



Hall Effect TwinSite® for Refrigerant Liquid Level Gauges

Application

The TwinSite® is a magnetically-driven, Hall Effect, voltage output sender with potted lead wires. Senders are utilized on stationary and mobile applications where direct reading plus an electrical signal to a remote level monitor is required. Fits models M6283, HM8443, and HM8483.

General Information & Features

A magnetic drive allows a signal from the float mechanism inside the tank to be transmitted through a solid, non-magnetic bulkhead without the necessity of dynamic seals or pressure-type conductors.

Previous designs of liquid level gauges for magnetically driven dials which produce an electrical output signal had the disadvantages inherent in using variable resistors with a wiper arm contact. There has been a need for a more reliable and simplified design for liquid level gauges which would provide an electrical output related to the liquid level in the tank.

Hall effect is a solid state technology with no moving contacts. It counts on the fact that a magnet bends the path of electrons moving through a semiconductor. The bending of the electrons can be detected and converted into ratiometric voltage output.

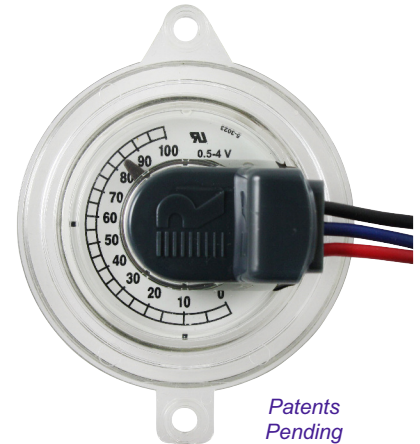
Hall effect sensors have been employed in various automotive applications such as for detecting throttle, fly wheel, and wheel positions. The magnetic connection of the Hall effect sensor is more reliable than systems that depend on the sliding contact of variable resistor devices. There is no sliding wiper contact, and is compatible with existing gauges equipped with weak drive magnets within the tank. The Hall Effect Twinsite® is advantageous in that it can be used as a retrofit on these tanks to provide an electrical output which can be utilized for remote monitoring of tank levels. With remote monitoring of tank levels, customers will be able to more efficiently monitor their liquid level usage.

The TwinSite® also provides the easiest to read local indication of any TwinSite® sender Rochester has produced. The bright, user friendly dial face is divided into percentage units.

The case is hermetically sealed by ultrasonic welding to melt and fuse the case into one solid piece. This keeps weather out, ensuring “no-fog” readability while greatly extending mechanical life. This ultra-sonic weld process is highly reliable. The plastic case is capable of withstanding vibration and shock that would render comparable metal designs useless.

The plastic case is far more resistant to corrosion than any metal-cased version and is capable of withstanding broad variations in temperature. The plastic lens (and the rest of the case) is a special, chemical resistant material.

Electrical connections are sealed with redundant epoxy chambers. The connecting wires are also sealed behind this epoxy barrier. This sealing process presents an impervious barrier to water.



Patents
Pending

WARNING: Level Gauging devices and sensors sold by Rochester Gauges, LLC are components only.

The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. Rochester Gauges, LLC cannot certify that our products used solely or in conjunction with other Rochester Gauges, LLC or other vendors' products will assure desired performance and safety for any application.

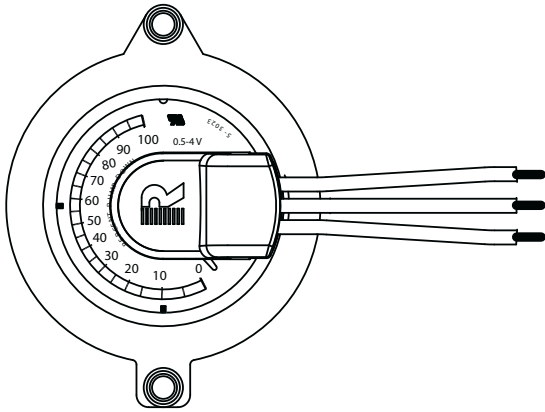
Any person using or applying any products sold by Rochester Gauges, LLC is responsible for learning the perform-

ance and safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility for the suitability of the product for their respective application.

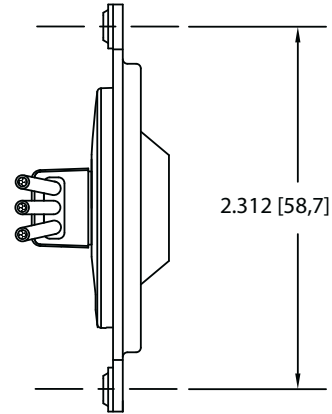
Rochester Gauges, LLC does not provide system design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with all performance and safety requirements for any application.

See reverse side for dimensional data, materials of construction, performance, and advice on how to order.

The Measure of Excellence



Sr. screw-on mount



General Specifications*

Operating Temperature

-40° to 80°C (-40°F to 176°F).

Conformity

±4%. (Float gauge errors not included.)

Hysteresis

Less than 1% typical.

Repeatability

±1%.

Operational Range

8-32 vdc.

Operational Current

8 mA

Output Voltage

0=0.5 V

100=4 V

Output Current

±1 mA

Resolution

Infinite.

Materials of Construction*

Crystal & Case

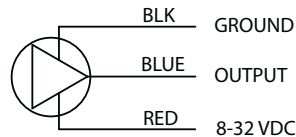
Proprietary copolymer, ultrasonically sealed.

Dial

Painted aluminum.

How To Order

P/N	Style	Circuit
P5AAKS03023	Sr.	Internal Voltage Regulator



When ordering, specify:

1. Part number.

WARNING! This sensor is not to be used as the primary means of determining high or low fuel condition. It must not be used in the absence of redundant systems in critical applications where there may be significant safety risk or financial exposure in the event of fuel overfill or fuel exhaustion condition. This sensor is not to be used for tank filling.

* Materials and specifications are subject to change without notice.
Ratings subject to change due to temperature and other environmental considerations.

U.S. Patent
6,584,838

WARNING:
Acrylonitrile, BPA
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

10/30/2019