

Ramsey CAP Series Level Controls can eliminate spills, material waste and downtime by preventing bin overflows, plugged chutes and empty bins. They work equally well as high or low-level indicators in plastic, food, chemical, mineral slurry and many other material applications. This gives you the flexibility and control you need to maximize the performance of your process to improve your bottom line.

Ramsey CAP Series Capacitance Level Controls

Point Level Monitoring of Solids, Liquids and Slurries in Bins, Vessels and Chutes



Features & Benefits

- No radio frequency interference
- Quick-set calibration provides simple selection of detection sensitivity
- Calibration stability from -40°C to $+82^{\circ}\text{C}$ (-40°F to $+180^{\circ}\text{F}$)
- UL listed/CSA approved
- NEMA 4X, 5, 9 & 12 for NEC Class II, Div. 1 & 2 Gr. E, F & G
- Shielded Delrin sleeve probe suitable for most solids, liquids and slurries
- No false readings from sidewall build-up
- Unsurpassed static discharge protection

The Ramsey CAP Series Capacitance Level Controls from Thermo Electron Corporation are designed for point level monitoring of solids, liquids and slurries in bins, vessels and chutes. The Ramsey CAP Series level controls can eliminate spills, material waste and downtime by preventing bin overflows, plugged chutes and empty bins. They work equally well as high or low-level indicators in plastic, food, chemical, mineral slurry, and other material applications.

The Ramsey CAP Series controls detect the presence or absence of material by sensing a change in capacitance, which is caused by the difference in dielectric constant of the vessel material and air. To detect these small changes, the Ramsey CAP Series sensors use a unique detection circuit that operates at a relatively low frequency level of 6 kHz. Unlike other capacitance sensors, the operating frequency of the Ramsey CAP Series is well below the RF level and is not subject to FCC regulation.

These capacitance level controls have a fail-safe feature that eliminates problems caused by power disruptions. Their high/low selector switches allow the sensors to be set for fail-safe at low when material is absent, or at high when material is present. When a power interruption occurs, the control will indicate the condition that the user deems safe for the application. Another important feature of the Ramsey CAP Series controls from Thermo is their adjustable time delay. Up to 10 seconds of delay allows the user to minimize false indications from sudden material shifts or splashing liquids.

The Ramsey CAP II Series of level controls features a shielding capability that eliminates false indications caused by material build-up on the unit's sensing surface. With this shielding, the sensors automatically compensate for material build-up and only indicate the true presence or absence of the target material. This makes the Ramsey CAP II Series level controls excellent options for use with dusty or sticky materials.

Ramsey CAP Series Capacitance Level Controls

	Ramsey Model CAP IIX	Ramsey Model CAP IIX-FL	Ramsey Model CAP IIIX
Power Requirements	120/240 VAC, 50/60 Hz ±15%, 5VA	120/240 VAC, 50/60 Hz ±15%, 5VA	115/230 VAC, 50/60 Hz ±15%, 5VA
Output Relay	DPDT 10 amps at 250 VAC	DPDT 10 amps at 250 VAC	DPDT 5 amps at 250 VAC
Ambient Temperature Electronics	-40°C to +85°C (-40°F to +185°F)	-40°C to +85°C (-40°F to +185°F)	-40°C to +85°C (-40°F to +185°F)
Probe	121°C (250°F) Delrin®, 260°C (500°F) Teflon®	66°C (150°F) standard, 232°C (450°F) high temp	121°C (250°F) Delrin®, 260°C (500°F) Teflon®
Pressure	35 kg/cm ² (500 PSI), 19.05 mm (0.75 in) mount	35 kg/cm ² (500 PSI), 19.05 mm (0.75 in) mount	35 kg/cm ² (500 PSI), 19.05 mm (0.75 in) mount
Sensitivity Setting	Adjustable 1 picofarad through 10 picofarads	Adjustable 1 picofarad through 10 picofarads	Better than 1 picofarad
Calibration	Quick-set coarse/fine single turn potentiometers	Quick-set coarse/fine single turn potentiometers	Quick-set adjust single turn potentiometer
Fail-Safe	Switch selectable high/low	Switch selectable high/low	Switch selectable high/low
Time Delay	Adjustable 0.25 to 10 seconds	Adjustable 0.25 to 10 seconds	Adjustable up to 15 seconds
Enclosure	Cast aluminum, bolt-on cover USDA approved finish	Cast aluminum, bolt-on cover USDA approved finish	Die cast aluminum
Conduit Entry	DN20 (0.75 in - NPT)	DN20 (0.75 in - NPT)	DN20 (0.75 in - NPT)
Mounting	DN32 (1.25 in - NPT) or DN20 (0.75 in - NPT) 316 SS	Flush mount Non-invasive	DN32 (1.25 in - NPT) or DN20 (0.75 in - NPT) 316 SS
CAP-Shield	Compensates for material build-up on sensing probe	Compensates for material build-up on sensing probe	Not available
Approval Ratings	NRTL/C; NEMA 4X, 5, 9 and 12 Explosion Proof for Class II Group E, F, & G	NRTL/C; NEMA 4X, 5, 9 and 12 Explosion Proof for Class II Group E, F, & G	NRTL/C; NEMA 4X, 5, 9 and 12 Explosion Proof for Class II Group E, F, & G
Status Indicator	Internal LED indicates material in contact with probe	Visual LED indicates sensor status: uncovered, covered & power failure	Internal LED indicates material in contact with probe
Probe Options	Standard Delrin, Teflon, bare SS, food grade, flexible extension, stubby, lagged	Flush mount sensor, Standard and high temp	Standard Delrin, Teflon, bare SS, food grade, flexible extension, stubby, lagged

Ramsey Model CAP IIX

The Ramsey CAP IIX Capacitance Level Sensor is designed for use in materials that have a tendency to build up on the probe. Its shielded probe automatically compensates for material build-up and will only indicate the real presence or absence of material in the vessel. The Ramsey CAP IIX is specially designed for hazardous environments.

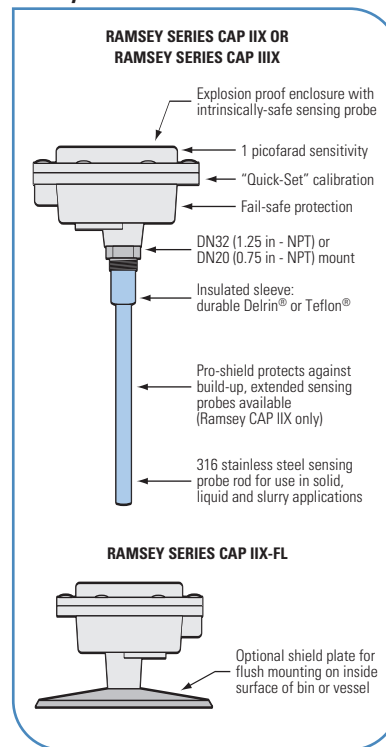
Ramsey Model CAP IIX-FL

The Ramsey CAP IIX-FL Capacitance Level Sensor is the flange-mounted version of the Ramsey CAP IIX and shares its ratings for hazardous locations. The flange also has a shielded section around its edge to compensate for material build-up.

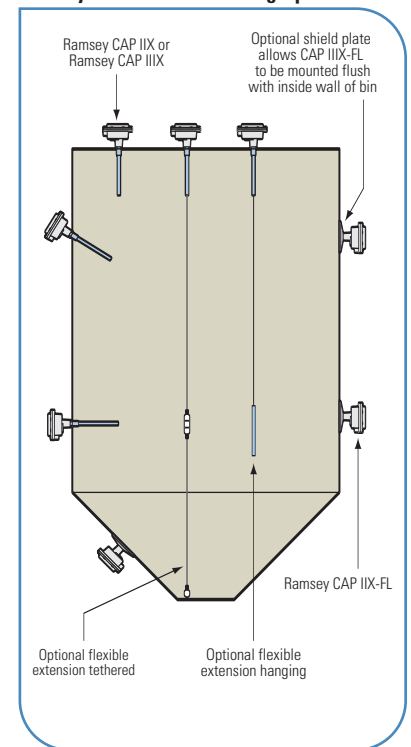
Ramsey Model CAP IIIX

The Ramsey CAP IIIX Capacitance Level Sensor offers reliability and affordability. The probe is constructed of 15.88 mm (0.625 in) stainless steel, offering increased durability in corrosive and abrasive environments. With unsurpassed reliability and durability, the Ramsey CAP IIIX is the most economical of the capacitance sensors.

Ramsey CAP Series Features



Ramsey CAP Series Mounting Options



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