# M -730T

## Features

- Bright 5.6" TFT 256 Color Display
- Analog Touch Screen Interface
- Connects to PLC's via Single Cable to Programming Port
- FREE Design Mode, Windows<sup>™</sup> based Setup Software Included
- Intel® Xscale PXA255 200MHz processor
- Built-in Recipe memory and Real Time Clock

#### LCD with Touch Panel

The MMI-730T is a touch screen interface for programmable controllers. No special PLC programming is required for data access. The unit displays pictorial information, data and messages that are preloaded into it using a Personal Computer. Touch screen areas can be programmed to perform various functions. Free setup software for configuring the MMI-730T is included with each unit. The Easy Builder Screen Editor offers fast and intuitive configuration. This simplifies application design while reducing development costs. The MMI-730T is rated NEMA4/IP65 from the front when mounted properly. It is designed for industrial working environments.

#### Connect directly to most PLCs

The MMI-730T uses each PLC's communication protocol to read or write data. It supports RS232 and RS485 for direct connection to PLCs with a single cable. It does not require the PLC to run any special program for data communication. This allows the unit to be used with existing systems. If desired, the unit can be programmed to work in conjunction with the PLC, responding to PLC commands. This brings out the PLC's full potential and improves operator efficiency. The MMI-730T allows the user to optimize communications by selecting the data block size that is uploaded with each communication to the PLC. The EasyWindow utility provided with EasyBuilder is used to further monitor and tweak PLC communication efficiencies.

#### Partial list of PLC Drivers

More supporting device drivers are being developed every day.

Allen Bradley DF1 Allen Bradley DH485 Crouzet XC03 DELTA DVP EMERSON EC20 ENTERTRON MODBUS RTU FACON FB Fuji NB Series GÉ FANUC SNP-X HITACHI EH-150 IDEC Micro3 **IDEC OpenNET** INDUSTRIAL INDEXING SYS-TEMS, INC. Jetter Nano Keyence KV-16DT KOYO Direct Lenze LG GLOFA Cnet

LG Master K Matsushita FP (Aromat/Panasonic) MITSUBISHI A Series **MITSUBISHI F Series MITSUBISHI J2** MODICON MODBUS RTU MODBUS RTU TCP/IP OMRON SAIA PCD Samsung SPC-10 Sharp JW Series SIEMENS S7-200 SIEMENS S7/300 SIMATIC TI505 **Telemecanique Unitelway** Toshiba T Serial VIGOR M Series Yokogawa PLC Series

### **Color Graphic Display Panel** and Touch Screen



#### General Specifications

| acheral opcomoat     |  |  |  |  |  |
|----------------------|--|--|--|--|--|
| Input power          | 23-25 VDC, 500 mA @ 24VDC                      |  |  |  |  |
| CE                   | Complies with EN50081-2 and EN50082-2          |  |  |  |  |
|                      | standards                                      |  |  |  |  |
| EMI                  | Complies with FCC Class A (Ferrite core        |  |  |  |  |
|                      | required when using unshielded power supply    |  |  |  |  |
|                      | wires)   |  |  |  |  |
| Isolation resistance | Exceeds 50 MΩ at 500VDC                        |  |  |  |  |
| Vibration endurance  | 10 to 25 Hz (X,Y,Z direction 2G 30 minutes)    |  |  |  |  |
| Protection structure | NEMA 4 / IP65 front panel (when mounted with   |  |  |  |  |
|                      | gasket seal)                                   |  |  |  |  |
| Temperature          | Operating: 32 to 113 °F (0 to 45 °C); Storage: |  |  |  |  |
|                      | -13 to 158 °F (-25 to 70°C)                    |  |  |  |  |
| Operation humidity   | 10 to 90% RH Non Condensing                    |  |  |  |  |
| Enclosure            | Plastic: Polybutylene Terephthalate (PBT) and  |  |  |  |  |
|                      | Polycarbonate(PC)                              |  |  |  |  |
|                      |  |  |  |  |  |

#### Hardware Specification 730T/730T-E

| LCD Display         | 5.6" TFT 256 color                               |  |  |
|---------------------|--|--|--|
| Contrast Ratio      | 150:1  |  |  |
| Brightness cd/m2    | 500  |  |  |
| Back light          | CCFLx1, MTBF 30,000 hr                           |  |  |
| Resolution pixels   | 320(W) x 234(H)                                  |  |  |
| Viewing Angle       | Top 20°; Bottom 40°; Right 50°; Left 50°;        |  |  |
| Pixel size          | 0.118(W) x 0.362 (H) mm                          |  |  |
| Display area (mm)   | 120(W) x 90(H)                                   |  |  |
| Touch panel         | 4 wire analog resistive type                     |  |  |
| Touch granularity   | 1.5mm grid                                       |  |  |
| Touch Feedback      | Beeper and or Graphic Indicator                  |  |  |
| Surface hardness    | 4H   |  |  |
| Processor           | 32 bit RISC PXA255 200MHz                        |  |  |
| Flash Memory        | 2MB flash ROM                                    |  |  |
| Compact Flash Slot  | (-E Option) Used for project transfers only      |  |  |
| System Memory       | 4MB DRAM   |  |  |
| Battery Held Memory | 128kB with Y2K compliant Real Time Clock/        |  |  |
|                     | Calendar   |  |  |
| Serial ports        | 1 RS-232 (Controller port), 1 RS-485 (Controller |  |  |
|                     | port) and 1 RS-232 485 (PC port)                 |  |  |
| Ethernet port       | (-E Option) RJ-45, 8 wire (10 BaseT) TCP/IP      |  |  |
| System diagnostic   | Watch dog timer, power failure detection         |  |  |
| Dimensions          | H x W x D inches (H x W x D) mm                  |  |  |
| Bezel:              | 5.90 x 8.00 x 2.00 (150 x 204 x 48 )             |  |  |
| Cutout:             | 5.43 x 7.56 (138 x 192 )                         |  |  |
| Weight              | Approx. 1.9 lbs. (0.85 kg)                       |  |  |
|                     |  |  |  |

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#### EasyBuilder Software Specification

| Screen editor   | EasyBuilder Version 2.7.0 or later<br>(requires Windows 98 / ME / 2000 / XP) |  |
|-----------------|--|--|
| No. of window   | 1 ~ 1999, limited by memory  |  |
| No. of object   | Up to 500 per window, limited by memory                                      |  |
| Text strings    | limited only by memory   |  |
| Bitmap graphics | 256 KB per graphic, limited by memory  |  |
| Support PLC     | Most popular PLC's   |  |
| Macro scripts   | Up to 256 Macro scripts per project, limited by memory                       |  |

Computer requirements include at least a Pentium 90Mhz PC, 16MB RAM, 10MB available hard disk space, minimum 800x600 resolution VGA, and one available RS-232 serial port.

EasyBuilder has a complete set of drawing tools as well as the ability to import and place bitmaps. Summary of EasyBuilder Objects Bit Lamp - Place an indicator that is bit triggered

Word Lamp - Place an indicator that is word triggered

- Set Bit Set a bit on a button press, button hold, window change, backlight activation or data entry.
- Set Word Set a word on a button press, button hold, window change, backlight activation or data entry.
- Toggle Switch Toggle a bit
- MultiState Switch Increment/Decrement a word Function Button Perform a system operation

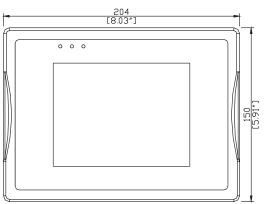
- Numeric Input / Display Change/Display digital data ASCII Input / Display Change/Display alphanumeric data X,Y Move Animation Move an object via pixel coordinates
- Spot Move Animation Move an object on a predefined path
- Direct Window Popup Window on Bit status change
- Indirect Window Popup Window depending on Word's value
- Alarm Display display predefined text strings in response to bit changes
- Trend Graph Plots active data on a trend
- XY Plot Plots active data on a grid BarGraph
- Meter Display one of 4 different types of meters
- Scrolling Alarm display predefined text strings in response to bit changes
- Event Display display and log predefined text strings in response to bit or word changes
- Recipe Transfer move data to and from the PLC
- PLC Controls: Change window, Backlight control, Macro Execution, Data Transfer

#### **Ordering Information:**

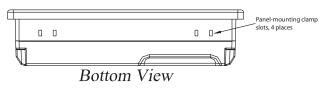
| Part Number | Description |
|-------------|-------------|
|-------------|-------------|

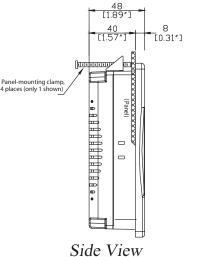
- Graphic Interface with 5.6" Color LCD display **MMI-730T** and Touchscreen, Real Time Clock. Replaces **MMI-720**
- **MMI-730T-E** Graphic Interface with 5.6" Color LCD display and Touchscreen, Real Time Clock with Ethernet and Compact Flash options. Replaces MMI-750 and MMI-750T

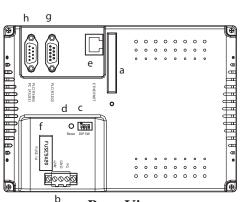
#### **Dimensions**



Front View







**Rear View** 

| a. | CompactFlash? slot | e. | Ethernet port          |
|----|--------------------|----|------------------------|
| b. | Power terminal     | f. | Fuse                   |
| c. | DIP Switch         | g. | PLC [RS-232]           |
| d. | Reset button       | h. | PLC [RS-485]/PC[RS232] |