ORMEC

HMI Touchscreens

ORMEC's MMI-8000 flatpanel touchscreens provide a variety of sizes and functionality for human-machine interfaces. MMI-8000 units are available in six, eight and ten inch screen sizes (diagonal), with TFT color displays.

The MMI-8000 touchscreen is designed to provide the operator an effective way to control machine operation. The operator can easily be alerted to machine alarms and status conditions. Different panels can be quickly selected to present different sets of machine functions typically found for setup, maintenance, changing product runs and fault conditions. Operator control functionality can be built into the MMI-8000 representing a typical factory operator panel, without the bulky hardware, I/O modules and wiring needed to build it.

Each individual panel can be designed and built in minutes using the "drag and drop" graphical objects found in the EasyBuilder 8000 application development utility. EasyBuilder 8000 includes a library of standard shapes to select from, as well as the ability to use bitmap images, when creating various panel objects. When upgrading a machine, the "look and feel" of an existing physical panel can be maintained to reduce operator retraining. After the design and installation of an MMI-8000 is complete, its flexibility allows the designer to easily add and change control functions without having to physically add switches, legend plates, I/O modules and their associated wiring.

MMI-8000 touchscreens include built-in recipe management, allowing for easy storage and retreival of machine setup parameters. Having this powerful capability in the HMI eliminates the need for developing recipe management in the machine control application program, saving software development time and simplifying the system design.

ORMEC's touchscreen operator interfaces provide a fully graphical, easy to use human-machine interface.

Each MMI-8000 unit is shipped with the latest revision of the EasyBuilder 8000 development software and an Ethernet crossover cable. All development communications are performed via Ethernet. The latest version of the EasyBuilder 8000 software is always available on the ORMEC web site. Projects created with the previous version of EasyBuilder for ORMEC's MMI-320/640 HMI series can be converted to EasyBuilder 8000 format using a conversion utility.

Operation

Communications with an SMLC controller can be through either a serial connection using Modbus

Ordering Guide

Operator Interface Terminals

MMI-8056	5.6" diagonal, 320w x 234h pixels, TFT Color, Ethernet
MMI-8080	8.0" diagonal, 640w x 480h pixels, TFT Color, Ethernet
MMI-8104	10.4"diagonal, 640w x 480h pixels, TFT Color, Ethernet

Each Operator Interface unit includes EasyBuilder 8000 development software and Ethernet crossover cable.

Ethernet Cables and Accessories

CBL-SMLC-MMI8/x	Serial Cable, SMLC to MMI-8000, RS-232, x ft.
EISK5-100T	Ethernet Switch, 100BASE-T, 5 port, 24 VDC input, DIN rail mount
CBL-ENET/x	Cable, Ethernet, RJ45, 3, 7, 10, 25, 50, 75 & 100 ft.
CBL-ENETX/x	Cable, Ethernet crossover, RJ45, 3, 7, 10 & 25 ft.

Development Software

Available at www.ormec.com

RTU, or Ethernet using Modbus/TCP. Screen objects are tagged to input and output registers that are mapped to input and output variables in the CoDeSys application program running on the SMLC. Touching a screen object, or entering data, sets the state of the variables in the SMLC application program. How the change of state is used in the program defines the object's control function.

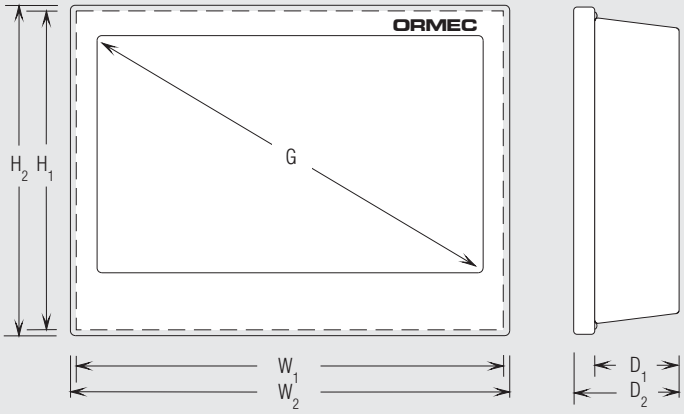
Graphical Panel Objects

- ❒ Pilot Light (Bit Lamp)
- ❒ Word Lamp
- ❒ Force Coil (Set Bit)
- ❒ Write Register (Set Word)
- ❒ Toggle Switch
- ❒ Multi-State Switch
- ❒ Function Key
- ❒ Numeric Input
- ❒ Numeric Display
- ❒ ASCII Data
- ❒ ASCII Display
- ❒ Moving Shape
- ❒ Animation
- ❒ Indirect Window
- ❒ Direct Window
- ❒ Alarm Display
- ❒ Trend Display
- ❒ XY Plot
- ❒ Bar Graph
- ❒ Meter Display
- ❒ Alarm Bar
- ❒ Recipe Upload/Download
- ❒ Event Display

Mounting & Sealing

MMI-8000 units are cabinet mounted, and feature a gasket and four or six mounting brackets to maintain a NEMA 4 rating.

Cabinet Mounted Unit Dimensions



	Dimension	MMI-8056	MMI-8080	MMI-8104
Mounting & Cutout	**G**	5.6" 142 mm	8.0" 203 mm	10.4" 264 mm
	H1	5.43" 138 mm	6.57" 167 mm	7.87" 200 mm
	W1	7.56" 192 mm	8.74" 222 mm	10.16" 258 mm
	D1	1.57" 40 mm	1.57" 40 mm	1.57" 40 mm
Overall	**H2**	5.91" 150 mm	7.04" 178 mm	8.35" 212 mm
	W2	8.03" 204 mm	9.45" 240 mm	11.26" 286 mm
	D2	1.89" 48 mm	1.97" 50 mm	1.97" 50 mm

LED Indicators

Each MMI-8000 unit has three status indicator LEDs to assist with installation and troubleshooting.

PWR - Indicates the unit has power.
CPU - Indicates that the processor is operating properly.
COM - Flashes during Ethernet communications.

CE Mark

All MMI-8000 units are CE Marked, indicating compliance with European

Union directives EN 55011: Group 1, Class A; EN50081-2 (Also US FCC Class A) and EN50082-2.

General Specifications

Touch panel type Resistive
Color Type
TFT TFT 65536 color
Touch Resolution
6 inch 320W x 234H pixels
8 and 10 inch 640W x 480H pixels
Installation
All sizes Cabinet Mount
Vibration 10 to 25Hz 2Gs on each x,y, z plane for 30 min.

Temperature
Operating 0C to 45C
Storage -10C to 60C
Relative Humidity
Operating 10% to 90% non-condensing
Storage 5% to 85% non-condensing
Enclosure Ratings
NEMA 4/IP65 front panel (O-ring seals).

Weight
MMI-8104 3.3 lbs (1.5 kg)
MMI-8080 2.9 lbs (1.3 kg)
MMI-8056 1.9 lbs (0.85 kg)
Input Power
24 Volt DC +/- 5% @ 500mA
CE
Complies with EN50081-2 and EN50082-2 standards
EMI
Complies with FCC Class A