

Mi160

pH/ORP/ISE/Temperature Laboratory Bench Meter

This new pH/ORP/ISE/Temp bench meter is ideal for very accurate and precise measurements for all laboratory needs. It can perform ion-selective measurements directly in ppm, as well as pH, ORP and temperature measurements. pH calibration can also be performed in 3 points selectable between 7 memorized buffers, to provide a very accurate calibration curve even when testing different samples, where very wide differences in pH can be found.

Thanks to the memory it can store up to 50 data sets for each range that can be downloaded to a PC via RS232 or USB. These instruments also have GLP features so, at any time, the user can recall the calibration data.

- 7 memorized buffers (pH 1.68, 4.01, 6.86, 7.01, 9.18, 10.01 and 12.45) for pH calibration
- pH calibration up to 3 points
- ISE calibration up to 2 points; six standard solutions available: 0.01, 0.1, 1, 10, 100, 1000 ppm
- Messages on the LCD to make the calibration easy and accurate
- Relative mV feature
- GLP feature, to view last calibration data for pH or ISE



Specifications	Mi160
Range	pH -2.00 to 16.00 pH mV ± 699.9 mV / ± 2000 mV ISE 0.001 to 19999 ppm Temp -20.0 to 120.0°C / -4.0 to 248.0°F
Resolution	pH 0.01 pH mV 0.1 mV / 1 mV ISE 0.001 (0.001 to 9.999) ppm; 0.01 (10.00 to 99.99) ppm; 0.1 (100.0 to 999.9) ppm; Temp 1 (1000 to 19999) ppm 0.1°C / 0.1°F
Accuracy (@20°C)	pH ± 0.01 pH mV ± 0.2 mV / ± 1 mV ISE $\pm 0.5\%$ Full Scale Temp $\pm 0.4^\circ\text{C}$ / $\pm 0.8^\circ\text{F}$
Rel mV offset	± 2000 mV
pH Calibration	1, 2 or 3 point-calibration, with 7 memorized buffers
ISE Calibration	1 or 2 point calibration, 6 standard solutions available
Temperature Compensation	automatic, from -20.0 to 120.0°C / -4.0 to 248.0°F or manual, without temperature probe
pH Electrode	MA917B/1 (included)
Temperature Probe	MA831R (included)
Environment	0 to 50°C / 32 to 122°F; max RH 95%
Input Impedance	10^{12} Ohm
Power Supply	12 VDC power adapter (included)
Dimensions	230 x 160 x 95 mm
Weight	1.1 kg

Easy PC Compatibility

RS232 or USB communication interface allows readings to be downloaded to a serial port.



Rear Connector Panel layout

Communication to the PC is done via opto-isolated USB and RS232 ports.



Accessories

MA9004	pH 4.01 buffer solution, 230 mL bottle	MA917B/1	Glass body, double junction refillable pH electrode
MA9007	pH 7.01 buffer solution, 230 mL bottle	MA921B/1	Platinum ORP electrode with 1 m cable (will be replaced by SE300)
MA9010	pH 10.01 buffer solution, 230 mL bottle	SE300	Platinum ORP electrode with 1 m cable
MA9015	Electrode storage solution, 230 mL	MA9350	RS232 connection cable with 2 m cable
MA9016	Electrode cleaning solution, 230 mL	Mi5200	Application Software
MA9112	pH 12.45 buffer solution, 230 mL bottle		
MA831R	Temperature probe		
MA9310	12 VDC Adapter, 220 V		
MA9311	12 VDC Adapter, 110 V		
MA9315	Electrode Holder		

Ordering Information

Mi160 is supplied complete with:

- MA917B/1 Double junction refillable pH electrode
- MA831R Temperature Probe
- MA9315 Electrode Holder
- M10004 pH 4.01 Sachet Buffer Solution
- M10007 pH 7.01 Sachet Buffer Solution
- M10010 pH 10.01 Sachet Buffer Solution
- M10016 Sachet Electrode Cleaning Solution
- Mi5200 Application Software
- MA9350 RS232 connection cable with 2 meters cable
- Graduate Pipet, 12 VDC Adapter & Instruction manual