

UMS AIR AIR QUALITY SENSOR

Part No: 1203060

The UMS Air Sensor is an air-quality sensor designed for permanent installation in ventilation systems, with RS-485 communication for reliable integration into building automation systems.



Key features:

- Multi-parameter sensing: Temperature, Humidity, VOC, CO₂ / eCO₂
- Encrypted communication in Bisly RS-485 device network
- Optimized for ventilation airflow environments
- Compact enclosure for duct and unit integration
- Simple installation with plug in wiring

Sensor Performance

Measured parameters	<ul style="list-style-type: none"> • Temperature • Relative humidity • VOC • CO₂ • eCO₂
Temperature accuracy	±0.4 °C at 25 °C over range of 5 °C to 60 °C and airflow 1 to 3.5 m/s (1)
Humidity accuracy	±3 %RH at 25 °C over range of 0 % to 85 %RH and airflow 1 to 3.5 m/s (1)
VOC, eCO₂	±11% of reading
CO₂	±(50 ppm + 5% of reading) at 5 °C to 60 °C, 50 ± 10% RH

(1) No-airflow note: Temperature offset can increase in still air; typical response time is about 5 minutes.

Electrical Data

Nominal supply voltage	24VDC (SELV)
Operating range	24VDC±25% (18V to 30V DC)
Current consumption	<ul style="list-style-type: none"> • Max inrush current 95 mA, 100 us • Average operating current 10 mA
Nominal power consumption	1 W at 24 V DC

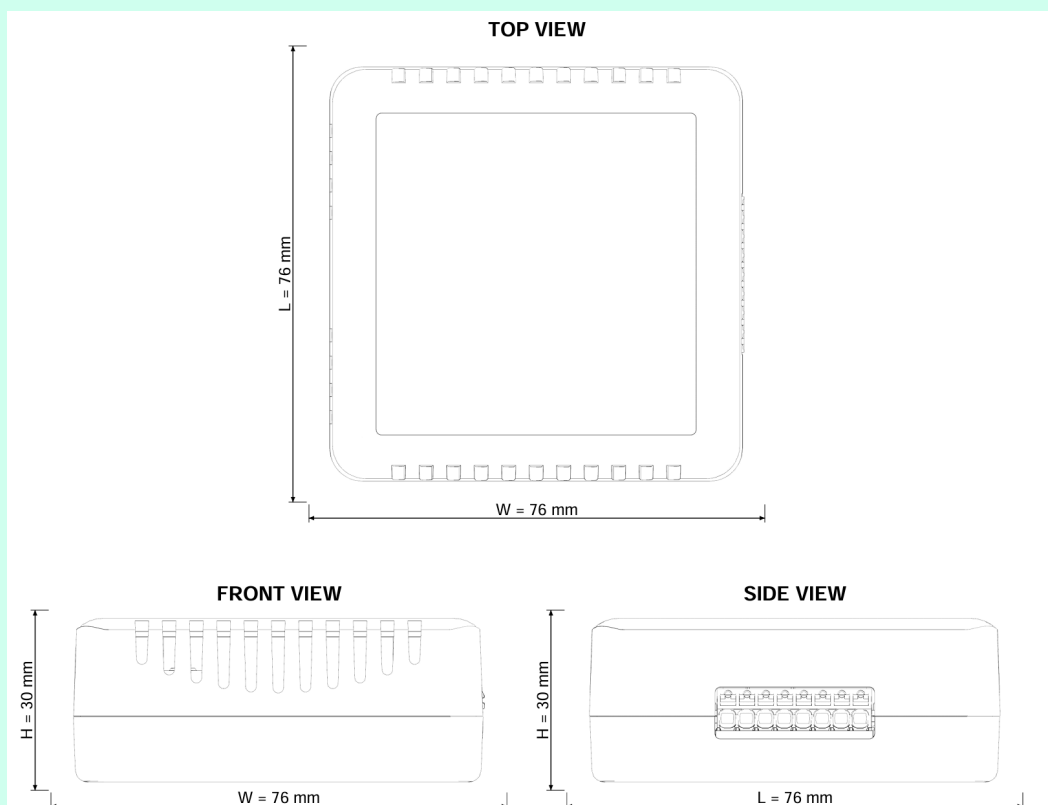
Electrical Data (continued)

Protection	<ul style="list-style-type: none"> • Reverse polarity protection • Short circuit protection (500 mA, 1 us trip) • RS-485 and DC-port miswire to 230Vac protection
Security	<ul style="list-style-type: none"> • Fully encrypted RS485 communication data • Unique AES128 encryption keys for each device • Remotely upgradable software
Communication interface	RS-485 (Bisly proprietary protocol) Interfaces with Bisly UM8 Pro Controller
Operational ambient Conditions	<ul style="list-style-type: none"> • Temperature: 0 °C to 60 °C • Humidity: 0% to 85% RH, non-condensing

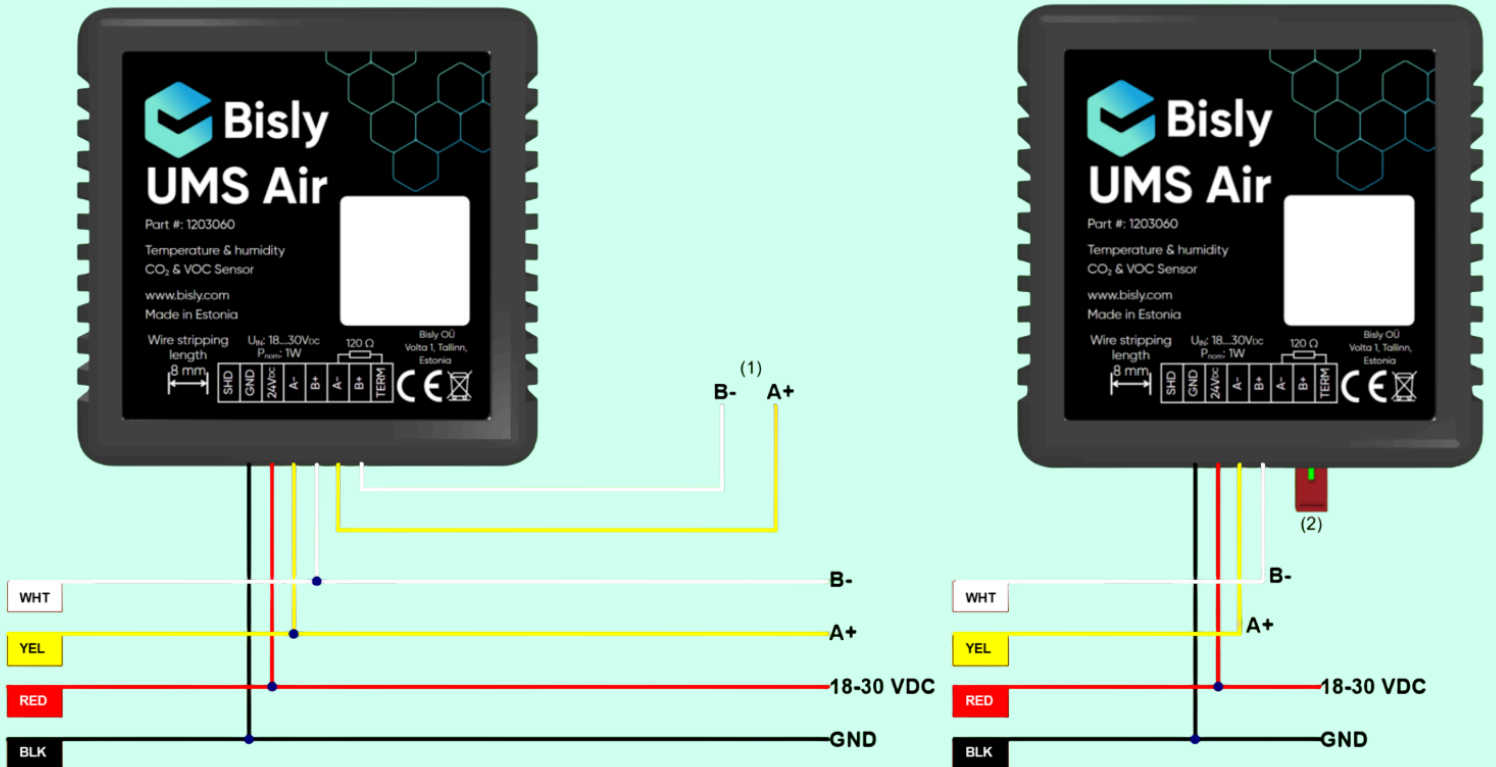
Product Characteristics

Flammability of casing	Fire retardant according to UL94 V0
Total weight	90 g
Product dimensions	76 × 76 × 30 mm (L x W x H)
Ingress protection	IP20
Color	Black
Mounting type	Fixed installation, magnet strips mounting on the back side of the device

Product dimensions drawing



Connection Diagram and wiring



(1) Additional RS-485 terminals allow convenient loop-through (daisy-chain) wiring to simplify continuation to additional bus devices.

(2) Install jumper 3213014 between B+ and TERM to enable 120 Ω termination when the UMS Air is the last device on the RS-485 bus.

Certifications & Standards

Markings	CE, WEEE, RoHS
Directive compliance	<ul style="list-style-type: none"> • EMC Directive 2014/30/EU • RoHS Directive 2011/65/EU • WEEE Directive 2012/19/EU
Applicable standards	<ul style="list-style-type: none"> • EN 61000-6-2 • EN 61000-6-4

Application Notes

- Designed for continuous monitoring in industrial ventilation and BMS applications
- Intended for fixed installation
- Use with 24 V DC SELV supply with hiccup behavior that recovers automatically after fault condition is removed
- Devices must be installed and used in accordance with local regulations and Bisly installation guidelines. Incorrect installation may void warranty and cause malfunction.
- Technical specifications are subject to change without prior notice as part of Bisly's continuous product development.