HD3114B
HANDHELD BAROMETRIC DATA LOGGER

- Built-in precision barometric sensor
- Calculation of altimetric parameters **QNH, QFE** and **QFF** used in aeronautics and meteorology
- One input for temperature, relative humidity and pressure SICRAM probes
- Automatic recognition of the probes
- Colour graphic display
- Graph display of a measure
- Configurable measuring unit
- Data logging function with programming of auto start and auto stop
- Data storing on SD card for long logging duration
- Automatic creation of pdf reports
- HOLD and REL (relative measure) functions
- Detection of minimum, average and maximum values
- Password protected configuration
- USB connection to PC
- Serial output for printer
- Rechargeable Battery
- Auto power off (configurable and excludable)

DESCRIPTION

HD3114B is a pressure, temperature and humidity handheld data logger with a large (43 x 58 mm) color graphic LCD display.

The instrument has a built-in precision barometric sensor for the measurement of the atmospheric pressure and the calculation of the following barometric and altimetric derived parameters: **barometric tendency** (numerical) **and trend** (decrease, steady, increase), **altitude**, **QNH** (atmospheric pressure at mean sea level calculated considering the international standard atmosphere - ISA), **QFE** (atmospheric pressure at ground level) and **QFF** (atmospheric pressure at mean sea level calculated considering the real temperature). The instrument can display the internal temperature of the barometric sensor.

The input for SICRAM probes (intelligent and interchangeable probes capable to store calibration data into memory) allows connecting:

- 4-wire Pt100 temperature probes.
- Temperature and relative humidity combined probes.
- TP704/TP705 absolute/relative/differential probes with PP471 module.

The type of SICRAM probe connected is automatically recognized by the instrument. The probes are supplied factory-calibrated and are interchangeable. Calibration reports or certificates are available upon request.

By connecting a combined temperature and relative humidity probe, the instrument calculates the quantities derived from humidity: dew point temperature, wet bulb temperature, absolute humidity, mixing ratio, partial vapor pressure, saturated vapor pressure, enthalpy. Moreover, the DI discomfort index and the NET (Net Effective Temperature) index are calculated.

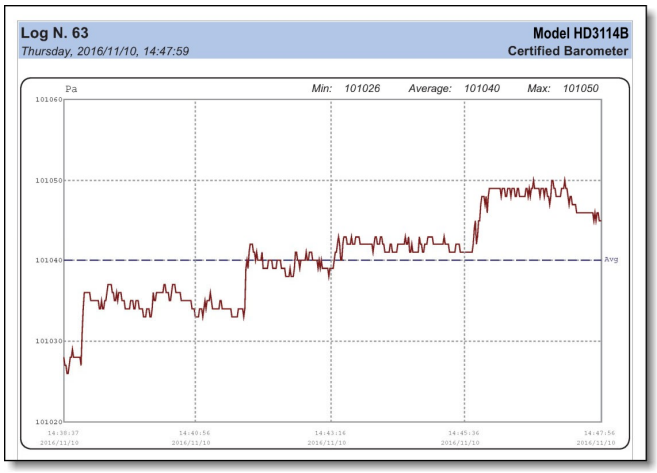
Simultaneous display of three variables in numerical form. Real time visualization on display of the graph of a measured variable.

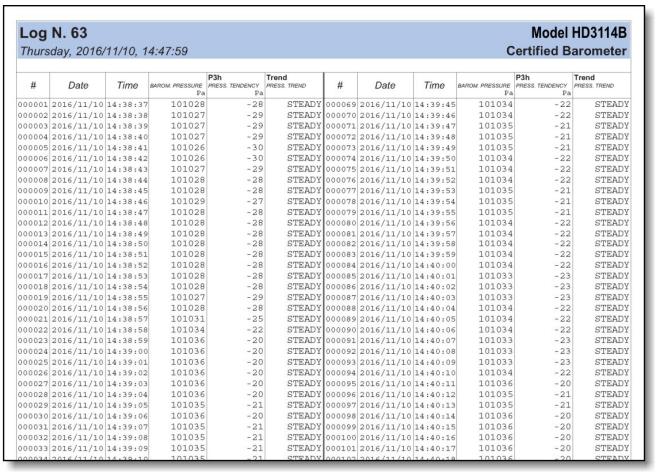
Measurement units selectable according to the measured physical quantity.

Data logging function with data storing in CSV format directly to the SD type memory card, for a long

duration of the logging (for example, with a 4GB SD card, the duration of the logging is in the order of months, even when recording many quantities with the minimum logging interval equal to 1 second). Storage interval configurable by the user. Automatic or manual start and stop of the logging. Storing of date and time of each recorded sample. Automatic creation of measurement reports in PDF format on the memory card.

Manual (it captures the current measurement at simply pushing a key) or automatic (it acquires the current measurement once per second) RECORD function for the calculation of minimum, medium and maximum values measured.





Log N. 63 — Thursday, 2016/11/10, 14:47:59 — Model HD3114B, Certified Barometer

#	Date	Time	BAROM. PRESSURE Pa	P3h PRESS. TENDENCY Pa	Trend PRESS. TREND	#	Date	Time	BAROM. PRESSURE Pa	P3h PRESS. TENDENCY Pa	Trend PRESS. TREND
000001	2016/11/10	14:38:37	101028	-28	STEADY	000069	2016/11/10	14:39:45	101034	-22	STEADY
000002	2016/11/10	14:38:38	101027	-29	STEADY	000070	2016/11/10	14:39:46	101034	-22	STEADY
000003	2016/11/10	14:38:39	101027	-29	STEADY	000071	2016/11/10	14:39:47	101035	-21	STEADY
000004	2016/11/10	14:38:40	101027	-29	STEADY	000072	2016/11/10	14:39:48	101035	-21	STEADY
000005	2016/11/10	14:38:41	101026	-30	STEADY	000073	2016/11/10	14:39:49	101035	-21	STEADY
000006	2016/11/10	14:38:42	101026	-30	STEADY	000074	2016/11/10	14:39:50	101034	-22	STEADY
000007	2016/11/10	14:38:43	101027	-29	STEADY	000075	2016/11/10	14:39:51	101034	-22	STEADY
000008	2016/11/10	14:38:44	101028	-28	STEADY	000076	2016/11/10	14:39:52	101034	-22	STEADY
000009	2016/11/10	14:38:45	101028	-28	STEADY	000077	2016/11/10	14:39:53	101035	-21	STEADY
000010	2016/11/10	14:38:46	101029	-27	STEADY	000078	2016/11/10	14:39:54	101035	-21	STEADY
000011	2016/11/10	14:38:47	101028	-28	STEADY	000079	2016/11/10	14:39:55	101035	-21	STEADY
000012	2016/11/10	14:38:48	101028	-28	STEADY	000080	2016/11/10	14:39:56	101034	-22	STEADY
000013	2016/11/10	14:38:49	101028	-28	STEADY	000081	2016/11/10	14:39:57	101034	-22	STEADY
000014	2016/11/10	14:38:50	101028	-28	STEADY	000082	2016/11/10	14:39:58	101034	-22	STEADY
000015	2016/11/10	14:38:51	101028	-28	STEADY	000083	2016/11/10	14:39:59	101034	-22	STEADY
000016	2016/11/10	14:38:52	101028	-28	STEADY	000084	2016/11/10	14:40:00	101034	-22	STEADY
000017	2016/11/10	14:38:53	101028	-28	STEADY	000085	2016/11/10	14:40:01	101033	-23	STEADY
000018	2016/11/10	14:38:54	101028	-28	STEADY	000086	2016/11/10	14:40:02	101033	-23	STEADY
000019	2016/11/10	14:38:55	101027	-29	STEADY	000087	2016/11/10	14:40:03	101033	-23	STEADY
000020	2016/11/10	14:38:56	101028	-28	STEADY	000088	2016/11/10	14:40:04	101034	-22	STEADY
000021	2016/11/10	14:38:57	101031	-25	STEADY	000089	2016/11/10	14:40:05	101034	-22	STEADY
000022	2016/11/10	14:38:58	101034	-22	STEADY	000090	2016/11/10	14:40:06	101034	-22	STEADY
000023	2016/11/10	14:38:59	101036	-20	STEADY	000091	2016/11/10	14:40:07	101033	-23	STEADY
000024	2016/11/10	14:39:00	101036	-20	STEADY	000092	2016/11/10	14:40:08	101033	-23	STEADY
000025	2016/11/10	14:39:01	101036	-20	STEADY	000093	2016/11/10	14:40:09	101033	-23	STEADY
000026	2016/11/10	14:39:02	101036	-20	STEADY	000094	2016/11/10	14:40:10	101034	-22	STEADY
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000029	2016/11/10	14:39:05	101035	-21	STEADY	000097	2016/11/10	14:40:13	101035	-21	STEADY
000030	2016/11/10	14:39:06	101036	-20	STEADY	000098	2016/11/10	14:40:14	101036	-20	STEADY
000031	2016/11/10	14:39:07	101035	-21	STEADY	000099	2016/11/10	14:40:15	101036	-20	STEADY
000032	2016/11/10	14:39:08	101035	-21	STEADY	000100	2016/11/10	14:40:16	101036	-20	STEADY
000033	2016/11/10	14:39:09	101035	-21	STEADY	000101	2016/11/10	14:40:17	101036	-20	STEADY
000034	2016/11/10	14:39:10	101035	-21	STEADY	000102	2016/11/10	14:40:18	101036	-20	STEADY

Report in PDF format with graphs and tables

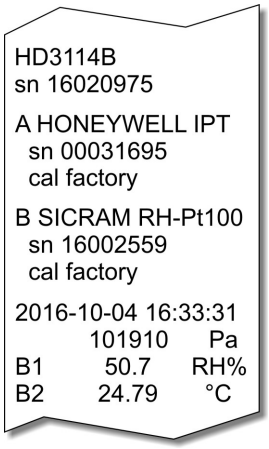
HOLD function (it freezes the current measurements on display) and REL function (difference compared to a stored value).

Password protected functions. A "Quick Help" on the display helps using the instrument functions.

The USB Port with mini-USB connector for PC connection is meant for configuration and download of the acquired data. The **DeltaLog9** application software is downloadable from Delta OHM website. The USB port can operate in "HID" (Human Interface Device) or "Virtual COM" mode. The "HID" mode has the advantage of not requiring the installation of USB drivers: when the instrument is connected to the PC, the Windows® operating system recognizes the instrument automatically and uses the drivers that are already included in the operating system. The "Virtual COM" mode allows communicating with the instrument by sending commands via a generic serial communication program.

It has the MSD (Mass Storage Device) under which the instrument is considered by the PC an SD card reader, thus allowing direct access to the memory card to view, copy or delete the recorded files.

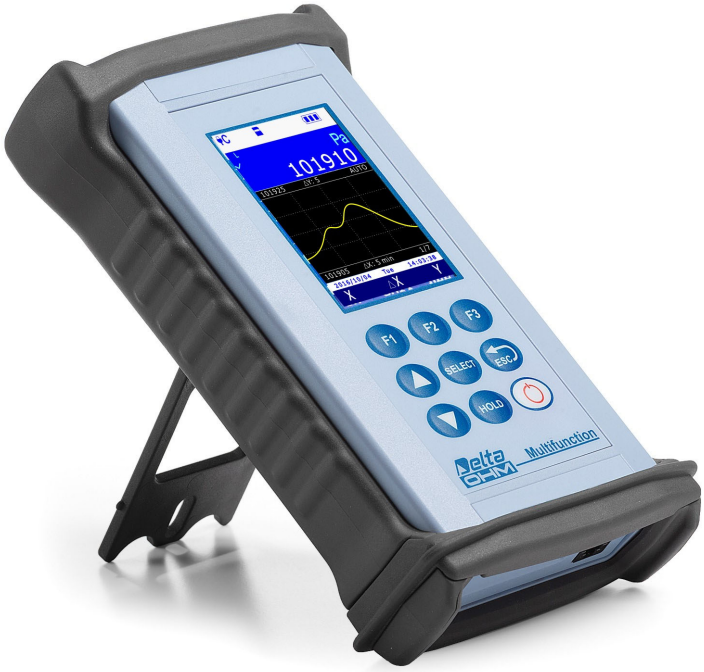
Serial output for printing the visualized measures on a printer with RS232C input. Baud Rate adjustable from 1200 to 115200.



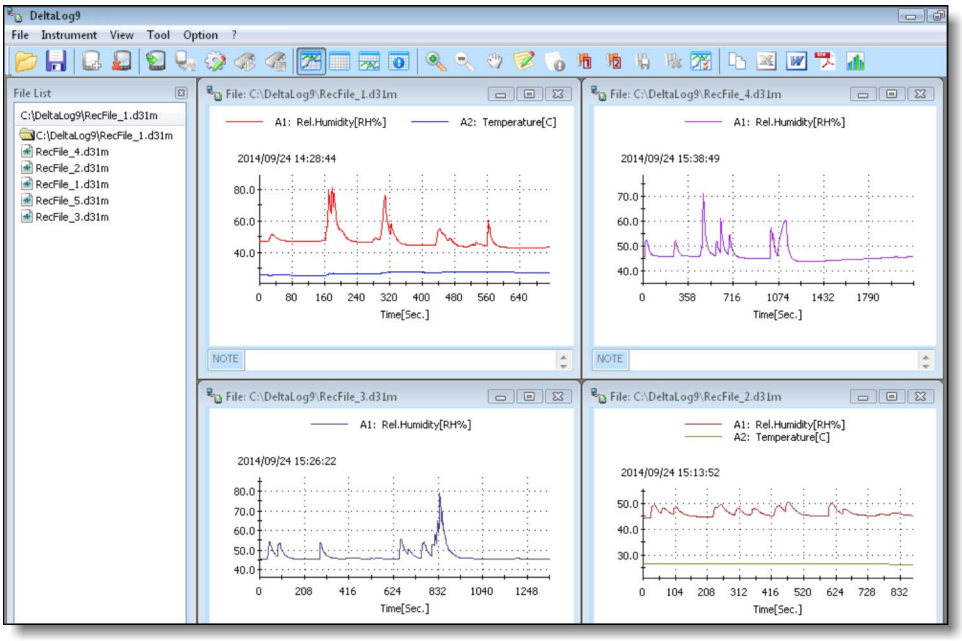
Example of the measurement print out

Rechargeable lithium-ion battery. Auto power off (excludable) after an idle time configurable by the user (2, 5, 10, 15, 20 or 30 minutes) to preserve the battery charge. External power supply through USB port (with mini-USB connector) by connecting a **5 Vdc** adapter or the USB port (at least 500 mA) of a PC. With external power supply connected, the battery is recharged and the auto power off is automatically deactivated.

The instrument is supplied with a sturdy protective rubber shell, provided with magnet and removable back support.

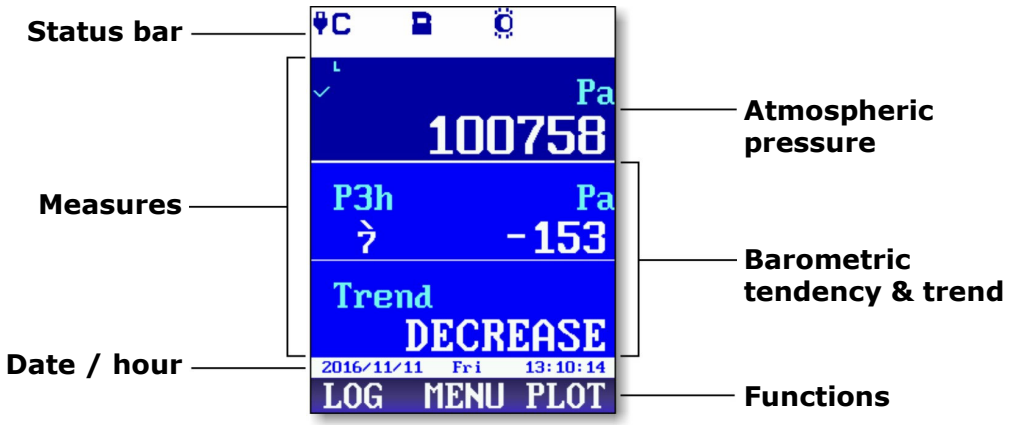


Protection shell with support

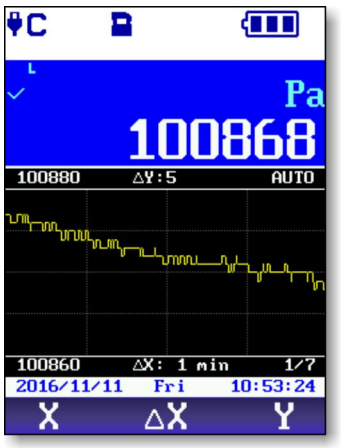


Software DeltaLog 9

Instrument description



LCD description



Real time measurement graph

HELP functions on the display

TECHNICAL CHARACTERISTICS

Atmospheric pressure

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 units of measurement	Pa, hPa, kPa, mbar, bar, atm, mmHg, mmH_2O, kgf/cm^2, PSI, inHg, inH_2O

Instrument

Power supply	**Rechargeable** internal 3.7 V Lithium battery, capacity 2250 mA/h, JST 3-pole connector. **Optional** external 5 Vdc/1A power supply (**SWD05**) to be connected at the mini-USB connector of the instrument. Powered by the PC USB port (at least 500 mA) when connected to the PC.
Battery autonomy	15 hours of continuous operation (typical duration starting from a fully charged battery and with one Pt100 probe connected). **The actual battery life depends on the type of the probe connected**.
Logging interval	1, 5, 10, 15, 30 seconds / 1, 2, 5, 10, 15, 20, 30 minutes / 1 hour
Storage capacity	SD memory card with capacity up to 4 GB. The logging duration depends on the number of logged quantities and on the capacity of the SD card employed. For example: with a 4GB SD card the duration of the logging is in the order of months, even when many quantities are recorded with the minimum logging interval equal to 1 s.
Inputs	1 input with 8-pole DIN45326 connector for Pt100 temperature probes, combined temperature and relative humidity probes, TP704/TP705 pressure probes with PP471 module. The barometric sensor is integrated into the instrument.
Clock stability	1 min/month maximum drift
Display	Color graphic LCD. Visible area 43 x 58 mm.
USB Connection	1 USB port with mini-USB connector.
RS232C Connection	1 serial RS232C output with RJ12 (6P6C) connector for connecting to a serial printer. Baud Rate selectable from 1200 to 115200.

Auto power off	Configurable after 2, 5, 10, 15, 20 or 30 minutes from last pressure of a key, with battery supply. It can be disabled. Automatically disabled when powered from external supply.
Operating conditions	-10 … 60 °C, 0 … 85% RH without condensation.
Storage temperature	-25 … 65 °C
Materials	ABS, protective 55 shore rubber bands on the sides. 55 shore rubber protective shell.
Dimensions	172x88x35 mm without rubber protection shell 180x102x46 mm with rubber protection shell
Weight	About 400 g (including batteries and protection shell)
Protection degree	IP 64

TECHNICAL DATA OF SICRAM PROBES AND MODULES IN LINE WITH THE INSTRUMENT

Temperature with Platinum sensors (PRT)

4-wire Pt100 sensor temperature probes equipped with SICRAM module

Model	Type	Application range	Accuracy
TP472I	Immersion	-196 °C…+500 °C	±0.25 °C (-196 °C…+300 °C) ±0.5 °C (+300 °C…+500 °C)
TP472I.0 1/3 DIN – Thin Film	Immersion	-50 °C…+300 °C	±0.25 °C
TP473P.I	Penetration	-50 °C…+400 °C	±0.25 °C (-50 °C…+300 °C) ±0.5 °C (+300 °C…+400 °C)
TP473P.0 1/3 DIN - Thin Film	Penetration	-50 °C…+300 °C	±0.25 °C
TP474C.0 1/3 DIN - Thin Film	Contact	-50 °C…+300 °C	±0.3 °C
TP475A.0 1/3 DIN - Thin Film	Air	-50 °C…+250 °C	±0.3 °C
TP472I.5	Immersion	-50 °C…+400 °C	±0.3 °C (-50 °C…+300 °C) ±0.6 °C (+300 °C…+400 °C)
TP472I.10	Immersion	-50 °C…+400 °C	±0.3 °C (-50 °C…+300 °C) ±0.6 °C (+300 °C…+400 °C)
TP49A.I	Immersion	-70 °C…+250 °C	±0.25 °C
TP49AC.I	Contact	-70 °C…+250 °C	±0.25 °C
TP49AP.I	Penetration	-70 °C…+250 °C	±0.25 °C
TP875.I	Globe-thermometer Ø 150 mm	-30 °C…+120 °C	±0.25 °C
TP876.I	Globe-thermometer Ø 50 mm	-30 °C…+120 °C	±0.25 °C
TP87.O 1/3 DIN - Thin Film	Immersion	-50 °C…+200 °C	±0.25 °C
TP878.O 1/3 DIN - Thin Film	Photovoltaic	+4 °C…+85 °C	±0.25 °C
TP878.1.O 1/3 DIN - Thin Film	Photovoltaic	+4 °C…+85 °C	±0.25 °C
TP879.O 1/3 DIN - Thin Film	Compost	-20 °C…+120 °C	±0.25 °C

Common characteristics

Resolution	0.01 °C from -200 °C to 350 °C / 0.1 °C from 350 °C to 800 °C
Temperature drift @ 20 °C	0.003 %/°C

4-wire Pt100 and 2-wire Pt1000 probes

Model	Type	Application range	Accuracy
TP47.100.O 1/3 DIN – Thin Film	4-wire Pt100	-50…+250 °C	1/3 DIN
TP47.1000.O 1/3 DIN – Thin Film	2-wire Pt1000	-50…+250 °C	1/3 DIN
TP87.100.O 1/3 DIN – Thin Film	4-wire Pt100	-50…+200 °C	1/3 DIN
TP87.1000.O 1/3 DIN – Thin Film	2-wire Pt1000	-50…+200 °C	1/3 DIN

Common characteristics

Resolution	0.01 °C from -200 °C to 350 °C / 0.1 °C from 350 °C to 800 °C
Temperature drift @ 20 °C	
Pt100	0.003 %/°C
Pt1000	0.005 %/°C

TP471 Module for **NO** SICRAM temperature probes with Platinum sensor (PRT).

Resistance values of the sensor @ 0 °C	25 Ω, 100 Ω, 500 Ω
Measuring range Pt25, Pt100	-200 °C … +850 °C
Measuring range Pt500	-200 °C … +500 °C
Accuracy with Pt25, Pt100 sensor	±0.03 °C up to 350 °C ±0.3 °C up to 850 °C
Accuracy with Pt500 sensor	±0.5 °C up to 500 °C
Resolution	0.01 °C from -200 °C to 350 °C 0.1 °C from 350 °C to 800 °C
Temperature drift @ 20 °C	0.002 %/°C
Excitation current	400 μA impulsive, Duration=100 ms, Period=1 s

Relative humidity and temperature

Relative humidity and temperature probes equipped with SICRAM module

Model	Temperature sensor	Application range		Accuracy	
		%RH	Temperature	%RH	Temp
HP472ACR	Pt100	0…100%RH	-20 °C…+80 °C	±1.5% (0…85%RH) ±2.5% (85…100%RH) @ T=15…35 °C (2 + 1.5% measure)% @ T= remaining field	±0.3 °C
HP473ACR	Pt100	0…100%RH	-20 °C…+80 °C		±0.3 °C
HP474ACR	Pt100	0…100%RH	-40 °C…+150 °C		±0.3 °C
HP475ACR	Pt100	0…100%RH	-40 °C…+150 °C		±0.3 °C
HP475AC1R	Pt100	0…100%RH	-40 °C…+180 °C		±0.3 °C
HP477DCR	Pt100	0…100%RH	-40 °C…+150 °C		±0.3 °C
HP478ACR	Pt100	0…100%RH	-40 °C…+150 °C		±0.3 °C
HP480	Pt100	0…100%RH	-40 °C…+60 °C		±0.25 °C

Common characteristics

Relative Humidity	
Sensor	Capacitive
Resolution	0.1%RH
Temperature drift @ 20 °C	0.02 %RH/°C
Response time %RH at constant temperature	10 s (10→80 %RH; air speed=2 m/s)
Temperature with Pt100 sensor	
Resolution	0.1 °C
Temperature drift @ 20 °C	0.003 %/°C

Protections and solutions for relative humidity and temperature probes

P1 200μm stainless steel grid protection for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P2 20μm PE sintered polythene protection for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P3 20μm sintered bronze protection for probes ∅26, thread M24x1.5. For temperatures up to 150 °C.

P4 20μm sintered PE complete cap for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P6 10μm sintered stainless steel protection for probes ∅14, thread M12x1. For temperatures up to 180 °C.

P7 20μm PTFE protection for probes ∅14, thread M12x1. For temperatures up to 150 °C.

P8 20μm stainless steel grid and Pocan protection for probes ∅14, thread M12x1. For temperatures up

to 100 °C.

HD75 75% RH saturated solution for checking the relative humidity sensor, complete with screw adaptor for probes ∅14, M12×1 thread.

HD33 33% RH saturated solution for checking the relative humidity sensor, complete with screw adaptor for probes ∅14, M12×1 thread.

Pressure

PP471 SICRAM module for the measurement of absolute, relative and differential pressure. It works with pressure probes of the series TP704 and TP705. It gives the instantaneous value and the peak of the pressure. The module is supplied with cable L=2m and 8-pole female DIN 45326 connector.

Accuracy	±0.05% of the full scale (f.s.)
Duration of the peak	≥ 5 ms
Accuracy of peak	±0.5% f.s.
Dead band of peak	≤ 2% f.s.

Pressure probes of the series TP704 and TP705 to be connected to the PP471 module

Full scale pressure	Maximum over-pressure	Resolution	ORDERING CODES			Accuracy from 20 to 25°C	Working temperature	Connection
			Differential pressure	Relative pressure (with respect to atmosphere)	Absolute pressure			
			NON insulated Membrane	Insulated membrane	Insulated membrane			
10.0 mbar	20.0 mbar	0.01 mbar	**TP705-10MBD**			0.50 % FSO	0...60 °C	Tube ∅ 5 mm
20.0 mbar	40.0 mbar	0.01 mbar	**TP705-20MBD**			0.50 % FSO	0...60 °C	Tube ∅ 5 mm
50.0 mbar	100 mbar	0.01 mbar	**TP705-50MBD**			0.50 % FSO	0...60 °C	Tube ∅ 5 mm
100 mbar	200 mbar	0.1 mbar	**TP705-100MBD**			0.25 % FSO	0...60 °C	Tube ∅ 5 mm
				TP704-100MBGI		0.25 % FSO	-30...+80 °C	¼ BSP
200 mbar	400 mbar	0.1 mbar	**TP705-200MBD**			0.25 % FSO	0...60 °C	Tube ∅ 5 mm
				TP704-200MBGI		0.25 % FSO	-30...80 °C	¼ BSP
400 mbar	1000 mbar	0.1 mbar		**TP704-400MBGI**		0.25 % FSO	-40...125 °C	¼ BSP
500 mbar	1000 mbar	0.1 mbar	**TP705-500MBD**			0.25 % FSO	0...60 °C	Tube ∅ 5 mm
600 mbar	1000 mbar	0.1 mbar		**TP704-600MBGI**		0.25 % FSO	-40...125 °C	¼ BSP
1.00 bar	2.00 bar	1 mbar	**TP705-1BD**			0.25 % FSO	0...60 °C	Tube ∅ 5 mm
					TP705BARO	0.25 % FSO	0...60 °C	Tube ∅ 5 mm
				TP704-1BGI		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-1BAI	0.25 % FSO	-40...120 °C	¼ BSP
2.00 bar	4.00 bar	1 mbar	**TP705-2BD**			0.25 % FSO	0...60 °C	Tube ∅ 5 mm
				TP704-2BGI		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-2BAI	0.25 % FSO	-25...85 °C	¼ BSP
5.00 bar	10.00 bar	1 mbar		**TP704-5BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-5BAI	0.25 % FSO	-25...85 °C	¼ BSP
10.0 bar	20.0 bar	0.01 bar		**TP704-10BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-10BAI	0.25 % FSO	-25...85 °C	¼ BSP
20.0 bar	40.0 bar	0.01 bar		**TP704-20BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-20BAI	0.25 % FSO	-25...85 °C	¼ BSP
50.0 bar	100.0 bar	0.01 bar		**TP704-50BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-50BAI	0.25 % FSO	-25...85 °C	¼ BSP
100 bar	200 bar	0.1 bar		**TP704-100BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-100BAI	0.25 % FSO	-25...85 °C	¼ BSP
200 bar	400 bar	0.1 bar		**TP704-200BGI**		0.25 % FSO	-40...125 °C	¼ BSP
					TP704-200BAI	0.25 % FSO	-25...85 °C	¼ BSP
500 bar	1000 bar	0.1 mbar		**TP704-500BGI**		0.25 % FSO	-40...125 °C	¼ BSP
	700 bar	0.1 mbar			**TP704-500BAI**	0.25 % FSO	-25...85 °C	¼ BSP

ORDERING CODES

HD3114B Temperature, humidity and pressure handheld data logger. Color graphic LCD display. Built-in precision barometric sensor. One input for Pt100 temperature probes, combined temperature and relative humidity probes, TP704/TP705 pressure probes with PP471 module. Direct logging on SD memory card. USB port for connection to PC or external power supply unit (**optional**). RS232C output for serial printer connection. Provided with: lithium ion rechargeable battery, SD card, rubber protection shell, instruction manual and case. **DeltaLog9** software downloadable from Delta OHM website is included.
Modules, probes, USB and serial connection cables, external power supply have to be ordered separately.

Accessories

DeltaLog9 CD-ROM with software DeltaLog 9 for configuration, data download, monitor and PC data management. For Windows® operating systems.

CP31 PC connecting cable with male mini-USB connector on instrument side and male A type USB connector on PC side

CP31RS RS232C connecting cable for serial printer. RJ12 connector on instrument side and 9-pole female Sub-D connector on printer side.

SWD05 100-240 Vac / 5 Vdc - 1 A power adapter.

HD35-BAT1 3.7 V lithium-ion **rechargeable** battery, capacity 2250 mA/h, 3-pole JST connector.

HD40.1 24-column portable thermal printer, serial interface, 57mm paper width, four NiMH 1.2V rechargeable batteries, SWD10 power supply, instruction manual, 5 thermal paper rolls.

BAT-40 Spare battery pack for HD40.1 printer with built-in temperature sensor.

RCT Four rolls of thermal paper, width 57mm, diameter 32mm.

Pt100 temperature probes equipped with SICRAM module

TP472I Immersion probe, Pt100 sensor. Stem Ø 3 mm, length 300 mm. Cable length 2 m.

TP472I.0 Immersion probe, Pt100 sensor. Stem Ø 3 mm, length 230 mm. Cable length 2 m.

TP473P.I Penetration probe, Pt100 sensor. Stem Ø 4 mm, length 150 mm. Cable length 2 m.

TP473P.0 Penetration probe, Pt100 sensor. Stem Ø 4 mm, length 150 mm. Cable length 2 m.

TP474C.0 Contact probe, Pt100 sensor. Stem Ø 4 mm, length 230mm, contact surface Ø 5 mm. Cable length 2m.

TP475A.0 Air probe, Pt100 sensor. Stem Ø 4mm, length 230mm. Cable length 2 m.

TP472I.5 Immersion probe, Pt100 sensor. Stem Ø 6 mm, length 500 mm. Cable length 2 m.

TP472I.10 Immersion probe, Pt100 sensor. Stem Ø 6 mm, length 1,000 mm. Cable length 2 m.

TP49A.I Immersion probe, Pt100 sensor. Stem Ø 2.7 mm, length 150 mm. Cable length 2 m. Aluminium handle.

TP49AC.I Contact probe, Pt100 sensor. Stem Ø 4 mm, length 150 mm. Cable length 2 m. Aluminium handle.

TP49AP.I Penetration probe, Pt100 sensor. Stem Ø 2.7 mm, length 150 mm. Cable length 2 m. Aluminium handle.

TP875.I Globe thermometer Ø 150 mm with handle, complete with SICRAM module. Cable length 2 m.

TP876.I Globe thermometer Ø 50 mm with handle, complete with SICRAM module. Cable length 2m.

TP87.O Immersion probe, Pt100 sensor. Stem Ø 3 mm, length 70 mm. Cable length 2 m.

TP878.O Contact probe for solar panels. Cable length 2 m.

TP878.1.O Contact probe for solar panels. Cable length 5 m.

TP879.O Penetration probe for compost. Stem Ø 8 mm, length 1 m. Cable length 2 m.

Pt100 and Pt1000 temperature probes without SICRAM module

TP47.100.O Direct 4 wires Pt100 sensor immersion probe. Probe's stem Ø 3mm, length 230 mm. Connection cable 4 wires with connector, length 2 m.

TP47.1000.O Pt1000 sensor immersion probe. Probe's stem Ø 3 mm, length 230 mm. Connection cable 2 wires with connector, length 2 m.

TP87.100.O Direct 4 wires Pt100 sensor immersion probe. Probe's stem Ø 3 mm, length 70 mm. Connection cable 4 wires with connector, length 2 m.

TP87.1000.O Pt1000 sensor immersion probe. Probe's stem Ø 3 mm, length 70 mm. Connection cable 2 wires with connector, length 2 m.

Modules for NON SICRAM temperature probes

TP471 Module for the connection of **NO** SICRAM probes with Platinum (PRT) sensor: Works with Pt25, Pt100 and Pt500 probes. Designed for the connection of 4-wire sensors.

Combined relative humidity and temperature probes equipped with SICRAM MODULE

HP472ACR %RH and temperature combined probe, dimensions Ø 26x170 mm. Connection cable length 2 metres.

HP473ACR %RH and temperature combined probe. Handle dimensions Ø 26x130 mm, probe Ø 14x120 mm. Connection cable length 2 metres.

HP474ACR %RH and temperature combined probe. Handle dimensions Ø 26x130 mm, probe Ø 14x215 mm. Connection cable length 2 metres.

HP475ACR %RH and temperature combined probe. Connection cable length 2 metres. Handle Ø 26x110 mm. Stainless steel stem Ø 12x560 mm. Tip Ø 13.5x75 mm.

HP475AC1R %RH and temperature combined probe. Connection cable length 2 metres. Handle Ø 80 mm. Stainless steel stem Ø 14x480 mm.

HP477DCR %RH and temperature combined sword probe. Connection cable length 2 metres. Handle Ø26x110 mm. Probe's stem 18x4 mm, length 520 mm

HP478ACR %RH and temperature combined probe. Connection cable length 5 metres. Stem made of stainless steel Ø14x130 mm.

HP480 Temperature and humidity probe for compressed air systems. Complete with SICRAM module. Connection cable length 2m. Fitted with sintered AISI 316 15µm filter, measuring chamber, air flow regulation valve and 3 quick couplings 1/4” (Italian, German and American standard).

P1 200µm stainless steel grid protection for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P2 20µm PE sintered polythene protection for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P3 20µm sintered bronze protection for probes ∅26, thread M24x1.5. For temperatures up to 150 °C.

P4 20µm sintered PE complete cap for probes ∅26, thread M24x1.5. For temperatures up to 80 °C.

P6 10µm sintered stainless steel protection for probes ∅14, thread M12x1. For temperatures up to 180 °C.

P7 20µm PTFE protection for probes ∅14, thread M12x1. For temperatures up to 150 °C.

P8 20µm stainless steel grid and Pocan protection for probes ∅14, thread M12x1. For temperatures up to 100 °C.

HD75 75% RH saturated solution for checking the relative humidity sensor, complete with screw adaptor for probes ∅14, M12×1 thread.

HD33 33% RH saturated solution for checking the relative humidity sensor, complete with screw adaptor for probes ∅14, M12×1 thread.

Probes and Modules for pressure measurement

PP471 SICRAM module for the measurement of absolute, relative and differential pressure. Works with the pressure probes of the series TP704 and TP705. Supplied with cable L=2m and 8-pole DIN 45326 female connector.

For the pressure probes of the series TP704 and TP705 see the previous table.

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