LifeQuality (8IN)

Smart air quality detector

Compatibility	Hubs
	• Hub 2 (2G) • Hub 2 (4G) • Hub 2 Plus • Hub Hybrid (2G) • Hub Hybrid (4G) **Radio signal range extenders** • ReX 2
Communication	**Jeweller communication technology** Proprietary wireless communication technology to transmit events. **It features:** • Two-way communication. • Protection against spoofing. • Block encryption with a dynamic key. • Instant notifications. • Remote configuration via the Ajax apps. **Frequency band** 865.0 − 867.0 MHz **Maximum effective radiated power (ERP)** up to 20 mW Automatic power regulation to reduce power consumption and radio interference.

	Radio signal modulation GFSK **Radio communication range** up to 1,700 m Between the detector and a hub/range extender in an open space. **Encrypted radio communication** All the data stored and transmitted are protected by block encryption with a dynamic key. **Radio frequency hopping** To prevent radio interference and jamming. **Wings communication technology** Proprietary wireless communication technology for backup connection with the hub (or radio signal range extender).
Sensitive elements	● Temperature and humidity sensor ● CO_2 (carbon dioxide) sensor
Temperature measurement	**Sensitive element** Digital temperature and humidity sensor Values in the Ajax apps are updated depending on the frequency of the "hub—detector" polling interval, but not less than once per minute. **Measurement range** from 0°C to +50°C The value is available in the device **States** in the Ajax app. **Measurement accuracy** ±0,2°C **Measurement pitch** 0,1°C The minimum temperature change value recorded in the Ajax apps.
Humidity measurement	**Sensitive element** Digital temperature and humidity sensor Values in the Ajax apps are updated depending on the frequency of the "hub—detector" polling interval, but not less than once per minute. **Measurement range** from 0% to 100% The value is available in the device **States** in the Ajax app. **Measurement range** ±1,8% **Measurement pitch** 1% The minimum humidity change value recorded in the Ajax app.
Carbon dioxide (CO_2) concentration measurement	**Sensitive element** digital carbon dioxide sensor

	Values in the Ajax apps are updated depending on the frequency of the "hub—detector" polling interval, but not less than once per minute. **Measurement range** from 400 to 5000 ppm The value is available in the device **States** in the Ajax app. **Air quality assessment levels** • Normal air: up to 1000 ppm; • Moderately polluted air: from 1000 to 1400 ppm; • Polluted air: from 1400 to 2000 ppm; • Critically polluted air: more than 2000 ppm. Effects on well-being: from 1000 to 2500 ppm— lethargy; from 2500 to 5000 ppm—possible adverse health effects; 5000 ppm and above—the maximum permissible concentration during an 8-hour working day. **Measurement accuracy** ±30 ppm or ±3% **Measurement pitch** 1 ppm The minimum value of the change in carbon dioxide concentration recorded in the Ajax app.
Additional features	**Charts** of temperature, humidity, and carbon dioxide concentration Available in the Ajax apps. The data is updated in real time. Measurements are stored for up to 2 years. Discrete value: 1 minute. **LED indication** • Green: Normal air • Yellow: Slightly polluted air • Red: Polluted air • Purple: Critically polluted air The LED indicator on the device enclosure lights up in the event of a critical change in air quality. The user can also turn on the indication by touching the touch sensitive button on the front panel of the detector. **Automatic calibration** once every 1–14 days The detector selects a calibration interval depending on the circumstances and automatically calibrates the carbon dioxide sensor. In normal conditions (ventilated room), manual calibration is not required. The digital humidity and temperature sensor does not require additional calibration.

	Manual calibration is run in the Ajax apps. Suitable for unventilated rooms. We recommend calibrating the detector once every 2-3 weeks in such rooms. **Scenarios** reactions to changes in temperature, humidity, and carbon dioxide concentration. For example, turning on plenum ventilation if the air quality deteriorates. **Backup memory** up to 3 days If the detector loses communication with the hub (or radio signal range extender), it stores all measured values. After the connection is restored, all values are sent to the Ajax app.
Anti-sabotage protection	**Accelerometer** Notifies on attempts to tear off the detector from a surface, remove it from the mounting panel, or move the detector if it is placed on a table or shelf. **Protection against spoofing** device authentication **Communication loss detection** within 36 seconds The detection time depends on the **Jeweller** or **Jeweller/Fibra** settings.
Power supply	**2 × CR123A battery** Up to 3 years of autonomous operation.
Enclosure	**Dimensions** 77 × 77 × 34,5 mm **Weight** 127 g **Operating temperature range** from 0°C to +50°C **Operating humidity** up to 85% **Protection class** IP50
Colours	● Black ● White
Complete set	LifeQuality Jeweller SmartBracket mounting panel 2 × CR123A battery

	(pre-installed) Installation kit Quick Start Guide
Additional information	Service life 10 years Warranty 24 months