WISE AIR 4.0
MEASURE TO MANAGE

2025



WADL-301 Multi-Function Display & Data Logger

WISEAIR TECHNOLOGIES INDIA LLP
www.wiseair.in



ABOUT US

Measure to manage.

Our vision at WiseAir Technologies is to offer our customers innovative and advanced measurement solutions for compressed air and gases at affordable cost. With over 22 years of experience in compressed air management, we have developed products that are more accurate, smart, reliable, state-of-the-art and easy to use. We aim to transform traditional manufacturing and industrial practice with our latest smart technologies.

We focus on products that use machine-to-machine communication (M2M) and the Industrial Internet of Things (IIoT) to provide increased automation, improved communication and self-monitoring that analyses and diagnoses issues without human intervention. Our "WA" range of smart IIoT sensors network easily with manufacturing and energy-management software — seamless data collection, exchange and analysis that drives productivity, efficiency and measurable economic benefit.

22+
Years in compressed air management

6
Global offices — NA, EU, ME, Asia

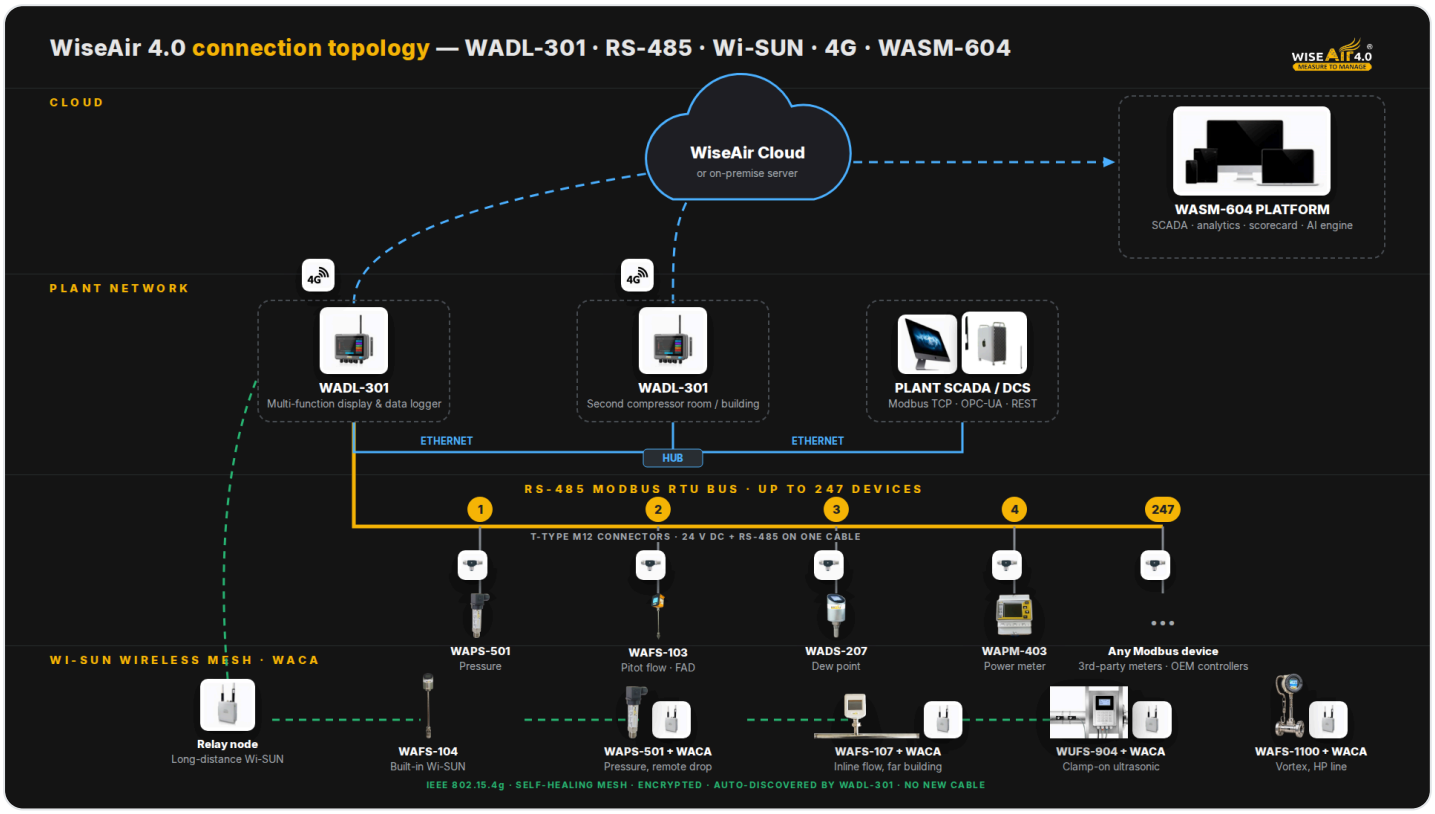
100 %
IIoT-ready WA-series sensor portfolio

1
Vendor — sensors, logger, software, service

OUR NETWORK

Global partners, local touch.

Our smart sensors are developed with design and technology support from partners across North America, Europe and Asia. With our strong network of partners we offer seamless, best-in-class service to our customers — California · Copenhagen · Dubai · Coimbatore · Kuala Lumpur.



WiseAir 4.0 connection topology — the WADL-301 sits at the centre: RS-485 sensors below it, Wi-SUN nodes beside it, SCADA and the WASM-604 cloud above it.

Artificial intelligence & machine-learning software

WASM-604 is programmed to analyse and self-diagnose the measured data — scorecards, action cards and anomaly detection.

Smart IIoT sensors

Flow, power, dew point, pressure, leak detection and smart drains — every one Modbus-ready for the WADL-301.

Product experts

Product specialists with decades of experience in compressed air measurement and management.








INTRODUCING THE

WADL-301 MULTI-FUNCTION DISPLAY & DATA LOGGER



The heart of your plant's compressed-air data architecture. The WADL-301 polls every WiseAir and third-party Modbus sensor, shows them live on a 7-inch touch screen, records them to on-board memory, raises alarms, and forwards everything to your SCADA and to the WASM-604 cloud — over Ethernet, 4G or Wi-SUN.

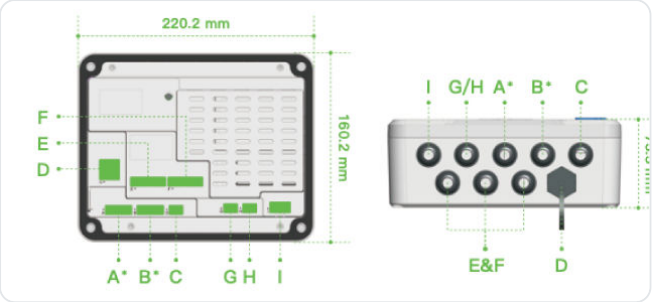
Key features

- 7" capacitive touch display — value, graph and setting views; swipe between measurement points
- Modbus RTU master on two isolated RS-485 inputs, plus RS-485 output and 1 Gbit Ethernet (Modbus TCP)
- Four analogue inputs for 4–20 mA sensors, two relay outputs for alarms
- Auto-search and manual add of WiseAir and third-party devices; virtual (calculated) channels
- On-board data logging with USB export; screenshots to file
- Configurable alarm limits per channel with relay and on-screen indication
- Data upload to DCS, PLC, SCADA and cloud platforms (Modbus RTU / TCP)
- Built-in Wi-SUN mesh coordinator (WADL-301-D) — auto-discovers WACA wireless sensors
- Panel, wall or DIN-rail mounting; 220 V AC or 24 V DC

TECHNICAL DATA SHEET

DISPLAY & INTERFACE	
Display	7" colour capacitive touch LCD; Value · Graph · Setting views; two-finger zoom on trends
Channels	Up to 30 measurement points per site; multiple sites; virtual channels
Languages	Multi-language UI; date / time; screen setup; on-device upgrade
INPUTS	
RS-485 in (Con. A, B)	2 × isolated Modbus RTU master ports, each with 24 V sensor power (VO+/VO−)
Analogue in (Con. E, F)	4 × 4–20 mA (VI_A … VI_D), each with 24 V loop power
Wireless (301-D)	Wi-SUN IEEE 802.15.4g mesh coordinator with external antenna
OUTPUTS & COMMUNICATION	
RS-485 out (Con. C)	Modbus RTU slave to PLC / SCADA / third-party logger
Ethernet (Con. D)	1 Gbit RJ45 — Modbus TCP; upload to DCS, PLC, SCADA, WASM-604 cloud
Relays (Con. G, H)	2 × changeover (NO / COM / NC) alarm relays
Data export	USB drive — recorded files and screenshots
POWER & MECHANICAL	
Supply (Con. I)	220 V AC (L / N / PE) or 24 V DC (V+ / V− / PE)
Dimensions	220.2 × 160.2 × 75.5 mm; panel cut-out 185.4 × 120.5 mm (R 10.5)
Mounting	Panel (4 buckles) · wall bracket (4 × M3) · DIN-rail bracket
Glands	8 × cable glands + antenna port on the underside
Environment	Indoor, non-condensing; not for hazardous areas

Size & electrical connection



WADM-301 Wiring Signal Pin Dimensions

	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8
Con.A	NC	VO−	VO+	RS485 A+	RS485 B−	RS485 Ground		
Con.B	NC	VO−	VO+	RS485 A+	RS485 B−	RS485 Ground		
Con.C	RS485 A+	RS485 B−	RS485 Ground					
Con.D	Ethernet port (1G Ethernet interface)							
Con.E	VO+	VO−	VI_D−	VI_D+	VO+	VO−	VI_C−	VI_C+
Con.F	VO+	VO−	VI_B−	VI_B+	VO+	VO−	VI_A−	VI_A+
Con.G	NO	COM	NC					
Con.H	NO	COM	NC					
Con.I	L V+	N V−	PE (220V AC) PE (24V DC)					

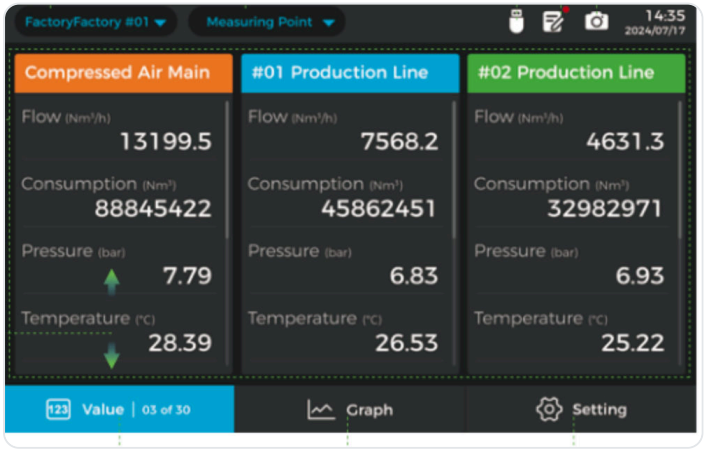
A∗ & B∗: RS-485 input · C: RS-485 output · D: Ethernet · E & F: analogue input · G & H: relay output · I: power. The device port chosen on the Add Device screen must match the physical wiring port.

Ordering code

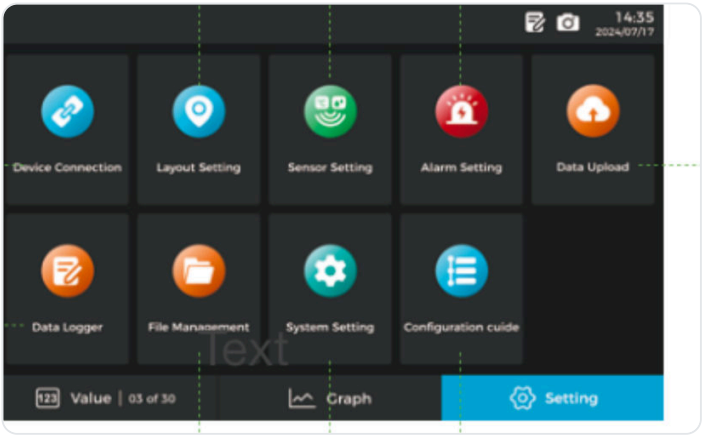
- **WADL 301**
  Multi-function display & data logger, 7" touch, 2 × RS-485 Modbus RTU master, 4 × 4–20 mA, RS-485 out, 1 G Ethernet, 2 relays, 220 V AC / 24 V DC
- **WADL 301 - D**
  As above, with built-in Wi-SUN mesh coordinator and antenna for WACA wireless sensors
- **WADL 301 - P** Panel-mount kit (face cover + 4 buckles)
- **WADL 301 - W** Wall-mount kit (back cover + bracket)
- **WADL 301 - R** DIN-rail kit (back cover + rail bracket)
- **WACA** Wi-SUN wireless connector for any WiseAir sensor

Benefits of the WADL-301

- One screen in the compressor room for every sensor — flow, dew point, pressure, power — from WiseAir or any Modbus vendor
- Records locally, so no data is lost when the network is down; store-and-forward to the cloud
- Alarms on the wall, on the relay and in WASM-604 — before the line gets wet or the pressure drops
- Bridges RS-485 field sensors to Ethernet SCADA and the cloud without a PLC
- Wi-SUN (301-D) reaches sensors where no cable can run — no new trenching
- GreenCo and ISO 50001-ready logged data for audits and sustainability reporting
- Configure on the touch screen with the built-in configuration guide — no laptop required



Value view — one card per measurement point, swipe between sites



Setting view — device connection, layout, sensor and alarm settings, data logger, upload

UNDERSTAND COMPRESSED AIR SYSTEM DYNAMICS WITH OUR ADVANCED MEASUREMENT SOLUTIONS

MEASURE – MANAGE – SAVE – SUSTAIN

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MEASURE TO MANAGE

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