

# IAQ DESKTOP DISPLAY SENSOR

INDOOR AIR QUALITY MONITORING



Automated  
Logic

## INDOOR AIR QUALITY DESKTOP DISPLAY SENSOR, BACNET COMMUNICATING

Multiple public studies<sup>1</sup> suggest that indoor environments can profoundly impact the health and decision-making performance of building occupants. They advise that the levels of carbon dioxide, volatile organic compounds, and particulate matter that we commonly encounter in schools, healthcare facilities, and commercial office buildings should be held within healthy thresholds. Additionally, humidity can increase heating and cooling costs, support mold and bacterial growth, contributing to allergies, respiratory problems, and occupant discomfort.

Automated Logic's Indoor Air Quality desktop display sensor provides building occupants simple visual indicators and alerts of critical indoor air quality measures.

1) Harvard T.H. Chan School of Public Health; The COGfx Study: <https://cogfx.forhealth.org>  
US EPA Indoor Air Quality (IAQ) <https://www.epa.gov/indoor-air-quality-iaq>

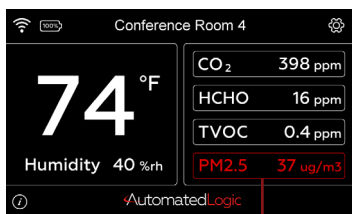
## KEY FEATURES AND BENEFITS

- Measures and displays six critical elements of healthy indoor air quality: temperature, humidity, particulate matter (PM2.5), carbon dioxide (CO<sub>2</sub>), total volatile organic compounds (TVOC), and the carcinogen formaldehyde (HCHO)
- Features a bright 4.3 inch TFT capacitive touch screen with a resolution of 800\*480, that dims when not in use
- Easily integrates with the Automated Logic WebCTRL system via BACnet/WiFi to share sensed values
- Has a passive infrared (PIR) human proximity sensor to wake the display when occupants are nearby
- Powered by USB Type-c and has a lithium ion battery as a backup power supply
- Supports firmware upgrades via USB if required
- Compact, low-profile, attractive design

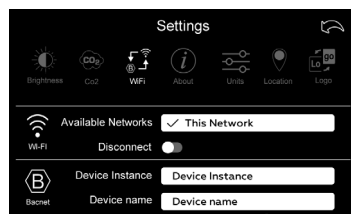


# SPECIFICATIONS

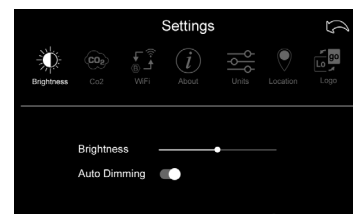
Part #	<b>IAQ1-D-4</b> <b>Indoor Air Quality desktop display sensor</b>
Power	5VDC with USB Type-C; 3.6v 2500mAh Lithium Ion Battery (not user accessible or replaceable)
Communication	
BACnet	BACnet over IEEE 802.1b/g/n Wi-Fi
Sensors	
Temperature	-0 to 50°C, Resolution: 0.1°C, Accuracy: ±2°C. Sensing element model Sensurion SHT30, sensing element lifetime: > 3 years
Humidity	10% RH-90% RH, Resolution: 1% RH, Accuracy: ±10% RH. Sensing element model Sensurion SHT30, sensing element lifetime: > 3 years
Particulate Matter (PM2.5)	0-500µg/m3(effective range) 0-1000µg/m3 (maximum range). Resolution 1µg/m³, Accuracy 1-100µg/m³ ±15µg/m³, 101-500µg/m³ ± 15%, sensing element model Plantower PMSA003-C, & element lifetime: > 5 years
Total Volatile Organic Compounds (TVOC)	125-600ppb, Resolution 1ppb, Accuracy: 20ppb+30% , sensing element model PAMS IAQ Core, & element lifetime: > 3 years
Carbon Dioxide (CO <sub>2</sub> )	0-5000 ppm, Resolution: 1 ppm, Accuracy: ±50ppm +10%. Sensing element model CM1106, & element lifetime: > 5 Years
Formaldehyde (HCHO)	0-2000ppb, Resolution: 1ppb, Accuracy:20ppb+30%. Sensing element model DART(WZ-S-K), & element lifetime: > 3 years
Environmental Range	0° to 50°C, 5-95% relative humidity, non-condensing
Housing	Steel mesh, Polycarbonate, & ABS
Display	4.3" diagonal TFT capacitive touch screen with a resolution of 800*480
Compliance	FCC CE (Power Supply ETL Listed - Conforms to UL STD 62368-1 Certified to CSA STD C22.2 NO. 6236801 US cETL Listed - Intertek 4007202)



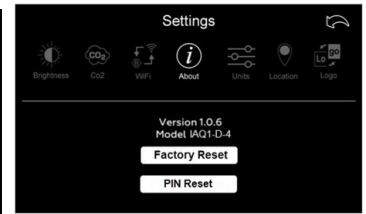
Clear visual indication of alarm conditions. Alarm thresholds are configurable to local compliance standards



Configurable BACnet Settings

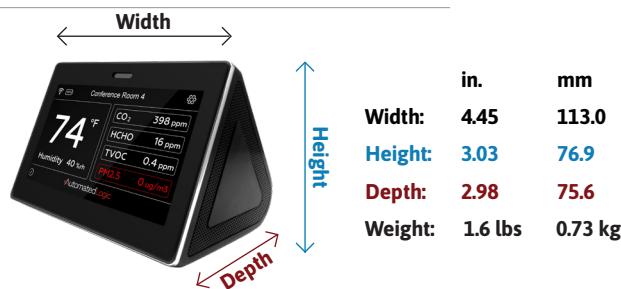


Configurable Brightness and Auto Dimming Settings



Firmware is upgradable via USB connection

Figure 1: Physical Dimensions



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