

Rosemount 5300 Series

Configuration Data Sheet

All items for the pre-configured (C1) option are bolded. For a complete list of C1 parameters, see page 46.

★ Indicates Default Factory Configuration

Customer and Sales Person Information

Customer/End User: _____	Contact Name: _____
Phone Number: _____	E-mail/Fax Number: _____
P.O. No. /Reference No: _____	P.O. Line Item: _____
Quote No. : _____	Model No. : _____
Final Destination: _____ (city), (state, province), (country)	
Industry:	
<input type="checkbox"/> Chemical	<input type="checkbox"/> Power
<input type="checkbox"/> Food and Beverage	<input type="checkbox"/> Pulp and Paper
<input type="checkbox"/> Life Sciences	<input type="checkbox"/> Refining
<input type="checkbox"/> Metals and Mining	<input type="checkbox"/> Water and Waste Water
<input type="checkbox"/> Oil and Gas	<input type="checkbox"/> Other _____

Tagging

Tag No. (Hardware): _____	(max 21 characters)
Software Tag: _____	(max 8 characters)

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Process/Application Information

Process Name/ Description: _____ Measurement Type: Liquid Level Solid Level
 Interface Level/Interface

Product/Process Media: _____ Dielectric Constant⁽¹⁾: 1.4-1.9 4.0-10.0 40-60
 1.9-2.5 11-20 > 60
 2.5-4.0 20-40

Process Temperature: Min: _____ degrees F
 degrees C

Max: _____ degrees F
 degrees C

Process Pressure: Min: _____ psig
 bar

Max: _____ psig
 bar

Product Build-up: None
 Film
 Heavy

Process/Application Information; Liquid / Slurry Measurements

Maximum Viscosity: 1-5 cSt (like water) 50-100 cSt (like Honey)
 5-20 cSt (like machine oil) 100-500 cSt (like Syrup/Molasses)
 20-50 cSt (like olive oil) >500 cSt (like Tar)

Turbulence: Yes No Turbulence due to Agitation
 Flowing
 Splash loading
 Other

Foam Type: None
 Light (airy)
 Medium
 Heavy (dense)

(1) If interface measurement, enter the Dielectric Constant of the lower product (minimum 8). The Dielectric Constant of the upper product is entered on page 42.

Process/Application Information; Level and Interface Measurements

Upper Product: _____

Upper Product Dielectric Constant: _____

Upper Product Thickness: Minimum: _____ in. ft mm. m
 Maximum: _____ in. ft mm. m

Emulsion Layer: Yes No
 Emulsion Thickness: _____ in. ft mm. m

Process/Application Information; Solid Measurements

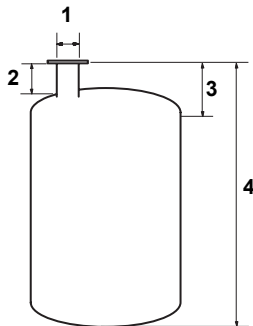
Particle Size: Fine dust/powder (flour, cement). < 0.2 in. (0.5 cm)
 Grains (rice, corn). < 0.8 in. (2 cm)
 Small stones/gravel. < 0.8 in. (2 cm)
 Small rocks/chunks (lime stone). > 0.8 in. (2 cm)
 Large particles (wood chips). < 3.5 in. (9 cm)

Abrasive Media: Yes No

Tensile Load (see "Solids" on page 14): < 12 kN
 > 12 kN
 > 29 kN

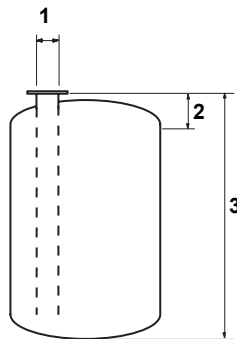
Tank / Fitting Information

Nozzle



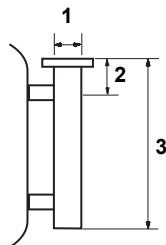
	in.	ft	mm	cm	m
1. Nozzle Diameter: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Nozzle Height: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Upper Null Zone ⁽¹⁾ : _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Tank/Reference Height: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Stilling Well



	in.	ft	mm	cm	m
1. Well Diameter: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Upper Null Zone ⁽¹⁾ : _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Tank/Reference Height: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Bypass Pipe



	in.	ft	mm	cm	m
1. Well Diameter: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Upper Null Zone ⁽¹⁾ : _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Tank/Reference Height: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1) The transmitter will not consider echoes in this area. Normally used to suppress nozzle echoes. Default value is zero.

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Additional Tank / Fitting Information

Tank Material of Construction: Metal Concrete Fiberglass Plastic

Tank Walls/Metallic Object < 11.8 in. (30 cm) from the probe: Yes No

Unit Selection

Variable Units: Use the chosen variable when filling in values in this form

Level: in. ft mm★ m

Volume: cubic feet US gals cubic meters★ oil barrels

Analog Output 1 (4-20 mA analog output) and HART Variables

Primary Variable Assignment: Level★
 Distance
 Interface Level
 Interface Distance
 Upper Product Thickness
 Volume

Lower Range Value (4 mA): _____

Upper Range Value (20 mA): _____

Secondary HART® Variable Assignment: Level★
 Distance
 Interface Level
 Interface Distance
 Upper Product Thickness
 Volume

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LCD Meter Configuration - Only if M1 is ordered

- Variables:**
- | | | | |
|--|-------------------------------------|---|--|
| <input type="checkbox"/> Level★ | <input type="checkbox"/> Distance | <input type="checkbox"/> Interface Level ⁽¹⁾ | <input type="checkbox"/> Volume ⁽²⁾ |
| <input type="checkbox"/> Interface Distance ⁽¹⁾ | <input type="checkbox"/> % of Range | <input type="checkbox"/> Upper Product Thickness ⁽¹⁾ | <input type="checkbox"/> Upper Volume ⁽²⁾ |
| <input type="checkbox"/> Lower Volume ⁽²⁾ | | | |

Variable units according to previous table section. Carousel Toggling is used to present more than one variable.

(1) Requires Rosemount 5302, or 5301 with the probe fully submerged in the liquid.

(2) The next section of this CDS needs to be filled out if Volume is selected.

Volume Calculation (If applicable)

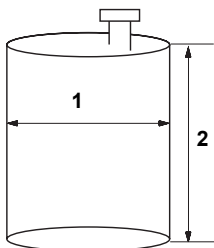
Please select what ideal tank shape to use, and add dimensions in:

- in.
- ft
- mm
- cm
- m

Vertical Cylinder

Dimensions:

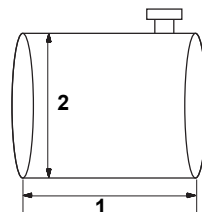
1. _____
2. _____



Horizontal Cylinder

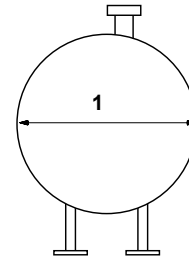
Dimensions:

1. _____
2. _____



Sphere

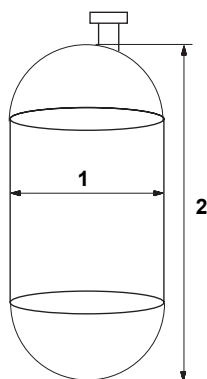
Dimension: 1. _____



Vertical Cylinder (bullet ends)

Dimensions:

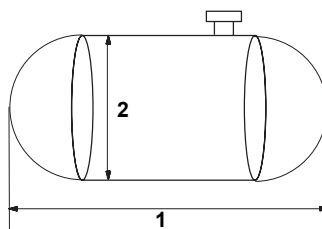
1. _____
2. _____



Horizontal Cylinder (bullet ends)

Dimensions:

1. _____
2. _____



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Strapping Table		
<input type="checkbox"/> Pre-configuration of strapping table (requires model code C1)		
Strap Point Number	Level	Volume
1 (Bottom of Tank)		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Pre-configured (C1) parameters

- Hardware Tag
- Software Tag
- Dielectric Constant/s
- Primary Variable Assignment
- Secondary Variable Assignment
- Variable Units Level
- Variable Units Volume
- Lower Range Value (LRV)
- Upper Range Value (URV)
- Tank / Reference Height (RGH)
- Upper Null Zone
- LCD Configuration
- Volume Configuration

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Rosemount Level Solutions

Emerson provides a complete range of Rosemount products for level measurement applications.

Pressure – Level or Interface Measurement

Emerson has a complete line of Rosemount pressure transmitters and remote seals for measuring level or interfaces in liquid applications. Optimize performance with direct mount, Tuned Seal systems:

- Rosemount 3051S_L, 3051L, and 1151LT Liquid Level Transmitters
- Rosemount 1199 Remote Diaphragm Seals with direct mount or capillary connections

Vibrating Fork Switches – Point Level Detection

The Rosemount 2100 Series is developed for reliable point level detection of liquids and consists of:

- Rosemount 2110 Compact Vibrating Fork Liquid Level Switch
- Rosemount 2120 Full-featured Vibrating Fork Liquid Level Switch

Guided Wave Radar – Level and Interface Measurement

Multivariable, loop-powered Guided Wave Radar transmitters with a wide range of probe styles to fit different liquids and solids applications. The product line consists of:

- Rosemount 3300 Series – Versatile and easy-to-use transmitter with proven reliability
- Rosemount 5300 Series – Accurate, high performance transmitter with FOUNDATION™ fieldbus support

Non-contacting Radar – Level Measurement

The Rosemount non-contacting radar family consists of:

- Rosemount 5400 Series Transmitters – Loop-powered transmitter with a wide range of antennas, for liquid level measurement in most applications and process conditions
- Rosemount 5600 Series Transmitters – Transmitters with ultra-high sensitivity for measurement of level in liquids and solids, even for the most challenging applications

Non-contacting Ultrasonic – Level Measurement

The Rosemount 3100 Series ultrasonic level transmitters provide continuous non-contacting level measurement of liquids. The range consists of:

- Rosemount 3101 for simple continuous level measurement
- Rosemount 3102 for continuous measurement with two integral relays for local control functionality
- Rosemount 3105 Intrinsically safe certified version for hazardous areas

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