Echoking® Ultrasonic Level Transmitter

measuring • monitoring • analyzing

NEO

- Measuring Range up to 24.5 ft
- Compact, Easy Installation
- Automatic Temperature Compensation
- Non-contact Sensor
- Compatible with Viscous, Sticky, or Aggressive Media
- 4-20 mA Transmitter
- Easy Calibration via On-board Display
- Loop Powered and Intrinsically Safe Models Available
- Bi-stable Switch Option for Pump or Valve Control

KOBOLD companies worldwide:

ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECH REPUBLIC, EGYPT, FRANCE, GERMANY, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, UNITED KINGDOM, USA, VIETNAM

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Description

The KOBOLD NEO is a full featured level system suitable for monitoring liquid levels and some dry-bulk materials. Through sophisticated signal processing, it delivers accuracy and dependability. The powerful internal microprocessor uses a form of artificial intelligence to learn about the process surroundings. This on-going learning process helps it to distinguish between real echoes, reflections, and background noise. The sensor also adapts constantly to on-site conditions. In air environments, the NEO adjusts for temperature variations by using an internal thermal sensor and compensation table. A built-in relay may be used to control tank fill/empty operations, as an alarm for level detection, or for fault detection. Span, set-point limits, and all necessary information is stored digitally in a non-volatile memory. There are no sensitive analog potentiometers to adjust. It is easily programmable via an on-board touch pad. All process parameters can be easily entered into the system at the installation site. For use in hazardous conditions, pair model NEO-5001IS with an approved I.S barrier, sold separately.

Technical Data

Range

NEO-5001, -5001IS:	18 ft. from Sensor Face
NEO-5003:	24.5 ft. from Sensor Face
Dead Band:	0.5 ft. (6")

Span

NEO-5001, -5001IS:	17.5 ft.
NEO-5003:	24 ft.
Accuracy:	± 0.25% of Full Scale
Repeatability:	± 0.125"
Fitting:	2" NPT

Display

NEO-5001, -5001IS:	4 Digit LCD, Units in in/cm
NEO-5003:	LED

Materials of Construction

Probe:	PVDF
Enclosure:	PP (UL 94VO)
Temperature Range:	-40...140 °F
Temp. Compensation:	Over Entire Range
Pressure Rating:	30 PSI @ 75 °F
Beam Angle:	± 8% off Vertical
Sensor Frequency:	50 KHz
Supply Voltage:	14-36 VDC
(NEO-5003 Current Draw):	200 mA Max.

Signal Output

NEO-5001, -5001IS:	4-20 mA DC (2-wire) into 350 ohms Max.
NEO-5003:	4-20 mA DC (3-wire) into 350 ohms Max.
Relay (NEO-5003 Only):	SPDT 12 amps @ 240 V_{AC}/120 V_{DC}

Protection

NEO-5003:	NEMA 4X
NEO-5001, -5001IS:	NEMA 4X Case

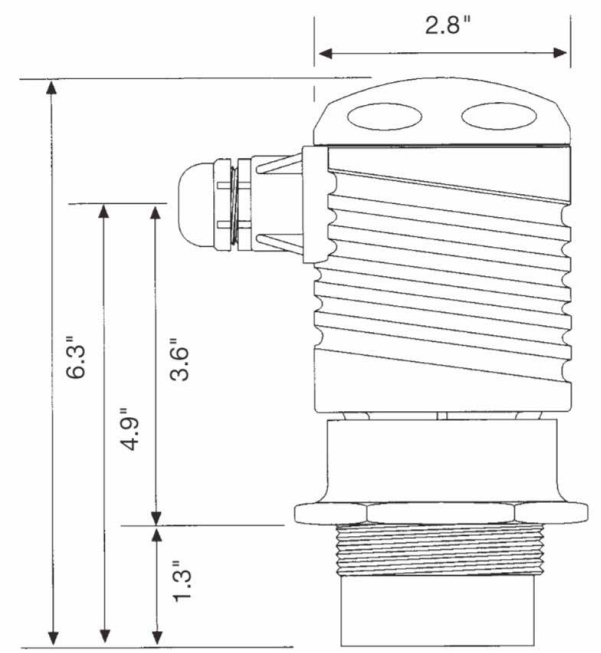
IS Ratings (NEO-5001IS Only)

CSA/NRTL/C:	Class I, Div 1, Groups ABCD Class II, Div 1, Groups EFG Class III, Temp. Code: T3C
V_{max}:	32.0 V_{DC}
I_{max}:	130 mA
C_i:	0 microFarads
L_i:	0 microHenries

Order Details (Example: **NEO-5003**)

Output Type	Model
Standard 4-20mA, 2-wire	**NEO-5001**
Standard 4-20mA, 2-wire Intrinsically Safe	**NEO-5001IS**
Sourcing 4-20mA, 3-wire with SPDT Bi-stable Relay	**NEO-5003**

Dimensions



Beam Divergence

Range (ft)	Radius (in)	Range (ft)	Radius (in)
1	2.6	14	23.1
2	4.2	15	24.7
3	5.7	16	26.3
4	7.3	17	27.8
5	8.9	18	29.4
6	10.5	19	31.0
7	12.1	20	32.6
8	13.6	21	34.2
9	15.2	22	35.7
10	16.8	23	37.3
11	18.4	24	38.8
12	20.0	25	40.5
13	21.5