

ROCHESTER GAUGES INTERNATIONAL S.A.

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<http://www.rochester-gauges.be>

# HALL EFFECT (5Vdc) TRANSMITTER

## 6320S\*107\*\* or 6320S\*207\*\*

### GENERAL DESCRIPTION :

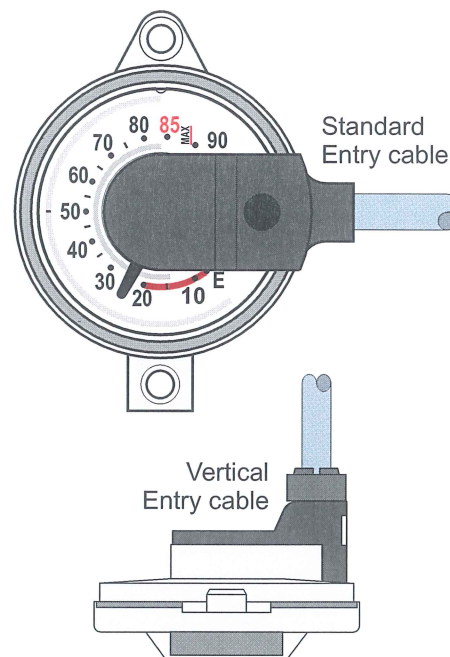
The Hall Effect Twinsite™ transmitter is a magnetically-driven Hall Effect, voltage output sender with potted wires and cable. Senders are utilized where direct reading plus an electrical signal to a remote level indication are required. Hall Effect is a solid state technology with no contacts. It counts on the fact that a magnet bends the path of electrons moving through a semiconductor. This bending is detected and converted into ratiometric voltage output.

Many existing domestic storage tanks are equipped with gauge heaving a weak drive magnet suited for low friction direct-indicating dial assemblies. As the Hall Effect Twinsite™ is a contactless sensor it can be utilized for a retrofit on those gauges to provide an electrical output which can be used for remote indication of tank levels.

The Hall Effect Twinsite™ provide the easiest to read local indication by using a dial face divided into percentage units.

This Hall Effect Twinsite require a 5Vdc Power Supply.

The housing, in UV stabilized plastic material, is hermetically sealed by ultrasonic welding and the electrical connections are sealed with potting material.



### GENERAL SPECIFICATIONS :

**Accuracy:**  $\pm 4\%$  for all types

**Hysteresys :** less than 1% typical

**Repeatability :**  $\pm 2\%$

**Resolution :** Infinite

**Operating Temperature :** -20 to 65°C

**Operating Voltage range :** 5Vdc  $\pm 0.5$  With a decrease in accuracy of 1 to 2%, power range can be extended to: 3.5 to 6Vdc

**Consumption :** typical 5 mA under 5Vdc

**Output Voltage :** Ratiometric (Ratiometric means that the output signal voltage is proportional with the input voltage (Vin) Under 5Vdc, 10% is 0.5V (or 10% of input voltage) 90% is 4.5V (or 90% of input voltage)).

**Output Current :** Max 1mA

### MATERIAL OF CONSTRUCTION :

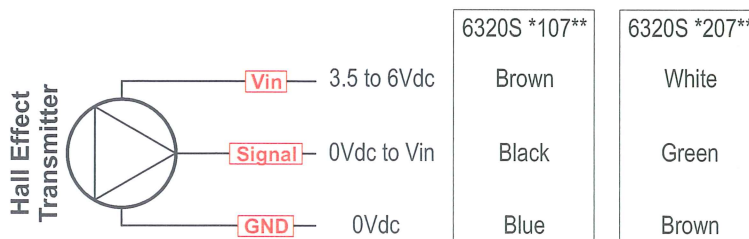
**Crystal and case :** polycarbonate, ultrasonic sealed

**Dial :** painted aluminium

### WARNING :

If this equipment is used in a flammable area, it has to be powered by an intrinsically safe power supply.

### WIRING :



The shield has to be wired to the receiver electrical ground.

### APPROVAL :

Ex II 2 G EEx ib IIB T4 EPL Gb APRAGAZ 10ATEX 0124X  
CE 0029

If used in flammable area and powered by an Intrinsically Safe power supply with if  $U_i = 14Vdc$ ,  $I_i = 200mA$ ,  $L_i = 4.8\mu H$ ,  $C_i = 123nF$ .



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## MODEL NUMBER :

The Hall Effect Twinsite™ Transmitters are available in two sizes to fit all Junior and Senior Rochester Gauges.

### **Transmitter with not shielded cable**

Supplied in standard with 2 meters grey cable LiYY-OB 3x0.5mm<sup>2</sup> with blue, brown and black conductors.

This transmitter is used with battery operated receiver with intermittent power supply to the transmitter.

Impedance : 4.8μH  
Capacitance : 123nF  
Color of cable cover : Black  
Cable Length : 50m maximum

The part number is :

6320S\*107\*\*

- E Standard entry cable
- V Vertical entry cable (only with LiYY-OB 3x0.25mm<sup>2</sup>)
- H Standard entry cable with a specific dial plate
- Length of cable supply (1 or 2 digits)  
0.5m to 20m by step of 0.5m
- Dial type
  - 8 Junior with hall effect Twinsite part number 5883S02714 or 5883S02877
  - 9 Senior with hall effect Twinsite part number 5952S02714 or 5952S02877

### **Transmitter with shielded cable**

Supplied in standard with 2 meters shielded grey cable LiYCY-OB 3x0.75mm<sup>2</sup> with white, green and black conductors.

For use with ROCHESTER receiver CSU-M (4370S\*\*\*\*\*) or permanent power supply and Intrinsically Safe Barrier (if necessary) wired with no more than 300m 3x0.75mm<sup>2</sup> cable.

Impedance : 4.8μH  
Capacitance : 123nF  
Color of cable cover : Green  
Cable Length : 300m maximum

The part number is :

6320S\*207\*\*

- E Standard entry cable
- H Standard entry cable with a specific dial plate
- Length of cable supply (1 or 2 digits)  
0.5m to 20m by step of 0.5m
- Dial type
  - 8 Junior with hall effect Twinsite part number 5883S02714 or 5883S02877
  - 9 Senior with hall effect Twinsite part number 5952S02714 or 5952S02877

## DS-1318 :

Best accuracy will be obtained using the calibration data in the table below, when powered in 5Vdc.

Graduation	Nominal Ref. (Volts)
E-Stop	0.29
E	0.49
10	0.64
20	1.15
30	1.53
40	1.98
50	2.5
60	3.02
70	3.5
80	3.9

Customer has to check the suitability of the sensor with his application.