HI6000 Series

Multiparameter Modular System

pH/ORP, pH/ORP/ISE, EC and DO

The HI6000 multiparameter modular system is a totally flexible benchtop meter platform that is customizable to a user's laboratory measurement and application needs.

Hanna offers four different measurement modules for pH/ORP, pH/ORP/ISE, DO, and EC. Together with appropriate sensors, the meter provides quick and reliable measurement displayed on the large, 7-inch capacitive touch display. The display supports multi-touch, video playback and data plotting.

Measure

- HI6000-1 module choice of measurement unit:
  - pH - pH, mV
  - ORP* - mV, Rel.mV
- HI6000-2 module choice of measurement unit:
  - pH - pH, mV
  - ORP* - mV, Rel.mV
  - ISE - ppt, ppm, ppb, g/L, mg/L, µg/L, mg/mL, µg/mL, M, mol/L, mmol/L, %w/v, user defined

* A separate ORP sensor is required for ORP measurements.

- HI6000-3 module choice of measurement unit:
  - Conductivity – µS/cm or mS/cm,
  - Resistivity – Ω•cm, kΩ•cm, MΩ•cm,
  - TDS – ppm, ppt,
  - Salinity – ppt, PSU, %,
- HI6000-4 module choice of measurement unit:
  - DO – % Sat, mg/L, ppm
  - BOD - ppm, mg/L,
  - OUR - ppm, mg/L
  - SOUR - ppm, mg/L
  - Pressure - mmHg, mbar, kPa, inHg, psi, atm
- Application-specific profiles allow quick and direct measurement without the need to update the sensor and system settings
- Method-specific application reports can be generated
- Measurement stability indicator (using the Stability Criteria setting)
- Temperature compensation can be Automatic (using integrated temperature sensor) or set manually
- Audible and / or alarm messages for measurements outside predefined limits
- Non-volatile memory for data storage and settings

Logging

- Active log during measurement
- Data log collection of at most 1,000,000 data points, with time and date stamp
- Logging types: manual, automatic, autohold
- Sample ID for manual and autohold data

Connectivity Features & Services

- Transfer logged data to a USB flash drive or PC
- Log files include measurements and calibration data (as .CSV file)
- FTP and email for log export via Ethernet and Wi-Fi connection
- Download logs using the meter's embedded web server
- USB type A for USB drive, printer (standard or thermal), and keyboard
- USB type C for USB drive and PC connection

User-support feature

- Help section – brief overview of HI6000's main functionalities and features

Flexibility and Expandability

Easily install and swap modules. Any combination of 1 to 3 modules can be used for total flexibility in measurements.

Multiparameter measurement flexibility • Plug-and-play design • Effortless installation
Application-specific solution without heavy customization

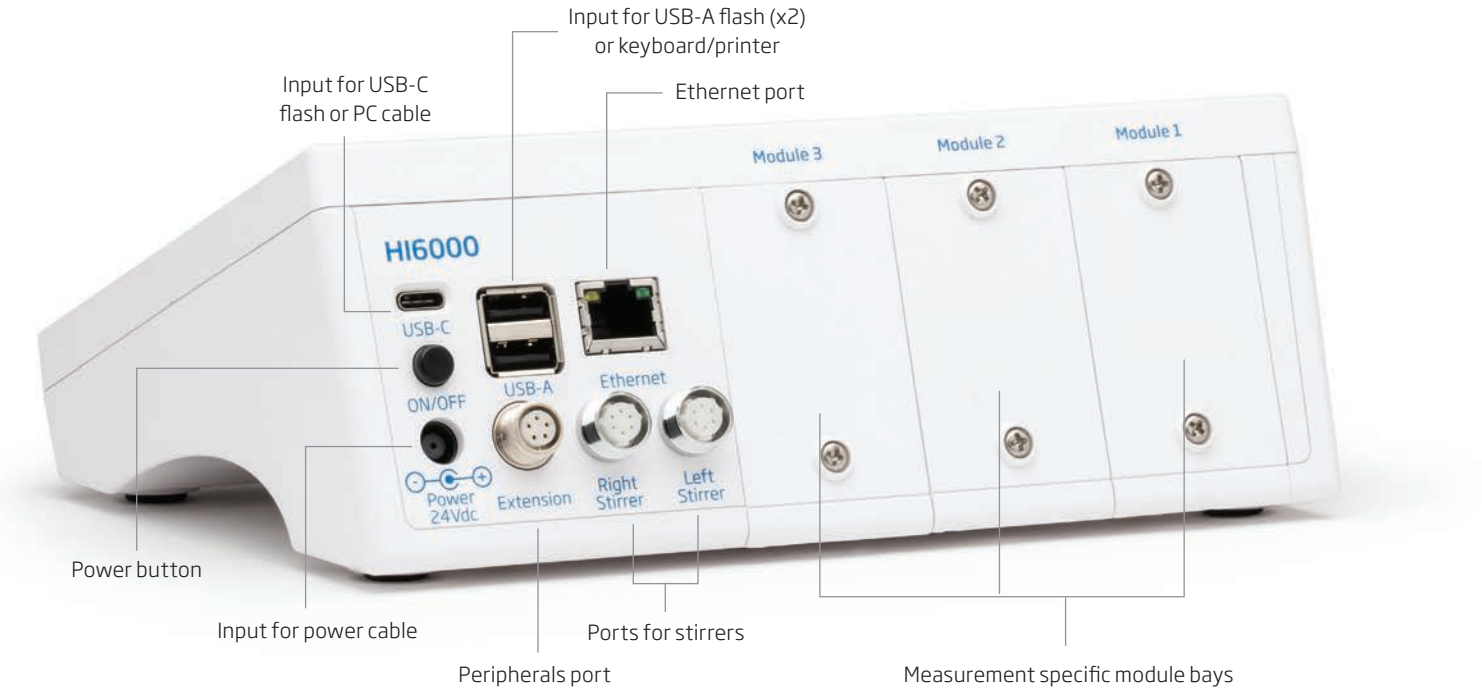
Module Options (sensors purchased separately)

Up to three measurement modules maybe easily installed into the HI6000 housing. This can be any combination of the available modules.

Module	HI6000-1 See page 7.14	HI6000-2 See page 7.14	HI6000-3 See page 7.16	HI6000-4 See page 7.18
Sensor	pH/ORP	pH/ORP/ISE	EC	DO
Details	For ORP (redox) measurements a separate sensor is required.	Features Incremental Methods for Ion Selective Electrode (ISE) applications.	Supports the measurement of high purity water used in the pharmaceutical industry. The application includes meter verification, cell validation applications and the module is programmed for the three stages of the USP <645> bulk water analysis. Once a stage is met a report can be generated and saved.	Supports dissolved oxygen applications for batch analysis of multiple samples: • Oxygen Uptake Rate (OUR)* • Specific Oxygen Uptake Rate (SOUR)* • Biological Oxygen Demand (BOD)* Reports are available for analysis records.
Recommended Probes	**HI1131B** Recommended Refillable combination pH electrode. See page 2.145 **HI7662-TW** Recommended Stainless steel Temperature probe	**HI1131B** Recommended Refillable combination pH electrode. See page 2.145 **HI7662-TW** Recommended Stainless steel Temperature probe See "Ion Selective Electrodes" starting on page 3.26	**HI7631233** Recommended EC and resistivity probe	**HI7641133** Recommended Optical DO probe. See page 6.32 **HI764833** Recommended Polarographic DO probe. See page 6.35

* with polarographic probe

Rear Ports



Other specifications

Reading	Stability criteria	Accurate Medium Fast
	Sampling Rate	1000 ms
Logging	Type	Automatic Manual Autohold
	Number of records	50 000 maximum per file Stores at least 1 000 000 data points per user
	Automatic interval	1, 2, 5, 10, 30 seconds 1, 2, 5, 10, 15, 30, 60, 120, 150, 180 minutes
	Sample ID	Incremental mode Manual
	Export option	.CSV file format
Connectivity	USB-A	2 ports › keyboard and / or printer input › USB flash drive
	USB-C	1 port › PC connectivity and USB-C type flash drive
	Wi-Fi & ethernet	Log transfer and download (web server; email; FTP)
	RS232	Connecting peripherals
Calibration reminder	Daily › 0 minutes to 23 hours 59 minutes Periodic › 1 minute to 30 days, 23 hours and 59 minutes Disabled	
Users	Up to 9 users and the default administrator account	
Power supply	DC adapter 100-240 VAC to 24 VDC 2A	
Environment	0 to 50 °C / 32 to 122 °F / 273 to 323 K; maximum 95 % RH non-condensing	
Dimensions	205 x 160 x 77 mm (8.0 x 6.2 x 3.0 ")	
Weight	Approximately 1.2 kg (2.65 lbs.)	

Ordering information

Meter only

HI6000-01 (US power plug) and **HI6000-02** (EU power plug) is supplied with HI764060 electrode holder; 24 VDC power adapter; USB-C to USB-A cable; quick reference guide and instrument quality certificate.

Pre-Configured kits

pH/ORP/ISE kit: **HI6222-01** (US power plug) and **HI6222-02** (EU power plug) is supplied with HI6000 housing unit; HI6000-2 pH/ORP/ISE hardware module ×2 (installed); HI1131B pH electrode; HI7662-TW temperature probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 4 sachets; pH 10.01 buffer solution, 2 sachets; electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); capillary pipette, 1 piece; electrode holder with base plate, screw, cable holder clip (requires mounting); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guide and quality certificates; probes and meter quality certificates.

pH/ORP/ISE and Conductivity kit: **HI6522-01** (US power plug) and **HI6522-02** (EU power plug) is supplied with HI6000 housing unit; HI6000-2 pH/ORP/ISE hardware module (installed); HI6000-3 EC hardware module (installed); HI1131B pH electrode; HI7662-TW temperature probe; HI7631233 EC & resistivity probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 4 sachets; pH 10.01 buffer solution, 2 sachets; electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); capillary pipette, 1 piece; 1413 µS/cm standard solution, 4 sachets; 5000 µS/cm standard solution, 2 sachets; 12880 µS/cm standard solution, 2 sachets; electrode rinse solution, 2 sachets; electrode holder with base plate, screw, cable holder clip (requires mounting); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guides and quality certificates; probes and meter quality certificate.

pH/ORP/ISE and opdo® kit: **HI6542-01** (US power plug) and **HI6542-02** (EU power plug) is supplied with HI6000 housing unit; HI6000-2 pH/ORP/ISE hardware module (installed); HI6000-4 DO hardware module (installed); HI1131B pH electrode; HI7662-TW temperature probe; HI7641133 optical DO probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 4 sachets; pH 10.01 buffer solution, 2 sachets; electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); capillary pipette, 1 piece; DO Smart Cap with O-ring, 1 pc. of each; calibration/storage vessel, 1 piece; lens cleaning wipe, 1 piece; syringe and sachet with silicone grease, 1 piece of each; electrode holder with base plate, screw, cable holder clip (requires mounting); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guides and quality certificates; Smart Cap, probes, and meter quality certificates.

pH/ORP/ISE and DO kit: **HI6542P-01** (US power plug) and **HI6542P-02** (EU power plug) is supplied with HI6000 housing unit; HI6000-2 pH/ORP/ISE hardware module (installed); HI6000-4 DO hardware module (installed); HI1131B pH electrode; HI7662-TW temperature probe; HI764833 polarographic DO probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 4 sachets; pH 10.01 buffer solution, 2 sachets; Electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); DO electrolyte solution (30 mL); capillary pipette, 1 piece; pH electrode cap; membrane cap and O-ring, 2 pieces; electrode holder with base plate, screw, cable holder clip (requires mounting); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guides and quality certificates; probes and meter quality certificates.

pH/ORP/ISE, Conductivity, opdo® kit: **HI6553-01** (US power plug) and **HI6553-02** (EU power plug) is supplied with HI6000 housing unit; HI6000-2 pH/ORP/ISE hardware module (installed); HI6000-3 EC hardware module (installed); HI6000-4 DO hardware module (installed); HI1131B pH electrode; HI7662-TW temperature probe; HI7631233 EC & resistivity probe; HI7641133 optical DO probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 2 sachets; pH 10.01 buffer solution, 2 sachets; electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); capillary pipette, 1 piece; 1413 µS/cm standard solution, 2 sachets; 12880 µS/cm standard solution, 2 sachets; electrode rinse solution, 2 sachets; DO Smart Cap with o-ring, 1 pc. of each; calibration/storage vessel, 1 piece; lens cleaning wipe, 1 piece; syringe and sachet with silicone grease, 1 piece of each; electrode holder with base plate, screw, cable holder clip (requires mounting), adapter (attached); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guides and quality certificates; Smart Cap, probes, and meter quality certificates.

pH/ORP/ISE, Conductivity, Dissolved Oxygen kit: **HI6553P-01** (US power plug) and **HI6553P-02** (EU power plug) is supplied with HI6000 housing unit; one HI6000-2 pH/ORP/ISE hardware module (installed); HI6000-3 EC hardware module (installed); HI6000-4 DO hardware module (installed); HI1131B pH electrode; HI7662-TW temperature probe; HI7631233 EC & resistivity probe; HI764833 polarographic DO probe; pH 4.01 buffer solution, 2 sachets; pH 7.01 buffer solution, 2 sachets; pH 10.01 buffer solution, 2 sachets; electrode cleaning solution, 2 sachets; pH & ORP electrode storage solution (25 mL); 3.5M KCl electrolyte solution (30 mL); DO electrolyte solution (30 mL); capillary pipette, 1 piece; 1413 µS/cm standard solution, 2 sachets; 5000 µS/cm standard solution, 2 sachets; 12880 µS/cm standard solution, 2 sachets; electrode rinse solution, 2 sachets; pH electrode cap; membrane cap and O-ring, 2 pieces; electrode holder with base plate, screw, cable holder clip (requires mounting), adapter (attached); 24 VDC power adapter; USB-C to USB-A cable; meter quick reference guide; hardware modules quick reference guides and quality certificates; probes and meter quality certificates.

Modules (each HI6000 unit can house 3 modules):	Recommended Probes:
HI6000-1 pH/ORP module	HI1131B (pH) HI3131B (ORP) HI7662-TW (Temperature)
HI6000-2 pH/ORP/ISE module	HI1131B (pH) HI3131B (ORP) HI7662-TW (temperature) Hanna Ion Selective Electrodes
HI6000-3 EC module	HI7631233 (EC)
HI6000-4 DO module	HI7641133 (optical DO) HI764833 (polarographic DO)

Accessories

HI6000180 Magnetic mini-stirrer for HI6000

SP6000-PRN01 HI6000 Thermal Printer for HI6000 family, 115V

SP6000-PRN02 HI6000 Thermal Printer for HI6000 family, 230V

SP6000-PRNRL HI6000 Thermal Printer Replacement Roll

HI6000180 Magnetic mini-stirrer for HI6000

See page 8.8 for more information

pH and ORP electrodes begin on page 2.144; pH and ORP solutions begin on page 2.164;
ISE electrodes and solutions begin on page 3.26; EC, TDS and salinity solutions begin on page 5.34