

EATON HMI/ Touch Panels

EATON

Cutler-Hammer

CONTROL
ENGINEERING



2006

ENGINEERS'
CHOICE
AWARDS

from
\$281



Robust. Flexible. HMI changes the way you interface.

Today's marketplace is all about how you interface—with customers, suppliers and your machinery. FactoryMation proudly offers a new and easy way to interface, HMI. Available in 4", 6", 8" and 10" models, HMI is a true analog touchscreen operator interface with programmable function buttons for the most robust applications. With the ability to store recipes, historical and alarm data, or transfer that data to a USB memory stick, using HMI makes interfacing with your machinery easier than ever.

Easy Configuration. Seamless Integration.

HMI simplifies configuring application parameters with features and software that provide added capabilities and make monitoring your system intuitive. Eaton's goal is to make the pieces of your process interface seamlessly.

Complete Project Storage

HMI stores your entire application, including images, so editing won't require original source files. If your computer fails or years from now you need to edit the application, there's no need to track down old original source files. HMI is the source. Flexibility, plus the security of password protection, makes HMI the perfect operator interface for any user.

All sizes, all features



All HMI touch panels feature true analog touch screen technology, along with built-in programmable function buttons starting at \$281 in 4-, 6-, 8-, and 10-inch models. All HMI products include 3 serial communication ports for simultaneous multiple PLC protocol connectivity, USB program upload/download port, real-time clock calendar, and support for over 20 different PLC/controller drivers. Additional features include USB data logging and USB printer support, battery backed SRAM retentive memory, security for system setup and program password protection.

Do More with Macros

Its easy-to-use macro ability, with the strength to handle even the most complicated applications, allows HMI to help you manage your machine more efficiently than ever. From simple math, storing and manipulating trends, data, and communications, to sending data from one PLC to another, macros make HMI the easiest interface on the market.

HMI Hardware/System Features:

- Best price-performance touch panel from 4" to 10" starting at \$281
- True analog touchscreen with no grid restrictions
- 3 Communication ports on all models, RS232/485/422
- Communicate to two or three different protocol PLCs from one touch panel
- Over 20 different PLC/Controller drivers supported
- Standard USB-B programming Upload/Download port
- USB-A historical data logging (4, 8, and 10" models)
- USB-A printer support
- Built-in configurable function keys on all models
- Battery backed SRAM retentive memory storage
- Advanced security for system setup and 10-level program password protection
- Built-in real time clock/calendar on all models
- Online and offline simulation and editing
- Real time trending
- Trend stored data
- Alarming and alarm storage
- Alarm frequency
- Event storage (History)
- Macro programming
- Multi-language
- Recipe storage
- Auto-scale application from 4" to 10" or 10" to 4"
- 2 year Warranty

Expansion I/O:

- Add I/O to 6", 8", or 10" HMI for direct control without an ELC, starting at \$154

FREE Software Download

Fully functional programming software. No demo time-outs. Registered users can download at www.factorymation.com.

To order call **1.800.972.0436** or visit factorymation.com

No Games, No Gimmicks...

...Just Great Products at Great Prices!!!

EATON HMI Touch Panels



FREE Software Download

Fully functional programming software. No demo time-outs. Registered users can download at www.factorymation.com.

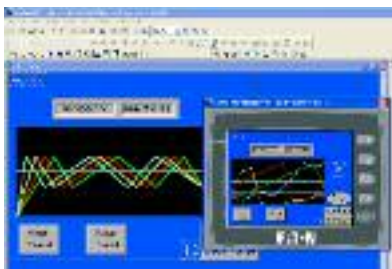
HMI Soft: Eaton Operator Interface Programming S/W

HMI Soft programming software makes touch panel project development simple and fast. Easy-to-use Windows-based tools and menu guide the user through developing a project. Extensive debugging and simulation features test and correct any errors without connecting hardware.

Online and Offline Simulation

HMI Soft includes a powerful simulation feature that includes the capability for both offline and online simulation.

Offline Simulation View



Offline simulation allows the user to simulate object functions without requiring connected hardware. The majority of project debugging can be accomplished even during offline development.

Online Simulation View



Online simulation and editing with connected hardware allows the user to control screens from HMI Soft. All screen objects can be activated using your mouse.

Part #	Description	Price
HMI04BU	4-inch Blue Mode Monochrome, 8 shades of blue, 4 built-in function keys, 24VDC input power	\$281
HMI06BE	6-inch Blue Mode Monochrome, 16 shades of blue, 4 built-in function keys, 24VDC input power	\$387
HMI06GE	6-inch Gray Scale Monochrome, 16 shades of gray, 4 built-in function keys, 24VDC input power	\$419
HMI06CE	6-inch STN Color, 256 colors, 4 built-in function keys, 24VDC input power	\$631
HMI08CE	8-inch TFT Color, 65536 colors, 6 built-in function keys, 24VDC input power	\$1055
HMI10CE	10-inch TFT Color, 65536 colors, 7 built-in function keys, 24VDC input power	\$1,691
HMIECENT	Ethernet Expansion Module adds 10/100 MB Modbus TCP ability (6", 8" or 10" HMI units)	\$95
HMIEC0806	I/O Expansion Module providing 8 DC inputs and 6 relay outputs	\$154
HMIEC1612	I/O Expansion Module providing 16 DC inputs and 12 relay outputs	\$250
HMISOFT	Programming Software CD and User Manual, Windows 2K/XP	\$32
FM-USBAB-10	Hi-Speed USB 2.0 Certified A to B cable, 10' (for programming EATON HMI)	\$10
ELC-CBPCELC1	ELC-GP to HMI communication cable, 9-pin D-sub connector to 8-pin mini din, 1 meter (same as ELC programming cable)	\$19
ELC-CBPCELC3	ELC-GP to HMI communication cable, 9-pin D-sub connector to 8-pin mini din, 3 meters (same as ELC programming cable)	\$22

Powerful Multi-state Objects

- Up to 255 states for a single object
- Reduces the need to duplicate screens
- Develop standard object and just add states for more functions
- Great solution for repeat status displays to include on each screen



One-Click Bitmap Scaling

HMI Soft has a unique feature for resizing bitmaps automatically within your program. No need to pre-size your bitmap images in another graphics software package.



Built-in Macro Language

HMI Soft includes a complete Macro Script editor for developing custom functions without any 3rd party software required.

- Simple If-Then-Else BASIC-type macro language with complete commenting and syntax check features
- Easy point-click-select command library
- Create global Background macros or individual object, or screen specific macros
- Complete access to all PLC variables using the same tools as standard screen objects
- Great feature for passing data between multiple PLCs from different vendors, eliminating the need for expensive hardware protocol converters or PLC Co-Processor modules



Trending, Alarming, Logging, Recipes and more..

HMI Soft includes advanced features often only found in more expensive PC-Based SCADA/HMI packages. Trending, Alarming, Data logging, Recipes, multiple language configuration and much more are all included in HMI Soft. These features can often eliminate the need for adding a dedicated PC with custom software to your control system.



FREE Ground Shipping!
for online orders over \$500

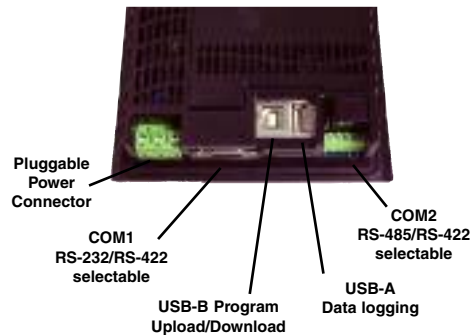


Connect to almost anything

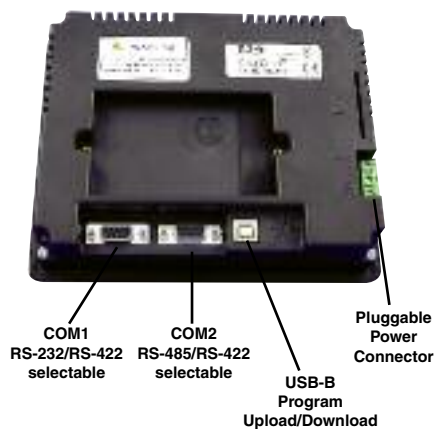
The Eaton HMI includes multiple connection ports across all models for easy communication, programming and data logging. No need to upgrade to a larger screen size just for more ports when they're included on even the smallest 4" model.

- 3 serial ports can be used simultaneously for RS232/485/422 connections to multiple PLCs
- USB-B port for fast and easy program upload/download
- Removable data logging USB-A (4, 8, and 10" models)
- External printer USB-A connection

4 inch Panel



6 inch Panel



8 and 10 inch Panel



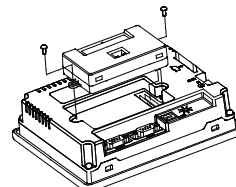
Expansion Modules (for 6", 8", 10")

Add Ethernet Modbus connectivity or add I/O to create a stand-alone HMI controller.

- 10/100 MB Modbus TCP
- I/O Expansion Module 14 I/O or 28 I/O



HMIEC1612



Installing the Expansion Cards

PLC Drivers

- Allen Bradley MicroLogix, SLC 500
- Danfoss VLT 2800 (FC Protocol)
- Eaton Cutler-Hammer ELC Series
- Facon FB Series
- Festo Festo PLC
- GE Fanuc 90 Series SNP
- Hust CNC Controller, Hust CNC Controller v2
- Jetter Nano Series
- Keyence KV/KZ Series
- Koyo DL/SU Series(DirectNet), K-Sequence
- Lenze LECOM-A/B protocol
- LG Master-K 120S/200S, Glofa GM6 CNET, Master-K CNET
- Li Yan LYPLC EX
- M2i M2i Master, M2i Slave
- Matsushita/Aeromat FP Series
- Mirle FAMA SC
- Mitsubishi FX Series, FX2N, A Series/J71UC24, A2A/A2AS/A2USH A1SH/A3N/A2ASH CPU Port, Q Series CPU Port
- MKS CT150
- MODBUS ASCII (Master) 984 RTU (Master), RTU 2W (Master), ASCII Hex Address (Master), RTU Hex Address (Master), ASCII nW (Master), RTU nW (Master) ASCII (Slave), RTU (Slave)
- Modicon/Telemecanique TSX Micro (Uni-Telway) NEZA (Uni-Telway), TWIDO
- NIKKI DENSO NCS-FI/FS Series
- Omron C Series, Cj1 Series, TPM1A
- SIEMENS S7 200, S7 300 (with PC Adapter), S7 300 (without PC Adapter)
- TECO TP02
- Texas Instruments Ti435
- Vigor M Series
- VIPA S7 300 (with PC Adapter)
- YOKOGAWA ACE(FA-M3R)

General Specifications

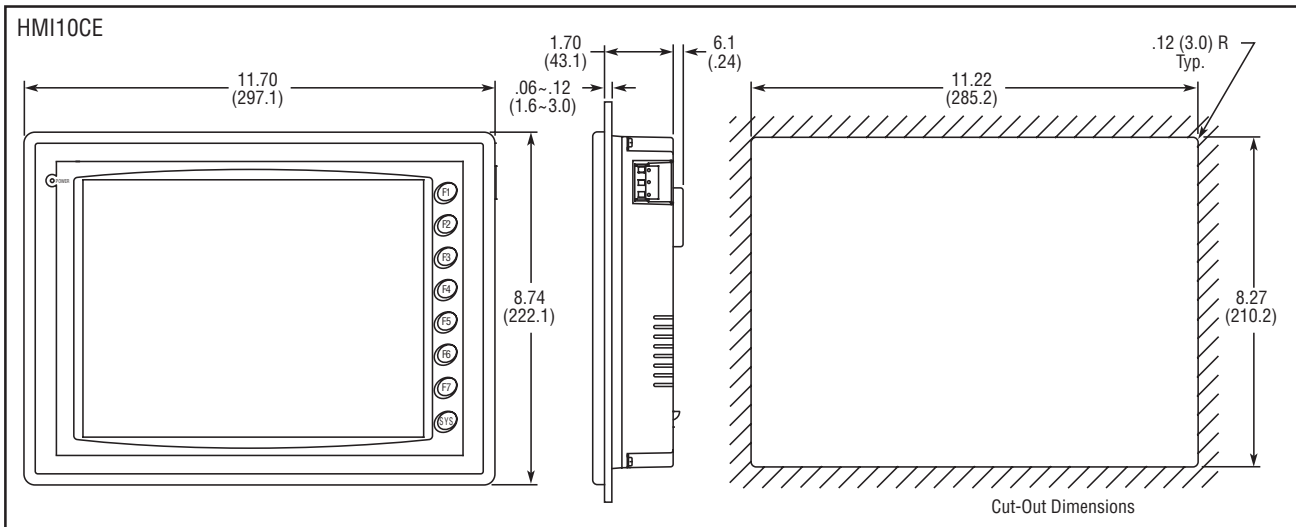
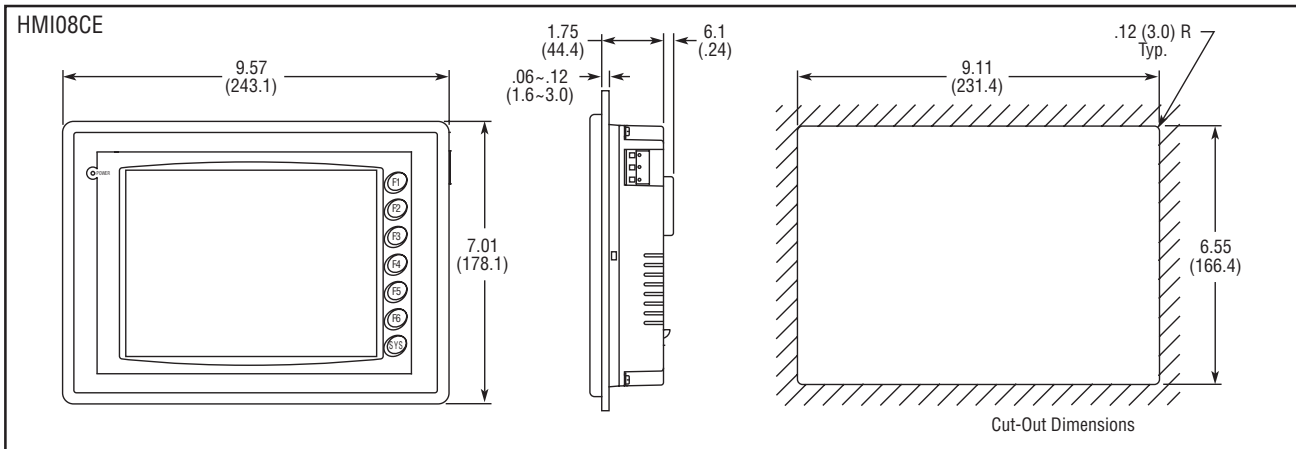
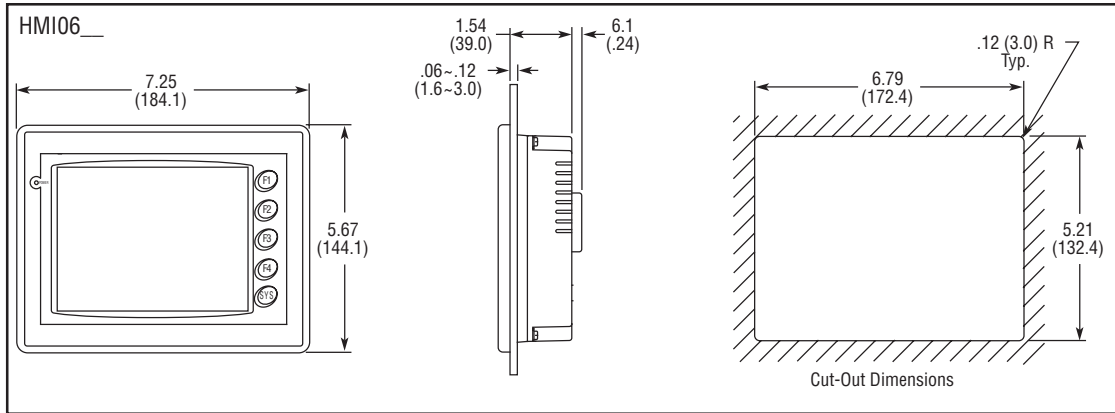
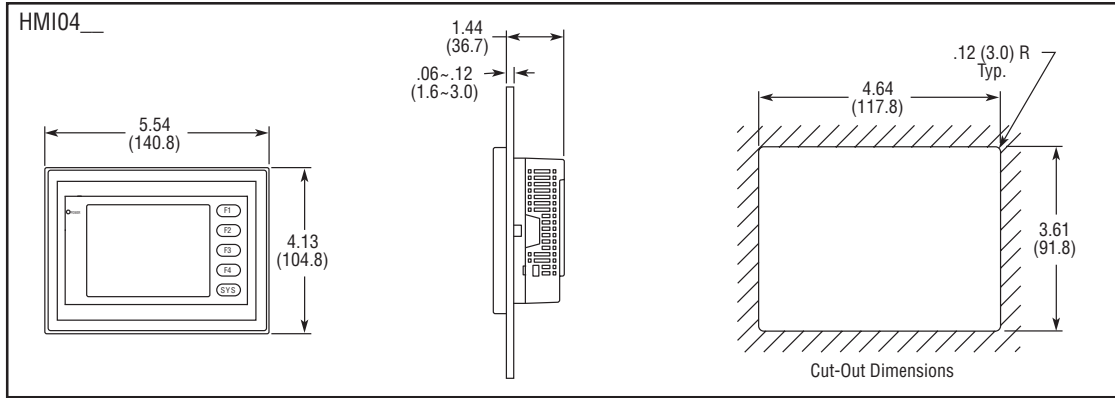
Model	HMI04BU	HMI06BE	HMI06GE	HMI06CE	HMI08CE	HMI10CE
Input Power	24 VDC (20.4VDC~28.8VDC) (-15% to +20%)					
Current Consumption	110mA Max	320mA Max	300mA Max	300mA Max	420mA Max	625mA Max
CPU	32-bit RISC Micro-controller / 206.4 MHz					
NOR Flash ROM	NOR Flash ROM 2 MB (System: 1 MB / User: 1 MB)	NOR Flash ROM 4 MB (System: 1 MB / User: 3 MB)		NOR Flash ROM 8 MB (System: 1 MB / User: 7 MB)		
SDRAM	4 MB	16 MB	16 MB	16 MB	32 MB	32 MB
Non-volatile Retentive Memory	128K	512K	512K	512K	512K	512K
USB-B Interface for Upload/Download	✓	✓	✓	✓	✓	✓
USB-A Interface for Data Logging/Printer	✓				✓	✓
Expansion Slot	-	✓	✓	✓	✓	✓
LCD Module	3.8" STN LCD (8 Shades of Blue)	5.7" STN LCD (16 Shades of Blue)	5.7" FSTN LCD (16 Shades of Gray)	5.7" STN LCD (256 Colors)	8" TFT LCD (65536 Colors)	10.4" TFT LCD (65536 Colors)
Resolution	320 x 240	320 x 240	320 x 240 pixels	320 x 240	640 x 480	640 x 480
Backlight	LED	CCFL	CCFL	CCFL	CCFL	2CCFL
Function Key	User Defined Key x 4				User Defined Key x 6	User Defined Key x 7
Real Time Clock/Calendar (RTC)	Built-In					
Backup Battery	3V Lithium Battery CR2032 x 1 / Battery Life: 5 Years					
Buzzer	85dB					
Cooling Method	Natural Air Circulation					
Safety Approval (Waterproof from Front)	IP65 / NEMA 4X / CE, UL					
Operating Temp.	32° - 122°F (0° - 50°C)					
Storage Temp.	-4° - 140°F (-20° - 60°C)					
Ambient Humidity	10% - 90% RH (0 - 40°C), 10% - 55% RH (41 - 50°C)					
Vibration Resistance	IEC61131-2 compliant, when vibration is NOT continuous: 5 Hz - 9 Hz 3.5 mm, 9 Hz - 150 Hz 1G, X, Y, Z directions for 10 times					
Weight in Lbs. (kg)	.69 (.315)		1.69 (.768)		2.52 (1.147)	3.79 (1.721)

To order call **1.800.972.0436** or visit **factorymation.com**

No Games, No Gimmicks...

...Just Great Products at Great Prices!!!

HMI Dimensions



FREE Ground Shipping!*
for online orders over \$500



ELC GRAPHIC PANELS



Product Description

ELC Graphic Panels are simple to program and easily connect to ELC products. ELC graphic panels make modifying an application quick and easy. ELC graphic panels also connect to many other devices. With over 30 objects that can be placed anywhere on the display, these tough panels also communicate to other major controllers. Graphic panels have two serial ports which can be used simultaneously to communicate. Transfer applications to or from Graphic Panels using the handy transfer module. Ten programmable functions keys provide easy to change pages, input numeric values, enter alphanumeric passwords, set, reset and more. Create alarms, password protect, import bitmaps, and use different fonts.

Protocols Supported

- Eaton ELC
- MODBUS ASCII
- MODBUS RTU
- AB DF1
- Mitsubishi FX Series
- Mitsubishi FX2N Series
- Koyo K-Sequence
- LG 200S
- OMRON C-Series
- Siemens S7-200 Series
- Eaton D50/D32LT, D320
- ASCII Slave Mode
- And more...

FREE Software Download

Fully functional programming software. No demo time-outs. Registered users can download at www.factorymation.com.

ELC-GPSoft Programming Software

The ELC-GPSoft programming software is an easy-to-use screen development tool that supports common drag-and-drop, and point-click fill-in-the-blank Windows feature to allow for quick screen configuration.

- Static and dynamic text displays with scalable font sizes
- Numeric entry and display with configurable decimal point, leading zeros, signed values
- Full library of static and dynamic bitmaps for switches, buttons, indicators, and symbols or create your own
- Specialty objects for bar graphs, meters, multistate displays, clock/calendar and trend curves



Part Number	ELC-GP02	ELC-GP04
Description	160 x 32 pixels, 10 Function Keys, Monochrome	128 x 64 pixels, 10 Function Keys, Monochrome
Price	\$133	\$186
General Specifications		
Input Power	24 VDC (20.4VDC~28.8VDC) (-15% to +20%)	
Current Consumption	125mA Max	125mA Max
Display Screen	STN-LCD, Monochrome	
Back-light	Always ON or Time-delay OFF (1 - 99 minutes)	
Bulb life	50,000 hours	
Resolution	160X32 pixels	128X64 pixels
Display Range	72 mm (W) X 22 mm (H)	67mm W X 32mm H, 3.00" (diagonal preferred)
Contrast Adjustment	15-step contrast adjustment	10-step contrast adjustment
Language Font	ASCII: characters (including European Fonts)	
Font Size (ASCII)	5 X 8, 8 X 8, 8 X 12, 8 X 16	
ALARM Indication LED	Power on indication, flash for comm. error or other alarm, and special indication by user programming	
RS-232 LED (Yellow)	Flashes when communicating	
RS-485 LED (Green)	Flashes when communicating	
Program Memory	256KB flash memory	
Communication Interface	COM1: RS-232 (9 PIN D-SUB male, 4800 bps - 115200 bps) COM2: RS-485/RS-422 (5-Pin Removal Terminal, 4800 bps - 115200 bps)	
Extension Slot	Program Copy Card Slot	
Environmental Specifications		
Temperature	Operating: 32° - 122°F (0° - 50°C); Storage: -4° - 140°F (-20° - 60°C)	
Humidity	20 - 90% RH (non-condensing)	
Vibration	0.5 mm displacement, 10 - 55 Hz, X, Y, Z three directions and two hours for each direction	
Impact	10G, 11 mS, from X, Y, Z three directions and three times for each direction	
Weight	0.53 Lbs. (0.24 kg)	
Cooling Method	Natural Air Cooling	

Accessories

Part Number	Description	Price
ELCSOFTGP	ELC-GP Programming Software CD and printed user manual, Windows 2K/XP	\$25
ELC-GPXFERMOD	ELC-GP Program Transfer Module	\$52
ELC-CBPCGP3	ELC-GP RS232 serial Programming Cable, PC to ELC-GP, 9-pin D-sub both ends, 3 meters	\$22
FM-USB232A	IOGEAR USB 1.1 to Serial (DB-9 male) Converter Cable, 14 in. (40.64 cm.) cable length	\$28
ELC-CBPCELC1	ELC-GP to HM/i communication cable, 9-pin D-sub connector to 8-pin mini din, 1 meter (same as ELC programming cable)	\$19
ELC-CBPCELC3	ELC-GP to HM/i communication cable, 9-pin D-sub connector to 8-pin mini din, 3 meters (same as ELC programming cable)	\$22

Dimensions

