Applicatio

The intrinsically safe 26 GHz. pulse radar transmitter provides continuous level measurement up to 229.7’ (70m) with a 4-20 mA analog and HART digital signal output, and is configured via its integral push button display module or HART communicator. The non-contact solids level sensor is intended for dry solid media including aggregates, grains, pellets, powders and building materials. Select this sensor for the most difficult process conditions with significant to extreme dust, and installation with an adjustable gimbal flange. For ease of installation, the parabolic antenna can be unclamped, inserted through the base of a riser, and reattached to the sensor. Typical applications include silos.

Features

- Parabolic antenna delivers high power RF signal strength
- Configuration via push button display or HART communicator
- Gimbal flange for easy positioning with the angle of repose
- LCD displays level in feet or meters with percent of span bar
- Optional display mode indicates the echo signal return curve
- Rugged 316L stainless steel antenna and process mount
- Fail-safe diagnostics with selectable signal fail-safe outputs
- Recognition, storage and rejection of false echo signal returns
- IP67 stainless enclosure with polycarbonate display window

Antenna Selection

The reflective parabolic antenna focuses the RF energy to narrow the beam and increase the signal strength. The sensor is offered in two antenna sizes including 8” (196mm) and 10” (246mm). The larger the antenna, the narrower the beam and the stronger the RF signal return. To select the appropriate antenna size, consider two variables; The measured span distance and the amount of dust within the span.
EchoPro® LR46
Pulse Radar Solids Level Transmitter

Specifications

Range: 12” to 229.7’ (30cm to 70m)
Frequency: 26 GHz.
Accuracy: ± 15mm
Dead band: 12” (30cm)
Beam angle: - 8°: 5°
- 0°: 4°
Configuration: Push button, HART 7
Memory: Non-volatile
Display type: LCD, dot matrix
Display units: Feet and meters
Display bar: Percent of span
Display graph: Echo signal curve
Supply voltage: 21.6 to 26.4 VDC
Max. consumption: 22.5 mA
Signal output: 4-20 mA, two-wire, HART 7
Signal invert: 4-20 mA, 20-4 mA
Signal fail-safe: 3.9 mA, 20.5 mA, 22 mA
Process temp.: F: -40º to 752º
 C: -40º to 400º
Temp. comp.: Automatic
Storage temp.: F: -40º to 176º
 C: -40º to 80º
Pressure: Atmospheric
Enclosure rating: IP67
Encl. material: 316L stainless steel w/silicone gasket
Encl. window mat.: Polycarbonate
Conduit entrance: (1) 1/2” NPT connector
Antenna material: 316L & PTFE
Process mount: - 4: 4” gimbal flange (ANSI)
Classification: Intrinsicly safe
Approvals: ATEX I IG Ex ia II C T6...T3 Ga
IEC Ex ia IIC (T6...T3) Ga
CSA Class I, Div 1, Groups A, B, C & D;
Class II, Div 1, Groups E, F & G; (T6...T3);
Class I Zone 0 AEx ia IIC (T6...T3) Ga &
Zone 20 AEx ia IIC (776ºC to T146ºC) Da;
Ex ia IIC (T6...T3) Ga & Ex ia IIC (776ºC to
T146ºC) Ga
Certification: FCC

Dimensions

FLANGE

<table>
<thead>
<tr>
<th>P/N</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>7.8” (198mm)</td>
<td>8.7” (220mm)</td>
<td>0.45” (11mm)</td>
</tr>
<tr>
<td>8</td>
<td>8” (196mm) parabola</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>10” (246mm) parabola</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTES

1) If you want help in selecting a sensor for your application, please go to our website and submit a Level Questionnaire. An engineer will review your requirements and suggest a product solution via email.
2) An Air Purge connection can be used to prevent clogging of the antenna in applications with significant dust. If significant dust is present in the application, then connect the integrated air purge connection to an air line.

Ordering

LR46-5321-400

ANTENNA SIZE (1)(2)

8 8’’ (196mm) parabola
0 10’’ (246mm) parabola