



Technical Information: Power

SMF-19863+: Wi-Fi / SMF-198634G+: 4G SIM

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|-------------------------|---|
| Data output | PS485 / UART/ WIFI |
| DC Power supply voltage | 10VDC-18VDC recommended DC12V |
| Strength | 0.5-0.87W depending on the number of optional sensors |

SMF-19863P: PoE (with Wi-Fi)

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|------------------------|--|
| Data output | PS485 / UART / WiFi / LAN (PoE) |
| Power supply voltage | IEEE 802.3af (PoE) or 12V adapter fallback |
| Strength | 1.2W |
| Recommended Cabling | Cat5e and Cat6. Maximum length 70 - 100m |
| Fall-back power supply | 10VDC-18VDC recommended DC12V |

When the sensor is connected to the internet via an Ethernet cable, it functions in the same way as the **SMF-198634G+** model. In this mode, the device's Wi-Fi is automatically disabled.

If the Ethernet connection is unavailable or cannot access the internet, the sensor automatically switches to **Wi-Fi mode**, behaving like the **SMF-19863+** model.

In short:

- **Wired connection active** → Device operates as **SMF-198634G+** (Wi-Fi disabled)
- **No wired connection** → Device switches to **SMF-19863+** mode (Wi-Fi enabled)

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|-----------------------------------|------------------------|
| Working temperature | -10-50 degrees Celsius |
| Working humidity (non-condensing) | 5%-80%RH |
| Mean time between failures | ≥3.0 years |
| Response time | ≤5 seconds |



Technical Information: Environmental & Air Quality Sensor Specifications

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| Particulate matter consistency (PM2.5 standard value) | ±10% @ 100-500µg / m3 |
| Particle measurement range | 0.3-10µm |
| Particle content | 0-500µg / m3 |
| Particle resolution | 1µg / m3 |
| Particle measurement method | Laser measurement |
| Temperature measurement range | 0-60 degrees Celsius |
| Temperature resolution | 0.1 degrees Celsius (take an integer) |
| Humidity measurement range | 10% ~95%RH |
| Humidity resolution | 1% |
| Carbon dioxide measuring range | 400~2000ppm optional |
| Carbon dioxide measurement resolution | 1ppm |
| TVOC measuring range | 1-1000ppb optional |
| TVOC measurement resolution | 1ppb |
| CH2O measuring range | 0-400ppb optional |
| CH2O measurement resolution | 1ppb |

Note: Specific aerosol detection parameters have been intentionally omitted from this document, as they are non-critical to general deployment and are protected under Vape Guardian's proprietary methods for vape, cigarette, THC and other contaminants identification and the production of comprehensive air-quality reports.