Barometric Data Logger

HD3114B

PRECISION HANDHELD BAROMETRIC DATALOGGER

INTRODUCTION

Experience precision and versatility with the HD3114B, an advanced data logger designed to measure pressure, temperature, and humidity.
Featuring a vibrant 43 x 58 mm color graphic LCD display, this instrument is packed with capabilities to meet your professional monitoring and analysis needs.

FEATURES

Barometric and Altimetric Analysis

The built-in precision barometric sensor measures atmospheric pressure and calculates barometric tendencies, altitude, meteo and aeronatical metrics like QNH, QFE, and QFF, ensuring accurate environmental assessments.

Intelligent Probe Compatibility

Compatible with SICRAM probes, the HD3114B supports automatic recognition of factory-calibrated and interchangeable 4-wire Pt100, combined temperature-humidity, and pressure probes with PP471 module.

Comprehensive Humidity Analysis

When paired with a humidity and temperature probe, the instrument calculates key metrics like dew-point, wet-bulb, absolute humidity, and comfort indices (DI, NET), offering a full spectrum of environmental insights.

Dynamic Display Capabilities

The color LCD can display up to 24 quantities, including three simultaneously in numeric format, and offers real-time graphs for intuitive trend monitoring with customizable measurement units.

Efficient Data Logging

Data is logged in CSV format on SD cards, enabling long-term storage with user-configurable intervals, manual or programmed logging, and auto-generated PDF reports for professional documentation.

User-Friendly Operation

Features like manual RECORD, HOLD, and REL functions simplify real-time analysis, while password-protected settings ensure secure operation.

Connectivity and Software Support

With USB and serial outputs, the device supports PC integration, data downloads, memory card access, and direct printing, complemented by DeltaLog9 software for seamless management.

Battery and Power Management

A rechargeable lithium-ion battery ensures long-lasting performance, while external USB power provides uninterrupted operation and automatic charging, with an optional auto-shutoff to preserve battery life.

CONFIGURATION & MEASUREMENT

Configurable storage intervals

Tailor your logging intervals to suit your data needs.

Measurement range and flexibility

Supports multiple parameters with customizable units.

Easy setup and operation

User-defined configurations, intuitive menus, and an ergonomic design.

ADVANCED BAROMETRIC ANALYSIS
Offers detailed atmospheric pressure metrics like barometric trend, altitude, and QNH, QFE, and QFF calculations, ensuring precise environmental assessments.

INTELLIGENT PROBE COMPATIBILITY
Automatically recognizes and supports various SICRAM probes, enabling seamless temperature, humidity, and pressure measurements.

COMPREHENSIVE DATA LOGGING
Store data in CSV format on SD cards with configurable intervals and auto-generated PDF reports for streamlined record-keeping.

DYNAMIC DISPLAY AND METRICS
Displays up to 24 quantities, including real-time graphs, and calculates advanced parameters like dew point, enthalpy, and comfort indices.

FLEXIBLE POWER MANAGEMENT
Features a rechargeable battery with automatic switch-off and USB-based external power supply for uninterrupted operation.

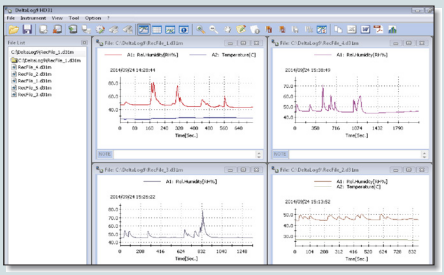
Technical specifications

Power supply	• rechargeable 3.7 V Li-ion internal battery • external power supply unit • PC's USB port
Battery life	15 hours of continuous operation
Logging	manual or automatic with configurable interval
Storage capacity	SD memory card, up to 8 GB
Inputs	1 input with 8-pole DIN45326 connector for external probe integrated barometric sensor
Connections	• 1 USB port with mini-USB connector • 1 RS232C serial output with RJ12 (6P6C) connector for connection of a serial printer.
Auto-off	Configurable (2, 5, 10, 15, 20 or 30 min)
Operating conditions	-10...60 °C, 0...85% RH no condensation
Storage Temperature	-25...65 °C
Materials	ABS, 55 shore rubber protection lateral bands and protective shell
Dimensions	172 x 88 x 35 mm without rubber protective shell 180 x 102 x 46 mm with rubber protective shell
Weight	about 400 g (with battery and protective shell)
Protection degree	IP64

PC application software

Deltalog9 allows to manage the HD3114B simply and intuitively from the PC:

- Start and stop recording
- Direct download from PC of all the data contained in the instrument's memory card
- Parameters setting
- Data display as a table or a graph
- Real time display of the measurement data detected by the instrument and possibility to save, print and export in different format
- Reading of battery's charge status



Ordering codes

HD3114B	Precision barometric data logger. Supplied with rechargeable battery, SD card, protective rubber shell, USB cable, power supply, carrying case.
HD3114B/C	Same as above with ISO 17025 certificate for pressure.

DeltaLog9 software downloadable from website.

Atmospheric pressure specifications

Sensor	Precision piezo-resistive
Measuring range	0...1350 hPa
Resolution	0.01 hPa
Accuracy @ 23 °C	± 0.1 hPa (500...1200 hPa) ± 0.2 hPa (remaining range)
Accuracy @ full temperature range	± 0.3 hPa (500...1200 hPa) ± 0.4 hPa (remaining range)
Long-term stability	0.25 hPa / year
Available measurement units	Pa, hPa, kPa, mbar, bar, atm, mmHg, mmH_2O, kgf/cm^2, PSI, inHg, inH_2O

Probes and modules in line with instrument

The probes of the instrument are equipped with an "intelligent" module (SICRAM) acting as interface between the probe and the instrument. Inside the module there is a microprocessor circuit with permanent memory performing different functions:

- allows the instrument to recognize the type of connected probe
- stores into memory the probe calibration data
- recognizes the instrument with which it was calibrated
- maintains the factory-calibration and the last calibration data
- stores into memory a serial number allowing the unique identification of the probe.

Temperature with platinum sensors (PRT)	4-wire Pt100
Combined RH and temperature probes	Calculated quantities: • saturated vapor pressure • partial vapor pressure • mixing ratio • enthalpy • absolute humidity • dew point temperature • wet bulb temperature • discomfort index • NET index
Pressure probes	• absolute • relative • differential

V 1.0

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