



PCS

Passenger Comfort Sensor

The PCS is a true **wireless** sensor, which monitors the on-train passenger environment. The device records: **CO2** (Carbon Dioxide), **Humidity** and **Temperature**.

This data can be used to determine the perceived passenger (or driver) experience and assist in improving passenger comfort – a key factor for franchise operators.

The PCS can help with efficiency management in reduction of **energy** by only recirculating air when required, saving thousands of pounds, as well as the wider benefit on the environment. Predictive asset failure such as a heater or HVAC unit is also possible.

Powered by industrial grade batteries and WiFi enabled, gives a true compact, portable wireless solution.

This highly configurable device allows users to remotely adjust the sample rate per their application needs, providing flexibility and freedom for future data needs.

The data is reported in near real-time to a server where the data can be used by ANY system as the solution is software agnostic.

Features

- Measurement of CO2 , Humidity and Temperature all in a single unit
- Remote user configurable parameters
- Battery powered / Field replaceable
- GPS location data
- Works with existing vehicle WiFi
- Can be used for asset management such as HVAC systems

SPECIFICATION

Power Supply	2 x AA 3.6V industrial batteries, non-rechargeable
Battery Type	Lithium Thionyl Chloride
Estimated Battery Life	1-5 years, subject to sample rate and other parameters
Temperature Measurement	-25 °C to +85 °C, accuracy ± 1.0 (0 °C to 65 °C)
Relative Humidity Measurement	0-100 %RH, accuracy ± 3 %RH
Carbon Dioxide Measurement	0 to 5000 ppm, accuracy \pm (50ppm +3% of reading)
GPS Location	UDP NMEA or UDP Type 1, subject to on-board gateway provider
Database	Microsoft Azure, IBM Watson, others available on request
Wi-Fi Standards	802.11b/g/n 2.4GHz
Wi-Fi Security	WEP, WPA/WPA2 PSK, WPA2 enterprise (802.1x)
Wi-Fi Channels	1 to 13
IP Addressing	Static IP, DHCP
Transport	MQTT UDP (GPS) TLSv1.2
Temperature Range	-25°C to +55°C (EN 50155 OT1)
Standards	EN 50155, EN 50121-3-2, EN 45545-2
Typical Weight	250g
Typical Dimensions (W x H x D)	68mm x 40mm x 135mm



Grinsty Rail Ltd
Electronics Division

Arrow Business Park
Shawbank Road
Lakeside, Redditch
Worcestershire
B98 8YN
United Kingdom
+44 (0)1527 514 151
www.grinstyrail.co.uk



Specification subject to change
without prior notification.