

Merlin IAQ Monitor

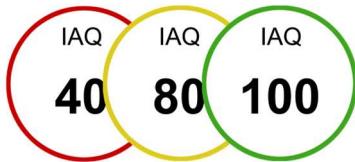
INDOOR AIR QUALITY SENSORS

Monitor and measure carbon dioxide (CO₂), temperature, dust (PM), volatile compounds (VOCs) and relative humidity. Designed for all areas being directly connected to mains or low 24v AC or DC voltage supply, e.g., residential, public, commercial, and light industrial environments, which support a Digital RS-485: Modbus RTU or BACnet MS/TP communication protocols.

- ✓ Excellent stability and strong anti-interference, long-life sensors.
- ✓ Fully calibrated.
- ✓ BS 50543. Harmonised BS 61010-1 & BS 50270.
- ✓ WELL Performance Standards.
- ✓ CIBSE Part F.
- ✓ Designed, manufactured and fully tested in the UK.
- ✓ Standard three year warranty guarantee.



Premium Air Quality Indications



DIGITAL OUTPUT
RS-485 NETWORK
BACNET MS/TP or MODBUS RTU
127 MAX



SENSORS

- Carbon Dioxide CO₂
- Dust PM1, PM2.5 & PM10
- Volatile Compounds VOC
- Temperature °C
- Humidity %rH

POWER INPUT

24V AC/DC or 110-240VAC

Selectable Options

| | |
|---|----------------|
| Air Score indication text Good / Fair / Poor | Enable/Disable |
| Audible Alarm On | Enable/Disable |

The **MERLIN IAQ** monitors are to be installed in non-classified, permanent locations and is intended to continuously monitor the ambient air for carbon dioxide (CO₂) levels, temperature (°C), relative humidity (rH%), Particulate Matter (Dust) and Volatile Organic Compounds (VOCs). Designed for all areas being directly connected to low voltage supply, e.g., residential, public, commercial, and light industrial environments.

The IAQ can operate as a standalone unit, or with 3rd party devices capable of accepting digital signals, i.e., Building Management System (BMS).

For more information, Get in touch.

Technical Specification

| | | |
|----------------|--------------------------------------|--|
| Mechanical | Mounting | Wall Mounted |
| | Entry | 1" 25.4mm DIA Rear Entry |
| | Size (W x H x D) | 86 x 114 x 35mm |
| | Weight (Max) | 0.2kg |
| | Enclosure | ABS UL Flame retardant – IP40 |
| Electrical | 24V AC/DC or 110-240VAC Power Rating | 12-24VDC(11-32 VDC) / 24VAC,(20-27 VAC) / 110-240VAC 50-60Hz |
| | Inrush current | < 120mA @ 24VDC |
| | Communication | 127 units max |
| | Power Consumption | < 2W @ 24VDC |
| Environmental | Operating Temperature | 0 to 50°C |
| | Storage | 10-30°C |
| | Room Humidity | 0 to 95% RH (continuous) non-condensing. |
| | Atmospheric Pressure | 80 to 110Pa |
| | Altitude | <2000m |
| | Installation Cat (24V Voltage) | III (Class 3) Pollution Degree 2 |
| I/Os | Digital Networks | RS-485 - BACnet MS/TP / MODBUS RTU |
| Cable Spec | Power | 1.0 – 2.5mm ² max |
| | Digital Output | 1.0 – 2.5 mm ² twisted pair + ground, shielded cable with 120Ω characteristic impedance. |
| User Interface | Language | English |
| | Optional Display | 2.8" TFT |
| | Optional LED/TFT Indication | Green: Power (GOOD AIR QUALITY) Yellow: Warning (FAIR AIR QUALITY) Red: Warning (POOR AIR QUALITY) |
| Conformance | Safety | BS 61010-1 |
| | Electromagnetic Compatibility | BS 50270 |
| | Other (Applied or Considered) | WELL Performance Standards. CIBSE Part F. BS 50543 |
| Sensors | Carbon Dioxide | CO ₂ (PPM) |
| | Particulate Matter | PM1.0, PM2.5 & PM10 (ug/m ³) |
| | Volatile Organic Matter | VOC (PPB) |
| | Temperature | °C |
| | Humidity | % RH |



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