

Resonant bulk level sensor



Key Features

- Solid-state, no moving parts
- Simple operation
- Tough, durable design
- Open collector output
- Ideal for use in agricultural & industrial silos



The Gill Bulk Material Level Sensor provides a simple binary logic indication of the presence or absence of dry bulk powder, granules or grain in contact with the front sensing face.

This sensor utilises a complex vibratory excitation to sense the presence of material in contact with the face. The sensor is only suitable for dry materials and not liquids. The sensing surface is flush with the sensor body and avoids entrapment of material. The design has incorporated a tough durable sensing face capable of withstanding impact and high static loads. It is intended for mounting upon an approximately vertical surface within a container and will typically be deployed in multiples to give level estimation.

The technology employed within this sensor offers many advantages over traditional bulk level sensors, such as paddle sensors. This maintenance free device can be incorporated into silo, hopper and bin applications, where sensor access is remote and often dangerous, offering potentially large savings to the end user.

Electrical

Supply Voltage	6VDC to 24VDC nominal (32VDC max) 1.7J surge suppressor fitted
Supply Current	<10mA (independent of voltage)

Electrical Output

Output	Open collector output
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Wiring

Wire/Connector	3-wire flying lead
Wiring Gauge	
Cable Material Compatibility	

Mechanical

Size	19 x 87 x 87 (DxWxL)
Mounting	2 x 4mm dia. holes on 78mm centres

Environmental

Protection Class	IP65
Operational Temperature	-20°C to +85°C (non-condensing)
EMC Immunity Level	
Vibration	
Finish	

Typical Applications

Agricultural

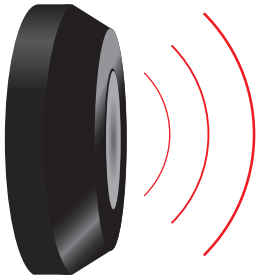
- Grain
- Soya beans
- Peas
- Millet
- Corn
- Rice
- Beads
- Wood Flour
- Most powders and granulated products

Industrial

- Dust Fibre
- Granule Dispensers and food products

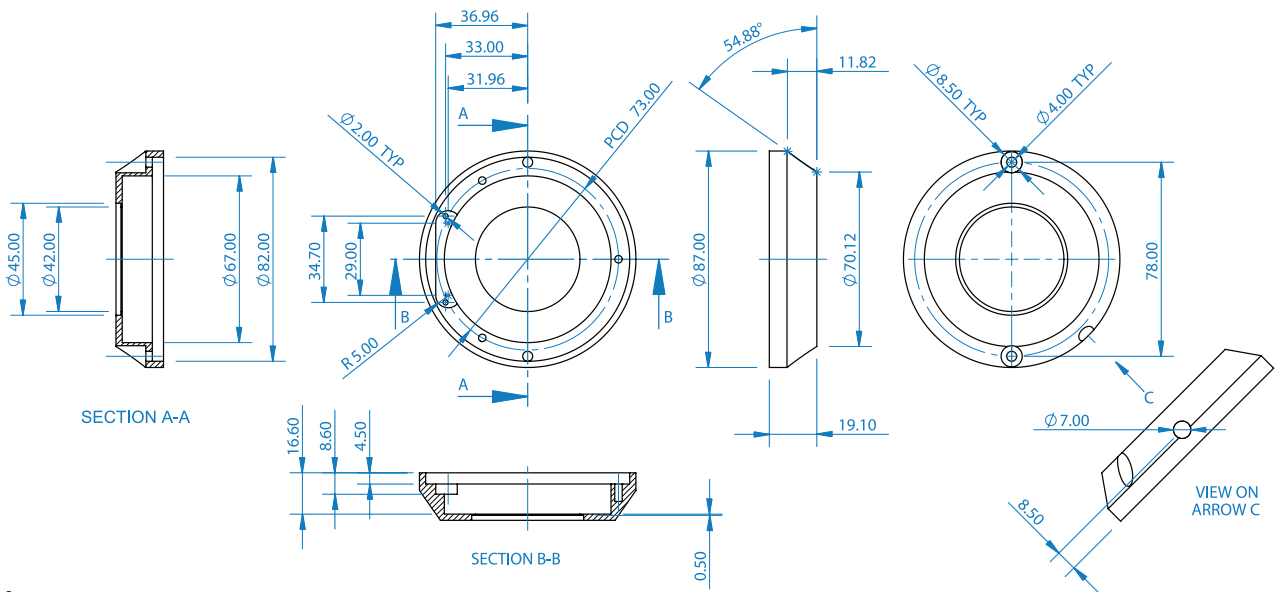
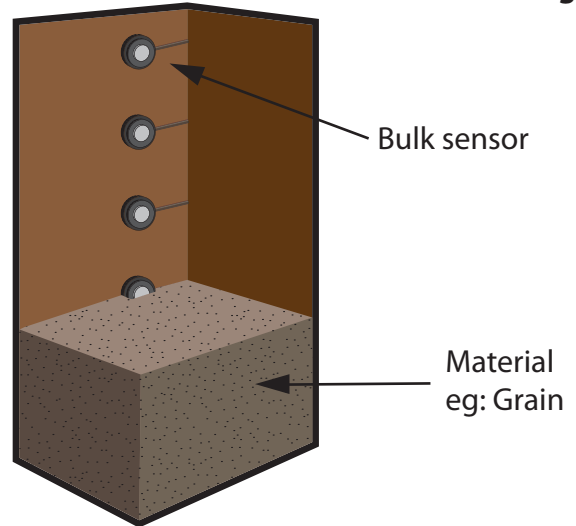
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How the sensor works



The sensor emits a frequency which changes when bulk material covers the metal face. This change in frequency produces a switching output which can be used to trigger an alarm, LED etc.

Typical Bulk level sensor arrangement



Wiring

Blue	Supply negative and signal ground
Red	Supply positive 6VDC to 24VDC
Yellow	Signal Output



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