RADAR LEVEL MEASUREMENT / DATA SHEET

SS401-03

Intelligent FM Radar Liquid Level Meter

Non-contact radar measurement for level and liquid level applications.

Overview

- SS401-03 is a non-contact radar level gauge for level and liquid level measurement.
- A small antenna and concentrated beam improve echo capability while helping to reduce interference from the installation environment.
- The source describes high-frequency radar measurement as having little effect from severe dust, water vapour and atmospheric changes.
- The source-listed configuration provides selectable 30 m, 60 m or 120 m measurement, 80 GHz operation and a lens antenna.



Range	Accuracy	Frequency	Output
30 / 60 / 120 m	±1 mm	80 GHz	4-20 mA / RS-485
Supply	**Pressure**	**Antenna**	**Protection**
18-28 VDC	-0.1 to 2 MPa	Lens antenna	IP67

Key Advantages

- Non-contact measurement with no mechanical wear or direct medium contact.
- Small antenna and concentrated beam improve echo capability and help reduce interference.
- High-frequency measurement is described as having little effect from severe dust and water vapour.

Application Scenarios

- Level measurement.
- Liquid level measurement.
- Process vessels where non-contact radar measurement is preferred.

MEASUREMENT PRINCIPLE

Measurement Principle

SS401-03 uses non-contact radar level measurement. The source describes a small antenna and concentrated beam that enhance echo capability and help avoid interference. The source also states that high-frequency radar measurement is little affected by severe dust, water vapour, temperature changes or atmospheric pressure changes.

TECHNICAL SPECIFICATIONS

Technical Specifications

Parameter	Specification	Parameter	Specification
Applicable media	Level, liquid level measurement	**Measuring range**	30 m; 60 m; 120 m
Signal output	4-20 mA (with HART bus) or RS-485	**Supply voltage**	18-28 VDC
Signal line specifications	2 Wire / 4 Wire	**Measurement accuracy**	±1 mm
Process temperature	-40 to +85 °C; humidity ≤95% RH	**Process pressure**	-0.1 to 2 MPa
Antenna structure	Lens antenna	**Antenna material**	Super material
Frequency range	80 GHz	**Protection class**	IP67
Explosion-proof grade	Exdia IIC T6	**Process connection**	Thread / Flange (Optional)
Live display	4-digit LCD liquid crystal display		

OUTPUT AND COMMUNICATION

Output and Communication

Interface	Source-listed configuration
4-20 mA	With HART bus
RS-485	Source-listed digital communication output

The source lists 4-20 mA with HART bus or RS-485 for the SS401-03 configuration.

MECHANICAL / PROCESS CONNECTION

Mechanical / Process Connection

The source specifies Thread / Flange (Optional) as the process connection. No separate dimension drawing or wiring diagram is provided in the supplied source PDF; no additional dimensions or installation values are added here.

PRODUCT SELECTION / ORDERING INFORMATION

Product Selection

Selection	Configuration
Base model	SS401-03 — Intelligent FM Radar Liquid Level Meter
Applicable media	Level, liquid level measurement
Measuring range	30 m; 60 m; 120 m
Output	4-20 mA with HART bus or RS-485
Supply and wiring	18-28 VDC; 2 Wire / 4 Wire

Selection	Configuration
Antenna	Lens antenna; super material
Process connection	Thread / Flange (Optional)

Specify SS401-03 with the required measuring range, output, wiring, antenna and process-connection configuration. Final configuration remains subject to the source-listed options.

CONTACT / SUPPORT

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