



RETRACTABLE LOCK-N-LOAD SENSOR ASSEMBLY INSTRUCTION MANUAL

Required Materials

Lock-N-Load – This assembly can be Stainless Steel, CPVC or Kynar®.

Electrode - Only a Lock-N-Load style electrode can be used with the Retractable Lock-N-Load Sensor assembly.

Analyzer, Meter, or Transmitter - The pH or ORP electrode will work with any analyzer, meter, or transmitter which can accept a pH or millivolt signal.

Retractable Housing and Electrode – Unpacking/Inspection

The electrode is not fitted into the housing during shipment. Upon receipt, please check housing and electrode for external defects such as electrode breakage, etc. A hydrating cap is placed over the electrode tip to prevent the glass membrane from drying out. Remove any shipping tape or other protective caps.

Precautions Prior to Initial Operation

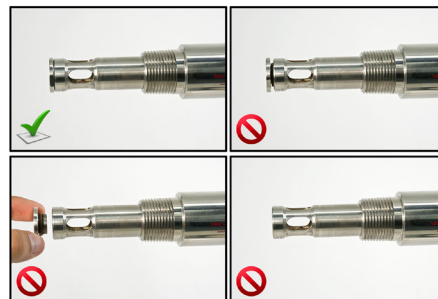
For pH or ORP measurements, the housing must be installed vertically or at least 15 degrees above horizontal with the sensing tip downward to assure that internal electrolyte fills the membrane and reference junction areas of the electrode. For all sensors installed in a pipe, the pipe must be completely filled so that the sensor tip is submerged in the sample with no air gaps or bubbles at the sensor surface.



Retractable Housing Installation (Very Important)

Before installation of the retractable housing into a flow cell, hold the housing body and push the movable portion into the housing body. Screw the end cap clockwise to lock in place. Carefully tighten the end cap. Thoroughly ensure that the end cap is threaded in tightly and properly to the movable housing. Check that the cap is tight everytime the assembly is removed.

CAUTION: IF THE END CAP IS NOT SECURELY AND CORRECTLY INSTALLED BEFORE RETRACTION INTO A PRESSURIZED SERVICE, PERSONAL INJURY OR DAMAGE OF THE ASSEMBLY MAY RESULT.



Electrode Calibration

Follow the specific analyzer/meter manufacturer's recommendations for calibration of the electrode before insertion into the retractable housing.

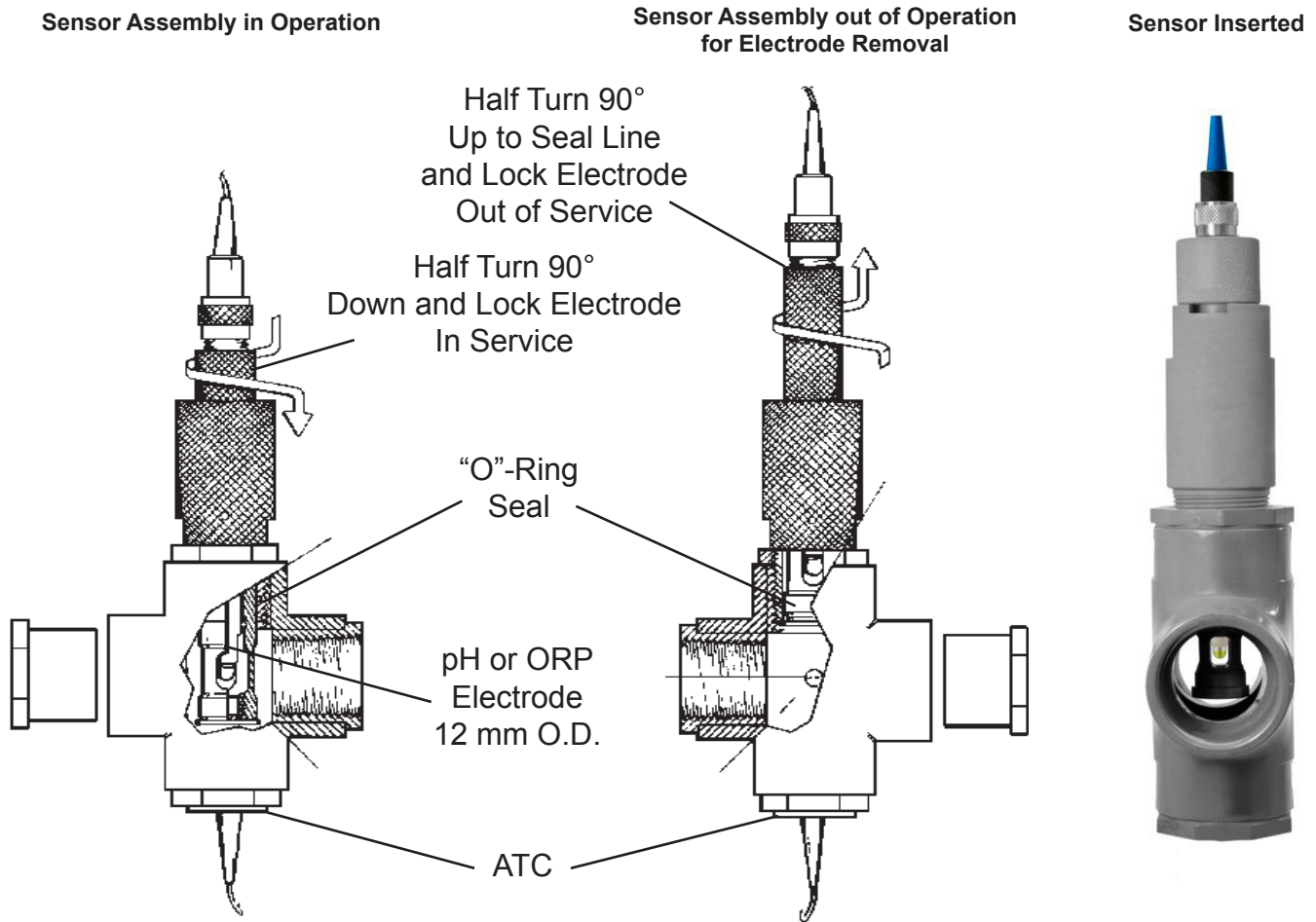
Fitting Electrode into Retractable Housing

The sensor is inserted and sealed into the inner, movable part of the housing with an internal o-ring. Screw the electrode clockwise to lock in place. Carefully tighten the electrode finger tight. Only screw the electrode by hand and never catch the electrode with a pipe wrench or similar.

CAUTION: IF THE ELECTRODE IS NOT SECURELY AND CORRECTLY INSTALLED BEFORE RETRACTION INTO A PRESSURIZED SERVICE, PERSONAL INJURY OR DAMAGE OF THE ASSEMBLY MAY RESULT.

The Retraction System

The retractable member is bought into the desired position by hand after actuation of the locking pin.



Insertion of Retractable Member

Push the retractable member inward by hand. The force required for insertion increases with increasing pipeline pressure. The housing will engage in the bottom lock. The movable portion locks into position with a 1/8th – turn bayonet twist-lock action clockwise.

Withdrawal of Retractable Member

Unlock the movable portion into position with a 1/8th –turn bayonet twist-lock action counter-clockwise. Pull the retractable member outward by hand. **WHEN USED IN A HIGH PRESSURE PROCESS, USE CARE TO BRACE YOURSELF WHEN RETRACTING THE MOVABLE PART SINCE IT WILL EXERT CONSIDERABLE FORCE.** The housing will engage in the top lock position. When the movable portion is withdrawn, the solid end of the movable part of the housing seals off the process completely. Now lock the assembly open by rotating the movable portion clockwise until it stops.

Ordering Specifications

Retractable Lock-N-Load Assembly with 1½" MNPT fitting.

Part Number	Material	Thread Size	Pressure Range	Temperature Range
1921020	CPVC	1½" MNPT	100 PSI	-5° to 80°C
1961020	Kynar®	1½" MNPT	100 PSI	-5° to 100°C
1951020	316 SS	1.0" MNPT	150 PSI	-5° to 120°C