PRINCO™

Instrumentation designed with the user in mind

Models L3610

NULL-KOTE™ RF Impedance Four-Wire Level Transmitter

Description

PRINCO's L3610 NULL-KOTE™ four-wire RF level transmitter can be used to measure the level of virtually any process material, from low-dielectric (insulating) products, such as refined oils, to conductive slurries– even viscous materials that cling to the probe.

Advanced NULL-KOTE™ circuit design means accurate readings even when conductive material builds up on the probe. Superior temperature stability and noise immunity, conformally coated circuit boards, self-diagnostics and factory precalibration mean accurate, reliable, easy-to-install level instrumentation.

The L3610's 4 to 20 mA dc output signal is proportional to the process level. Zero and span adjustments are non-interacting. Our Easy-On probe gives you reliable, automatic connection when the probe is screwed into the electronics housing.

The need for continuous level measurement is nearly universal in the process industries. Today's processing plants must operate at peak efficiency, minimize labor and material costs, insure on-time delivery of product and eliminate spills of even marginally hazardous materials.

Accurate, reliable, continuous level measurement is a vital part of their operation. In millions of installations, spanning more than 85 years of experience, PRINCO process instruments have provided accurate, dependable, long lived service for all types of industries.

Applications

- Water-based liquids
- Acids
- Hydrocarbons and solvents
- Powders and granulars
- Oils

Features

- **NULL-KOTE™ Circuitry –** Makes the sensor immune to adverse effects of conductive coating build up.
- **Designed to Survive –** RF immune, vibration-proof, and conformally coated (tropicalized) circuit boards for additional protection – at no extra cost.
- **Explosion-Proof/Weatherproof Housing –** Class I, II, III, Div.1, Groups C, D, E, F, & G - NEMA 4.
- **Factory Precalibrated –** Field calibration, if needed, is quick and easy. No interaction between span and zero.
- **Easy to Install –** Probe and electronics install as single unit. No cable, delicate connectors, or separate enclosure.
- **Wide Temperature Range** – Standard process temperature: -300 to 500°F (-184 to 260°C).
- **Built-In Self Diagnostics –** Provides assurance that the system is working properly.
- **Easy-On Probe Connection –** Automatically provides simple, fast installation and reliable operation without wires, connectors, or terminal strips. Simply screw probe into the housing.
- **Ten-Year Warranty –** The only level instruments available with this unique assurance of quality.

AGT Absolute Gauge Technologies™

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L100 Series Continuous Level Probes

Probes used with the L3610 are designated as the L100 Series.
A variety of types and construction materials are available: flexible (cable type) or rigid, heavy or light duty Teflon™ or Kynar™ sheathing, NPT hub or flanged mounted, single or dual construction.
All probes are manufactured to the exact length required.

MODEL NO.	ELEMENT CONFIGURATION	TYPE	VESSEL CONNECTION	INSULATION OPTIONS
L101	Single	Rigid	1" NPT	B, KP, KS, TP, TS
L104	Single	Rigid	1", 2", 3" OR 4" TRI-CLAMP™	B, KP, KS, TP, TS
L102	Dual Concentric	Rigid	1½" NPT	B, KP, KS, TP, TS
L107	Dual Concentric	Rigid	1" NPT	B, KS, TP, TS
L109	Single	Flexible	1" NPT	KW, TW
L113	Dual Parallel	Flexible	1" NPT	KW, TW
L115	Dual Parallel	Flexible	3" Flange	KW, TW
L116	Dual Parallel	Flexible	3" Flange	KW, TW
L127	Dual Parallel	Rigid	3" Flange	B, KP, KS, TP, TS
L128	Dual Parallel	Rigid	3" Flange	KP, KS, TP, TS

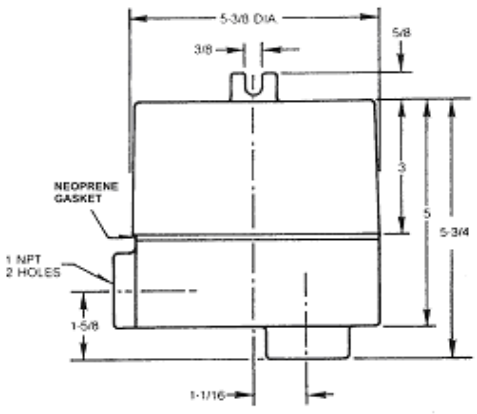
KP = Kynar® Pipe (60 mil Kynar over carbon steel)
KS = Kynar Sheath (17 mil Kynar over 316 SS rod)
KW = Kynar Wire (20 mil Kynar over 316 SS wire rope)
B = Bare (No insulation)
TP = Teflon® Pipe (60 mil PFA Teflon over 316 SS rod)
TS = Teflon Sheath (17 mil Teflon over 316 SS rod)
TW = Teflon Wire (12 mil Teflon over copper wire)

Model Number	Probe	Pressure Rating (PSI) at Temperature Indicated (°F)						
		-300	40	100	250	300	400	500
L101, L102, L104, L107, L109, L113	Teflon or Bare	1250	1250	1250	550	450	350	0
	Kynar	N/A	1000	1000	250	0	N/A	N/A
L115, L116, L127, L128	Teflon or Bare	275[1]	275[1]	275[1]	225[1]	210[1]	180[1]	0
	Kynar	N/A	275[1]	275[1]	225[1]	0	N/A	N/A

1. Rating of Carbon Steel 150 lb. flange. For higher ratings, consult factory.

L3610 Specifications

TYPE	Self-diagnostic, NULL-KOTE™, RF Impedance sensing four-wire, level to current transmitter.
POWER REQUIREMENTS	104 to 126 Vac, 50 to 60Hz, 5 watts; or 207 to 253 Vac, 5 watts; or 22 to 27 Vdc, 2.2 watts.
AMBIENT TEMPERATURE	-30 to 150 °F (-34 to 66 °C)
SPAN RANGE	From 20 pF to 50,000 pF. Probe lengths from 0.5 to 200 feet typical, depending on application.
LINEARITY	0.5% of span maximum over entire range span.
REPEATABILITY	+/- 0.1%
TEMPERATURE STABILITY	+/- 0.015% per 1 degree F
REMOTE MOUNTING DISTANCE	Up to 50 feet (cable connected) for all but the shortest span values.
PROCESS CONDUCTANCE	Tolerates process coating conductance up to 5000mS (200 ohms of composite resistance).
ELECTRONIC HOUSINGS	Explosion-proof Class I, II, III, Div. 1, Groups C, D, E,F, & G . NEMA4.



Dimensions in Inches

10 Year Warranty

All PRINCO RF impedance level control instruments are backed by a 10-year warranty. PRINCO will repair or replace, at our option, any instrument that fails under normal use up to 10 years after purchase.

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