CO2/Temp/Humidity

Wireless CO2, temp and humidity sensor.

Device:
The combined true CO2, ambient temperature and humidity device is a plug-and-play transmitter. Great care has been taken to design a sleek, good looking device with high security and performance. The device has 2 antennas for maximum range in both vertical and horizontal directions.

Performance:
The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion. The CO2 sensor is also monitored and a warning is issued if it is not working.

CO2 sensor:
The on-board NDIR CO2 sensor with diffusion technology is used to measure the absolute CO2 level. An intelligent calibration routine calibrate the device at startup and during the entire lifetime. The sensor calibrates every 20 days to ensure good readings. The calibration is done using the lowest reading in the interval. This reading is used as the 400 ppm baseline for the next period. This works on the fact that the CO2 level move towards 400 ppm when the building is not occupied for a period.

Temperature sensor:
The on-board temperature sensor is highly accurate with typical accuracy ±0,30.

Humidity sensor:
The on-board humidity sensor is highly accurate in the entire temperature range, with typical accuracy ±3%RH.

Measurments:
The CO2, Temperature and humidity is sampled every 6 minutes and sent synchronous using the Wireless MBUS protocol OMS compliant. The data is also repeated every 90 seconds as an asynchronous message. This makes the sensor ideal for integration in data collecting systems, drive by solutions or for controlling ventilation. The data from the device could is also protected using the AES128 encryption compliant with OMS standard.

Firmware:
MODES	Configurable* C1-A/B, T1 or S1
SAMPLE INTERVAL	Configurable* 6 minutes.
ENCRYPTION	AES128 encryption OMS mode 5. Profile A.
MBUS DATA	Instant, Average hour, Average 24 hours.
STANDARD	T1 Mode, 6 min synchronous, 90 seconds asynchronous, Encryption ON

Sensors:
TEMPERATURE	RANGE: -400 to +850 ACC: ±0,3 at 0 to +650
HUMIDITY	ACC: ±3 %RHat 10-90 % RH.
CO2	ACC typical ±(50 ppm + 3%). 0-2000 ppm. (other range on request)

Warnings:
BATTERY	Low battery
SENSOR ERROR	Sensor not working.

Power:
POWER SUPPLY	2 x ER18505 3.6V Li-SOCl2 battery pack.
CAPACITY	8200 mA VOLTAGE 2.6 to 3.6V
LIFESPAN	16 years typical, depending on configuration and operating temperature.
RADIO	4 dBM (25mW) output power to antennas
ANTENNAS	2 antennas for true differential transmission

General information
STANDARDS	2014/53/EU (RED) EN 13757-3/4:2013, OMS 4.0.2 OP
TEMPERATURE	00 to +550 (-200 to +550 on request) OP
PRESSURE	950 mbar to 1050 mbar (other range on request)
RELATIVE HUMIDITY	Non condensing
MATERIAL	White, ABS
SIZE (W x H x D)	80 x 80 x 25 mm

Orderinformation:
Ordernumber
PI-900S/M-Bus Laster/Klienter