



**Measurand:**

- Temperature
  - Relative humidity
  - Atmospheric pressure and differential pressure
  - Carbon monoxide (CO)
  - Carbon dioxide (CO<sub>2</sub>)
- Connection via USB, WLAN, Ethernet, RS485, GSM/GPRS, WiFi

**Upon request:**

- Solar radiation
- Soil moisture
- Illuminance (lux)
- UVA, UVB and UVC Irradiance
- Rainfall
- Wind speed and direction
- Leaf wetness
- Standard signals, Analog, Digital (ModBus), Potentiometer, potential-free contacts, PT100, PT1000, ...

**Description:**

The Delta OHM wireless data logging system allows the monitoring of many physical quantities in various application fields.

The models that measure relative humidity and temperature can also calculate derived humidity quantities. The calculated quantities depend on the model and can be: Dew Point, wet bulb temperature, absolute humidity, mixing ratio, partial vapour pressure.

Depending on the model, the external measuring probes are connected to the data logger via M12 connector or screw terminal header. Some of the models are equipped with built-in sensors.

A version of data logger with terminal header inputs is available for the connection of:

- Transmitters with 0 ... 20 or 4 ... 20 mA current output and 0 ... 50 mV, 0 ... 1 V or 0 ... 10 V voltage output
- Pt100 / Pt1000 and K, J, T, N, E type thermocouple temperature sensors
- Sensors with voltage free contact output (counting of switchings) or potentiometric output

This allows to extend the monitoring capability of the system to countless other quantities, in addition to those listed.



**Application:**

- Food services (refrigerated containers, cold storage, production and carriage of food)
- Health (storage of medicines, vaccines, blood, monitoring of operating rooms)
- Greenhouses and agriculture crops
- Environmental analyses (Air quality, meteorology and hydrology)
- Monitoring of solar panels
- Museums and document archives
- Transportation of perishable and fragile goods (monitoring of shocks by measuring the acceleration)
- Air conditioning
- Clean rooms
- Laboratories
- Industrial processes
- Buildings, offices, schools
- Building automation
- Meteorology
- Industry
- Pharmaceutical industry
- Warehouse
- Photovoltaics

**Transmission frequency:**

All the models (except HD35APD ...) are available in three versions, depending on the transmitting frequency band:

- 868 MHz (in compliance with the european normative EN 300 220),
- 902 ... 928 MHz (in compliance with U.S. FCC part 15 section 247 and I.C. RSS-210 regulations),
- 915.9 ... 929.7 MHz (in compliance with ARIB STD-T108 standard).

The base unit HD35APD is only available with 868 MHz or 902 ... 928 MHz transmitting frequency band.

The 902 - 928 MHz transmitting frequency band can be reduced to 915 ... 928 MHz (Australia) or 921 ... 928 MHz (New Zealand).

The wireless transmission of the Delta OHM system is extremely robust against radio frequency interference. The system is able to detect any RF interference in the transmission channel, and to transfer the data communication in another channel of the same transmitting band. The correctness of the transmitted data is ensured by the bidirectional communication between the base unit and the remote data loggers.

**Transmission range and Repeater:**

To increase the distance between the base unit and the data loggers, the HD35RE... repeaters are used. More repeaters in cascade can be used ("multi-hop" network). Depending on HF-frequency band the typical transmitting range between two devices communicating directly is 300 m in open field (the range can be reduced if there are obstacles between the two devices.).

EXAMPLES

