

# MMI-210

## Combination Register Access Panel with Programmable Push Buttons

### Features

- 2 Line by 20 Character Backlit LCD or VFD Display
- Easy, Smart Cable Hookup to PLC Programming Port
- Programming Software Allows Labels to be Assigned to Registers and Bits
- Setup software can convert projects from one PLC brand to another
- Programmable Lists of Commonly Used Registers and Bits
- Security Lockout of Registers and Bits
- 20 Programmable (40 using shift key) Push-Buttons and LED's



- Programmable Open Collector Alarm Output
- Beeper for Audio Feedback of Key Presses and Alarms.

### Description:

The MMI-210 is designed to:

1. Provide a convenient way for machine operator to:
  - a) View machine status and parameters.
  - b) Change applicable parameters of operation.
  - c) Maintain the running of a machine.
2. Enhance the capabilities of a machine through:
  - a) User defined Push-Button interface.
  - b) Annunciation of user defined conditions through LED's.

The MMI-210 interfaces to the PLC through a Smart Cable which is connected to the PLC programming port. No additional communications modules are necessary. Just plug in both ends of the cable and you are ready to go!

### Application:

Typical applications include:

Changing timer or counter set points; changing batch recipes; monitoring shift production; troubleshooting I/O points and many other applications where register access is needed.

**Setup** -- The MMI-210 is programmed using a Personal Computer. Using the Windows™ based configuration software, parameters can be defined and downloaded to the MMI-210.

**Annunciator LED's** -- The MMI-210 has 20 LED's for the purpose of annunciation. Each LED corresponds to a bit in a user designated register in the PLC.

**Programmable Push-Buttons** -- The MMI-210 has 20 (40 using the shift key) user definable Push-Buttons. A Push-Button can be defined to perform any one of the following actions:

- a) TURN ON a bit in the PLC.
- b) TURN OFF a bit in the PLC.
- c) TOGGLE a bit in the PLC.
- d) HOLD ON a bit in the PLC.
- e) HOLD OFF a bit in the PLC.
- f) Download a CONSTANT to a specific location in the PLC.
- g) Display a Labeled register or bit in a List.

**List Definitions** -- The Lists are user defined lists of frequently viewed register and bit locations. Up to 20 lists can be created. They are programmed using the MMI-210 Configuration Software.

Registers and bits can be:

- Assigned labels
- Password Protected
- Viewed as Signed Integer, Decimal, Binary, Hexadecimal, or BCD values (as applies to a particular PLC)
- Assigned a decimal point location
- Assigned High and Low limits for operator input values.

These labels are displayed whenever the register or bit is called up. The registers and bits in a list can be accessed conveniently by pressing the NEXT or PREV keys.

**Alarm Open Collector Output --** The Open Collector Output is controlled by a PLC register. The O.C. output can also be set to pulse when a key is pressed. (On/Off = Active-Sinking/Inactive-High Impedance).

**Beeper --** The MMI-210 contains a piezo electric beeper which is programmed in a similar procedure as the LED's. The beeper can also be disabled by the programming software.

**Operation:**

The NEXT and PREV keys step up or down through a Queued list as they are pressed. In this manner, any register or bit in a list can be viewed.

The register or bit status being displayed can be changed by use of the NUM key (See below). Also, the displayed Queue List can be changed by pressing a pre-programmed Push-Button designated to call up a specific list.

The MMI-210 can access counter/timer accumulators and presets. This is indicated by a P or A next to the displayed counter / timer number.

Registers and bits may be viewed in one of two ways:

1. Full screen: The entire display is used to show the label, the register or bit number and the register value or bit status. The Labels can be up to 20 characters. For Example: Showing Timer 1. Labeled as "Dwell Timer"

Dwell Timer	
T0001A	789

2. Half screen: Two registers or bits are displayed, one on each line of the display. The Label and register value or bit status is shown on each line. The Labels are truncated to 11 characters. For Example: Showing a register. Labeled as "Gallons" and a bit. Labeled as "Pump #1"

Gallons	12340
Pump #1	OFF

**ENTERING DATA --** The NUM key is used for changing bit, register, preset and accumulator values.

- A new value may be entered into a register if:
- a) The register is not Password protected; or
  - b) The Password is assigned a value of 0000.

Press the NUM key to change a bit status, register, preset or accumulator value while it is being displayed. You will notice that the last digit of the displayed value or status is flashing. This indicates that the unit is ready to accept a new value. Use the CLR key and Number keys to change the flashing value. Press ENT to accept the value.

If the register or bit is assigned write protection the unit will prompt the operator for the Write Password when the NUM button is pressed. The password is entered the same way that new data is entered as described above.

**MMI Setup Software Information**

The Windows® based MMI setup software is a convenient way to setup this PLC Interface Product.



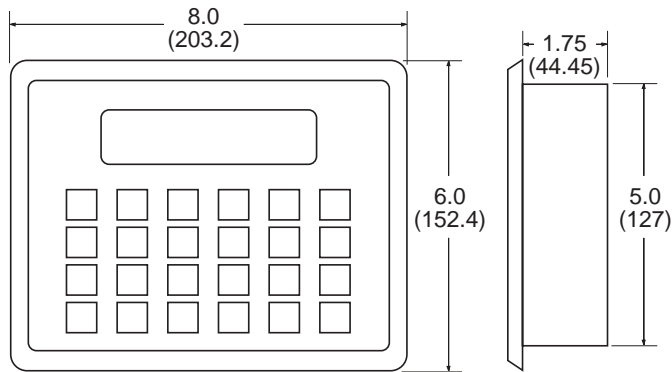
Our software makes Function Key setup a snap! Create, Edit and View messages with Point & Click Ease!

Text Interfaces

## SPECIFICATIONS

<b>Power</b>	12 to 24 VDC, 6W Maximum
<b>Display</b>	LCD Backlit Liquid Crystal Display; 2 lines; 20 characters per line; character height is 0.2" VFD Vacuum Fluorescent Display; 2 lines; 20 characters per line; character height is 0.2"
<b>Bezel</b>	NEMA 4 / IP65 rated membrane keypad
<b>Temperature</b>	Operating: - 0 to 50 degrees C Storage: -40 to 90 degrees C
<b>Humidity</b>	10% to 90% ( Non condensing)
<b>Size</b>	8" W x 6" H x 1.75" D (203.2 mm x 152.4 mm x 44.45 mm)
<b>Panel Cutout:</b>	7.1"W x 5.1"H (180.3 mmWx 152.4 mm H)
<b>Communication</b>	Using the programming or the standard communication port of the PLC
<b>Memory</b>	8k EEPROM expandable to 32k
<b>Open Collector O/P</b>	24 Volts at 100 mA maximum
<b>Immunity to ESD</b>	8 kV Air, 6 kV Contact as per IEC801-2
<b>Immunity to Transients</b>	2 kV as per IEC801-4 2 kV 1 us Impulse Noise
<b>Radiated Susceptibility</b>	10 Volts/meter as per 1EC801-3
<b>Emissions</b>	EN5501,1 CISPR A
<b>Approvals</b>	CE Pending

### Dimensions:



PANEL CUTOUT: 7.1 (180.3) X 5.1 (129.5)

All Dimensions in inches (mm)

## How To Order:

<b>EXAMPLE:</b>	<b>MMI210</b>	<b>V</b>	<b>32</b>
<b>Series</b>	MMI-210		
<b>Display Type</b>	L= LCD V=VFD		
<b>Options (add to end of part number)</b>	32 = 32K of storage A = 115 VAC Power B = 230 VAC Power		

### For PLC Type

Use Smart cable part number as indicated below. Also refer to SMIC Cables in the Accessories Section of this catalog. The MMI-210 will not operate without a smart cable and software.

<b>EXAMPLE:</b>	<b>SMIC-</b>	<b>GE90-</b>	<b>05</b>
<b>Series</b>	SMIC-GE90-05		
<b>PLC Type</b>	<ul style="list-style-type: none"> <li>AB500 AB SLC500 types with DH485 port</li> <li>ABDF1 AB SLC500 5/03, 5/04 with DF1 port</li> <li>ABMICRO AB MicroLogix only</li> <li>ABAIC For use with AB AIC Modules</li> <li>ARO All Aromat FP1 Series</li> <li>FUJI Fuji Flex Series NB, NJ and NS</li> <li>GE90 All GE 90 Series SNP Port</li> <li>IDECM1 Idec M1 and FA2J</li> <li>IDECM3 Idec Micro3 Series</li> <li>IDECM3C Idec Micro3C Series</li> <li>K205 Koyo DL230, DL240, DL250</li> <li>K305 Siemens Simatic 335, Koyo 340</li> <li>K405 Siemens Simatic 425, 435, Koyo 440</li> <li>KEY Keyence KV 10,16,24,40 &amp; 80, KV300</li> <li>MOD Modicon Micro 84; 884; 984; Open Modbus and J-Bus</li> <li>MODMICRO Modicon Micro 984</li> <li>MITFX Mitsubishi FX Series</li> <li>MITFXO Mitsubishi FXo only</li> <li>OMCK25 Omron C Series, (Host link modules)</li> <li>OMCH9 Omron CH Series</li> <li>OMCQM Omron CQM1 Series</li> <li>SIS5 Siemens S5 Series, 95, 100, 102, 103, 115</li> <li>SIS7 Siemens S7-200 Series</li> <li>TSBEX Toshiba EX Series &amp; M Series Program Port</li> <li>TSB485 Toshiba EX &amp; M Series RS-422 Link Port</li> <li>TSBT1 Toshiba T1 only</li> <li>TSBT2 Toshiba T2 and T3</li> <li>TSX07 Telemecanique TSX 07 (nano), TSX 37</li> <li>TSX17 Telemecanique TSX 17</li> <li>TSX47 Telemecanique TSX 47-40, TSX 47-20</li> </ul>		

### Cable Length

05 = 5 feet

### Accessories:

**ZA9M9F** - Five feet of cable with DB9 male connector and DB9 female connector.  
(PC end, normally used for "AT" COM1)

**ZA9M25F** - Five feet of cable with DB9 male connector and DB25 female connector.  
(PC end, normally used for "XT" or "AT" COM2)

**MMISOFT** - Setup software for MMI-1XX, IMMI-2XX and IMC2