











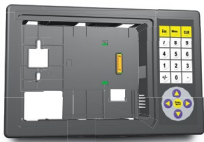

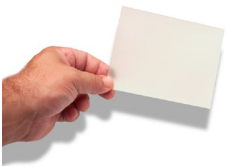


C-more Micro EA1 Series Selection Guide

C-more Micro EA1 Series Panels			
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

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

C-more Micro EA1 Series Selection Guide

C-more Micro EA1 Series Panel Accessories			
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 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 6 o'clock axis → 45 degrees 12 o'clock axis → 30 degrees	
Backlight			
• Type		LED	
• Color		5 user defined colors: EA1-S3ML, EA1-S3ML-N - Red, Green, Amber, Lime, and Yellow EA1-S3MLW, EA1-S3MLW-N - White, Pink1, Pink2, Pink3 and Red	
• User Replaceable		No	
Touch Screen			
• Type		Analog touch panel, single touch*	N/A
• Operation		51 gram force [0.5 N] maximum	N/A
• Life		Minimum of 1,000,000 cycles	N/A
Features			
• User Memory		768 KB	
• Number of Screens		Up to 999 – limited by project memory usage	
• Beep (Internal)		Yes	
• Keypad Function Buttons		Five user defined function key buttons with the ability to customize the label. Minimum of 500,000 cycles	
• Keypad Function Button LEDs		Each function key button includes a red LED that can be user programmed.	
• Serial Communications		Built-in RJ12 serial communications port (RS-232). Optional serial communications port (RS-232, RS-485/422) when using the optional EA-MG-SP1 Serial Port with DC Power Adapter.	
• Expansion Connection		Yes – used with optional Keypad Bezels, EA-MG-BZ1 & BZ2, and EA-MG-P1 DC Power Adapter, and EA-MG-SP1 Serial Port with DC Power Adapter.	
Screen Objects			
• Functional Devices		Pushbutton, Switch, Indicator Button, Indicator Light, Graphic Indicator Light, Numeric Display, Numeric Entry, Inc/Dec Value, Bar Graph, Bitmap Button, Static Bitmap, Dynamic Bitmap, Recipe Button, Static Text, Lookup Text, Dynamic Text, Scroll Text, Screen Change Pushbutton, Screen Selector, Adjust Contrast, Function, Key Configuration Object, Realtime Graph, Line Graph, Analog Meter	
• Static Shapes		Lines, Rectangles, Circles and Frames	
• Displayable Fonts		Fixed fonts: 4x6, 6x6, 6x6B, 6x8, 8x16, 8x32, 8x64, 16x16, 16x32, 16x64, 32x16, 32x32, 32x64, and Windows fonts	
*Note: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.			
C-more 3-inch Micro panel specifications continued on next page.			



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 No fuse required when directly connected to a PLC or PC with recommended cable.	
• Maximum Inrush Current		1 A for 500 µs	
• Acceptable External Power Drop Duration		Maximum 1ms	
Environmental*			
• Operating Temperature		0 to 50 °C (32 to 122 °F) Maximum surrounding air temperature rating: 50 °C	
• Storage Temperature		-20 to +60 °C (-4 to +140 °F)	
• Humidity		5–95% RH (non-condensing)	
• Environmental Air		For use in Pollution Degree 2 Environment	
• Vibration		IEC60068-2-6 (Test Fc), 5-9 Hz: 3.5 mm amplitude, 9-150 Hz: 1.0G, sweeping, at a rate of 1 octave/min. (±10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock		IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity		NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1µs pulse EN61000-4-2 (ESD), EN61000-4-3 (RFI), EN61000-4-4 (FTB), EN61000-4-5 (Surge) 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 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 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 μ s	8 A for 800 μ s - EA1-T4CL 13 A for 800 μ s - EA1-T6CL
• 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. (\pm 10%), 10 sweep cycles per axis on each of 3 mutually perpendicular axes	
• Shock	IEC60068-2-27 (Test Ea), 15 G peak, 11ms duration, three shocks in each direction per axis, on 3 mutually perpendicular axes (total of 18 shocks)	
• Noise Immunity	NEMA ICS3-304 (EN61131-2) RFI, (145MHz, 440Mhz 10W @ 10cm) Impulse 1000V @ 1 μ S pulse EN61000-4-2 (ESD), EN61000-4-3 (RFI), EN61000-4-4 (FTB), EN61000-4-5 (Surge) EN61000-4-6 (Conducted), EN61000-4-8 (Power frequency magnetic field immunity)	
• Enclosure	For use on a flat surface of Type 1, 4X enclosure (Indoor use only)	
• Agency Approvals	CE (EN61131-2), UL508, CUL Canadian C22.2 No. 142-M95, UL File E157382, CSA 234884	
Physical:		
• 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