

ROCHESTER GAUGES INTERNATIONAL S.A.

Z.I. WAVRE NORD - Av. Lavoisier, 6 - 1300 WAVRE (Belgium)

Tel. +32 (0)10 241010 - Fax +32 (0)10 228139

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

HALL EFFECT (5Vdc) TRANSMITTER

6320S*107** or 6320S*207**

GENERAL DESCRIPTION :

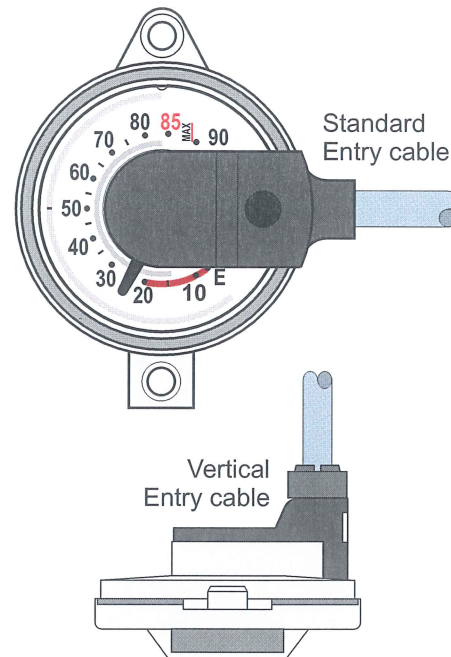
The Hall Effect Twinsite™ transmitter is a magnetically-driven Hall Effect, voltage output sender with potted wires and cable. Senders are utilized where direct reading plus an electrical signal to a remote level indication are required. Hall Effect is a solid state technology with no contacts. It counts 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: ± 4% for all types

Hysteresis: less than 1% typical

Repeatability: ±2%

Resolution: Infinite

Operating Temperature: -20 to 65°C

Operating Voltage range: 5Vdc ± 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 :

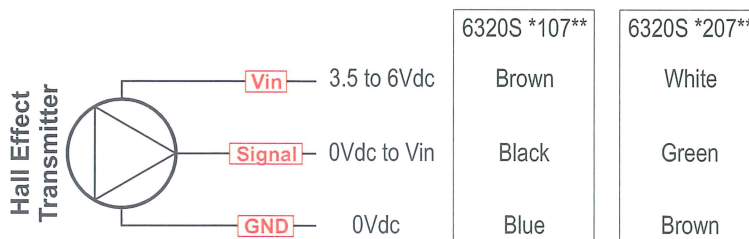
Crystal and case: polycarbonate, ultrasonic sealed

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 Ui = 14Vdc, Ii=200mA, Li=4.8µH, Ci=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 3x0.5mm² 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 3x0.25mm²)
- 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 3x0.75mm² 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 3x0.75mm² cable.

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

The part number is :

6320S*207**

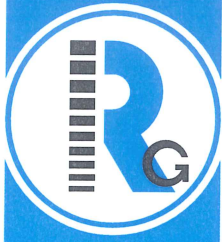
- E Standard entry cable
- H Standard entry cable with a specific dial plate
- Length of cable supply (1 or 2 digits)
0.5m to 20m by step of 0.5m
- Dial type
 - 8 Junior with hall effect Twinsite part number 5883S02714 or 5883S02877
 - 9 Senior with hall effect Twinsite part number 5952S02714 or 5952S02877

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.



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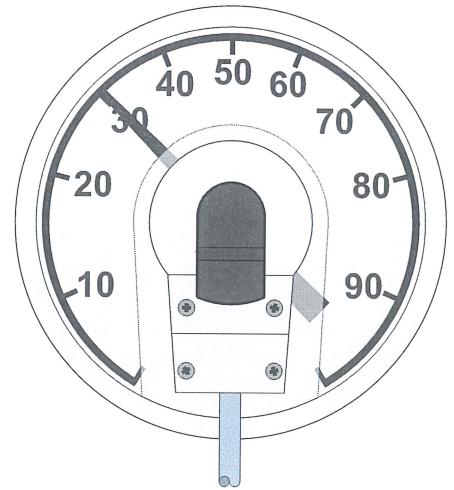
HALL EFFECT TRANSMITTER

6320S4107*E or 6320S4207*E (5Vdc) « 4" Senior gauges »

GENERAL DESCRIPTION :

This transmitter consists of a 4" dial for Senior Gauge (model 6290/6293) incorporating a Hall Effect Twinsite™ which provides an electrical output for remote indication.

The Hall Effect Twinsite™ requires a 5Vdc power supply.



GENERAL SPECIFICATIONS :

Accuracy: ± 4% for all types

Hysteresis: less than 3% typical

Repeatability: ±2%

Resolution: Infinite

Operating Temperature: -20 to 65°C

Operating Voltage range: 5Vdc ± 0.5 With a decrease in accuracy of 1 to 2%, power range can be extended at 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 of twinsite: polycarbonate, ultrasonic sealed

Crystal of dial: polycarbonate

Case of dial: aluminium anodised

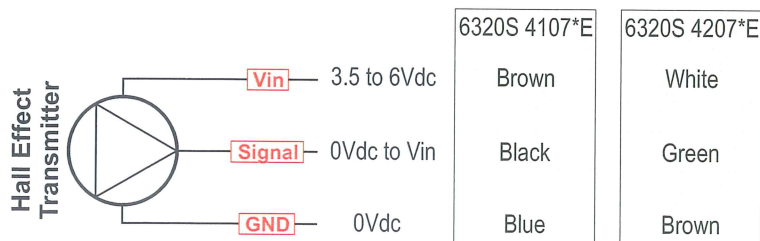
Bezel Ring: aluminium

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 Ui = 14Vdc, Ii=200mA, Li=4.8µH, Ci=123nF.



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MODEL NUMBER :

This 4" Transmitter is designed for mounting on Rochester Gauges model 6290/6293.

Transmitter with not shielded cable

Supplied in standard with 4 meters grey cable LiYY-OB 3x0.5mm² 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 :

6320S4107*E

- Length of cable (1 or 2 digits)
0.5m to 20m by step of 0.5m
- Dial Plate with graduation 5 to 95% with hall effect Twinsite part number 5AANS02086

Transmitter with shielded cable

Supplied in standard with 4 meters grey cable LiYCY-OB 3x0.75mm² with white, brown and green 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 3x0.75mm² cable.

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

The part number is :

6320S4207*E

- Length of cable (1 or 2 digits)
0.5m to 20m by step of 0.5m
- Dial type
4 Dial Plate with graduation 5 to 95% with hall effect Twinsite part number 5AANS02086

CALIBRATION CHART :

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

Graduation	Nominal Ref. (Volts)
5	0.18
10	0.54
20	1.03
30	1.39
40	1.88
50	2.44
60	3.03
70	3.57
80	3.97
90	4.42
95	4.82

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