



Hand Held BD5 DS1741

# Densimeter

Ref: HDS1741IntE  
Version:2002-01-13

## Professional Density Measurement

- HBD5DS Embedded CPU Analyzer, full intelligent machine operation.
- Menu driven setup
- Read out, as inserted
- Smart test at any temperature, of any liquids
- Normal density and conversion to Standard density at pointed temperature
- Units conversion
- 1000s Data log. Auto recording or manual selection
- Memo read out, and print supported
- Versatile connection for any sampler or devices in lab or fields
- RS232/485 communication to PC
- Concentration test function
- Liquids concentration analysis

## Advanced Sensor Design

- ◆ No moving parts or seals, minimizes maintenance
- ◆ Unaffected by vibration
- ◆ Insensitive to flow and pressure variations
- ◆ Wide range of materials available to suit most applications
- ◆ Approved for use in hazardous areas

For speed, accuracy and reliability.  
Test at any time anywhere, any temperature of any liquids  
H-DS1741 is the best choice for smart density test!

HDS1741 is a portable densitometer for use in the lab, factory or field.

The solid stainless steel sensor is simply immersed into the fluid to obtain a reading of density. There is no limit on the size of vessel or fluid volume - just sufficient to cover the tip. Simply wipe clean after use.

Readings are given instantly on a LCD digital display. The meter and probe are lightweight, and combined with a long battery life makes the instrument truly portable.

The probe has no moving parts, seals or bearings and is well suited to everyday use in an industrial environment.



## Functions

- **Normal Density Test**

The H-DS1741 gives professional density readout. No matter what is, and at what temperature it is

- **Standard Density Test**

Convert the tested epi-density into the equal data at pointed temperature.

This function is supported by density ~ temperature relations of the defined materials. It is always varies with different substances. Three ways were embedded into the analyzer: User input, user establish, using scientific model.

- **Units Conversion**

- API degrees
- Absolute and Referred Density
- Concentration by mass or volume

- **Concentration Analysis**

- 1) Exact concentration calculation of two ingredients compound, based on density database.
- 2) Modelling calibration by user

## Modern Electronics

- BD5 CPU based STIM, perfect design with complete instrument functions
- 4\*5 20 Keypad, and 2\*20 LCD display
- RS232 serial port always available
- RS485 with STIMcom or Modbus protocol
- Rechargeable Li battery power supply, 1 week stanby
- Intrinsic safe design
- Serial printer supported
- Data record, store, and readout
- IAP program update support possible in future

For more information about BD4/5 electronics, please refer to URL: <http://www.fullsense.com/Products/Meters/>

## Typical applications

- Fiscal metering
- Slurries
- Food processing
- General chemicals
- Hydrocarbons
- Resource management

## Specifications

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Density operating range:	0 to 3g/cc (0 - 3000kg/m3)
Calibrated range:	0.6 to 1.25g/cc (600 - 1250kg/m3)
Accuracy:	0.001g/cc (1.0kg/m3)
Repeatability:	0.0005g/cc (0.5kg/m3)
Temperature range (fluid):	-50 to +120,250,400 °C
Density range:	up to 20,000cP
Max. pressure:	1.6MPa
Environment:	IP66
Power Supply:	9 to 24Vdc, 100mA EEx d IIc T4
Safety approvals:	CSA Class 1, Division 1, Group C (pending)

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## Ordering Information

### Wetted materials

Stainless steel, Hastelloy C

### Tine Finish

Standard, PTFE coated or Electropolished

## Connections

ANSI 150 to 1500RF; DIN 50 PN40 and PN100 1.5" compression; IDF and RJT hygienic

## Meter Version

H-BD5DS1741 C	Normal	Normal density, temperature compensated
H-BD5DS1741 Pro	Professional	User establish the temperature converting model
H-BD5DS1741 ATC	Scientific	Using database by scientific formulae

## Meter and Included Accessories

Sensor	H-DS1741	1 included
Meter	H-BD3/5	1 included
Cell	9V	1 included
Charger	220V	1 included
Package		1 included
Accessories	Fit ZG1"	Pipeline connector
	FitSeal25	Glass device connector

## Selective Accessories

Printer	up24
Wire	
Paper	Common meter paper
PC Software	Win HDS1741.1
RS485 Kit	Converter to RS232 on PC

**Package:** 465\*370\*112 (mm)

**Delivery Weight:** 2.5-3 kg

## BIG DIPPER TECHNOCHEM INSTITUTE

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<http://www.fullsense.com/> Email: [sales@fullsense.com](mailto:sales@fullsense.com)



### BD4Controller & BD5 STIM

<http://www.fullsense.com/Meters/>

BD4&5Introduction: [http://www.fullsense.com/Meters/BD4\\_IntE.htm](http://www.fullsense.com/Meters/BD4_IntE.htm)

BD4&5 Functions: [http://www.fullsense.com/Meters/BD4\\_TB\\_E.thm](http://www.fullsense.com/Meters/BD4_TB_E.thm)

BD4&5 Selection: [http://www.fullsense.com/Meters/BD4\\_Sel\\_E.htm](http://www.fullsense.com/Meters/BD4_Sel_E.htm)

BD4\_5Configuration: [http://www.fullsense.com/MetersBD4\\_Cfg\\_E.htm](http://www.fullsense.com/MetersBD4_Cfg_E.htm)

BD4Application: [http://www.fullsense.com/Meters/BD4\\_AG\\_E.htm](http://www.fullsense.com/Meters/BD4_AG_E.htm)

### Related Technical References:

<http://www.fullsense.com/Network/>

Scm Protocol

STIMcom Protocol

IEEE1451.1 NCAP Protocol

IEEE1451.2 STIM Protocol