# AUTOMATIONDIRECT.com

## C-more® micro

# HMI: Operator Interface

## BOOKMARKS

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75 Series Electromechanical Relay Selection Guide
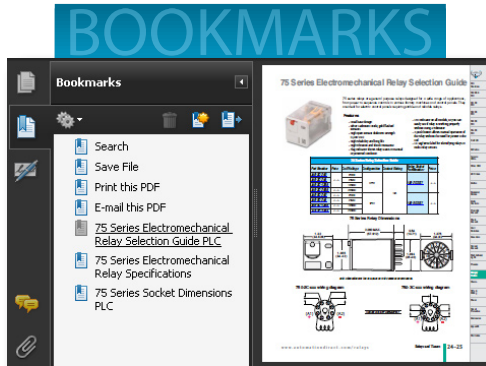
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*C-more* **Micro Panels**     **mCMM-1**

# Micro panels...MEGA value!

**C-more®** *micro*

## Do more for LESS with C-more Micro Panels!

*C-more Micro panels* are one of the most popular and reliable, value-packed operator interfaces in the industrial market today. No matter the budget or system size, we have a C-more Micro operator panel for the job. And all of our panels come with FREE programming software that includes a project simulator and many other time saving features. You'll always get the biggest bang for your buck with C-more Micro.

Micro touch panel and non-touch panel versions available

- The 3-inch cost-conscious panels display standard or high contrast STN monochrome graphics with 12 selectable background colors
- 32K color TFT displays are available in 4-inch and 6-inch models
- Ethernet communication built in on 3 and 4-inch EA3 models, optional Ethernet communications module (EA-ECOM) available for 6-inch EA3 models
- FREE programming software with simulator
- Full 2-year product warranty

The 3-inch STN monochrome versions offer twelve selectable background colors that allow you to use color to convey meaning.

The 4-inch and 6-inch TFT full color versions offer up to 32,767 colors for more vibrant and colorful project screens.
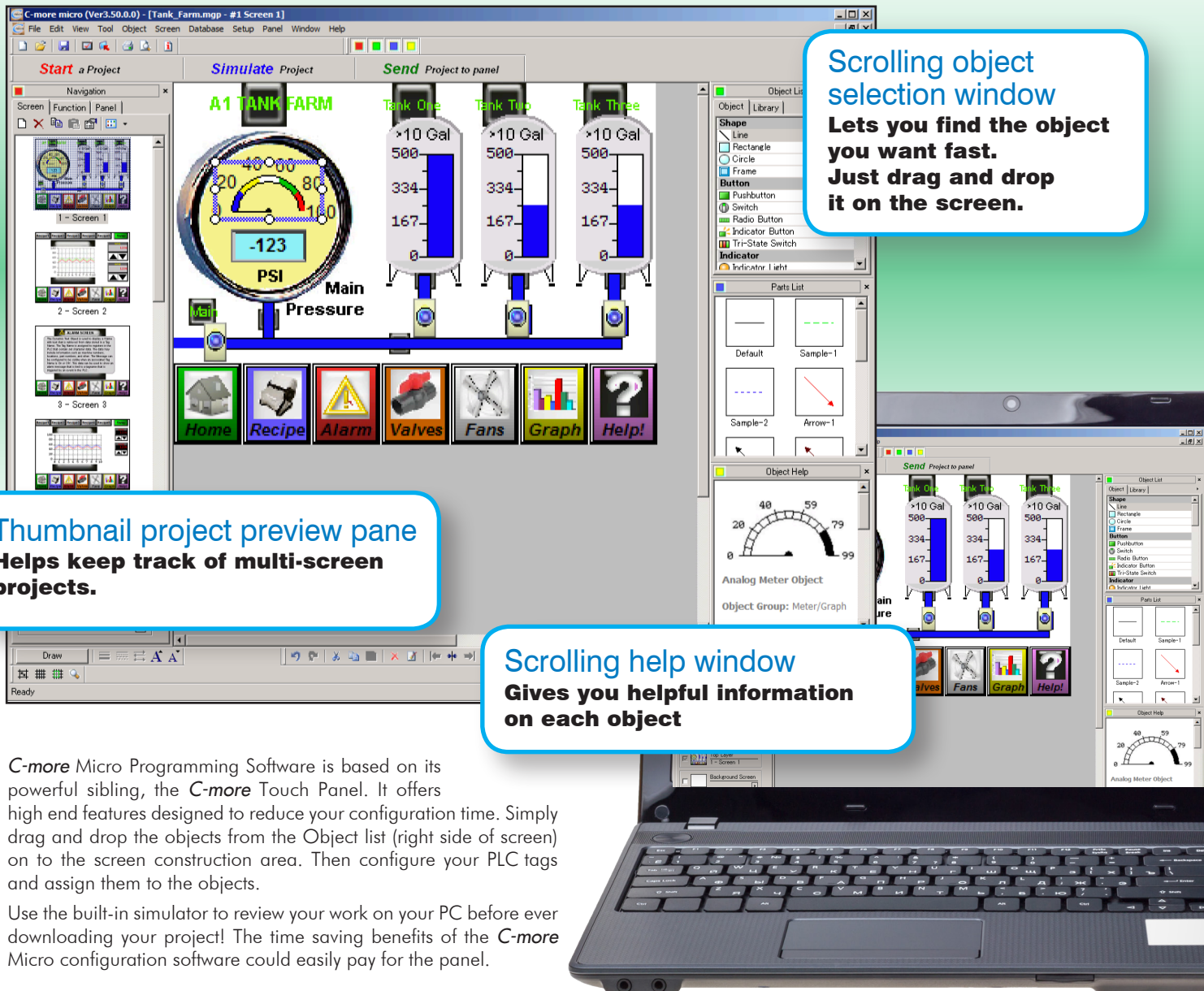
# <u>FREE</u> Configuration Software with Simulator

## 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.**



### Scrolling object selection window
**Lets you find the object you want fast.**
**Just drag and drop it on the screen.**

### Thumbnail project preview pane
**Helps keep track of multi-screen projects.**

### Scrolling help window
**Gives you helpful information on each object**

*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.

**Learn more! Go to:**

## C-moreMicro.automationdirect.com
for detailed specifications, a virtual tour of the product, programming examples, newest communication drivers…
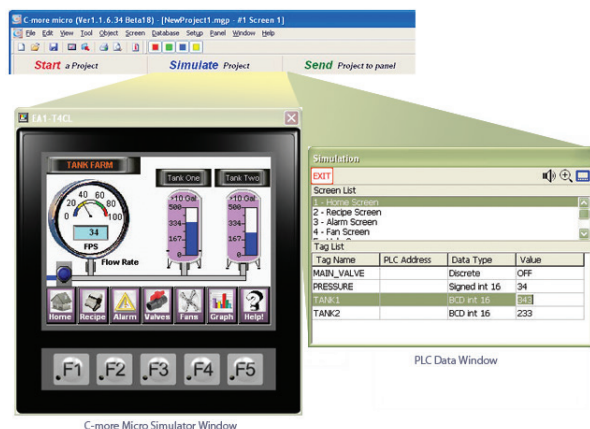
# *C-more* Micro Productivity Tools

## 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

## 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
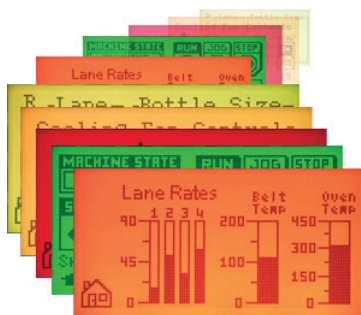


*Note: Keep in mind that depending on the complexity of your screens, the limiting factor could be the 999 addressable screens or the panel's memory.*

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.

## Build and Save Custom Objects

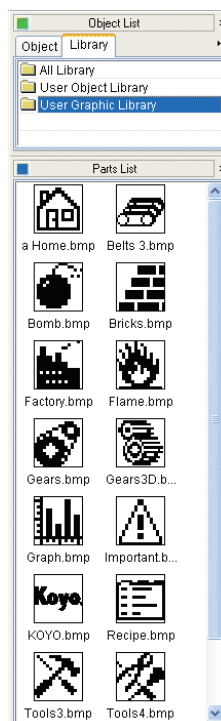Store your objects in the library for fast and easy re-use.

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*



## 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

## Download the Software!

*C-more* Micro Programming Software can be downloaded at no charge from *AutomationDirect.com*, or a CD version may be purchased for $25 (EA-MG-PGMSW). A USB port on your PC is required to connect to the *C-more* Micro panel.

**This software can only be used to program the C-more Micro panels,* not *the C-more 6" through 15" touch panels.*

# *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
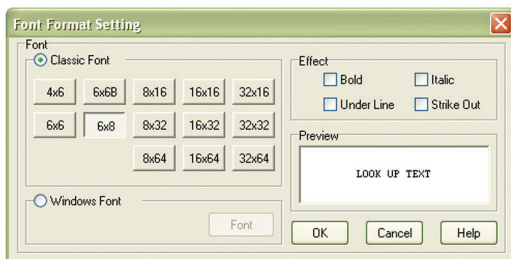


Windows fonts can be sized with their familiar "point" values.



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
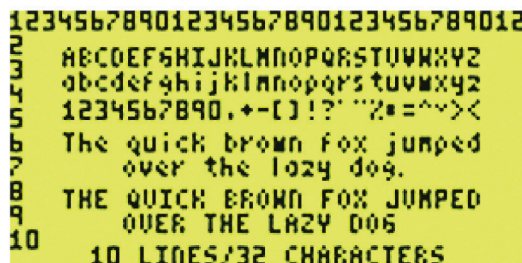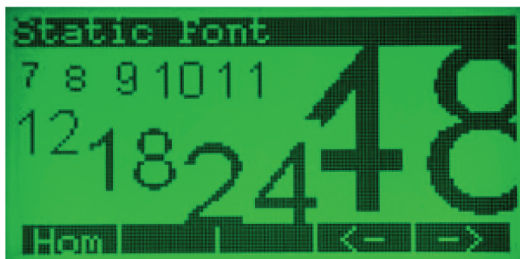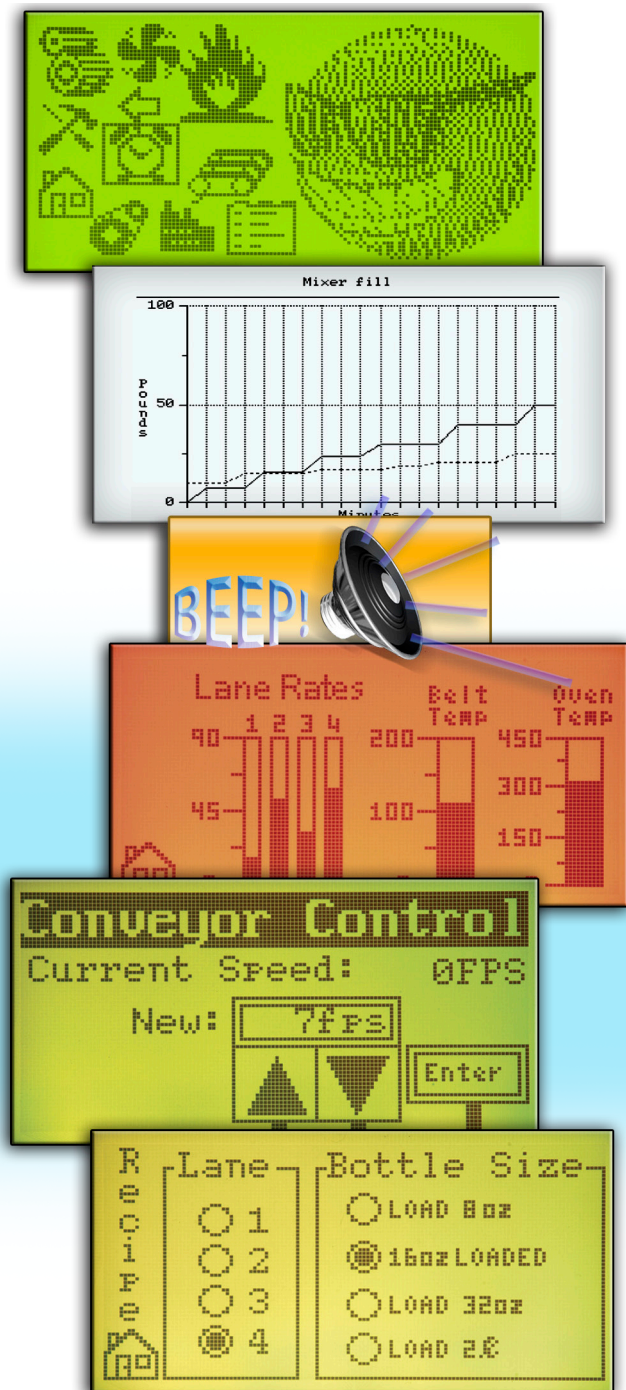
## Controlled beep

- 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 3in STN models support various user controlled backlight colors that can be used to get the operators attention.

These colors will vary based on the model:

**White, Green, Red, Amber, Lime, Yellow, Pink, Emerald**

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

## 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

# C-more® micro



## Support you can rely on!

Our HMI's have been an important part of the automation industry for over 10 years. And whether or not you're purchasing a new EA3 panel or you're an existing EA1 customer, you can count us to offer the support you need long into the future.

## What our customers think...

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:

**NEW!**

# EA3 Reduced Models
## New EA3 Series starting at **$98**

### EA3-S3ML-RN **$98**

- Non-touch
- NEMA1 indoor rating -ships without gasket. Optional gasket can be purchased for NEMA4 indoor rating
- One RJ12 serial port for programming and PLC connection
- Supports only AutomationDirect/Modbus PLC protocols
- No expansion/option module support

### EA3-S3ML-R **$146**

- Touch screen
- NEMA4, 4x indoor rating
- One RJ12 serial port for programming and PLC connection
- Supports only AutomationDirect/Modbus PLC protocols
- No expansion/option module support

# 3-inch STN Monochrome Panel
## Ethernet-ready panel for only **$198**

- Touch screen
- Built-in Ethernet port
- Two built-in serial ports
- Micro-USB programming port
- 5 Function keys with LED indicators
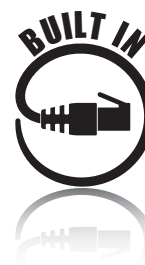- UL, cUL, CE approvals
- NEMA 4, 4x indoor ratings

*EA3-S3ML*

**BUILT IN**

# 4-inch TFT WIDESCREEN Full Color Panel
## Ethernet-ready widescreen panel for only **$269**

- Touch screen
- Built-in Ethernet port
- Two built-in serial ports
- Micro-USB programming port
- Supports Portrait and Landscape modes
- UL, cUL, CE approvals
- NEMA 4, 4x indoor ratings

*EA3-T4CL*

**BUILT IN**

**EA3-T6CL**

# 6-inch TFT Full Color Panel

## Ethernet-capable, priced at **$299**

- Five user-defined function keys, each key with a user-defined red LED indicator
- UL-rated for use on a flat surface of Type 1, 4X enclosure (for indoor use only)
- Powered from a Class 2, 12-24 VDC power supply or through the USB port when programming
- EA-ECOM module allows Ethernet connection



## Add Ethernet to your 6-inch panel for only **$50** with the EA-ECOM module

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.

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



### 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
- Allen-Bradley EtherNet/IP Client (MicroLogix 1100/1400)
- Allen-Bradley EtherNet/IP Client (SLC5/05/ENI Adapter)

| C-more Micro EA3 Series Panels | | | | |
|---|---|---|---|---|
| | 3-inch STN Monochrome Models | | | 4-inch Widescreen TFT Color Models | 6-inch TFT Color Models |
| | **EA3-S3ML-RN** | **EA3-S3ML-R** | **EA3-S3ML** | **EA3-T4CL** | **EA3-T6CL** |
| **NEMA Rating** | NEMA 250 Type 1 indoor use only. Optional gasket EA-MG-S3ML-GSK can be purchased for NEMA 250 Type 4/4X (indoor use only) rating. | NEMA 250 Type 4/4X (indoor use only) | | | |
| **Touch Screen** | NO | YES | | | |
| **Display Resolution** | 128 x 64 pixel | | | 480 x 272 pixel widescreen | 320 x 240 pixel |
| **USB Programming Port** | NO (Use serial port with EA-MG-PGM-CBL) | | | (1) USB (Port 1: USB Type Micro-B) | (1) USB (Port 1: USB Type B) |
| **Serial Port** | (1) RJ12 Serial | | | (2) Serial (RJ12 and DSUB15) | |
| **Ethernet Port** | NO | | | (1) 10/100 Mbps Built In | Ethernet Option Module (EA-ECOM) |
| **Protocols** | Supports only Automationdirect protocols and Modbus RTU | | | Supports complete C-more micro protocol list (see specs) | |
| **User Project Memory** | 1MB | | 3MB | 14MB | 6MB |
| **Portrait Mode** | NO | | | YES | |
| **Colors** | Monochrome; backlight can be configured per screen and/or per alarm with one of 12 colors. See specs | | | 32,768 colors | |

# *C-more* Micro EA1 Series Selection Guide

| Part Number | | Description | Price |
|---|---|---|---|
| **EA1-S3ML** | | ***C-more*** Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow | $205.00 |
| **EA1-S3ML-N** | **Non-Touch** | ***C-more*** Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow | $161.00 |
| **EA1-S3MLW** | | ***C-more*** Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red | $205.00 |
| **EA1-S3MLW-N** | **Non-Touch** | ***C-more*** Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red | $161.00 |
| **EA1-T4CL** | | ***C-more*** Micro EA1 series touch screen HMI, 4in color TFT LCD, 320 x 240, QVGA, supports (1) serial and (1) USB port. | $356.00 |
| **EA1-T6CL** | | ***C-more*** Micro EA1 series touch screen HMI, 6in color TFT LCD, 320 x 240, QVGA, supports (1) serial and (1) USB port. | $432.00 |

*C-more* Micro EA1 Series Panels
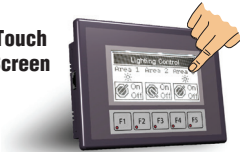
| Part Number | Panel Software / Firmware Version Required |
|---|---|
| EA1-S3ML | 1.0 or later |
| EA1-S3ML-N | 1.0 or later |
| EA1-S3MLW | 1.5 or later |
| EA1-S3MLW-N | 1.5 or later |
| EA1-T4CL | 3.0 or later |
| EA1-T6CL | 2.5 or later |

# *C-more* Micro EA1 Series Selection Guide

| Part Number | | Description | Price |
|---|---|---|---|
| **EA-MG-BZ1** | | Keypad bezel, 8 predefined function keys. For use with EA1 series 3in **C-more** Micro HMIs. | $64.00 |
| **EA-MG-BZ2** | | Keypad bezel, 20 predefined function keys. For use with EA1 series 3in **C-more** Micro HMIs. | $87.00 |
| **EA-MG-P1** | | AC/DC power adapter, 24 VDC. For use with EA1 series 3in **C-more** Micro HMIs. | $31.50 |
| **EA-MG-SP1** | | AC/DC power adapter, 24 VDC. For use with EA1 series 3in **C-more** Micro HMIs. Integral 15-pin D-Sub RS-232/422/485 port included. | $54.00 |
| **EA-COMCON-3** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, right angle cable entry. For use with **C-more** Micro EA1 series 4in and 6in HMIs, **C-more** Micro EA3 series 3in, 4in, and 6in HMIs, **C-more** EA9 6in and 7in HMIs. | $42.00 |
| **EA-COMCON-3A** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with **C-more** Micro EA1 series 3in with EA1-MG-SP1, **C-more** Micro EA3 series 8in and 10in HMIs, **C-more** EA9 8in, 10in, 12in and 15in HMIs. | $19.00 |
| **EA-MG6-BZ2** | | Keypad bezel, 20 predefined function keys. For use with EA1-T6CL **C-more** Micro HMIs being used in Landscape (horizontal mounted) mode. | $107.00 |
| **EA-MG6-BZ2P** | | Keypad bezel, 21 predefined function keys. For use with EA1-T6CL **C-more** Micro HMIs being used in Portrait (vertical mounted) mode. | $89.00 |
| **EA-MG-COV-CL** | | Screen protector, clear, 3in. Package of 5. For use with **C-more** Micro 3in HMIs. | $35.50 |
| **EA-4-COV2** | | Screen protector, replacement, non-glare, 4in. Package of 3. For use with **C-more** Micro EA1-T4CL 4in HMIs. | $33.50 |
| **EA-6-COV2** | | Screen protector, non-glare, 6in. Package of 3. For use with **C-more** and **C-more** Micro 6in panels. | $37.00 |

*C-more Micro EA1 Series Panel Accessories*

# *C-more* Micro 3-inch EA1 Series Overview

| Part Number | | Description | Price |
|---|---|---|---|
| **EA1-S3ML** | Touch Screen | ***C-more*** Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow | $205.00 |
| **EA1-S3ML-N** | Non-Touch | ***C-more*** Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: red, green, amber, lime, or yellow | $161.00 |
| **EA1-S3MLW** | Touch Screen | ***C-more*** Micro EA1 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red | $205.00 |
| **EA1-S3MLW-N** | Non-Touch | ***C-more*** Micro EA1 series non-touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (1) serial port. Selectable backlight colors: white, pink1, pink 2, pink3 or red | $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*.**

# C-more Micro 3-inch EA1 Series

| Part Number | | Description | Price |
|---|---|---|---|
| **C-more Micro 3-inch EA1 Series Panels Programming Software & Programming Cable** | | | |
| EA-MG-PGMSW | | **C-more** Micro Windows-based programming software, CD. For use with **C-more** Micro panels. Requires USB port connection from PC to **C-more** Micro panel. | $25.00 |
| EA-MG-PGM-CBL | | USB/RS-232 programming cable assembly, USB Type A male to RJ12 male, 6ft cable length. For use with **C-more** Micro panels, CLICK CPUs, Do-more H2 series CPUs, and DirectLogic CPUs. | $43.00 |

| Part Number | | Description | Price |
|---|---|---|---|
| **C-more Micro 3-inch EA1 Series Panel Accessories** | | | |
| EA-MG-BZ1 | | Keypad bezel, 8 predefined function keys. For use with EA1 series 3in **C-more** Micro HMIs. | $64.00 |
| EA-MG-BZ2 | | Keypad bezel, 20 predefined function keys. For use with EA1 series 3in **C-more** Micro HMIs. | $87.00 |
| EA-MG-P1 | | AC/DC power adapter, 24 VDC. For use with EA1 series 3in **C-more** Micro HMIs. | $31.50 |
| EA-MG-SP1 | | AC/DC power adapter, 24 VDC. For use with EA1 series 3in **C-more** Micro HMIs. Integral 15-pin D-Sub RS-232/422/485 port included. | $54.00 |
| EA-COMCON-3A | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with **C-more** Micro EA1 series 3in with EA1-MG-SP1, **C-more** Micro EA3 series 8in and 10in HMIs, **C-more** EA9 8in, 10in, 12in and 15in HMIs. | $19.00 |
| EA-MG-COV-CL | | Screen protector, clear, 3in. Package of 5. For use with **C-more** Micro 3in HMIs. | $35.50 |

# *C-more* Micro 3-inch EA1 STN Touch Panel

Model EA1-S3ML **C-more** 3-inch 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 pixel 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 pixel 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

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Optional (EA-MG-SP1) |

**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]

RS232 Comm. PORT

4.488 [114.0]
3.976 [101.0]
2.835 [72.0]
1.357 [34.5]

MOUNTING CLIP (2) places

GASKET

0.236 [6.0]        1.144 [29.1]

TOP VIEW

RS232 COMM. PORT

3.409 [86.6]    3.228 [82.0]    2.716 [69.0]

LEFT VIEW

C-more Micro-Graphic Panel

F1 F2 F3 F4 F5

FRONT VIEW

## Panel Cutout

4.016 +0.04 −0.00
[102.0 +1 −0]

0.236 [6.0]    0.236 [6.0]    0.236 [6.0]

R0.118 [R3]

CUTOUT

2.756 +0.04 −0.00
[70.0 +1 −0]

0.236 [6.0]

CUTOUT OUTLINE

BEZEL OUTLINE

MOUNTING CLIP (2) places

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04 – 0.2 [1–5]

MOUNTING CLIP (2) places

**NOTE: The *C-more* 3-inch 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* Micro 3-inch EA1 STN Touch Panel

Model EA1-S3MLW ***C-more*** 3-inch Micro touch panel has a 3.1-inch STN LCD mono-chrome display and five selectable LED-driven backlight colors: White, Pink1, Pink2, Pink3 and Red. It features a 128 x 64 pixel 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 pixel 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 ℃ (32 to 122 ℉) 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

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Optional (EA-MG-SP1) |

**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]

RS232 Comm. PORT

4.488 [114.0]
3.976 [101.0]
2.835 [72.0]
1.357 [34.5]
0.236 [6.0]
1.144 [29.1]

MOUNTING CLIP (2) places
GASKET

TOP VIEW

RS232 COMM. PORT

3.409 [86.6]
3.228 [82.0]
2.716 [69.0]

LEFT VIEW

C-more Micro-Graphic Panel

F1  F2  F3  F4  F5

FRONT VIEW

## Panel Cutout

4.016 +0.04 −0.00
[102.0 +1 −0]
0.236 [6.0]
0.236 [6.0]
0.236 [6.0]
R0.118 [R3]
CUTOUT
2.756 +0.04 −0.00
[70.0 +1 −0]
0.236 [6.0]

CUTOUT OUTLINE
BEZEL OUTLINE
MOUNTING CLIP (2) places

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04 – 0.2 [1–5]
MOUNTING CLIP (2) places

**NOTE: The *C-more* 3-inch 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* Micro 3-inch EA1 STN Non-Touch

Model EA1-S3ML-N *C-more* 3-inch 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 pixel 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 pixel 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
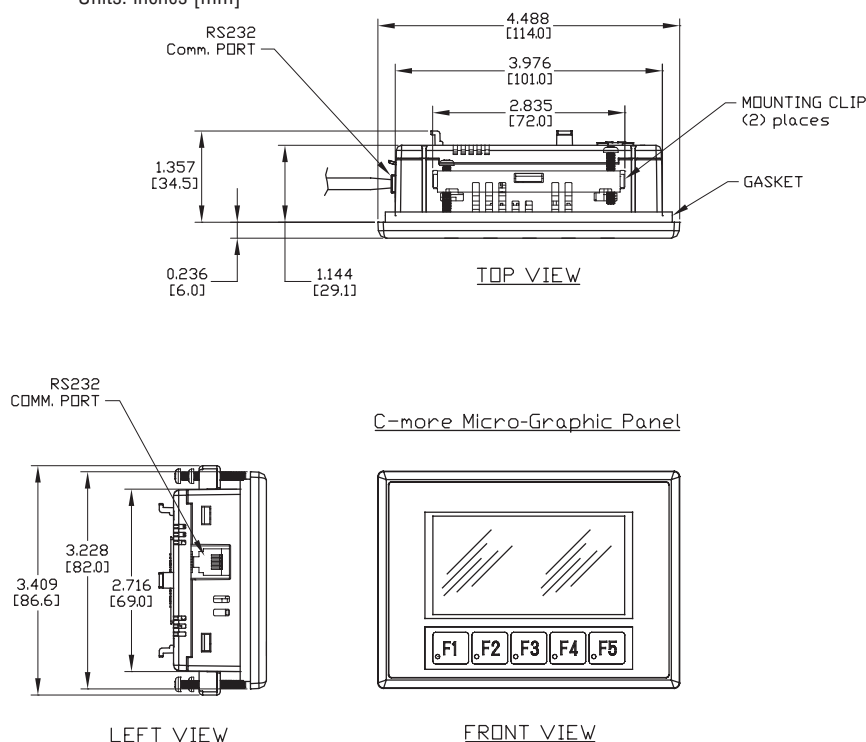- 2-year warranty from date of purchase

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Optional (EA-MG-SP1) |

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

## Dimensions
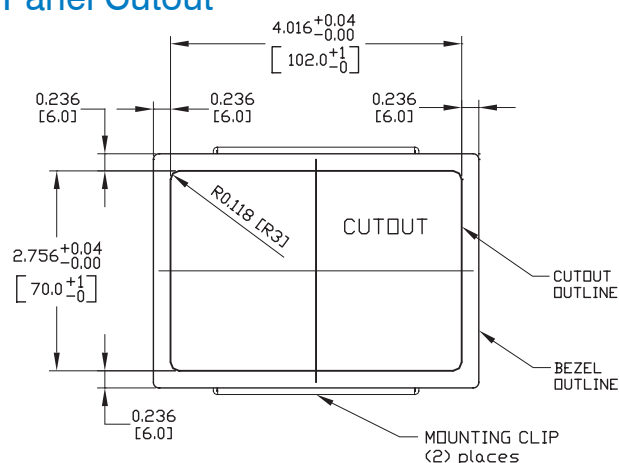
Units: inches [mm]



TOP VIEW

LEFT VIEW

*C-more Micro-Graphic Panel*

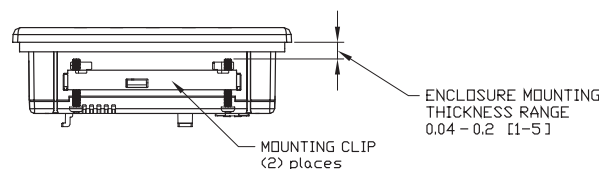FRONT VIEW

## Panel Cutout



## Panel Thickness



**NOTE: The *C-more* 3-inch 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* Micro 3-inch EA1 STN Non-Touch

Model EA1-S3ML-N **C-more** 3-inch 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 pixel 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 pixel 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
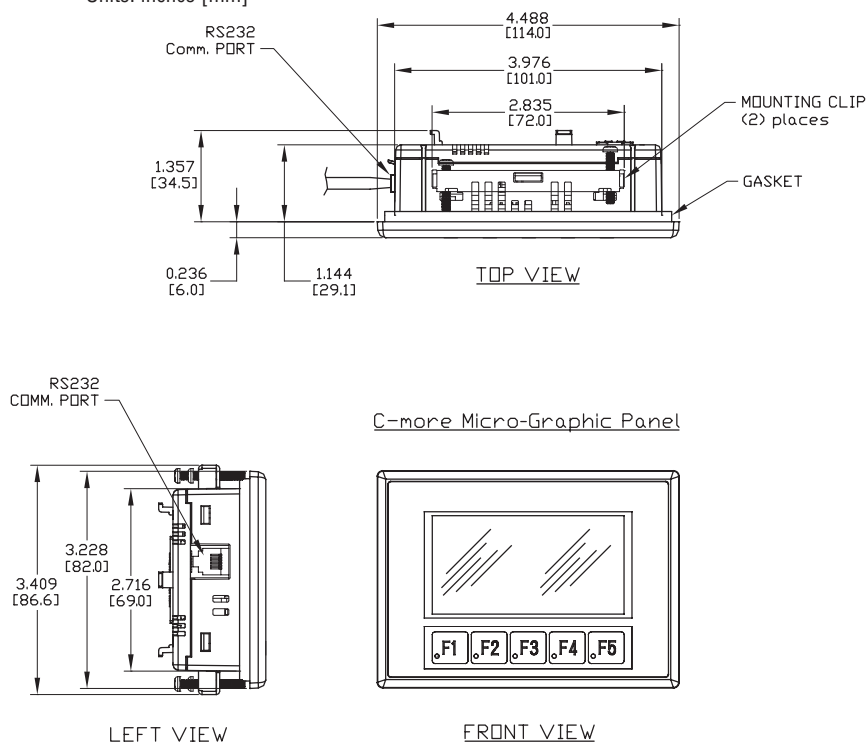- 2-year warranty from date of purchase

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Optional (EA-MG-SP1) |

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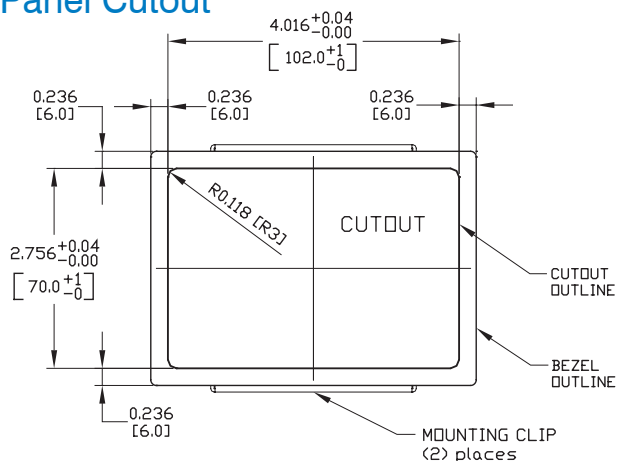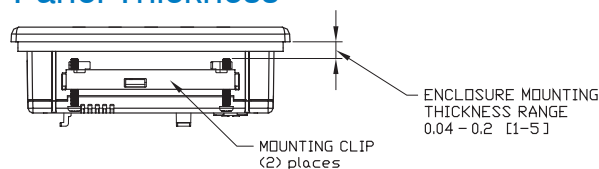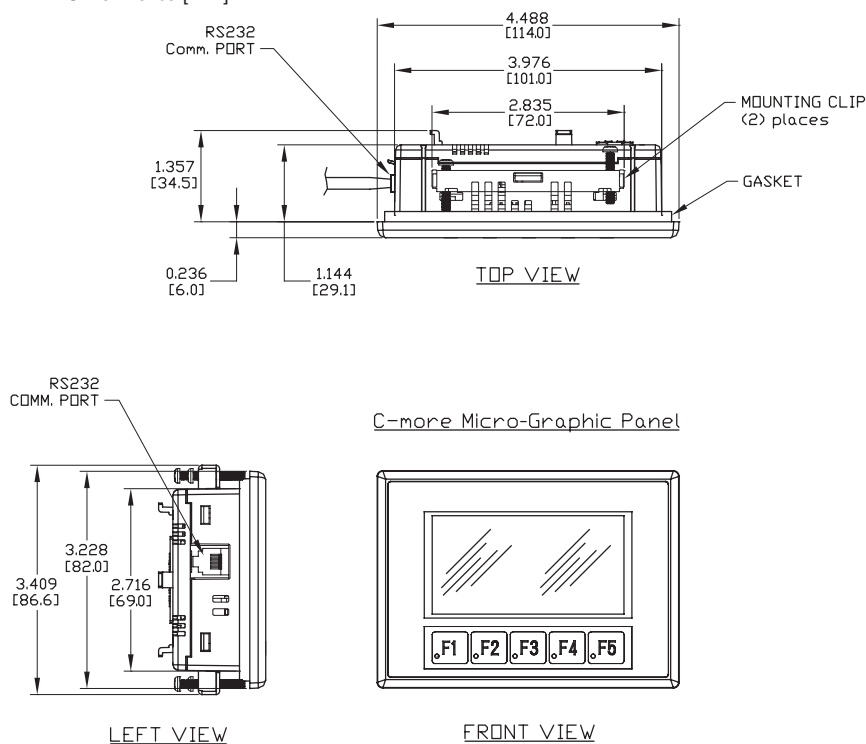
## Dimensions

Units: inches [mm]

RS232 Comm. PORT

4.488 [114.0]
3.976 [101.0]
2.835 [72.0]
1.357 [34.5]
0.236 [6.0]
1.144 [29.1]

MOUNTING CLIP (2) places
GASKET

TOP VIEW

RS232 COMM. PORT

3.409 [86.6]
3.228 [82.0]
2.716 [69.0]

LEFT VIEW

C-more Micro-Graphic Panel

F1 F2 F3 F4 F5

FRONT VIEW

## Panel Cutout

4.016 +0.04 −0.00
[102.0 +1 −0]
0.236 [6.0]
0.236 [6.0]
0.236 [6.0]
2.756 +0.04 −0.00
[70.0 +1 −0]
R0.118 [R3]
CUTOUT
0.236 [6.0]

CUTOUT OUTLINE
BEZEL OUTLINE
MOUNTING CLIP (2) places

## Panel Thickness

ENCLOSURE MOUNTIN THICKNESS RANGE 0.04 - 0.2 [1-5]
MOUNTING CLIP (2) places

**NOTE: The *C-more* 3-inch 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* Micro 3-inch EA1 Specifications

| Specification ╱ Model | 3-inch STN Micro Panel Touch Screen | 3-inch STN Micro Panel Non-Touch Screen |
|---|---|---|
| **Part Number** | EA1-S3ML, EA1-S3MLW | EA1-S3ML-N, EA1-S3MLW-N |
| **Description** | 128 x 64 pixel LCD display, five user defined keypad function buttons, and five user defined LED's | |
| **Display** | | |
| • *Type* | 3.1-inch STN monochrome LCD, graphical characters | |
| • *Resolution* | 128 (W) x 64 (H) pixel | |
| • *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<br>6 o'clock axis —> 45 degrees<br>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<br>**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.<br>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).<br>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,<br>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.**

NOTE: Photo includes EA-MG-BZ2

# *C-more* Micro 3-inch EA1 Specifications

| Specification / Model | 3-inch STN Micro Panel Touch Screen | 3-inch 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<br>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%),<br>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,<br>on 3 mutually perpendicular axes (total of 18 shocks) | |
| • Noise Immunity | NEMA ICS3-304 ( EN61131-2 )<br>RFI, (145MHz, 440Mhz 10W @ 10cm)<br>Impulse 1000V @ 1µS pulse<br>EN61000-4-2 (ESD), EN61000-4-3 (RFI), EN61000-4-4 (FTB), EN61000-4-5 (Surge)<br>N61000-4-6 (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 / BRX\*\* | 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 |

For a list of supported protocols and cabling options refer to the 3-inch *C-more* Micro Protocols and cabling chart starting on page tCMM-14.

**Notes:** \* Serial port 2 requires the use of EA-MG-SP1 adapter for *C-more* Micro 3-inch EA1 series
\*\* BX-P-SER2-RJ12 is required

# *C-more* Micro 3-inch EA1 Series 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 to RS-232 Programming Cable Assembly
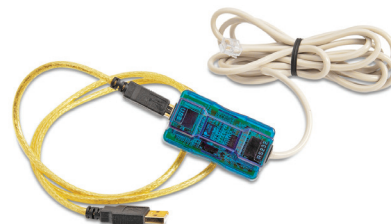


**Part No. EA-MG-PGM-CBL**

**$43.00**

### USB Connectivity



USB Cable

PC to Panel Programming Cable Assembly (Includes serial & USB cables) p/n EA-MG-PGM-CBL

Serial Cable

USB to RS232 Converter

*C-more 3"* **Micro-Graphic** Panel
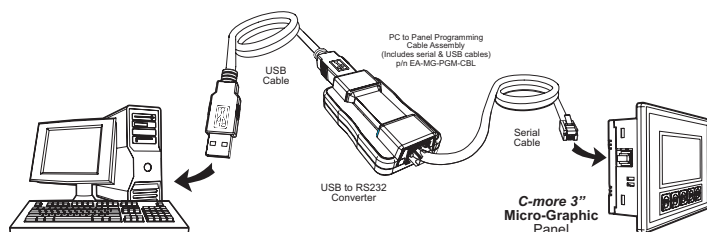
**NOTE: The TFT panels EA1-T4CL, EA1-T6CL, EA3-T6CL, EA3-T8CL and EA3-T10CL do NOT use the EA-MG-PGM-CBL assembly. The TFT panels use a standard USB A-to-B type cable such as USB-CBL-AB6. See below.**

| USB to RS-232 Converter Specifications | |
|---|---|
| **Part Number** | EA-MG-PGM-CBL |
| **Hardware** | |
| **USB Interface** | USB Specification Rev. 1.1<br>Connector: USB Type B jack to accept USB Type B cable plug |
| **Serial Interface** | RS-232 (EIA-232-E)<br>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)<br>[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* Micro 3-inch EA1 Power Connection Wiring

## Providing power to the touch panel

- The **C-more** 3-inch 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-inch Panel powered from AutomationDirect PLC via communications cable

Power Supplied to Panel through Cable from AutomationDirect PLC RJ12 port
RS-232C (p/n DV-1000CBL)

To PLC RJ12 Port

To **C-more** Micro-Graphic Serial Port1

10 feet [3.0 m] Maximum

Wiring Diagram

| | | |
|---|---|---|
| GND | 6 | 1 | GND |
| TXD | 4 | 3 | RXD |
| RXD | 3 | 4 | TXD |
| +5 V | 2 | 5 | +5 V |
| GND | 1 | 6 | GND |

RJ12 6-pin Phone Plug (6P6C)

1 2 3 4 5 6

1 = Sig GND
2 = +5 VDC
3 = RXD
4 = TXD
5 = not used
6 = Sig GND

RJ12 6-pin Phone Plug (6P6C)

1 2 3 4 5 6

1 = Sig GND
2 = not used
3 = RXD
4 = TXD
5 = +5 VDC
6 = Sig GND

## 3-inch panel powered from a DC power adapter – wiring diagram
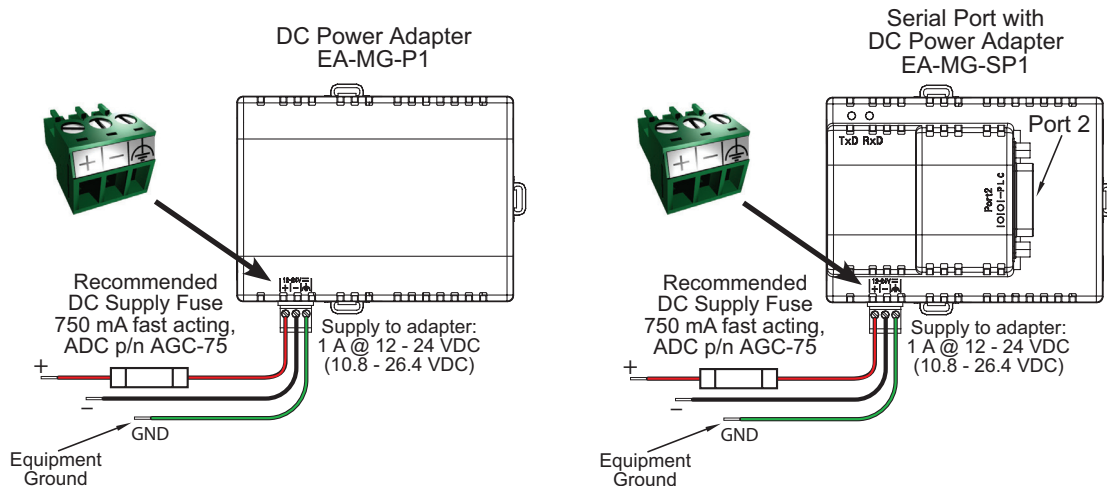
DC Power Adapter
EA-MG-P1

Serial Port with
DC Power Adapter
EA-MG-SP1

Port 2

Recommended DC Supply Fuse 750 mA fast acting, ADC p/n AGC-75

Supply to adapter: 1 A @ 12 - 24 VDC (10.8 - 26.4 VDC)

GND

Equipment Ground

Recommended DC Supply Fuse 750 mA fast acting, ADC p/n AGC-75

Supply to adapter: 1 A @ 12 - 24 VDC (10.8 - 26.4 VDC)

GND

Equipment Ground

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

**NOTE:** The maximum communication cable length when a 3-inch panel is powered from an optional DC power adapter is 50 feet.

# *C-more* Micro 3-inch EA1 PLC Connections

## Cabling requirements

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

- DV-1000CBL — connects to Productivity Series, Do-more/BRX* 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** Micro 3-inch EA1 series 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/BRX*
- 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
  * BX-P-SER2-RJ12 is required

### *C-more* 3-inch Micro Port 1 to DL205 PLC Port 1
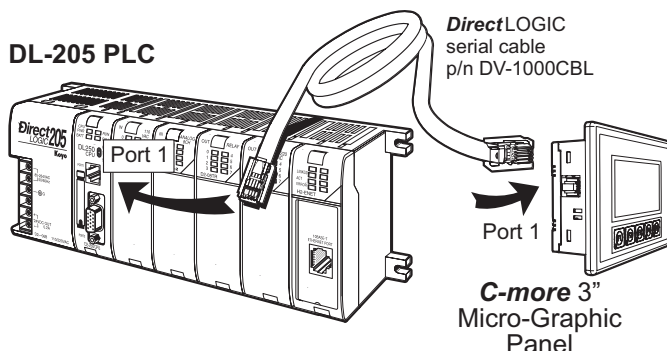


### *C-more* 3-inch Micro Port 1 to CLICK PLC Port 2
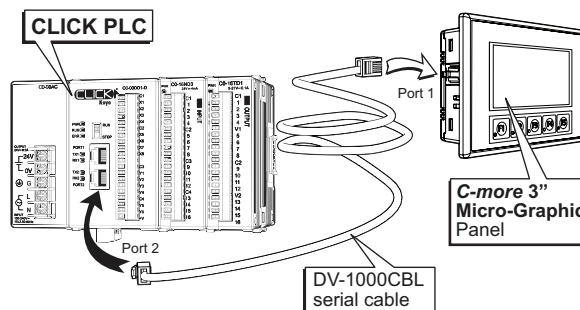


### *C-more* 3-inch Micro Port 1 to DL06 PLC Port 1



### *C-more* 3-inch Micro Port 2 to DL06 PLC Port 2

# *C-more* Micro 3-inch EA1 Communication Protocols & Cabling Chart

**Controller Compatibility & Connection Chart**

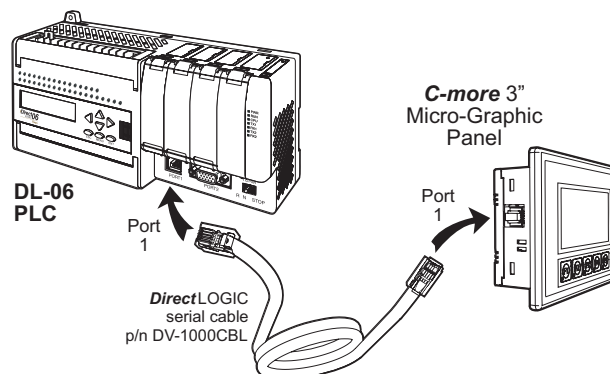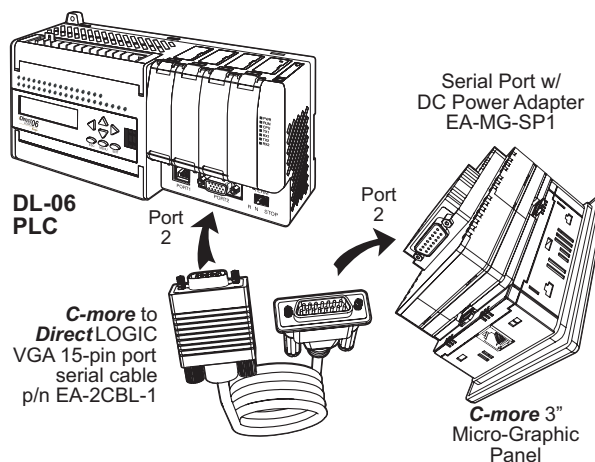| PLC | | | C-more 3-inch Micro Panel. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Panel to PLC Cabling Components Required for Specific Port and Protocol being used. | | | | | | | |
| | | | **PLC Port Powered** — Powered with 5 VDC from the connected PLC's comm. port. | | **DC 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. | | | |
| **Family** | **CPU** | **Port & Type** | 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 |
| **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 Productivity Serial | DV-1000CBL RS-232 | Automation Direct Productivity Serial | DV-1000CBL RS-232 | Automation Direct Productivity Serial | DV-1000CBL RS-232 | Automation Direct Productivity Serial | 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 |
| **BRX** | all versions | RS-232 POM module BX-P-SER2-RJ12 | 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 |
| | | RS-485 Port Term block 3-pin | | N/A | | N/A | | N/A | | See Note RS-485 |
| ***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* Micro 3-inch EA1 Communication Protocols & Cabling Chart (cont'd)

| Controller Compatibility & Connection Chart | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **PLC** | | | **C-more 3-inch 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. | | | |
| *Family* | *CPU* | *Port & Type* | 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 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.

| | | | Controller Compatibility & Connection Chart | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PLC** | | | **C-more 3-inch 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 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 / D4-454 | 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* Micro 3-inch EA1 Communication Protocols & Cabling Chart (cont'd)

| Controller Compatibility & Connection Chart | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *PLC* | | | *C-more 3-inch 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* Micro 3-inch EA1 Communication Cables and Cable Kits


**DV-1000CBL**


**D4-1000CBL**


**OP-3CBL-1**


**FA-15HD**


**FA-CABKIT**

| 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/BRX*, 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/BRX*, 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 |
| ***BX-P-SER-RJ12 is required*** | | |


**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 3-inch EA1 Panel Accessories

## 8-button Keypad Bezel

The 8-button keypad bezel can be used with both the touch and non-touch *C-more* Micro 3-inch EA1 series 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* Micro 3-inch EA1 series panel. No panel configuration required.

**Part No. EA-MG-BZ1**

**$64.00**

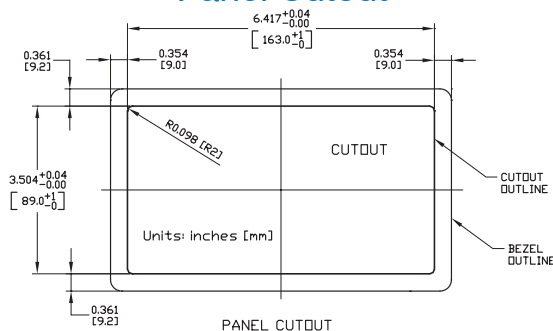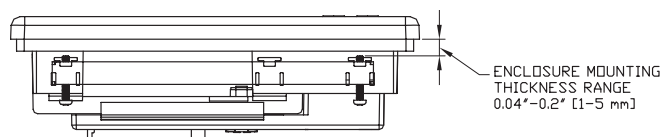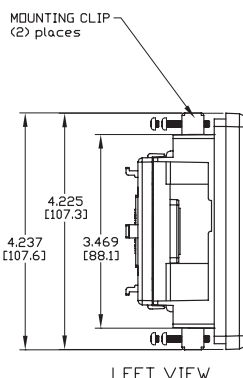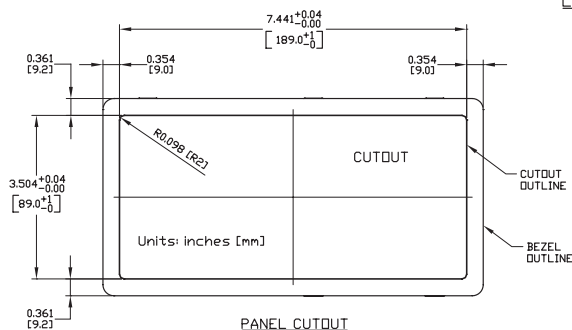Four directional cursor buttons, and ESC, MENU, CLEAR and ENTER buttons.

| | |
|---|---|
| ◀ | Esc |
| ▶ | Menu |
| ▲ | CLR |
| ▼ | Enter |

## Dimensions
Units: inches [mm]

GASKET

7.126 [181.0]
6.374 [161.9]
1.786 [45.4]
0.394 [10.0]
1.574 [40.0]

TOP VIEW

MOUNTING CLIP SCREW TORQUE RANGE 21–28 oz-in [0.15–0.2 Nm]

MOUNTING CLIP (2) places

4.225 [107.3]
4.237 [107.6]
3.469 [88.1]

LEFT VIEW

FRONT VIEW

## Panel Cutout

6.417 +0.04 −0.00 [163.0 +1 −0]
0.361 [9.2]
0.354 [9.0]
0.354 [9.0]
R0.098 [R2]
CUTOUT
3.504 +0.04 −0.00 [89.0 +1 −0]
Units: inches [mm]
0.361 [9.2]

CUTOUT OUTLINE
BEZEL OUTLINE

PANEL CUTOUT

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04"–0.2" [1–5 mm]

| 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-inch 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-inch Micro panel is installed into the keypad bezel using the EA-MG-S3ML-BRK mounting clips that are supplied with the panel. |
| **Physical** | |
| • Weight | 7.05 oz. [200 g] |
| • Environmental | See environmental specifications at the beginning of this catalog section. |

# *C-more* Micro 3-inch EA1 Panel Accessories

## 20-Button Keypad Bezel

The 20-button keypad bezel can be used with both the touch and non-touch **C-more** Micro 3-inch EA1 series 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** Micro 3-inch EA1 series panel. No panel configuration required.

### Part No. EA-MG-BZ2

**$87.00**

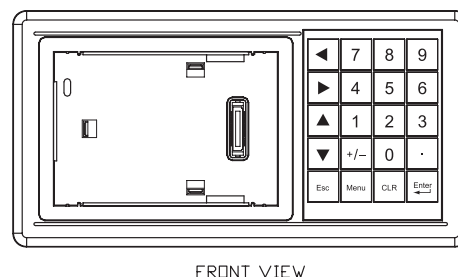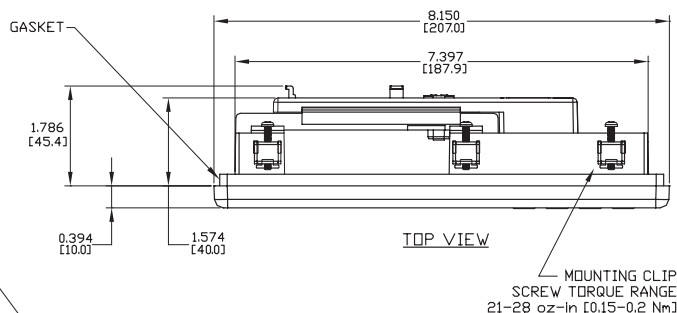Four directional cursor buttons, numeric buttons, and ESC, MENU, CLEAR and ENTER buttons.

## Dimensions
Units: inches [mm]

8.150 [207.0]
7.397 [187.9]
1.786 [45.4]
0.394 [10.0]
1.574 [40.0]

GASKET

TOP VIEW

MOUNTING CLIP SCREW TORQUE RANGE
21–28 oz-in [0.15–0.2 Nm]

MOUNTING CLIP (2) places

4.225 [107.3]
4.237 [107.6]
3.469 [88.1]

LEFT VIEW

FRONT VIEW

## Panel Cutout

7.441 +0.04 −0.00 [189.0 +1 −0]
0.361 [9.2]
0.354 [9.0]
0.354 [9.0]
R0.098 [R2]
CUTOUT
3.504 +0.04 −0.00 [89.0 +1 −0]
Units: inches [mm]
0.361 [9.2]

CUTOUT OUTLINE
BEZEL OUTLINE

PANEL CUTOUT

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE
0.04"–0.2" [1–5 mm]
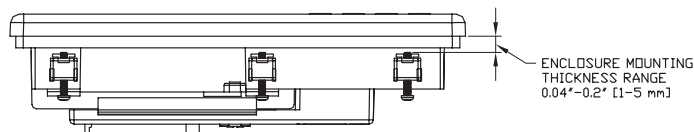
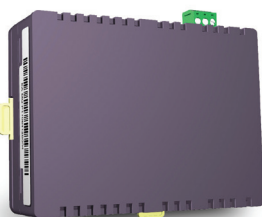| 20-Button Keypad Bezel Specifications | |
|---|---|
| **Part Number** | EA-MG-BZ2 |
| **General** | |
| • **C-more Micro Panels Supported** | EA1-S3ML, EA1-S3MLW, EA1-S3ML-N, EA1-S3MLW-N |
| • **Connection** | Connects with expansion connector on the rear of a 3-inch **C-more** Micro panel. An expansion 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-inch Micro panel is installed into the keypad bezel using the EA-MG-S3ML-BRK mounting clips that are supplied with the panel. |
| **Physical** | |
| • **Weight** | 7.40 oz. [210 g] |
| **Environmental** | See environmental specifications at the beginning of this catalog section. |

# *C-more* Micro 3-inch EA1 Panel Accessories

## DC Power Adapter

The ***C-more*** Micro 3-inch EA1 series 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*** Micro 3-inch EA1 series is designed to easily snap on to the rear of a ***C-more*** Micro 3-inch EA1 series panel or the rear of an optional Keypad Bezel being used with a ***C-more*** Micro 3-inch EA1 series panel.
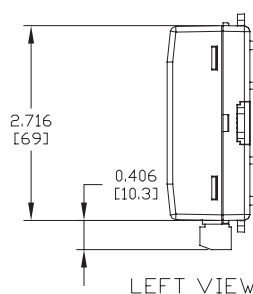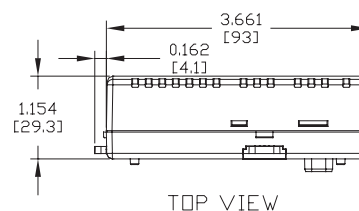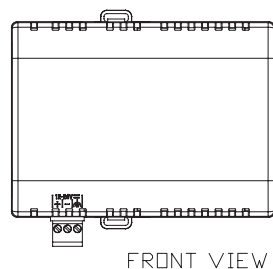
### Part No. EA-MG-P1

**$31.50**

## Dimensions

Units: inches [mm]
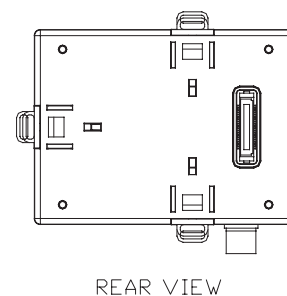
3.661 [93]

0.162 [4.1]

1.154 [29.3]

TOP VIEW

2.716 [69]

0.406 [10.3]

LEFT VIEW

REAR VIEW

## Panel overall depth with adapter installed

2.298 [58.4]

Units: inches [mm]

FRONT VIEW
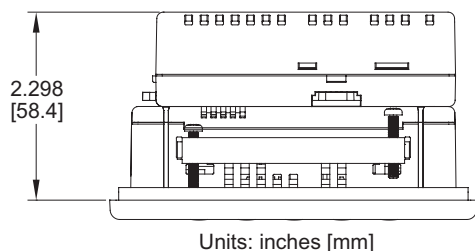
| DC Power Adapter Specifications | |
|---|---|
| *Part Number* | EA-MG-P1 |
| *Electrical* | |
| • *Input Voltage* | 12-24 VDC |
| • *Input Voltage Range* | 10.8-26.4 VDC |
| • *Power Consumption* | 100 mA @ 24 VDC |
| • *Maximum Power* | 2.90 Watts |
| • *Maximum Inrush Current* | 5 A @ 500 μs with 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* | |
| • *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* Micro 3-inch EA1 Panel Accessories

## Serial Port with DC Power Adapter

The **C-more** Micro 3-inch EA1 series 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** Micro 3-inch EA1 series is designed to easily snap on to the rear of a **C-more** Micro 3-inch EA1 series panel or the rear of an optional Keypad Bezel being used with a **C-more** Micro 3-inch EA1 series panel.
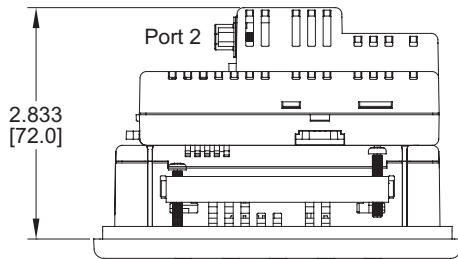
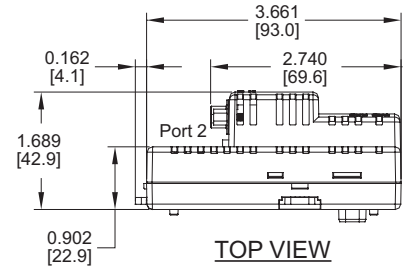### Part No. EA-MG-SP1
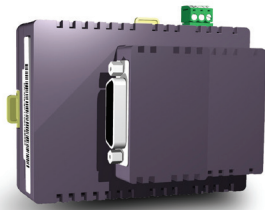
Supports:
RS-232,
RS-485,
& RS-422

**$54.00**

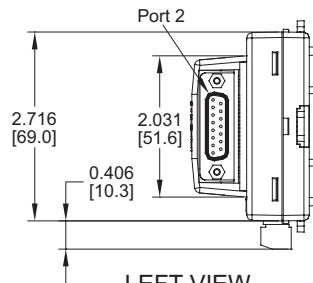## Panel overall depth with adapter installed

Port 2

2.833 [72.0]

Units: inches [mm]

## Dimensions

Units: inches [mm]

3.661 [93.0]
0.162 [4.1]
2.740 [69.6]
Port 2
1.689 [42.9]
0.902 [22.9]
TOP VIEW

Port 2
2.716 [69.0]
2.031 [51.6]
0.406 [10.3]
LEFT VIEW

REAR VIEW

TxD RxD
Port 2
Port 2
FRONT VIEW

**NOTE: Recommended DC power supply to power either DC Power Adapter, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.**
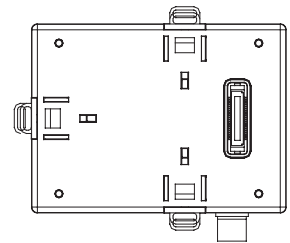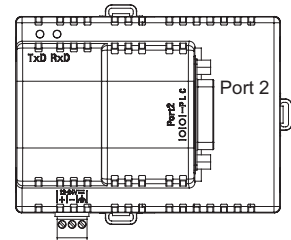
| Serial Port w/ DC Power Adapter Specifications | |
|---|---|
| **Part Number** | EA-MG-SP1 |
| **Serial PLC Interface** | |
| • **Interface Standard** | RS-232 & RS-485/422 |
| • **Adjustable Settings from Software (Dependent on PLC Protocol)** | Baud rate: 9600, 19200 or 38400 bits/sec<br>Data bits: 7/8 bits<br>Parity: None, Odd/Even<br>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** | |
| • **Weight** | 2.8 oz. [80 g] |
| • **Environmental** | See environmental specifications at the beginning of this catalog section. |

## PLC Serial Communications Port 2

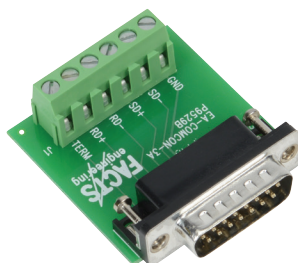| Pin | Signal | Pin | Signal | Pin | Signal |
|---|---|---|---|---|---|
| 1 | Frame GND | 6 | LE | 11 | TXD+ (422/485) |
| 2 | TXD (232C) | 7 | CTS (232C) | 12 | TXD– (422/485) |
| 3 | RXD (232C) | 8 | RTS (232C) | 13 | Term. Resistor |
| 4 | Supplies +5VDC | 9 | RXD+ (422/485) | 14 | do not use |
|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

Serial Port 2
8 1
15 9
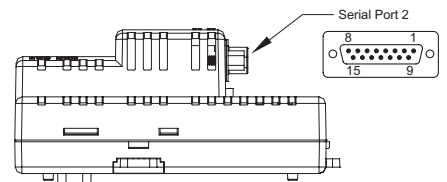
# *C-more* Micro 3-inch EA1 Panel Accessories

## D-SUB 15-pin to Terminal Block Adapter

DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with **C-more** Micro EA1 series 3in with EA1-MG-SP1, **C-more** Micro EA3 series 8in and 10in HMIs, **C-more** EA9 8in, 10in, 12in and 15in HMIs.
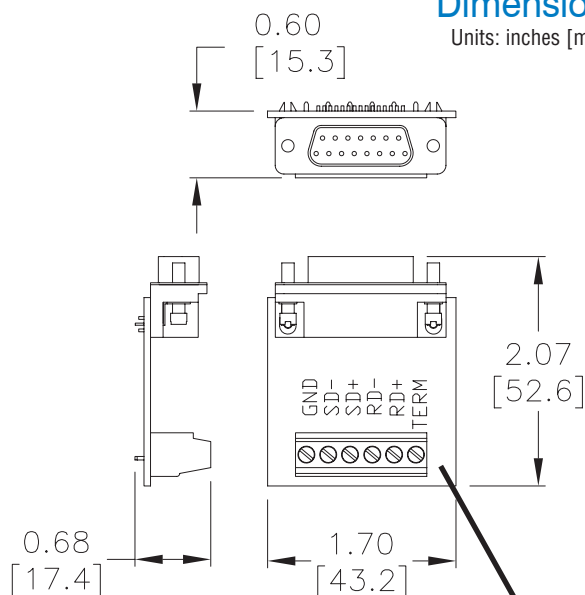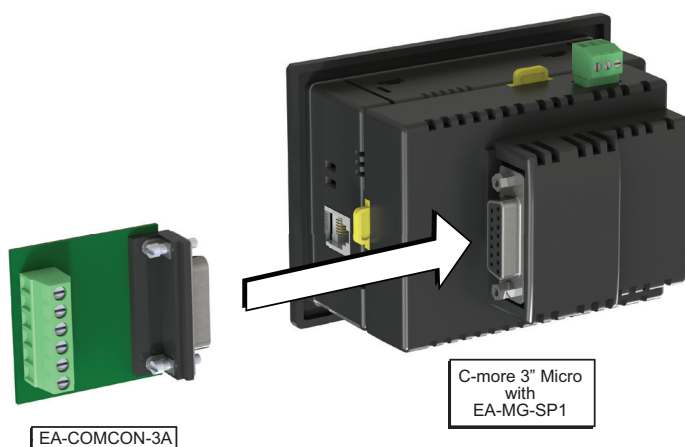
**Part No.
EA-COMCON-3A**
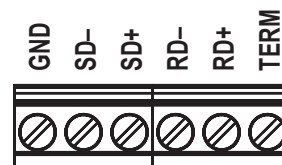
**$19.00**

**Dimensions**
Units: inches [mm]

0.60 [15.3]

2.07 [52.6]

0.68 [17.4]

1.70 [43.2]

GND SD– SD+ RD– RD+ TERM

**Terminals**

GND SD– SD+ RD– RD+ TERM

C-more 3" Micro with EA1-MG-SP1
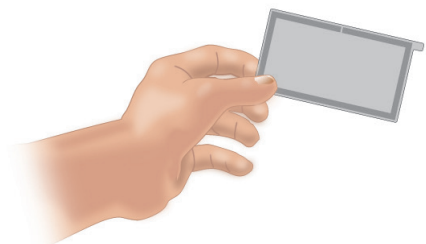
EA-COMCON-3A

# *C-more* Micro 3-inch EA1 Panel Accessories

## Clear Screen Overlay

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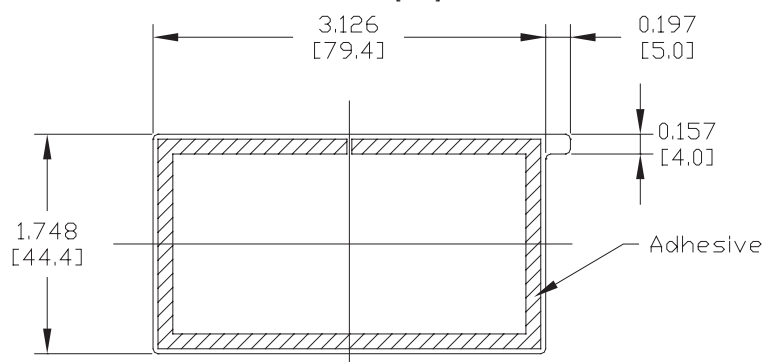Package contains 5 clear screen overlays.

**Part No. EA-MG-COV-CL**

**$35.50**

### Dimensions

Units: inches [mm]

3.126 [79.4]

0.197 [5.0]

0.157 [4.0]

1.748 [44.4]

Adhesive

# *C-more* Micro 3-inch EA1 Replacement Parts

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

## Replacement parts at a glance:

| Part Number | Description | Price |
|---|---|---|
| EA-MG-S3ML-BRK | Panel mounting brackets, replacement. Package of 2. For use with **C-more** Micro 3in and EA3-T4CL HMIs. | $17.50 |
| EA-MG-BZ1-BRK | Panel mounting brackets, replacement. Package of 2. For use with **C-more** Micro bezel EA-MG-BZ1. | $17.50 |
| EA-MG-BZ2-BRK | Panel mounting brackets, replacement. Package of 8. For use with **C-more** Micro 4in and 6in panels, all 6in bezels, and 3in bezel EA-MG-BZ2. | $18.50 |
| EA-MG-DC-CON | DC 3-terminal power connector, replacement. Package of 5. For use with all **C-more** Micro 4in, 6in, 8in and 10in panels, and power adapters EA-MG-P1 and EA-MG-SP1. | $14.00 |
| EA-MG-S3ML-GSK | Panel mounting gasket, replacement. For use with 3in **C-more** Micro panels. | $12.00 |
| EA-MG-BZ1-GSK | Panel mounting gasket, replacement. For use with 3in **C-more** Micro bezel EA-MG-BZ1. | $15.00 |
| EA-MG-BZ2-GSK | Panel mounting gasket, replacement. For use with 3in **C-more** Micro bezel EA-MG-BZ2. | $15.00 |
| EA-MG-S3ML-FKL | Function key label insert, replacement. Package of 10. For use with **C-more** Micro 3in panels. (5) blank labels (5) landscape F1-F5 label included. | $9.75 |

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

(pk of 2)
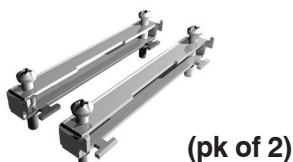
**Keypad Bezel 1 Mounting Clips**
**Part No. EA-MG-BZ1-BRK**

(pk of 2)
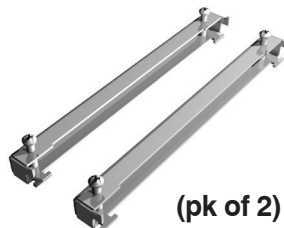
**Keypad Bezel 2 Mounting Clips**
**Part No. EA-MG-BZ2-BRK**

(pk of 8)

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

(pk of 5)
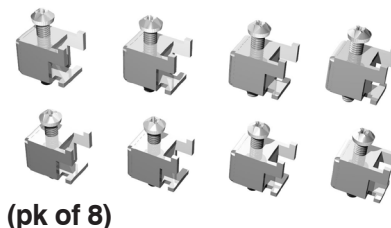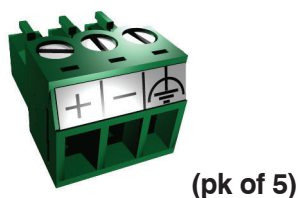
**3-inch Panel Gasket**
**Part No. EA-MG-S3ML-GSK**

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

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

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

(pk of 10 - 5 blank, 5 F1-F5 )
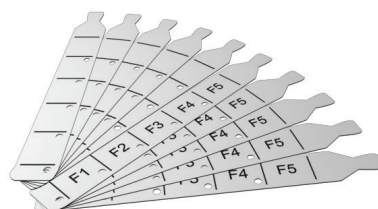
# *C-more* Micro 4-inch & 6-inch EA1 Panels Overview
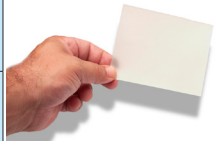
| C-more 4-inch and 6-inch EA1 Micro Panels | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA1-T4CL** |  | ***C-more*** Micro EA1 series touch screen HMI, 4in color TFT LCD, 320 x 240, QVGA, supports (1) serial and (1) USB port. | $356.00 |
| **EA1-T6CL** |  | ***C-more*** Micro EA1 series touch screen HMI, 6in color TFT LCD, 320 x 240, QVGA, supports (1) serial and (1) USB port. | $432.00 |

**Note: Software and Firmware Version 3.00 or later is required with model EA1-T4CL. 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, CD. For use with ***C-more*** Micro panels. Requires USB port connection from PC to ***C-more*** Micro panel. | $25.00 |
| **USB-CBL-AB3** | | USB cable, 3ft/0.9m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $7.50 |
| **USB-CBL-AB6** | | USB cable, 6ft/1.8m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $9.50 |
| **USB-CBL-AB10** | | USB cable, 10ft/3m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $18.00 |
| **USB-CBL-AB15** | | USB cable, 15ft/4.5m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $22.50 |

# *C-more* Micro 4-inch & 6-inch EA1 Panels Overview

| C-more 4-inch and 6-inch EA1 Panel Accessories | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA-ADPTR-4** | | DSUB port adapter, 15-pin male to 15-pin female, right angle cable entry. For use with *C-more* Micro EA1 series 4in and 6in HMIs, *C-more* Micro EA3 series 3in, 4in, and 6in HMIs, *C-more* EA9 6in and 7in HMIs. | $39.00 |
| **EA-COMCON-3** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, right angle cable entry. For use with *C-more* Micro EA1 series 4in and 6in HMIs, *C-more* Micro EA3 series 3in, 4in, and 6in HMIs, *C-more* EA9 6in and 7in HMIs. | $42.00 |
| **EA-4-COV2** | | Screen protector, replacement, non-glare, 4in. Package of 3. For use with *C-more* Micro EA1-T4CL 4in HMIs. | $33.50 |
| **EA-6-COV2** | | Screen protector, non-glare, 6in. Package of 3. For use with *C-more* and *C-more* Micro 6in panels. | $37.00 |

| EA1-T6CL Panel Accessories | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA-MG6-BZ2** | | Keypad bezel, 20 predefined function keys. For use with EA1-T6CL *C-more* Micro HMIs being used in Landscape (horizontal mounted) mode. | $107.00 |
| **EA-MG6-BZ2P** | | Keypad bezel, 21 predefined function keys. For use with EA1-T6CL *C-more* Micro HMIs being used in Portrait (vertical mounted) mode. | $89.00 |

# *C-more* Micro 4-inch EA1 TFT Touch Panel

Model EA1-T4CL **C-more** 4-inch Micro touch panel has a 4.1-inch TFT LCD 320 x 240 pixel 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-inch Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*.

Part No.    EA1-T4CL

**$356.00**

| Function | Available |
|----------|-----------|
| Ethernet | No |
| USB Programming Port | Yes |
| Serial RJ12 Port | No |
| Serial DB15 Port | Yes |

## Features

- Standard 1/4 DIN mounting cutout
- Touch screen display
- Free downloadable programming software
- 320 x 240 pixel 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-inch 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]

3.583 [91.0]

2.035 [51.7]  1.807 [45.9]  1.252 [31.8]

.343 [8.7]

4.311 [109.5]

MOUNTING CLIP (4) places

GASKET

3.583 [91.0]

4.362 [110.8]

## Panel Cutout - Standard 1/4 DIN

3.622 $^{+0.04}_{-0.00}$ [92.0 $^{+1}_{-0}$]

0.344 [8.8]

0.344 [8.8]

0.344 [8.8]

R .079 [R2]

3.622 $^{+0.04}_{-0.00}$ [92.0 $^{+1}_{-0}$]

CUTOUT OUTLINE

BEZEL OUTLINE

CUTOUT

0.344 [8.8]

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04" - 0.2" [1 - 5mm]

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

# *C-more* Micro 6-inch EA1 TFT Touch Panel

Model EA1-T6CL *C-more* 6″ Micro touch panel has a 5.7-inch TFT LCD 320 x 240 pixel 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**

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | Yes |
| Serial RJ12 Port | No |
| Serial DB15 Port | Yes |

## Features
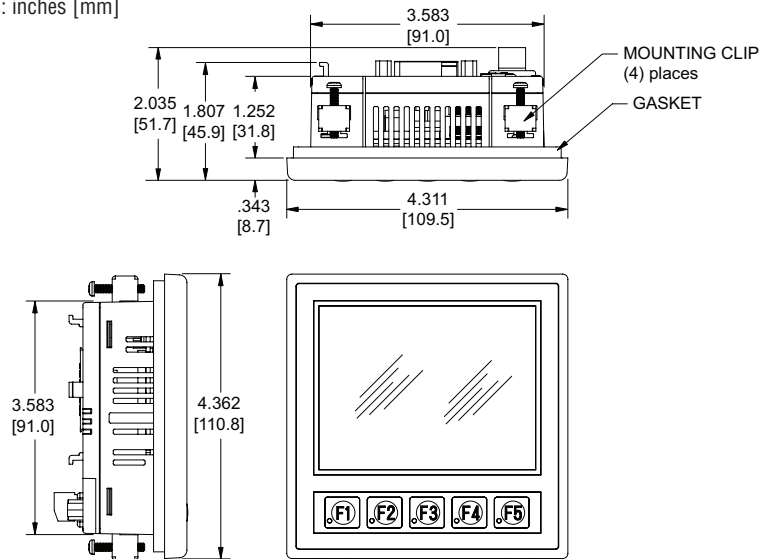
- Touch screen display
- Free downloadable programming software
- 320 x 240 pixel display with up to 40 lines by 80 characters of text and graphics in landscape mode
- Up to 40 lines by 40 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys 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
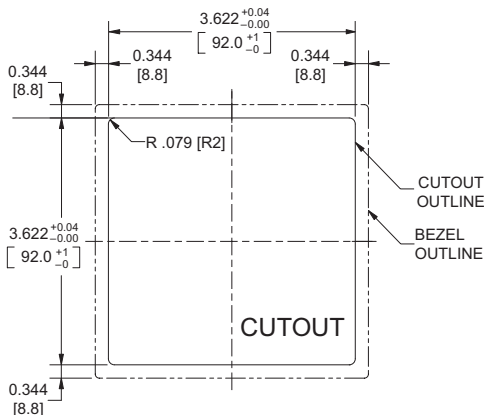- 2-year warranty from date of purchase

**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.
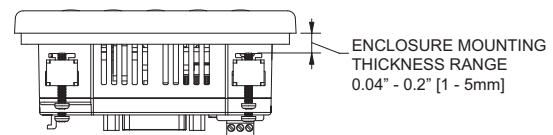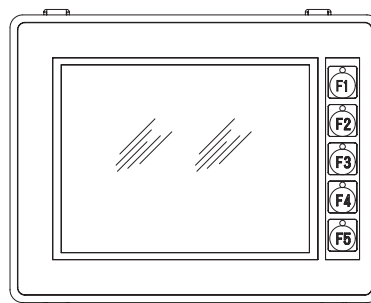
## Dimensions

Units: inches [mm]

6.295 [159.9]

2.13 [54.1]  1.689 [42.9]  1.453 [36.9]

.236 [6.0]

6.850 [174.0]

MOUNTING CLIP (4) places

GASKET

4.770 [121.3]

5.331 [135.4]

F1 F2 F3 F4 F5

## Panel Cutout

6.339 +0.04 −0.00 [161.0 +1 −0]

0.256 [6.5]

0.256 [6.5]

0.260 [6.6]

R .118 [R3]

CUTOUT OUTLINE

BEZEL OUTLINE

4.811 +0.04 −0.00 [122.2 +1 −0]

CUTOUT

0.260 [6.6]

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04" - 0.2" [1 - 5mm]

**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* Micro 4-inch & 6-inch EA1 Specifications

| EA1-T4CL and EA1-T6CL Specifications | | |
|---|---|---|
| **Part Number** | *EA1-T4CL* | *EA1-T6CL* |
| **Description** | 320 x 240 pixel 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 | 5.7" TFT Color LCD, graphical characters |
| • *Resolution* | 320 (W) x 240 (H) pixel (Landscape Mode) 240 (W) x 320 (H) pixel (Portrait Mode) | |
| • *Color* | 32768 colors | |
| • *Display Brightness (Reference)* | USB Bus Power (Programming) - 180 nits (typ) High Power Mode - 360 nits (typ) | |
| • *Viewing Area Size* | 3.357" (W) x 2.54" (H) [85.26 mm x 64.62 mm] | 4.574" (W) x 3.483" (H) [116.2 mm x 87.4 mm] |
| • *Active Area Size* | 3.250" (W) x 2.438" (H) [82.56 mm x 61.92 mm] | 4.535" (W) x 3.400" (H) [115.2 mm x 86.4 mm] |
| • *Brightness* | Adjusted from the panel's built-in configuration setup menu | |
| • *Viewing Angle* | 3, 9 o'clock axis –> 35 degrees 6 o'clock axis –> 50 degrees 12 o'clock axis –> 20 degrees | 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* | 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* | 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* Micro 4-inch & 6-inch EA1 panel specifications continued on next page.** | | |

# C-more Micro 4-inch & 6-inch EA1 Specifications

| EA1-T4CL and EA1-T6CL 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 - EA1-T4CL<br>6.5 W - EA1-T6CL |
| • **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 - EA1-T4CL<br>13 A for 800 µs - EA1-T6CL |
| • **Acceptable External Power Drop Duration** | Maximum 1ms | |
| **Environmental:** | | |
| • **Operating Temperature** | 0 to 50 °C (32 to 122 °F)<br>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 )<br>RFI, (145MHz, 440Mhz 10W @ 10cm)<br>Impulse 1000V @ 1µS pulse<br>EN61000-4-2 (ESD), EN61000-4-3 (RFI), EN61000-4-4 (FTB), EN61000-4-5 (Surge)<br>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:** | | |
| • **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) | 30.69 oz. (870 g) |

| PLC Drivers | |
|---|---|
| Serial - port2 only | |
| AutomationDirect Productivity Series | Allen-Bradley DF1 Half Duplex |
| AutomationDirect CLICK | Allen-Bradley DF1 Full Duplex |
| AutomationDirect Do-more / BRX* | 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) |
| *BX-P-SER-RJ12 is required* | |

NOTE: EA1-T4CL and EA1-T6CL cannot be powered by a PLC and cannot communicate with a PLC through Port1

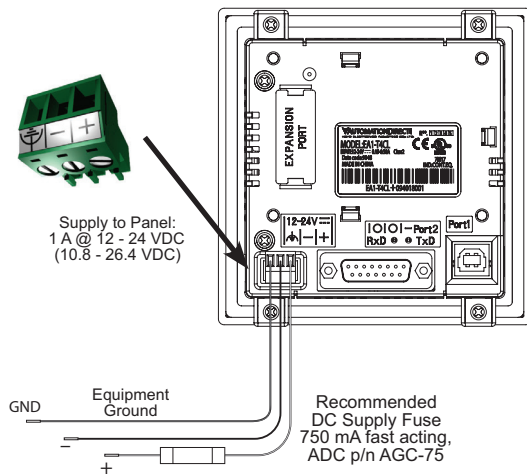# *C-more* Micro 4-inch & 6-inch EA1 Power Connection Wiring

## 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.) EA1-T4CL and EA1-T6CL are 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.) EA1-T4CL and EA1-T6CL cannot be powered from a PLC.

> *NOTE: EA1-T4CL and 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 panel's power connection. An external Class 2, 12-24 VDC power source must be used when the panel is installed in its application.

## EA1-T4CL typical wiring diagram



Supply to Panel:
1 A @ 12 - 24 VDC
(10.8 - 26.4 VDC)

GND

Equipment Ground

+

Recommended DC Supply Fuse 750 mA fast acting, ADC p/n AGC-75
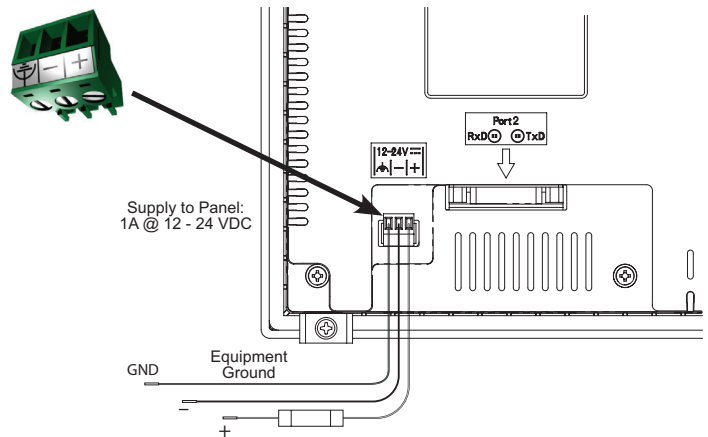
> NOTE: Recommended DC power supply to power the EA1-T4CL, *AutomationDirect* Part No. PSC-24-015 or PSC-24-030.

## EA1-T6CL typical wiring diagram



Supply to Panel:
1A @ 12 - 24 VDC

GND

Equipment Ground

+

> NOTE: Recommended DC power supply to power the EA1-T6CL, *AutomationDirect* Part No. PSC-24-030.

# *C-more* Micro 4-inch & 6-inch EA1 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, Do-more/BRX**, Productivity Series, 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.
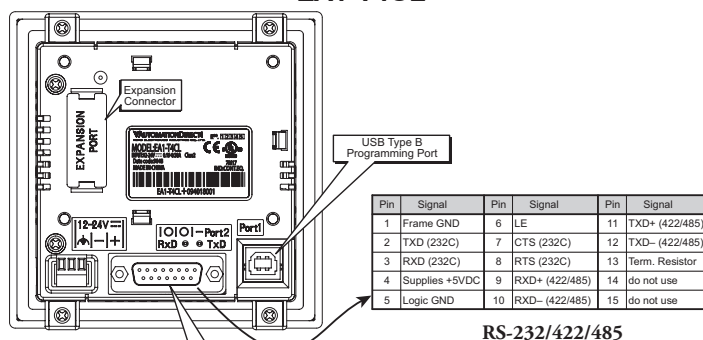
## Drivers for your Controller

- AutomationDirect Productivity Series – serial
- AutomationDirect Do-more/BRX** – serial
- AutomationDirect CLICK (Modbus)– serial
- *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

*\*\*BX-P-SER2-RJ12 is required*

### 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**

**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* EA3 Micro Port 2 to CLICK PLC Port 2

Recommended DC Supply Fuse 750 mA fast acting, ADC p/n AGC-75

*C-more* **Color Micro-Graphic** Panel

**CLICK PLC**

Port 2

**PSC-24-015** Power Supply

EA-2CBL serial cable
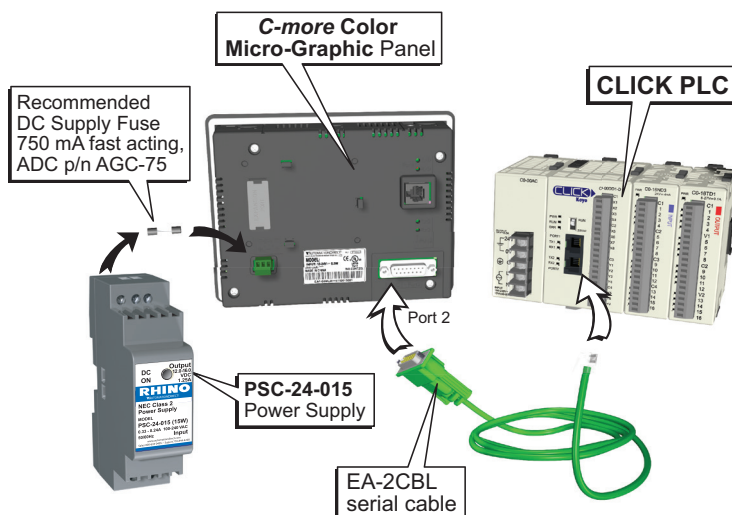
# *C-more* Micro 6-inch EA1 Panel Accessories

## 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.
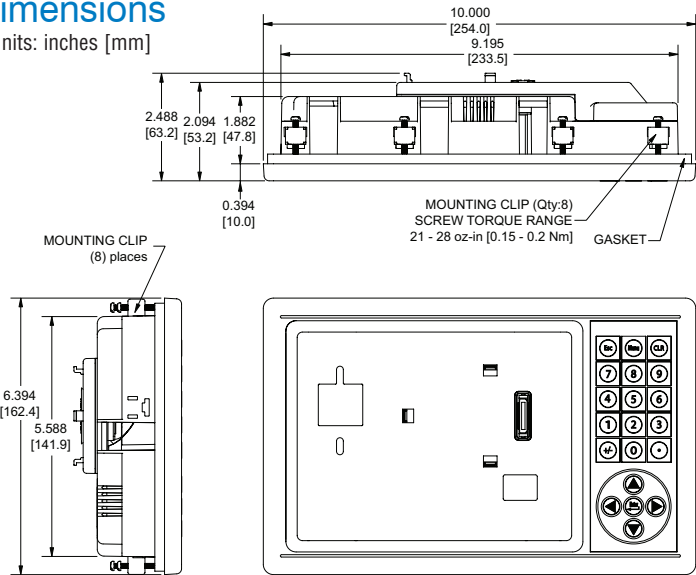
### Part No. EA-MG6-BZ2



**$107.00**

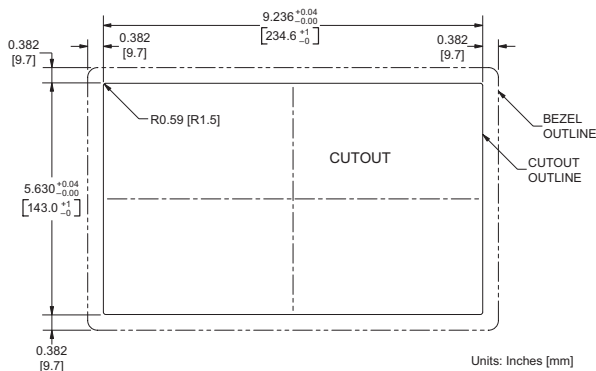Four directional cursor buttons, numeric buttons and ESC, MENU, CLEAR and ENTER buttons.
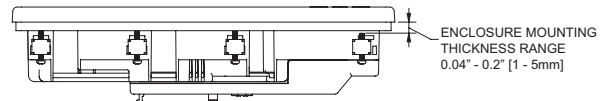
### Dimensions
Units: inches [mm]



MOUNTING CLIP (Qty:8)
SCREW TORQUE RANGE
21 - 28 oz-in [0.15 - 0.2 Nm]
GASKET

MOUNTING CLIP (8) places

### Panel Cutout



R0.59 [R1.5]

CUTOUT

BEZEL OUTLINE
CUTOUT OUTLINE

Units: Inches [mm]

### Panel Thickness



ENCLOSURE MOUNTING THICKNESS RANGE 0.04" - 0.2" [1 - 5mm]

| 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* | |
| • *Weight* | 26.1 oz. [740 g] |
| *Environmental:* | See Micro panel specifications at the beginning of this catalog section |

# *C-more* Micro 6-inch EA1 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 o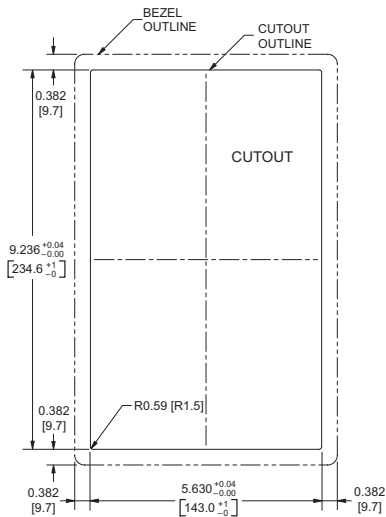f a value, and can also be used to navigate & select screen objects. The numeric buttons can be used to enter a new value, along with the ENTER and CLEAR buttons. The EA1-T6CL panel mounts directly into the bezel; no panel configuration is required.
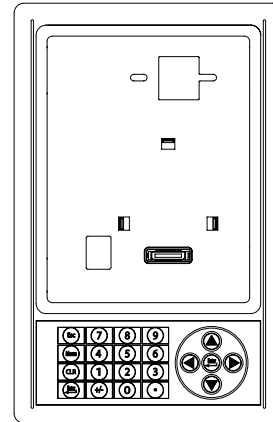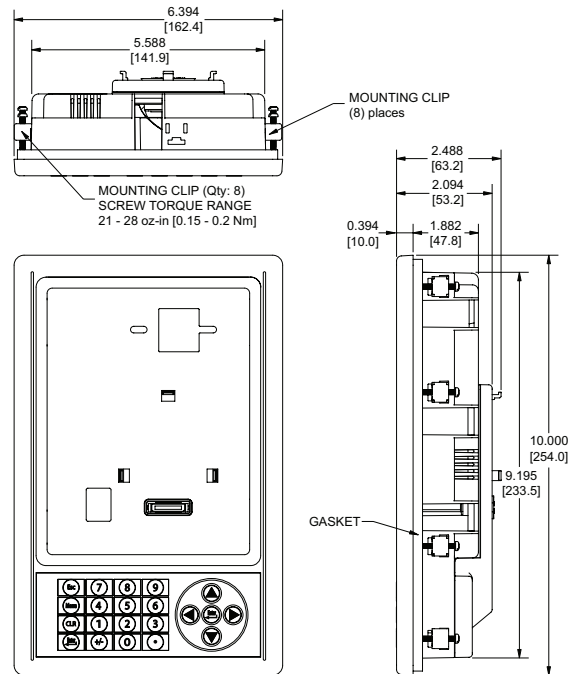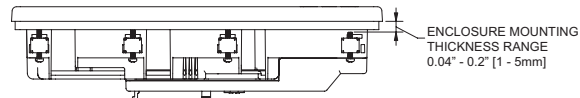
### Part No. EA-MG6-BZ2P

**$89.00**

### Panel Cutout

### Dimensions
Units: inches [mm]

6.394 [162.4]
5.588 [141.9]

MOUNTING CLIP (8 places)

MOUNTING CLIP (Qty: 8) SCREW TORQUE RANGE 21 - 28 oz-in [0.15 - 0.2 Nm]

2.488 [63.2]
2.094 [53.2]
0.394 [10.0]
1.882 [47.8]

10.000 [254.0]
9.195 [233.5]

GASKET

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

BEZEL OUTLINE
CUTOUT OUTLINE

0.382 [9.7]

CUTOUT

9.236 $^{+0.04}_{-0.00}$ [234.6 $^{+1}_{-0}$]

0.382 [9.7]

R0.59 [R1.5]

0.382 [9.7]
5.630 $^{+0.04}_{-0.00}$ [143.0 $^{+1}_{-0}$]
0.382 [9.7]

### Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04" - 0.2" [1 - 5mm]

| 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** | |
| • **Weight** | 26.1 oz. [740 g] |
| **Environmental** | See Micro panel specifications at the beginning of this catalog section |

# *C-more* Micro 4-inch & 6-inch EA1 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 EA1-T4CL or EA1-T6CL 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.
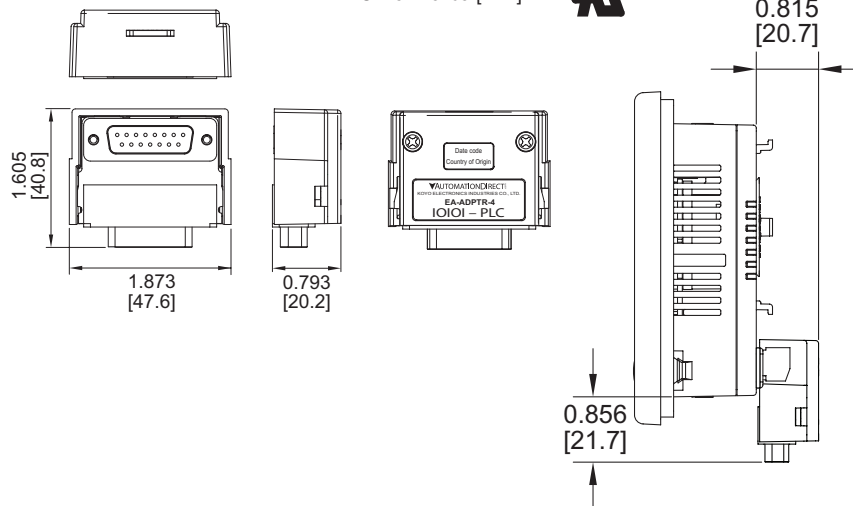
**Part No.
EA-ADPTR-4**

**$39.00**

### Dimensions

Units: inches [mm]

1.605 [40.8]

1.873 [47.6]

0.793 [20.2]

0.815 [20.7]

0.856 [21.7]

EA-ADPTR-4
IOIOI – PLC

## 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 EA1-T4CL or EA1-T6CL panel to allow wire terminal connections for an RS-422/RS-485/DH485 PLC communication cable. UL Recognized.
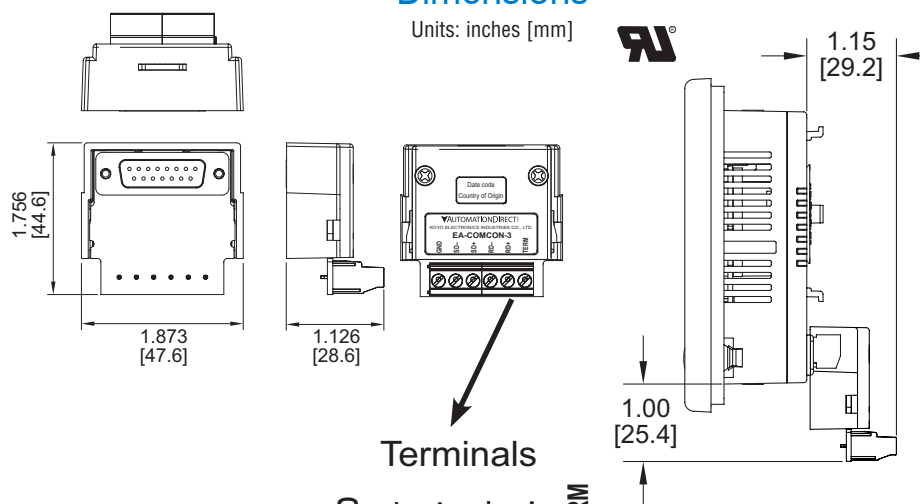
**Part No.
EA-COMCON-3**

**$42.00**

### Dimensions

Units: inches [mm]
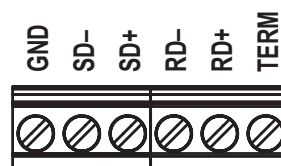
1.756 [44.6]

1.873 [47.6]

1.126 [28.6]

1.15 [29.2]

1.00 [25.4]

EA-COMCON-3

### Terminals

GND  SD–  SD+  RD–  RD+  TERM

# *C-more* Micro 4-inch & 6-inch EA1 Panel Accessories

## Clear Screen Overlay

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

**Part No. EA-4-COV2**
**$33.50**

**Part No. EA-6-COV2**
**$37.00**

## Dimensions

Units: inches [mm]

0.197 [5.0]

0.157 [4.0]

| Part Number | Dimensions - inch [mm] | |
|---|---|---|
| | A | B |
| EA-4-COV2 | 3.66 [93.0] | 2.85 [72.5] |
| EA-6-COV2 | 4.91 [124.8] | 3.80 [96.4] |

# *C-more* Micro 4-inch & 6-inch EA1 Replacement Parts

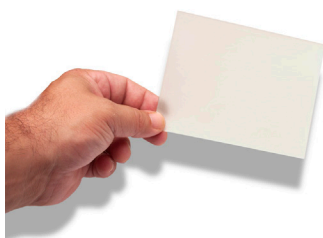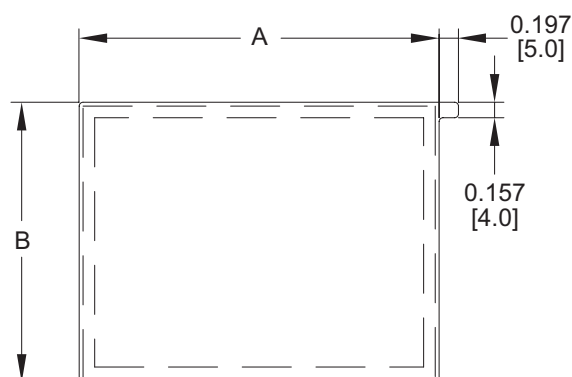The optional replacement parts can be used to replace damaged, worn or lost EA1-T4CL or EA1-T6CL components.

## Replacement parts at a glance:

| Part Number | Description | Price |
|---|---|---|
| EA-MG-BZ2-BRK | Panel mounting brackets, replacement. Package of 8. For use with *C-more* Micro 4in and 6in panels, all 6in bezels, and 3in bezel EA-MG-BZ2. | $18.50 |
| EA-MG-DC-CON | DC 3-terminal power connector, replacement. Package of 5. For use with all *C-more* Micro 4in, 6in, 8in and 10in panels, and power adapters EA-MG-P1 and EA-MG-SP1. | $14.00 |
| EA-MG4-GSK | Panel mounting gasket, replacement. For use with *C-more* Micro EA1-T4CL 4in HMIs. | $8.75 |
| EA-MG4-FKL | Function key label insert, replacement. Package of 4. For use with *C-more* Micro EA1-T4CL 4in HMIs. (3) blank label inserts and (1) landscape F1-F5 label insert included. | $14.00 |
| EA-MG6-S6ML-GSK | Panel mounting gasket, replacement. For use with 6in *C-more* Micro panels. | $11.00 |

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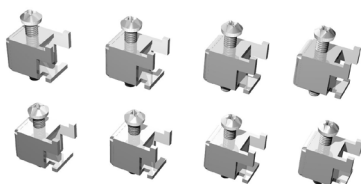


**(pk of 8)**

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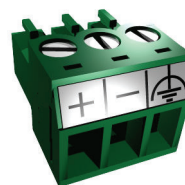


**(pk of 5)**

**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)**

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

# *C-more* Micro EA3 Series Selection Guide
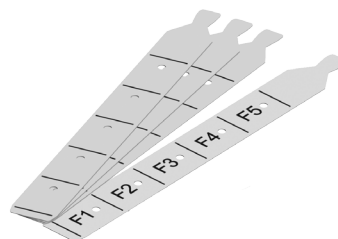
| Part Number | | Description | Price |
|---|---|---|---|
| **EA3-S3ML-RN** | | ***C-more*** Micro EA3 series HMI, 3in monochrome STN LCD, 128 x 64 pixel, LED backlight, supports (1) serial port. | $98.00 |
| **EA3-S3ML-R** | | ***C-more*** Micro EA3 series touch screen HMI, 3in monochrome STN LCD, 128 x 64 pixel, LED backlight, supports (1) serial port. | $146.00 |
| **EA3-S3ML** | | ***C-more*** Micro EA3 series touch screen HMI, 3in monochrome STN LCD, 128 x 64 pixel, supports (2) serial, (1) Ethernet and (1) USB ports. | $198.00 |
| **EA3-T4CL** | | ***C-more*** Micro EA3 series touch screen HMI, 4in color TFT LCD, widescreen, 480 x 272 pixel, WQVGA, supports (2) serial, (1) Ethernet and (1) USB port. | $269.00 |
| **EA3-T6CL** | | ***C-more*** Micro EA3 series touch screen HMI, 6in color TFT LCD, 320 x 240 pixel, QVGA, supports (2) serial and (1) USB port. | $299.00 |
| **EA3-T8CL** | | ***C-more*** Micro EA3 series touch screen HMI, 8in color TFT LCD, 800 x 600 pixel, SVGA, supports (2) serial and (1) USB port. | $749.00 |
| **EA3-T10CL** | | ***C-more*** Micro EA3 series touch screen HMI, 10in color TFT LCD, 800 x 600 pixel, SVGA, supports (2) serial and (1) USB port. | $899.00 |

*C-more* Micro EA3 Series Panels

| Part Number | Panel Software / Firmware Version Required |
|---|---|
| EA3-S3ML-RN | 4.30 or later |
| EA3-S3ML-R | 4.30 or later |
| EA3-S3ML | 4.20 or later |
| EA3-T4CL | 4.20 or later |
| EA3-T6CL | 3.6 or later |
| EA3-T8CL | 3.5 or later |
| EA3-T10CL | 3.5 or later |

# *C-more* Micro EA3 Series Selection Guide

| C-more Micro Programming Software | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| **EA-MG-PGMSW** | *C-more* Micro Windows-based programming software, CD. For use with *C-more* Micro panels. Requires USB port connection from PC to *C-more* Micro panel. | $25.00 |
| **EA-MG-PGM-CBL** | USB/RS-232 programming cable assembly, USB Type A male to RJ12 male, 6ft cable length. For use with *C-more* Micro panels, CLICK CPUs, Do-more H2 series CPUs, and DirectLogic CPUs. | $43.00 |
| **USB-CBL-AB3** | USB cable, 3ft/0.9m cable length, standard A plug to standard B plug. For use with Productivity, *C-more* and Do-more programming and most USB devices. | $7.50 |
| **USB-CBL-AB6** | USB cable, 6ft/1.8m cable length, standard A plug to standard B plug. For use with Productivity, *C-more* and Do-more programming and most USB devices. | $9.50 |
| **USB-CBL-AB10** | USB cable, 10ft/3m cable length, standard A plug to standard B plug. For use with Productivity, *C-more* and Do-more programming and most USB devices. | $18.00 |
| **USB-CBL-AB15** | USB cable, 15ft/4.5m cable length, standard A plug to standard B plug. For use with Productivity, *C-more* and Do-more programming and most USB devices. | $22.50 |
| **USB-CBL-AMICB6** | Programming cable, USB A to micro-B USB, 6ft cable length. For use with Productivity2000 CPUs and most USB devices. | $5.00 |

| C-more Micro EA3 Series Panel Accessories | | |
|---|---|---|
| **Part Number** | **Description** | **Price** |
| **EA-ECOM** | *C-more* Micro communication expansion module, (1) RJ45 10/100 Mbps Ethernet port. For use with EA3 series 6in, 8in and 10in HMIs. For programming and PLC communications. | $50.00 |
| **EA-ADPTR-4** | DSUB port adapter, 15-pin male to 15-pin female, right angle cable entry. For use with *C-more* Micro EA1 series 4in and 6in HMIs, *C-more* Micro EA3 series 3in, 4in, and 6in HMIs, *C-more* EA9 6in and 7in HMIs. | $39.00 |
| **EA-COMCON-3** | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, right angle cable entry. For use with *C-more* Micro EA1 series 4in and 6in HMIs, *C-more* Micro EA3 series 3in, 4in, and 6in HMIs, *C-more* EA9 6in and 7in HMIs. | $42.00 |
| **EA-COMCON-3A** | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with *C-more* Micro EA1 series 3in with EA1-MG-SP1, *C-more* Micro EA3 series 8in and 10in HMIs, *C-more* EA9 8in, 10in, 12in and 15in HMIs. | $19.00 |
| **EA-MG-COV-CL** | Screen protector, clear, 3in. Package of 5. For use with *C-more* Micro 3in HMIs. | $35.50 |
| **EA-4-COV3** | Screen protector, replacement, non-glare, 4in. Package of 3. For use with *C-more* Micro EA3-T4CL 4in HMIs. | $33.50 |
| **EA-6-COV2** | Screen protector, non-glare, 6in. Package of 3. For use with *C-more* and *C-more* Micro 6in panels. | $37.00 |
| **EA-8-COV2** | Screen protector, non-glare, 8in. Package of 3. For use with *C-more* and *C-more* Micro 8in panels. | $40.00 |
| **EA-10-COV2** | Screen protector, non-glare, 10in. Package of 3. For use with *C-more* and *C-more* Micro 10in panels. | $45.50 |

# C-more Micro EA3-S3ML-RN and EA3-S3ML-R Panels Overview

| Part Number | | Description | Price |
|---|---|---|---|
| **C-more Micro EA3 Series Panels** | | | |
| **EA3-S3ML-RN** | | **C-more** Micro EA3 series HMI, 3in monochrome STN LCD, 128 x 64 pixel, LED backlight, supports (1) serial port. | $98.00 |
| **EA3-S3ML-R** | | **C-more** Micro EA3 series touch screen HMI, 3in monochrome STN LCD, 128 x 64 pixel, LED backlight, supports (1) serial port. | $146.00 |

| Part Number | Panel Software / Firmware Version Required |
|---|---|
| EA3-S3ML-RN | 4.30 or later |
| EA3-S3ML-R | |

| Part Number | | Description | Price |
|---|---|---|---|
| **C-more Micro Programming Software** | | | |
| **EA-MG-PGMSW** | | **C-more** Micro Windows-based programming software, CD. For use with **C-more** Micro panels. Requires USB port connection from PC to **C-more** Micro panel. | $25.00 |
| **EA-MG-PGM-CBL** | | USB/RS-232 programming cable assembly, USB Type A male to RJ12 male, 6ft cable length. For use with **C-more** Micro panels, CLICK CPUs, Do-more H2 series CPUs, and DirectLogic CPUs. | $43.00 |

| Part Number | | Description | Price |
|---|---|---|---|
| **C-more Micro EA3 Series Panel Accessories** | | | |
| **EA-MG-COV-CL** | | Screen protector, clear, 3in. Package of 5. For use with **C-more** Micro 3in HMIs. | $35.50 |

# C-*more* Micro 3-inch EA3 Non-Touch Panel

Model EA3-S3ML-RN **C-*more*** 3-inch Micro touch panel has a 3.1-inch STN LCD monochrome display and twelve selectable LED-driven backlight colors. It features a 128 x 64 pixel display, and five user-defined function keys each with a user-defined red LED indicator. This **C-*more*** Micro panel is powered through the RJ-12 serial communications port of most AutomationDirect PLC's or from the USB port of a PC using the EA-MG-PGM-CBL programming cable assembly. This panel supports only AutomationDirect PLC protocols and Modbus RTU. (For other controllers consider the EA3-S3ML). The panel is NEMA 1 as shipped but is NEMA 4/4X indoor, when installed correctly with the optional gasket EA-MG-S3ML-GSK (sold separately).

## Part No. EA3-S3ML-RN

**NOTE: EA3-S3ML-RN is NEMA 1 compliant. Add optional gasket EA-MG-S3ML-GSK for NEMA 4/4X compliance (sold separately).**

**$98.00**

## Features

- Free downloadable programming software
- 128 x 64 pixel 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.
- 12-Color LED backlight for longer lifetime; Red, Green, Amber, Yellow, Lime, Pink 1, Pink 2, Pink 3, Emerald 1, Emerald 2, Emerald 3 and White
- Optional clear screen overlay
- 1MB memory
- 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 1 compliant: NEMA 4/4X, IP65 compliant when mounted correctly with optional gasket (EA-MG-S3ML-GSK sold separately), indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | No |

## Dimensions

Units: inches [mm]

3.97 [100.9]

MOUNTING BOLTS (4) PLACES

1.33 [33.7]

1.08 [27.4]

0.25 [6.3]

4.50 [114.4]

3.24 [82.4]

2.71 [68.9]

## Panel Cutout

4.02 +0.04 −0.00 [102.0] +1 −0

0.24 [6.2]

R0.12 [R3.0]

CUTOUT OUTLINE

2.76 +0.04 −0.00 [70.0] +1 −0

CUTOUT

BEZEL OUTLINE

0.24 [6.2]

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.039" − 0.20" [1−5mm]
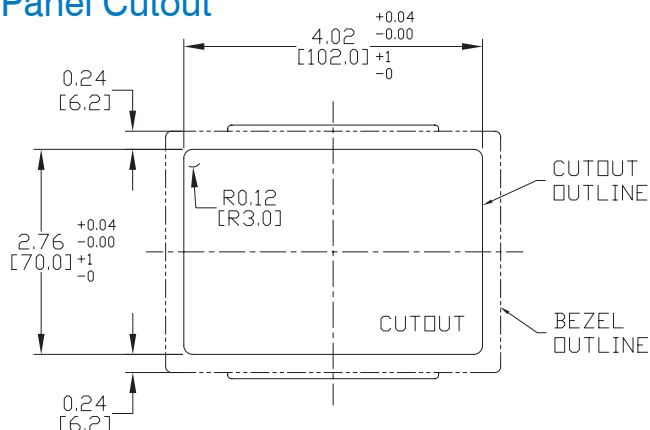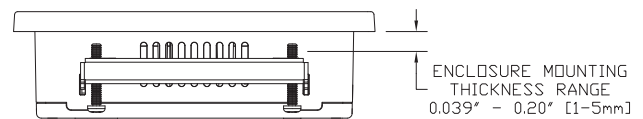
# C-more Micro 3-inch EA3 Touch Panel

Model EA3-S3ML-R **C-more** 3-inch Micro touch panel has a 3.1-inch STN LCD monochrome display and twelve selectable LED-driven backlight colors. It features a 128 x 64 pixel display, and five user-defined function keys each with a user-defined red LED indicator. This **C-more** Micro panel is powered through the RJ-12 serial communications port of most AutomationDirect PLC's or from the USB port of a PC using the EA-MG-PGM-CBL programming cable assembly. This panel supports only AutomationDirect PLC protocols and Modbus RTU. (For other controllers consider the EA3-S3ML). The panel is NEMA 4/4X indoor when installed correctly.

## Part No. EA3-S3ML-R

**$146.00**

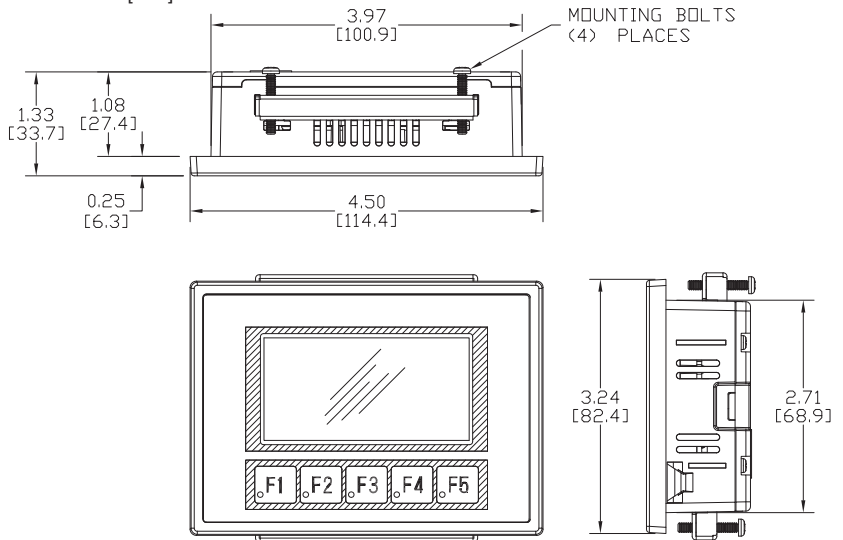| Function | Available |
|---|---|
| Ethernet | No |
| USB Programming Port | No |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | No |

## Features

- Touch screen display
- Free downloadable programming software
- 128 x 64 pixel 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.
- 12-Color LED backlight for longer lifetime; Red, Green, Amber, Yellow, Lime, Pink 1, Pink 2, Pink 3, Emerald 1, Emerald 2, Emerald 3 and White
- Optional clear screen overlay
- 1MB memory
- 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]



```
3.97
[100.9]          MOUNTING BOLTS
                  (4) PLACES

1.33    1.08
[33.7]  [27.4]

0.25          4.50
[6.3]        [114.4]

3.24          2.71
[82.4]        [68.9]
```

## Panel Cutout

```
        4.02  +0.04
        [102.0] -0.00
                +1
                -0

0.24
[6.2]

        R0.12        CUTOUT
        [R3.0]       OUTLINE

2.76  +0.04
[70.0] -0.00
       +1
       -0

                CUTOUT        BEZEL
                              OUTLINE
0.24
[6.2]
```

## Panel Thickness



```
ENCLOSURE MOUNTING
THICKNESS RANGE
0.039" - 0.20" [1-5mm]
```

# *C-more* Micro EA3-S3ML-RN and EA3-S3ML-R Panels Specifications

| EA3-S3ML-RN and EA3-S3ML-R Specifications | | |
|---|---|---|
| **Part Number:** | *EA3-S3ML-RN* | *EA3-S3ML-R* |
| **Description:** | 128 x 64 pixel LCD display<br>Five user defined keypad function buttons with five user defined LED indicators | |
| **Display:** | | |
| • *Type* | 3.1" STN Monochrome<br>with LED Backlight | |
| • *Resolution* | 128 (W) x 64 (H) pixel | |
| • *Color* | 2 colors (normal / inverse) | |
| • *Display Brightness (Reference)* | W: Typ. 150 nit<br>G: Typ. 150 nit<br>R: Typ. 40 nit | |
| • *Viewing Area Size* | 2.78" (W) x 1.53" (H)<br>70.7 mm x 38.8 mm | |
| • *Active Area Size* | 2.62" (W) x 1.31" (H) mm<br>66.52 mm x 33.24 mm | |
| • *Contrast / Brightness* | Adjusted from the panel's built-in configuration setup menu | |
| • *Viewing Angle (Landscape Mode)* | 3, 6, 9 o'clock axis –> 45 degrees<br>12 o'clock axis –> 30 degrees | |
| **Backlight:** | | |
| • *Type* | LED | |
| • *Color* | White, Red, Green (12 colors) | |
| • *User Replaceable* | No | |
| **Touch Screen:** | | |
| •*Type* | N/A | Analog resistive, single touch* |
| • *Operation* | | 100 gram force [0.8 N] maximum |
| • *Life* | | Minimum of 1,000,000 cycles |
| **Features:** | | |
| • *User Memory* | 1MB | |
| • *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.<br>Minimum of 500,000 cycles | |
| • *Keypad Function Button LEDs* | Each function key button includes a red LED that can be user programmed. | |
| • *Programming Port* | RJ12 serial | |
| • *Serial Communications* | RJ12 serial communications port (RS-232) | |
| • *Ethernet Communications* | 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* Micro EA3-S3ML-RN and EA3-S3ML-R Panels Specifications

| EA3-S3ML-RN and EA1-S3ML-R Specifications (cont'd) | | |
|---|---|---|
| **Part Number:** | **EA3-S3ML-RN** | **EA3-S3ML-R** |
| **Electrical:** | | |
| • *Input Power* | RJ12 port to any AutomationDirect PLC RJ12 port | |
| • *Power Consumption* | 1.05W (RJ12) | |
| • *Maximum Inrush Current* | 3.5 A for 50µs | |
| • *Acceptable External Power Drop Duration* | Maximum 1ms | |
| **Environmental:** | | |
| • *Operating Temperature* | 0 to 50 °C (32 to 122 °F); IEC 60068-2-14 (Test Nb, Thermal Shock) | |
| • *Storage Temperature* | –20 to +60 °C (–4 to +140 °F) IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock) | |
| • *Humidity* | 5–95% RH (non-condensing) | |
| • *Environmental Air* | For use in Pollution Degree 2 environment, no corrosive gases permitted | |
| • *Housing Material* | ABS Plastic | |
| • *Gasket Material* | Ships without gasket | Silicone Rubber |
| • *Overlay Sheet Material* | PET | |
| • *Vibration* | IIEC60068-2-6 (Test Fc) | |
| • *Shock* | IEC60068-2-27 (Test Ea) | |
| • *Altitude* | Up to 2000m (6562ft) | |
| • *Noise Immunity* | (EN61131-2) EN61000-4-2 (ESD), EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-5 (Serge) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity) (Local Test) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µs pulse | |
| • *Enclosure* | With EA-MG-S3ML-GSK - NEMA 250 type 4/4X indoor use only, UL50 type 4X indoor use only IP-65 indoor use only (Not tested by UL) (When mounted correctly) Without EA-MG-S3ML-GSK - NEMA 250 type 1 indoor use only, UL type 1 indoor use only IP-20 indoor use only (Not tested by UL) (When mounted correctly) | |
| • *Agency Approvals* | CE (EN61131-2), UL61010, CUL Canadian C22.2, 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** | | |
| • *Enclosure Mounting Thickness Range* | 0.04" – 0.2" [1 – 5 mm] | |
| • *Mounting Clip Screw Torque Range* | 21 – 28 oz·in [0.15 – 0.20 Nm] | |
| • *Weight* | 5.4 oz. (152g) | 5.5 oz. (156g) |

# *C-more* Micro EA3-S3ML and EA3-T4CL Panels Overview

| **C-more Micro EA3 Series Panels** | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA3-S3ML** | | **C-more** Micro EA3 series touch screen HMI, 3in monochrome STN LCD, 128 x 64, supports (2) serial, (1) Ethernet and (1) USB ports. | $198.00 |
| **EA3-T4CL** | | **C-more** Micro EA3 series touch screen HMI, 4in color TFT LCD, widescreen, 480 x 272, WQVGA, supports (2) serial, (1) Ethernet and (1) USB ports. | $269.00 |

| **Part Number** | **Panel Software / Firmware Version Required** |
|---|---|
| EA3-S3ML | 4.20 or later |
| EA3-T4CL | |

| **C-more Micro Programming Software** | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA-MG-PGMSW** | | **C-more** Micro Windows-based programming software, CD. For use with **C-more** Micro panels. Requires USB port connection from PC to **C-more** Micro panel. | $25.00 |
| **USB-CBL-AMICB6** | | Programming cable, USB A to micro-B USB, 6ft cable length. For use with Productivity2000 CPUs and most USB devices. | $5.00 |

| **C-more Micro EA3 Series Panel Accessories** | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA-ADPTR-4** | | DSUB port adapter, 15-pin male to 15-pin female, right angle cable entry. For use with **C-more** Micro EA1 series 4in and 6in HMIs, **C-more** Micro EA3 series 3in, 4in, and 6in HMIs, **C-more** EA9 6in and 7in HMIs. | $39.00 |
| **EA-COMCON-3** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, right angle cable entry. For use with **C-more** Micro EA1 series 4in and 6in HMIs, **C-more** Micro EA3 series 3in, 4in, and 6in HMIs, **C-more** EA9 6in and 7in HMIs. | $42.00 |
| **EA-MG-COV-CL** | | Screen protector, clear, 3in. Package of 5. For use with **C-more** Micro 3in HMIs. | $35.50 |
| **EA-4-COV3** | | Screen protector, replacement, non-glare, 4in. Package of 3. For use with **C-more** Micro EA3-T4CL 4in HMIs. | $33.50 |

# *C-more* Micro 3-inch EA3 Touch Panel

Model EA3-S3ML **C-more** 3-inch Micro touch panel has a 3.1-inch STN LCD monochrome display and twelve selectable LED-driven backlight colors. It features a 128 x 64 pixel display, and five user-defined function keys each with a user-defined red LED indicator. The EA3-S3ML is powered from a Class 2, 12-24 VDC power supply*. This **C-more** Micro panel can receive power from the serial communications port of most AutomationDirect PLC's or through the USB port when connected to a PC for programming. The panel is NEMA 4/4X indoor when installed correctly.

## Part No.   EA3-S3ML

**$198.00**

*NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-010.

## Features

- Touch screen display
- Free downloadable programming software
- 128 x 64 pixel 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.
- 12-Color LED backlight for longer lifetime; Red, Green, Amber, Yellow, Lime, Pink 1, Pink 2, Pink 3, Emerald 1, Emerald 2, Emerald 3 and White
- Optional clear screen overlay
- 3MB memory
- Built-in USB type Micro-B programming port
- Built-in RJ45 Ethernet 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

| Function | Available |
|---|---|
| Ethernet | Yes (Built-in) |
| USB Programming Port | Yes |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Yes |

## Dimensions

Units: inches [mm]



MOUNTING CLIP (2) PLACES
GASKET
3.97 [100.8]
1.58 [40.2]
1.33 [33.7]
1.08 [27.4]
0.25 [6.3]
4.50 [114.4]
2.71 [68.8]
3.24 [82.4]

## Panel Cutout



4.02 +0.04 −0.00 [102.0] +1 −0
0.24 [6.2]
2.76 +0.04 −0.00 [70.0] +1 −0
R0.12 [R3.0]
0.24 [6.2]
CUTOUT OUTLINE
CUTOUT
BEZEL OUTLINE

## Panel Thickness



ENCLOSURE MOUNTING THICKNESS RANGE 0.04" − 0.20" [1-5mm]

# *C-more* Micro 4-inch EA3 Touch Panel

Model EA3-T4CL **C-more** 4" Micro touch panel has a 4.3-inch TFT LCD 482 x 272 pixel display (WQVGA) and a palette of 32K colors for customizing objects, screen backgrounds and displaying bitmap graphics. EA3-T4CL is powered from a Class 2, 12-24 VDC power supply*. The panel is NEMA 4/4X indoor when installed correctly.

**\*NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-010.**

## Part No.    EA3-T4CL

**$269.00**

c(UL)us  CE

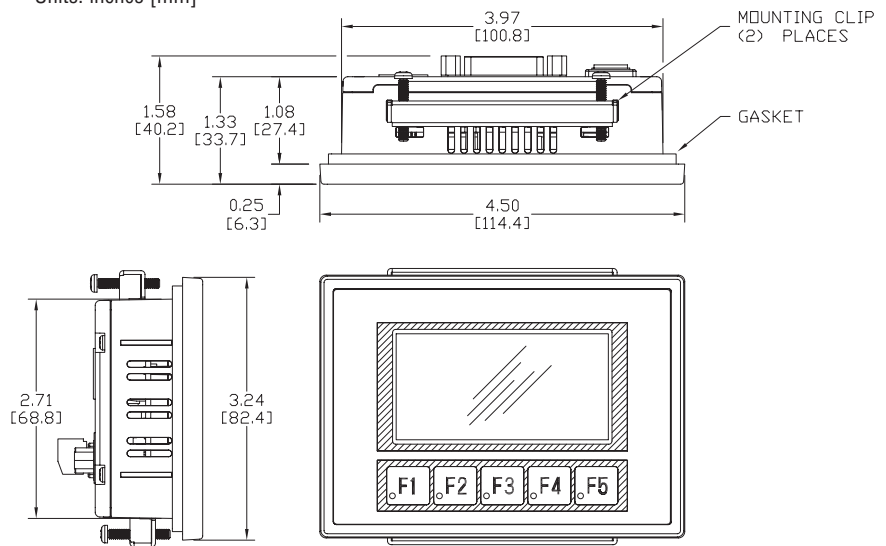| Function | Available |
|---|---|
| Ethernet | Yes (Built-in) |
| USB Programming Port | Yes |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Yes |

## Features

- Touch screen display
- Free downloadable programming software
- 482 x 272 pixel display (WQVGA) with up to 40 lines by 80 characters of text and graphics
- 32K colors
- Optional clear screen overlay
- 14MB memory
- Built-in USB type Micro-B programming port
- Built-in RJ45 Ethernet 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]

MOUNTING CLIP
(2) PLACES

GASKET

3.98 [101.0]

1.76 [44.8]   1.30 [33.1]   0.95 [24.2]

0.35 [8.9]

4.76 [120.9]

2.71 [69.0]

3.48 [88.3]

## Panel Cutout

4.02 +0.04 −0.00 [102.0] +1 −0

0.36 [9.2]

0.37 [9.5]

CUTOUT OUTLINE

2.76 +0.04 −0.00 [70.0] +1 −0

CUTOUT

BEZEL OUTLINE

0.36 [9.2]      0.37 [9.5]

## Panel Thickness

ENCLOSURE MOUNTING THICKNESS RANGE 0.04" − 0.20" [1–5mm]

**NOTE: Model EA3-T4CL and EA1-T4CL use different panel cutouts.**

# *C-more* Micro EA3-S3ML and EA3-T4CL Panel Specifications

| EA3-S3ML and EA3-T4CL Specifications | | |
|---|---|---|
| **Part Number:** | *EA3-S3ML* | *EA3-T4CL* |
| **Description:** | 128 x 64 pixel LCD display<br>Five user defined keypad function buttons with five user defined LED indicators | 480 x 272 pixel LCD display |
| **Display:** | | |
| • *Type* | 3.1" STN Monochrome<br>with LED Backlight | 4.3" TFT Graphical type<br>with LED Backlight |
| • *Resolution* | 128 (W) x 64 (H) pixel | 480 (W) x 272 (H) pixel |
| • *Color* | 2 colors (normal / inverse) | 32768 colors |
| • *Display Brightness (Reference)* | W: Typ. 150 nit<br>G: Typ. 150 nit<br>R: Typ. 40 nit | 370 nits (typ) |
| • *Viewing Area Size* | 2.78" (W) x 1.53" (H)<br>70.7 mm x 38.8 mm | 3.89" (W) x 2.26" (H)<br>98.70 mm x 57.50 mm |
| • *Active Area Size* | 2.62" (W) x 1.31" (H) mm<br>66.52 mm x 33.24 mm | 3.74" (W) x 2.12" (H) mm<br>95.04 mm x 53.86 mm |
| • *Contrast / Brightness* | Adjusted from the panel's built-in configuration setup menu | |
| • *Viewing Angle (Landscape Mode)* | 3, 6, 9 o'clock axis –> 45 degrees<br>12 o'clock axis –> 30 degrees | 3, 6, 9, 12 o'clock axis –><br>80 degrees |
| **Backlight:** | | |
| • *Type* | LED | |
| • *Color* | White, Red, Green (12 colors) | White |
| • *User Replaceable* | No | |
| **Touch Screen:** | | |
| •*Type* | Analog resistive, single touch* | |
| • *Operation* | 100 gram force [0.8 N] maximum | 82 gram force [0.98 N] maximum |
| • *Life* | Minimum of 1,000,000 cycles | |
| **Features:** | | |
| • *User Memory* | 3MB | 14MB |
| • *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.<br>Minimum of 500,000 cycles | N/A |
| • *Keypad Function Button LEDs* | Each function key button includes a red LED that can be user programmed. | N/A |
| • *Programming Port* | USB 2.0 Type Micro-B<br>Built-in Ethernet port | |
| • *Serial Communications* | RJ12 serial communications port (RS-232)<br>15-pin D-sub serial communications port (RS-232, RS-485 / 422). | |
| • *Ethernet Communications* | 10/100 Base-T (Automatic Negotiation MDI/MDIX) | |
| **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* Micro EA3-S3ML and EA3-T4CL Panel Specifications

| EA3-S3ML and EA1-T4CL Specifications (cont'd) | | |
|---|---|---|
| **Part Number:** | *EA3-S3ML* | *EA3-T4CL* |
| **Electrical:** | | |
| • *Input Power* | RJ12 port to any AutomationDirect PLC RJ12 port<br>USB Micro-B port to PC<br>10.2 - 26.4 VDC; Class 2 or SELV (Safety Extra-Low Voltage)or Limited Energy Circuit power supply | USB Micro-B port to PC<br>10.2 - 26.4 VDC; Class 2 or SELV (Safety Extra-Low Voltage)or Limited Energy Circuit power supply |
| • *Power Consumption* | 1.05W (RJ12)<br>2W (USB)<br>3W (External Power Supply) | 2.5W (USB)<br>4W (External Power Supply) |
| • *Maximum Inrush Current* | 20A for 240µs (DC power supply) | 22A for 240µs (DC power supply) |
| • *Acceptable External Power Drop Duration* | Maximum 1ms | |
| **Environmental:** | | |
| • *Operating Temperature* | 0 to 50 °C (32 to 122 °F);<br>IEC 60068-2-14 (Test Nb, Thermal Shock) | |
| • *Storage Temperature* | –20 to +60 °C (–4 to +140 °F)<br>IEC 60068-2-1 (Test Ab, Cold)<br>IEC 60068-2-2 (Test Bb, Dry Heat)<br>IEC 60068-2-14 (Test Na, Thermal Shock) | |
| • *Humidity* | 5–95% RH (non-condensing) | |
| • *Environmental Air* | For use in Pollution Degree 2 environment, no corrosive gases permitted | |
| • *Housing Material* | ABS Plastic | ABS-GF20 |
| • *Gasket Material* | Silicone Rubber | |
| • *Overlay Sheet Material* | PET | |
| • *Vibration* | IIEC60068-2-6 (Test Fc) | |
| • *Shock* | IEC60068-2-27 (Test Ea) | |
| • *Altitude* | Up to 2000m (6562ft) | |
| • *Noise Immunity* | (EN61131-2)<br>EN61000-4-2 (ESD),<br>EN61000-4-3 (RFI)<br>EN61000-4-4 (FTB)<br>EN61000-4-5 (Serge)<br>EN61000-4-6 (Conducted)<br>EN61000-4-8 (Power frequency magnetic field immunity)<br><br>(Local Test)<br>RFI, (145MHz, 440Mhz 10W @ 10cm)<br>Impulse 1000V @ 1µs pulse | |
| • *Enclosure* | NEMA 250 type 4/4X indoor use only<br>UL50 type 4X indoor use only<br>IP-65 indoor use only (not tested by UL)<br>(When mounted correctly) | |
| • *Agency Approvals* | CE (EN61131-2), UL61010, CUL Canadian C22.2, UL E157382, RoHS (2011/65/EU)<br>To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page | |
| **Physical** | | |
| • *Enclosure Mounting Thickness Range* | 0.04" – 0.2" [1 – 5 mm] | |
| • *Mounting Clip Screw Torque Range* | 21 – 28 oz·in [0.15 – 0.20 Nm] | |
| • *Weight* | 6.7 oz. (190g) | 7.76 oz. (220g) |

# *C-more* Micro 6-inch, 8-inch & 10-inch EA3 Panels Overview

| C-more Micro EA3 Series Panels | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA3-T6CL** | | ***C-more*** Micro EA3 series touch screen HMI, 6in color TFT LCD, 320 x 240, QVGA, supports (2) serial and (1) USB port. | $299.00 |
| **EA3-T8CL** | | ***C-more*** Micro EA3 series touch screen HMI, 8in color TFT LCD, 800 x 600, SVGA, supports (2) serial and (1) USB port. | $749.00 |
| **EA3-T10CL** | | ***C-more*** Micro EA3 series touch screen HMI, 10in color TFT LCD, 800 x 600, SVGA, supports (2) serial and (1) USB port. | $899.00 |

| Part Number | Panel Software / Firmware Version Required |
|---|---|
| EA3-T6CL | 3.6 or later |
| EA3-T8CL | 3.5 or later |
| EA3-T10CL | 3.5 or later |

| C-more Micro Programming Software | | | |
|---|---|---|---|
| **Part Number** | | **Description** | **Price** |
| **EA-MG-PGMSW** | | ***C-more*** Micro Windows-based programming software, CD. For use with ***C-more*** Micro panels. Requires USB port connection from PC to ***C-more*** Micro panel. | $25.00 |
| **USB-CBL-AB3** | | USB cable, 3ft/0.9m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $7.50 |
| **USB-CBL-AB6** | | USB cable, 6ft/1.8m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $9.50 |
| **USB-CBL-AB10** | | USB cable, 10ft/3m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $18.00 |
| **USB-CBL-AB15** | | USB cable, 15ft/4.5m cable length, standard A plug to standard B plug. For use with Productivity, ***C-more*** and Do-more programming and most USB devices. | $22.50 |

# *C-more* Micro 6-inch, 8-inch & 10-inch EA3 Panels Overview

| Part Number | | Description | Price |
|---|---|---|---|
| **EA-ECOM** | | ***C-more*** Micro communication expansion module, (1) RJ45 10/100 Mbps Ethernet port. For use with EA3 series 6in, 8in and 10in HMIs. For programming and PLC communications. | $50.00 |
| **EA-ADPTR-4** | | DSUB port adapter, 15-pin male to 15-pin female, right angle cable entry. For use with ***C-more*** Micro EA1 series 4in and 6in HMIs, ***C-more*** Micro EA3 series 3in, 4in, and 6in HMIs, ***C-more*** EA9 6in and 7in HMIs. | $39.00 |
| **EA-COMCON-3** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, right angle cable entry. For use with ***C-more*** Micro EA1 series 4in and 6in HMIs, ***C-more*** Micro EA3 series 3in, 4in, and 6in HMIs, ***C-more*** EA9 6in and 7in HMIs. | $42.00 |
| **EA-COMCON-3A** | | DSUB port adapter, 15-pin male to 6-pole RS-422/485 terminal block, straight cable entry. For use with ***C-more*** Micro EA1 series 3in with EA1-MG-SP1, ***C-more*** Micro EA3 series 8in and 10in HMIs, ***C-more*** EA9 8in, 10in, 12in and 15in HMIs. | $19.00 |
| **EA-6-COV2** | | Screen protector, non-glare, 6in. Package of 3. For use with ***C-more*** and ***C-more*** Micro 6in panels. | $37.00 |
| **EA-8-COV2** | | Screen protector, non-glare, 8in. Package of 3. For use with ***C-more*** and ***C-more*** Micro 8in panels. | $40.00 |
| **EA-10-COV2** | | Screen protector, non-glare, 10in. Package of 3. For use with ***C-more*** and ***C-more*** Micro 10in panels. | $45.50 |

Table header: ***C-more*** Micro EA3 Series Panel Accessories

# *C-more* Micro 6-inch TFT EA3 Touch Panel

Model EA3-T6CL **C-more** 6-inch Micro touch panel has a 5.7-inch TFT LCD  320 x 240 pixel 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 **C-more** 6-inch Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*. The panel is NEMA 4/4X indoor when installed correctly.

**\*NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-010.**

## Part No.   EA3-T6CL

**Shown in Landscape (Horizontal) mode**



**$299.00**

## Features

- Touch screen display
- Free downloadable programming software
- 320 x 240 pixel 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
- Supports Ethernet expansion module (EA-ECOM)
- 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

| Function | Available |
|---|---|
| Ethernet | Optional (EA-ECOM) |
| USB Programming Port | Yes |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Yes |

**\*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]
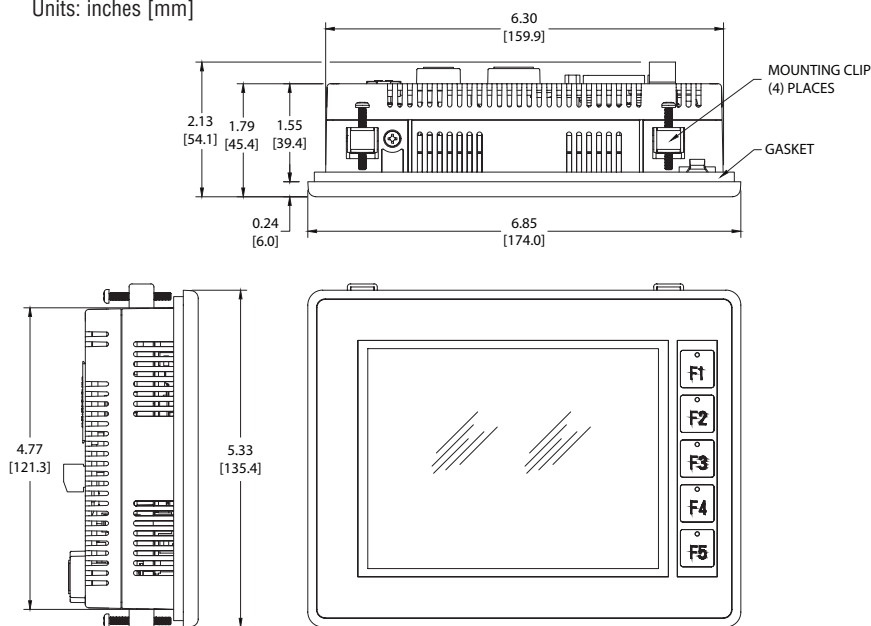


## Panel Cutout
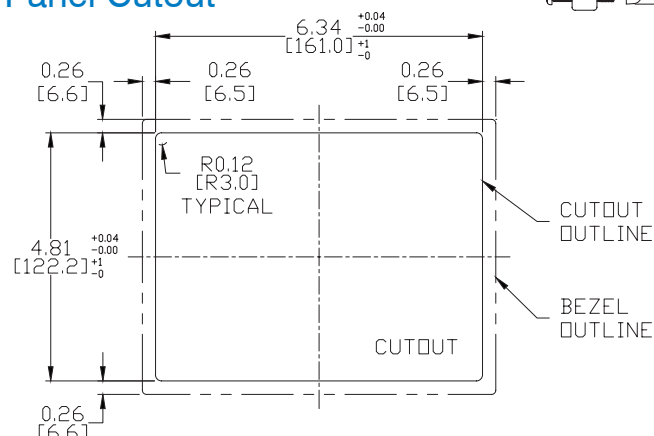


## Panel Thickness
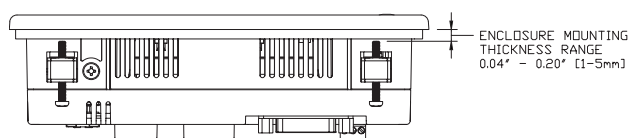


**NOTE: The *C-more* 6-inch Micro cutout dimensions are not equivalent to previous AutomationDirect text panels. The *C-more* 6-inch Micro panels will not fit in cutouts for DV-1000, EZText, Optimate panels or *C-more* 6-inch panels.**

# *C-more* Micro 8-inch TFT EA3 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. *C-more* 8" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*. The panel is NEMA 4/4X indoor when installed correctly.

**Part No.   EA3-T8CL**



$749.00

**\*NOTE: Recommended DC power supply to power the *C-more* Micro Panel, *AutomationDirect* Part No. PSC-24-010.**

## 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
- Supports Ethernet expansion module (EA-ECOM)
- 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

| Function | Available |
|---|---|
| Ethernet | Optional (EA-ECOM) |
| USB Programming Port | Yes |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Yes |

## Dimensions

Units: inches [mm]



9.19 [233.4]

1.84 [46.7]

GASKET

0.32 [8.1]

9.87 [250.8]

4X MOUNTING BRACKETS

7.69 [195.4]

F1
F2
F3
F4
F5
F6
F7

7.01 [178.1]

## Panel Cutout



2X 0.31 [7.9]

9.25 [235.0]

2X 0.31 [7.9]

OUTER EDGE FRONT BEZEL

7.07 [179.7]

CUT LINE

PANEL CUTOUT

## Panel Thickness



Mounting Clip

Enclosure Thickness Range 0.04" - 0.2" [1 - 5 mm]

# *C-more* Micro 10-inch TFT EA3 Touch Panel

Model EA3-T10CL **C-more** 10-inch 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. **C-more** 10" Micro TFT panels are powered from a Class 2, 12-24 VDC power supply*. The panel is NEMA 4/4X indoor when installed correctly.

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

## 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
- Supports Ethernet expansion module (EA-ECOM)
- 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

| Function | Available |
|----------|-----------|
| Ethernet | Optional (EA-ECOM) |
| USB Programming Port | Yes |
| Serial RJ12 Port | Yes |
| Serial DB15 Port | Yes |

## Dimensions

Units: inches [mm]

11.84 [300.7]

1.84 [46.7]

0.32 [8.1]

GASKET

8X MOUNTING BRACKETS

12.52 [318.0]

9.53 [242.1]

F1
F2
F3
F4
F5
F6
F7

8.84 [224.5]

## Panel Cutout

2X 0.31 [7.8]

11.91 [302.5]

2X 0.31 [7.8]

OUTER EDGE FRONT BEZEL

8.92 [226.5]

CUT LINE

PANEL CUTOUT

## Panel Thickness

Mounting Clip

Enclosure Thickness Range 0.04" - 0.2" [1 - 5 mm]

# *C-more* Micro 6-inch, 8-inch and 10-inch EA3 Panel Specifications

| EA3-T6CL, EA3-T8CL and EA3-T10CL Specifications | | | |
|---|---|---|---|
| **Part Number:** | **EA3-T6CL** | **EA3-T8CL** | **EA3-T10CL** |
| **Description:** | 320 x 240 pixel LCD display (Landscape mode), Five user defined keypad function buttons with five user defined LED indicators | 800 x 600 pixel LCD display (Landscape mode), Seven user defined keypad function buttons with seven user defined LED indicators | |
| **Display:** | | | |
| • *Type* | 5.7" TFT Graphical type with LED Backlight | 8.4" TFT Graphical type with LED Backlight | 10.4" TFT Graphical type with LED Backlight |
| • *Resolution* | 320 (W) x 240 (H) pixel (Landscape Mode) 240 (W) x 320 (H) pixel (Portrait Mode) | 800 (W) x 600 (H) pixel (Landscape Mode) 600 (W) x 800 (H) pixel (Portrait Mode) | |
| • *Color* | 32768 colors | | |
| • *Display Brightness (Reference)* | 270 nits (typ) | 295 nits (typ) | 270 nits (typ) |
| • *Viewing Area Size* | 4.57" (W) x 3.44" (H) [116.2 mm x 87.4 mm] | 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* | 4.54" (W) x 3.40" (H) [115.2 mm x 86.4 mm] | 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] |
| • *Contrast / 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 –> 65 degrees 12 o'clock axis –> 80 degrees | 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 resistive, single touch* | | |
| • *Operation* | 82 gram force [0.8 N] maximum | | |
| • *Life* | Minimum of 1,000,000 cycles | | |
| **Features:** | | | |
| • *User Memory* | 6MB | 30MB | |
| • *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 | 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* | 10/100 Base-T (Automatic Negotiation) with EA-ECOM Module | | |
| **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* Micro EA3-T6CL, EA3-T8CL and EA3-T10CL panel specifications continued on next page.

# *C-more* Micro 6-inch, 8-inch and 10-inch EA3 Panel Specifications

| EA3-T6CL, EA3-T8CL and EA3-T10CL Specifications (cont'd) | | |
|---|---|---|
| **Part Number:** | *EA3-T6CL* | *EA3-T8CL* | *EA3-T10CL* |
| **Electrical:** | | | |
| • *Input Power* | 10.2 - 26.4 VDC; Class 2 or SELV (Safety Extra-Low Voltage) or Limited Energy Circuit power supply | | |
| • *Power Consumption* | 7.5 W | 8W | 10W |
| • *Maximum Inrush Current* | 13A for 800µs | 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 (122 °F) IEC 60068-2-14 (Test Nb, Thermal Shock) | | |
| • *Storage Temperature* | −20 to +60 °C (−4 to +140 °F) IEC 60068-2-1 (Test Ab, Cold) IEC 60068-2-2 (Test Bb, Dry Heat) IEC 60068-2-14 (Test Na, Thermal Shock) | | |
| • *Humidity* | 5–95% RH (non-condensing) | | |
| • *Environmental Air* | For use in Pollution Degree 2 environment, no corrosive gases permitted | | |
| • *Housing Material* | ABS Plastic | | |
| • *Gasket Material* | Silicone Rubber | | |
| • *Overlay Sheet Material* | PET | | |
| • *Vibration* | IIEC60068-2-6 (Test Fc) | | |
| • *Shock* | IEC60068-2-27 (Test Ea) | | |
| • *Altitude* | Up to 2000m (6562ft) | | |
| • *Noise Immunity* | (EN61131-2) EN61000-4-2 (ESD), EN61000-4-3 (RFI) EN61000-4-4 (FTB) EN61000-4-5 (Serge) EN61000-4-6 (Conducted) EN61000-4-8 (Power frequency magnetic field immunity) (Local Test) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µs pulse | | |
| • *Enclosure* | NEMA 250 type 4/4X indoor use only UL50 type 4X indoor use only IP-65 indoor use only (not tested by UL) (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:** | | | |
| • *Enclosure Mounting Thickness Range* | 0.04" – 0.2" [1 – 5 mm] | | |
| • *Mounting Clip Screw Torque Range* | 21 – 28 oz·in [0.15 – 0.20 Nm] | 63 – 77 oz·in [0.45 – 0.55 Nm] | |
| • *Weight* | 21.1 oz. (600g) | 39.9 oz. (1130g) | 57.1 oz. (1620g) |

# *C-more* Micro EA3 Series PLC Drivers

| PLC Drivers | | |
|---|---|---|
| Serial – port1 or port2 | Serial – port2 only | Ethernet* |
| AutomationDirect Productivity Series | Allen-Bradley DF1 Half Duplex | AutomationDirect Productivity Series Ethernet |
| AutomationDirect Do-more / BRX** | Allen-Bradley DF1 Full Duplex | AutomationDirect Do-more / BRX 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 | Allen-Bradley EtherNet/IP(Client) SLC5/05 |
| Modicon Modbus RTU | Mitsubishi Q & QnA | Allen-Bradley EtherNet/IP(Client) ENI Adapter |
| Entivity Modbus RTU | Omron Host Link (C200 Adapter, C500) | Allen-Bradley EtherNet/IP(Client) MicroLogix 1100/1400 |
| | Omron FINS Serial (CJ1, CS1) | |
| | Siemens PPI (S7-200 CPU) | |
| | AutomationDirect SOLO Temperature Controller | |
| | AutomationDirect GS Drives | |

\* Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL, EA3-T8CL and EA3-T10CL require the optional EA-ECOM module for Ethernet.

\*\* BX-P-SER2-RJ12 is required

# *C-more* Micro EA3 Series
# Power Connection Wiring

## EA3-S3ML-RN and EA3-S3ML-R

- EA3-S3ML-RN and EA3-S3ML-R **C-more** Micro panels are powered during programming from the PC through the USB to RS-232 Programming Cable Assembly, EA-MG-PGM-CBL.

- During operation, EA3-S3ML-RN and EA3-S3ML-R **C-more** Micro panels can be powered from most AutomationDirect PLC's RJ12 serial communications ports by using the DV-1000CBL communications cable.

Power Supplied to Panel through Cable from AutomationDirect PLC RJ12 port
RS-232C (p/n DV-1000CBL)

To PLC RJ12 Port

To **C-more** Micro-Graphic Serial Port1

10 feet [3.0 m] Maximum

Wiring Diagram

| RJ12 6-pin Phone Plug (6P6C) | | RJ12 6-pin Phone Plug (6P6C) |
|---|---|---|
| 1 = Sig GND | GND 6 — 1 GND | 1 = Sig GND |
| 2 = +5 VDC | TXD 4 — 3 RXD | 2 = not used |
| 3 = RXD | RXD 3 — 4 TXD | 3 = RXD |
| 4 = TXD | +5 V 2 — 5 +5 V | 4 = TXD |
| 5 = not used | GND 1 — 6 GND | 5 = +5 VDC |
| 6 = Sig GND | 1 2 3 4 5 6 | 6 = Sig GND |

## EA3-S3ML, EA3-T4CL, EA3-T6CL, EA3-T8CL and EA3-T10CL

EA3-S3ML, EA3-T4CL, EA3-T6CL, EA3-T8CL and EA3-T10CL **C-more** Micro EA3 series panels are powered by a Class 2, 2.5 Amp @ 12-24 VDC power source in normal operation.

Port 2
RxD      TxD

12-24V

Supply to Panel:
2.5A @ 12–24 VDC

Equipment
Ground
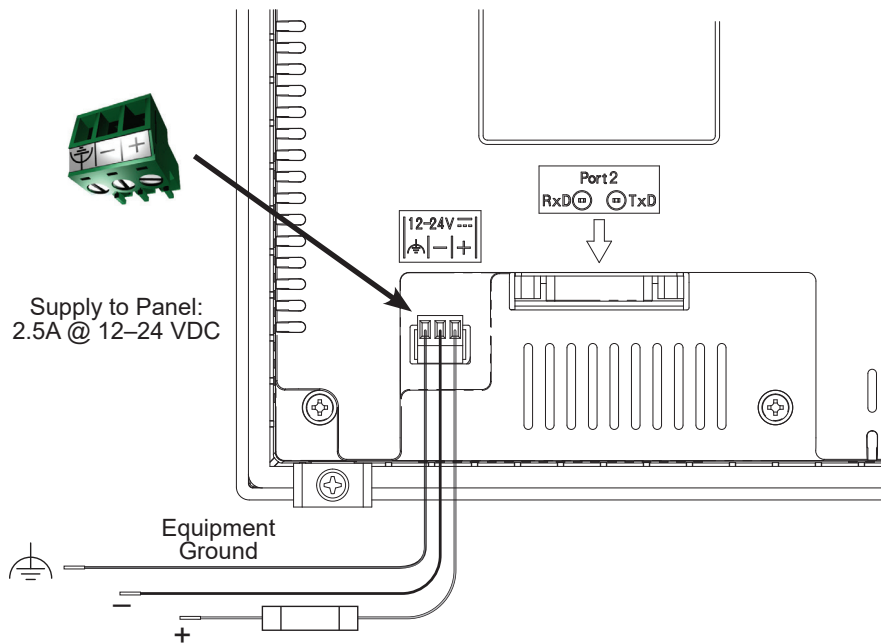
# *C-more* Micro EA3 Series PLC Connections

## Cabling requirements

When using the built in RJ12 serial port (Port1) on EA3 models 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 Productivity Series, Do-more / BRX*, CLICK, DL05, DL06, DL105, DL205, D3-350 and D4-450 phone jack.
  - ***BX-P-SER2-RJ12 is required**

EA3-T6CL, EA3-T8CL and EA3-T10CL cannot be powered from a PLC.

The *C-more* EA3 series Micro panels (except -RN and -R models) 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 Productivity Series, Do-more / BRX*, 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.
  - ***BX-P-SER2-RJ12 is required**

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

## Drivers for your Controller

- AutomationDirect Productivity Series – serial / Ethernet*
- AutomationDirect Do-more / BRX – 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, Allen-Bradley EtherNet/IP (Client) SLC5/05, NET-ENI, MicroLogix 1100/1400*
- 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
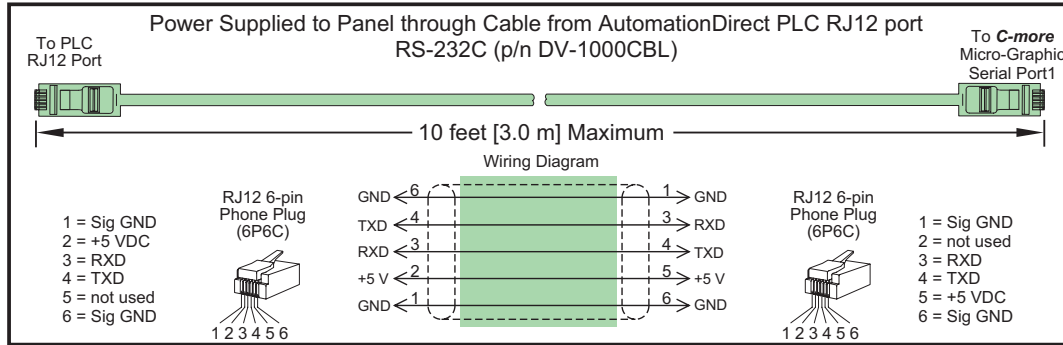
 * *Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL, EA3-T8CL and EA3-T10CL require the optional EA-ECOM module for Ethernet.*

## Communication Ports

### EA3-T6CL



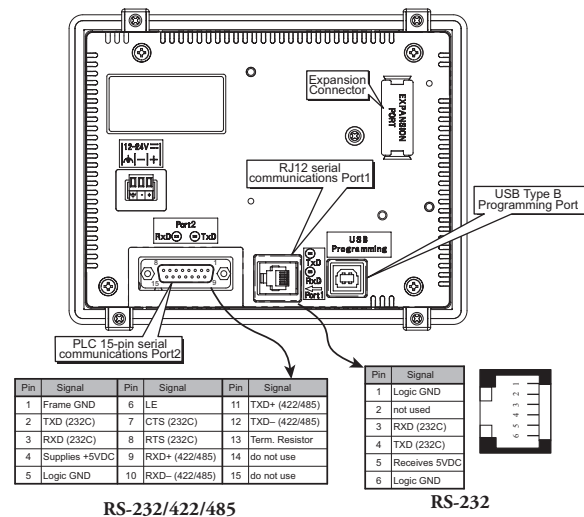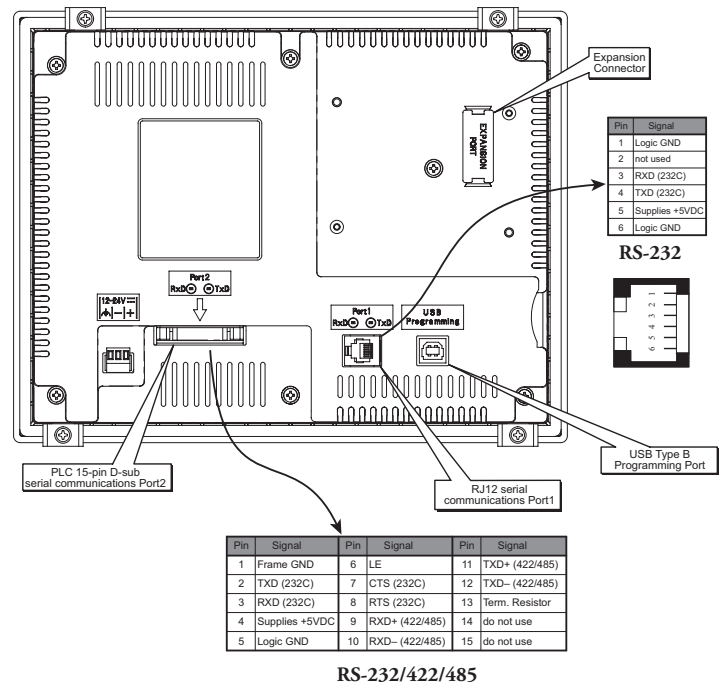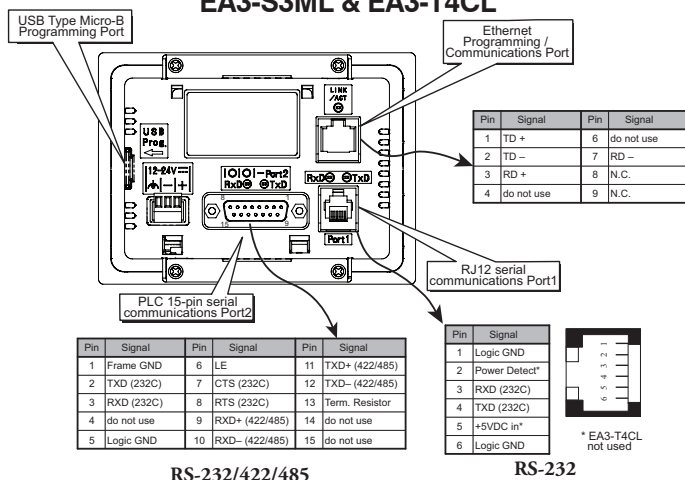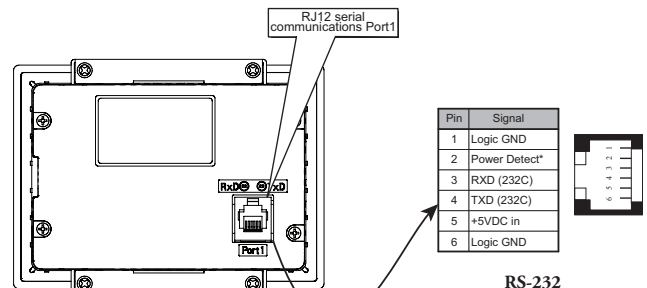| Pin | Signal | Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|-----|--------|
| 1 | Frame GND | 6 | LE | 11 | TXD+ (422/485) |
| 2 | TXD (232C) | 7 | CTS (232C) | 12 | TXD– (422/485) |
| 3 | RXD (232C) | 8 | RTS (232C) | 13 | Term. Resistor |
| 4 | Supplies +5VDC | 9 | RXD+ (422/485) | 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**

### 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**

### EA3-S3ML-RN & EA3-S3ML-R



| Pin | Signal |
|-----|--------|
| 1 | Logic GND |
| 2 | Power Detect* |
| 3 | RXD (232C) |
| 4 | TXD (232C) |
| 5 | +5VDC in |
| 6 | Logic GND |

**RS-232**

### EA3-S3ML & EA3-T4CL



| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1 | TD + | 6 | do not use |
| 2 | TD – | 7 | RD – |
| 3 | RD + | 8 | N.C. |
| 4 | do not use | 9 | N.C. |

| 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 | do not use | 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 | Power Detect* |
| 3 | RXD (232C) |
| 4 | TXD (232C) |
| 5 | +5VDC in* |
| 6 | Logic GND |

**RS-232**

\* EA3-T4CL not used

# *C-more* Micro EA3 Series Accessories

## EA3 Series Communication Expansion Module

The EA-ECOM *C-more* Micro communication module is compatible with EA3 series *C-more* Micro 6-inch, 8-inch and 10-inch 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**

### Dimensions
Units: inches [mm]

PANEL CONNECTION

0.98 [24.8]

3.62 [92.0]

3.70 [94.0]

ETHERNET

| 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 / BRX Ethernet |
| AutomationDirect CLICK Ethernet |
| AutomationDirect ECOM Ethernet |
| Modbus TCP/IP |

LINK /ACT
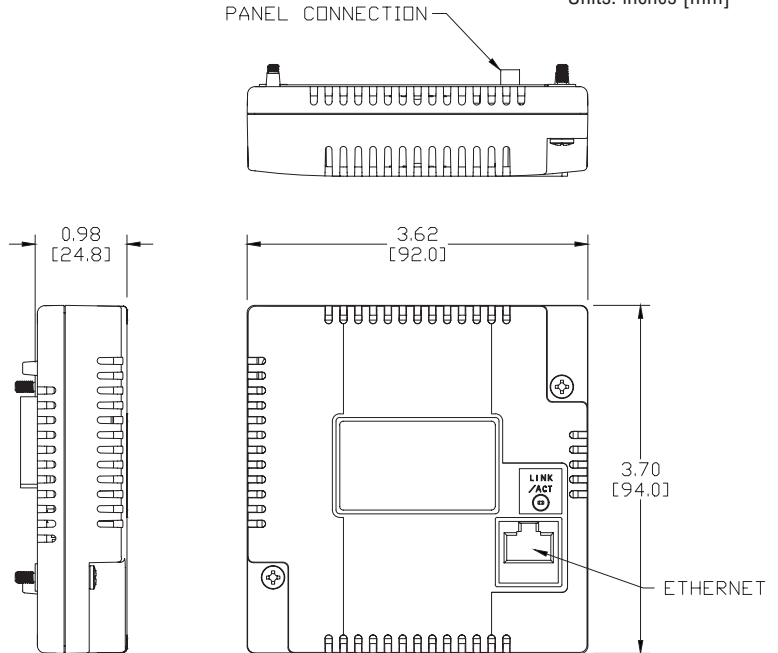
| Link Status LED (Green) | |
|---|---|
| On | Ethernet Linked |
| Off | No Ethernet Comm. |
| Blinking Green | Comm. Activity |

1    8

| EA-ECOM Specifications | |
|---|---|
| Part Number | EA-ECOM |
| Operating Temperature | 0 to 50 °C (32 to 122 °F)<br>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%),<br>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<br>per axis, on 3 mutually perpendicular axes (total of 18 shocks) |
| Noise Immunity | NEMA ICS3-304<br>RFI, (145 MHz, 440 MHz 10 W @ 10 cm)<br>Impulse 1000 V @ 1 µs pulse |
| Emission | EN55011 Class A (Radiated RF emission) |
| Enclosure<br>(panel door installation) | NEMA 250 type 4/4X indoor use only<br>UL50 type 4X indoor use only<br>IP-65 indoor use only<br>(When mounted correctly) |
| Agency Approvals | CE (EN61131-2), UL508, CUL Canadian C22.2<br>To obtain the most current agency approval information,<br>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* Micro EA3 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 **C-more** Micro EA3 Series 3-inch*, 4-inch and 6-inch panels 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.

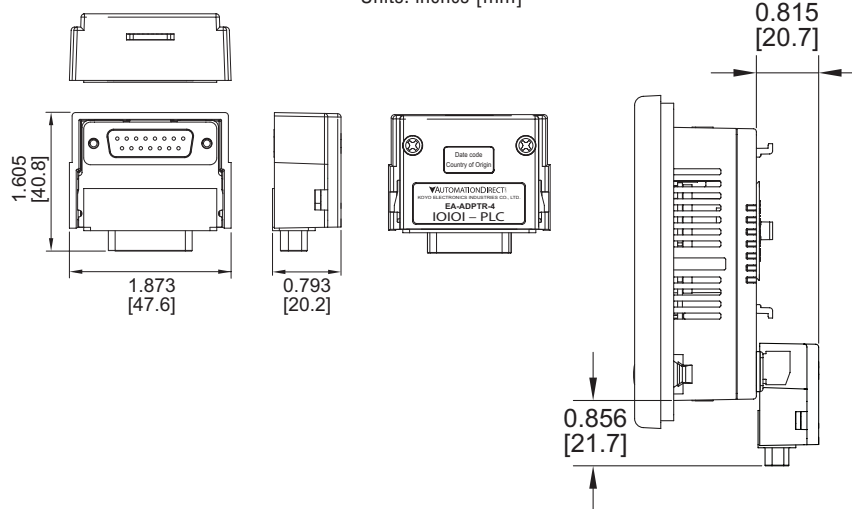  * *EA3-S3ML-RN and EA3-S3ML-R are not equipped with a 15-pin serial port.*

**Part No.
EA-ADPTR-4**

**Dimensions**
Units: inches [mm]

0.815 [20.7]
1.605 [40.8]
1.873 [47.6]
0.793 [20.2]
0.856 [21.7]

**$39.00**

## D-SUB 15-pin to Terminal Block Adapter

The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of C-more Micro EA3 Series 3-inch*, 4-inch and 6-inch panels to allow wire terminal connections for an RS-422/RS-485/DH485 PLC communication cable. UL Recognized.

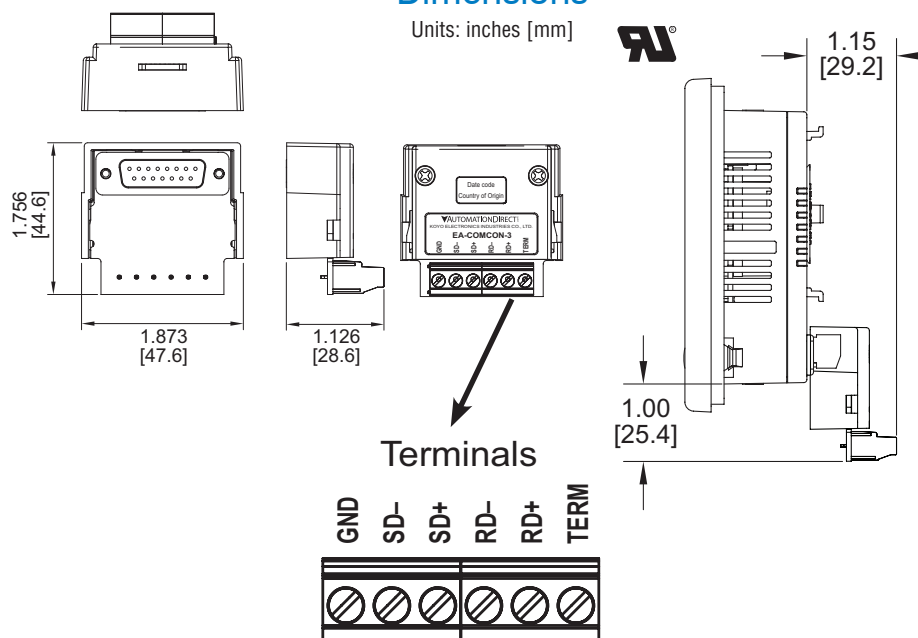  * *EA3-S3ML-RN and EA3-S3ML-R are not equipped with a 15-pin serial port.*

**Part No.
EA-COMCON-3**

**Dimensions**
Units: inches [mm]

1.756 [44.6]
1.873 [47.6]
1.126 [28.6]
1.15 [29.2]
1.00 [25.4]

**$42.00**

**Terminals**

GND | SD– | SD+ | RD– | RD+ | TERM

# *C-more* Micro EA3 Panel Accessories
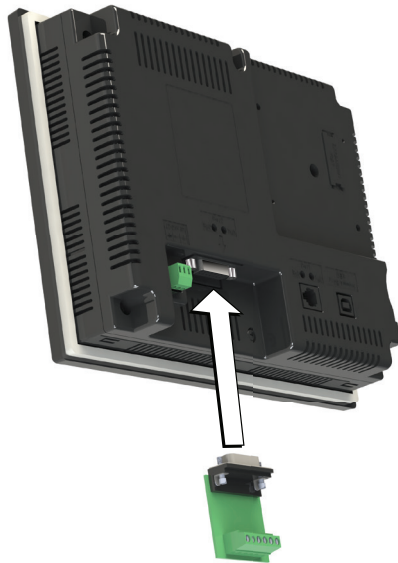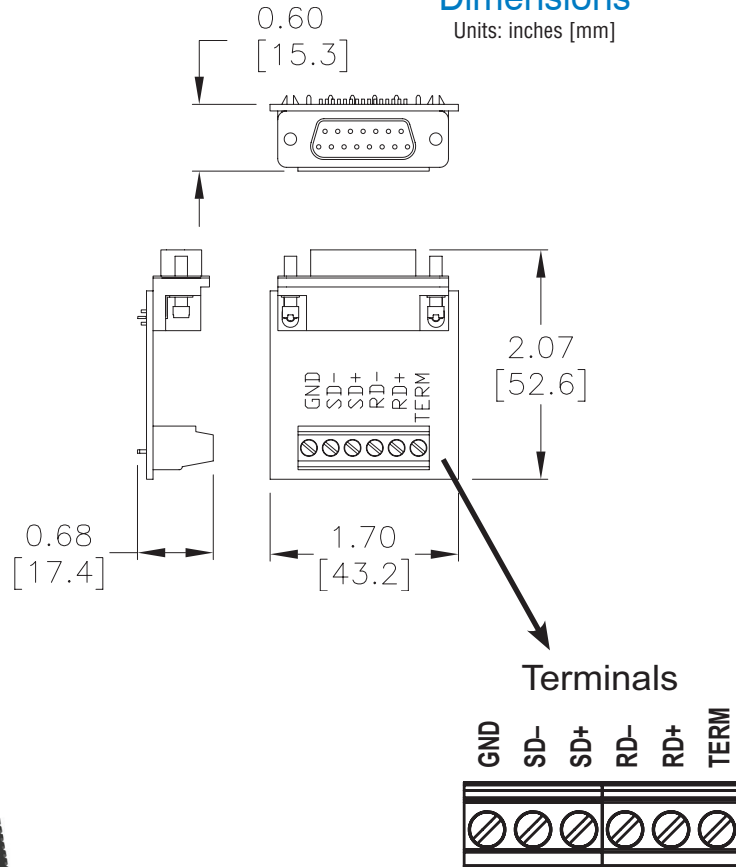
## D-SUB 15-pin to Terminal Block Adapter

The EA-COMCON-3A adapter plugs into the 15-pin serial port on the rear of *C-more* Micro EA3 Series 8-inch and 10-inch panels to allow wire terminal connections for an RS-422/RS-485/DH485 PLC communication cable.

**Part No.
EA-COMCON-3A**

**$19.00**

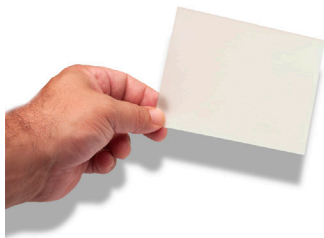**Dimensions**
Units: inches [mm]

0.60 [15.3]

2.07 [52.6]

0.68 [17.4]

1.70 [43.2]

### Terminals

GND   SD–   SD+   RD–   RD+   TERM

# *C-more* Micro EA3 Panel Accessories

## Clear Screen Overlay

Optional clear screen overlay used to protect **C-more** Micro displays from minor scratches and wear. EA-MG-COV-CL contains 5 clear screen overlays. All other packages contain 3 clear screen overlays.

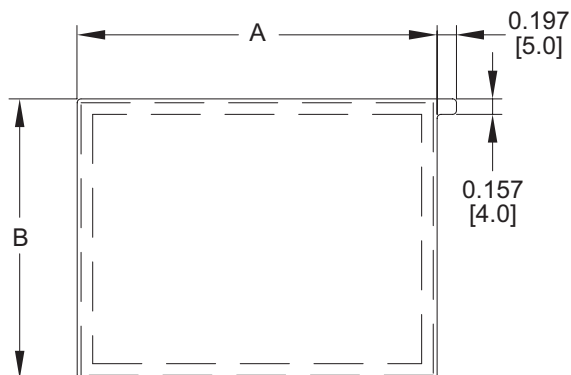**Part No. EA-MG-COV-CL**
**$35.50**

**Part No. EA-4-COV3**
**$33.50**

**Part No. EA-6-COV2**
**$37.00**

**Part No. EA-8-COV2**
**$40.00**

**Part No. EA-10-COV2**
**$45.50**

## Dimensions

Units: inches [mm]

0.197 [5.0]

0.157 [4.0]

| Part Number | Dimensions - inch [mm] | |
|---|---|---|
| | **A** | **B** |
| **EA-MG-COV-CL** | 3.13 [79.4] | 1.75 [44.4] |
| **EA-4-COV3** | 4.15 [105.5] | 2.52 [64.0] |
| **EA-6-COV2** | 4.91 [124.8] | 3.80 [96.4] |
| **EA-8-COV2** | 7.32 [185.8] | 5.44 [138.2] |
| **EA-10-COV2** | 8.91 [226.2] | 6.61 [168.0] |

# *C-more* Micro 3-inch and 4-inch EA3 Panel Replacement Parts

## Replacement parts at a glance:

| Part Number | Description | Price |
|---|---|---|
| *EA-MG-S3ML-BRK* | Panel mounting brackets, replacement. Package of 2. For use with *C-more* Micro 3in and EA3-T4CL HMIs. | $17.50 |
| *EA-MG-DC-CON* | DC 3-terminal power connector, replacement. Package of 5. For use with all *C-more* Micro 4in, 6in, 8in and 10in panels, and power adapters EA-MG-P1 and EA-MG-SP1. | $14.00 |
| *EA-MG-S3ML-GSK* | Panel mounting gasket, replacement. For use with 3in *C-more* Micro panels. | $12.00 |
| *EA-4-GSK* | Panel Mounting Gasket: replacement, for C-more Micro EA3-T4CL 4in HMIs | $8.50 |
| *EA-MG-S3ML-FKL* | Function key label insert, replacement. Package of 10. For use with *C-more* Micro 3in panels. (5) blank labels (5) landscape F1-F5 label included. | $9.75 |

**Panel Mounting Clips
Part No. EA-MG-S3ML-BRK**
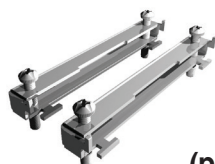
**(pk of 2)**

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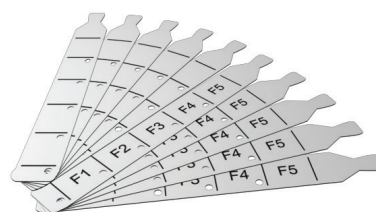Part No. EA-MG-S3ML-GSK**

**EA3-T4CL Panel Gasket
Part No. EA-4-GSK**

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

**(pk of 5)**

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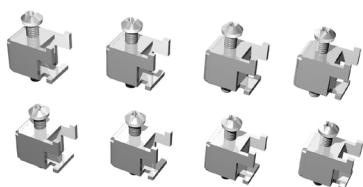Part No. EA-MG-S3ML-FKL**

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

# *C-more* Micro 6-inch EA3 Panel Replacement Parts
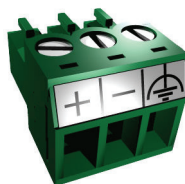
## Replacement parts at a glance:

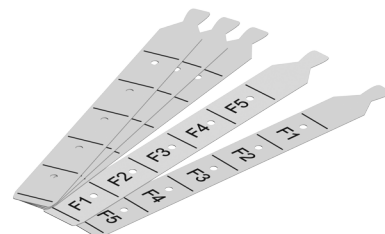| Part Number | Description | Price |
|---|---|---|
| EA-MG-BZ2-BRK | Panel mounting brackets, replacement. Package of 8. For use with C-more Micro 4in and 6in panels, all 6in bezels, and 3in bezel EA-MG-BZ2. | $18.50 |
| EA-MG-DC-CON | DC 3-terminal power connector, replacement. Package of 5. For use with all C-more Micro 4in, 6in, 8in and 10in panels, and power adapters EA-MG-P1 and EA-MG-SP1. | $14.00 |
| EA-MG6-S6ML-GSK | Replacement mounting gasket for *C-more* 6" Micro panels | $11.00 |
| 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)**
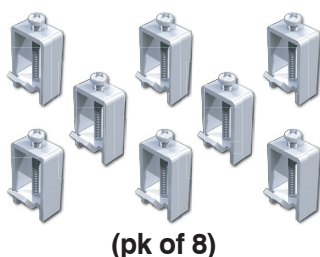
**Panel Gasket**
**Part No. EA-MG6-S6ML-GSK**

# *C-more* Micro 8-inch and 10-inch EA3 Panel Replacement Parts

## Replacement parts at a glance:

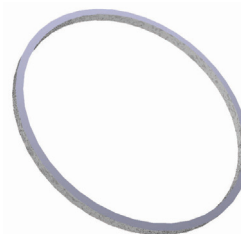| Part Number | Description | Price |
|---|---|---|
| EA3-BRK | Replacement mounting clips for *C-more* Micro EA3 series (pack of 8) | $27.00 |
| EA-MG-DC-CON | Replacement DC power connector (pack of 5) | $14.00 |
| EA3-8-GSK | Replacement mounting gasket for *C-more* 8" Micro panels | $17.00 |
| EA3-10-GSK | 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**
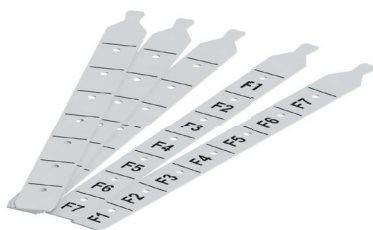
(pk of 8)

**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)
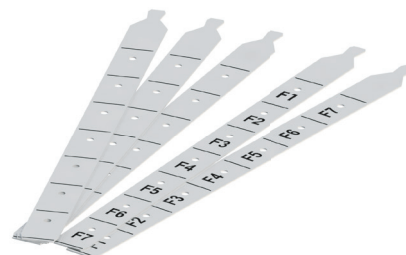
# C-more Micro Communication Cables and Cable Kits

| Cable Description | Cable Part Number | Price |
|---|---|---|
| **Cables used with RJ-12 RS-232 serial Port1** | | |
| AutomationDirect Productivity Series, Do-more / BRX*, 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 / BRX*, 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 |

**\* BX-P-SER2-RJ12 is required**

**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 or Ethernet connection* 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-inch through 15-inch touch panels).

**Note: This software is used to program *C-more* Micro panels only.**

**Note: The Ethernet port is built in to EA3-S3ML and EA3-T4CL. EA3-T6CL, EA3-T8CL and EA3-T10CL require the optional EA-ECOM module for Ethernet.**

| Part Number | Panel Software / Firmware Version Required |
|---|---|
| EA1-S3ML | 1.0 or later |
| EA1-S3ML-N | |
| EA1-S3MLW | 1.5 or later |
| EA1-S3MLW-N | |
| EA1-T4CL | 3.0 or later |
| EA1-T6CL | 2.5 or later |
| EA3-S3ML-RN | 4.30 or later |
| EA3-S3ML-R | |
| EA3-S3ML | 4.20 or later |
| EA3-T4CL | |
| EA3-T6CL | 3.6 or later |
| EA3-T8CL | 3.5 or later |
| EA3-T10CL | |

**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
- Simulate function keys and keypad bezel

## Built-in user object/screen libraries

Save time by re-using your custom objects and screens.
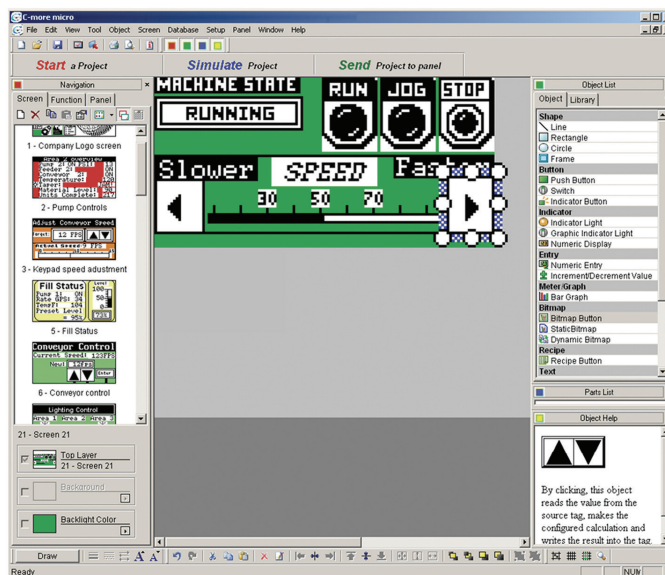
### Thumbnail project preview pane

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), Windows 8 (32 or 64 bit) or Windows 10
- 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

# USB Programming Cables

## USB Cables

AutomationDirect's high quality USB cables are used to connect USB devices to a USB port on a PC. Each cable has Standard-A plug to Standard-B plug end connectors, both gold plated, and meet the USB 2.0 requirements. These cables can be used for programming Productivity Series CPUs, *C-more* panels, certain *C-more* Micro panels and PC to touchscreen connections for Atlas Industrial Monitors that include touchscreen capability.

## Standard A to standard B

| Part Number | Description | Price |
|---|---|---|
| *USB-CBL-AB3* | 3-ft (0.9 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices. | $7.50 |
| *USB-CBL-AB6* | 6-ft (1.8 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices. | $9.50 |
| *USB-CBL-AB10* | 10-ft (3 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices. | $18.00 |
| *USB-CBL-AB15* | 15-ft (4.6 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices. | $22.50 |

## Standard A to micro B

| Part Number | Description | Price |
|---|---|---|
| *USB-CBL-AMICB6* | Programming cable, USB A to micro-B USB, 6ft cable length. | $5.00 |
| *USB-CBL-AMICB15* | Programming cable, USB A to micro-B USB, 15ft cable length. | $8.50 |

- Productivity Series CPUs
- *C-more* panels
- *C-more* Micro panels
- Atlas Industrial Monitors with touchscreen capability.