

# C-more 3" Micro-Graphic STN Touch Panel

This Touch Screen version of the C-more Micro-Graphic panel has a 3.1-inch STN LCD monochrome display. Model EA1-S3ML has five selectable LED-driven backlight colors: Green, Red, Amber, Yellow and Lime. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated NEMA 4/4X, IP-65 (when mounted correctly, for indoor use only). This Micro-Graphic 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 3rd party PLCs.

Part No. EA1-S3ML



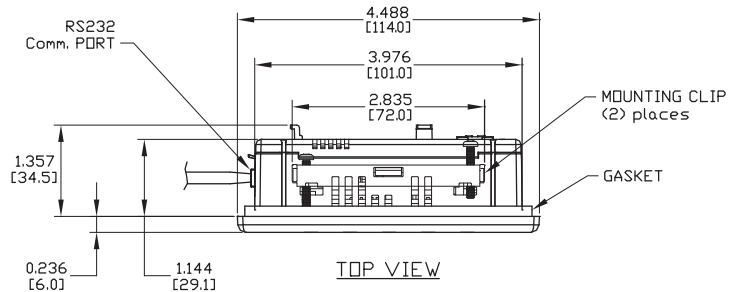
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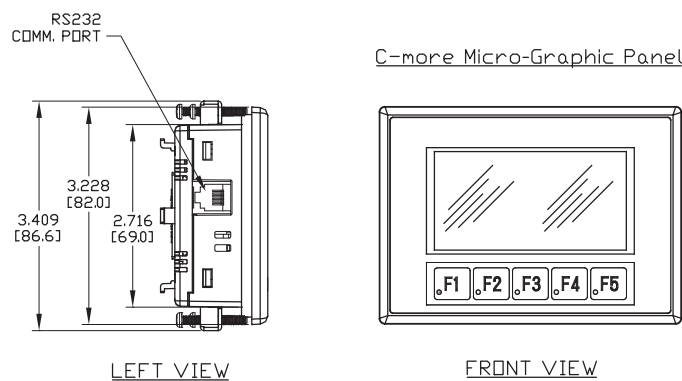
## Features

- Touch screen display
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; Green, Red, Amber, Yellow and Lime
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other PLC's (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, IP-65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

## Dimensions

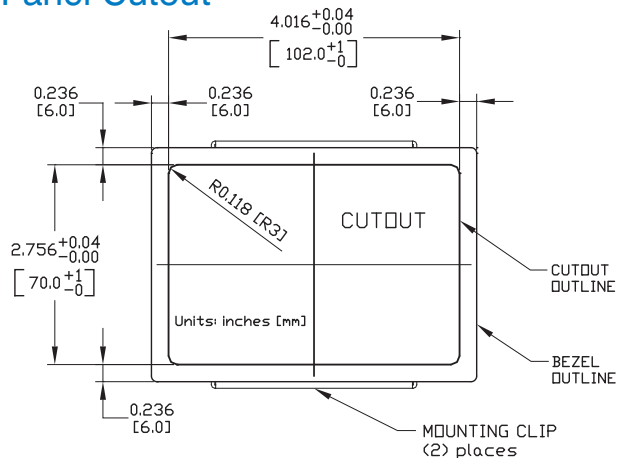


Units: inches [mm]

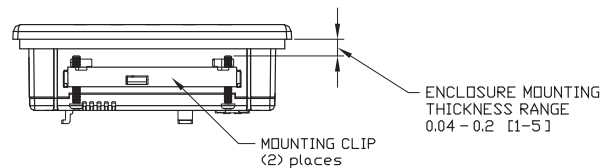


**NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the accessories.**

## Panel Cutout



## Panel Thickness



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

PLC Overview
DL05/06 PLC
DL105 PLC
DL205 PLC
DL305 PLC
DL405 PLC
Field I/O
Software
C-more HMIs
Other HMI
AC Drives
Motors
Steppers/Servos
Motor Controls
Proximity Sensors
Photo Sensors
Limit Switches
Encoders
Current Sensors
Pushbuttons/Lights
Process
Relays/Timers
Comm.
TB's & Wiring
Power
Circuit Protection
Enclosures
Appendix
Part Index

# C-more 3" Micro-Graphic STN Touch Panel

This Touch Screen version of the C-more Micro-Graphic panel has a 3.1-inch STN LCD monochrome display. Model EA1-S3MLW has five selectable LED-driven backlight colors: White, Pink1, Pink2, Pink3 and Red. It features a 128 x 64 dot display, and five user-defined function keys each with a user-defined red LED indicator. The panel can display up to 10 lines by 32 characters of static text and up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics. It is rated NEMA 4/4X, IP-65 (when mounted correctly, for indoor use only). This Micro-Graphic 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 3rd party PLCs.

Part No. EA1-S3MLW



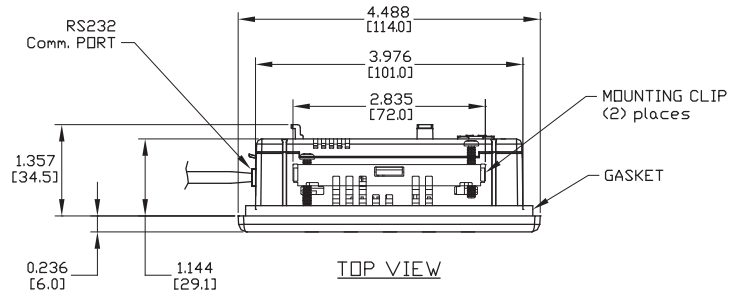
## Features

- Touch screen display
- Free downloadable programming software
- 128 x 64 Dot display with up to 10 lines by 32 characters of text and graphics
- Up to 10 lines by 21 characters of dynamic text with embedded variables and phrases mixed with graphics
- 5 programmable function keys can change with every screen. Can increment / decrement values, trigger recipes, view index of screens.
- 5-Color LED backlight for longer lifetime; White, Pink1, Pink2, Pink3 and Red
- 2 optional snap-on keypad bezels
- 768 KB memory
- Panel is powered from PLC comm port when using select AutomationDirect PLCs. Use optional DC power adapter and serial port modules if needed for other PLC's (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, IP-65 compliant when mounted correctly, indoor use only
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

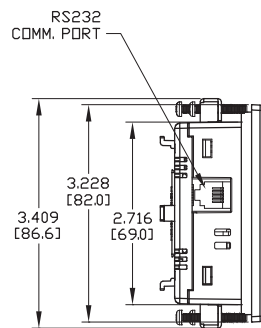


**NOTE: Don't forget the optional keypad bezels, DC power adapter and serial port with DC power adapter shown in the accessories.**

## Dimensions

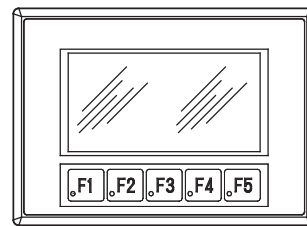


Units: inches [mm]



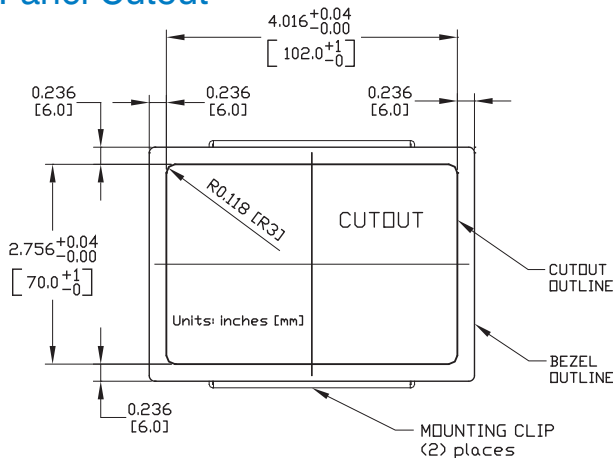
LEFT VIEW

C-more Micro-Graphic Panel

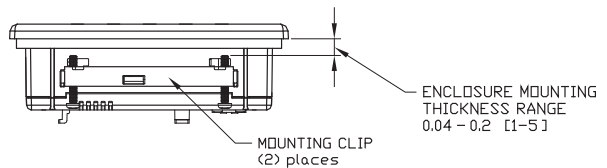


FRONT VIEW

## Panel Cutout



## Panel Thickness



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

# C-more 3" Micro-Graphic Specifications

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



NOTE: Photo includes EA-MG-BZ2

- PLC Overview
- DL05/06 PLC
- DL105 PLC
- DL205 PLC
- DL305 PLC
- DL405 PLC
- Field I/O
- Software
- C-more HMIs
- Other HMI
- AC Drives
- Motors
- Steppers/Servos
- Motor Controls
- Proximity Sensors
- Photo Sensors
- Limit Switches
- Encoders
- Current Sensors
- Pushbuttons/Lights
- Process
- Relays/Timers
- Comm.
- TB's & Wiring
- Power
- Circuit Protection
- Enclosures
- Appendix
- Part Index

# C-more 3" Micro-Graphic Specifications

Specification	Model	3" STN Micro-Graphic Panel Touch Screen	3" STN Micro-Graphic Panel Non-Touch Screen
<b>Part Number</b>		EA1-S3ML, EA1-S3MLW	EA1-S3ML-N, EA1-S3MLW-N
<b>Electrical</b>			
• <b>Input Voltage Range</b>		5.0 VDC (4.75 – 5.25 VDC)	
• <b>Input Power</b>		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 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	
• <b>Power Consumption</b>		1.05 W @ 5 VDC (210 mA)	
• <b>Recommended Fuse</b>		Type AGC fast acting glass fuse, 250 mA, 250 VAC, ADC p/n AGC-25 No fuse required when directly connected to a PLC or PC with recommended cable.	
• <b>Maximum Inrush Current</b>		1 A for 500 $\mu$ s	
• <b>Acceptable External Power Drop Duration</b>		Maximum 1 ms	
<b>Environmental</b>			
• <b>Operating Temperature</b>		0 to 50 °C (32 to 122 °F)	
• <b>Storage Temperature</b>		-20 to +60 °C (-4 to +140 °F)	
• <b>Humidity</b>		5–95% RH (non-condensing)	
• <b>Environmental Air</b>		No corrosive gases permitted	
• <b>Vibration</b>		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. ( $\pm$ 10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• <b>Shock</b>		IEC60068-2-27 (Test Ea), 15 G peak, 11 ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• <b>Noise Immunity</b>		NEMA ICS3-304 RFI, (145 MHz, 440 Mhz 10 W @ 10 cm) Impulse 1000 V @ 1 $\mu$ s pulse	
• <b>Enclosure</b>		NEMA 4/4X, IP-65 (When mounted correctly, for indoor use only.)	
• <b>Agency Approvals</b>		CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382	
<b>Physical</b>			
• <b>Dimensions</b>		4.488" (W) x 3.228" (H) x 1.593" (D) [114.0 mm x 82.0 mm x 40.5 mm]	
• <b>Enclosure Mounting Thickness Range</b>		0.04" – 0.2" [1 – 5 mm]	
• <b>Mounting Clip Screw Torque Range</b>		21 – 28 oz-in [0.15 – 0.2 Nm]	
• <b>Depth from bezel rear with options Module</b>		2.295" [58.3 mm]	
• <b>Weight</b>		5.82 oz. (165 g)	



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



NOTE: Photo includes EA-MG-BZ2

# C-more 6" Micro-Graphic 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 the 6" panel to allow a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

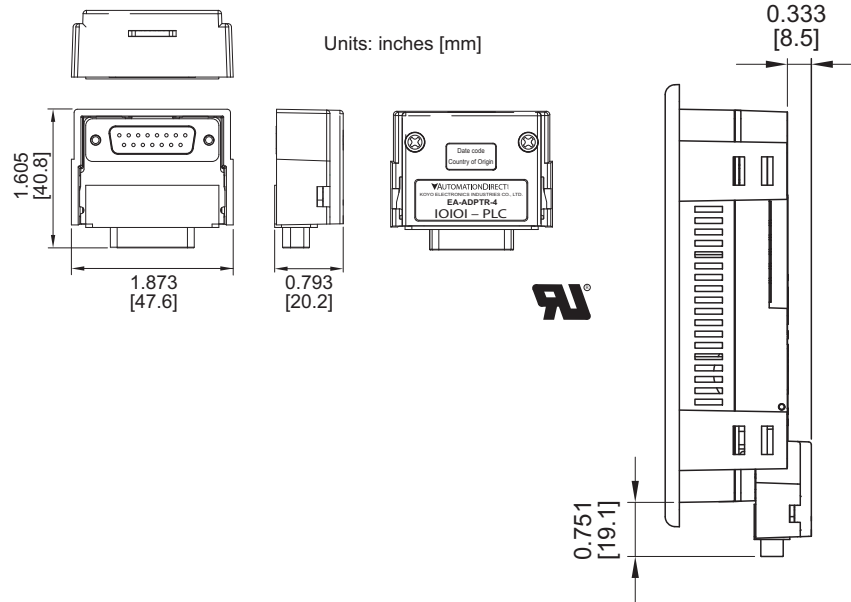
**Part No.**  
**EA-ADPTR-4**



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### Dimensions

Units: inches [mm]



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

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

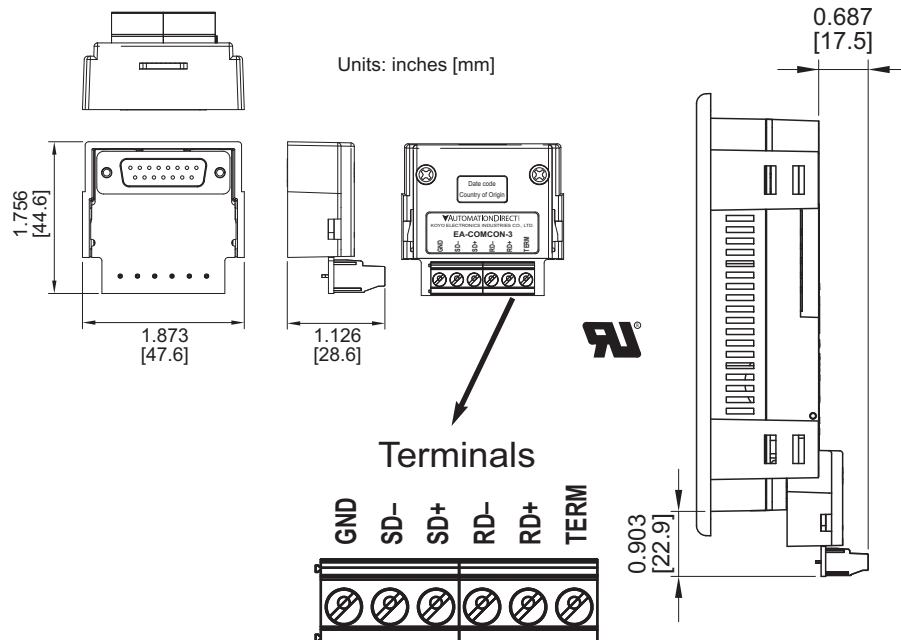
**Part No.**  
**EA-COMCON-3**



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### Dimensions

Units: inches [mm]



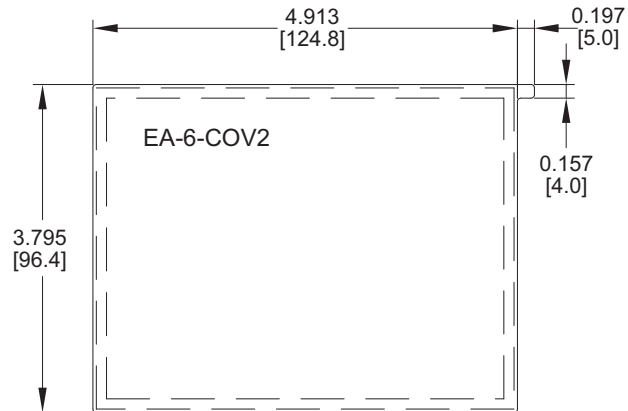
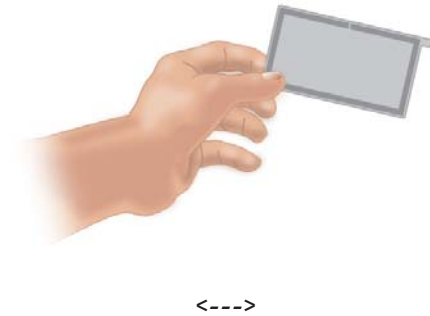
# C-more 6" Micro-Graphic Panel Accessories

## Clear Screen Overlay

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

Part No. EA-6-COV2

### Dimensions



## Clear Screen Overlay Installation

Step 1



Remove the overlay from the package

Step 2



Remove the paper backing from the overlay

Step 3



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

Step 4



Remove the protective film\*



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



# C-more 3" Micro-Graphic PLC Connections

## Cabling requirements

When using the built-in RJ12 serial port on the **C-more** Micro-Graphic panel to connect with the CLICK, DL05, DL06, DL105, DL205, D3-350 and DL405 CPUs, your cabling choices are fairly simple.

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

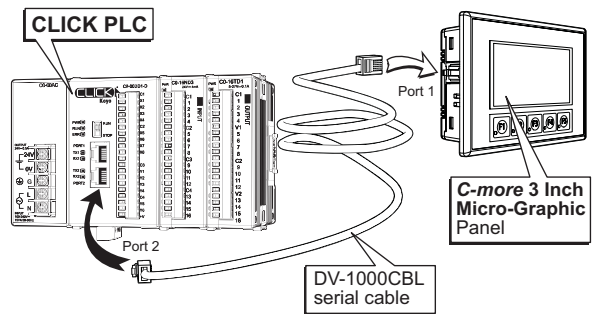
A maximum cable length of **10 feet** between the **C-more** Micro-Graphic panel and the PLC is recommended when powering the panel from the PLC.

The Serial Port with DC Power Adapter module, EA-MG-SP1, can be used 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 distances. See the PLC Communication Protocols & Cabling Charts in this catalog section for details on the selection of various PLCs, protocols, and connectivity.

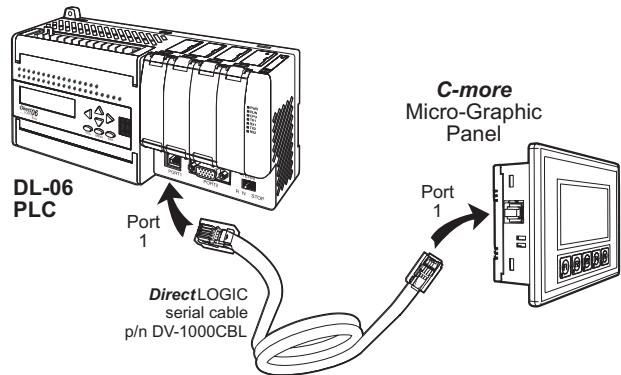
## PLC Supported Protocols

- AutomationDirect CLICK (Modbus)
- **Direct**LOGIC K-sequence
- **Direct**NET
- Modbus (Koyo Addressing)
- Modbus RTU
- Entivity Modbus RTU
- Allen-Bradley DF1 Half Duplex
- Allen-Bradley DF1 Full Duplex
- Allen-Bradley PLC5 DF1
- Allen-Bradley DH485
- GE Fanuc SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
- Omron Host Link (C200 Adapter, C500)
- Omron FINS Serial (CJ1, CS1)
- Mitsubishi Melsec FX
- Mitsubishi Q and QnA
- Siemens PPI

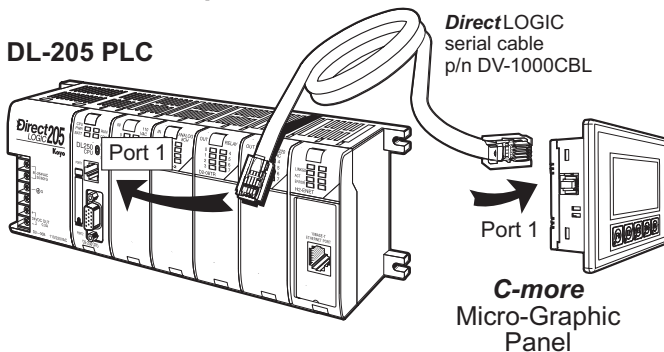
### Micro-Graphic Port 1 to CLICK PLC Port 2



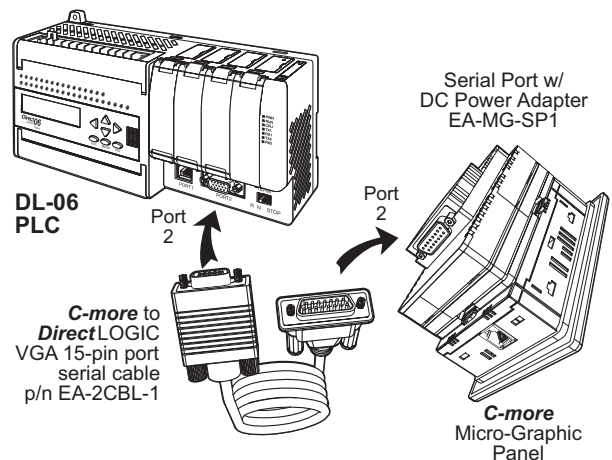
### Micro-Graphic Port 1 to DL06 PLC Port 1



### Micro-Graphic Port 1 to DL205 PLC Port 1



### Micro-Graphic Port 2 to DL06 PLC Port 2



# C-more 3" Micro-Graphic PLC Communication Protocols & Cabling Chart

PLC Compatibility & Connection Chart											
PLC			C-more Micro-Graphic Panel								
Family	CPU	Port & Type	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-SP1.		Serial Port with DC Power Adapter Powered from an external 24 VDC source using the Serial Port with DC Power Adapter, EA-MG-SP1.				
			Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using panel's RJ12 port 1		Using adapter's serial Port 2 15-pin D-sub - female		
			Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	
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	
DirectLOGIC DL05 (see D0-DCM under DL06)	all versions	Port 1 RJ12 - 6 pin	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	EA-2CBL RS-232	
		Port 2 RJ12 - 6 pin									
DirectLOGIC DL06	all versions	Port 1 RJ12 - 6 pin	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, 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	
	D0-DCM	Port 1 RJ12 - 6 pin	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	K-sequence, DirectNET, 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
	DirectLOGIC 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
			Port 2 DB15HD (female)								
DirectLOGIC 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	
		Port 2 RJ12 - 6 pin									
	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, DirectNET		K-sequence, DirectNET		K-sequence, DirectNET		K-sequence, DirectNET		
	D2-250-1	Port 1 RJ12 - 6 pin	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	K-sequence, DirectNET, 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, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	K-sequence, DirectNET, 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-DCM	Port 1 DB 25 pin (female)	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	DirectNET	EA-4CBL-2 RS-232 See Note RS-422		
	Port 2 DB 25 pin (female)										
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	

Note: See the C-more Micro-Graphic 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](http://www.automationdirect.com). PLC Compatibility & Connection Chart continued on next page.



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

PLC Compatibility & Connection Chart										
PLC			C-more Micro-Graphic Panel							
Family	CPU	Port & Type	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	
			Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type	Protocol(s) Supported	Components & Network Type
DirectLOGIC DL305	D3-330 or D3-340	D3-232-DCU DB 25 pin (female)	Not Possible		DirectNET	See Note RS-232	DirectNET	EA-4CBL-2 RS-232	DirectNET	EA-4CBL-2 RS-232
		D3-422-DCU DB 25 pin (female)	Not Possible		Not Possible		Not Possible		DirectNET	See Note RS-422
	D3-340	Port 1 RJ11 - 4 pin	Not Possible		DirectNET	OP-3CBL-1 RS-232	DirectNET	OP-3CBL-1 RS-232	DirectNET	EA-3CBL RS-232
		Port 2 RJ11 - 4 pin	Not Possible		DirectNET, Modbus RTU		DirectNET, Modbus RTU		DirectNET, Modbus RTU	
	D3-350	Port 1 RJ12 - 6 pin	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	EA-2CBL RS-232
		Port 2 DB 25 pin (female)	Not Possible		K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	EA-4CBL-2 RS-232 See Note RS-422
D3-DCM D3-350 only	Port 1 DB 25 pin (female)	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	DirectNET	EA-4CBL-2 RS-232 See Note RS-422	
DirectLOGIC 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)	Not Possible		K-sequence, DirectNET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, DirectNET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, DirectNET	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)	Not Possible		K-sequence, DirectNET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, DirectNET	DV-1000CBL & FA-CABKIT RS-232	K-sequence, DirectNET	EA-4CBL-2 RS-232 See Note RS-422
	D4-450	Port 0 DB 15 pin (female)	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	D4-1000CBL or DV-1000CBL & FA-CABKIT RS-232	K-sequence	EA-4CBL-1 RS-232
		Port 1 DB 25 pin (female)	Not Possible		K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	DV-1000CBL RS-232	K-sequence, DirectNET, Modbus RTU	EA-4CBL-2 RS-232 See Note RS-422
		Port 3 DB 25 pin (female)	Not Possible		Not Possible		Not Possible		K-sequence, DirectNET, Modbus RTU	See Note RS-422
	D4-DCM	Port 2 RJ12 - 6 pin	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	DV-1000CBL RS-232	K-sequence, DirectNET	EA-2CBL RS-232
		Port 1 DB 25 pin (female)	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	K-sequence, DirectNET, Modbus RTU	See Note RS-232	DirectNET	EA-4CBL-2 RS-232 See Note RS-422

Note: See the C-more Micro-Graphic 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](http://www.automationdirect.com). PLC Compatibility & Connection Chart continued on next page.

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

PLC Overview
DL05/06 PLC
DL105 PLC
DL205 PLC
DL305 PLC
DL405 PLC
Field I/O
Software
C-more HMIs
Other HMI
AC Drives
Motors
Steppers/Servos
Motor Controls
Proximity Sensors
Photo Sensors
Limit Switches
Encoders
Current Sensors
Pushbuttons/Lights
Process
Relays/Timers
Comm.
TB's & Wiring
Power
Circuit Protection
Enclosures
Appendix
Part Index

PLC Compatibility & Connection Chart										
PLC			C-more Micro-Graphic Panel							
Family	CPU	Port & Type	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	
			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, 1500	8-pin mini-din port	Not Possible	Not Possible	Not Possible	DF1 Full Duplex	EA-MLOGIX-CBL RS-232	Software		
		RJ45 8-pin phone plug				DH485/AIC/AIC+	EA-DH485-CBL RS-232		C-more HMIs	
Allen-Bradley SLC500	5/03, 5/04, 5/05 5/01, 5/02, 5/03	9-pin D-sub port				DF1 Full Duplex	EA-SLC-232-CBL RS-232	Other HMI		
		RJ45 8-pin phone plug				DH485/AIC/AIC+	EA-DH485-CBL RS-232	AC Drives		
Allen-Bradley ControlLogix	all	9-pin D-sub port				DF1 Full Duplex	EA-SLC-232-CBL RS-232	Motors		
Allen-Bradley CompactLogix	all	9-pin D-sub port				DF1 Full Duplex	EA-SLC-232-CBL RS-232	Steppers/Servos		
Allen-Bradley FlexLogix	all	9-pin D-sub port				DF1 Full Duplex	EA-SLC-232-CBL RS-232	Motor Controls		
Allen-Bradley PLC5	all	25-pin D-sub port				DF1 Full Duplex	EA-PLC5-232-CBL RS-232	Proximity Sensors		
		RJ45 8-pin phone plug				DH485/AIC/AIC+	EA-DH485-CBL RS-232	Photo Sensors		
GE	90/30, 90/70 Micro 90, VersaMax Micro	15-pin D-sub port				Not Possible	Not Possible	Not Possible	SNPX	EA-90-30-CBL RS-422
		RJ45 Port 1	See Note RS-232	Encoders						
Mitsubishi	Melsec FX Series Q / QnA	15-pin D-sub port Port 2	Not Possible	Not Possible	Not Possible	CPU Direct	EA-90-30-CBL RS-422	Current Sensors		
		25-pin D-sub port					EA-MITSU-CBL RS-422	Pushbuttons/Lights		
Omron	C200 (Adapter), C500 CJ1, CS1, CQM1, CPM1, CPM2, C200	8-pin mini-din port	Not Possible	Not Possible	Not Possible	Q / QnA	EA-MITSU-CBL-1 RS-422	Process		
		9-pin D-sub port					See Note RS-232	Relays/Timers		
Modicon	984 CPU, Quantum 113 CPU, AEG Modicon Micro Series 110 CPU	6-pin mini-din port	Not Possible	Not Possible	Not Possible	Host Link	EA-OMRON-CBL RS-232	Comm.		
		25-pin D-sub port					FINS	See Note RS-232	TB's & Wiring	
Siemens	S7-200 CPU	9-pin D-sub port	Not Possible	Not Possible	Not Possible	Modbus RTU	See Note RS-232	Power		
		0 or 1					PPI	See Note RS-485	Circuit Protection	

**Note:** See the C-more Micro-Graphic 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](http://www.automationdirect.com). Available cables with descriptions shown on the next page.