

MODEL LPAX - LARGE PAX DISPLAY

- LARGE LED DISPLAY READABLE TO 70 FEET
- VARIOUS INPUT MODULES;
 - DC VOLTAGE AND CURRENT
 - PROCESS SIGNALS
 - TRUE RMS VOLTAGE AND CURRENT
 - THERMOCOUPLE OR RTD
 - STRAIN GAGE/BRIDGE
 - COUNT/RATE
- ALARMS, ANALOG OUTPUT, AND COMMUNICATION
- CUSTOM UNITS LABEL WITH BACKLIGHT
- PROGRAMMABLE USER INPUTS



- PROGRAMMABLE FUNCTION KEYS
- UNIVERSAL AC/DC POWERED MODELS



Features are dependent on the module installed.

Product Features

The LPAX Display is a versatile display that can increase productivity by offering the plant floor or production area a large visual display of their current status. Whether your measurement is temperature, weight, flow, count, or rate, the LPAX can satisfy your requirement. With the use of a units label and backlighting, the display can be tailored to show the actual engineering unit, which further enhances the display. The LPAX accepts various inputs through the use of input modules (MPAX) which allow the unit to adapt to most any application. The MPAX Modules offer the same features as our highly successful PAX Series Panel Meters. Additional plug-in option cards can add alarms, analog output, and communication/bus capabilities, making the LPAX a truly Intelligent Panel Meter.

The MPAX Module serves as the input to the LPAX Display. There are 6 different modules to cover a variety of inputs. The MPAX module provides input scaling which allows the LPAX to display most any engineering unit. Once the MPAX is inserted into the LPAX, the unit has the same functions and capabilities of our PAX Series Intelligent Panel Meters. A full set of PAX programming instructions will be included with the MPAX Module. Installing a module is as simple as sliding the unit into the LPAX case until the latches engage.

Note: The MPAX provides the operating power for the LPAX, therefore you must select either the AC or DC MPAX corresponding with your application and available power.



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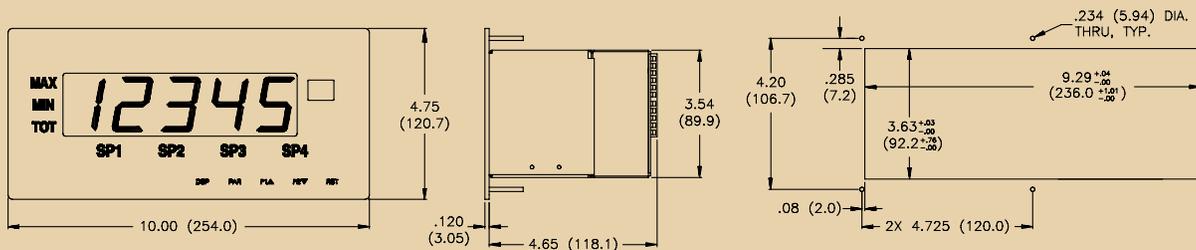
Selecting Your Display Components

To build a complete display unit, you will need an LPAX and an MPAX Input Module. The LPAX is only a display and will not operate without an MPAX Module. Please use the following chart to identify the appropriate MPAX Module (including supply power) and LPAX Display that will satisfy your application.

SIGNAL TYPE	INPUT RANGES	MPAX MODULES *		LPAX DISPLAYS
		85-250 VAC	11 to 36 VDC/24 VAC	
Universal DC Inputs	DC Voltage 200 mV, 2 V, 20 V, 300 V DC Current 200 μ A, 2 mA, 20 mA, 200 mA, 2 Amp Resistance 100 ohm, 1000 ohm, 10 K ohm	MPAXD000	MPAXD010	LPAX0500
Process Inputs	0-20 mA or 0-10 VDC	MPAXP000	MPAXP010	LPAX0500
Temperature Inputs	Thermocouples-T, E, J, K, R, S, B, N, C, or Custom Scaling RTD's-100 ohm Pt (platinum) 385/392, 120 ohm Nickel 672, or 10 ohm Copper 427	MPAXT000	MPAXT010	LPAX0500
Strain Gage/Load Cell	24 mV or 240 mV	MPAXS000	MPAXS010	LPAX0500
True RMS AC Voltage/Current	AC Voltage 200 mV, 2 V, 20 V, 300 V AC Current 200 μ A, 2 mA, 20 mA, 200 mA, 5 Amp	MPAXH000	N/A	LPAX0500
Count/Rate	Digital Inputs	MPAXI000	MPAXI010	LPAX0600

*For detailed Module specifications, see corresponding PAX literature. (i.e. For MPAXD specifications, see the PAXD literature)

DIMENSIONS "In inches (mm)"



Product Features Continued

ADDING OPTION CARDS

The MPAX series meters can be fitted with up to three optional plug-in cards. However, only one card from each function type can be installed at a time. The function types include Setpoint Alarms (PAXCDS), Communications (PAXCDC), and Analog Output (PAXCDL). The cards can be installed initially or at a later date. Each optional plug-in card is shipped with installation and programming instructions.

SETPPOINT ALARMS PLUG-IN CARDS (PAXCDS)

The MPAX series has four setpoint alarm output plug-in cards. Only one of these cards can be installed at a time. These plug-in cards include:

- Dual relay, FORM-C, Normally open & closed
- Quad relay, FORM-A, Normally open only
- Isolated quad sinking NPN open collector
- Isolated quad sourcing PNP open collector

The setpoint alarms can be configured in modes to suit a variety of control and alarm requirements.

- High and low absolute, high and low deviation and band acting
- Balanced or unbalanced hysteresis
- On and off delay timers
- Auto reset or latching modes
- Reverse phase output and/or panel indicator
- Selection of alternate list of setpoint values

COMMUNICATION CARDS (PAXCDC)

Plug-in cards also facilitate bus communications. Readout values and setpoint alarm values can be controlled through the bus. Additionally, the meter has features that allow a remote computer to directly control the outputs of the meter. With a communication card installed, it is possible to configure the meter using a Windows® based program. The configuration data can be saved to a file for later recall.

SERIAL RS485 PLUG-IN CARD

An RS485 communication port can be installed with the serial RS485 plug-in card. The RS485 option allows the connection of up to 32 meters or other devices (such as a printer, PLC, HMI, or a host computer) on a single pair of wires not longer than 4,000 feet. The address number of each meter on the line can be programmed from 0-99. Data from the meter(s) can be interrogated or changed and alarm outputs can be reset by sending the proper command string. The function keys and user inputs can be programmed to send data to a printer or other device via serial communications.

SERIAL RS232 PLUG-IN CARD

An RS232 communication port can be installed with the serial RS232 plug-in card. The RS232 is intended to allow only 2 devices, not more than 50 feet apart, to communicate to each other (such as a printer, PLC, HMI, or host computer). Data from the meter(s) can be interrogated or changed and alarm outputs can be reset by sending the proper command string. The function keys and user inputs can be programmed to send data to a printer or device via serial communication.

DEVICENET PLUG-IN CARD

A DeviceNet communication port can be installed with the DeviceNet plug-in card. DeviceNet is a high level bus protocol based upon the CAN specifications. The protocol allows the integration of devices of different types and manufacturers within a common communication framework.

ANALOG OUTPUT PLUG-IN CARD (PAXCDL)

Either a 0(4)-20 mA or 0-10 V retransmitted linear DC output is available from the analog output plug-in card. The programmable output low and high scaling can be based on the input, max, min, or total display value. Reverse acting output is possible by reversing the scaling point positions. The output can be scaled independent of the input range. The features of the linear output cards are:

- Output tracks either input, totalizer, max or min readings
- Programmable output update times
- Programmable forward or reverse acting

UNITS LABEL (LX)

The LPAX Display has an area on the front panel designed for a custom units label. The units label is applied directly to the panel in the embossed area. The units backlight is then turned on via programming.

Available on 5-digit version only. Refer to the Accessories Section for a list of available units labels. (LX Label Accessory)

PC SOFTWARE (SFPAX)

The SFPAX is a Windows® based program that allows configuration of the PAX meter from a PC. Using SFPAX makes it easier to program the PAX meter and allows saving the PAX program in a PC file for future use. On-line help is available within the software. A PAX serial plug-in card is required to program the meter using the software.

General Specifications

Additional specifications, wiring, programming, and information for the individual MPAX models are contained in the corresponding standard PAX literature. This PAX literature is shipped with the ordered MPAX model.

1. **DISPLAY:** 1.5" (38 mm) Red LED
5-Digit: (-19999 to 99999)
6-Digit: (For MPAXI only) (-99999 to 999999)
2. **POWER REQUIREMENTS:**
AC Modules: 85 to 250 VAC, 50/60 Hz
DC Modules: 11 to 36 VDC or 24 VAC $\pm 10\%$, 50/60 Hz
3. **ANNUNCIATORS:**
5-Digit: MAX, MIN, TOT, SP1, SP2, SP3, and SP4
6-Digit: A, B, C, SP1, SP2, SP3, and SP4
 Optional units label with backlight (5-digit version only)
4. **KEYPAD:** Five tactile membrane switches integrated into the front panel
5. **ENVIRONMENTAL CONDITIONS:**
Operating Temperature Range: Determined by the MPAX module
Storage Temperature Range: -40 to 60 °C
Operating and Storage Humidity: 0 to 85% max. RH (non-condensing)
Altitude: Up to 2000 meters

6. CERTIFICATIONS AND COMPLIANCES:

EMC specifications determined by MPAX module

7. MOUNTING REQUIREMENTS:

- Max. panel thickness is 0.375" (9.5 mm)
- Min. panel thickness for NEMA 4/IP65 sealing is 0.060" (1.57 mm)

8. MODULE INSTALLATION:

24-pin shrouded connector on LPAX engages connector on MPAX module upon installation. Shroud ensures proper alignment by providing a lead-in for the module connector.

9. CONNECTIONS:

All wiring connections are made to the MPAX module via high compression cage-clamp terminal blocks. Wiring instructions are provided with the MPAX module.

Wire Strip Length: 0.3" (7.5 mm)

Wire Gauge Capacity: One 14 AWG (2.55 mm) solid, two 18 AWG (1.02 mm), four 20 AWG (0.61 mm)

10. **CONSTRUCTION:** Steel front panel, enclosure, and rear cover with textured black polyurethane paint for scratch and corrosion resistance protection. Sealed front panel meets NEMA 4/IP65 specifications for indoor use when properly installed. Installation Category II, Pollution Degree 2. Panel gasket and keps nuts included.

11. **WEIGHT:** 2.7 lbs (1.2 kg) (less module)

MODEL LPAX - LARGE PAX DISPLAY

Ordering Information

TYPE	MODEL NO.	DESCRIPTION	PART NUMBERS
Display	LPAX	5-Digit, Large Display for MPAX Modules	LPAX0500
		6-Digit, Large Display for MPAXI Modules Only	LPAX0600
Input Module	MPAX	Universal DC Input Module, AC Powered	MPAXD000
		Universal DC Input Module, DC/24 VAC Powered	MPAXD010
		Process Input Module, AC Powered	MPAXP000
		Process Input Module, DC/24 VAC Powered	MPAXP010
		Thermocouple and RTD Module, AC Powered	MPAXT000
		Thermocouple and RTD Module, DC/24 VAC Powered	MPAXT010
		AC True RMS Voltage and Current Module, AC Powered	MPAXH000
		Strain Bridge Input Module, AC Powered	MPAXS000
		Strain Bridge Input Module, DC/24 VAC Powered	MPAXS010
		Count/Rate Indicator Module (Use w/LPAX0600 only), AC Powered	MPAXI000
		Count/Rate Indicator Module (Use w/LPAX0600 only), DC/24 VAC Powered	MPAXI010
Optional Plug-In Cards	PAXCDS	Dual Setpoint Relay Output Card	PAXCDS10
		Quad Setpoint Relay Output Card	PAXCDS20
		Quad Setpoint Sinking Open Collector Output Card	PAXCDS30
		Quad Setpoint Sourcing Open Collector Output Card	PAXCDS40
	PAXCDC	RS485 Serial Communications Card	PAXCDC10
		RS232 Serial Communications Card	PAXCDC20
		DeviceNET Communications Card	PAXCDC30
	PAXCDL	Analog Output Card	PAXCDL10
Accessories	LX	Custom Units Label *	Listed Separately
	SFPAX	PC Configuration Software for Windows 3.x and 95/98 (3.5" disk)	SFPAX
	ENC9	NEMA 4 Enclosure for LPAX	ENC90000
	SHR	Shroud for LPAX	SHRLPAX0
	MB	Mounting Bracket for LPAX	MBLPAX00

* See the Accessory Section or our web site for available units labels.