Autonomous, mobile level measurement: VEGAPULS Air
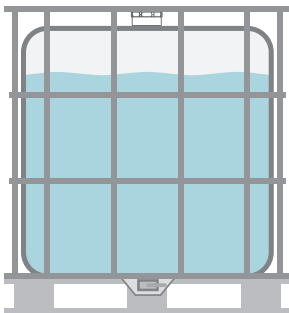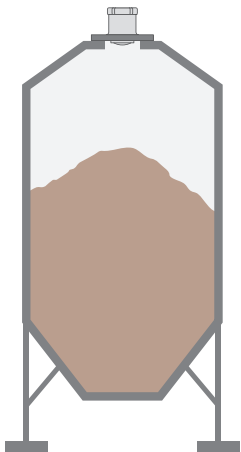
VEGAPULS Air stand-alone radar sensors measure the levels in silos, mobile containers or liquids in tanks safely and reliably, even in remote or difficult-to-access locations. The battery-powered IIoT sensors communicate their measured values to the cloud wirelessly and require neither expensive cabling nor their own on-site Internet access.

The advantages

✓ Easy installation thanks to long-life battery supply and wireless technology

✓ Exact measuring results, independent of medium as well as process and ambient conditions

✓ Economical IIoT solutions transfer level information to the cloud

	AIR VEGAPULS Air 23	**AIR** VEGAPULS Air 41	**AIR** VEGAPULS Air 42
Application	Liquids and bulk solids in plastic tanks without process fitting	Liquids and bulk solids in simple process conditions	Liquids and bulk solids in simple process conditions
Measuring range	3 m	15 m	30 m
Antenna	Integrated	Integrated	Integrated
Process fitting	–	Threads: G1½, 1½ NPT, R1½	Compression flanges DN 80, 3" Adapter flanges from DN 100, 4"
Mounting connection	Adhesive adapter, tensioning strap, ceiling mounting	Mounting strap	–
Process temperature	-20 … +60 °C	-20 … +60 °C	-20 … +60 °C
Process pressure	–	-1 … +2 bar (-100 … +200 kPa)	-1 … +2 bar (-100 … +200 kPa)
Accuracy	±5 mm	±2 mm	±2 mm
Frequency range	W-band (80 GHz)	W-band (80 GHz)	W-band (80 GHz)
Signal output	NB-IoT (LTE-CAT-NB1), LTE-M (LTE-CAT-M1), LoRaWAN	NB-IoT (LTE-CAT-NB1), LTE-M (LTE-CAT-M1), LoRaWAN, Bluetooth	NB-IoT (LTE-CAT-NB1), LTE-M (LTE-CAT-M1), LoRaWAN, Bluetooth
Display/adjustment	VEGA Inventory System	VEGA Tools app, PACTware/DTM, VEGA Inventory System	VEGA Tools app, PACTware/DTM, VEGA Inventory System
Voltage supply	Integrated batteries 2x 3.6 V (lithium)	Integrated batteries 5x 3.6 V (lithium), exchangeable	Integrated batteries 5x 3.6 V (lithium), exchangeable
Approvals	ATEX, UKEX, IECEx	–	–
Benefit	✓ Easy mounting "outside", as it is optimised for measurement through the tank top	✓ Minimal installation work thanks to self-sufficient supply and wireless interface	

IIoT I Level I VEGAPULS Air series

	LoRa Gateway (indoor)	LoRa Gateway (outdoor)
Application	Gateway for connecting LoRaWAN sensors to VEGA Inventory System	Gateway for connecting LoRaWAN sensors to VEGA Inventory System
Input	LoRaWAN	LoRaWAN
Output	GPRS/UMTS/LTE (2G, 3G, 4G)	GPRS/UMTS/LTE (2G, 3G, 4G)
Display	LED	LED
Mounting	Wall mounting	Wall and tube mounting
Temperature range	-20 … +55 °C	-40 … +60 °C
Voltage supply	100 … 230 V AC, 50/60 Hz	100 … 230 V AC, 50/60 Hz, PoE adapter
Benefit	✓ Easy setup and commissioning through preconfigured settings	

VEGA Inventory System

Application	System for inventory monitoring as well as remote enquiry and visualization of measurement and location data
Recommended operating systems	· VEGA Hosting Service: independent of operating system · Local server: MS Windows Server 2016 or 2019 as well as MS SQL Server 2014 or higher
Adjustment	With standard web browser
Versions	· VEGA Hosting Service (VH) · Local servers (LS)
Technology	Web-based
Benefit	✓ Simple centralized inventory monitoring and management ✓ More transparency through connected assets and facilities ✓ Avoidance of production stoppages and increased supply security ✓ Reduction of transport costs with optimized logistics planning