

# DIGITAL MANOMETER THERMOMETER

HD 2114.0/2, HD2134.0/2  
HD 2164.0, HD 2114B.2

Intended to Measure Absolute, Relative and Differential Pressure, as well as Temperature. Pressure is measured using an internal module which is differential with respect to the atmosphere with fixed full scale. With the PP471 module acting as an interface, the instrument can use all the TP704 and TP705 series probes to perform the measurements. The HD2114B.0 & HD2114B.2 internal module measures the barometric pressure.

For Temp. measurement the sensor can be a Pt100, Pt1000 or Ni1000. The temp. probes are fitted with a SICRAM module, with the factory calibration settings already being logged inside.

The HD 2114.2, HD2134.2, HD2164.2 & HD2114B.2 instruments are Dataloggers. They memorize up to 36,000 samples which can be transferred from the instrument connected to a PC via the multi-standard RS232C serial port & USB 2.0. The storing interval, printing, & baud rate can be configured using the menu. They are also fitted with an RS232C serial port & can transfer the acquired measurements to a PC or to a portable printer in real time.

The Peak function can be activated with external probes connected to the module PP471 & detects the presence of pressure peaks. Other functions include: the relative measurement REL, the HOLD function & the automatic turning off which can also be disabled.

## Instrument Technical Characteristics :

Display	2x4½ characters plus symbols Visible area : 52x42mm
<b>Measuring unit</b>	°C - °F - Pa - hPa - mbar - bar - atm mmHg - mmHO <sub>2</sub> - kgf/cm <sup>2</sup> - PSI - inchHg
Materials	ABS, rubber
Dimensions (L x W x H)	185x90x40mm
Weight	470g (complete with batteries)

### Operating conditions

Operating temperature	-5...50°C
Stocking temperature	-25...65°C
Working relative humidity	0...90%RH without condensation
Protection degree	IP67

### Power

Batteries	4x1.5V type AA batteries
Autonomy	200 hrs. with 1800mAh alkaline batteries
Power absorbed with instrument off	20µA
Mains - Models	HD21....4.2 Output mains adapter 9V dc/250mA



	HD2114.0 HD2114.2	HD2134.0 HD2134.2	HD2164.0 HD2164.2	HD2114B.0 HD2114B.2
Full scale	±20mbar	±200mbar	±2000mbar	600..1100mbar
Max. overpressure	±300mbar	±1bar	±6bar	±3bar
Resolution	0.001mbar	0.01mbar	0.1mbar	0.1mbar
Accuracy @ 23°C	±0.3%f.s.	±(0.1% f.s. + 0.1% measurement)		± 0.3mbar
Working Temp.	0...60°C			
Connection	quick couplings ø5mm			
Compensation Temp.	0...60°C			
Drift on zero	±1%f.s.	±0.5%f.s.	±0.5%f.s.	±0.3%f.s.
Drift on span	±1%f.s.	±0.5%f.s.	±0.5%f.s.	±0.3%f.s.
Fluid contacting the membrane	non corrosive air and gas			

	HD2114.0	HD2134.0	HD2164.0	HD2114B.0	HD2114.2	HD2134.2	HD2164.2	HD2114B.2
Full Scale	±20mbar	±200mbar	±2000mbar	600...1100mbar	±20mbar	±200mbar	±2000mbar	600...1100mbar
Barometer	-	-	-	-	-	-	-	YES
Datalogger	-	-	-	-	YES	YES	YES	YES
RS232C-USB	-	-	-	-	YES	YES	YES	YES
External Power Supply	-	-	-	-	YES	YES	YES	YES


Measured values	storage-model	HD21....4.2
Type	2000 pages containing 18 samples each	
Quantity	36,000 samples (pressure-temp.)	
Storage interval	1s...3600s (1hour)	
Measured values	storage-models	HD21....4.2
Type	RS232C electrically isolated	
Baud rate	Can be set from 1200 to 38400 baud	
Data bit	8	
Serial cable length	Max. 15m	
Immediate print interval	1s....3600s (1hour)	
USB interface	- model	HD21....4.2
Type	1.1 -2.0 electrically isolated	

Connections	
Input module for the probes	2 quick couplings ø 5mm
Serial USB interface	
Measurement of Temperature	by Instrument
Pt100 measurement range	-200...+650°C
Pt1000 measurement range	-200...+650°C
Ni1000 measurement range	-50...+250°C
Resolution	0.1°C
Instrument accuracy	± 0.1 °C
Drift after 1 year	0.1°C / year

PRESSURE PROBE TABLE								
Full Scale Pressure	Maximum over pressure	Resolution	ORDER CODES			Accuracy From 20 to 25°C	Working Temp.	Connection
			Differential pressure	Relative pressure (compared to atmosphere)	Absolute Pressure			
			NON insulated membrane	Insulated membrane	Insulated membrane			
10.0 mbar	20.0 mbar	0.001 mbar	TP705-10MBD			0.50 % FSO	0...60°C	Tube ø 5mm
20.0 mbar	40.0 mbar	0.001 mbar	TP705-20MBD			0.50 % FSO	0...60°C	Tube ø 5mm
50.0 mbar	100 mbar	0.001 mbar	TP705-50MBD			0.50 % FSO	0...60°C	Tube ø 5mm
100 mbar	200 mbar	0.01 mbar	TP705-100MBD			0.25 % FSO	0...60°C	Tube ø 5mm
200 mbar	400 mbar	0.01 mbar	TP705-200MBD			0.25 % FSO	0...60°C	Tube ø 5mm
				TP704-200MBGI		0.25 % FSO	0...80°C	¼ BSP
500 mbar	1000 mbar	0.01 mbar	TP705-500MBD			0.25 % FSO	0...60°C	Tube ø 5mm
				TP704-500MBGI		0.25 % FSO	0...80°C	¼ BSP
1.00 bar	2.00 bar	0.1 mbar	TP705-1BD	TP705BARO		0.25 % FSO	0...60°C	Tube ø 5mm
				TP705-1BGI		0.25 % FSO	0...80°C	¼ BSP
2.00 bar	4.00 bar	0.1 mbar	TP705-2BD			0.25 % FSO	0...60°C	Tube ø 5mm
				TP704-2BGI	TP704-2BAI	0.40 % FSO	0...80°C	¼ BSP
5.00 bar	10.00 bar	0.1 mbar		TP704-5BGI	TP704-5BAI	0.40 % FSO	0...80°C	¼ BSP
10.0 bar	20.0 bar	0.001 bar		TP704-10BGI	TP704-10BAI	0.40 % FSO	0...80°C	¼ BSP
20.0 bar	40.0 bar	0.001 bar		TP704-20BGI	TP704-20BAI	0.40 % FSO	0...80°C	¼ BSP
50.0 bar	100.0 bar	0.001 bar		TP704-50BGI	TP704-50BAI	0.40 % FSO	0...80°C	¼ BSP
100 bar	200 bar	0.01 bar			TP704-100BAI	0.40 % FSO	0...80°C	¼ BSP
200 bar	400 bar	0.01 bar			TP704-200BAI	0.40 % FSO	0...80°C	¼ BSP
500 bar	750 bar	0.01 bar			TP704-500BAI	0.40 % FSO	0...80°C	¼ BSP

## ORDER CODES :

- HD2114.0K : The kit is composed of the HD2114.0, with built-in 20mbar full scale probe, 4 × 1.5V alkaline batteries, operating manual, case. Other probes must be ordered separately .
- HD2114.2K : The kit is composed of the HD2114.2 datalogger with built-in 20mbar full scale probe, connection cable HD2101/USB, 4×1.5V alkaline batteries, operating manual, case. Other probes must be ordered separately .
- HD2134.0K : The kit is composed of the HD2134.0 with built-in 200mbar full scale probe, 4×1.5V alkaline batteries, operating manual, case. Other probes must be ordered separately .
- HD2134.2K : The kit is composed of the HD2134.2 datalogger with built-in 200mbar full scale probe, connection cable HD2101/USB, 4×1.5V alkaline batteries, operating manual, case and DeltaLog9 software. Other probes must be ordered separately.
- HD2164.0K : The kit is composed of the HD2164.0 with built-in 2000mbar full scale probe, 4×1.5V alkaline batteries, operating manual, case. Other probes must be ordered separately .
- HD2164.2K : The kit is composed of the HD2164.2 datalogger with built-in 200mbar full scale probe, connection cable HD2101/USB, 4×1.5V alkaline batteries, operating manual, case & DeltaLog9 Software . Other probes must be ordered separately.
- HD2114B.0K : The kit is composed of the HD2114B .0 with 600...1100 mbar range barometric sensor, 4×1.5V alkaline batteries, operating manual, HD2134.0K : The kit is composed of the HD2134.0 with built-in 200mbar full scale probe, 4×1.5V alkaline batteries, operating manual, case. Other probes must be ordered separately .
- HD2114B.2K : The kit is composed of the HD2114B.2 datalogger with 600...1100mbar range barometric sensor, connection cable HD2101/USB, 4×1.5V alkaline batteries, operating manual, case & DeltaLog9 software . Other probes must be ordered separately.
- HD2110CSNM : 8-pole connection cable MiniDin - Sub D 9-pole female RS232C.
- HD2101/USB : Connection cable USB 2.0 connector type A - 8-pole MiniDin. DeltaLog9 : Software for download and management of the data on PC using Windows 98 to XP operating systems.
- AF209.60 : Stabilized power supply at 230V ac / 9Vdc-300mA mains voltage.
- S' print-BT : On request, portable, serial input, 24 column thermal printer, 58mm paper width.

	<h1>HTA INSTRUMENTATION (P) LTD.,</h1> <p>An ISO 9001:2015 Certified Company &amp; NABL Accredited Calibration Laboratory as per ISO/IEC 17025:2005</p> <p><b>Your One Stop for Instrumentation Calibration &amp; Service</b></p> <p># 73, Ramachandra Agrahara, Near T.R. Mills, Chamarajpet, Bangalore - 560018, INDIA</p> <p>Phone: 080-26749750, 26759253, 26751379, 26751192, Fax: 080-26740681 Website: www.htaipl.com E-mail: sales@htaipl.com</p>	
	<p>ISO 9001:2015 CERTIFIED</p> <p>Certificate No. IQSC201710015</p>	