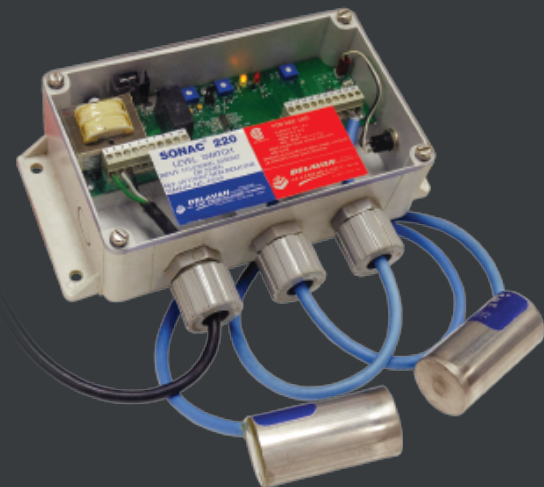


Sonac 220

Ultrasonic Level Switch

The Sonac 220 is a rugged two-wire ultrasonic level switch designed for reliable high- or low-level detection in liquids, slurries, and light bulk solids. Using matched ultrasonic sensors and solid-state electronics, it provides dependable point-level control without mechanical wear, sticking, or clogging, delivering long-term performance in challenging industrial conditions. Unlike floats, tuning forks, or mechanical switches that drift or foul, the Sonac 220 detects product presence through an acoustic feedback path, maintaining stable operation despite turbulence, foam, viscosity changes, or aerated liquids. Built for hazardous and corrosive environments, it offers a NEMA 4X enclosure, optional high-temperature sensors, dual time-delay settings, fail-safe selection, and an internal self-test feature for status verification during commissioning or routine checks. Rated up to 150 PSIG and suitable for liquids, slurries, and solids as light as ¼ lb/ft³, the Sonac 220 provides plant engineers, operators, and EPC teams with a low-maintenance, long-life solution for overfill protection, pump control, and process monitoring across storage tanks, pipelines, and processing equipment.



Key Features

Solid-State Ultrasonics

Provides non-intrusive level detection without moving parts, ensuring consistent switching performance even when products foam, coat, or rapidly change density.

Drift-Free Measurement

Acoustic feedback sensing eliminates mechanical wear and calibration drift, maintaining dependable actuation accuracy throughout changing temperature, viscosity, or turbulence conditions.

Fail-Safe Protection

Selectable high- or low-level fail-safe modes ensure safe alarm behavior during power loss, wiring faults, or unexpected signal failures in hazardous applications.

Built-In Self-Test

Internal diagnostic circuitry verifies sensor and relay operation on demand, enabling quick functional checks during startup or routine field maintenance.

Dual Time Delays

Independent make and break delays minimize false trips caused by splashing, falling material, or flow variations, improving reliability in dynamic process environments.

Hazardous-Area Compliance

Available UL, FM, and ATEX approvals ensure safe installation in explosive atmospheres, supporting global deployment across petrochemical and industrial facilities.

Typical Applications



PETROLEUM STORAGE

Provides reliable high/low point detection in crude, fuels, and chemical tanks where mechanical switches may foul or fail under harsh conditions.



WASTEWATER BASINS

Delivers consistent level alarms in sludge, mixed liquor, and aerated basins, remaining unaffected by foam, turbulence, or solid carryover.



CHEMICAL VESSELS

Handles corrosive, viscous, or aggressive liquids using sealed ultrasonic sensing, maintaining alarm accuracy where mechanical devices cannot operate reliably.



FOOD & BEVERAGE

Supports hygienic processes with non-intrusive sensing, enabling dependable point-level control in sanitary tanks and pipelines with fast-changing products.



BULK SOLIDS HANDLING

Detects light or stringy solids such as plastics, fibers, and powders, enabling high/low level alarms or plugged-chute monitoring.



PUMP PROTECTION

Provides dry-run or overfill indication for centrifugal and transfer pumps, preventing equipment damage and reducing downtime during abnormal operating conditions.

Benefits



Reliable Detection

Ultrasonic sensing avoids sticking, buildup, or vibration effects, ensuring dependable actuation even in turbulent, foaming, or viscous industrial applications.



Minimal Maintenance

With no mechanical components to wear or bind, the device delivers long service life and significantly reduced maintenance intervention.



Improved Safety

Fail-safe modes and hazardous-area certifications help prevent spills, pump damage, and unsafe operating conditions in critical process areas.



Reduced Downtime

Solid-state construction and self-test capability enable rapid troubleshooting and uninterrupted performance, lowering downtime during process upsets.



Versatile Integration

Two-wire loop-powered design and multiple mounting options simplify retrofits and allow straightforward installation in existing tank or pipeline openings.



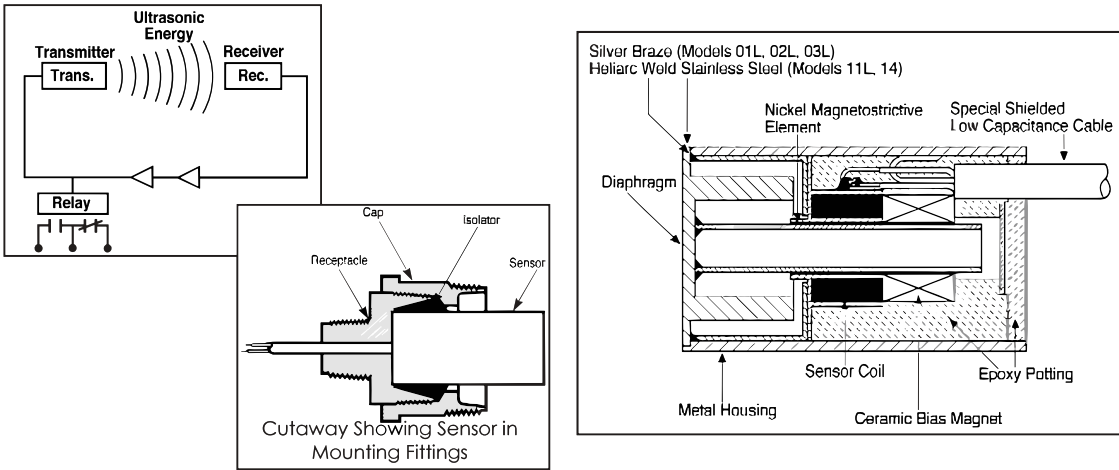
Global Compliance

UL, FM, and ATEX approvals support worldwide use, ensuring consistent safety and performance across multinational industrial and storage facilities.

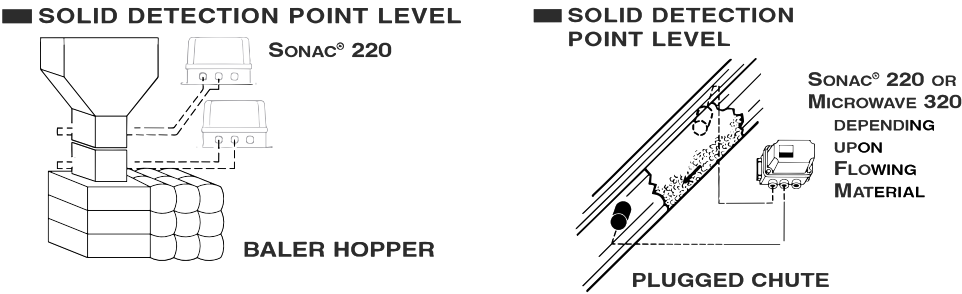
Technical Specifications & Key Features

Technology:	Ultrasonic level switch, two-wire solid-state
Operation:	Configurable for high-level or low-level detection
Accuracy:	Reliable switching independent of foam, turbulence, or viscosity
Temperature Range:	-40 °F to +185 °F (-40 °C to +85 °C)
Pressure Rating:	Up to 150 PSIG (10 bar)
Materials of Construction:	Stainless Steel wetted parts; optional coatings available
Outputs:	2-wire loop-powered output; fail-safe selectable
Connections:	Threaded or flanged process connections
Certifications:	Hazardous area approvals available (UL, FM, ATEX for EU)

Dimensions



Typical System Layout



Model Number Selection

The model number will consist of a base number 110 followed by 9 digits.
These digits will represent 10 sets of option tables.

Part Number Structure

D220-A-BCD-E

Part Prefix

D220

Part Number	A- Enclosure Type
S	Standard, NEMA 4X Enclosure
C	Clear NEMA 4x Enclosure
O	OEM, Electronic Assembly with Mounting Hardware (No Enclosure)
T	Retrieving data. Wait a few seconds and try to cut or copy again.
D	Clear, NEM 4x Enclosure, Test Switch

Part Number	E- Process Mounting (priced per pair)
S	Standard, Nylon 2" NPT (220 F Max)
H	High Temp, Ryton 2" NPT (400 Deg F Max)
F	Food Grade, 304 SS Sanitary Coupling
R	Rear Mount, 3/4" NPT

Part Number	BCD- Sensor Type (priced per pair)
11L	316SS, 50 Ft. Cables (220 Deg F Max)
14H	High Temp, 316SS, 15 Ft Cables (400 Deg F Max)
03L	11L Sensor with Focalizer (220 Deg F Max)

Summary

With over a century of tank safety and measurement expertise, L&J Technologies delivers proven reliability across critical industries. The Sonac 220 Ultrasonic Level Switch combines solid-state sensing, rugged design, and global certifications to provide safe, low-maintenance, and cost-effective level monitoring. By choosing L&J, you gain more than a switch — you gain trusted engineering and long-term protection for your people, product, and facilities.

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This document is for information purposes only. All designs subject to change. Certified dimensions, specifications, and performance data available upon request