

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.

The meter 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; 1 (1000 to 19999) ppm Temp 0.1°C / 0.1°F
Accuracy	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)
Logging	up to 50 records, LOG on demand or auto-logging
Environment	0 to 50°C / 32 to 122°F; max RH 95%
Input Impedance	10^{12} Ohm
Power Supply	12 VDC power adapter (included)
Packaging dimensions	335 x 120 x 255 mm
Packaging weight	2.16 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
- MA9007 pH 7.01 buffer solution, 230 mL bottle
- MA9010 pH 10.01 buffer solution, 230 mL bottle
- MA9015 Electrode storage solution, 230 mL
- MA9016 Electrode cleaning solution, 230 mL
- 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

- MA917B/1 Glass body, double junction refillable pH electrode
- MA924B/1 ± 2000 mV Glass ORP electrode, refillable with BNC connector and 1 meter cable
- SE300 Platinum ORP electrode with 1 m cable
- MA9350 RS232 connection cable with 2 m cable
- Mi5200 Application Software

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
 - MA9310 12 VDC Adapter
 - Instruction manual