



Van London Co.

"When Accuracy Matters"

Industrial Sensors & Instrumentation

- **pH/ORP**
- **Chlorine**
- **Oxygen**
- **Conductivity**
- **Ion Selective**
- **Meters & Analyzers**
- **Custom**



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S8 Style Electrodes	5	Instrumentation offerings include, pH Meters and Transmitters. Dissolved Oxygen Meters, Conductivity Meters, Portable Meters, In-Line Retractable, In-Line Fittings, the digital MemoSens Electrode, "UniCal®" system which is a perfect compliment to the VLC electrodes focusing on industrial markets offering Explosion Proof equipment satisfying up to Class 1 / Div 1 requirements.
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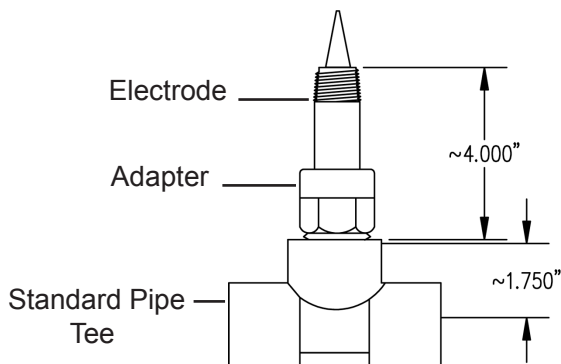


Twist-Lock Sensors

pH, ORP, ISE, ISFET, and Conductivity



V-1700 Series V-1000 Series V-1100 Series V-1400 Series Conductivity



Optional Guarded Twist-Lock Adapter

- **Low Cost Replacements**

Long-lasting, reliable, and low in cost for pH and ORP sensors. Twist-Lock housing design allows for an all-in-one electrode or sensor replacement to reduce inventory requirements.

- **Safe Operation**

A stop pin is installed in the adapters for positive electrode/sensor positioning; locking pins on the housing are visible through an opening 90° from the removal slots to assure correct installation.

- **Housing Features**

¼ turn is all that is required for installation. The housing is ribbed for easy handling.

- **O-ring Arrangement**

Dual external o-rings and an internal o-ring seal the electrode from any process leakage.

- **Quality "Built In"**

All parts meet strict, documented quality specifications, followed through each step of the manufacturing process.

- **Solid Polymer Reference™**

Cross Linked Polymer for extended life in hot, harsh applications.

- **GXV**

Low impedance, ruggedized membrane, fast response, and 0-14pH range.

- **Multiple Sensor Options available**

Threaded Sensors

pH, ORP, ISE, Conductivity, and Oxygen



3/4" MPT
Stainless Steel



1/2" MPT
Kynar



Epoxy/Graphite
Conductivity



3/4" MPT
Ryton



3/4" MPT
Kynar



3/4" MPT Kynar
Detachable Preamp



1" MPT Kynar



1" MPT Kynar



3/4" MPT
Conductivity



PES/Graphite
Conductivity

These are a few of our threaded sensor designs for pH, ORP, ISE, Conductivity and Oxygen measurements. Standard materials of construction include CPVC, Kynar®, Ryton®, Epoxy and Viton®. Optional materials of construction include polypropylene, PEEK®, Stainless Steel, PES, Kalrez® and EPDM. Other options include a large selection of Temperature Compensators, Tuff-Tip®, Large Ceramic Junction (MagnaSens), Solution Ground, Quick Disconnect Cable and a large selection of connectors. Standard process connections are 1/2", 3/4" and 1" MPT but BSP threads are available on request.

Hot Tap / Retractable Assemblies

pH, ORP, ISE and Conductivity



MK7Z



MK7K



MKX



LiveTap



LOCK-N-LOAD

The Hot Tap assemblies are designed so that the sensor can be removed from a tank or live line without process flow interruption. Available measurements in this configuration are pH, ORP, ISE and Conductivity. The sensors are available with many options including Temperature Compensator selection, Solution ground and MagnaSens reference junction. The Lock-N-Load is an economical design that isolates the sensor from the process without a ball valve.

Standard materials of construction are Stainless Steel, Kynar®, and Viton® but upon request, Hastalloy C and Kalrez® are available. The MKX is pneumatic and is supplied with flushing ports for cleaning or calibrating. Process connections are 1", 1¼" and 1½" MPT. Custom designs are available for longer insertion depths. Custom options include special wetted parts, special valves and flanges. Some assemblies are rated up to 150 PSI.

Direct Replacements

pH, ORP, ISE Conductivity, and Oxygen



This series of Van London Co. (VLC) sensors is designed to replace other major manufacturer sensor assemblies.

They are manufactured with Solid Polymer Reference ("SPR"), a unique cross-linked polymer formulation for:

- **Extended Life**
- **Designed for Harsh Environments**

Our new glass formula ("GXV") yields

- **Fast Response**
- **0-14 pH**
- **Ruggedized Measuring Membrane**

Direct replacements are dimensionally matched to existing equipment so that expensive retrofit changes are not necessary. For standardization, simply remove the original element and replace with a Van London Co. equivalent.

Some more popular Direct Replacements Include:

- | | | |
|---------------------------|-----------------------------------|-------------------------|
| • ABB/TBI | • Great Lakes Ins. (GLI) | • Hach |
| • BAT (Barben) | • Sensorex | • Knick |
| • E & H | • Rosemount | • SI Analytics |
| • Ingold / Mettler | • Foxboro | • Broadley James |
| • Yokogawa | • Custom Designs | |

S8 Style Electrode Series

pH, ORP, Conductivity, ISE, ISFET and Oxygen

MEMO SENS



Digital Sensors

S8 Conductivity S8 Connector Variopol Connector F Connector

ISFET/with S8 Connector

The S8 electrode series is for pH, ORP, ISFET, Conductivity and Dissolved Oxygen measurement in the Hot Taps and Submersible fittings on the following pages. These sensors are for use in all industrial and sterilizable applications. There are a wide range of cable connectors including Variopol, S8, F, the digital Memosens and ISFET. Standard electrode lengths are 120mm and 225mm, but other lengths are available including custom designs. Other options include specialty Electrolyte solutions, gelled and polymerized electrolyte, annular ceramic junctions, ceramic wick junctions, open aperture junctions, numerous temperature compensators and solution grounds.

In-Line Fittings & Assemblies for S8 Style Electrodes

pH, ORP, ISFET, Conductivity, ISE and Oxygen

A wide range of fittings are available for mounting the in-line S8 style of electrodes including MPT and BSP threaded housings, Ingold Socket, Flow Thru, Flanged, Socket Weld, Dairy Pipe and Tri-Clover®. Standard wetted materials are Kynar™, Stainless Steel and Viton™ but also available are CPVC, PEEK®, Hastalloy C, Kalrez®, EPDM® and Silicone. Suitable for aggressive chemical processes as well as processes with hygienic requirements. pH sensors with polymeric electrolyte or with refillable, pressurizable electrolyte can be used. pH, ORP, ISE, ISFET, conductivity, or Oxygen measurement in chemical processes, in the pharmaceutical or food industry and in biotechnology. A wide range of options are available for custom assemblies, please contact factory at: info@VanLondon.com



1" MPT Long
 Insertion
 Removable
 Guard

3/4 MPT
 Kynar

1" MPT
 Kynar

Submersible
 Kynar

Hot Taps for S8 Style Electrodes



WA130



WA131



WA131M



WA150

pHastTrac® 2000



These Hot Tap assemblies are only for use with S8 style electrodes and are designed so that the sensor can be removed without process flow interruption. Standard materials of construction include Stainless Steel, PEEK®, Kynar®, Viton®, EPDM and Kalrez®.

Assemblies can be either pneumatic or manual retraction. Most assemblies are supplied with flushing ports for cleaning and/or calibration. Process connections are Ingold 25mm port, 1½" MPT, Flanged, Dairy Pipe and Sanitary.

Meters/Sampling System

pH, ORP, Conductivity and Oxygen

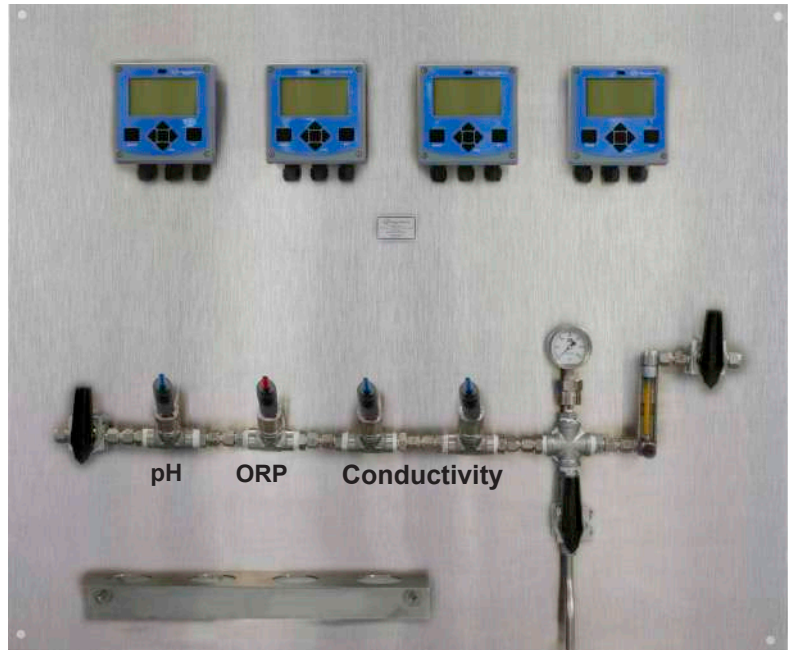


Rosemount



ABB

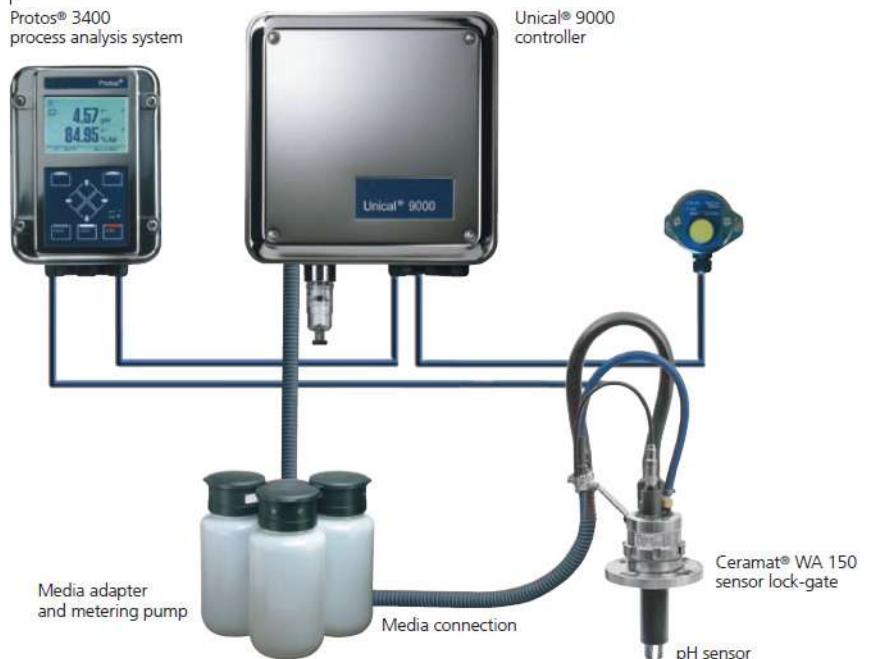
pH/ORP/Conductivity/Sampling System



UniCal® 9000

The UniCal® 9000 is an electro-pneumatic controller for fully automated pH measurement, cleaning and calibrating. The system is designed to clean and calibrate the sensor without interruption to the process flow or to communication to the control room. The Enclosure is rated IP65 (Nema 4X) and Class1 Division1 for explosive areas.

Overview - The Complete System



KROHNE SMARTPAT

pH, ORP, Conductivity and Oxygen



SMARTPAT

SMARTPAT sensors are the first and only sensor line in the market with integrated compact electronic.

The complete circuitry is miniaturized and fits into the sensor head.

- Significant cost savings
- Direct communication via 4...20 mA/HART® 7
- Offline and online configuration & calibration
- No restrictions for zone 0

Industries

- Water
- Power plant
- Municipal wastewater
- Industrial wastewater

Applications

- Drinking Water / Beverages
- Monitoring of surface and wastewater in the outlet
- Process water monitoring
- Cooling water control
- Boiler feed water control



Optical Dissolved Oxygen



This unique submersible probe has been designed to measure dissolved oxygen using fluorescent technology.

The measuring system includes:

- Digital input for calibration and configuration; and
- Nozzle for the autoclean by external air

The probe can be connected to any controller which provides power to the probe.

The most common applications of this probe include: water quality monitoring, municipal and water treatment and aquaculture.

Specifications

Measuring Method: Optical

Scale: 0-20 ppm

Power Supply: 9/36 VDC

Isolated Output: 4/20 mA current loop

Max. Pressure: 10 Bar at 25°C

Length: 165 mm total

Communication: RS485/Modbus

Diameter: 60mm

Body: PVC

Installation: Submersible

Protection: IP68



High turbidity and suspended solids probe. 4/20 mA and RS 485 output

This unique submersible probe has been designed to measure the high turbidity and suspended solids based on back scattering technology.

The measuring system consists of:

- Infrared light source
- Detector of scattered light by suspended particles
- Detector of the clean lens status
- 2-wire 4/20 mA analog output
- RS 485 digital output; nozzle for the autoclean by external pressured air

Toroidal Conductivity

Specifications

Range: 0/10 mS (0/100-0/1000 mS on request)

Power Supply: 24 VDC

Installation: In-line or Submersible

Length: 191mm (Over All) 86mm (Insertion)

Thread: 1 1/2" MNPT

Body: CPVC or Kynar

Max. Temperature: 104°F (40°C)

Max. Pressure: 3 Bar at 25°C

This Conductivity monitoring system consists of a loop powered transmitter and an electrodeless conductivity sensor in a single package. Temperature compensation is accomplished with a Temperature Compensator built-in to sensor. Application includes water treatment, cooling tower and water monitoring.



**Free Chlorine, Chlorine Dioxide
and Dissolved Ozone**



- Applications:
 - Drinking water
 - Bottling industry
- Ranges: 0/2 PPM and 0/20 PPM autoranging
- Isolated output:
 - 0/20 mA or 4/20 mA selectable
- Autoclean relay
 - Auto + manual/manual action
 - Holding function for input and outputs



**High Purity / Low Ionic Strength
Applications**



This is a simple and economical High Purity measuring system commonly used in power plants, Reverse Osmosis Systems, Semiconductor manufacturing and Pharmaceutical Industries in a continuous stream. The sensor incorporates a low impedance glass measuring membrane, super saturated reference solution, Temperature Compensator and Platinum band solution ground.

Sensors for use in HF Solutions

Due to the chemical attack that Hydrofluoric Acid has on glass, it is recommended to use a thick glass membrane or to design a sensor without glass. The Antimony sensor is good for HF, but does require a special meter and has limited accuracy and a small pH range for operation. The polymer membrane pH sensor has an output that is similar to that of a glass pH electrode. Therefore no special equipment is necessary.



Polymer Membrane pH



Antimony pH

Sensor Options

VLC was founded based on the ability to manufacture custom electrodes. Below are some of our newer sensor options.



Tuff-Tip

The Tuff-Tip is a unique design that provides a low profile guard for the pH glass without protruding prongs that accumulate process material or debris. The Tuff-Tip also incorporates a Large Ceramic Junction (MagnaSens) that reduces the chance of process material fouling the porous junction. In the correct installation, the Tuff-Tip also aids in keeping the pH membrane and reference junction clear from coating.

TempH

Our *NEW* TempH sensor is specially designed for temperature extremes from -20 to 135 degrees Celsius. Most sensors exposed to these extremes will shatter but the TempH sensor is capable of both extreme high and extreme low temperatures without cracking the glass or boiling the internal fill solution. This is perfect solution to prevent temperature related probe failure during usage, shipment, autoclave or storage. Our unique designs and formulations allow for a significantly increased temperature operating range and R&D in underway to push these ranges even further. The TempH™ electrode series can be manufactured in a wide variety of styles suitable for laboratory, industrial or biotech applications.

TS Series

TS-Gel is our newest cross linked polymerized electrolyte for improving stability and reliability of the reference. The TS-Gel allows for long probe life and lower maintenance, thus reducing overall cost. The TS-Gel also allows VLC to incorporate new designs for existing products, such as the Open Aperture Junction.

GX5 - For Hot Caustic

Introducing our new pH glass formula with unparalleled performance. This new pH glass formula, "GX5", can replace all other formulas, streamlining inventories and eliminating wasted time trying to select the best electrode for the job. The GX5 formulation is perfect in low ionic strength solutions as well as high pH applications and is specially formulated to have lightning fast response time with superior accuracy and repeatability. The sample pH is registered in less than 10 seconds, the result is correct to within 0.02 pH units, and the pH value is reproducible over the entire pH range from 0 to 14 pH.

Custom Designs, R&D and Private Label

- Custom designs are available for customers with special needs.
- In house R&D services are available for new measurements and specialty projects.
- We currently have customers world wide who use our private label and custom packaging option.

Meters and Simulators

- We have a full range of meters available for all needs including pocket meters, portable meters and bench top meters. (Certain meters have classified ratings)
- Our pH/mV simulator is compact and convenient for use when testing equipment.



- Available for use in hazardous areas (Class 1 Div 1)
- Water-proof enclosure IP66
- Calimatic® automatically recognizes the buffer; automatic one-key calibration
- 8 buffer sets to choose from
- Simultaneous pH/mV and temperature display
- Automatic unit test during power-on
- 2000 operating hours with just 3 AA batteries
- Automatic switch-off
- EMC design
- Available with data logger in the 913x Series

Accessories

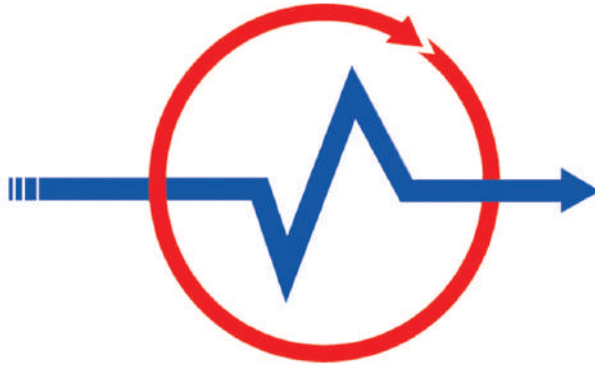
Accessories are available to complete the product offering and make us your one stop shop for your electro-chemical sensor needs.

- NIST-Traceable Buffers
- Solutions
- Wire adapters
- External temperature compensators



Various connectors available for wiring adapters





Industrial Sensors and Instrumentation

For additional information,
contact us at:

Van London Co.
10540 Rockley Road
Houston, TX 77099
Local: (832) 456-6641
Toll Free: (800) 522-7920
Web: www.VanLondon.com
e-mail: info@VanLondon.com
Multi-language support available



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