



LEVEL

TEMPERATURE CONDUCTIVITY

## **INSTRUCTION MANUAL**

# **BI-COLOR MAGNETIC LEVEL INDICATOR**



CONTACT DETAILS

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## Warning

Read all warnings and instructions before performing installation or maintenance. Safety glasses and gloves should be worn at all times when working with or examining water gauge glass and connections.

## Danger

Improper installation or maintenance of gauge glass and connections can cause immediate or delayed breakage resulting in bodily injury and / or property damage.

### INSTALLATION

Only properly trained personnel should install and maintain water gauge and connections. Remember to wear safety gloves and glasses during installation. Before installing, make sure all parts are free of chips and debris.

The Liquid Level Gauge is packed in separate pieces for protection during shipment. It is easy to assemble by following the guidelines in this manual. Upon unpacking, inspect all components for damage. Check the NK Instrument nameplate in the Gauge Housing Chamber to verify that the specifications of the Liquid Level Gauge are correct for the operating conditions. Contact NK Instruments if you have any questions or encounter any problems.

The following instructions specify to first install the Gauge Housing Chamber to the process tank, then to install the float inside the Housing. However, some installations may not provide sufficient clearance between the chamber and the ground. Therefore, the float must be installed before mounting the Housing Chamber. In such cases caution must be exercised during installation to prevent the float from slamming end to end within the Housing Chamber.

### 1. Attaching the Gauge Housing Chamber to the Process Tank

Attach the Gauge Housing Chamber to the tank, making up all connections loosely. (Flange gaskets, bolts, nuts to be supplied by the customer.). Tighten only after all connections and fasteners are in proper position.

Note: Isolation valves are recommended between the Liquid Level. Gauge and the tank process connections so that maintenance of the level gauge is permitted without draining the process tank.

### 2. Assembly

Install the float, with top end first, through the open flange at the bottom of the Gauge Housing. Ensure the "TOP" label on the float is pointed toward the top of the chamber.

**Note:** It is recommended to install valves in both the upper and lower vent ports in the Gauge Housing Chamber to permit de-pressuring and draining the chamber if necessary.

Enclose the float inside the Housing by attaching the flange cover plate with the bolts and nuts provided. Use an anti-seize lubricants on the threads to prevent galling. Ensure the flange gasket is positioned to seal properly before tightening bolts and nuts. Proper bolting

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procedures should be followed including correct torqueing patterns and values.

#### 3. Commissioning

Before putting the Liquid Level Gauge into service, ensure that the Gauge Housing Chamber is sealed with no openings to atmosphere. Slowly open the upper process tank connection to the Gauge Housing Chamber. Slowly open the lower process tank connection to the Gauge Housing Chamber. By opening the upper connection first, the float is held down while the pressure equalizes between the tank and the gauge. If the lower connection is opened first, the float may be launched upward, possibly damaging the float and housing.

After the upper and lower connections are opened, inspect to verify that there are no leaks and that the fluid level flags are operational. The installation is now complete.

#### 4. PRODUCT WARRANTY

NK Instruments, warrants its products as designed and manufactured by NK Instruments to be free of defects in material and workmanship for a period of one year after the date of installation or eighteen months after the date of manufacture, whichever is earliest. NK Instruments will, at its option, replace or repair any products which fail during the warranty period due to defective material or workmanship.

Prior to submitting any claim for warranty service, the owner must submit proof of purchase to NK

Instruments and obtain written authorization to return the product. Thereafter, the product shall be returned to NK Instruments with freight prepaid.

This warranty shall not apply if the product has been disassembled, tampered with, repaired or altered outside of the NK Instruments factory, or if it has been subjected to misuse, neglect or accident.

NK Instruments responsibility hereunder is limited to repairing or replacing the product at its expense. NK Instruments shall not be liable for loss, damage, or expenses directly or indirectly related to the installation or use of its products, or from any other cause or for consequential damages. It is expressly understood that NK Instruments is not responsible for damage or injury caused to other products, building, property or persons, by reason of the installation or use of its products.

THIS IS MAYUR INSTRUMENTS SOLE WARRANTY AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED WHICH ARE HEREBY EXCLUDED, INCLUDING IN PARTICULAR ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This document and the warranty contained herein may not be modified and no other warranty, expressed or implied, shall be made by or on behalf of NK Instruments unless modified or made in writing and signed by the Proprietor of NK Instruments.

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## **USE And Care**

DO NOT's

DO NOT use glass if it contains any scratches, chips, or any other visible signs of damage.

DO NOT reuse any glass packing.

DO NOT subject gauge glass to bending or torsional stresses.

DO NOT over tighten glass packing nuts.

DO NOT allow glass to touch any metal parts.

DO NOT exceed the recommended pressure of the gauge or gauge glass.

DO NOT clean the gauge or gauge glass while pressurized or in operation.

## DO's

DO verify proper gauge has been supplied.

DO examine gauge and packing carefully for damage before installation.

DO install protective guards and utilize automatic ball checks where necessary to help prevent injury in case of glass breakage.

DO inspect the gauge daily, keep maintenance records, and conduct routine replacements.

DO protect glass from sudden changes in temperature such as drafts, water spray, etc.

## **MAINTENANCE**

Examine the gauge regularly for any signs of clouding, scratching, erosion, or corrosion. This will help establish the routine inspection and routine replacement schedules.

## INSPECTION

Examine the surface of the gauge for scratches, corrosion, chips, cracks, surface flaws, or nicks.

## **STORING**

Keep the gauge in original packaging until ready to install.

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