

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



Years warranty
3

LOG

ATC

MTC

Points
3

RS232

USB

Software
CD

GLP

Dual Display

Self diagnostics

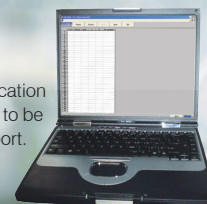
Memorized buffers
7

CE

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 (@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
- 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
- MA921B/1 Platinum ORP electrode with 1 m cable (will be replaced by SE310)
- SE310(*) Platinum ORP electrode with 1 m cable
- MA9350 RS232 connection cable with 2 m cable
- Mi5200 Application Software

(*) Available from the 1st of September 2010

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