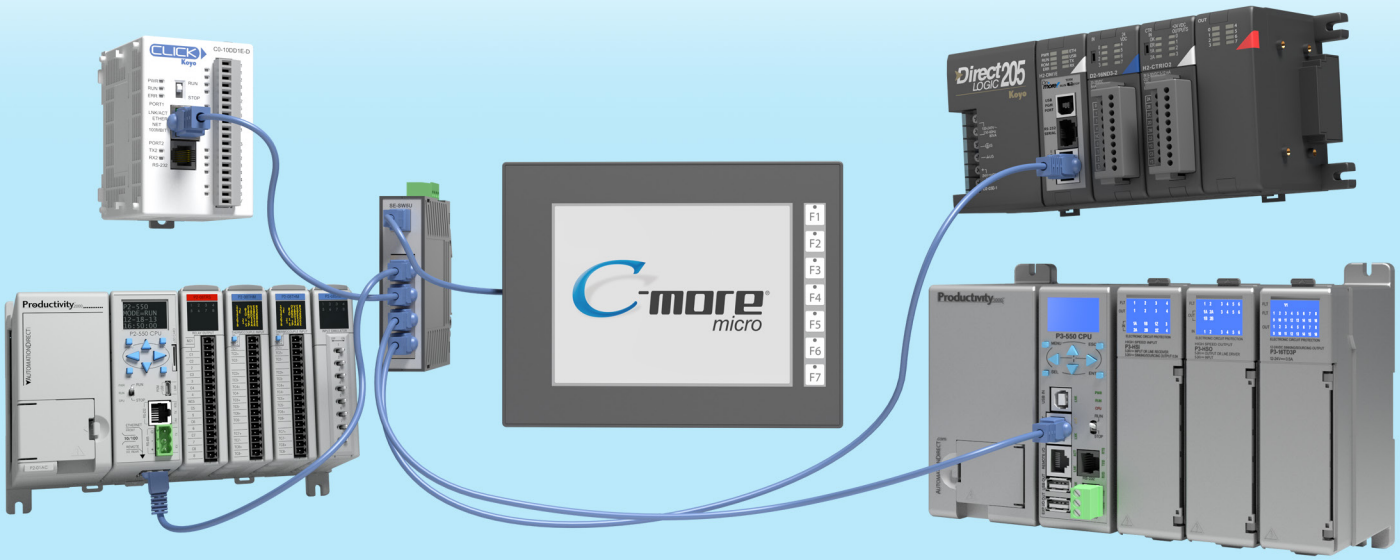
The EA-ECOM expansion module adds 10/100 Mbps Ethernet ability when plugged into the expansion slot of the EA3 Series 6", 8" or 10" HMI units (not available on other models). Upload and download programs in less time while also increasing performance for PLC communications. This module auto-detects the connection and adjusts for proper operation so there is no need for patch or crossover cables.

Benefits

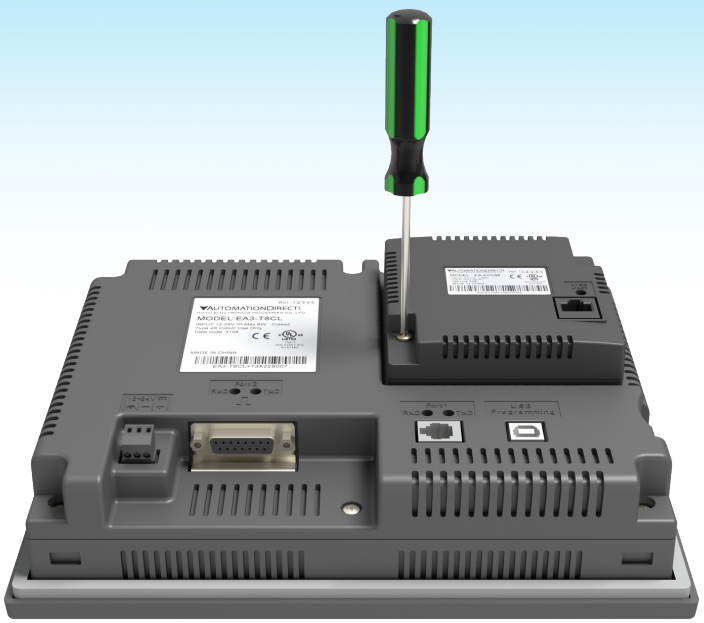
- Faster project download speed
- Faster firmware update speed
- Connectivity to existing Ethernet networks
- Power supplied from expansion port

The EA-ECOM adds support for the following Ethernet protocols:

- AutomationDirect ECOM Ethernet
- AutomationDirect CLICK Ethernet
- AutomationDirect Do-More Ethernet
- AutomationDirect Productivity Ethernet
- Modbus TCP



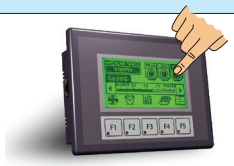
The EA-ECOM module adds one Ethernet RJ45 Port for panel configuration and PLC communications. Simply connect the module to the back of your EA3 C-more Micro and secure it with the supplied screws. The EA-ECOM does not require an external power supply.



For use with the following part numbers

- EA3-T6CL
- EA3-T8CL
- EA3-T10CL

C-more Micro Panels Selection Guide

C-more Micro Panels			
Part Number		***Description***	***Price***
EA1-S3ML		***C-more*** Micro touch screen operator interface, 3.1 inch, STN LCD monochrome, 128 x 64 pixel display, selectable screen colors: red, green, amber, lime, or yellow, LED backlight, 5 user defined function keys, RS-232 (RJ12) port, display supports landscape mode(s), NEMA 4/4X, IP65, indoor use only.	$205.00
EA1-S3ML-N	**Non-Touch**	***C-more*** Micro non-touch operator interface, 3.1 inch, STN LCD monochrome, 128 x 64 pixel display, selectable screen colors: red, green, amber, lime, or yellow, LED backlight, 5 user defined function keys, RS-232 (RJ12) port, display supports landscape mode(s), NEMA 4/4X, IP65, indoor use only.	$161.00
EA1-S3MLW		***C-more*** Micro touch screen operator interface, 3.1 inch, STN LCD monochrome, 128 x 64 pixel display, selectable screen colors: white, pink1, pink 2, pink3 or red, high-contrast white LED backlight, 5 user defined function keys, RS-232 (RJ12) port, display supports landscape mode(s), NEMA 4/4X, IP65, indoor use only.	$205.00
EA1-S3MLW-N	**Non-Touch**	***C-more*** Micro non-touch operator interface, 3.1 inch, STN LCD monochrome, 128 x 64 pixel display, selectable screen colors: white, pink1, pink 2, pink3 or red, high-contrast white LED backlight, 5 user defined function keys, RS-232 (RJ12) port, display supports landscape mode(s), NEMA 4/4X, IP65, indoor use only.	$161.00
EA1-T4CL		***C-more*** Micro touch screen operator interface, 4.1 inch, TFT color LCD, 320 x 240 pixel display, 32K colors, LED backlight, 5 user defined function keys, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$356.00
EA1-T6CL		***C-more*** Micro touch screen operator interface, 5.7 inch, TFT color LCD, 320 x 240 pixel display, 32K colors, LED backlight, 5 user defined function keys, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$432.00
EA3-T6CL		***C-more*** Micro touch screen operator interface, 5.7 inch, TFT color LCD, 320 x 240 pixel display, 32K colors, LED backlight, 5 user defined function keys, RS-232 (RJ12) port, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$299.00
EA3-T8CL		***C-more*** Micro touch screen operator interface, 8.4 inch, TFT color LCD, 800 x 600 pixel display, 32K colors, LED backlight, 7 user defined function keys, RS-232 (RJ12) port, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$749.00
EA3-T10CL		***C-more*** Micro touch screen operator interface, 10.4 inch, TFT color LCD, 800 x 600 pixel display, 32K colors, LED backlight, 7 user defined function keys, RS-232 (RJ12) port, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$899.00

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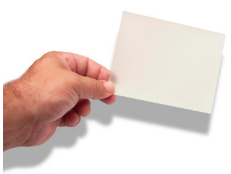
C-more Micro Panel Accessories			
Part Number		**Description**	**Price**
EA-MG-BZ1		8-button keypad bezel for ***C-more*** 3" Micro panels, with four arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad. Designed for easy drop-in of the Micro panels.	$64.00
EA-MG-BZ2		20-button keypad bezel with numeric keypad for ***C-more*** 3" Micro panels, with four arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the Micro panels.	$87.00
EA-MG-P1		Optional DC Power Adapter for ***C-more*** 3" Micro panels. Required when using third party PLCs, or when using 24VDC power instead of the 5VDC supplied from the RJ12 connector of a Productivity Series, CLICK or *Direct*LOGIC PLC.	$31.50
EA-MG-SP1		Optional Serial Port with DC Power Adapter for ***C-more*** 3" Micro panels. Serial port is a D-Sub 15-pin RS-232/RS-422/485 connector. Required when using RS422, RS485 or third party PLCs.	$54.00
EA-ECOM		***C-more*** Micro communication expansion module, Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. For use with EA3 series panels.	$50.00
EA-COMCON-3		DSUB port adapter, 15-pin to 6-terminal RS-422/485, right angle connector, plugs into the 15-pin serial port on rear of touch panel to allow wire terminal connections for an RS-422/485 communication cable. Compatible with C-more EA7 series, EA9-T6CL(-R), and C-more Micro 4 or 6-inch panels.	$42.00
EA-COMCON-3A		DSUB port adapter, 15-pin to 6-terminal RS-422/485, straight connector, plugs into the 15-pin serial port on rear of touch panel to allow wire terminal connections for an RS-422/485 communication cable. Compatible with C-more EA9 series panels, C-more Micro EA3 series panels and EA1-S3x with EA1-MG-SP1. Not recommended with EA9-T6CL(-R) panels.	$19.00
EA-MG6-BZ2		20-button keypad bezel with numeric keypad for EA1-T6CL panels being used in landscape (horizontal) mounted mode, with 2 arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the EA1-T6CL panels.	$107.00
EA-MG6-BZ2P		21-button keypad bezel with numeric keypad for EA1-T6CL panels being used in Portrait (vertical) mounted mode, with 2 arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the EA1-T6CL panels.	$79.00
EA-MG-COV-CL		Optional clear screen overlay used to protect 3" displays from minor scratches and wear. Package contains five (5) clear screen overlays.	$35.50
EA-4-COV2		Optional clear screen overlay used to protect 4" displays from minor scratches and wear. Package contains three (3) clear screen overlays.	$33.50
EA-6-COV2		Optional clear screen overlay used to protect 6" displays from minor scratches and wear. Package contains three (3) clear screen overlays.	$37.00
EA-8-COV2		Optional clear screen overlay used to protect 8" displays from minor scratches and wear. Package contains three (3) clear screen overlays.	$40.00
EA-10-COV2		Optional clear screen overlay used to protect 10" displays from minor scratches and wear. Package contains three (3) clear screen overlays.	$45.50

C-more 3" Micro Panels Overview

Overview

C-more 3" Micro panels are the next generation of Graphic/Text panels based on the very successful ***C-more*** touch panel design. *C-more* Micro panels are very small, yet offer touch screen capability and graphics. Models are available with touch screen ability and without touch screen. Several options such as plug and play keypad bezels are available.

In addition to the simple free downloadable panel configuration software, a very helpful feature is the built-in project simulator. The project simulator allows you to view your project on the PC screen as it would appear on the panel and to test all your screens before downloading the project to the panel. You can simulate your entire project at any stage of development. With version 2.50 or later, even simulate the function keys and keypad bezel.

Getting started

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

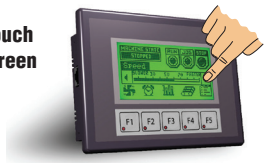
- ***C-more*** Micro panel
- ***C-more*** Micro Programming Software EA-MG-PGMSW (Downloadable version available from the ***AutomationDirect*** web site at no charge.)
- ***C-more*** Micro USB to RS232 Programming Cable Assembly EA-MG-PGM-CBL, used to connect between a PC and the Micro panel's built-in serial port
- Power source – either powered from the RJ12 serial comm port on most ***AutomationDirect*** PLCs, ***C-more*** DC Power Adapter EA-MG-P1, or Serial Port with DC Power Adapter EA-MG-SP1
- Personal computer – to run the ***C-more*** Micro programming software
- Communications Cable (serial) – to connect the ***C-more*** Micro panel to your controller

Drivers for your Controller

C-more 3" Micro panels have the following drivers available for connection to Productivity Series, Do-more, CLICK, *Direct*LOGIC and many other devices:

- AutomationDirect Productivity Series
- AutomationDirect Do-more
- AutomationDirect CLICK (Modbus)
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing)
- Modbus RTU
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500) Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

Part No. EA1-S3ML, EA1-S3MLW



$205.00

Part No. EA1-S3ML-N, EA1-S3MLW-N

$161.00

Note: Software and Firmware Version 1.5 or later is required with models EA1-S3MLW and EA1-S3MLW-N. Available for free download at *www.automationdirect.com*.

Features

Bitmaps

- 128 X64 pixel graphical display supports bitmaps
- Use bitmap images of pushbuttons, switches, indicators, your company logo
- Use provided library of bitmaps
- Create your own library of bitmaps

Text - 10 lines

- 10 lines by 32 characters of static text
- look up text, scroll up to 128 characters
- 10 lines by 21 characters of dynamic text, embedded variables, on/off phrases, scroll up to 40 characters
- scroll text object with up to 128 characters
- Inverse view to accentuate text

Beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Vertical, horizontal, skinny, fat, multiple

Data entry

- Pop-up numeric key pad on the screen
- Increment/decrement a value by touching arrows
- Add an optional keypad bezel

Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

5 dynamic background colors

Screen background colors can be controlled by the program to choose one of five colors depending upon the model. Choices for models EA1-S3ML and EA1-S3ML-N include green, lime, yellow, amber and red. Models EA1-S3MLW and EA1-S3MLW-N background colors include white, pink1, pink2, pink3 and red . For example, use a red background for an alarm condition or a yellow background on a caution screen that will be easily noticed.

EA1-S3ML, EA1-S3ML-N

EA1-S3MLW, EA1-S3MLW-N

Up to 999 Screens

C-more Micro supports up to 999 screens. Screen quantity is limited by memory usage which is determined by the total bitmaps, objects, etc. that are used.

C-more 3” Micro Panels Overview

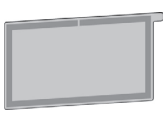
C-more 3” Micro Panels			
Part Number		***Description***	***Price***
EA1-S3ML	**Touch Screen**	3.1-inch ***C-more*** Micro Touch Panel with green and red LED backlights. Supports 5 selectable backlight colors (Green, Red, Amber, Yellow and Lime). STN LCD monochrome, 128 x 64 dot display. Has 5 user-defined function keys with LED indicators. Power is supplied to the panel through the serial communication port connection when used with *Direct*LOGIC PLCs having an RJ12 communication port. EA-MG-SP1 (power supply with serial option module) required when connecting to third party PLCs. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only).	$205.00
EA1-S3ML-N	**Non-Touch**	3.1-inch ***C-more*** Micro Non-Touch Panel with green and red LED backlights. Supports 5 selectable backlight colors (Green, Red, Amber, Yellow and Lime). STN LCD monochrome, 128 x 64 dot display. Has 5 user-defined function keys with LED indicators. Power is supplied to the panel through the serial communication port connection when used with *Direct*LOGIC PLCs having an RJ12 communication port. EA-MG-SP1 (power supply with serial option module) required when connecting to third party PLCs. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only).	$161.00
EA1-S3MLW	**Touch Screen**	3.1-inch ***C-more*** Micro Touch Panel with High Contrast white and red LED backlights. Supports 5 selectable backlight colors (White, Pink1, Pink2, Pink3 and Red). STN LCD monochrome, 128 x 64 dot display. Has 5 user-defined function keys with LED indicators. Power is supplied to the panel through the serial communication port connection when used with *Direct*LOGIC PLCs having an RJ12 communication port. EA-MG-SP1 (power supply with serial option module) required when connecting to third party PLCs. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only).	$205.00
EA1-S3MLW-N	**Non-Touch**	3.1-inch ***C-more*** Micro Non-Touch Panel with High Contrast white and red LED backlights. Supports 5 selectable backlight colors (White, Pink1, Pink2, Pink3 and Red). STN LCD monochrome, 128 x 64 dot display. Has 5 user-defined function keys with LED indicators. Power is supplied to the panel through the serial communication port connection when used with *Direct*LOGIC PLCs having an RJ12 communication port. EA-MG-SP1 (power supply with serial option module) required when connecting to third party PLCs. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only).	$161.00

NOTE: *C-more* 3” Micro panels with the letter “W” in the part number are units with 5 selectable background colors of White, Pink1, Pink2, Pink3 and Red. *C-more* 3” Micro panels without the letter “W” in the part number are provided with 5 selectable background colors of Green, Red, Amber, Yellow and Lime.

NOTE: Software and Firmware Version 1.5 or later is required with models EA1-S3MLW and EA1-S3MLW-N. Available for free download at *www.automationdirect.com*.

C-more 3" Micro Panels Overview

***C-more* 3" and 6" Micro STN Monochrome Panels Programming Software & Programming Cable**			
Part Number		***Description***	***Price***
EA-MG-PGMSW		***C-more*** Micro Windows-based programming software for C-more EA1 and EA3 series panels. Package includes software CD. Requires USB port connection from PC to C-more Micro panel. Cables sold separately. Downloadable version available from the Web site at no charge.	$25.00
EA-MG-PGM-CBL		6-ft. cable assembly to connect personal computer to 3" and 6" ***C-more*** Micro STN monochrome panels for setup and programming. (Note: This cable assembly uses the PC's USB port and converts the signals to serial transmissions. The USB port supplies 5 VDC to the 3" and 6" Micro STN monochrome panel for configuration operations). Assembly includes standard USB A-type connector to B-type connector cable, custom converter, and an RS232C cable with RJ12 modular connector on each end.	$43.00

***C-more* 3" Micro Panel Accessories**			
Part Number		***Description***	***Price***
EA-MG-BZ1		8-button keypad bezel for ***C-more*** 3" Micro panels, with 4 arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad. Designed for easy drop-in of the Micro panels. No panel configuration is required.	$64.00
EA-MG-BZ2		20-button keypad bezel with numeric keypad for ***C-more*** 3" Micro panels, with 4 arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the Micro panels. No panel configuration is required.	$87.00
EA-MG-P1		Optional DC Power Adapter for ***C-more*** 3" Micro panels. Required when using third party PLCs, or when using 24 VDC power instead of the 5 VDC supplied from the RJ12 connector of a CLICK or *Direct*LOGIC PLC.	$31.50
EA-MG-SP1		Optional Serial Port with DC Power Adapter for ***C-more*** 3" Micro panels. Serial port is a D-Sub 15-pin RS-232/RS-422/485 connector. Required when using RS422, RS485 or third party PLCs.	$54.00
EA-COMCON-3A		DSUB port adapter, 15-pin to 6-terminal RS-422/485, straight connector, plugs into the 15-pin serial port on rear of touch panel to allow wire terminal connections for an RS-422/485 communication cable. Compatible with C-more EA9 series panels, C-more Micro EA3 series panels and EA1-S3x with EA1-MG-SP1. Not recommended with EA9-T6CL(-R) panels.	$19.00
EA-MG-COV-CL		Optional clear screen overlay used to protect ***C-more*** 3" Micro displays from minor scratches and wear. Package contains 5 clear screen overlays.	$35.50

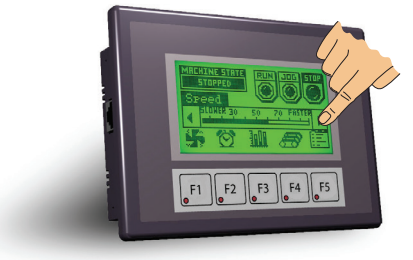
For a list of supported protocols and cabling options refer to the 3" *C-more* Micro Protocols and cabling chart starting on page CK-24.

Company Information
Control Systems Overview
CLICK PLC
Do-More PLCs Overview
Do-More H2 PLC
Do-More T1H PLC
DirectLOGIC PLCs Overview
DirectLOGIC DL05/06
DirectLOGIC DL105
DirectLOGIC DL205
DirectLOGIC DL305
DirectLOGIC DL405
Productivity Controller Overview
Productivity 3000
Universal Field I/O
Software
C-More HMI
C-More Micro HMI
ViewMarq Industrial Marquees
Other HMI
Communications
Appendix Book 1
Terms and Conditions

C-more 3" Micro STN Touch Panel

Model EA1-S3ML ***C-more*** 3" Micro touch panel has a 3.1-inch STN LCD monochrome display and five selectable LED-driven backlight colors: Green, Red, Amber, Yellow and Lime. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). This Micro panel can receive power from the serial communications port of most AutomationDirect PLCs. An EA-MG-SP1 Serial Port with DC Power Adapter option module (RS-232/422/485) is required when using other controllers.

Part No. EA1-S3ML



$205.00

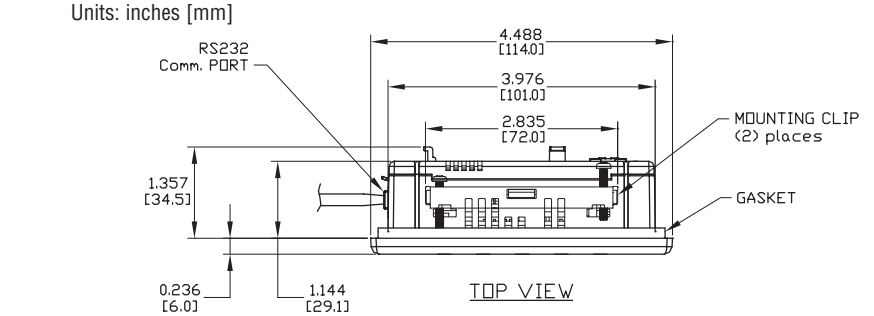
Features

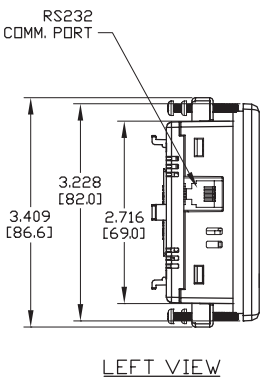
- Touch screen display
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; Green, Red, Amber, Yellow and Lime
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other controllers (RS-232/422/485)
- Built in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

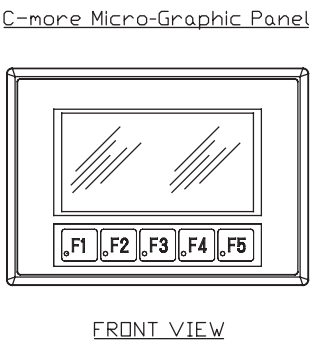
NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the Accessories.

Dimensions

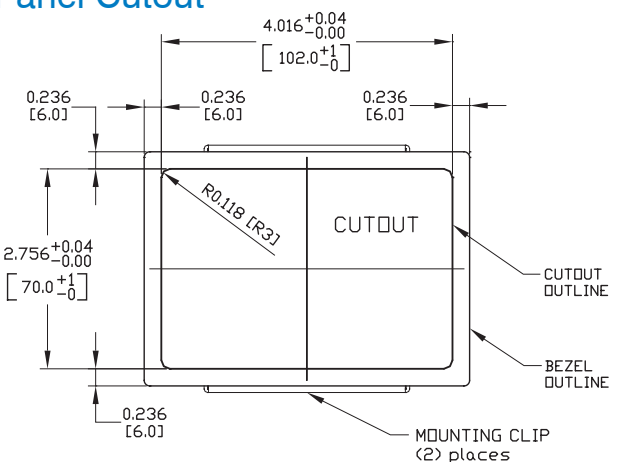
Units: inches [mm]



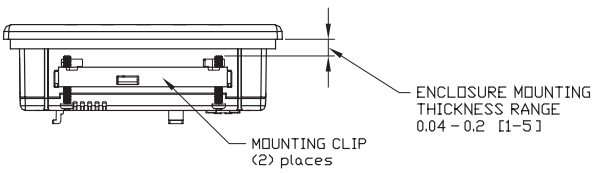




Panel Cutout



Panel Thickness



NOTE: The *C-more* 3" Micro cutout dimensions are not equivalent to previous AutomationDirect text panels. The *C-more* Micro panels will not fit in cutouts for DV-1000, EZText or Optimate panels.

C-more 3" Micro STN Touch Panel

Model EA1-S3MLW ***C-more*** 3" Micro touch panel has a 3.1-inch STN LCD monochrome display and five selectable LED-driven backlight colors: White, Pink1, Pink2, Pink3 and Red. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). This Micro panel can receive power from the serial communications port of most AutomationDirect PLCs. An EA-MG-SP1 Serial Port with DC Power Adapter option module (RS-232/422/485) is required when using other controllers.

Part No. EA1-S3MLW

$205.00

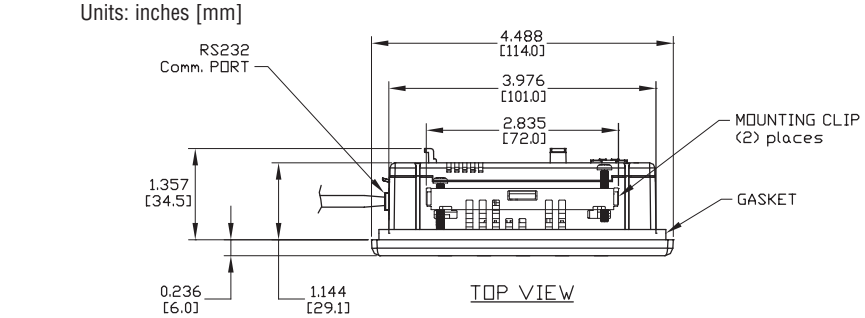
Features

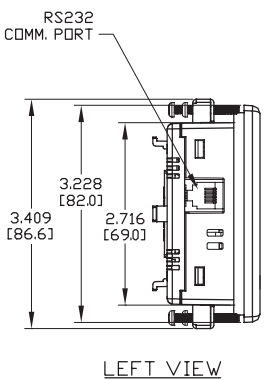
- Touch screen display
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; White, Pink1, Pink2, Pink3 and Red
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other controllers (RS-232/422/485)
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

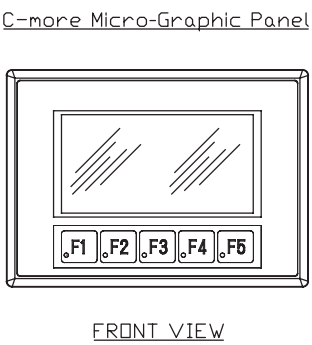
NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the Accessories.

Dimensions

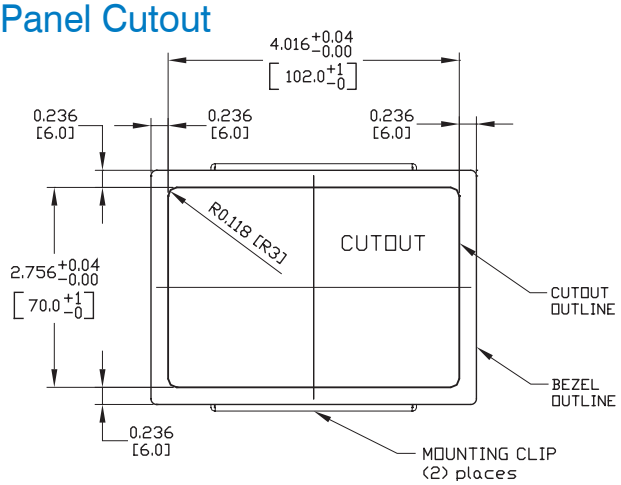
Units: inches [mm]



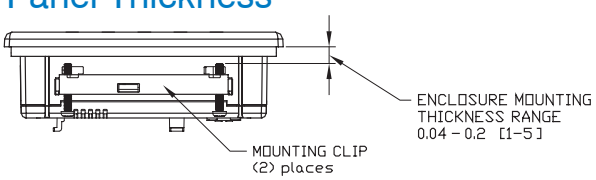




Panel Cutout



Panel Thickness



NOTE: The *C-more* 3" Micro cutout dimensions are not equivalent to previous *AutomationDirect* text panels. The *C-more* Micro panels will not fit in cutouts for DV-1000, EZText or Optimate panels.

C-more 3" Micro STN Non-Touch

Model EA1-S3ML-N ***C-more*** 3" Micro non-touch panel has a 3.1-inch STN LCD monochrome display and five selectable LED-driven backlight colors: Green, Red, Amber, Yellow and Lime. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). This Micro panel can receive power from the serial communications port of most AutomationDirect PLCs. An EA-MG-SP1 Serial Port with DC Power Adapter option module (RS-232/422/485) is required when using other controllers.

Part No. EA1-S3ML-N

$161.00

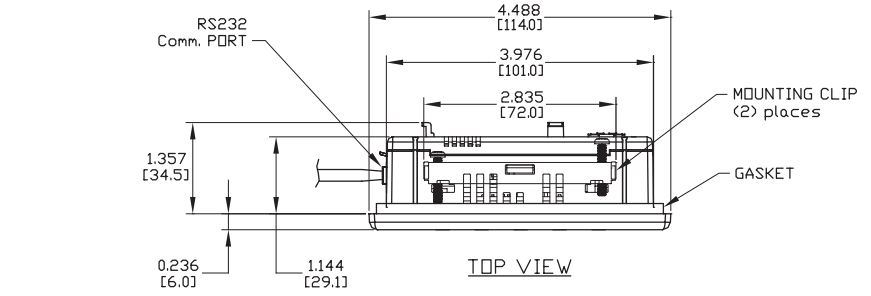
Features

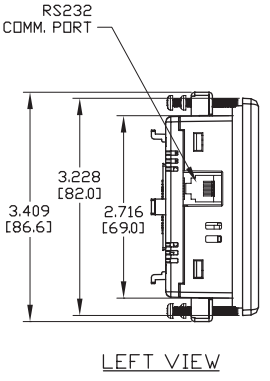
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; Green, Red, Amber, Yellow and Lime
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other controllers (RS-232/422/485)
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

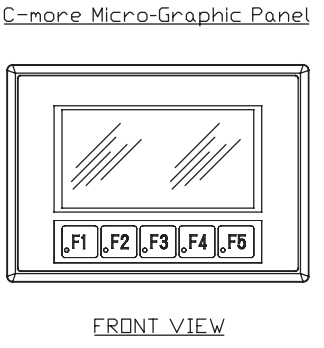
NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the Accessories.

Dimensions

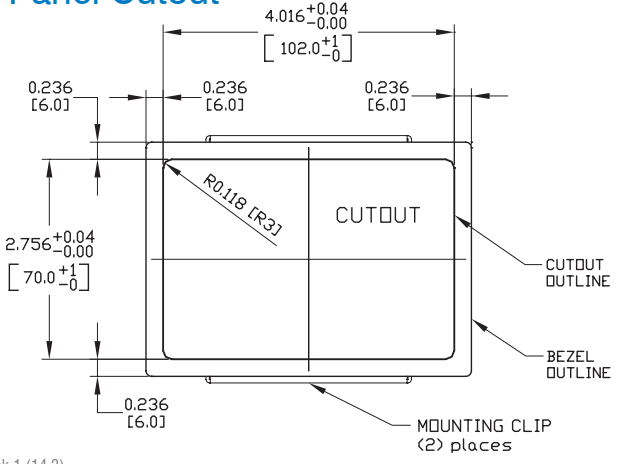
Units: inches [mm]



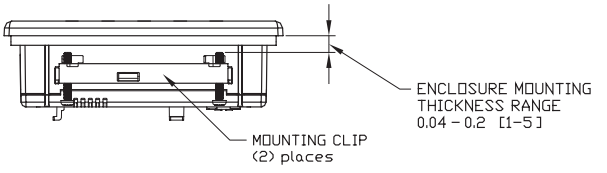




Panel Cutout



Panel Thickness



NOTE: The *C-more* 3" Micro cutout dimensions are not equivalent to previous *AutomationDirect* text panels. The *C-more* Micro panels will not fit in cutouts for DV-1000, EZText or Optimate panels.

C-more 3" Micro STN Non-Touch

Model EA1-S3ML-N ***C-more*** 3" Micro non-touch panel has a 3.1-inch STN LCD monochrome display and five selectable LED-driven backlight colors including White, Plnk1, Pink2, Pink3 and Red. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). This Micro panel can receive power from the serial communications port of most AutomationDirect PLCs. An EA-MG-SP1 Serial Port with DC Power Adapter option module (RS-232/422/485) is required when using third-party PLCs.

Part No. EA1-S3MLW-N

$161.00

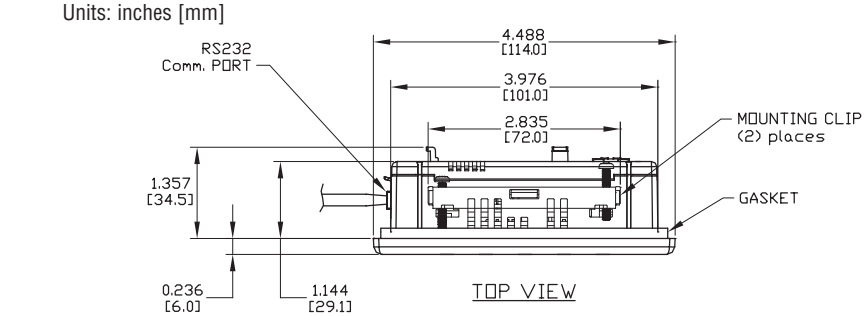
Features

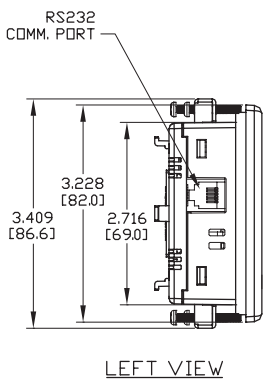
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; White, Pink1, Pink2, Pink3 and Red
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other controllers (RS-232/422/485)
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

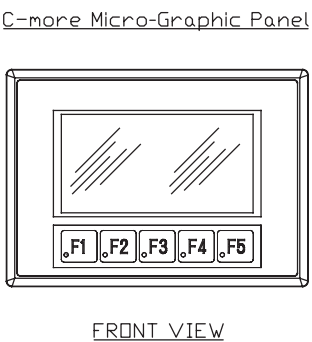
NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the Accessories.

Dimensions

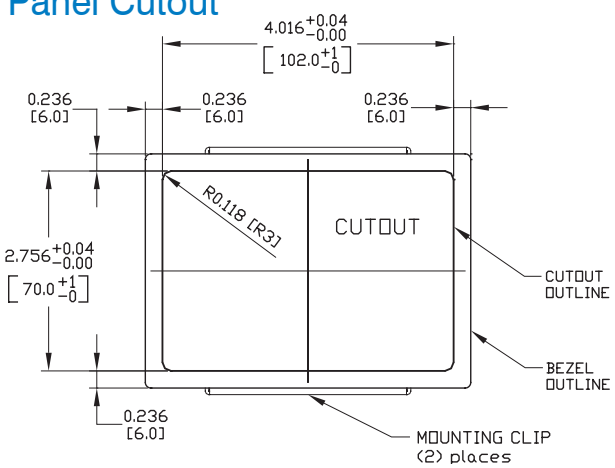
Units: inches [mm]



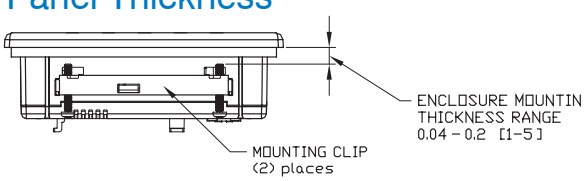




Panel Cutout



Panel Thickness



NOTE: The *C-more* 3" Micro cutout dimensions are not equivalent to previous *AutomationDirect* text panels. The *C-more* Micro panels will not fit in cutouts for DV-1000, EZText or Optimate panels.

C-more 3" Micro Specifications

Specification / Model	3" STN Micro Panel Touch Screen	3" STN Micro Panel Non-Touch Screen
Part Number	EA1-S3ML, EA1-S3MLW	EA1-S3ML-N, EA1-S3MLW-N
Description	128 x 64 dots LCD display, five user defined keypad function buttons, and five user defined LED's	
Display		
• ***Type***	3.1" STN monochrome LCD, graphical characters	
• ***Resolution***	128 (W) x 64 (H) dots	
• ***Color***	2 colors (normal / inverse)	
• ***Viewing Area Size***	2.789" (W) x 1.385" (H) [70.8 mm x 35.2 mm]	
• ***Active Area Size***	2.670" (W) x 1.259" (H) [67.8 mm x 32.0 mm]	
• ***Contrast***	Adjusted from the panel's built-in configuration setup menu	
• ***Viewing Angle***	3, 9 o'clock axis –> 45 degrees 6 o'clock axis –> 45 degrees 12 o'clock axis –> 30 degrees	
Backlight		
• ***Type***	LED	
• ***Color***	5 user defined colors: **EA1-S3ML, EA1-S3ML-N -** Red, Green, Amber, Lime, and Yellow **EA1-S3MLW, EA1-S3MLW-N -** White, Pink1, Pink2, Pink3 and Red	
• ***User Replaceable***	No	
Touch Screen		
• ***Type***	Analog touch panel, single touch*	N/A
• ***Operation***	51 gram force [0.5 N] maximum	N/A
• ***Life***	Minimum of 1,000,000 cycles	N/A
Features		
• ***User Memory***	768 KB	
• ***Number of Screens***	Up to 999 – limited by project memory usage	
• ***Beep (Internal)***	Yes	
• ***Keypad Function Buttons***	Five user defined function key buttons with the ability to customize the label. Minimum of 500,000 cycles	
• ***Keypad Function Button LEDs***	Each function key button includes a red LED that can be user programmed.	
• ***Serial Communications***	Built-in RJ12 serial communications port (RS-232). Optional serial communications port (RS-232, RS-485/422) when using the optional EA-MG-SP1 Serial Port with DC Power Adapter.	
• ***Expansion Connection***	Yes – used with optional Keypad Bezels, EA-MG-BZ1 & BZ2, and EA-MG-P1 DC Power Adapter, and EA-MG-SP1 Serial Port with DC Power Adapter.	
Screen Objects		
• ***Functional Devices***	Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Scroll Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Realtime Graph, Line Graph, Analog Meter	
• ***Static Shapes***	Lines, Rectangles, Circles and Frames	
• ***Displayable Fonts***	Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	

***Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.**

***C-more* 3" Micro panel specifications continued on next page.**

NOTE: Photo includes EA-MG-BZ2

C-more 3" Micro Specifications

Specification \ Model	3" STN Micro Panel Touch Screen	3" STN Micro Panel Non-Touch Screen
Part Number	EA1-S3ML, EA1-S3MLW	EA1-S3ML-N, EA1-S3MLW-N
Electrical		
• Input Voltage Range	5.0 VDC (4.75 – 5.25 VDC)	
• Input Power	Supplied through the panel's RJ12 serial communications port connection when used with any AutomationDirect PLC having an RJ12 communication port. Can also be supplied from an external Class 2, 12-24 VDC power source when using the optional EA-MG-P1 DC Power Adapter, or the optional EA-MG-SP1 Serial Port with DC Power Adapter	
• Power Consumption	1.05W (220mA @ 4.75 VDC)	
• Recommended Fuse	Type AGC fast acting glass fuse, 250 mA, 250 VAC, ADC p/n AGC-25 No fuse required when directly connected to a PLC or PC with recommended cable.	
• Maximum Inrush Current	1 A for 500 µs	
• Acceptable External Power Drop Duration	Maximum 1ms	
Environmental*		
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• Storage Temperature	–20 to +60 °C (–4 to +140 °F)	
• Humidity	5–95% RH (non-condensing)	
• Environmental Air	For use in Pollution Degree 2 Environment	
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µS pulse 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)	
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (Indoor use only)	
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382, CSA File 234884	
Physical		
• Dimensions	4.488" (W) x 3.228" (H) x 1.593" (D) [114.0 mm x 82.0 mm x 40.5 mm]	
• Enclosure Mounting Thickness Range	0.04" – 0.2" [1 – 5 mm]	
• Mounting Clip Screw Torque Range	21 – 28 oz·in [0.15 – 0.2 N·m]	
• Depth from bezel rear with options Module	2.295" [58.3 mm]	
• Weight	5.82 oz. (165 g)	

NOTE: The environmental specifications for the panels shown above are also applicable for the *C-more* 3" Micro accessories shown later in this section of the catalog.

Supported Protocols / Drivers	
Serial - Panel port1 or port2*	***Serial - Panel port2 only ****
AutomationDirect Productivity Series	Allen-Bradley DF1 Full Duplex
AutomationDirect CLICK	Allen-Bradley DF1 Half Duplex
AutomationDirect Do-more	Allen-Bradley PLC5 DF1
AutomationDirect K-sequence	Allen-Bradley DH485
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
AutomationDirect Modbus	Mitsubishi FX
Modicon Modbus RTU	Mitsubishi Q & QnA
Entivity Modbus RTU	Omron Host Link (C200 Adapter, C500)
	Omron FINS Serial (CJ1, CS1)
	Siemens PPI (S7-200 CPU)
	AutomationDirect GS Drives
	AutomationDirect SOLO Temperature Controller

***Note: Serial port 2 requires the use of EA-MG-SP1 adapter for *C-more* 3" Micro panels**

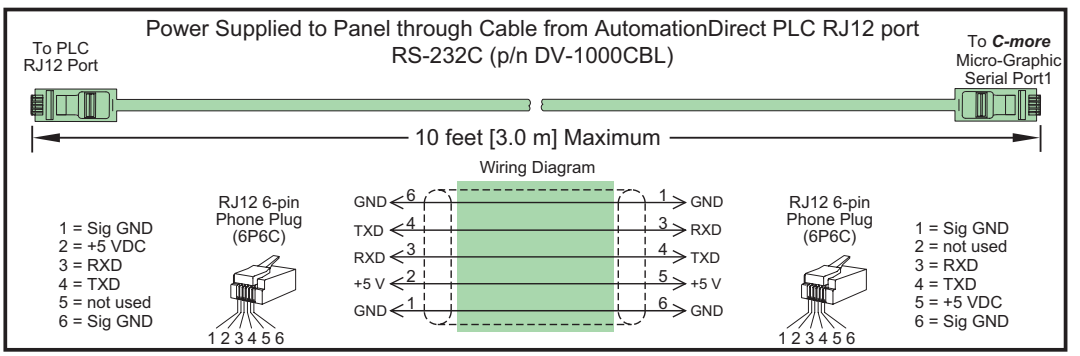
For a list of supported protocols and cabling options refer to the 3" *C-more* Micro Protocols and cabling chart starting on page CK-24.

C-more 3" Micro Power Connection Wiring

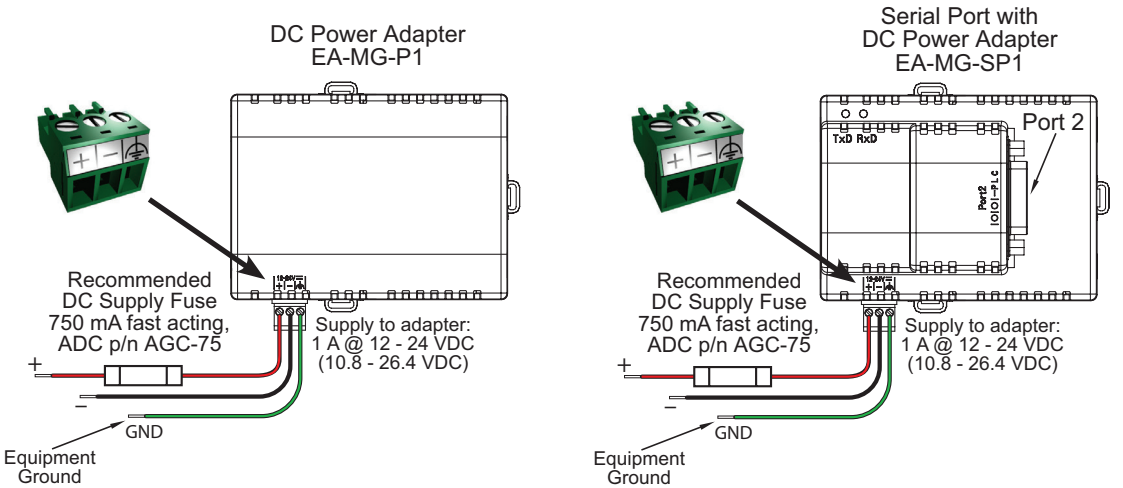
Providing power to the touch panel

- The ***C-more*** 3" Micro panel is powered during programming from the PC through the USB to RS-232 Programming Cable Assembly, EA-MG-PGM-CBL.
- During operation, the ***C-more*** Micro panel can be powered from most ***AutomationDirect*** PLC's RJ12 serial communications port by using the DV-1000CBL communications cable.
- Or install either the DC Power Adapter, EA-MG-P1, or the Serial Port with DC Power Adapter, EA-MG SP1, to the rear of the panel and supply the adapter from a Class 2, 12-24 VDC power source.

3" Panel powered from AutomationDirect PLC via communications cable

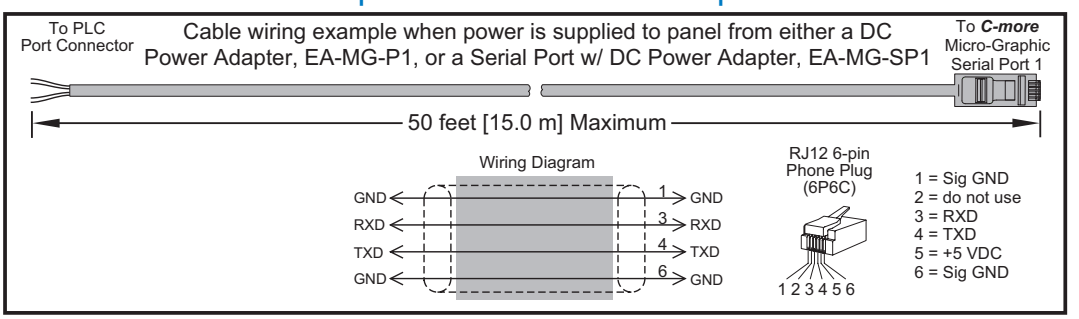


3" panel powered from a DC power adapter – wiring diagram



NOTE: Recommended DC power supply to power either DC Power Adapter, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

Maximum communication cable length when 3" panel is powered from an optional DC Power Adapter



C-more 3" Micro PLC Connections

Cabling requirements

The following cables can be used when connecting the ***C-more*** 3" Micro panel's built-in RJ12 serial port (Port1) with the Productivity Series, Do-more, CLICK, DL05, DL06, DL105, DL205, D3-350 and DL405 CPUs.

- DV-1000CBL — connects to Productivity Series, Do-more CLICK, DL05, DL06, DL105, DL205, D3-350 and D4-450 phone jack.
- D4-1000CBL — connects to all DL405 CPU 15-pin ports.

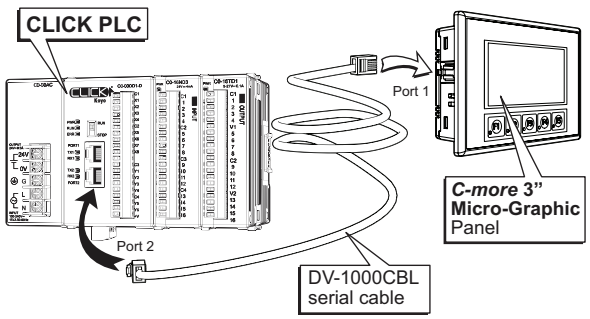
A maximum cable length of 10 feet between the ***C-more*** Micro panel and the PLC is recommended when powering the panel from the PLC.

The Serial Port with DC Power Adapter module, EA-MG-SP1, can be used with the ***C-more*** 3" Micro panels if the application requires the use of RS-422 or RS-485. The serial port on the adapter, designated as port 2, can also be wired for RS-232. The use of the adapter permits greater cable length. See the Communication Protocols & Cabling Charts in this catalog section for details on the selection of various controllers, protocols, and connectivity.

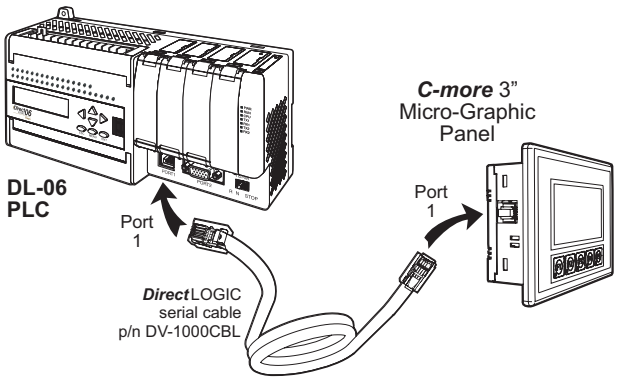
Drivers for your Controller

- AutomationDirect Productivity Series
- AutomationDirect Do-more
- AutomationDirect CLICK (Modbus)
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing)
- Modbus RTU
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500) Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomationDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

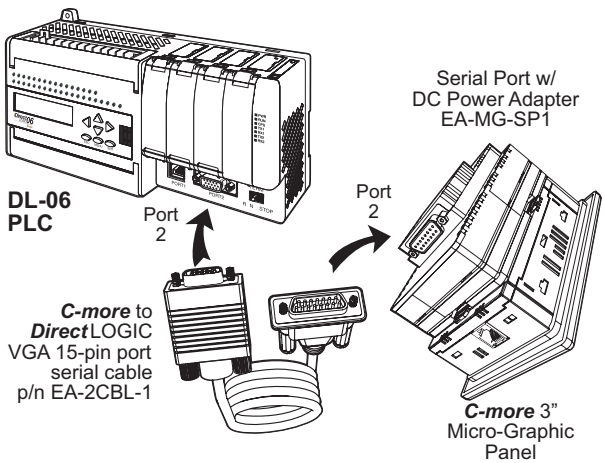
C-more 3" Micro Port 1 to CLICK PLC Port 2



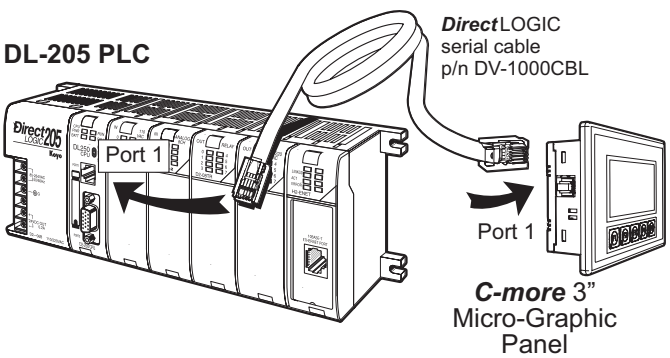
C-more 3" Micro Port 1 to DL06 PLC Port 1



C-more 3" Micro Port 2 to DL06 PLC Port 2



C-more 3" Micro Port 1 to DL205 PLC Port 1



C-more 3" Micro Communication Protocols & Cabling Chart

Controller Compatibility & Connection Chart

PLC			*C-more 3" Micro Panel.*							
			Panel to PLC Cabling Components Required for Specific Port and Protocol being used.							
			PLC Port Powered Powered with 5 VDC from the connected PLC's comm. port.		**DC Power Adapter** Powered from an external 24 VDC source using the DC Power Adapter, EA-MG-P1.		**Serial Port with DC Power Adapter** Powered from an external 24 VDC source using the Serial Port with DC Power Adapter, EA-MG-SP1.			
			Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using adapter's serial Port 2 15-pin D-sub - female	
Family	***CPU***	***Port & Type***	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
CLICK	all versions	Port 1 RJ12 - 6 pin	Automation Direct Modbus (CLICK)	DV-1000CBL RS-232	Automation Direct Modbus (CLICK)	DV-1000CBL RS-232	Automation Direct Modbus (CLICK)	DV-1000CBL RS-232	Automation Direct Modbus (CLICK)	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin								
	Analog CPU's	Port 3 Terminal block - 3-pin		N/A		N/A		N/A		See Note RS-485
Productivity Series	all versions	RS-232 RJ12 - 6 pin	Automation Direct Productivity3000 Serial (P3-550)	DV-1000CBL RS-232	Automation Direct Productivity3000 Serial (P3-550)	DV-1000CBL RS-232	Automation Direct Productivity3000 Serial (P3-550)	DV-1000CBL RS-232	Automation Direct Productivity3000 Serial (P3-550)	DV-1000CBL RS-232
		RS-485 Port Term block 3-pin		N/A		N/A		N/A		See Note RS-485
Do-more	all versions	Port 2 RJ12 - 6 pin	Automation Direct Do-more Serial	DV-1000CBL RS-232	Automation Direct Do-more Serial	DV-1000CBL RS-232	Automation Direct Do-more Serial	DV-1000CBL RS-232	Automation Direct Do-more Serial	DV-1000CBL RS-232
***Direct*LOGIC DL05 (see D0-DCM under DL06)**	all versions	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin								
***Direct*LOGIC DL06**	all versions	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
										See Note RS-422
									Modbus RTU	See Note RS-485 Modbus only
	D0-DCM	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
										See Note RS-422
									Modbus RTU	See Note RS-485 Modbus only
***Direct*LOGIC DL105**	all versions	Port 1 RJ12 - 6 pin	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	EA-2CBL RS-232

Note: See the *C-more* Micro Hardware User Manual, Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. Available for download at www.automationdirect.com. PLC Compatibility & Connection Chart continued on next page.

C-more 3" Micro Communication Protocols & Cabling Chart (cont'd)

Controller Compatibility & Connection Chart

PLC			*C-more* 3" Micro Panel.							
			Panel to PLC Cabling Components Required for Specific Port and Protocol being used.							
			PLC Port Powered Powered with 5 VDC from the connected PLC's comm. port.		**DC Power Adapter** Powered from an external 24 VDC source using the DC Power Adapter, EA-MG-P1.		**Serial Port with DC Power Adapter** Powered from an external 24 VDC source using the Serial Port with DC Power Adapter, EA-MG-SP1.			
			Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using adapter's serial Port 2 15-pin D-sub - female	
Family	**CPU**	**Port & Type**	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
***Direct*LOGIC DL205**	D2-230	Port 1 RJ12 - 6 pin	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	EA-2CBL RS-232
	D2-240	Port 1 RJ12 - 6 pin	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	DV-1000CBL RS-232	K-sequence	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin	K-sequence, *Direct*NET		K-sequence, *Direct*NET		K-sequence, *Direct*NET		K-sequence, *Direct*NET	
	D2-250-1	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
										See Note RS-422
	D2-260	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		DV-1000CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
										See Note RS-422
									Modbus RTU	See Note RS-485 Modbus only
	D2-DCM	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232
										See Note RS-422
	WINPLC	Port 1 RJ12 - 6 pin	Modbus RTU	DV-1000CBL RS-232	Modbus RTU	DV-1000CBL RS-232	Modbus RTU	DV-1000CBL RS-232	Modbus RTU	EA-2CBL RS-232
***Direct*LOGIC DL305**	D3-330 or D3-340	D3-232-DCU DB 25 pin .(female)	N/A		*Direct*NET	See Note RS-232	*Direct*NET	See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232
		D3-422-DCU DB 25 pin (female)	N/A		N/A		N/A		*Direct*NET	See Note RS-422
	D3-340	Port 1 RJ11 - 4 pin	N/A		*Direct*NET	OP-3CBL-1 RS-232	*Direct*NET	OP-3CBL-1 RS-232	*Direct*NET	EA-3CBL RS-232
		Port 2 RJ11 - 4 pin	N/A		*Direct*NET, Modbus RTU		*Direct*NET, Modbus RTU		*Direct*NET, Modbus RTU	
	D3-350	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	EA-2CBL RS-232
		Port 2 DB 25 pin (female)	N/A		K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-4CBL-2 RS-232
										See Note RS-422
	D3-DCM D3-350 only	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232
										See Note RS-422

Note: See the *C-more* Micro Hardware User Manual, Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. Available for download at www.automationdirect.com. PLC Compatibility & Connection Chart continued on next page.

C-more 3" Micro Communication Protocols & Cabling Chart (cont'd)

Controller Compatibility & Connection Chart

PLC			*C-more 3" Micro Panel.*							
			Panel to PLC Cabling Components Required for Specific Port and Protocol being used.							
Family	*CPU*	*Port & Type*	**PLC Port Powered** Powered with 5 VDC from the connected PLC's comm. port.		**DC Power Adapter** Powered from an external 24 VDC source using the DC Power Adapter, EA-MG-P1.		**Serial Port with DC Power Adapter** Powered from an external 24 VDC source using the Serial Port with DC Power Adapter, EA-MG-SP1.			
			Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using adapter's serial Port 2 15-pin D-sub - female	
			Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
***Direct*LOGIC DL405**	D4-430	Port 0 DB 15 pin (female)	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	N/A		K-sequence, *Direct*NET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	EA-4CBL-2 RS-232 See Note RS-422
	D4-440	Port 0 DB 15 pin (female)	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	N/A		K-sequence, *Direct*NET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	EA-4CBL-2 RS-232 See Note RS-422
	D4-450	Port 0 DB 15 pin (female)	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	N/A		K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET, Modbus RTU	DV-1000CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-4CBL-2 RS-232 See Note RS-422
		Port 2 RJ12 - 6 pin	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	DV-1000CBL RS-232	K-sequence, *Direct*NET	EA-2CBL RS-232
		Port 3 DB 25 pin (female)	N/A		N/A		N/A		K-sequence, *Direct*NET, Modbus RTU	See Note RS-422
	D4-DCM	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232 See Note RS-422
SOLO	N/A	Data +/- terminals	N/A		N/A		N/A		SOLO Temperature Controller	See Note RS-485
GS Drives	N/A	RS-485 Interface	N/A		N/A		N/A		GS Drives Serial GS Drives TCP/IP (GS-EDRV)	See Note RS-485

Note: See the *C-more* Micro Hardware User Manual, Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. Available for download at www.automationdirect.com. PLC Compatibility & Connection Chart continued on next page.

C-more 3" Micro Communication Protocols & Cabling Chart (cont'd)

Controller Compatibility & Connection Chart										
PLC			***C-more 3" Micro Panel.***							
			Panel to PLC Cabling Components Required for Specific Port and Protocol being used.							
			PLC Port Powered Powered with 5 VDC from the connected PLC's comm. port.		**DC Power Adapter** Powered from an external 24 VDC source using the DC Power Adapter, EA-MG-P1.		**Serial Port with DC Power Adapter** Powered from an external 24 VDC source using the Serial Port with DC Power Adapter, EA-MG-SP1.			
			Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using adapter's serial Port 2 15-pin D-sub - female	
Family	***CPU***	***Port & Type***	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
Allen-Bradley MicroLogix	1000, 1100, 1200, 1400, 1500	8-pin mini-din port	N/A		N/A		N/A		DF1 Full Duplex DF1 Half Duplex	EA-MLOGIX-CBL RS-232
		RJ45 8-pin phone plug							DH485/AIC/AIC+	EA-DH485-CBL RS-232
Allen-Bradley SLC500	5/03, 5/04, 5/05	9-pin D-sub port							DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
	5/01, 5/02, 5/03	RJ45 8-pin phone plug							DH485/AIC/AIC+	EA-DH485-CBL RS-232
Allen-Bradley ControlLogix	all	9-pin D-sub port							DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley CompactLogix	all	9-pin D-sub port							DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley FlexLogix	all	9-pin D-sub port							DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley PLC5	all	25-pin D-sub port							DF1 Full Duplex	EA-PLC5--232-CBL RS-232
		RJ45 8-pin phone plug							DH485/AIC/AIC+	EA-DH485-CBL RS-232
GE	90/30	15-pin D-sub port							SNPX	EA-90-30-CBL RS-422
	Micro 90, VersaMax Micro	RJ45 Port 1								See Note RS-232
		15-pin D-sub port Port 2								EA-90-30-CBL RS-422
Mitsubishi	Melsec FX Series	25-pin D-sub port							CPU Direct	EA-MITSU-CBL RS-422
		8-pin mini-din port								EA-MITSU-CBL-1 RS-422
	Q / QnA	9-pin D-sub port							Q / QnA	See Note RS-232
		6-pin mini-din port								See Note RS-232
Omron	C200 (Adapter), C500	25-pin D-sub port							Host Link	EA-OMRON-CBL RS-232
	CJ1, CS1, CQM1, CPM1, CPM2, C200	9-pin D-sub port							FINS	See Note RS-232
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU	varies							Modbus RTU	See Note RS-232
Siemens	S7-200 CPU	9-pin D-sub port 0 or 1							PPI	See Note RS-485

Note: See the *C-more* Micro Hardware User Manual, Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. Available for download at www.automationdirect.com. Available cables with descriptions shown on the next page.

C-more 3" Micro Communication Cables and Cable Kits

Cable Description	Cable Part Number	Price
Cables for direct connect to panel's serial Port1 (Panel powered from PLC's serial port.)		
AutomationDirect Productivity Series, Do-more, CLICK, *Direct*LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C).	***DV-1000CBL***	$19.00
*Direct*LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C).	***D4-1000CBL***	$17.00
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C). Use with DV-1000CBL cable.	***FA-15HD***	$8.00
*Direct*LOGIC PLC 15-pin D-sub port, DL405 (RS-232C). Use with DV-1000CBL cable.	***FA-CABKIT***	$40.00
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C).	***OP-3CBL-1***	$6.00
Cables used with serial Port2		
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***	$20.00
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C).	***EA-2CBL-1***	$20.00
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C).	***EA-3CBL***	$20.00
*Direct*LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C).	***EA-4CBL-1***	$20.00
*Direct*LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232C).	***EA-4CBL-2***	$20.00
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C)	***EA-MLOGIX-CBL***	$30.00
Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C)	***EA-SLC-232-CBL***	$20.00
Allen-Bradley PLC-5 DF1 port (RS-232C)	***EA-PLC5-232-CBL***	$20.00
Allen-Bradley MicroLogix, SLC-5-01/02/03, PLC5 DH485 port (RS-232C)	***EA-DH485-CBL***	$20.00
GE 90/30 and 90/70, Micro 90, VersaMax Micro (Port 2) 15-pin D-sub port (RS-422A)	***EA-90-30-CBL***	$20.00
MITSUBISHI FX Series 25-pin port (RS-422A)	***EA-MITSU-CBL***	$20.00
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A)	***EA-MITSU-CBL-1***	$20.00
OMRON Host Link C200 Adapter, C500 (RS-232C)	***EA-OMRON-CBL***	$20.00

DV-1000CBL

D4-1000CBL

OP-3CBL-1

FA-15HD

FA-CABKIT

EA-2CBL-1

EA-2CBL

EA-4CBL-1

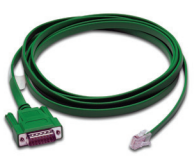
EA-3CBL

EA-MLOGIX-CBL

EA-4CBL-2

EA-PLC5-232-CBL

EA-SLC-232-CBL



EA-DH485-CBL

EA-90-30-CBL

EA-MITSU-CBL

EA-MITSU-CBL-1

EA-OMRON-CBL

C-more 3" Micro Panel Accessories

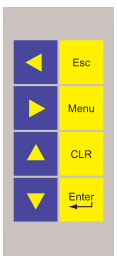
8-button Keypad Bezel

The 8-button keypad bezel can be used with both the touch and non-touch ***C-more*** 3" Micro 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 (Style 3) to allow changing of a value, and can also be used to navigate & select objects when using the non-touch panel version.The keypad bezel is designed for easy drop-in of a ***C-more*** 3"Micro panel. No panel configuration required.

Part No. EA-MG-BZ1

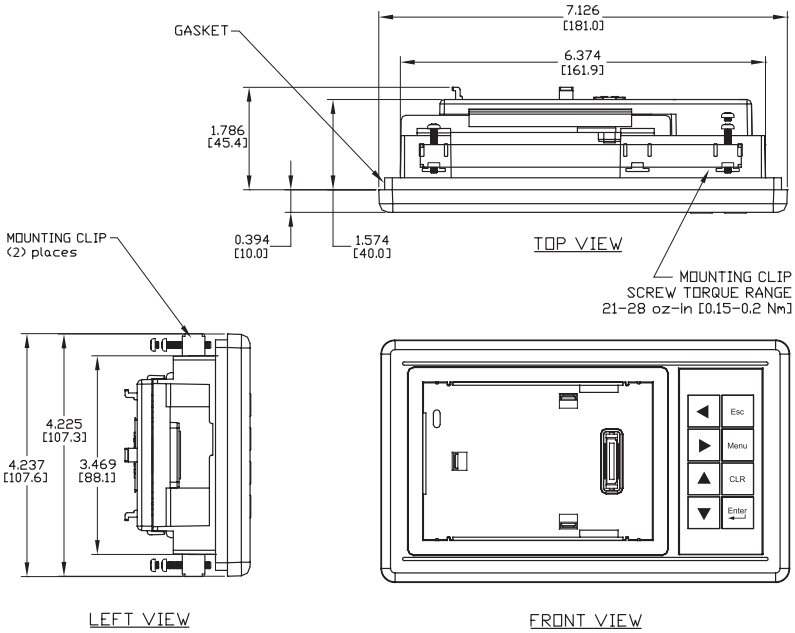
$64.00

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

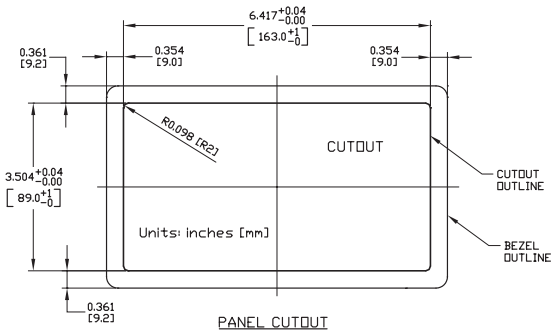


Dimensions

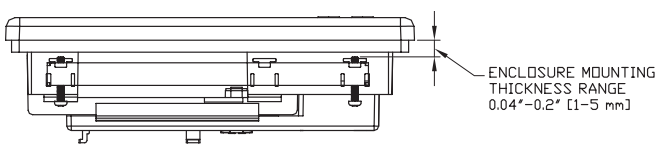
Units: inches [mm]



Panel Cutout



Panel Thickness



8-Button Keypad Bezel Specifications	
Part Number	EA-MG-BZ1
General	
• ***C-more Micro Panels Supported***	EA1-S3ML, EA1-S3MLW, EA1-S3ML-N, EA1-S3MLW-N
• ***Connection***	Connects with expansion connector on the rear of a ***C-more*** 3" Micro 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*** 3" Micro 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 environmental specifications at the beginning of this catalog section.

C-more 3" Micro Panel Accessories

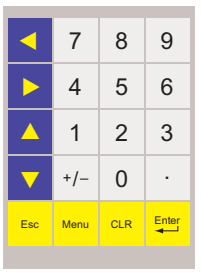
20-Button Keypad Bezel

The 20-button keypad bezel can be used with both the touch and non-touch ***C-more*** 3" Micro 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 (Style 3) to allow changing of a value, and can also be used to navigate & select objects when using the non-touch panel version. The numeric buttons can be used to enter a new value. The keypad bezel is designed for easy drop-in of a ***C-more*** 3" Micro panel. No panel configuration required.

Part No. EA-MG-BZ2

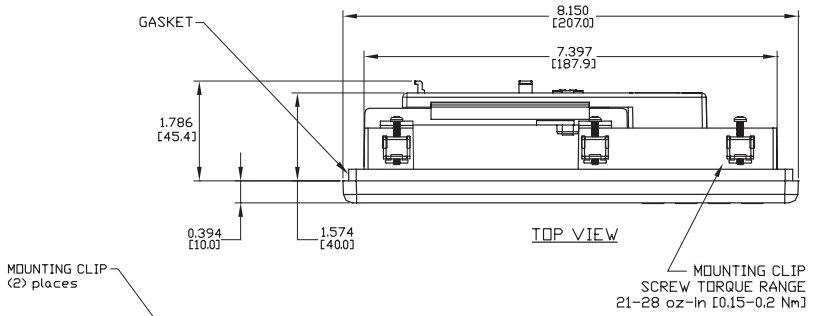
$87.00

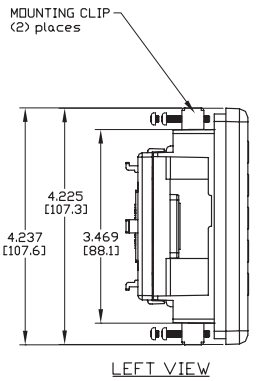
Four directional cursor buttons, numeric buttons, and ESC, MENU, CLEAR and ENTER buttons.

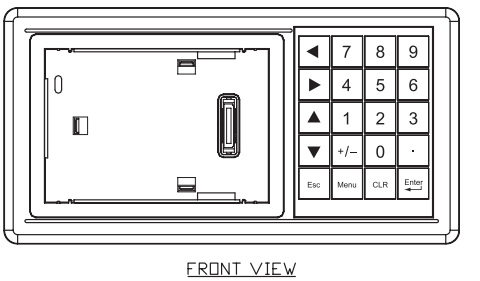


Dimensions

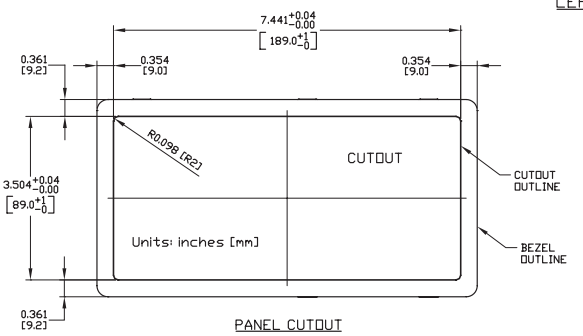
Units: inches [mm]



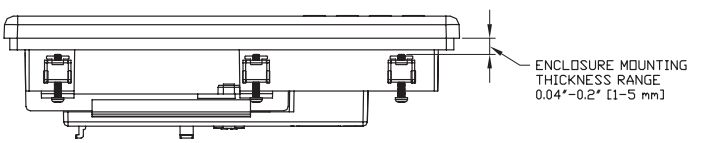




Panel Cutout



Panel Thickness



20-Button Keypad Bezel Specifications	
Part Number	EA-MG-BZ2
General	
• ***C-more Micro Panels Supported***	EA1-S3ML, EA1-S3MLW, EA1-S3ML-N, EA1-S3MLW-N
• ***Connection***	Connects with expansion connector on the rear of a 3" ***C-more*** Micro 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***	(6) mounting clips, EA-MG-BZ2-BRK, included.
	Note: The ***C-more*** 3" Micro 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 environmental specifications at the beginning of this catalog section.

C-more 3" Micro Panel Accessories

DC Power Adapter

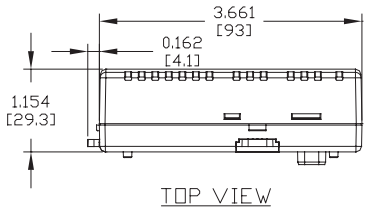
The ***C-more*** 3" Micro panel is designed to use the 5 VDC power that is available from an RJ12 serial communications port found on some *AutomationDirect* PLC's. However, for other devices that do not supply power through their serial commun cations port, the EA-MG-P1 DC power adapter or EA-MG-SP1 serial port with DC power adapter must be used. Both adapters require power from a Class 2, 12-24 VDC source. The EA-MG-P1 DC Power Adapter for ***C-more*** 3" Micro panels is designed to easily snap on to the rear of a ***C-more*** 3" Micro panel or the rear of an optional Keypad Bezel being used with a ***C-more*** 3" Micro panel.

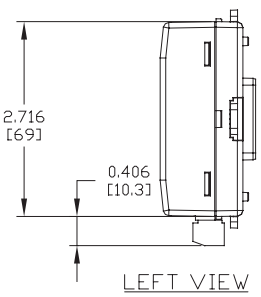
Part No. EA-MG-P1

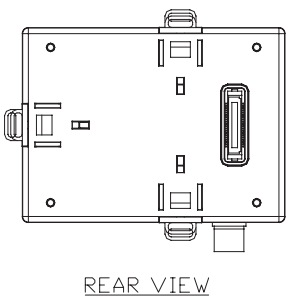
$31.50

Dimensions

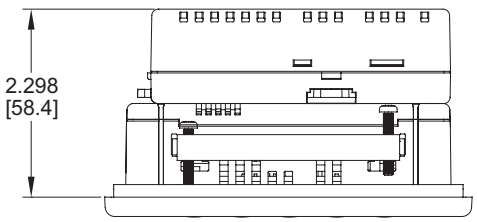
Units: inches [mm]



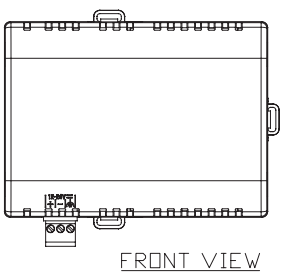




Panel overall depth with adapter installed



Units: inches [mm]



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 µs with 12 VDC applied, 10 A @ 500 µs with 24 VDC applied
• Recommended Fuse	Type AGC fast acting glass fuse, 750 mA, 250 VAC, ADC #AGC-75
• 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 environmental specifications at the beginning of this catalog section.

NOTE: Recommended DC power supply to power either DC Power Adapter, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

C-more 3" Micro Panel Accessories

Serial Port with DC Power Adapter

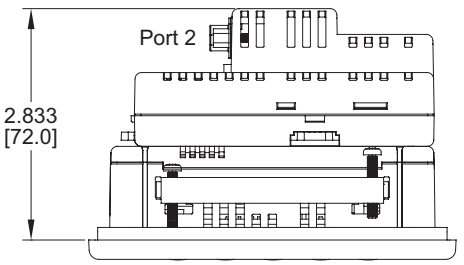
The ***C-more*** 3" Micro panel is designed to use the 5 VDC power that is available from an RJ12 serial communications port of some *AutomationDirect* PLC's. However, for other devices that do not supply power through their serial communications port, the EA-MG-P1 DC power adapter or EA-MG-SP1 serial port with DC power adapter must be used. The EA-MG SP1, 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 Class 2, 12-24 VDC source. This optional Serial Port with DC Power Adapter for ***C-more*** 3" Micro panels is designed to easily snap on to the rear of a ***C-more*** 3" Micro panel or the rear of an optional Keypad Bezel being used with a ***C-more*** 3" Micro panel.

Part No. EA-MG-SP1

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

$54.00

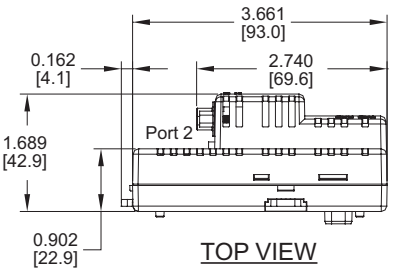
Panel overall depth with adapter installed



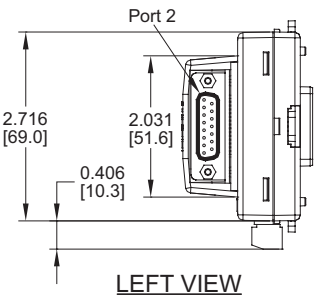
Units: inches [mm]

Dimensions

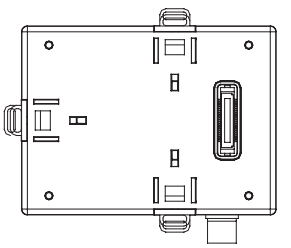
Units: inches [mm]



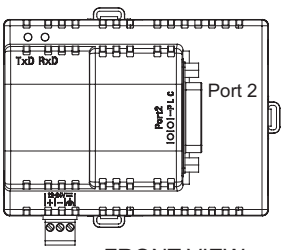
TOP VIEW



LEFT VIEW



REAR VIEW



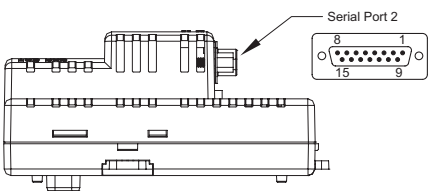
FRONT VIEW

NOTE: Recommended DC power supply to power either DC Power Adapter, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

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
• Recommended Fuse	Type AGC fast acting glass fuse, 750 mA, 250 VAC, ADC #AGC-75
• 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 environmental specifications at the beginning of this catalog section.

PLC Serial Communications Port 2

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	Supplies +5VDC	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use



C-more 3" Micro Panel Accessories

D-SUB 15-pin to Terminal Block Adapter

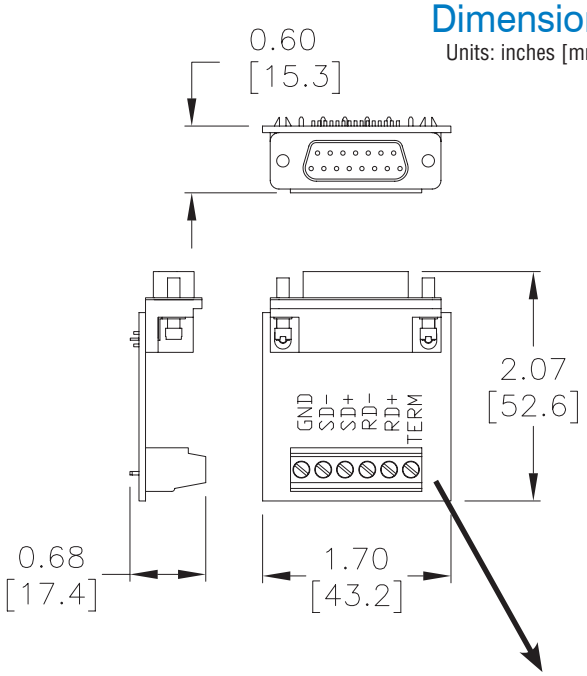
The EA-COMCON-3A adapter plugs into the 15-pin serial port on the rear of a ***C-more*** Micro panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable.

Part No.
EA-COMCON-3A

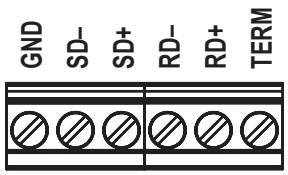
$19.00

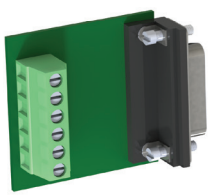
Dimensions

Units: inches [mm]

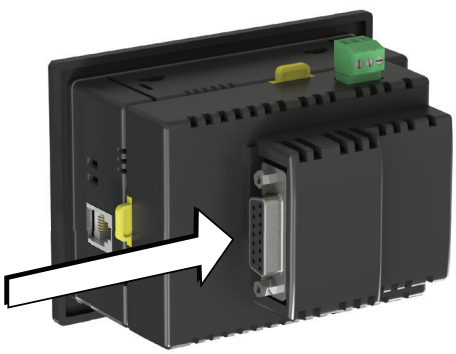


Terminals





EA-COMCON-3A



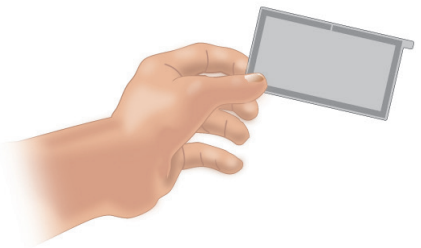
C-more 3" Micro with EA-MG-SP1

C-more 3” Micro Panel Accessories

Clear Screen Overlay

Optional clear screen overlay used to protect ***C-more*** 3″ Micro displays from minor scratches and wear. Package contains 5 clear screen overlays.

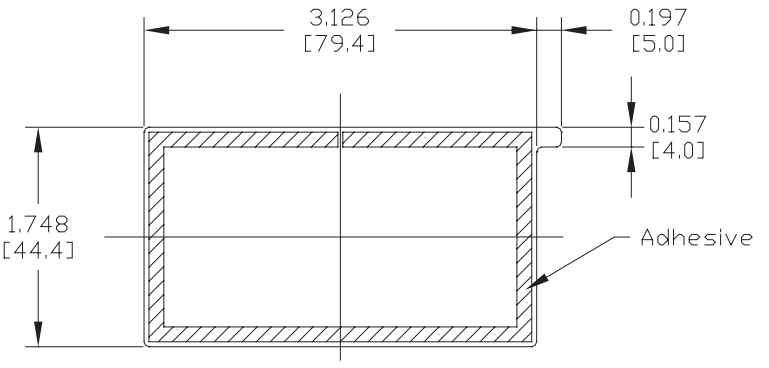
Part No. EA-MG-COV-CL



$35.50

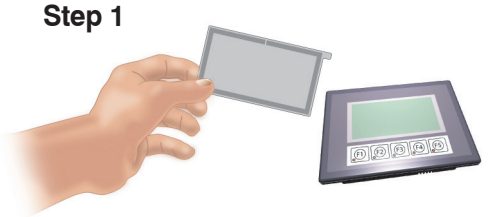
Dimensions

Units: inches [mm]



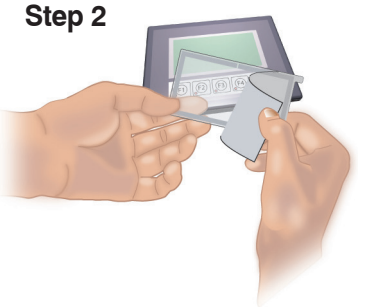
Clear screen overlay installation

Step 1



Remove the overlay from the package

Step 2



Remove the paper backing from the overlay

Step 3

Align the overlay with the screen and press the adhesive firmly into place

Step 4

Remove the protective film*

***Note: The overlay cover ships with a thin protective film on the face that should be carefully removed after installation.**

C-more 3" Micro Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost ***C-more*** 3" Micro panel components.

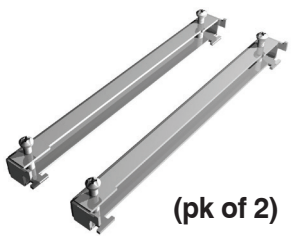
Replacement parts at a glance:

Part Number	Description	Price
EA-MG-S3ML-BRK	Replacement mounting clip for ***C-more*** 3" Micro panels (pk of 2)	$17.50
EA-MG-BZ1-BRK	Replacement mounting clip for ***C-more*** 3" Micro keypad bezel p/n EA-MG-BZ1 (pk of 2)	$17.50
EA-MG-BZ2-BRK	Replacement mounting clip for ***C-more*** Micro keypad bezel p/n EA-MG-BZ2 and ***C-more*** 6" Micro panels and bezels (pk of 8)	$18.50
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*** 3" Micro panels and ***C-more*** Micro panels larger than 3" (pk of 5)	$14.00
EA-MG-S3ML-GSK	Replacement mounting gasket for ***C-more*** 3" Micro panels	$12.00
EA-MG-BZ1-GSK	Replacement mounting gasket for ***C-more*** 3" Micro keypad bezel p/n EA-MG-BZ1	$15.00
EA-MG-BZ2-GSK	Replacement mounting gasket for ***C-more*** 3" Micro keypad bezel p/n EA-MG-BZ2	$15.00
EA-MG-S3ML-FKL	Replacement function key label insert for ***C-more*** 3"Micro panels (pk of 10; 5 blank, 5 F1-F5)	$9.75

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

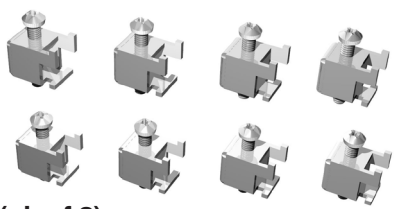
(pk of 2)

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



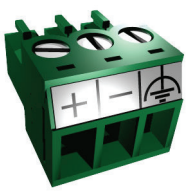
(pk of 2)

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



(pk of 8)

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



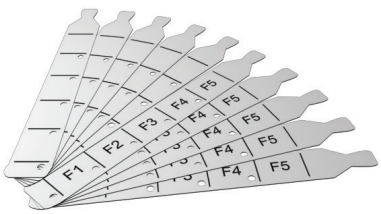
(pk of 5)

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

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

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

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



(pk of 10 - 5 blank, 5 F1-F5)

C-more 4" Micro Panels Overview

Overview

C-more 4" Micro panel is a full color, TFT model that offers touch screen capability and customizable graphics! The 4" panel mounts in a standard 1/4 DIN cutout.

In addition to the simple panel configuration software, a very helpful feature is the built-in project simulator. The project simulator allows you to view your project on the PC screen as it would appear on the panel and to test all your screens before downloading the project to the panel. You can simulate your entire project at any stage of development and even simulate the function keys and keypad bezel.

Getting started

Installing the software and configuring the ***C-more*** 4" Micro panel is simple. You will need the following to successfully connect and configure a project for the panel:

- ***C-more*** 4" Micro panel
- ***C-more*** Micro Programming Software EA-MG-PGMSW (Downloadable version available from the ***AutomationDirect*** web site at no charge.)
- ***C-more*** Micro USB Programming Cable such as USB-CBL-AB6, used to connect between a PC and the Micro panel's built-in programming port. The panel will operate in Low-Power mode when powered by the PC and the screen brightness is diminished.
- Power source – An external Class 2, 12-24 VDC power source is required for normal High-Power operation. Recommended power supplies are AutomationDirect part numbers PSC-24-015 or PSC-24-030.
- Personal computer – to run the ***C-more*** Micro programming software
- Communications Cable (serial) – to connect the ***C-more*** Micro panel to your PLC or other controller with which the panel will communicate.

Drivers for your Controller

C-more 4" Micro panels have the following drivers available for connection to Productivity Series, CLICK, *Direct*LOGIC and many other devices:

- AutomationDirect Productivity Series
- AutomationDirect Do-more
- AutomationDirect CLICK (Modbus)
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing)
- Modbus RTU
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500) Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomationDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

EA1-T4CL

$356.00

NOTE: EA1-T4CL requires Software and Firmware Version 3.00 or later. Available for free download at *www.automationdirect.com*.

Features

Bitmaps

- 320 X 240 pixel graphical display supports bitmaps
- Use bitmap images of pushbuttons, switches, indicators, your company logo
- Use provided library of bitmaps
- Create your own library of bitmaps

Text - 40 lines

- 40 lines by 80 characters of static text in Landscape Orientation
- 54 lines by 59 characters of static text in Portrait Orientation
- Look up text, scroll up to 128 characters
- 30 lines by 40 characters of dynamic text, embedded variables, on/off phrases, scroll up to 40 characters
- Scroll text object with up to 128 characters

Beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Line, vertical, horizontal, skinny, fat, multiple

Data entry

- Pop-up numeric key pad on the screen
- Increment/decrement a value by touching arrows

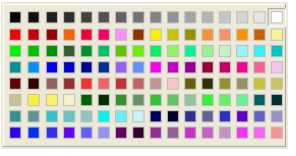
Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

32K Colors

The TFT panel has a palette of 32K colors available to make full use of color for objects and bitmaps as well as backgrounds.

Up to 999 Screens



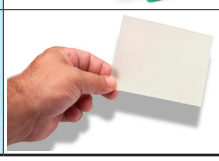
C-more Micro supports up to 999 screens. Screen quantity is limited by memory usage which is determined by the total bitmaps, objects, etc. that are used.

C-more 4" Micro Panels Overview

C-more 4" TFT Micro Panel			
Part Number		**Description**	**Price**
EA1-T4CL		4-inch ***C-more*** Micro Touch Panel with TFT Color LCD, 320 x 240 dot, 32,768 color display with LED backlight. 5 user-defined function keys with LED indicators. Two built-in ports (USB Type-B port and 15-pin D-sub RS-232/422/485 port). Display supports Portrait and Landscape modes. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only).	$356.00

Note: Software and Firmware Version 3.00 or later is required with model EA1-T4CL. Available for free download at *www.automationdirect.com.*

C-more Micro Programming Software			
Part Number		**Description**	**Price**
EA-MG-PGMSW		***C-more*** Micro Windows-based programming software for C-more EA1 and EA3 series panels. Package includes software CD. Requires USB port connection from PC to C-more Micro panel. Cables sold separately. Downloadable version available from the Web site at no charge.	$25.00
USB-CBL-AB3		The ***C-more*** Micro TFT panel requires a USB A-to-B type cable to connect a personal computer to the panel for programming. (Note: The TFT panel includes a built-in USB to serial converter and the USB driver will appear as a COM port to the PC when properly installed. The USB port supplies 5VDC to the TFT panel so that no external power supply is required for programming.)	$7.50
USB-CBL-AB6			$9.50
USB-CBL-AB10			$18.00
USB-CBL-AB15			$22.50

C-more 4" Micro Panel Accessories			
Part Number		**Description**	**Price**
EA-ADPTR-4		DSUB PLC serial communications port adapter, 15-pin 90-degree. Compatible with C-more EA7 series, EA9-T6CL(-R) and C-more Micro 4 or 6-inch panels.	$39.00
EA-COMCON-3		DSUB port adapter, 15-pin to 6-terminal RS-422/485, right angle connector, plugs into the 15-pin serial port on rear of touch panel to allow wire terminal connections for an RS-422/485 communication cable. Compatible with C-more EA7 series, EA9-T6CL(-R), and C-more Micro 4 or 6-inch panels.	$42.00
EA-4-COV2		Optional clear screen overlay used to protect ***C-more*** 4" Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.	$33.50

For a list of supported protocols and cabling options refer to the *C-more* Micro Protocols and cabling chart starting on page CK-73.

C-more 4" Micro TFT Touch Panel

Model EA1-T4CL ***C-more*** 4" Micro touch panel has a 4.1-inch TFT LCD 320 x 240 dot display and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. It features five user-defined function keys, each key with a user-defined red LED indicator. The panel can display up to 40 lines by 80 characters of static text and up to 30 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics in landscape orientation. Portrait orientation can display 54 lines by 59 characters of static text and 40 lines by 40 characters of dynamic text. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). The **C-more** 4" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*.

Part No. EA1-T4CL

$356.00

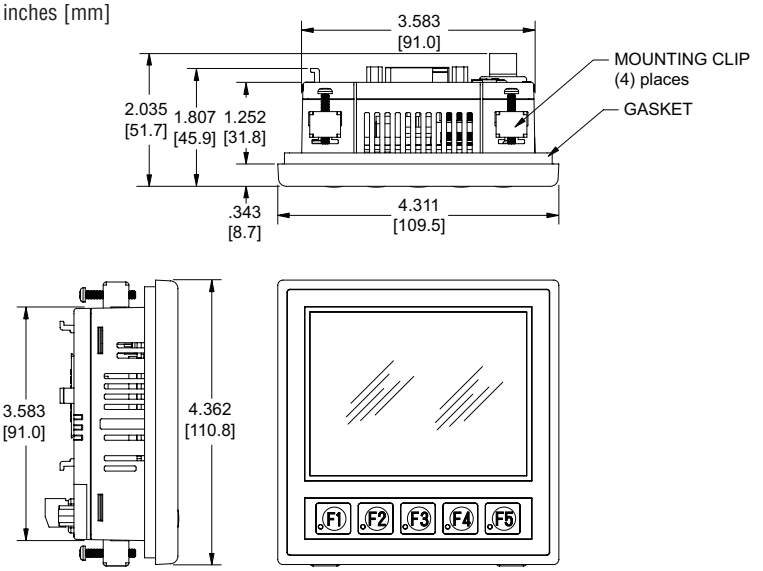
Features

- Standard 1/4 DIN mounting cutout
- Touch screen display
- Free downloadable programming software
- 320 x 240 Dot display with up to 40 lines by 80 characters of text and graphics in landscape mode
- Up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 32K colors
- Optional replaceable clear screen overlay
- 3,276 KB memory
- Built-in USB type B programming port
- Built-in 15-pin serial communications port
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

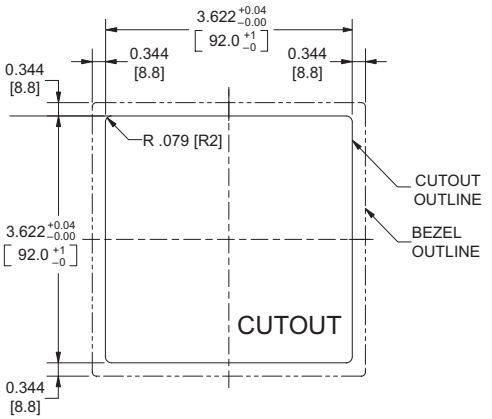
***NOTE: The EA1-T4CL can be powered through Port1 when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 4" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

Dimensions

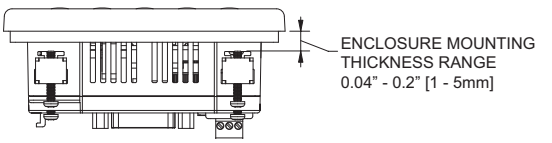
Units: inches [mm]



Panel Cutout - Standard 1/4 DIN



Panel Thickness



NOTE: The *C-more* 4" Micro cutout dimensions are not equivalent to previous *AutomationDirect* text panels. The *C-more* 4" Micro panels will not fit in cutouts for DV-1000, EZText, Optimate panels or *C-more* panels.

C-more 4" Micro Specifications

Specifications		
Description:	320 x 240 dots LCD display (Landscape Mode), Five user defined keypad function buttons, and five user defined LED's	
Display:		
• Type	4.1" TFT Color LCD, graphical characters	
• Resolution	320 (W) x 240 (H) dots (Landscape Mode) 240 (W) x 320 (H) dots (Portrait Mode)	
• Color	32768 colors	
• Display Brightness (Reference)	**USB Bus Power (Programming)**	**High Power Mode**
	180 nits (typ)	360 nits (typ)
• Viewing Area Size	3.357" (W) x 2.54" (H) [85.26 mm x 64.62 mm]	
• Active Area Size	3.250" (W) x 2.438" (H) [82.56 mm x 61.92 mm]	
• Brightness	Adjusted from the panel's built-in configuration setup menu	
• Viewing Angle (Landscape Mode)	3, 9 o'clock axis –> 35 degrees 6 o'clock axis –> 50 degrees 12 o'clock axis –> 20 degrees	
Backlight:		
• Type	LED	
• Color	White	
• User Replaceable	No	
Touch Screen:		
•Type	Analog touch panel, single touch*	
• Operation	82 gram force [0.8 N] maximum	
• Life	Minimum of 1,000,000 cycles	
Features:		
• User Memory	3276 kBytes	
• Number of Screens	Up to 999 – limited by project memory usage	
• Beep (Internal)	Yes	
• Keypad Function Buttons	Five user defined function key buttons with the ability to custom label with an overlay. Minimum of 500,000 cycles	
• Keypad Function Button LEDs	Each function key button includes a red LED that can be user programmed.	
• Programming Port	USB Type B	
• Serial Communications	15-pin D-sub serial communications port (RS-232, RS-485 / 422).	
Screen Objects:		
• Functional Devices	Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Real Time Graphics Line Graph, Analog Meter.	
• Static Shapes	Lines, Rectangles, Circles and Frames	
• Displayable Fonts	Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
***Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.**		

***C-more* 4" Micro panel specifications continued on next page.**

C-more 4" Micro Specifications

Specifications (cont'd)		
Electrical:		
	USB Bus Power (Programming)	***High Power Mode***
• Input Voltage Range	5.0 VDC (4.75 – 5.25 VDC)	12/24 VDC (10.2 – 26.4 VDC)
• Input Power	Supplied from a PC USB.	Supplied from an external Class 2, 12-24 VDC power source
• Power Consumption	2W	4.5 W
• Recommended Fuse	No fuse required when directly connected to a PC with recommended cable.	Type AGC fast acting glass fuse, 750 mA, 250 VAC, ADC p/n AGC-75
• Maximum Inrush Current	4.5 A for 800 µs	8 A for 800 µs
• Acceptable External Power Drop Duration	Maximum 1ms	
Environmental:		
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• Storage Temperature	–20 to +60 °C (–4 to +140 °F)	
• Humidity	5–95% RH (non-condensing)	
• Environmental Air	For use in Pollution Degree 2 environment	
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µS pulse 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)	
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (Indoor use only)	
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382, CSA 234884	
Physical:		
• Dimensions	4.311" (W) x 4.362" (H) x 2.035" (D) [109.5 mm x 110.8 mm x 51.7 mm]	
• Enclosure Mounting Thickness Range	0.04" – 0.2" [1 – 5 mm]	
• Mounting Clip Screw Torque Range	21 – 28 oz-in [0.15 – 0.2 N·m]	
• Weight	14.99 oz. (425 g)	

PLC Drivers	
Serial - port2 only	
AutomationDirect Productivity Series	Allen-Bradley DF1 Half Duplex
AutomationDirect CLICK	Allen-Bradley DF1 Full Duplex
AutomationDirect Do-more	Allen-Bradley PLC5 DF1
AutomationDirect K-sequence	Allen-Bradley DH485
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
AutomationDirect Modbus	Mitsubishi FX
AutomationDirect SOLO	Mitsubishi (Q, QnA)
AutomationDirect GS Drives	Omron Host Link (C200 Adapter, C500)
Modicon Modbus RTU	Omron FINS Serial (CJ1, CS1)
Entivity Modbus RTU	Siemens PPI (S7-200 CPU)

NOTE: EA1-T4CL cannot be powered by a PLC and cannot communicate with a PLC through Port1

For a list of supported protocols and cabling options refer to the *C-more* Micro Protocols and cabling chart starting on page CK-73.

C-more 4" Micro Power Connection Wiring

Providing power to the touch panel

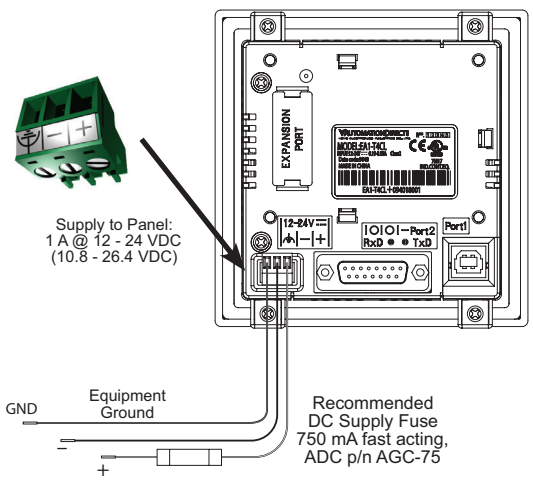
1.) The panel is powered by a Class 2, 1 Amp @ 12-24 VDC power source in normal operation. Recommended power supplies are AutomationDirect part number PSC-24-015 or PSC-24-030.

2.) ***C-more*** Micro TFT panel EA1-T4CL is powered during programming through a USB A-to-B cable such as USB-CBL-AB6.
The panel will operate in Low-power mode when powered by the PC and result in a dim screen.*

3.) ***C-more*** Micro TFT panel EA1-T4CL cannot be powered from a PLC.

***NOTE: The EA1-T4CL can be powered through Port1 when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 4" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

4" Panel powered from a DC power source – wiring diagram



NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

C-more 4" Micro Panel Accessories

D-SUB 15-pin 90-degree Communication Port Adapter

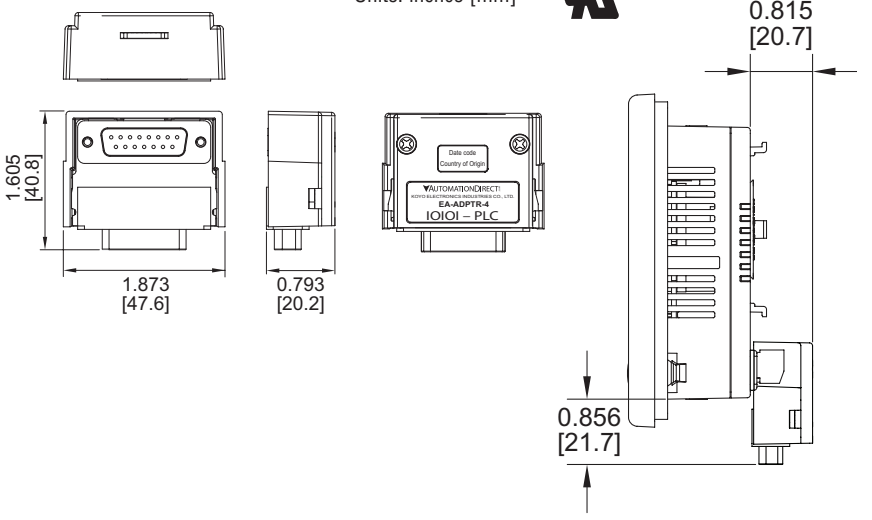
The EA-ADPTR-4 adapter plugs into the 15-pin serial port on the rear of a 4" panel to allow a controller communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

Part No.
EA-ADPTR-4

$39.00

Dimensions

Units: inches [mm]



D-SUB 15-pin to Terminal Block Adapter

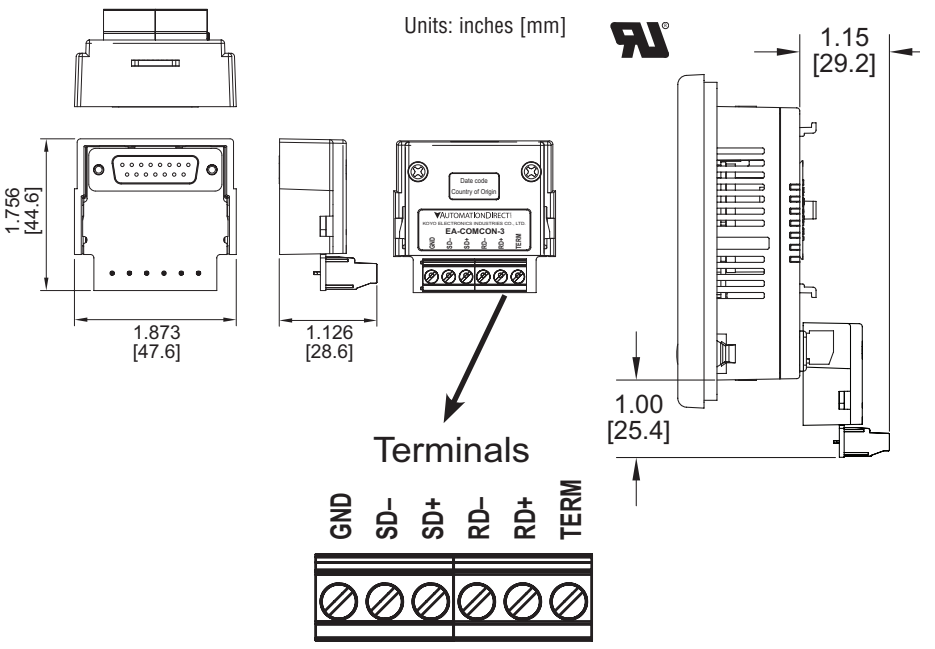
The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of a 4" panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized.

Part No.
EA-COMCON-3

$42.00

Dimensions

Units: inches [mm]

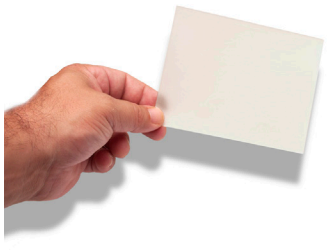


C-more 4" Micro Panel Accessories

Clear Screen Overlay

Optional clear screen overlay used to protect ***C-more*** 4" Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.

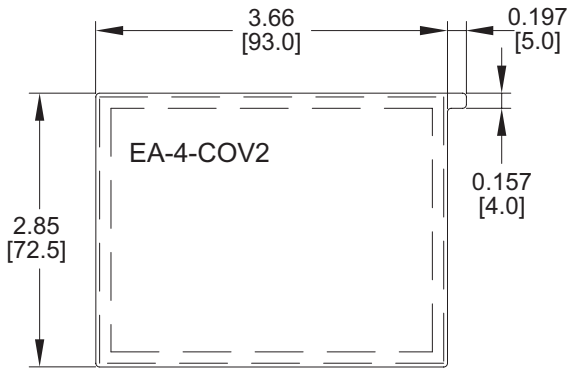
Part No. EA-4-COV2



$33.50

Dimensions

Units: inches [mm]



Clear Screen Overlay Installation

Step 1

Remove the overlay from the package

Step 2

Remove the paper backing from the overlay

Step 3

Align the overlay with the screen and press the adhesive firmly into place

Step 4

Remove the protective film*

***Note: The overlay cover ships with a thin protective film on the face that should be carefully removed after installation.**

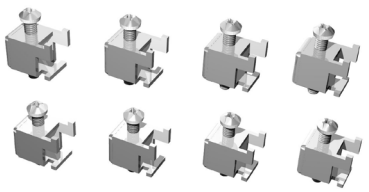
C-more 4” Micro Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost ***C-more*** 4” Micro panel components.

Replacement parts at a glance:

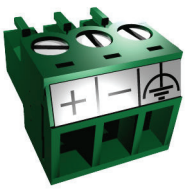
Part Number	Description	Price
EA-MG-BZ2-BRK	Replacement mounting bracket for 4” and 6” ***C-more*** Micro panels and 6” keypad bezels. Also used to mount the ***C-more*** 3” Micro bezel EA-MG-BZ2. (pk of 8)	$18.50
EA-MG-DC-CON	Replacement adapter DC power connector (pk of 5)	$14.00
EA-MG4-GSK	Replacement mounting gasket for ***C-more*** 4” Micro panels	$8.75
EA-MG4-FKL	Replacement function key label insert for ***C-more*** 4” Micro panels (pk of 4; 3 blank, 1 F1-F5 for landscape)	$14.00

Panel Mounting Clips
Part No. EA-MG-BZ2-BRK



(pk of 8)

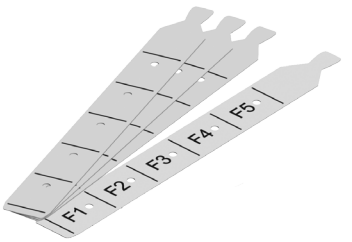
DC Power Connector
Part No. EA-MG-DC-CON



(pk of 5)

Panel Gasket
Part No. EA-MG4-GSK

Function Keys Label Inserts
Part No. EA-MG4-FKL



(pk of 4; 3 blank, 1 F1-F5 for landscape)

C-more 6" Micro Panels Overview

Overview

C-more 6" Micro panels offer full color TFT touch screen capability and customizable graphics.

In addition to the simple panel configuration software, a very helpful feature is the built-in project simulator. The project simulator allows you to view your project on the PC screen as it would appear on the panel and to test all your screens before downloading the project to the panel. You can simulate your entire project at any stage of development. With version 2.50 or later, simulate the function keys and keypad bezel.

Getting started

Installing the software and configuring the ***C-more*** 6" Micro panel is simple. You will need the following to successfully connect and configure a project for the panel:

- ***C-more*** Micro panel
- ***C-more*** Micro Programming Software EA-MG-PGMSW (Downloadable version available from the ***AutomationDirect*** web site at no charge.)
- ***C-more*** Micro USB to RS232 Programming Cable Assembly EA-MG-PGM-CBL, used to connect between a PC and the Micro panel's built-in serial port
- Power source – either powered from the RJ12 serial comm port on most ***AutomationDirect*** PLCs, ***C-more*** DC Power Adapter EA-MG-P1, or Serial Port with DC Power Adapter EA-MG-SP1
- Personal computer – to run the ***C-more*** Micro programming software
- Communications Cable (serial) – to connect the ***C-more*** Micro panel to your controller
- Adding the EA-ECOM module allows programming and PLC communication via an Ethernet connection (EA3 series only)

Drivers for your Controller

C-more 6" Micro panels have the following drivers available for connection to Productivity Series, CLICK, ***Direct***LOGIC and many other devices:

- AutomationDirect Productivity Series – serial / Ethernet*
- AutomationDirect Do-more – serial / Ethernet*
- AutomationDirect CLICK (Modbus)– serial / Ethernet*
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing) ***Direct***LOGIC ECOM Ethernet*
- Modbus RTU Modbus TCP/IP*
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500) Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

**with EA-ECOM Ethernet module (EA3 series only)*

EA1-T6CL

$432.00

Shown in Landscape (Horizontal) mode

EA3-T6CL

$299.00

Shown in Portrait (Vertical) mode

NOTE: EA1-T6CL requires Software and Firmware Version 2.50 or later. EA3-T6CL requires Software and Firmware Version 3.60 or later. Available for free download at www.automationdirect.com.

Features

Bitmaps

- 320 X 240 pixel graphical display supports bitmaps
- Use bitmap images of pushbuttons, switches, indicators, your company logo
- Use provided library of bitmaps
- Create your own library of bitmaps

Text - 40 lines

- 40 lines by 80 characters of static text in Landscape Orientation
- 53 lines by 60 characters of static text in Portrait Orientation
- Look up text, scroll up to 128 characters
- 40 lines by 40 characters of dynamic text, embedded variables, on/off phrases, scroll up to 40 characters
- Scroll text object with up to 128 characters

Beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Line, vertical, horizontal, skinny, fat, multiple

Data entry

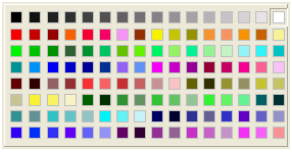
- Pop-up numeric key pad on the screen
- Increment/decrement a value by touching arrows

Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

32K Colors

The 6" panels have a palette of 32K colors available to make full use of color for objects and bitmaps as well as backgrounds.



Up to 999 Screens

C-more Micro supports up to 999 screens. Screen quantity is limited by memory usage which is determined by the total bitmaps, objects, etc. that are used.

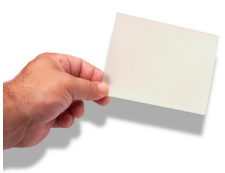
C-more 6" Micro Panels Overview

C-more 6" TFT Micro Panels			
Part Number		**Description**	**Price**
EA3-T6CL		***C-more*** Micro touch screen operator interface, 5.7 inch, TFT color LCD, 320 x 240 pixel display, 32K colors, LED backlight, 5 user defined function keys, RS-232 (RJ12) port, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$299.00
EA1-T6CL		***C-more*** Micro touch screen operator interface, 5.7 inch, TFT color LCD, 320 x 240 pixel display, 32K colors, LED backlight, 5 user defined function keys, RS-232 / RS-485 / 422 (15-pin D-sub) port, USB B port, display supports landscape/portrait mode(s), NEMA 4/4X, IP65, indoor use only.	$432.00
USB-CBL-AB3		The ***C-more*** Micro TFT panel requires a USB A-to-B type cable to connect a personal computer to the panel for programming. (Note: The TFT panel includes a built-in USB to serial converter and the USB driver will appear as a COM port to the PC when properly installed. The USB port supplies 5VDC to the TFT panel so that no external power supply is required for programming.)	$7.50
USB-CBL-AB6			$9.50
USB-CBL-AB10			$18.00
USB-CBL-AB15			$22.50

Note: Software and Firmware Version 3.60 or later is required with model EA3-T6CL. Available for free download at www.automationdirect.com.

Note: Software and Firmware Version 2.5 or later is required with model EA1-T6CL. Available for free download at www.automationdirect.com.

C-more Micro Programming Software			
Part Number		**Description**	**Price**
EA-MG-PGMSW		***C-more*** Micro Windows-based programming software for ***C-more*** EA1 and EA3 series panels. Package includes software CD. Requires USB port connection from PC to C-more Micro panel. Cables sold separately. Downloadable version available from the Web site at no charge.	$25.00

C-more 6" Micro Panel Accessories			
Part Number		**Description**	**Price**
EA-ADPTR-4		DSUB PLC serial communications port adapter, 15-pin 90-degree. Compatible with C-more EA7 series, EA9-T6CL(-R) and C-more Micro 4 or 6-inch panels.	$39.00
EA-COMCON-3		DSUB port adapter, 15-pin to 6-terminal RS-422/485, right angle connector, plugs into the 15-pin serial port on rear of touch panel to allow wire terminal connections for an RS-422/485 communication cable. Compatible with C-more EA7 series, EA9-T6CL(-R), and C-more Micro 4 or 6-inch panels.	$42.00
EA-6-COV2		Optional clear screen overlay used to protect ***C-more*** 6" Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.	$37.00

C-more 6” Micro Panels Overview

EA1-T6CL Panel Accessories			
Part Number		***Description***	***Price***
EA-MG6-BZ2		For Landscape (Horizontal) Mounted EA1-T6CL Panels. 20-button keypad bezel with numeric keypad for ***C-more*** EA1-T6CL, 4 arrow adjust keys, and ESCAPE, MENU, CLEAR and ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the Micro panels.	$107.00
EA-MG6-BZ2P		For Portrait (Vertical) Mounted EA1-T6CL Panels. 21-button keypad bezel with numeric keypad for ***C-more*** EA1-T6CL, 4 arrow adjust keys, and ESCAPE, MENU, CLEAR and (2) ENTER buttons. Helps to reduce screen wear in heavy-duty applications where operators can use the keypad to enter numeric data. Designed for easy drop-in of the Micro panels.	$79.00

For a list of supported protocols and cabling options refer to the *C-more* Micro Protocols and cabling chart starting on page CK-73.

EA3-T6CL Panel Accessories			
Part Number		***Description***	***Price***
EA-ECOM		C-more Micro communication expansion module, Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. For use with EA3 series panels.	$50.00

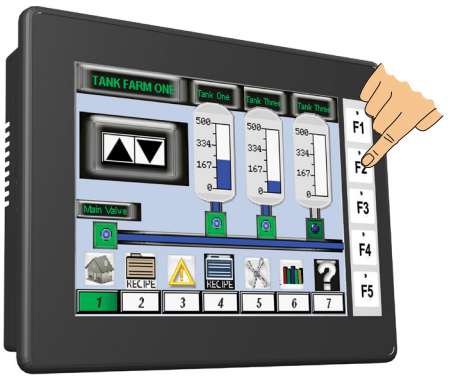
C-more 6" Micro TFT Touch Panel

Model EA3-T6CL ***C-more*** 6" Micro touch panel has a 5.7-inch TFT LCD 320 x 240 dot display and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. It features five user-defined function keys, each key with a user-defined red LED indicator. The panel can display up to 40 lines by 80 characters of static text and up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics in landscape orientation. Portrait orientation can display 53 lines by 60 characters of static text and 40 lines by 40 characters of dynamic text. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). The ***C-more*** 6" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*.

***NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-030.**

Part No. EA3-T6CL

Shown in Landscape (Horizontal) mode



$299.00

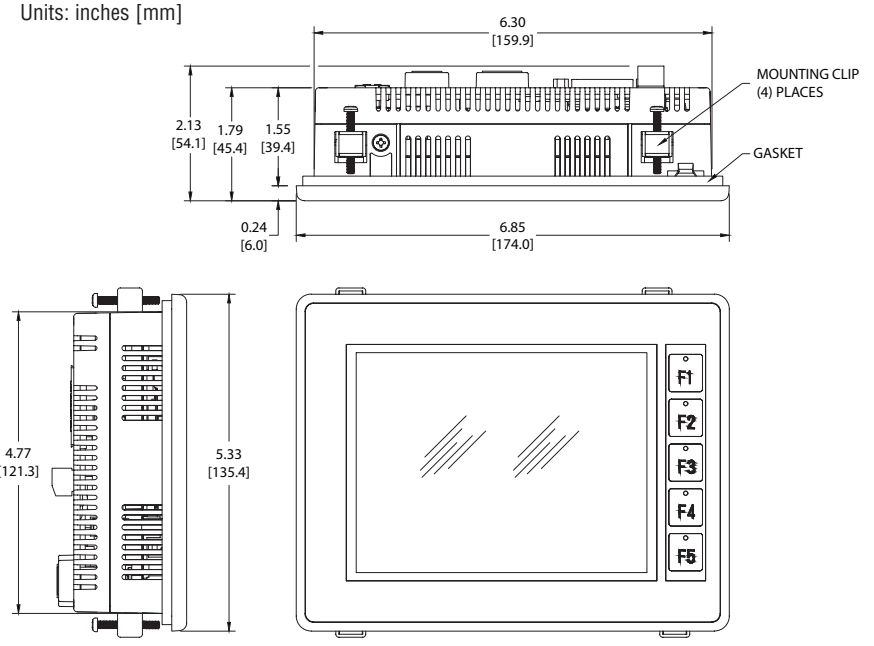
Features

- Touch screen display
- Free downloadable programming software
- 320 x 240 dot display with up to 40 lines by 80 characters of text and graphics in landscape mode
- Up to 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- Five programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 32K colors
- Optional replaceable clear screen overlay
- 6MB memory
- Built-in USB type B programming port
- Built-in 15-pin serial communications port
- Built-in RJ12 serial communications port
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

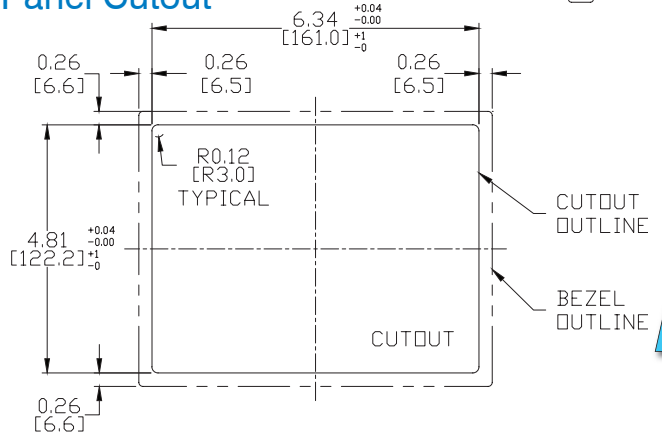
***NOTE: The EA3-T6CL can be powered through the USB port when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 6" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

Dimensions

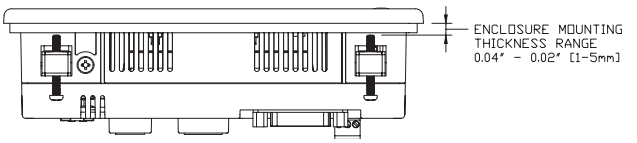
Units: inches [mm]



Panel Cutout



Panel Thickness



NOTE: The *C-more* 6" Micro cutout dimensions are not equivalent to previous AutomationDirect text panels. The *C-more* 6" Micro panels will not fit in cutouts for DV-1000, EZText, Optimate panels or *C-more* 6" panels.

C-more 6" Micro TFT Touch Panel

Model EA1-T6CL ***C-more*** 6" Micro touch panel has a 5.7-inch TFT LCD 320 x 240 dot display and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. It features five user-defined function keys, each key with a user-defined red LED indicator. The panel can display up to 40 lines by 80 characters of static text and up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics in landscape orientation. Portrait orientation can display 53 lines by 60 characters of static text and 40 lines by 40 characters of dynamic text. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). The ***C-more*** 6" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*.

Part No. EA1-T6CL

Shown in Landscape (Horizontal) mode

$432.00

Features

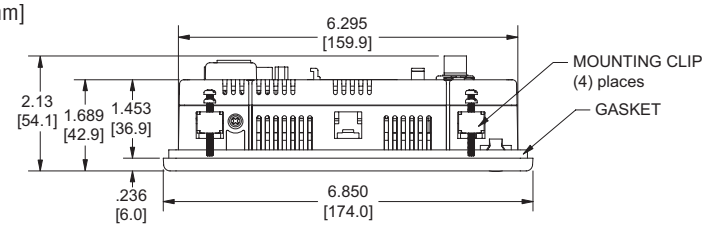
- Touch screen display
- Free downloadable programming software
- 320 x 240 Dot display with up to 40 lines by 80 characters of text and graphics in landscape mode
- Up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 32K colors
- 2 optional keypad bezels, 20-button landscape and 21-button portrait
- Optional replaceable clear screen overlay
- 3,276 KB memory
- Built-in USB type B programming port
- Built-in 15-pin serial communications port
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

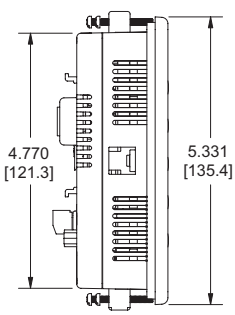
NOTE: Don't forget the optional keypad bezels shown in the Accessories section.

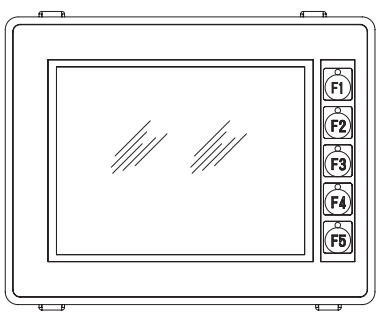
***NOTE: The EA1-T6CL can be powered through Port1 when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 6" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

Dimensions

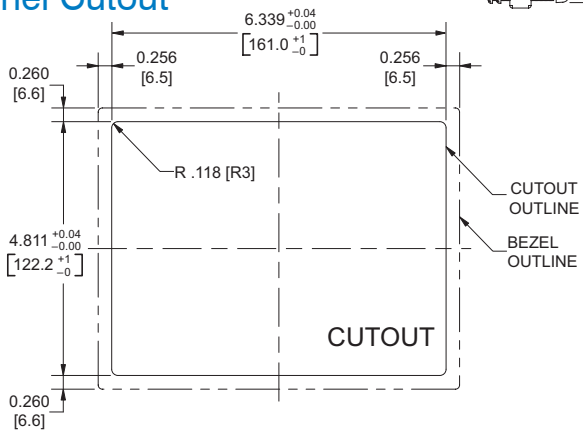
Units: inches [mm]



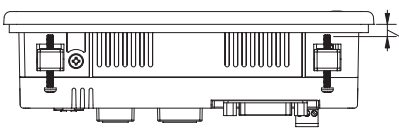




Panel Cutout



Panel Thickness



NOTE: The *C-more* 6" Micro cutout dimensions are not equivalent to previous AutomationDirect text panels. The *C-more* 6" Micro panels will not fit in cutouts for DV-1000, EZText, Optimate panels or *C-more* 6" panels.

C-more 6” Micro Specifications

Specifications		
Part Number	***EA3-T6CL***	***EA1-T6CL***
Description	320 x 240 dots LCD display (Landscape Mode), five user defined keypad function buttons, and five user defined LED’s	
Display		
• Type	5.7” TFT Color LCD, graphical characters	
• Resolution	320 (W) x 240 (H) dots (Landscape Mode) 240 (W) x 320 (H) dots (Portrait Mode)	
• Color	32768 colors	
• Viewing Area Size	4.574” (W) x 3.483” (H) [116.2 mm x 87.4 mm]	
• Active Area Size	4.535” (W) x 3.400” (H) [115.2 mm x 86.4 mm]	
• Contrast	Adjusted from the panel’s built-in configuration setup menu	
• Viewing Angle	3, 9 o’clock axis –> 80 degrees 6 o’clock axis –> 65 degrees 12 o’clock axis –> 80 degrees	
Backlight		
• Type	LED	
• Color	White	
• User Replaceable	No	
Touch Screen		
•Type	Analog touch panel, single touch*	
• Operation	82 gram force [0.8 N] maximum	
• Life	Minimum of 1,000,000 cycles	
Features		
• User Memory	6291 kBytes	3276 kBytes
• Number of Screens	Up to 999 – limited by project memory usage	
• Beep (Internal)	Yes	
• Keypad Function Buttons	Five user defined function key buttons with the ability to customize label with an overlay. Minimum of 500,000 cycles	
• Keypad Function Button LEDs	Each function key button includes a red LED that can be user programmed.	
• Programming Port	USB Type B	
• Serial Communications	RJ12 serial communications port (RS-232) 15-pin D-sub serial communications port (RS-232, RS-485 / 422)	15-pin D-sub serial communications port (RS-232, RS-485 / 422)
• Ethernet Communications	With optional EA-ECOM module	N/A
Screen Objects		
• Functional Devices	Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Real Time Graphics Line Graph, Analog Meter.	
• Static Shapes	Lines, Rectangles, Circles and Frames	
• Displayable Fonts	Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
***Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.**		
***C-more* 6” Micro panel specifications continued on next page.**		

C-more 6" Micro Specifications

Specifications		
Part Number	***EA3-T6CL***	***EA1-T6CL***
Physical		
• Dimensions	6.850" (W) x 5.331" (H) x 2.130" (D) [174.0 mm x 135.4 mm x 54.1 mm] (Landscape Mode) 5.331" (W) x 6.850" (H) x 2.130" (D) [135.4 mm x 174.0 mm x 54.1 mm] (Portrait Mode)	
• Enclosure Mounting Thickness Range	0.04" – 0.2" [1 – 5 mm]	
• Mounting Clip Screw Torque Range	21 – 28 oz·in [0.15 – 0.2 N·m]	
• Depth from bezel rear with options Module	N/A	1.894" [47.1 mm]
• Weight	21.16 oz. (600 g)	30.69 oz. (870 g)
Environmental		
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• Storage Temperature	–20 to +60 °C (–4 to +140 °F)	
• Humidity	5–95% RH (non-condensing)	
• Environmental Air	For use in Pollution Degree 2 environment	
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µS pulse 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)	
• Enclosure	For use on a flat surface of Type 4 / 4X enclosure (Indoor use only)	
• Agency Approvals*	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382	
***Note: To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com**		
***C-more* 6" Micro panel specifications continued on next page.**		

NOTE: The environmental specifications for the panels shown above are also applicable for the *C-more* 6" Micro accessories shown later in this section of the catalog.

C-more 6" Micro Specifications

Specifications		
EA3-T6CL		
Electrical		
	USB Bus Power (Programming only)*	***High Power Mode***
• Input Voltage Range	5.0 VDC (4.75 – 5.25 VDC)	12/24 VDC (10.2 – 26.4 VDC)
• Input Power	Supplied from a PC USB.	Supplied from an external Class 2, 12-24 VDC power source
• Power Consumption	2W (400mA @ 5VDC)	7.5 W (625mA @ 12 VDC)
• Recommended Fuse	No fuse required when directly connected to a PLC or PC with recommended cable.	Type AGC fast acting glass fuse, 2.5 A, 250 VAC, ADC p/n MDL2-5
• Maximum Inrush Current	4.5 A for 800 µs	13 A for 800 µs
• Acceptable External Power Drop Duration	Maximum 1ms	

***NOTE: The EA3-T6CL can be powered through the USB port when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 6" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

Specifications		
EA1-T6CL		
Electrical		
	USB Bus Power (Programming only)*	***High Power Mode***
• Input Voltage Range	5.0 VDC (4.75 – 5.25 VDC)	12/24 VDC (10.2 – 26.4 VDC)
• Input Power	Supplied from a PC USB.	Supplied from an external Class 2, 12-24 VDC power source
• Power Consumption	2 W (420 mA @ 4.75 VDC)	6.5 W (640 mA @ 10.2 VDC)
• Recommended Fuse	No fuse required when directly connected to a PLC or PC with recommended cable.	Type AGC fast acting glass fuse, 750 mA, 250 VAC, ADC p/n AGC-75
• Maximum Inrush Current	4.5 A for 800 µs	13 A for 800 µs
• Acceptable External Power Drop Duration	Maximum 1ms	

***NOTE: The EA1-T6CL can be powered through Port1 when connected to a PC for programming, the screen brightness is diminished because the panel is running in Low-Power Mode. For full brightness, connect an external Class 2, 12-24 VDC power source to the 6" panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.**

PLC Drivers		
Serial - port1 or port2	Serial - port2 only	EA-ECOM**
AutomationDirect Productivity Series	Allen-Bradley DF1 Half Duplex	AutomationDirect Productivity Series Ethernet
AutomationDirect Do-more	Allen-Bradley DF1 Full Duplex	AutomationDirect Do-more Ethernet
AutomationDirect CLICK	Allen-Bradley PLC5 DF1	AutomationDirect CLICK Ethernet
AutomationDirect K-sequence	Allen-Bradley DH485	AutomationDirect ECOM Ethernet
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)	Modbus TCP/IP
AutomationDirect Modbus	Mitsubishi FX	
Modicon Modbus RTU	Mitsubishi Q & QnA	
Entivity Modbus RTU	Omron Host Link (C200 Adapter, C500)	
	Omron FINS Serial (CJ1, CS1)	
	Siemens PPI (S7-200 CPU)	
	AutomationDirect SOLO Temperature Controller	
	AutomationDirect GS Drives	
** EA-COM module is compatible only with EA3 series panels		

***NOTE: EA3 Series panels cannot be powered by a PLC.**

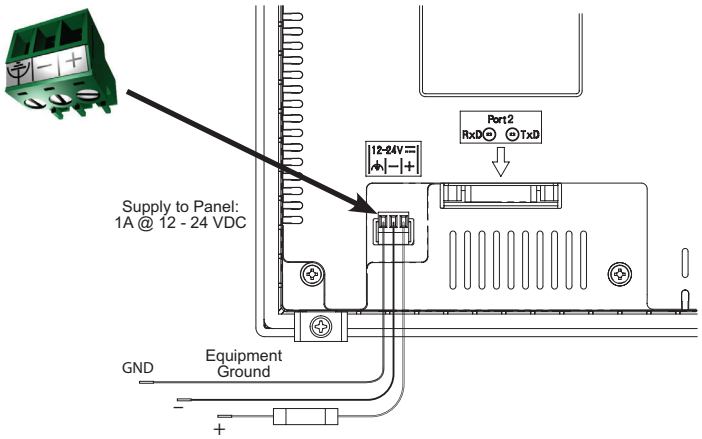
For a list of supported protocols and cabling options refer to the *C-more* Micro Protocols and cabling chart starting on page CK-73.

C-more 6" Micro Power Connection Wiring

Providing power to the touch panel

The panel is powered by a Class 2, 1 Amp @ 12-24 VDC power source in normal operation. Recommended power supply is AutomationDirect part number PSC-24-030.

C-more 6" Micro Panels typical wiring diagram



NOTE: Recommended DC power supply to power the *C-more* Micro Panel, AutomationDirect Part No. PSC-24-030.

C-more 6” Micro Panel Accessories

20-Button Keypad Bezel, Landscape Orientation

The 20-button keypad bezel is designed to be used with the EA1-T6CL Micro panel. 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 (Style 3) to allow changing of a value, and can also be used to navigate and select screen objects. The numeric buttons can be used to enter a new value, along with the ENTER and CLEAR buttons. The EA1-T6CL panel mounts directly into the bezel; no panel configuration is required.

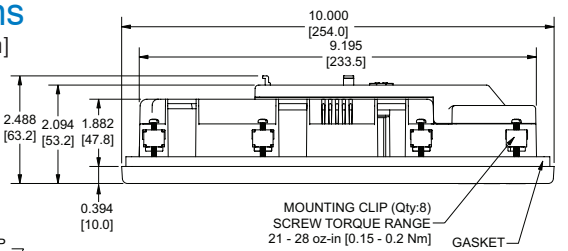
Part No. EA-MG6-BZ2

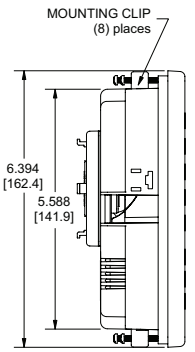
$107.00

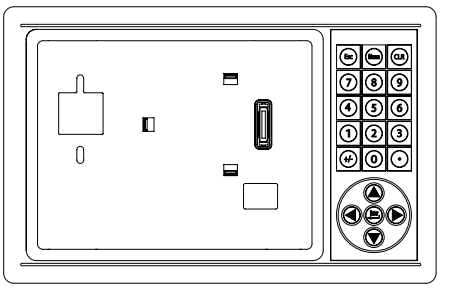
Four directional cursor buttons, numeric buttons and ESC, MENU, CLEAR and ENTER buttons.

Dimensions

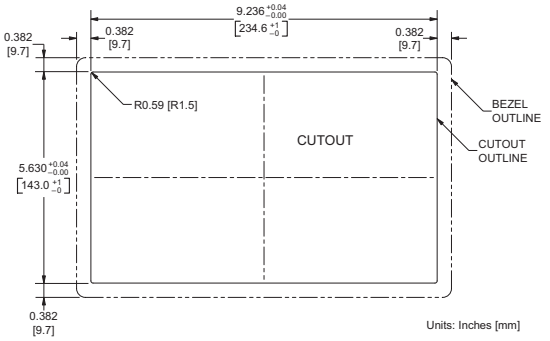
Units: inches [mm]



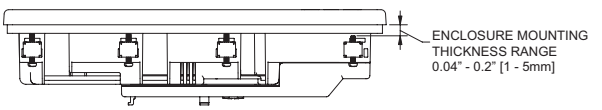




Panel Cutout



Panel Thickness



20-Button Keypad Bezel Specifications	
Part Number	**EA-MG6-BZ2**
General	
• Micro Panel Supported	EA1-T6CL
• Connection	Connects with expansion connector on the rear of the EA1-T6CL panel.
• Power Consumption	None
• Keypad Button Life	Minimum of 500,000 cycles
• Enclosure Mounting	(8) mounting clips, EA-MG-BZ2-BRK, included.
	Note: The EA1-T6CL panel is installed into the keypad bezel using the (4) mounting clips, EA-MG-BZ2-BRK, that are supplied with the panel.
Physical	
• Dimensions	10.000” (W) x 6.394” (H) x 2.488” (D) [254.0 mm x 162.4 mm x 63.2 mm]
• Weight	26.1 oz. [740 g]
Environmental:	See Micro panel specifications at the beginning of this catalog section

C-more 6" Micro Panel Accessories

21-Button Keypad Bezel, Portrait Orientation

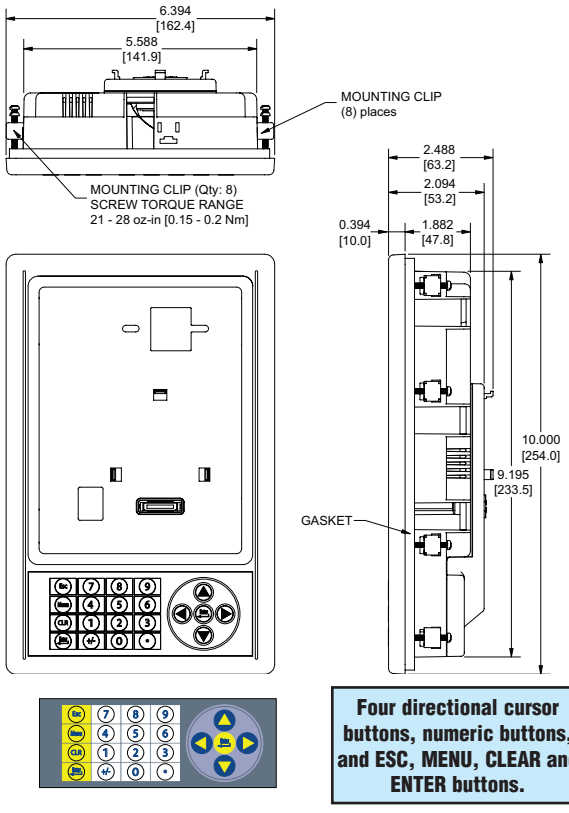
The 21-button keypad bezel is designed to be used with EA1-T6CL Micro panels The keypad includes four directional arrow cursor buttons, a full numeric keypad, and one each of an ESCAPE, MENU, CLEAR and two ENTER buttons. The keypad is intended to be used with the numeric entry object (Style 3) to allow changing of a value, and can also be used to navigate & select screen objects. The numeric buttons can be used to enter a new value, along with the ENTER and CLEAR buttons. The EA1-T6CL panel mounts directly into the bezel; no panel configuration is required.

Part No. EA-MG6-BZ2P

$79.00

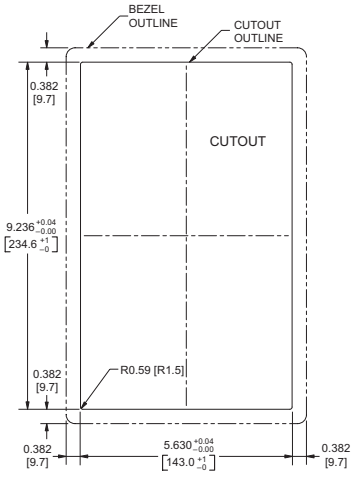
Dimensions

Units: inches [mm]

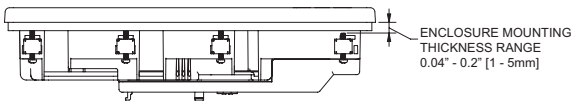


Four directional cursor buttons, numeric buttons, and ESC, MENU, CLEAR and ENTER buttons.

Panel Cutout



Panel Thickness



21-Button Keypad Bezel Specifications	
Part Number	**EA-MG6-BZ2P**
General	
• Micro Panel Supported	EA1-T6CL
• Connection	Connects with expansion connector on the rear of the EA1-T6CL panel.
• Power Consumption	None
• Keypad Button Life	Minimum of 500,000 cycles
• Enclosure Mounting	(8) mounting clips, EA-MG-BZ2-BRK, included.
	Note: The EA1-T6CL panel is installed into the keypad bezel using the (4) mounting clips, EA-MG-BZ2-BRK, that are supplied with the panel.
Physical	
• Dimensions	6.394" (W) x 10.000" (H) x 2.488" (D) [162.4 mm x 254.0 mm x 63.2 mm]
• Weight	26.1 oz. [740 g]
Environmental	See Micro panel specifications at the beginning of this catalog section

C-more 6” Micro Panel Accessories

EA3 Series Communication Expansion Module

The EA-ECOM ***C-more*** Micro communication module is compatible with all EA3 series ***C-more*** Micro panels. It adds an Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. Software and firmware version 4.0 or later is required

Part No.
EA-ECOM

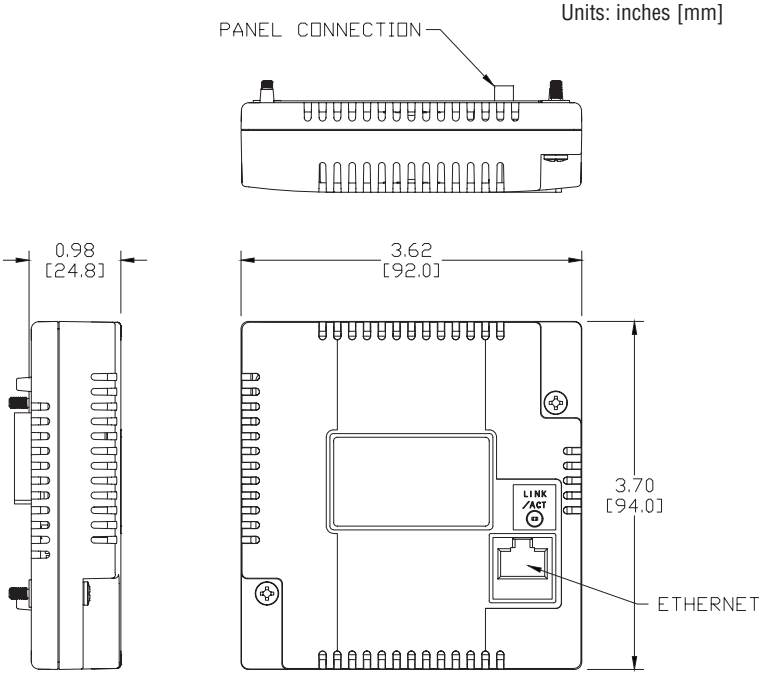
$50.00

Ethernet Communication Interface Specifications	
Standard Specification	Conforms to IEEE802.3
Communication Speed	10/100 Base-T (Automatic Negotiation)
Cable Specification	Category 5
Auto MDI / MDI-X	Yes
Connector Type	RJ45

PLC Drivers
AutomationDirect Productivity Series Ethernet
AutomationDirect Do-more Ethernet
AutomationDirect CLICK Ethernet
AutomationDirect ECOM Ethernet
Modbus TCP/IP

Dimensions

Units: inches [mm]



Link Status LED (Green)	
On	Ethernet Linked
Off	No Ethernet Comm.
Blinking Green	Comm. Activity

EA-ECOM Specifications	
Part Number	EA-ECOM
Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C
Storage Temperature	–20 to +60 °C (–4 to +140 °F)
Humidity	5–95% RH (non-condensing)
Environmental Air	For use in pollution degree 2 environment
Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes
Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)
Noise Immunity	NEMA ICS3-304 RFI, (145 MHz, 440 MHz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse
Emission	EN55011 Class A (Radiated RF emission)
Enclosure (panel door installation)	NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (When mounted correctly)
Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page
Mounting Torque	50 oz-in [0.35 N·m]
Weight	0.23 lb [105g]

C-more 6" Micro Panel Accessories

D-SUB 15-pin 90-degree Communication Port Adapter

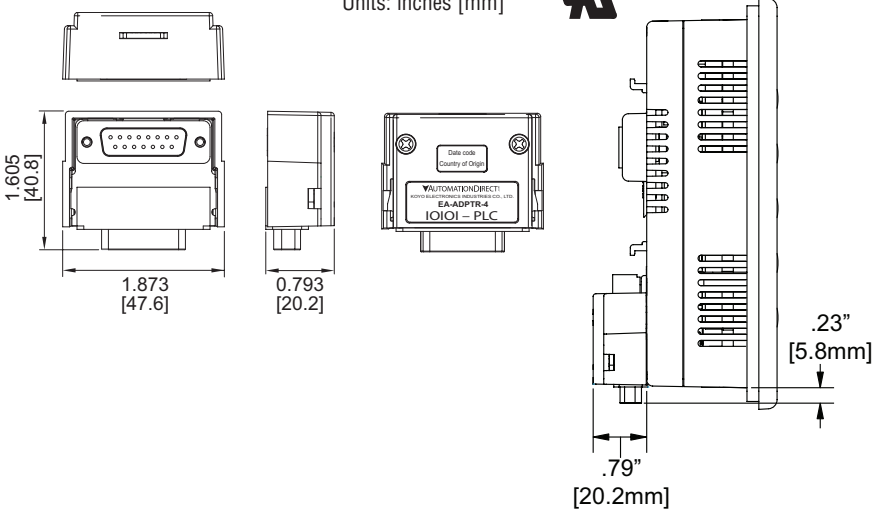
The EA-ADPTR-4 adapter plugs into the 15-pin serial port on the rear of a 6" panel to allow a controller communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

Part No.
EA-ADPTR-4

$39.00

Dimensions

Units: inches [mm]



D-SUB 15-pin to Terminal Block Adapter

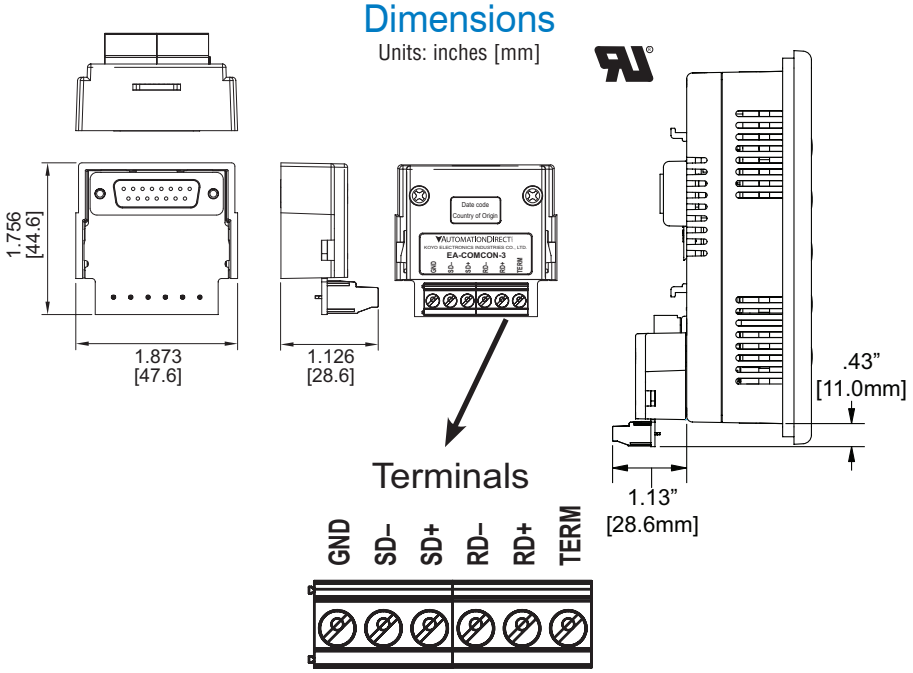
The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of a 6" panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized.

Part No.
EA-COMCON-3

$42.00

Dimensions

Units: inches [mm]

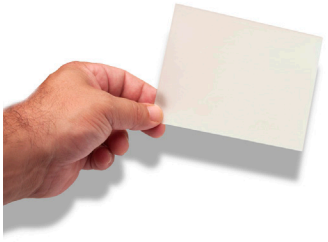


C-more 6” Micro Panel Accessories

Clear Screen Overlay

Optional clear screen overlay used to protect ***C-more*** 6” Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.

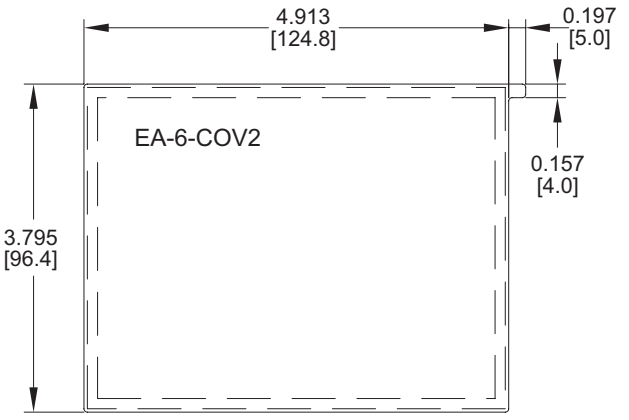
Part No. EA-6-COV2



$37.00

Dimensions

Units: inches [mm]



Clear Screen Overlay Installation

Step 1

Remove the overlay from the package

Step 2

Remove the paper backing from the overlay

Step 3

Align the overlay with the screen and press the adhesive firmly into place

Step 4

Remove the protective film*

***Note: The overlay cover ships with a thin protective film on the face that should be carefully removed after installation.**

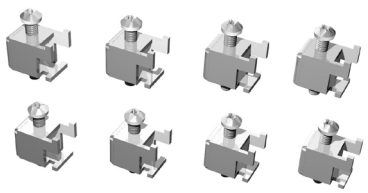
C-more 6" Micro Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost ***C-more*** 6" Micro panel components.

Replacement parts at a glance:

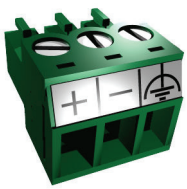
Part Number	Description	Price
EA-MG-BZ2-BRK	Replacement mounting clip for 4" and 6" ***C-more*** Micro panels and 6" keypad bezels. Also used to mount the ***C-more*** 3" Micro bezel EA-MG-BZ2. (pk of 8)	$18.50
EA-MG-DC-CON	Replacement adapter DC power connector (pk of 5)	$14.00
EA-MG6-S6ML-GSK	Replacement mounting gasket for ***C-more*** 6" Micro panels	$11.00
EA-MG6-BZ2-GSK	Replacement mounting gasket for optional EA1-T6CL keypad bezels EA-MG6-BZ2 and EA-MG6-BZ2P	$21.50
EA-MG6-S6ML-FKL	Replacement function key label insert for ***C-more*** 6" Micro panels (pk of 5; 3 blank, 1 F1-F5 for landscape, 1 F1-F5 for portrait)	$18.00

Panel Mounting Clips
Part No. EA-MG-BZ2-BRK



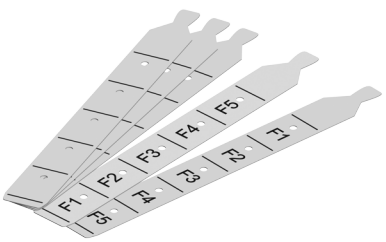
(pk of 8)

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



(pk of 5)

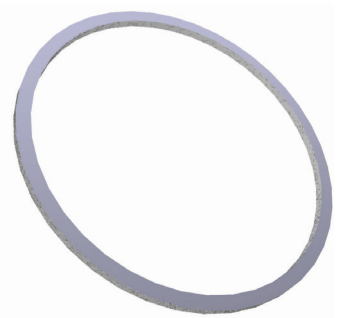
Function Keys Label Inserts
Part No. EA-MG6-S6ML-FKL



(pk of 5; 3 blank, 1 F1-F5 for landscape, 1 F1-F5 for portrait)

Panel Gasket
Part No. EA-MG6-S6ML-GSK

Keypad Bezel Gasket
Part No. EA-MG6-BZ2-GSK



C-more 4" & 6" Micro PLC Connections

Cabling requirements

The ***C-more*** 4" and 6" Micro panels can communicate through the built-in 15-pin serial port (Port2) via RS-232, RS-422 and RS-485 using these cables.

- EA-2CBL — connects to CLICK, P3-550, DL05, DL105, DL205, D3-350 and D4-450 phone jack.
- EA-2CBL-1 — connects to D2-250, D250-1, D2-260, DL06 VGA connector.

The EA1-T4CL and EA1-T6CL can only communicate to a controller through the 15-pin serial Port2. Port 2. EA3-T6CL can communicate to a controller through the 15-pin or the RJ12 serial ports. The USB port is for programming only.

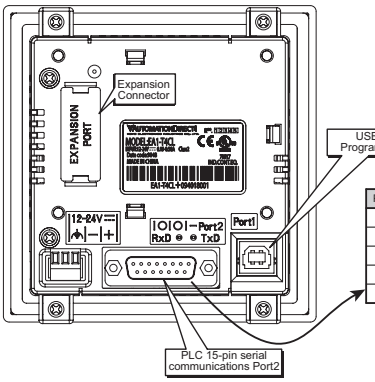
Drivers for your Controller

- AutomationDirect Productivity Series – serial / Ethernet*
- AutomationDirect Do-more – serial / Ethernet*
- AutomationDirect CLICK (Modbus)– serial / Ethernet*
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing)
  DirectLOGIC ECOM Ethernet*
- Modbus RTU
  Modbus TCP/IP*
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500)
  Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

**with EA-ECOM Ethernet module (EA3 series only)*

Communication Ports

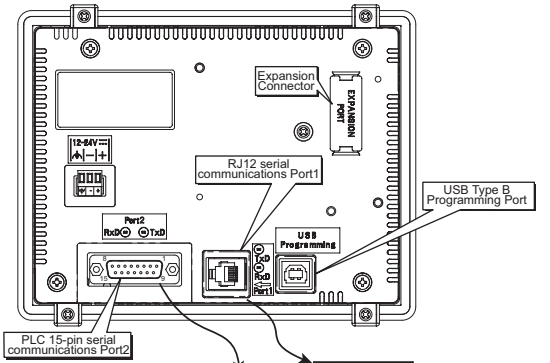
EA1-T4CL



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	Supplies +5VDC	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use

RS-232/422/485

EA3-T6CL



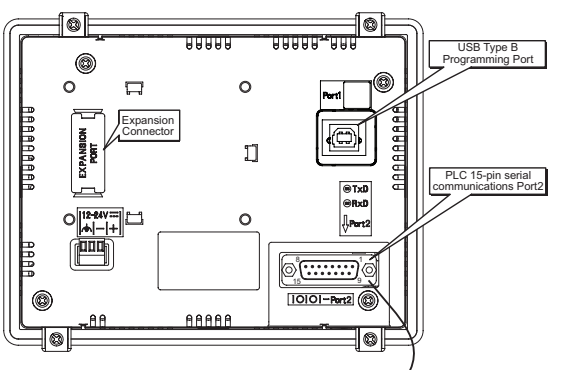
Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD– (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	Supplies +5VDC	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use

RS-232/422/485

Pin	Signal
1	Logic GND
2	not used
3	RXD (232C)
4	TXD (232C)
5	Receives 5VDC
6	Logic GND

RS-232

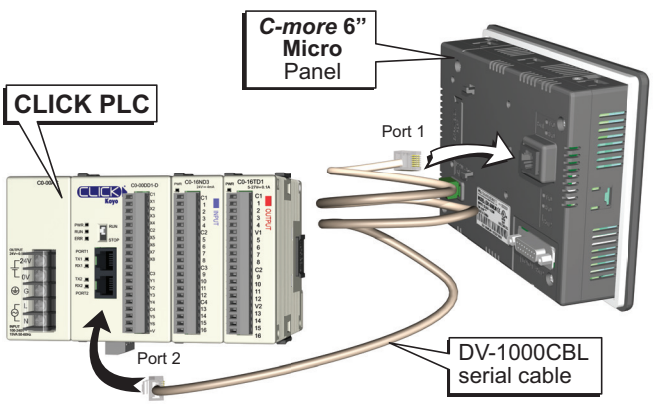
EA1-T6CL



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	Supplies +5VDC	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use

RS-232/422/485

C-more Micro Port 1 to CLICK PLC Port 2



C-more 8" and 10" Micro Panels Overview

Overview

C-more 8" and 10" Micro panels are full color, TFT models that offer touch screen capability and customizable graphics.

In addition to the simple panel configuration software, a very helpful feature is the built-in project simulator. The project simulator allows you to view your project on the PC screen as it would appear on the panel and to test all your screens before downloading the project to the panel. You can simulate your entire project at any stage of development and even simulate the function keys.

Getting started

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

- ***C-more*** Micro panel
- ***C-more*** Micro Programming Software EA-MG-PGMSW (Downloadable version available from the ***AutomationDirect*** web site at no charge.)
- ***C-more*** Micro USB to RS232 Programming Cable Assembly EA-MG-PGM-CBL, used to connect between a PC and the Micro panel's built-in serial port
- Power source – either powered from the RJ12 serial comm port on most ***AutomationDirect*** PLCs, ***C-more*** DC Power Adapter EA-MG-P1, or Serial Port with DC Power Adapter EA-MG-SP1
- Personal computer – to run the ***C-more*** Micro programming software
- Communications Cable (serial) – to connect the ***C-more*** Micro panel to your controller
- Adding the EA-ECOM module allows programming and PLC communication via an Ethernet connection (EA3 series only)

Drivers for your Controller

C-more 8" and 10" Micro panels have the following drivers available for connection to AutomationDirect PLCs and many other devices:

- AutomationDirect Productivity Series – serial / Ethernet*
- AutomationDirect Do-more – serial / Ethernet*
- AutomationDirect CLICK (Modbus)– serial / Ethernet*
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing) ***Direct***LOGIC ECOM Ethernet*
- Modbus RTU Modbus TCP/IP*
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500) Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

**with EA-ECOM Ethernet module (EA3 series only)*

EA3-T8CL

$749.00

EA3-T10CL

$899.00

NOTE: EA3-T8CL and EA3-T10CL require Software and Firmware Version 3.5 or later. Available for free download at www.automationdirect.com.

Features

Seven Programmable Function Keys

- Increment / decrement values
- Trigger recipes
- Change screens

Communication Ports

- RJ12 RS-232 serial communication port
- 15-pin D-sub RS-232/422/485 serial communication port

Bitmaps

- 800 X 600 pixel graphical display supports bitmaps
- Use bitmap images of pushbuttons, switches, indicators, your company logo
- Use provided library of bitmaps
- Create your own library of bitmaps

Text - 40 lines

- 100 lines by 200 characters of static text in landscape orientation
- 133 lines by 150 characters of static text in portrait orientation
- Look up text, scroll up to 128 characters
- Dynamic text, embedded variables, on/off phrases, scroll up to 40 characters
- Scroll text object with up to 128 characters

Beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Line, vertical, horizontal, skinny, fat, multiple

Data entry

- Pop-up numeric key pad on the screen
- Increment/decrement a value by touching arrows
- Pop-up text entry keypad on the screen

Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

32K Colors

The TFT panel has a palette of 32K colors available to make full use of color for objects and bitmaps as well as backgrounds.

Up to 999 Screens

C-more Micro supports up to 999 screens. Screen quantity is limited by memory usage which is determined by the total bitmaps, objects, etc. that are used.

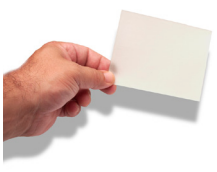
C-more 8" and 10" Micro Panels Overview

C-more 8" and 10" TFT Micro Panels			
Part Number		**Description**	**Price**
EA3-T8CL		***C-more*** Micro touch screen interface panel, 8-inch, color TFT, 800 x 600 pixel, 32k colors, LED backlight, seven user-defined function keys with LED indicators. Includes (2) serial ports and (1) USB Type B programming port. Display supports Portrait and Landscape modes. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only). Compatible with EA-MG-PGMSW programming software version 3.5 or later.	$749.00
EA3-T10CL		***C-more*** Micro touch screen interface panel, 10-inch, color TFT, 800 x 600 pixel, 32k colors, LED backlight, seven user-defined function keys with LED indicators. Includes (2) serial ports and (1) USB Type B programming port. Display supports Portrait and Landscape modes. NEMA 4/4X, IP65 (when mounted correctly; for indoor use only). Compatible with EA-MG-PGMSW programming software version 3.5 or later.	$899.00

Note: Software and Firmware Version 3.5 or later is required with models EA3-T8CL and EA3-T10CL. Available for free download at www.automationdirect.com.

C-more Micro Programming Software			
Part Number		**Description**	**Price**
EA-MG-PGMSW		***C-more*** Micro Windows-based programming software for C-more EA1 and EA3 series panels. Package includes software CD. Requires USB port connection from PC to C-more Micro panel. Cables sold separately. Downloadable version available from the Web site at no charge.	$25.00
USB-CBL-AB3		The ***C-more*** Micro TFT panel requires a USB A-to-B type cable to connect a personal computer to the panel for programming. (Note: The TFT panel includes a built-in USB to serial converter and the USB driver will appear as a COM port to the PC when properly installed.)	$7.50
USB-CBL-AB6			$9.50
USB-CBL-AB10			$18.00
USB-CBL-AB15			$22.50

For a list of supported protocols and cabling options refer to the 8" & 10" *C-more* Micro Protocols and cabling chart starting on page CK-73.

C-more 8" and 10" Micro Panel Accessories			
Part Number		**Description**	**Price**
EA-ECOM		C-more Micro communication expansion module, Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. For use with EA3 series panels.	$50.00
EA-8-COV2		Optional clear screen overlay used to protect ***C-more*** 8" Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.	$40.00
EA-10-COV2		Optional clear screen overlay used to protect ***C-more*** 10" Micro displays from minor scratches and wear. Package contains 3 clear screen overlays.	$45.50

C-more 8" Micro TFT Touch Panel

Model EA3-T8CL ***C-more*** 8" Micro touch panel has a 8.4-inch TFT LCD 800 x 600 pixel display and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. It features seven user-defined function keys, each key with a user-defined red LED indicator. In landscape mode, the panel can display 100 lines of static text, maximum 200 characters wide. In portrait mode the screens can display 133 lines of static text, maximum 150 characters wide. The panels also support 40 characters of dynamic text with embedded variables. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). ***C-more*** 8" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply.

Part No. EA3-T8CL

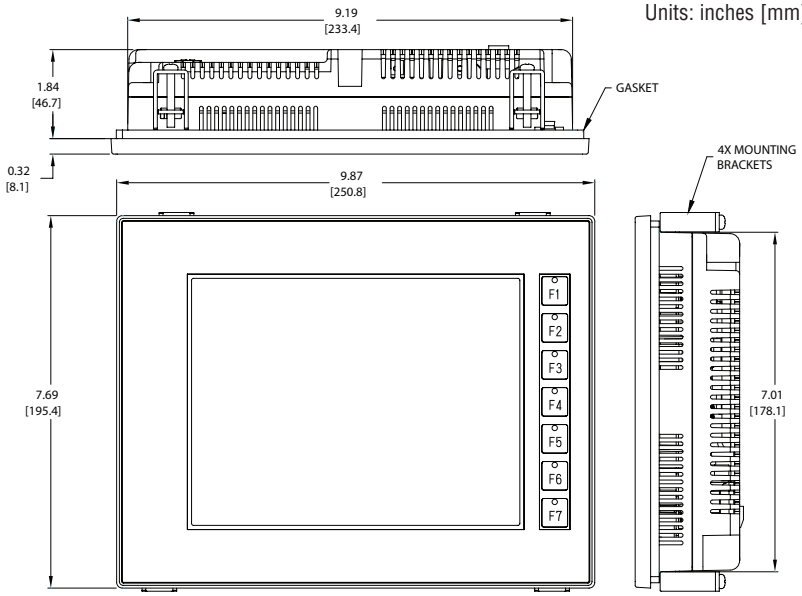
$749.00

Features

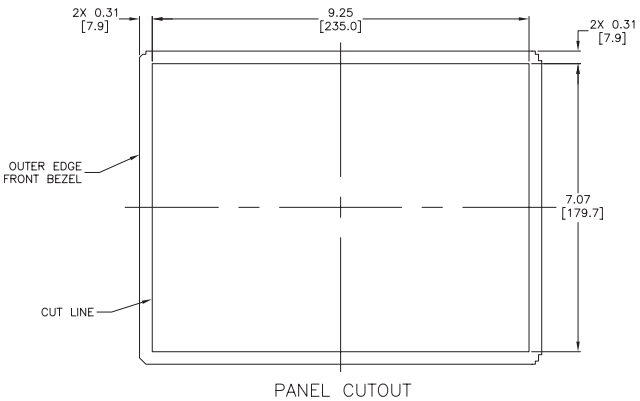
- Touch screen display
- Free downloadable programming software
- 800 x 600 Dot display with up to 100 lines by 200 characters of text and graphics in landscape mode
- Up to 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- Seven programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 32K colors
- Optional replaceable clear screen overlay
- 30MB memory
- Built-in USB type B programming port
- Built-in 15-pin serial communications port
- Built-in RJ12 serial communications port
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

Dimensions

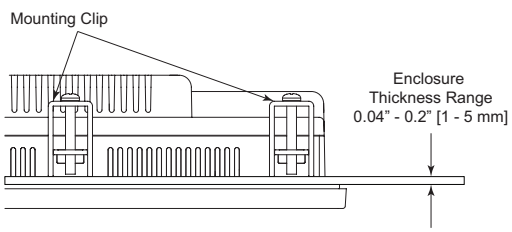
Units: inches [mm]



Panel Cutout



Panel Thickness



C-more 10” Micro TFT Touch Panel

Model EA3-T10CL ***C-more*** 10” Micro touch panel has a 10.4-inch TFT LCD 800 x 600 pixel display and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. It features seven user-defined function keys, each key with a user-defined red LED indicator. In landscape mode, the panel can display 100 lines of static text, maximum 200 characters wide. In portrait mode the screens can display 133 lines of static text, maximum 150 characters wide. The panels also support 40 characters of dynamic text with embedded variables. It is rated UL for use on a flat surface of Type 1, 4X enclosure (for indoor use only). ***C-more*** 8” Micro TFT panels are powered from a Class 2, 12-24 VDC power supply.

Part No. EA3-T10CL

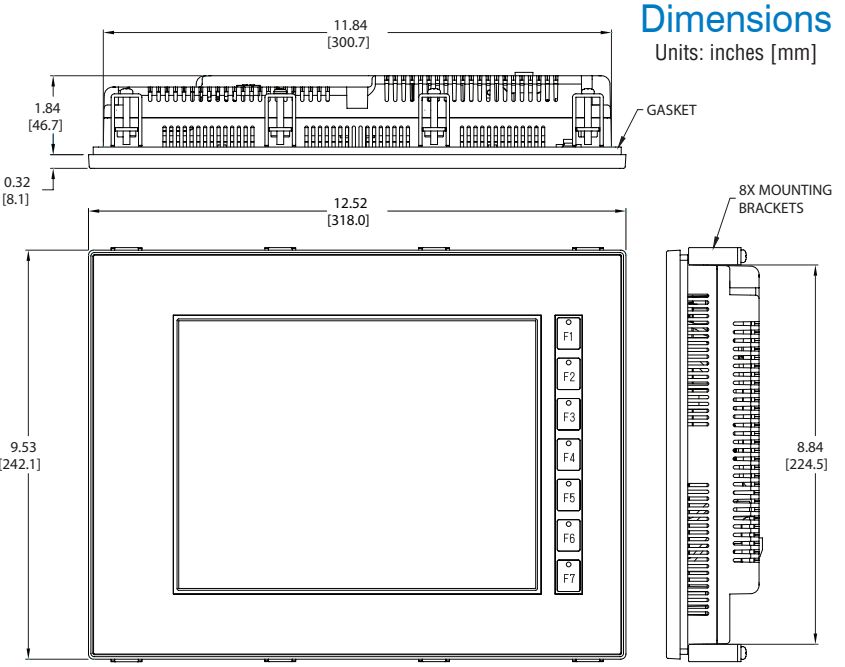
$899.00

Features

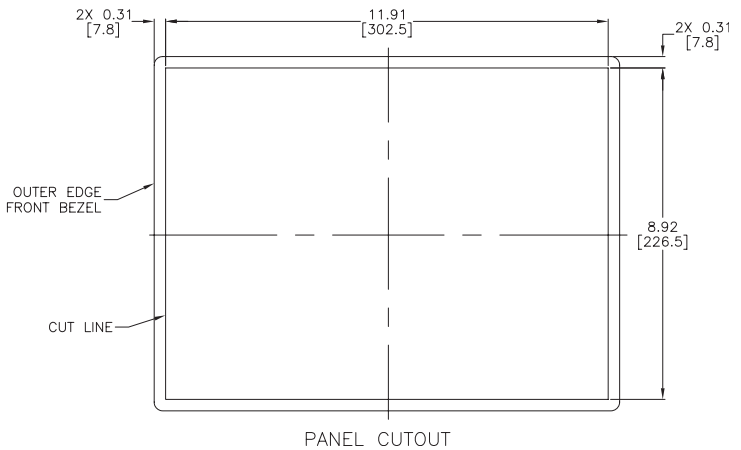
- Touch screen display
- Free downloadable programming software
- 800 x 600 pixel display with up to 100 lines by 200 characters of text and graphics in landscape mode
- Up to 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- Seven programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 32K colors
- Optional replaceable clear screen overlay
- 30MB memory
- Built-in USB type B programming port
- Built-in 15-pin serial communications port
- Built-in RJ12 serial communications port
- Built-in Alarm Control setup that activates beep, backlight flash, customized alarm banner, and red LED blinking
- 0 to 50 °C (32 to 122 °F) operating temperature range (IEC 60068-2-14)
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

Dimensions

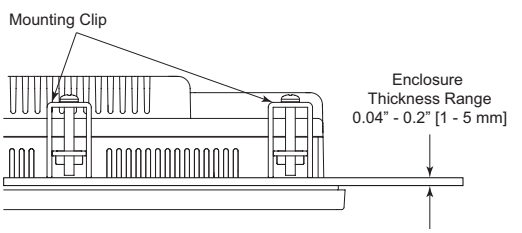
Units: inches [mm]



Panel Cutout



Panel Thickness



C-more 8" and 10" Micro Specifications

Specifications		
Part Number:	***EA3-T8CL***	***EA3-T10CL***
Description:	800 x 600 pixels LCD display (Landscape mode), Seven user defined keypad function buttons with seven user defined LED indicators	
Display:		
• Type	8.4" TFT Graphical type with LED Backlight	10.4" TFT Graphical type with LED Backlight
• Resolution	800 (W) x 600 (H) pixels (Landscape Mode) 600 (W) x 800 (H) pixels (Portrait Mode)	
• Color	32768 colors	
• Display Brightness (Reference)	295 nits (typ)	270 nits (typ)
• Viewing Area Size	6.86" (W) x 5.17" (H) [174.2 mm x 131.2 mm]	8.46" (W) x 6.41" (H) [214.8 mm x 162.7 mm]
• Active Area Size	6.71" (W) x 5.03" (H) [170.4 mm x 127.8 mm]	8.31" (W) x 6.24" (H) [211.2 mm x 158.4 mm]
• Brightness	Adjusted from the panel's built-in configuration setup menu	
• Viewing Angle (Landscape Mode)	3, 9 o'clock axis –> 80 degrees 6 o'clock axis –> 60 degrees 12 o'clock axis –> 80 degrees	3, 9 o'clock axis –> 80 degrees 6 o'clock axis –> 80 degrees 12 o'clock axis –> 60 degrees
Backlight:		
• Type	LED	
• Color	White	
• User Replaceable	No	
Touch Screen:		
•Type	Analog touch panel, single touch*	
• Operation	82 gram force [0.8 N] maximum	
• Life	Minimum of 1,000,000 cycles	
Features:		
• User Memory	30MB	
• Number of Screens	Up to 999 – limited by project memory usage	
• Beep (Internal)	Yes	
• Keypad Function Buttons	Seven user defined function key buttons with the ability to customize label with an overlay. Minimum of 500,000 cycles	
• Keypad Function Button LEDs	Each function key button includes a red LED that can be user programmed.	
• Programming Port	USB 2.0 Type B	
• Serial Communications	RJ12 serial communications port (RS-232) 15-pin D-sub serial communications port (RS-232, RS-485 / 422)	
• Ethernet Communications	With optional EA-ECOM module	N/A
Screen Objects:		
• Functional Devices	Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Text Entry, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function Key Configuration Object, Real Time Graph, Line Graph, Analog Meter.	
• Static Shapes	Lines, Rectangles, Circles and Frames	
• Displayable Fonts	Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
***Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.**		

***C-more* 8" and 10" Micro panel specifications continued on next page.**

C-more 8" and 10" Micro Specifications

Specifications (cont'd)		
Part Number:	***EA3-T8CL***	***EA3-T10CL***
Electrical:		
• Input Power	10.2 - 26.4 VDC, Class 2 power supply	
• Power Consumption	8W	10W
• Maximum Inrush Current	10A for 1ms	
• Acceptable External Power Drop Duration	Maximum 1ms	
Environmental:		
• Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• Storage Temperature	–20 to +60 °C (–4 to +140 °F)	
• Humidity	5–95% RH (non-condensing)	
• Environmental Air	No corrosive gasses permitted (EN61131-2 pollution degree 1)	
• Housing Material	ABS plastic	
• Gasket Material	Silicone rubber	
• Overlay Sheet Material	PET	
• Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µS pulse 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)	
• 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	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL E157382, RoHS (2011/65/EU) To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page	
Physical:		
• Dimensions	9.87" (W) x 7.69" (H) x 2.16" (D) [250.7 mm x 195.3 mm x 54.9 mm]	12.52" (W) x 9.53" (H) x 2.16" (D) [318.0 mm x 242.1 mm x 54.9 mm]
• Enclosure Mounting Thickness Range	0.04" – 0.2" [1 – 5 mm]	
• Mounting Clip Screw Torque Range	63 – 77 oz-in [0.45 – 0.55 N·m]	
• Weight	39.9 oz. (1130g)	57.1 oz. (1620g)

PLC Drivers		
Serial - port1 or port2	Serial - port2 only	EA-ECOM**
AutomationDirect Productivity Series	Allen-Bradley DF1 Half Duplex	AutomationDirect Productivity Series Ethernet
AutomationDirect Do-more	Allen-Bradley DF1 Full Duplex	AutomationDirect Do-more Ethernet
AutomationDirect CLICK	Allen-Bradley PLC5 DF1	AutomationDirect CLICK Ethernet
AutomationDirect K-sequence	Allen-Bradley DH485	AutomationDirect ECOM Ethernet
AutomationDirect DirectNET	GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)	Modbus TCP/IP
AutomationDirect Modbus	Mitsubishi FX	
Modicon Modbus RTU	Mitsubishi Q & QnA	
Entivity Modbus RTU	Omron Host Link (C200 Adapter, C500)	
	Omron FINS Serial (CJ1, CS1)	
	Siemens PPI (S7-200 CPU)	
	AutomationDirect SOLO Temperature Controller	
	AutomationDirect GS Drives	
** EA-COM module is compatible only with EA3 series panels		

NOTE: EA3-T8CL and EA3-T10CL cannot be powered by a PLC.

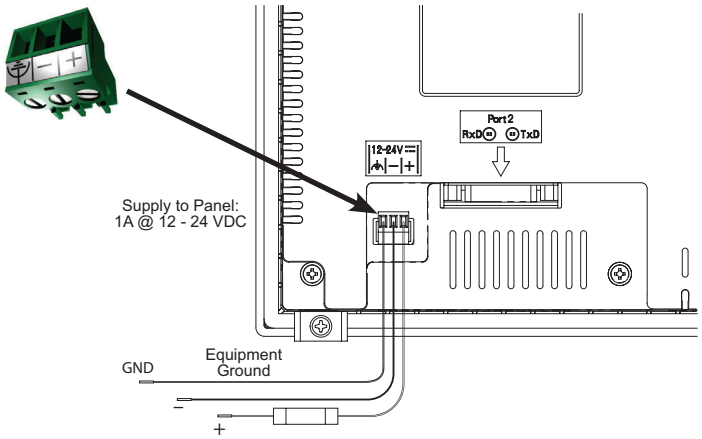
For a list of supported protocols and cabling options refer to the 8" & 10" *C-more* Micro Protocols and cabling chart starting on page CK-73.

C-more 8” and 10” Micro Power Connection Wiring

Providing power to the touch panel

The panel is powered by a Class 2, 1 Amp @ 12-24 VDC power source in normal operation. Recommended power supply is AutomationDirect part number PSC-24-030.

8” and 10” Panels wiring diagram



NOTE: Recommended DC power supply to power the *C-more* Micro Panel, AutomationDirect Part No. PSC-24-030.

Company Information
Control Systems Overview
CLICK PLC
Do-More PLCs Overview
Do-More H2 PLC
Do-More T1H PLC
DirectLOGIC PLCs Overview
DirectLOGIC DL05/06
DirectLOGIC DL105
DirectLOGIC DL205
DirectLOGIC DL305
DirectLOGIC DL405
Productivity Controller Overview
Productivity 3000
Universal Field I/O
Software
C-More HMI
C-More Micro HMI
ViewMarq Industrial Marquees
Other HMI
Communications
Appendix Book 1
Terms and Conditions

C-more 8” and 10” Micro Panel Accessories

EA3 Series Communication Expansion Module

The EA-ECOM ***C-more*** Micro communication module is compatible with all EA3 series ***C-more*** Micro panels. It adds an Ethernet (RJ45) port for programming and PLC communications at 10/100 Mbps. Software and firmware version 4.0 or later is required

Part No.
EA-ECOM

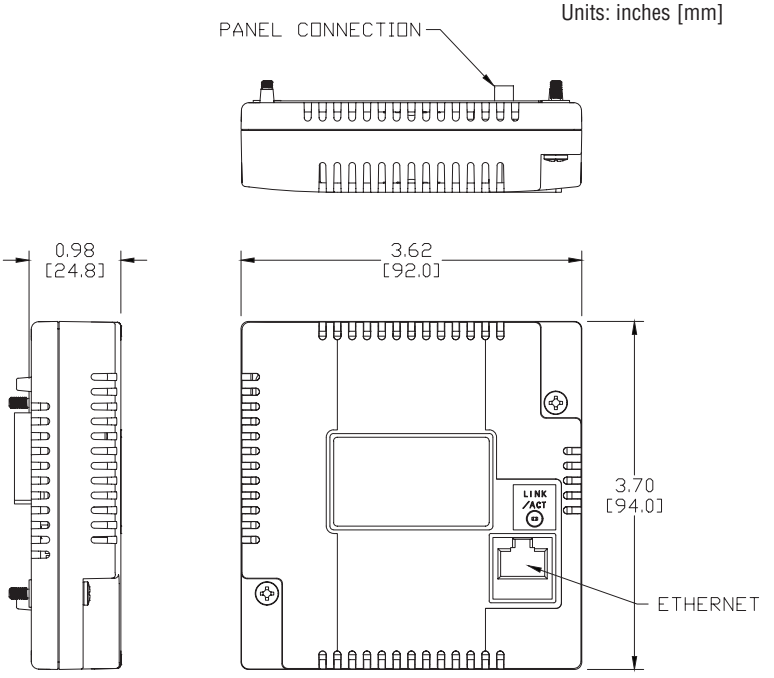
$50.00

Ethernet Communication Interface Specifications	
Standard Specification	Conforms to IEEE802.3
Communication Speed	10/100 Base-T (Automatic Negotiation)
Cable Specification	Category 5
Auto MDI / MDI-X	Yes
Connector Type	RJ45

PLC Drivers
AutomationDirect Productivity Series Ethernet
AutomationDirect Do-more Ethernet
AutomationDirect CLICK Ethernet
AutomationDirect ECOM Ethernet
Modbus TCP/IP

Dimensions

Units: inches [mm]



Link Status LED (Green)	
On	Ethernet Linked
Off	No Ethernet Comm.
Blinking Green	Comm. Activity

EA-ECOM Specifications	
Part Number	EA-ECOM
Operating Temperature	0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C
Storage Temperature	–20 to +60 °C (–4 to +140 °F)
Humidity	5–95% RH (non-condensing)
Environmental Air	For use in pollution degree 2 environment
Vibration	IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes
Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)
Noise Immunity	NEMA ICS3-304 RFI, (145 MHz, 440 MHz 10 W @ 10 cm) Impulse 1000 V @ 1 µs pulse
Emission	EN55011 Class A (Radiated RF emission)
Enclosure (panel door installation)	NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (When mounted correctly)
Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number’s web page
Mounting Torque	50 oz·in [0.35 N·m]
Weight	0.23 lb [105g]

C-more 8” and 10” Micro Panel Accessories

D-SUB 15-pin to Terminal Block Adapter

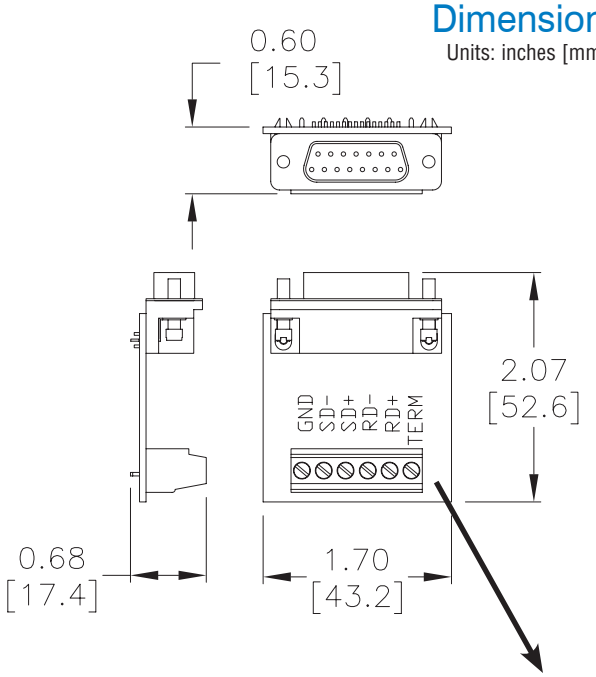
The EA-COMCON-3A adapter plugs into the 15-pin serial port on the rear of a ***C-more*** Micro panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable.

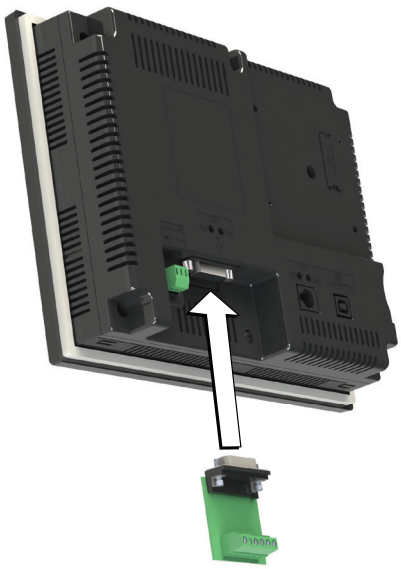
Part No.
EA-COMCON-3A

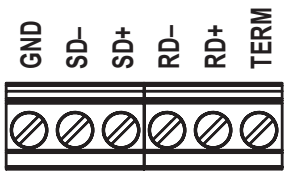
$19.00

Dimensions

Units: inches [mm]





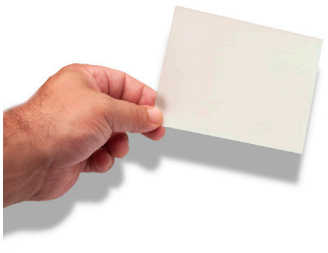


C-more 8” and 10” Micro Panel Accessories

Clear Screen Overlay

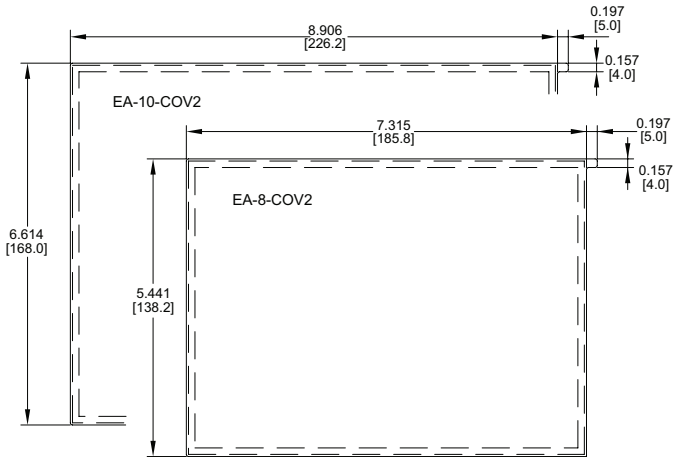
Optional clear screen overlay used to protect ***C-more*** 8″ and 10″ Micro displays from minor scratches and wear. Package contains three clear screen overlays.

Part No. EA-8-COV2
EA-10-COV2



Dimensions

Units: inches [mm]



Clear Screen Overlay Installation

Step 1

Remove the overlay from the package

Step 2

Remove the paper backing from the overlay

Step 3

Align the overlay with the screen and press the adhesive firmly into place

Step 4

Remove the protective film*

***Note: The overlay cover ships with a thin protective film on the face that should be carefully removed after installation.**

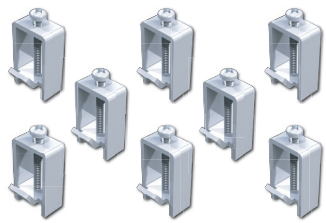
C-more 8" and 10" Micro Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost ***C-more*** 8" and 10" Micro panel components.

Replacement parts at a glance:

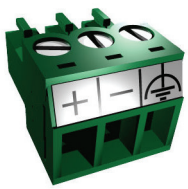
Part Number	Description	Price
EA3-BRK	Replacement mounting clips for ***C-more*** Micro EA3 series (pack of 8)	$27.00
EA-MG-DC-CON	Replacement DC power connector (pack of 5)	$14.00
EA3-8-GSK	Replacement mounting gasket for ***C-more*** 8" Micro panels	$17.00
EA3-10-GSK	Replacement mounting gasket for ***C-more*** 10" Micro panels	$19.00
EA3-MG-8-FKL	Replacement function key label insert for ***C-more*** 8" Micro panels (pk of 5; 3 blank, 1 F1-F7 for landscape, 1 F1-F7 for portrait)	$15.00
EA3-MG-10-FKL	Replacement function key label insert for ***C-more*** 10" Micro panels (pk of 5; 3 blank, 1 F1-F7 for landscape, , 1 F1-F7 for portrait)	$19.00

Panel Mounting Clips
Part No. EA3-BRK



(pk of 8)

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

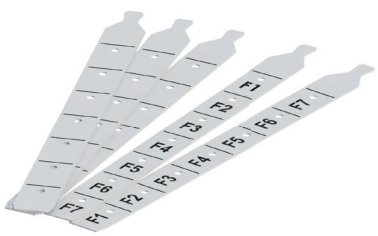


(pk of 5)

Panel Gasket
Part No. EA3-8-GSK

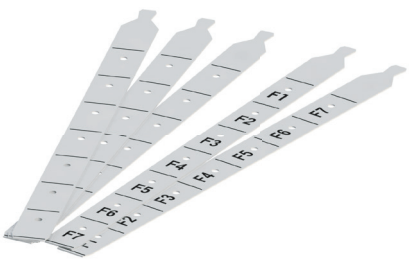
Panel Gasket
Part No. EA3-10-GSK

Function Keys Label Inserts
Part No. EA3-MG-8-FKL



(pk of 5; 3 blank, 1 F1-F7 for landscape, 1 F1-F7 for portrait)

Function Keys Label Inserts
Part No. EA3-MG-8-FKL



(pk of 5; 3 blank, 1 F1-F7 for landscape, 1 F1-F7 for portrait)

C-more 8" & 10" Micro PLC Connections

Cabling requirements

When using the built in RJ12 serial port (Port1) on models EA3-T8CL or EA3-T10CL to connect with the CLICK, ProductivitySeries, DL05, DL06, DL105, DL205, D3-350 and DL405 CPUs, your cabling choices are fairly simple.

- **D0-CBL — connects to P3-530, P3-550, Do-more, CLICK, DL05, DL06, DL105, DL205, D3-350 and D4-450 phone jack.**

The EA3-T8CL and EA3-T10CL cannot be powered from a PLC.

The ***C-more*** 8" and 10" Micro panels can communicate through a built-in 15-pin serial port (Port2) via RS-232, RS-422 and RS-485 using these cables.

- **EA-2CBL — connects to P3-530, P3-550, Do-more, CLICK, DL05, DL105, DL205, D3-350 and D4-450 phone jack.**
- **EA-2CBL-1 — connects to D2-250, D250-1, D2-260, DL06 VGA connector.**

The USB programming port on these TFT models is for programming only.

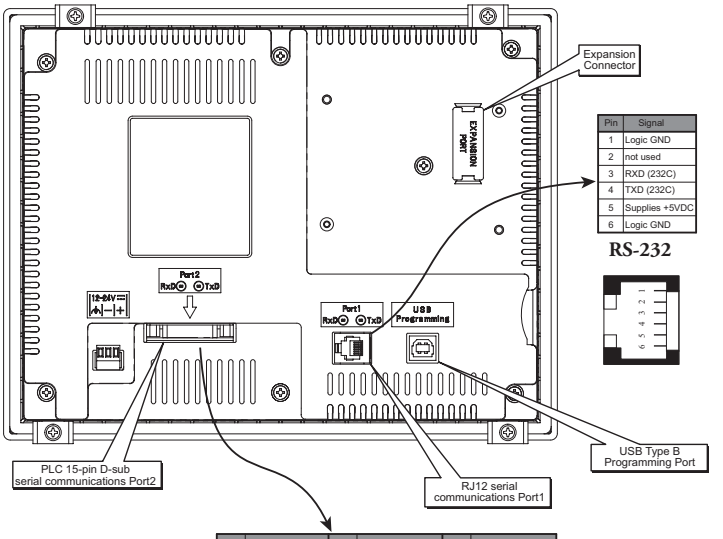
Drivers for your Controller

- AutomationDirect Productivity Series – serial / Ethernet*
- AutomationDirect Do-more – serial / Ethernet*
- AutomationDirect CLICK (Modbus)– serial / Ethernet*
- ***Direct***LOGIC K-sequence, *Direct*LOGIC *Direct*NET, ***Direct***LOGIC Modbus (Koyo Addressing)
  DirectLOGIC ECOM Ethernet*
- Modbus RTU
  Modbus TCP/IP*
- Allen Bradley DF1 Full Duplex, Allen Bradley DF1 Half Duplex, Allen Bradley PLC5 DF1, AB DH485
- Omron Host Link (C200 Adapter, C500)
  Omron FINS serial (CJ1, CS1)
- GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Mitsubishi Melsec FX
- Siemens PPI
- Entivity Modbus RTU
- AutomatiionDirect GS Drives
- AutomationDirect SOLO Temperature Controllers
- Mitsubishi Q/QnA

**with EA-ECOM Ethernet module (EA3 series only)*

Communication Ports

EA3-T8CL & EA3-T10CL



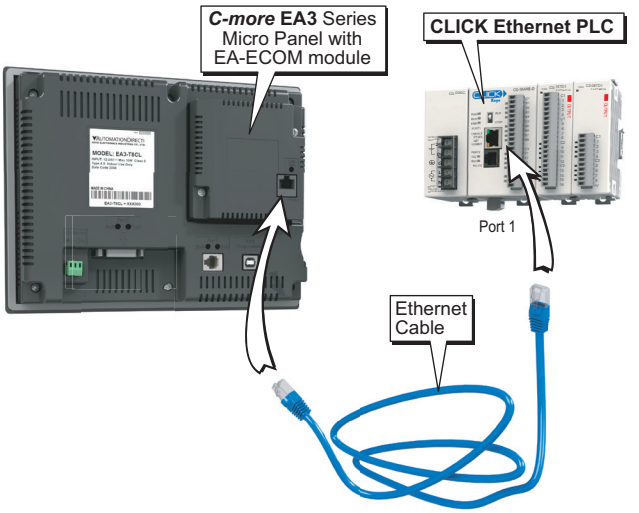
Pin	Signal
1	Logic GND
2	not used
3	RXD (232C)
4	TXD (232C)
5	Supplies +5VDC
6	Logic GND

RS-232

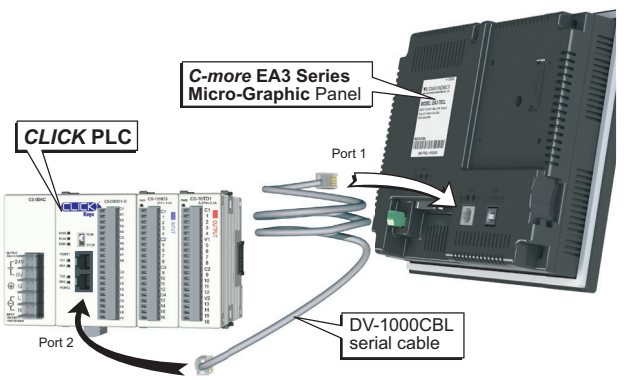
Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	6	LE	11	TXD+ (422/485)
2	TXD (232C)	7	CTS (232C)	12	TXD– (422/485)
3	RXD (232C)	8	RTS (232C)	13	Term. Resistor
4	Supplies +5VDC	9	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD– (422/485)	15	do not use

RS-232/422/485

C-more EA3 Micro with optional EA-ECOM to CLICK PLC Ethernet Port 1



C-more EA3 Micro Port 1 to CLICK PLC Port 2



C-more Micro Communication Protocols & Cabling Chart

Serial Compatibility & Connection Chart

PLC			*C-more Micro Panel*			
			Using panel's RJ12 Port1**		Using panel's Port2** DB 15-pin - female	
Family	***CPU***	***PLC Port & Type***	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
CLICK	all versions	Port 1 RJ12 - 6 pin	Modbus (CLICK)	D0-CBL RS-232	Modbus (CLICK)	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin				
	Analog CPU's	Port3 Term block 3-pin		N/A		* See Note RS-485
Productivity Series	all versions	RS-232 RJ12 - 6 pin	Productivity3000 Serial (P3-550)	D0-CBL RS-232	Productivity3000 Serial (P3-550)	EA-2CBL RS-232
		RS-485 Port Term block 3-pin		N/A		* See Note RS-485
Do-more	all versions	RS-232 RJ12 - 6 pin	Do-more Serial, K-sequence, Modbus RTU	D0-CBL RS-232	Do-more Serial, K-sequence, Modbus RTU	EA-2CBL RS-232
	H2-SERIO	RS-232 RJ12 - 6 pin				
	H2-SERIO-4	RS-232 RJ12 - 6 pin				
Entivity	H2-WinPLC	RS-232 RJ12 - 6 pin	Entivity Modbus RTU Modbus RTU	D0-CBL RS-232	Entivity Modbus RTU Modbus RTU	EA-2CBL RS-232
	H2-SERIO	RS-232 RJ12 - 6 pin				
	H2-SERIO-4	RS-232 RJ12 - 6 pin				
Direct**LOGIC DL05**	all versions	Port 1 RJ12 - 6 pin	K-sequence, *Direct* NET, Modbus RTU	D0-CBL RS-232	K-sequence, *Direct* NET, Modbus RTU	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin				
	D0-DCM	Port 1 RJ12 - 6 pin	K-sequence, *Direct* NET, Modbus RTU	D0-CBL RS-232	K-sequence, *Direct* NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		D0-CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
						* See Note RS-422
					Modbus RTU	* See Note RS-485 Modbus only
Direct**LOGIC DL06**	all versions	Port 1 RJ12 - 6 pin	K-sequence, *Direct* NET, Modbus RTU	D0-CBL RS-232	K-sequence, *Direct* NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		D0-CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
						* See Note RS-422
					Modbus RTU	* See Note RS-485 Modbus only
	D0-DCM	Port 1 RJ12 - 6 pin	K-sequence, *Direct* NET, Modbus RTU	D0-CBL RS-232	K-sequence, *Direct* NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		D0-CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
						* See Note RS-422
					Modbus RTU	* See Note RS-485 Modbus only
Direct**LOGIC DL105**	all versions	Port 1 RJ12 - 6 pin	K-sequence	D0-CBL RS-232	K-sequence	EA-2CBL RS-232

*** Note: See the *C-more* Micro Hardware User Manual (P/N: EA3-USER-M), Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. The manual is available for download at www.automationdirect.com.**

****Note: These charts apply to all current C-more Micro panels except 3" models. The 3" panels include only the RJ12 Port1. Optional accessory for 3" models EA-MG-SP1 provides the DB 15-pin Port2. 3" models may be powered through Port1 when connected to an AutomationDirect PLC which provides 5VDC using a cable such as DV-1000CBL that properly carries the 5VDC. All other panels require an external power supply. Refer to the 3" Communication and Cabling Chart starting on page CK-24 for cabling options.**

PLC Compatibility & Connection Chart continued on next page.

C-more Micro Communication Protocols & Cabling Chart (cont'd)

Serial Compatibility & Connection Chart

PLC			C-more Micro Panel			
			Using panel's RJ12 port 1**		Using panel's Port2** DB 15-pin - female	
Family	CPU	Port & Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
***Direct*LOGIC DL205**	D2-230	Port 1 RJ12 - 6 pin	K-sequence	DO-CBL RS-232	K-sequence	EA-2CBL RS-232
	D2-240	Port 1 RJ12 - 6 pin	K-sequence	DO-CBL RS-232	K-sequence	EA-2CBL RS-232
		Port 2 RJ12 - 6 pin	K-sequence, Direct NET,		K-sequence, Direct NET,	
	D2-250-1	D2-250-1	K-sequence, Direct NET, Modbus RTU	DO-CBL RS-232	K-sequence, *Direct* NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DO-CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
						* See Note RS-422
	D2-260	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET, Modbus RTU	DO-CBL RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-2CBL RS-232
		Port 2 DB15HD (female)		DO-CBL + FA-15HD RS-232		EA-2CBL-1 RS-232
						* See Note RS-422
					Modbus RTU	* See Note RS-485 Modbus only
	D2-DCM	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	*See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232
						* See Note RS-422
	WINPLC	Port 1 RJ12 - 6 pin	Modbus RTU	DO-CBL RS-232	Modbus RTU	EA-2CBL RS-232
***Direct*LOGIC DL305**	D3-330 or D3-340	D3-232-DCU DB 25 pin (female)	*Direct*NET	DO-CBL +FA-CABKIT RS-232	*Direct*NET	EA-4CBL-2 RS-232
		D3-422-DCU DB 25 pin (female)	N/A		*Direct*NET	*See Note RS-422
	D3-340	Port 1 RJ11 - 4 pin	*Direct*NET	OP-3CBL-1 RS-232	*Direct*NET	EA-3CBL RS-232
		Port 2 RJ11 - 4 pin	*Direct*NET, Modbus RTU		*Direct*NET, Modbus RTU	
	D3-350	Port 1 RJ12 - 6 pin	K-sequence, *Direct*NET	DO-CBL RS-232	K-sequence, *Direct*NET	EA-2CBL RS-232
		Port 2 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	*See Note RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-4CBL-2 RS-232
						*See Note RS-422
	D3-DCM D3-350 only	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	*See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232
						*See Note RS-422

*** Note: See the *C-more* Micro Hardware User Manual (P/N: EA3-USER-M), Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. The manual is available for download at www.automationdirect.com.**

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PLC Compatibility & Connection Chart continued on next page.

C-more Micro Communication Protocols & Cabling Chart (cont'd)

Serial Compatibility & Connection Chart

PLC			C-more Micro Panel			
			Using panel's RJ12 port 1**		Using panel's Port2** DB 15-pin - female	
Family	CPU	Port & Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
*Direct*LOGIC DL405	D4-430	Port 0 DB 15 pin (female)	K-sequence	D0-CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	K-sequence, *Direct*NET	D0-CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	EA-4CBL-2 RS-232 *See Note RS-422
	D4-440	Port 0 DB 15 pin (female)	K-sequence	D0-CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	K-sequence, *Direct*NET	D0-CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET	EA-4CBL-2 RS-232 *See Note RS-422
	D4-450	Port 0 DB 15 pin (female)	K-sequence	D0-CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	D0-CBL & FA-CABKIT RS-232	K-sequence, *Direct*NET, Modbus RTU	EA-4CBL-2 RS-232 *See Note RS-422
		Port 3 DB 25 pin (female)	N/A		K-sequence, *Direct*NET, Modbus RTU	*See Note RS-422
		Port 2 RJ12 - 6 pin	K-sequence, *Direct*NET	D0-CBL RS-232	K-sequence, *Direct*NET	EA-2CBL RS-232
	D4-DCM	Port 1 DB 25 pin (female)	K-sequence, *Direct*NET, Modbus RTU	*See Note RS-232	*Direct*NET	EA-4CBL-2 RS-232 *See Note RS-422
SOLO	N/A	Data +/- terminals	N/A		SOLO Temperature Controller	*See Note RS-485
GS Drives	N/A	RS-485 Interface	N/A		GS Drives Serial GS Drives TCP/IP (GS-EDRV)	*See Note RS-485

*** Note: See the *C-more* Micro Hardware User Manual (P/N: EA3-USER-M), Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. The manual is available for download at www.automationdirect.com.**

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PLC Compatibility & Connection Chart continued on next page.

C-more Micro Communication Protocols & Cabling Chart (cont'd)

Serial Compatibility & Connection Chart

PLC			C-more Micro Panel			
			Using panel's RJ12 port 1**		Using panel's Port2** DB 15-pin - female	
Family	CPU	Port & Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
Allen-Bradley MicroLogix	1000, 1100, 1200, 1400, 1500	8-pin mini-din port	N/A		DF1 Full Duplex DF1 Half Duplex	EA-MLOGIX-CBL RS-232
		RJ45 8-pin phone plug			DH485/AIC/AIC+	EA-DH485-CBL RS-232
Allen-Bradley SLC500	5/03, 5/04, 5/05	9-pin D-sub port			DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
	5/01, 5/02, 5/03	RJ45 8-pin phone plug			DH485/AIC/AIC+	EA-DH485-CBL RS-232
Allen-Bradley ControlLogix	all	9-pin D-sub port			DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley CompactLogix	all	9-pin D-sub port			DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley FlexLogix	all	9-pin D-sub port			DF1 Full Duplex DF1 Half Duplex	EA-SLC-232-CBL RS-232
Allen-Bradley PLC5	all	25-pin D-sub port			DF1 Full Duplex	EA-PLC5--232-CBL RS-232
		RJ45 8-pin phone plug			DH485/AIC/AIC+	EA-DH485-CBL RS-232
GE	90/30	15-pin D-sub port			SNPX	EA-90-30-CBL RS-422
	Micro 90, VersaMax Micro	RJ45 Port 1				*See Note RS-232
		15-pin D-sub port Port 2				EA-90-30-CBL RS-422
Mitsubishi	Melsec FX Series	25-pin D-sub port			CPU Direct	EA-MITSU-CBL RS-422
		8-pin mini-din port				EA-MITSU-CBL-1 RS-422
	Q / QnA	9-pin D-sub port			Q / QnA	*See Note RS-232
		6-pin mini-din port				*See Note RS-232
Omron	C200 (Adapter), C500	25-pin D-sub port			Host Link	EA-OMRON-CBL RS-232
	CJ1, CS1, CQM1, CPM1, CPM2, C200	9-pin D-sub port			FINS	*See Note RS-232
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU	varies			Modbus RTU	*See Note RS-232
Siemens	S7-200 CPU	9-pin D-sub port 0 or 1			PPI	*See Note RS-485

*** Note: See the *C-more* Micro Hardware User Manual (P/N: EA3-USER-M), Chapter 6: PLC Communications, for wiring diagrams that the user can use to construct their own cables. The manual is available for download at www.automationdirect.com.**

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C-more Micro Communication Cables and Cable Kits

Cable Description	Cable Part Number	Price
Cables used with RJ-12 RS-232 serial Port1		
AutomationDirect Productivity Series, Do-more, CLICK, *Direct*LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C) 3.66m (12ft) cable length	***D0-CBL***	$19.00
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C) Use with D0-CBL cable.	***FA-15HD***	$8.00
*Direct*LOGIC PLC 15-pin D-sub port, DL405 (RS-232C) Use with D0-CBL cable.	***FA-CABKIT***	$40.00
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C) 2m (6.56 ft) cable length	***OP-3CBL-1***	$6.00
Cables used with 15-pin RS-232/422/485 serial Port2		
AutomationDirect Productivity Series, Do-more, CLICK, *Direct*LOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C) 3m (9.8 ft) cable length	***EA-2CBL***	$20.00
*Direct*LOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C) 3m (9.8 ft) cable length	***EA-2CBL-1***	$20.00
*Direct*LOGIC PLC RJ-11 port, D3-340 (RS-232C). 3m (9.8 ft) cable length	***EA-3CBL***	$20.00
*Direct*LOGIC DL405 PLC 15-pin D-sub port, DL405 (RS-232C). 3m (9.8 ft) cable length	***EA-4CBL-1***	$20.00
*Direct*LOGIC PLC 25-pin D-sub port, DL405, D3-350, DL305 DCU and all DCM's (RS-232C). 3m (9.8 ft) cable length	***EA-4CBL-2***	$20.00
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C) 3m (9.8 ft) cable length	***EA-MLOGIX-CBL***	$30.00
Allen-Bradley SLC 5-03/04/05, ControlLogix, CompactLogix, FlexLogix DF1 port (RS-232C) 3m (9.8 ft) cable length	***EA-SLC-232-CBL***	$20.00
Allen-Bradley PLC-5 DF1 port (RS-232C) 3m (9.8 ft) cable length	***EA-PLC5-232-CBL***	$20.00
Allen-Bradley MicroLogix, SLC-5-01/02/03, PLC5 DH485 port (RS-232C) 3m (9.8 ft) cable length	***EA-DH485-CBL***	$20.00
GE 90/30 and 90/70, Micro 90, VersaMax Micro (Port 2) 15-pin D-sub port (RS-422A) 3m (9.8 ft) cable length	***EA-90-30-CBL***	$20.00
MITSUBISHI FX Series 25-pin port (RS-422A) 3m (9.8 ft) cable length	***EA-MITSU-CBL***	$20.00
MITSUBISHI FX Series 8-pin mini-DIN (RS-422A) 3m (9.8 ft) cable length	***EA-MITSU-CBL-1***	$20.00
OMRON Host Link C200 Adapter, C500 (RS-232C) 3m (9.8 ft) cable length	***EA-OMRON-CBL***	$20.00
EA3-T8CL and EA3-T10CL cannot be powered by a PLC and cannot communicate with a PLC through the USB Programming Port.		
Note: Adding the optional EA-ECOM module allows communication via an Ethernet connection (EA3 series only).		

D0-CBL

OP-3CBL-1

FA-15HD

FA-CABKIT

EA-2CBL-1

EA-2CBL

EA-4CBL-1

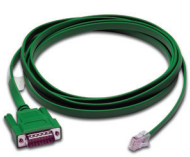
EA-3CBL

EA-MLOGIX-CBL

EA-4CBL-2

EA-PLC5-232-CBL

EA-SLC-232-CBL



EA-DH485-CBL

EA-90-30-CBL

EA-MITSU-CBL

EA-MITSU-CBL-1

EA-OMRON-CBL

C-more Micro Programming Software

FREE software!

C-more Micro Programming Software can be downloaded at no charge or a CD version may be purchased by ordering EA-MG-PGMSW. The software requires a USB port on your PC to connect to the ***C-more*** Micro panel. Software Help Files are included in the download. This software programs all the ***C-more*** Micro panels (does not program the ***C-more*** 6" through 15" touch panels).

Note: This software is used to program *C-more* Micro panels only.
Part Numbers: EA1-S3ML, EA1-S3ML-N, EA1-S3MLW, EA1-S3MLW-N, EA1-T4CL, EA1-S6ML, EA1-S6MLW, EA1-T6CL, EA3-T6CL, EA3-T8CL, EA3-T10CL

NOTES: Software and Firmware Version 3.5 or later is required with model EA3-T6CL.
Software and Firmware Version 3.5 or later is required with models EA3-T8CL and EA3-T10CL.
Software and Firmware Version 3.0 or later is required with model EA1-T4CL.
Software and Firmware Version 2.5 or later is required with model EA1-T6CL.
Software and Firmware Version 2.0 or later is required with models EA1-S6ML and EA1-S6MLW.
Software and Firmware Version 1.5 or later is required with models EA1-S3MLW and EA1-S3MLW-N.
Available for free download at www.automationdirect.com.

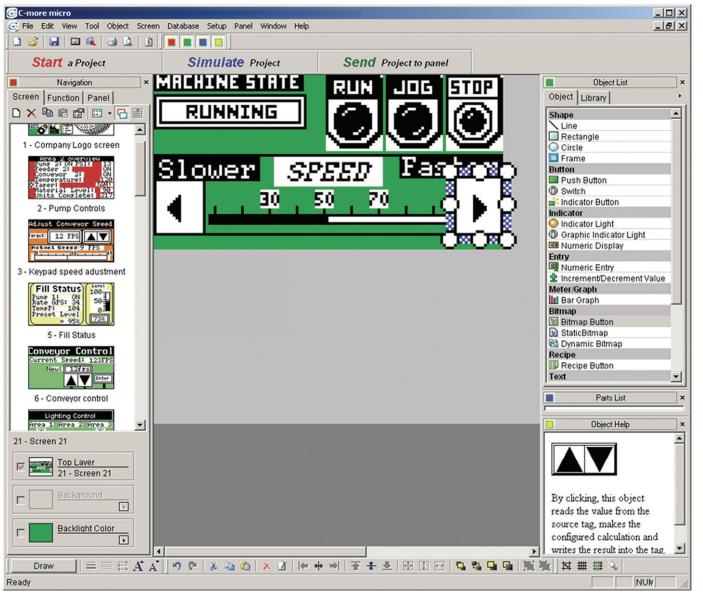
C-more Micro Programming Software is a spin-off of its powerful sibling ***C-more*** Touch Panel. It offers very high end features designed to reduce your configuration time. Simply drag and drop the objects from the object list (right side of screen) onto the screen construction area. Then configure your PLC tags and click on the objects you wish to use. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the ***C-more*** Micro configuration software could easily pay for the panel. Check out www.CmoreMicro.com to download a free version.

Built-in project simulator

- Runs your project on your PC
- Test all of your screens before downloading
- Time savings pays for the panel
- Version 2.5 or later - Simulate function keys and keypad bezel.

Built-in user object/ screen libraries

Save time by re-using your custom objects and screens.



Thumbnail project preview pane

Helps keep track of multi-screen projects.

Scrolling object selection window

Lets you find the object you want fast. Just drag and drop it on the screen.

PC requirements

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

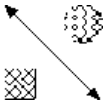
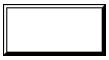
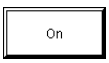
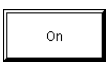
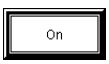
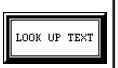
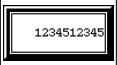
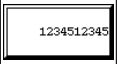
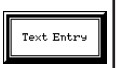
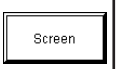
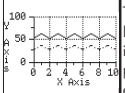
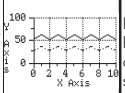
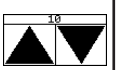
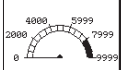
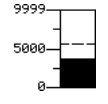
- Operating System - Windows® XP Professional Edition Service Pack 2, Windows® 7 (32 or 64 bit) or Windows 8 (32 or 64 bit)
- 150 MB free hard-disk space
- CD-ROM or DVD drive for installing software from the CD, or internet access to download free programming software
- USB port to use with the correct Programming Cable Assembly for project transfer from the programming software to the panel

Scrolling help window

Gives you helpful information on each object

C-more Micro Programming Software

C-more Micro Panel Objects

Object	Graphic	Object	Graphic
Shape objects, just like with drawing tools, allow the user to insert shapes, such as a straight line, circle, or rectangle drawing into a project. When a Shape is inserted into a project, a window opens to allow the user to setup all available parameters for the Line object. Some of the uses for Shape Objects include but are not limited to adding callouts, pointers, or indicators.		The Bitmap Button object offers the ability to use a Bitmap graphic to perform the functions of a Button. This allows users to create their own graphics and implement them within the software project. The Bitmap Button object can be used to activate or deactivate components assigned to a Discrete Tag Name. The ***C-more*** Micro display only supports two colors, black and white.	
The Frame object allows the user to insert a Frame to the project that can be used to Frame other objects. Some of the uses for Frame object include but are not limited to graphically separating objects for different operations that may appear on one screen and emphasizing pushbuttons or other objects that may require more attention by the operator.		The Static Bitmap offers the ability to display a Bitmap graphic on any screen. The Static Bitmap does not change state. Refer to the Dynamic Bitmap Object if you require the graphic object to change state based on a Tag Value in your PLC. The dialog box for a "Static Bitmap" object allows you to "read from disk" and select a graphic file for import. Graphics must be in one of the following formats: .BMP .WMF .JPG .JPEG	
The Pushbutton object is available from the Button Category of the Object List window. The Pushbutton object is an electronic version of a typical Pushbutton normally found on control panels. The Pushbutton object can be used to activate or deactivate components assigned to a Discrete Tag Name.		Recipe objects make it easy to make a large number of tag changes with the push of a single button. Create Recipes with up to 99 entries, and multiple sets of values. Then just push a button to load an entire set of values into the group of recipe tags.	
The Switch object is an electronic version of a typical Switch that normally can be found on control panels. The Switch object can be used to activate or deactivate components assigned to a Discrete Tag Name.		The Dynamic Bitmap object offers the ability to make an object using two different Bitmap graphics that will display one graphic when the Tag is On and a different graphic when the Tag is Off. Use your own bitmap designs or use some of the bitmaps provided with the software that are located in the User Graphic Library.	
The Indicator Button object is available from the Button Category of the Object List window. The Indicator Button object is an electronic version of a typical Indicator Button normally found on control panels. The Indicator Button is a combination of a Pushbutton and an Indicator Light. The Indicator Button can be used to activate or deactivate components assigned to a Discrete Tag Name.		The Static Text object is used to display a Frame with a personalized Message. This Frame and Message can be placed on any screen and any location within the screen.	
The Indicator Light object is an electronic version of a typical Indicator Light normally found on industrial control panels. The Indicator Light can be configured to display the status of the assigned Discrete Tag Name.		The Lookup Text object is used to display a Frame with a personalized Message. This Frame and Message can be placed on any screen and any location within the screen. The object is always displayed like a sign but is configured to display only the message prompted by an assigned Tag Name. Messages are retrieved from a Message Database which is configured by the user with text defined by the user. The Lookup Text Object will scroll text up to 128 characters.	
The Graphic Indicator Light object is a more enhanced version of the "Indicator Light Object" that allows the user to choose more detailed graphics to display the status of a tag. This object is an electronic version of a typical Indicator Light normally found on industrial control panels. The Indicator Light can be configured to display the status of the assigned Discrete Tag Name.		The Dynamic Text object is used to display text that is retrieved from data stored in a Tag. The Tag Name is assigned to registers in the PLC that contain set character data. The data can be stored in the PLC in ASCII format and may include information such as machine numbers, locations, part numbers, and such. The Message can be configured to be visible (Trigger) when an associated Tag Name is On or Off. This object can be placed on any screen and any location within the screen. The Dynamic Text Object will scroll text up to 40 characters.	
The Numeric Display consists of a frame that displays a real-time numeric value according to the value of data received from an assigned Tag Name. The Numeric Display supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal point. User Defined Alpha Numeric Prefix and Suffix values are also supported.		The Scroll Text object is available from the Text Category of the Object List window. The Scroll Text object is an electronic version of a marquee. It is similar to the Static Text Object. If the text in the object does not fit in the window, it will scroll from right to left across the window. The Scroll Text object does not require a Tag Name assignment. The Scroll Text Object has a maximum character limit of 128 characters.	
The Numeric Entry object is used to enter a value from your Panel to a PLC Register. This object, when selected, opens a Numeric Keypad that allows the user to enter a new value that will be written to the assigned Tag Name. The Numeric Entry supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal points. User Defined Alpha Numeric Prefix and Suffix values are also supported.		The Text Entry object is used to enter an ASCII string. Two entry options allow use of an on-screen keypad or the hardware function keys to enter characters.	
The Increment/Decrement Value object is used to add or subtract a value by pressing a button on the Panel. Basically the object uses two Tags, one to read a value from and another to write a modified value to. The Increment/Decrement Value supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal points. The Increment and decrement values are also user selectable.		The Screen Change Pushbutton object is available from the Control Category of the Object List window. The Screen Change Pushbutton object is a pushbutton that can be configured to activate another screen in the project. This object may be edited to various colors and sizes. Users can configure the button to activate the Power-Up screen, Forward Screen, Previous Screen, or any one of the project screens.	
The Real Time Graph object displays the value stored in up to two PLC tags, over a history of up to 24 points each. One point is added at each refresh.		The Screen Selector object is available from the Control Category of the Object List window. This object is an enhanced version of the Screen Change pushbutton in that it offers many more features and defaults with data from screens in the project. This helps to save time by not having to create Screen change buttons for each screen. This object may be edited to various colors and sizes.	
The Line Graph object displays the values of up to 24 PLC address points. Up to two address arrays can be displayed. The line is drawn in its entirety at each refresh.		The Adjust Display Contrast object is used to allow the operator to adjust the Panel Display Contrast. The default Display setting often works in most applications, however lighting may vary based on the location of each application. In these cases the operator can use this object to make adjustments. The current display setting value will appear on the top of the button and will change as the arrow keys are pressed. This button can be modified to various sizes.	
The Analog Meter object is used to display the current value of a Tag Name.		The Function object is used to assign the panels function key buttons to a particular action as well as assigning the control of the LED On/Off status. When a button has been assigned as a shift button, the then F1 through F7 will become F8 through F14. The Function Object buttons will activate when the hardware button is pressed or when the object is pressed on the screen. The object size is restricted so that the keys will line up with the hardware function keys on the panel.	
The Bar Meter object is used to monitor up to two assigned Tag Names continuously. This object has various appearances depending upon the relative value of the tags. The Bar Meter can be used to create digital versions of level, current, and flow meters to name a few samples, or gauges that measure speed and other measurable data.			

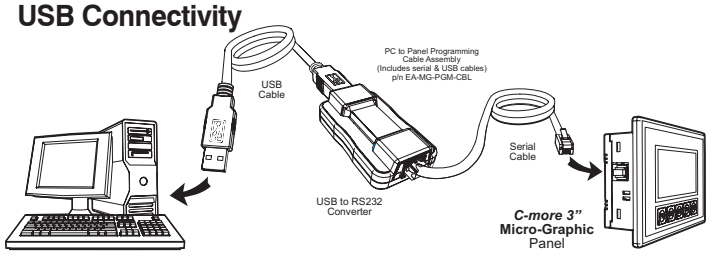
C-more Micro Programming Connections

C-more STN Micro Programming Connection

Using the ***C-more*** Micro Programming Software for project development, STN ***C-more*** Micro panels can be connected to a PC (personal computer) by using EA-MG-PGM-CBL, the USB-to-RS-232 cable assembly.

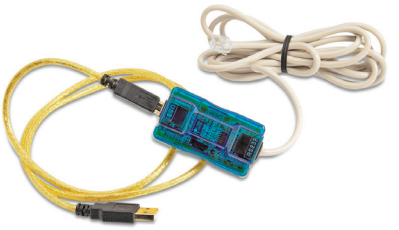
- Connect the USB programming cable (included) from a USB port type A on the PC to the USB type B port on the converter (included). Next connect the serial programming cable from the converter's RJ12 port to the panel's RJ12 serial port. The panel receives power from the USB port of the PC that it is connected to through the USB to RS-232 converter assembly.

USB Connectivity



NOTE: The TFT panels EA1-T4CL, EA1-T6CL, EA3-T6CL, EA3-T8CL and EA3-T10CL do NOT use the EA-MG-PGM-CBL assembly. The TFT panels use a standard USB A-to-B type cable such as USB-CBL-AB6. See below.

USB to RS-232 Programming Cable Assembly



Part No. EA-MG-PGM-CBL

$43.00

USB to RS-232 Converter Specifications	
Part Number	EA-MG-PGM-CBL
Hardware	
USB Interface	USB Specification Rev. 1.1 Connector: USB Type B jack to accept USB Type B cable plug
Serial Interface	RS-232 (EIA-232-E) Connector: RJ12 phone jack 6p to accept RJ12 cable plug
Baud Rate	115.2 kbps Maximum
Input Voltage	5 VDC (Supplied thru serial interface cable.)
Power Consumption	50 mA (Does not include power to panel and/or bezel.)
Accessory Cables (included)	
USB Cable	USB Type A plug to PC on one end, USB Type B plug to converter on other end, 0.30 m [1 foot] length (* Note)
Serial Cable	RJ12 phone plug connectors on both ends, 2.0 m [6.56 feet] length (* Note)
Physical	
Dimensions	2.559" (W) x 1.417" (H) x 0.886" (D) [65.0 mm x 36.0 mm x 22.5 mm]
Weight	1.06 oz. [30 g]
Environmental	See Micro panel specifications at the beginning of this catalog section.
*** Note: Maximum cable length for either the USB or serial cable should not exceed 2.0 m [6.56 feet] in length.**	

C-more TFT Micro Programming Connection

The ***C-more*** TFT Micro panels EA1-T4CL, EA1-T6CL, EA3-T6CL, EA3-T8CL and EA3-T10CL include an integral USB to serial converter. It is programmed via any USB Type A to Type B cable.

When properly installed on your PC, the device driver will be assigned a communication port number and appear in Windows Device Manager as a serial com port.

USB cable options for programming EA1-T4CL, EA1-T6CL, EA3-T6CL, EA3-T8CL and EA3-T10CL

Part Number	Description	Price
USB-CBL-AB3	Standard 3-ft. (0.9 m) 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 24 VDC power source for configuration and operation.)	$7.50
USB-CBL-AB6	Standard 6-ft. (1.8 m) 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 24 VDC power source for configuration and operation.)	$9.50
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 24 VDC power source for configuration and operation.)	$18.00
USB-CBL-AB15	Standard 15-ft. (4.6 m) 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 24 VDC power source for configuration and operation.)	$22.50
Note: Adding the optional EA-ECOM module allows communication via an Ethernet connection (EA3 series only).		