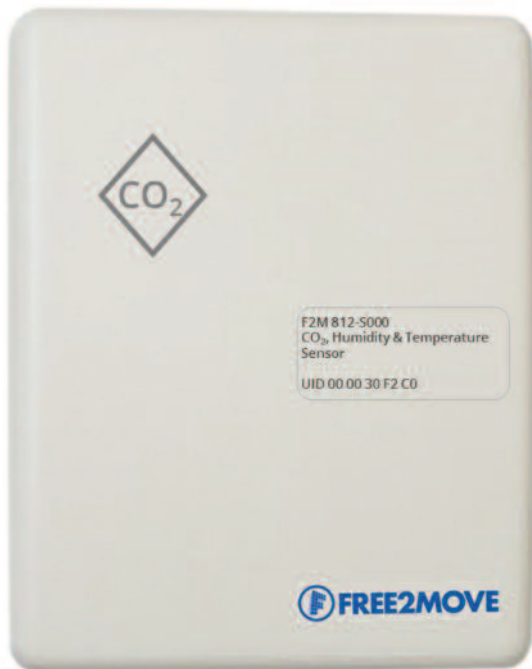


# 812-series, Enon

## CO<sub>2</sub>, Humidity & Temperature Sensor



### Ordering Information

Product Code	Definition
F2M812-S000	CO <sub>2</sub> , humidity & temperature sensor

### Product Overview

Free2move's 812-series is a high performance carbon dioxide, humidity and temperature sensor. It reports accurate gas concentrations, relative humidity and ambient temperature at a configurable interval or on demand.

In addition, the 812-series can be configured as a data logger whereby sensor readings are stored into memory with time stamps for later wireless data collection. Alert conditions can be set, including gas concentration threshold alert and dew point alert.

The 812-series offers the FRAP multisensor protocol for use with 2Connect™ as well as Bluetooth Smart.

### Product Features

- Reports RH% & Temperature.
- Dual Nordic Semiconductor nRF52, with built-in 32-bit ARM® Cortex™-M4F CPU.
- Calibration free.
- Industrial sensor accuracy, resolution and stability.
- Long range (101 dB link-budget) with up to 100 metres Line of Sight (LoS) range.
- Battery life up to 10 years.
- CO<sub>2</sub> gas concentration alert.
- Can be configured as a Bluetooth sensor Beacon.
- Supports FRAP beacon mode and wakeup mode.
- Supports Bluetooth v4.2 (ready for Bluetooth v5.0).



## Product Specifications

### Radio

Frequencies	2.40 – 2.485 GHz, GFSK
Output Power	3 dBm EIRP
Range	< 100 m LoS
Supported radio modes	Beacon, Wake-up or Bluetooth mode

### Device System

Supported air protocols	FRAP, Bluetooth Smart
Security	- Seclusion code (FRAP) - Multi-level access codes (FRAP & Bluetooth) - AES128 (FRAP & Bluetooth) - LE Secure Connections (Bluetooth)

### Standards & Certification

CE	Certified
EMC safety	EN 60 950-1 / IEC 60 950-1
EMC immunity	EN 61 000-4
EMC emission	ETSI EN 300 328, ETSI EN 301 489-17
Manufacturing	ISO 9001, ISO 14001, RoHS, REACH

### Power

Power	LTC battery
Battery life	10 years at recommended settings

### Sensors, User interface and I/O

On-board sensors	CO <sub>2</sub> , Temperature, Humidity
CO <sub>2</sub> accuracy / range	±50 ppm ±3% of reading / 0-10,000 ppm
CO <sub>2</sub> sensor life expectancy	> 15 years
CO <sub>2</sub> sensor operating principle	Non-dispersive infrared (NDIR)
Humidity accuracy / range	±1.8% @ 20-80% RH / 0-100% RH
Temperature accuracy / range	±0.4°C @ 25°C / -30°C –+85°C

### Physical

Size/Weight	123 ×82 ×22 / 120 g
Enclosure	IP54
Operating temperature	- 20°C to 70°C
Mounting	Screws or adhesive

