

Fill_ir Sensor



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Infrared sensor for fill level inspection.

Infrared Sensor for Fill Level Inspection

The TapTone Fill_ir sensor is designed to inspect plastic and glass containers for proper fill level. The system can be configured to detect under filled containers, over filled containers or both. The system uses optical technology to detect an infrared beam, which measures the fill level of water based liquid products. The sensor mounts on a remote variable height stand and requires no modifications to the existing production conveyor. The Fill_ir sensor is compatible with any TapTone Platform and can be added to existing TapTone systems as an optional inspection.

Benefits

- Low cost fill level inspection at production line speeds.
- Cantilever design requires no line modifications.
- No tools required for change-overs
- Simple height adjustment
- Meets CE requirements

Applications

- Beverage containers
- Carbonated and LN2 dosed beverages
- Household chemicals
- Nutraceutical products
- Personal care & cosmetics

How It Works

The TapTone Fill_ir sensor is a non-contact fill level inspection module. The system uses Optical technology to detect an infrared beam, which measures the fill level of water based liquid products in glass and plastic containers. The Fill_ir sensor utilizes a special emitter/receiver infrared wavelength tuned to the absorption band of water. This infrared beam penetrates the side of the container in the expected area of the fill level. The beam is powerful enough to pass through most types of plastic and glass containers but will not pass through water based liquids. A receiver is positioned on the opposite side of the container to detect the beam after it passes through the container. When set to detect under fills, if the beam is detected by the

receiver, then the container is under filled. When set to detect over fills, if the beam is not detected by the receiver (blocked), then the container is over filled. The Fill_ir sensor can be used to measure both overfilled and under-filled products

in glass and plastic containers. High and low reject limits are defined by the user. Containers falling outside the user-set acceptance criteria are rejected.



Full container (left), underfilled container (right).

SYSTEM SPECIFICATIONS

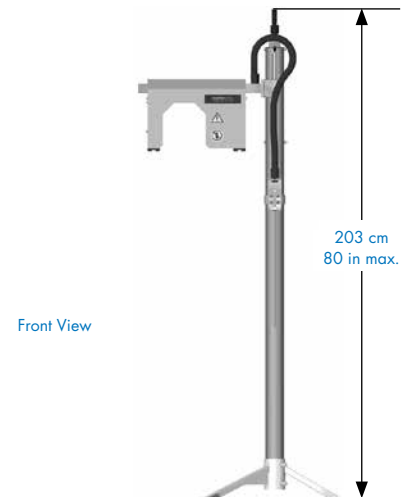
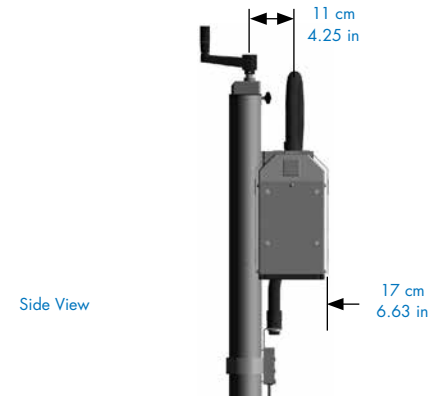
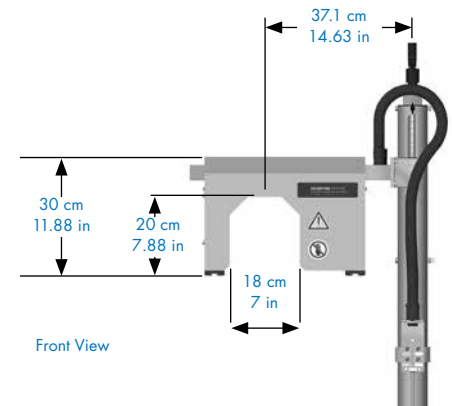
General Specifications

Operating Speed (max)	2,000 containers per minute
Maximum Container Width	170 mm (6.75 in)
Power Requirements	Voltage: 10-30 VDC (Typical 24 VDC) Current: 340mA maximum
Operating Conditions	Stable Ambient Temperature: 0° - 50° C (32° to 122° F)
Weight	9.95 kg (22 lbs)
Max Range from OF to UF	65 mm (2.50 in)
Trigger Sensor	10-30 VDC, PNP Sourcing Output
Measurement Resolution	1-4 mm (0.040 in to 0.160 in)
Sensor Output	24V PNP Sourcing

Material & Control Enclosure

Environmental Rating	NEMA 4X, IP67
Construction	Box: 304 electro polished, stainless steel housing, high pressure wash-down
Mounting	Angled pedestal stand, 304 stainless steel, tripod base, adjustable height range 241 mm (9.5 in)

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Fill_ir Sensor | Compatible Systems

- T100
- T550
- T4000 HMI

The Fill_ir Sensor can also be added to existing systems as an upgrade. Sensor requires TapTone user interface for operation.



49 Edgerton Drive • North Falmouth, MA 02556 USA

P: +1 508.563.1000

F: +1 508.564.9945

E-Mail: taptone@teledyne.com