

IDA 4 Plus

Multi-Channel Infusion Device Analyzer

Technical Data



IDA 4 Plus Multi-Channel Infusion Device Analyzer maximizes productivity with multiple, independent channels for testing up to four infusion pumps at once.

The device measures instantaneous flow, average flow, occlusion pressure, and analyzes patient-control analgesia (PCA) units. An optional PCA trigger box provides automated PCA pump control, allowing technicians to set up tests and walk away.

An autostart feature simplifies syringe pump testing or other tests that have long startup times.

With built-in memory, the IDA 4 Plus records test results internally and provides easy-to-read test-result graphs right on the analyzer's screen. The display is so large numbers can be read from across the room.

Additionally, the IDA 4 Plus comes with Hydrograph PC software for creating full-color graphs and reports. For automated testing, the IDA 4 Plus is compatible with Fluke Biomedical's medTester 5000C (US only).

Key features

- Tests up to four infusion pumps simultaneously
- Compatible with virtually any type of infusion device
- Instantaneous and average flow measurement
- Occlusion pressure measurements to 45 psi
- Single- and dual-flow (piggyback) testing
- Full PCA testing (bolus volume, lockout time, and automated external triggering)
- Autostart mode enables unit to begin testing only when fluid is detected
- On-board graphing of pressure and flow
- Built-in memory to save test results for printing or downloading to computer
- Hydrograph graphical software to control unit and display results via PC
- Automated testing through Fluke Biomedical medTester 5000C (US only)

Technical specifications

Flow-rate measurement

Technique: Calculated by measuring a volume over time
Range: 0.5 ml/hr to 1000 ml/hr
Accuracy: 1 % of reading \pm 1 LSD for flows of 16 ml/hr to 200 ml/hr for volumes over 20 ml; otherwise, 2 % of reading \pm 1 LSD after delivery of 10 ml

Volume measurement

Technique: Volume measured directly by the transducer in minimum sample sizes of 60 μ l
Range: 0.06 ml to 9999 ml
Accuracy: 1 % of reading \pm 1 LSD for flows of 16 ml/hr to 200 ml/hr for volumes over 20 ml; otherwise, 2 % of reading \pm 1 LSD after delivery of 10 ml

PCA bolus measurement

Technique: Volume is measured directly by the transducer in minimum bolus volumes of 0.5 ml. The measurement is made with a continuous rate between 0 ml/hr and 30 ml/hr. The bolus flow rate should be at least four times the basal flow rate for reliable detection of boluses.

Minimum bolus volume: 0.5 ml
Accuracy: See volume measurement

Pressure measurement

Technique: Direct occlusion of the infusion line and measurement of pressure prior to the glass transducer

Range: 0 psi to 45 psi and equivalents in mmHg and kPa
Accuracy: 1 % of full scale \pm 1 LSD
Back pressure: -100 mmHg to 300 mmHg

Electrical specifications

Supply voltage: Autoswitching 90 V ac to 260 V ac



Supply frequency: 50 Hz to 60 Hz

Supply power: < 30 VA
Fuse: 20 mm 250 V, 1 A (T) (slow blow)

Earth leakage current: < 1 mA in single fault condition

Environmental conditions

Operating temperature: 15 °C to 30 °C (59 °F to 86 °F)

Storage temperature: 0 °C to 40 °C (32 °F to 104 °F) at 85 % RH or less for storage [Do not leave for more than 48 hours at -20 °C (-4 °F)]

General information

Dimensions (WxDxH): 19.05 cm x 18.11 cm x 30.18 cm (7.5 in x 7.2 in x 11.9 in)
Weight: 5 kg (11 lb)

Optional PCA Trigger Box

Use the PCA Trigger Box to take full advantage of IDA 4 Plus capabilities to automate PCA pump testing.

Connect the PCA Trigger Box to the PCA pump to automatically generate simulated "demand" signals. With the IDA 4 Plus connected to the Trigger Box, it will measure, display, and record essential PCA pump parameters to show bolus and flow characteristics.

The PCA Trigger Box can also be used to test the "nurse call" interface of PCA Pumps. Simulate "nurse calls" and look for the response indicated by markers in the flow graph.



HydroGraph™ Graphics Software

Use the moving color visual advantage of HydroGraph to troubleshoot up to four infusion pumps at once. Data is taken directly off the transducer and transmitted to HydroGraph. The flowing graphs provide an electronic means to display, store, and recall flow patterns for comparison at a later date. Each test window can display instantaneous and average flow rates, cumulative, and bolus volumes; and occlusion pressure.



Ordering information

Models

IDA 4 Plus One-Channel Infusion Device Analyzer

2250063 IDA-4P/1-US120V (US)

2394575 IDA-4P/1-AUS250V (Australia)

2394582 IDA-4P/1-DEN250V (Denmark)

2394594 IDA-4P/1-SHK250V (Shuko)

2394608 IDA-4P/1-ISR250V (Israel)

2394613 IDA-4P/1-ITAL250V (Italy)

2394624 IDA-4P/1-IND250V (India)

2394636 IDA-4P/1-SWZ250V (Switzerland)

2394649 IDA-4P/1-UK250V (UK)

IDA 4 Plus Two-Channel Infusion Device Analyzer

Full testing for up to two infusion pumps simultaneously

2250088 IDA-4P/2-US120V (US)

2394651 IDA-4P/2-AUS250V (Australia)

2394660 IDA-4P/2-DEN250V (Denmark)

2394672 IDA-4P/2-SHK250V (Shuko)

2394685 IDA-4P/2-ISR250V (Israel)

2394697 IDA-4P/2-ITAL250V (Italy)

2394703 IDA-4P/2-IND250V (India)

2394715 IDA-4P/2-SWZ250V (Switzerland)

2394726 IDA-4P/2-UK250V (UK)

IDA 4 Plus Three-Channel Infusion Device Analyzer

Full testing capability for up to three infusion pumps simultaneously

2250109 IDA-4P/3-US120V (US)

2394732 IDA-4P/3-AUS250V (Australia)

2394744 IDA-4P/3-DEN250V (Denmark)

2394759 IDA-4P/3-SHK250V (Shuko)

2394767 IDA-4P/3-ISR250V (Israel)

2394771 IDA-4P/3-ITAL250V (Italy)

2394780 IDA-4P/3-IND250V (India)

2394798 IDA-4P/3-SWZ250V (Switzerland)

2394800 IDA-4P/3-UK250V (UK)

IDA 4 Plus Four-Channel Infusion Device Analyzer

Full testing capability for up to four infusion pumps simultaneously

2250127 IDA-4P/4-US120V (US)

2394817 IDA-4P/4-AUS250V (Australia)

2394821 IDA-4P/4-DEN250V (Denmark)

2394839 IDA-4P/4-SHK250V (Shuko)

2394842 IDA-4P/4-ISR250V (Israel)

2394856 IDA-4P/4-ITAL250V (Italy)

2394863 IDA-4P/4-IND250V (India)

2394874 IDA-4P/4-SWZ250V (Switzerland)

2394888 IDA-4P/4-UK250V (UK)

Standard accessories

2213506 Electronic User Manual and HydroGraph Software

2238626 Serial Communication Cable

2217231 20 ml priming syringe

2391750 Luerlock-3 way (one for each channel)

2238909 5 foot plastic drain line

XXXXXXX Power cord (country specific)

Optional accessories

2245061 External Mini-Keyboard, 83-Key with PS/2 Connector and AT Adapter

2238072 Parallel Printer Cable (D25M-36M)

2209703 PCA Trigger/Nurse Call Box

2248899 Printer, Seiko DPU-414-30B (120 V power supply) (additional purchase required: Parallel Printer Cable, p/n 2238072)

2399531 Printer, Seiko DPU-414-30B (220 V power supply) (additional purchase required: Parallel Printer Cable, p/n 2238072)

2235375 Printer (120 V power supply)

2235382 Printer (220 V power supply)

2200102 Interface Cable, medTester to IDA 4 Plus (without wedge adapter) (RS-232; female DB25 to female DB9)

2201042 Interface Cable, medTester to IDA 4 Plus (with wedge adapter) (RS-232; female DB9 to female DB25)

2245092 Barcode Scanner (with long-reach coil cable with Y connector for keyboard attachment)

2238626 Null Modem Cable (female DB9 to female DB9)

About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required



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