

LEVEL TRANSMITTERS • RADAR

76–81 GHz FMCW Radar Level Transmitter

II-LT-002

76–81 GHz FMCW radar



Full specification, variants, open points and ordering information. Non-contact level to 120 m with an 8 cm blind spot and a 3° beam.

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ISSUED

24 October 2026

76–81 GHz FMCW Radar Level Transmitter

Indiana catalogue ID **II-LT-002** Level Transmitters · Radar

IDENTIFICATION

Product	76–81 GHz FMCW Radar Level Transmitter
Indiana catalogue ID	II-LT-002
Category	Level Transmitters · Radar
Measuring principle	76–81 GHz FMCW radar
Model line	76–81 GHz
Document	Specification · issued 24 October 2026

01 Measurement

Transmission frequency	76 GHz – 81 GHz, FM scanning frequency width 5 GHz
Measuring range	0.1 – 120 m
Measurement accuracy	±1 mm
Beam angle	3° or 8°
Dielectric constant	≥2

02 Electrical

Power supply range	18–28.0 V DC, four-wire system, less than 1 W
Output	4–20 mA with HART bus, or RS-485
Communication	HART / MODBUS bus
Fault output	3.8 mA, 4 mA, 20 mA, 22 mA or maintain
Cable entry	M20 × 1.5
Recommended cable	AWG18 or 0.75 mm ²

03 Mechanical and environment

Field operation	128 × 64 dot matrix display screen with 4 buttons; configurable upper computer setting software
Industrial temperature / humidity	–40 to 85 °C, 95% RH

Shell material	Aluminium alloy, stainless steel
Antenna type	Lens antenna; optional lens antenna cover, anti-corrosion antenna, antenna heat dissipation paste, quartz isolation flange plate
Process pressure	-0.1 to 2 MPa
Protection grade	IP68
Installation method	Thread or flange
Net / gross weight	2.480 kg / 2.995 kg

04 Commissioning

On-site	LCD with four buttons
PC	USB to RS485 serial cable (four-wire); USB to TTL serial cable (two-wire); USB to HART modem
Mobile	Bluetooth debugging from a phone
Remote	4G network through remote modules

05 Installation

- 01 Align the instrument with the target material level and keep it perpendicular to the surface.
- 02 Ensure there are no interfering objects such as ladders or steps within the beam range, and keep the beam clear of the feeding port.
- 03 Install at least 20 cm away from the container wall, otherwise readings may be incorrect.
- 04 In a conical container, direct the beam towards the bottom of the tank, otherwise bottom measurements may be inaccurate.

06 Applications and industries

APPLICATIONS

- Solid level in silos and hoppers, including high dust environments
- Liquid level in storage tanks
- High-temperature process vessels up to +200 °C at the antenna

INDUSTRIES

Cement

Mining and minerals

Chemical

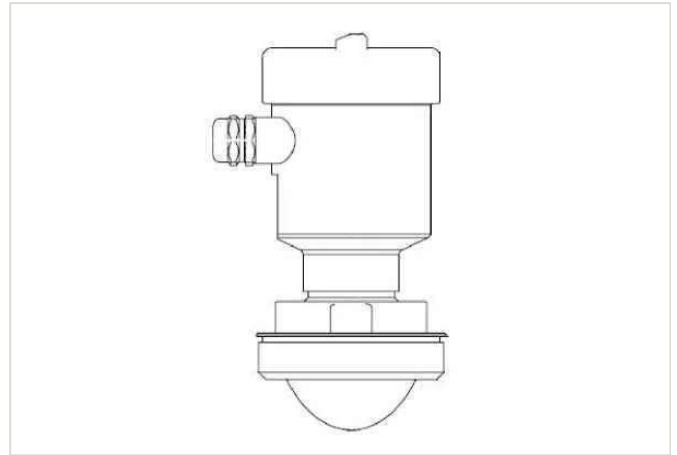
Power generation

Water treatment

07 Views



PRIMARY VIEW 76-81 GHz FMCW radar level transmitter — representative photograph of this radar type from a matching manufacturer listing (nameplate removed); not a factory photo of this exact unit
Product photograph



TECHNICAL Outline drawing from the product documentation
Product photograph



ALTERNATE VIEW 76-81 GHz FMCW radar level transmitter — head detail, representative manufacturer-listing photograph
Product photograph



APPLICATION Row of large cylindrical process storage tanks — illustrative environment, not an installation of this product
Illustrative scene

08 Ordering

Quote reference	II-LT-002
Model / variant options	76-81 GHz FMCW — 3° beam • 76-81 GHz FMCW — 8° beam
Lead time, terms, documentation	Confirmed in the quotation

TO PREPARE A QUOTATION WE NEED

- Measuring range and tank height
- Medium — liquid or solid — and its dielectric constant

- Process temperature and pressure
- Dust, foam or condensation conditions
- Process connection — thread or flange
- Output and communication required
- Antenna accessories — cover, anti-corrosion, heat dissipation, quartz isolation flange

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QUOTATION

List the product, ID and quantity; add process conditions. We reply with a quotation.

CONFIRM BEFORE ORDERING

- The manual states both four-wire and two-wire support in the product introduction while the specification table lists a four-wire power supply range. Confirm the wiring configuration for your model before ordering.

INDIANA INSTRUTECH · 76–81 GHz FMCW radar level meter — product user manual Values are reproduced from the source documentation as stated there; where a source gives two different values for the same property, both are shown with their source. Unstated values are listed under “Open points”. This document is not a certificate, and no approval, certification or hazardous-area suitability is implied. INDIANA SALES (INDIANA INSTRUTECH) · info@indianainstrutech.com · +91 75033 02545 · +91 92893 62447 · issued 24 October 2026.