SMART LEVEL MEASUREMENT AND MONITORING

PROLEVEL SERIES | 80 GHz radar & ultrasonic sensing



80 GHz radar
Focused, non-contact sensing.

Process-ready
Liquids, powders and bulk solids.

Connected
Analog and digital interfaces.

IIoT remote monitoring
Remote visibility through compatible gateways.

PLC automation
Level-based pump control, alarms and interlocks.

Real-time monitoring & control
Continuous level visibility and process control integration.

Radar / Ultrasonic / Hydrostatic / Capacitance / Level switches

PORTFOLIO

The right sensing principle

Clear choices for tanks, silos, water systems and process vessels.

NON-CONTACT RADAR
PROLEVEL 6000NC / 6000ND / 6000NC26G 03-05
Process tanks, water levels and bulk solids

GUIDED WAVE RADAR
PROLEVEL 6000GW 06
Probe-based sensing for liquids and powders

ULTRASONIC
PROLEVEL 1000 / 1000V2 / 1000V2-20M 07-09
Compact continuous level measurement

REMOTE & DIFFERENTIAL
PROLEVEL 1000R / 1000RD 10-11
Remote display, control and dual-probe monitoring

HYDROSTATIC
PROLEVEL 500 12
Submersible liquid level sensing

CAPACITANCE
PROLEVEL 1050 13
Contact sensing with rod or rope probes

POINT LEVEL
PROLEVEL 300SW / 502 14-15
High/low alarms and pump interlocks

OPEN-CHANNEL RADAR
METRON RD-5003* 16
Water level, surface velocity and flow

*Open-channel source identifies METRON RD-5003. Supplied make/model is confirmed with the project offer. Ranges and options depend on the selected configuration.

NON-CONTACT RADAR

PROLEVEL 6000NC

80 GHz FMCW radar level transmitter



FEATURES

- Focused beam for tanks, silos and restricted mounting spaces.
- PTFE lens antenna with process-specific options.
- Local display with four-button setup.
- Bluetooth and remote configuration options.

APPLICATIONS

Chemical storage, water treatment, cement silos and process vessels.

TECHNICAL SPECIFICATIONS

Frequency	76-81 GHz
Range	30 / 60 / 120 m configurations
Accuracy	±1 mm, specified conditions
Beam angle	3° / 8°, antenna-dependent
Temperature	-40 to +85 °C; +200 °C option
Pressure	-0.1 to 2 MPa, configuration-dependent
Output	4-20 mA / HART / Modbus options
Protection / housing	IP67 / aluminium alloy or stainless steel
Mounting	Thread or flange

Special high-temperature assemblies and hazardous-area options require configuration-specific confirmation.

TECHNOLOGY HIGHLIGHT

80 GHz FMCW sensing combines a narrow beam with intelligent echo processing to reduce interference from nearby structures.

NON-CONTACT RADAR

PROLEVEL 6000ND

80 GHz water level transmitter | Two documented configurations



WATER-LEVEL VERSION



COMPACT / NO DISPLAY

Frequency	76-81 GHz	76-81 GHz
Range / accuracy	Up to 65 m / ±1 mm	0.1-65 m / ±1 mm
Beam angle	8°	6°
Temperature	-30 to +80 °C	-40 to +85 °C
Output	RS485; 4-20 mA / HART option	RS485
Power	Confirm selected configuration	9-36 VDC
Protection	IP68	IP67
Housing / mounting	PP or SS / bracket, thread	Stainless steel / bracket

For rivers, reservoirs, sumps and flood-level monitoring. Bluetooth is optional on the water-level version. Select enclosure, beam angle and output together.

TECHNOLOGY HIGHLIGHT

Compact millimetre-wave radar supports remote water-level monitoring through a compatible RTU or telemetry gateway.

NON-CONTACT RADAR

PROLEVEL 6000NC26G

26 GHz cone radar level transmitter



FEATURES

- Non-contact level sensing with horn antenna options.
- Threaded, flanged and universal-flange mounting.
- Liquid and solid configurations selected by duty.
- Analog and digital communication options.

APPLICATIONS

Liquid storage, corrosive process tanks and dusty bulk-solid silos.

TECHNICAL SPECIFICATIONS

Frequency	26 GHz
Liquid configuration	30 m; ±3 mm; -40 to +150 °C
Corrosive-liquid configuration	10 m; ±5 mm; -40 to +120 °C
Dust / solid configuration	70 m; ±15 mm; -40 to +250 °C
Pressure - liquid	-0.1 to 4 MPa
Pressure - corrosive / dust	-0.1 to 0.3 MPa / -0.1 to 0.1 MPa
Output	4-20 mA / HART; RS485 Modbus option
Protection	IP67

Values describe separate configurations; maximum ratings do not apply to every version.

TECHNOLOGY HIGHLIGHT

Echo analysis and antenna selection help match radar performance to the vessel geometry and material surface.

GUIDED WAVE RADAR

PROLEVEL 6000GW

Cable, rod and coaxial level transmitter



FEATURES

- Guided pulse sensing along a selected probe.
- Cable, rod, double-cable and coaxial variants.
- PTFE-sealed probe for corrosive liquids.
- LCD display and HART communication.

APPLICATIONS

Chemical tanks, powder silos and low dielectric liquids with suitable probe selection.

TECHNICAL SPECIFICATIONS

Standard cable / powder	Up to 30 m; ±10 mm
Corrosive-media version	Up to 20 m; ±10 mm; PTFE sealed
Coaxial version	Up to 6 m; ±5 mm
Frequency	500 MHz-1.8 GHz
Temperature	Up to +250 °C on selected standard variants
Pressure	-0.1 to 4 MPa, standard variants
Output	4-20 mA / HART
Power	24 VDC; four-wire 220 VAC option
Housing / mounting	Aluminium; thread or flange

Special 15 m high-pressure version: up to 40 MPa and +400 °C; separate engineered selection required.

TECHNOLOGY HIGHLIGHT

Guided energy concentrates the measurement along the probe, providing an alternative where free-space echoes are difficult.

ULTRASONIC

PROLEVEL 1000

Ultrasonic level transmitter



FEATURES

- Non-contact measurement without moving parts.
- LCD for local level indication.
- Intelligent echo analysis.
- Lightning and short-circuit protection.

APPLICATIONS

Water tanks, sumps and compatible chemical storage at suitable process conditions.

TECHNICAL SPECIFICATIONS

Range	Up to 15 m; select for the application
Accuracy	0.3%, standard conditions
Resolution	1 mm
Blind zone	0.25-0.6 m
Output	4-20 mA; RS485 Modbus optional
Power	24 VDC / 220 VAC
Ambient temperature	-20 to +60 °C
Protection	IP65

TECHNOLOGY HIGHLIGHT

Digital echo processing supports non-contact level measurement; retain the specified blind-zone clearance above maximum level.

ULTRASONIC

PROLEVEL 1000V2

Integral ultrasonic level transmitter



FEATURES

- Compact transmitter with local LCD.
- ABS, PVC and PTFE probe options.
- High and low relay outputs by configuration.
- Surge and over-current protection.

APPLICATIONS

WTP/STP tanks, utility water, sumps and compatible process liquids.

TECHNICAL SPECIFICATIONS

Range options	4 / 6 / 8 / 10 / 12 / 15 / 20 / 30 m
Accuracy	0.5-1.0%, configuration-dependent
Resolution	3 mm or 0.1%
Output	Two-wire 4-20 mA; HART option
Power	24 VDC
Temperature - transmitter	-20 to +60 °C
Temperature - sensor	-20 to +80 °C
Protection	IP65 transmitter / IP68 sensor
Connection / probe	Thread or flange / ABS, PVC, PTFE

Confirm blind zone and relay availability for the selected range and wiring version.

TECHNOLOGY HIGHLIGHT

A compact sensing and display assembly simplifies local commissioning; HART supports configuration through compatible tools.

ULTRASONIC

PROLEVEL 1000V2-20M

Ultrasonic transmitter | Range up to 20 m



FEATURES

- Non-contact sensing with LCD indication.
- Intelligent echo analysis for stable ranging.
- Analog output and digital communication.
- Nut or flange installation.

APPLICATIONS

Deeper water tanks, pits and storage vessels where non-contact sensing is suitable.

TECHNICAL SPECIFICATIONS

Range	0-20 m
Accuracy	0.3%, standard conditions
Resolution	1 mm
Blind zone	0.25-0.5 m
Output	4-20 mA
Digital communication	RS485 Modbus, four-wire configuration
Power	24 VDC / 220 VAC
Protection	IP65
Mounting	Nut or flange

Allow blind-zone clearance; verify process pressure and temperature against the ordered sensor.

TECHNOLOGY HIGHLIGHT

RS485 Modbus allows a compatible controller to collect digital level values for trends, alarms and reporting.

REMOTE ULTRASONIC

PROLEVEL 1000R

Remote ultrasonic transmitter with relay control



FEATURES

- Separate sensor and wall-mounted display.
- Configurable high, low and fault alarm relays.
- Remote cable up to 1,000 m by selection.
- ABS, PVC and PTFE sensor options.

APPLICATIONS

Pump stations, water storage, chemical tanks and bulk-solid monitoring.

TECHNICAL SPECIFICATIONS

Range options	4 / 6 / 8 / 12 / 20 / 30 / 40 m
Accuracy	±0.2% of full range
Blind zone	0.2-1.2 m, range-dependent
Output	4-20 mA; RS485 Modbus / HART options
Relay capacity	Up to 6 relays; up to 5 with RS485
Relay rating	5 A at 250 VAC / 30 VDC
Power	24 VDC / 220 VAC
Sensor temperature	-40 to +75 °C, standard selection
Protection	IP67 main unit / IP68 sensor

Usable range reduces for uneven solids or strongly fluctuating liquids. Cable, relay and communication options are selected together.

TECHNOLOGY HIGHLIGHT

Remote electronics keep the operator interface accessible while configurable relays support level-based pump and alarm control.

DIFFERENTIAL ULTRASONIC

PROLEVEL 1000RD

Dual-probe differential level monitoring



FEATURES

- Two sensor inputs for differential monitoring.
- Local LCD with 18-key setup.
- Four relay outputs for alarms and control.
- Data storage and export options.

APPLICATIONS

Differential level across screens, upstream/downstream monitoring and dual-point water systems.

TECHNICAL SPECIFICATIONS

Probe range	1-40 m selections; 2 m standard
Blind zone	0.06-0.6 m, sensor-dependent
Sensor input	Two RS485 probe interfaces, 24 VDC
Output	One 4-20 mA standard; second optional
Digital / control	RS485 / four relay outputs
Power	85-380 VAC or 11-24 VDC
Power consumption	5 W
Protection	IP65 host; probe protection by selection
Options	HART, USB export, 4G transmission

Confirm differential accuracy and sensor rating in the project offer; the source does not establish a level accuracy value.

TECHNOLOGY HIGHLIGHT

Two level readings can support differential alarms and maintenance decisions when configured for the site process.

HYDROSTATIC

PROLEVEL 500

Diffused silicon piezoresistive level transmitter



FEATURES

- Continuous level sensing from hydrostatic pressure.
- Submersible, threaded or flange installation.
- Surge and reverse-polarity protection.
- SS304 / SS316L wetted-part selections.

APPLICATIONS

Wells, reservoirs, sumps, water treatment and compatible storage tanks.

TECHNICAL SPECIFICATIONS

Range options	0-10 / 20 / 50 m; custom on request
Accuracy / repeatability	±0.25% FS / ±0.1% FS
Stability	≤0.1% FS per year
Output	4-20 mA; RS485 Modbus / HART optional
Power	24 VDC; 12-36 VDC option
Process temperature	-20 to +85 °C
Protection	IP68 sensor / IP65 transmitter
Cable	Polyurethane / PTFE
Wetted parts	SS304 / SS316L

The source lists a 4 bar pressure limit alongside a 50 m option; confirm pressure rating for the selected range.

TECHNOLOGY HIGHLIGHT

Hydrostatic sensing remains practical for submerged installations; account for liquid density when converting pressure to level.

CAPACITANCE

PROLEVEL 1050

Capacitance level transmitter and switch



FEATURES

- Flexible rope or rigid rod probe options.
- PTFE-insulated rope for compatible media.
- Continuous output or two-point switching.
- Probe length configured for the tank or silo.

APPLICATIONS

Compatible liquids, cement, fly ash, coal, grains and bulk materials.

TECHNICAL SPECIFICATIONS

Probe length	Up to 5,000 mm
Accuracy	±1% FS
Switch repeatability	±0.5% FS
Output selections	4-20 mA transmitter / 2-point SPDT switch
Probe / material	Flexible rope or rigid rod / SS316 options
Connection	2 inch or 3 inch ANSI Class 150 RF flange
Enclosure	Aluminium IP66; DMC option
Power	250 VAC ±10%, 50 Hz - source configuration

Confirm supply voltage, probe insulation and combined transmitter/switch availability before ordering.

TECHNOLOGY HIGHLIGHT

Capacitance sensing measures the electrical response around the probe; material dielectric properties guide setup and calibration.

POINT LEVEL DETECTION

PROLEVEL 300SW

Magnetic float level switch



FEATURES

- Custom single or multiple switching points.
- Magnet-operated reed contacts.
- No separate power supply for the reed contact.
- Top, side and connecting-rod mounting options.

APPLICATIONS

Water tanks, process vessels, chemical storage and high/low liquid alarms.

TECHNICAL SPECIFICATIONS

Installation height	0-6 m, customized
Switch point	One standard; multiple points on request
Working pressure	Up to 1.0 MPa
Temperature	-30 to +250 °C, selected construction
Minimum specific gravity	0.45
Contact type	Dry reed contact
Contact rating	220 VAC, 24 VA, 1 A; observe all limits
Wetted parts	SS304 / SS316 / PTFE-lined / PP / PVC
Protection / entry	IP65 / M20 x 1.5

Select float/material for density, temperature and pressure. The supplied document identifies model 300SW as a switch.

TECHNOLOGY HIGHLIGHT

Direct mechanical buoyancy with magnetic switching provides a simple discrete signal for control panels and pump interlocks.

POINT LEVEL DETECTION

PROLEVEL 502

Vibrating tuning fork level switch



FEATURES

- Point-level detection for liquids and light solids.
- High/low switching and LED status indication.
- SPDT relay for alarms and interlocks.
- Threaded connection and rugged aluminium housing.

APPLICATIONS

Chemical tanks, water systems, feedwater tanks and suitable powder/granule applications.

TECHNICAL SPECIFICATIONS

Technology	Vibrating tuning fork
Fork / wetted options	SS304 / SS316L; Inconel 625 optional
Fork length / connection	100 mm standard / 1/2 inch NPT male
Power / output	24 VDC or 220 VAC / SPDT relay
Protection	IP67
Process temperature	-40 to +130 °C
Electronics temperature	-40 to +80 °C
Process pressure	Up to 2.0 MPa
Minimum density	Liquid ≥0.7 g/cm³; solid ≥0.1 g/cm³

Ex d IIB T4 construction is optional; confirm applicable certification and selected liquid/solid version.

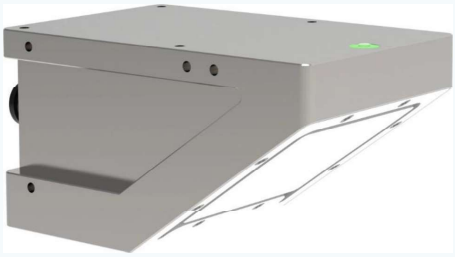
TECHNOLOGY HIGHLIGHT

Vibration-based point sensing provides a discrete level signal without relying on liquid conductivity. Match fork construction to the medium.

OPEN-CHANNEL MONITORING

METRON RD-5003

3-in-1 radar level, velocity and flow monitoring



FEATURES

- Non-contact surface velocity and water-level sensing.
- Calculates flow from configured channel geometry.
- Rain mode and flow-direction recognition.
- Wired and wireless transmission options.

APPLICATIONS

Open channels, irrigation canals, stormwater and partially filled drainage systems.

TECHNICAL SPECIFICATIONS

Velocity radar / range	24 GHz / 0.03-20 m/s
Velocity accuracy	±0.01 m/s; ±1% FS, source specification
Level radar / range	60 GHz / 0.2-7.0 m
Level accuracy	±2 mm
Beam angle	12° velocity / 8° level
Supply	7-32 VDC; 5.5-32 VDC option
Temperature / protection	-30 to +80 °C / IP68
Output options	RS485 / RS232 / 4-20 mA / 4G / LoRa
Dimensions	Approx. 160 x 100 x 80 mm

Source model retained; LABTECH supply configuration to be confirmed. No overall flow accuracy is inferred from level or velocity accuracy.

TECHNOLOGY HIGHLIGHT

Velocity-area flow calculation combines surface velocity, level and channel geometry; site validation is essential for reliable flow results.

MODERN MONITORING

From measurement to insight

Focused sensing. Accessible configuration. Connected operations.

01 80 GHz FMCW radar

A narrow measurement beam helps reduce reflections from tank structures. Select antenna angle and mounting clearance for the actual vessel.

02 Intelligent echo processing

Echo evaluation helps distinguish the material surface from unwanted reflections. Good installation remains essential for dependable performance.

03 Digital configuration

HART, Modbus and optional Bluetooth simplify access to selected instruments. Confirm the interface, wiring and supported functions with the model.

04 Remote visibility

Compatible gateways can bring level values into PLC, SCADA or an IIoT platform for trends and alarms. Telemetry and software are project options.

ENGINEER THE COMPLETE MEASUREMENT POINT

Confirm media, range, blind zone, temperature, pressure, material compatibility, power and output. Add an independent point-level alarm where the process requires it.

Technology context: Endress+Hauser, “The new generation of 80 GHz radar sensors”; VEGA, “VEGAPULS Air 41”. Model capabilities follow the supplied LABTECH documents.

PRECISION IN EVERY PROCESS

“From selecting the right instrument to keeping your process running, LABTECH stands beside you.”

Application guidance / Commissioning support / Service assistance

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CALIBRATION & PERFORMANCE DISCLAIMER

Every instrument is supplied with a factory calibration certificate documenting verification of its specified accuracy or switching performance against the agreed specifications and applicable standards.

Published accuracy refers to defined test conditions and the selected configuration. Actual operation, performance and measurement accuracy depend on site conditions, installation, media characteristics, ambient and process conditions, and proper commissioning and maintenance.

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