

A Higher Level of Performance



Data Sheet

Centurion

Dual Pulse Guided Radar

Interface Measurement



For more information, please visit >
www.hawkmeasure.com

Overview

Centurion Dual Pulse Guided Radar



Principle of Operation

Microwave pulses are transmitted along a probe to the product being measured. At the point where the pulse meets the product surface it is reflected by the product. The unit automatically calculates the distance to the pulse reflection using time of flight & time expansion. The intensity of the reflection depends on the dielectric constant of the product. The instrument measures the time between emission and reception of the signal which is proportional to the distance.

The unique patented HAWK Dual probe solution uses specially developed signal mapping techniques. The combination of HAWK's hardware and software give an accurate and consistent output for interfaces level measurement.

Function

The HAWK range of Guided Radar products are ideal for the measurement of liquids, sludge, powders and granules to a range of 1.5m for level and interface. This technology is not affected by pressure, temperature, viscosity, vacuum, foam, dust, changes in dielectric constant or coating of the probe.

Primary Areas of Application

- Chemicals
- Petrochemicals
- Cement
- Building Aggregates
- Energy
- Food & Beverages
- Oil & Gas
- Pharmaceutical
- Pulp & Paper
- Wastewater

Features

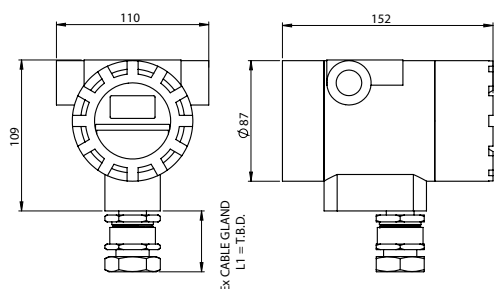
- Multiple Interface Measurement
- IECEx Ex d [ia] ia IIC T6 Gb Ga
- Up to 1.5m range
- Simple setup
- Auto-Calibration to any dielectric
- Adjustable Sensitivity
- Precise & continuous accuracy
- 2 wire loop
- 4-20mA, 4-20mA with HART
- Protection class IP66 (Nema 4X)
- Measures extremely low dielectric (1.6)
- Programmable fail safe mode

Dimensions / Part Numbering

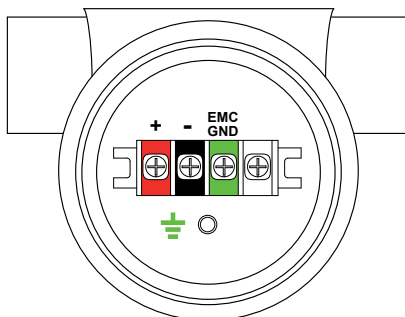
Centurion Dual Pulse Guided Radar



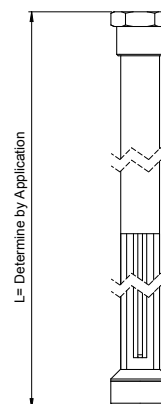
Housing



Wiring



Probe C35 (Interface)



Senator Guided Radar System

Model

CGR2 2 wire Guided Radar

Communication

X 4-20mA analog

H 4-20mA with HART

Housing

1 Aluminium

Gland Entry

1 1/2" NPT Cable gland entry

3 M20 x 1.5 Cable gland entry

Probe Type

C35 Senator Interface Probe C35

Probe variant / materials

S 316L / Teflon

Mounting

TN15 1.5" NPT Thread (316L) or standard flange mount²

TB15 1.5" BSP Thread (316L)

FLXX¹ Pre-Welded Flange (replace XX with 2 character Welded Flange Code)

Process O-ring seal

B NBR

Process Temperature for probe

1 80°C

Process Pressure

1 5 bar

2 10 bar

3 20 bar

4 40 bar

Approval Standard

XX Not Required

1D IECEx Ex d [ia] ia IIC T6 Gb Ga

Probe Length

Specify in cm to the nearest 5cm (max 150cm)

Flange Table (subject to change)

Accessory Code	Welded Code	Flange Type
FLA-FA2-SS	A2	2" ASME/ANSI 150lb Flange (316L)
FLA-FA3-SS	A3	3" ASME/ANSI 150lb Flange (316L)
FLA-FA4-SS	A4	4" ASME/ANSI 150lb Flange (316L)
FLA-FB2-SS	B2	2" ASME/ANSI 300lb Flange (316L)
FLA-FB3-SS	B3	3" ASME/ANSI 300lb Flange (316L)
FLA-FB4-SS	B4	4" ASME/ANSI 300lb Flange (316L)
FLA-FH2-SS	H2	DN50 pn16 Flange (316L)
FLA-FH3-SS	H2	DN80 pn16 Flange (316L)
FLA-FH4-SS	H2	DN100 pn16 Flange (316L)

CGR2 H 1 3 C35 S TN15 S 1 1 1D 110

¹See Weld Code selection table.

²Order flange as separate line item using Accessory Code. Standard flange has 1.5" NPT bore hole to match TN15 unit

Specifications

Centurion Dual Pulse Guided Radar



Operating Voltage

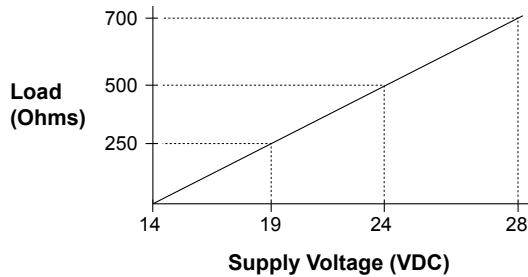
- 14 – 28VDC (residual ripple no greater than 100mV)
- HART 24V @ 250 Ohms

Power Consumption

- <0.6W @ 24VDC

Analog Output

- 14V @ 0 Ohm
- 19V @ 250 Ohms
- 24V @ 500 Ohms



Communications*

- 4-20mA, 4-20mA with HART, GosHawk

Minimum Range

- 0.250m

Maximum Range

- 1.5m

Dielectric Range

- ≥ 1.6

Resolution

- Distance: 0.65mm
- Analog: 0.5uA
- Display: 1.0mm

Accuracy¹

- +/- 3mm

Sum of non linearity, non repeatability, hysteresis

- Analog +/- 0.02%

Repeatability

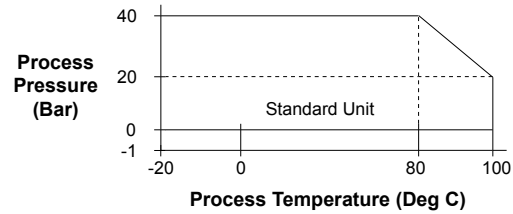
- +/- 2mm

Memory

- Non-Volatile (No backup battery required)
- >10 years data retention

Operating Temperature (Electronics)

- -20°C to +80°C (-28 to +176°F)



Process Pressure*

- -1 to 40 BAR

Process Temperature*

- -30°C to +150°C (-35°F to +302°F)

Display

- 4 line graphic display (128 x 64)

Approvals*

- IECEx Ex d [ia] ia IIC T6 Gb Ga

Probe Physical Load

- Max lateral force on C35 probe:
 - 4 kN

*Specifications model dependent. Consult part number listing.

¹Accuracy dielectric & material dependant

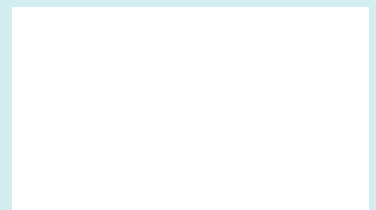
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Represented by:



For more information and global representatives: www.hawkmeasure.com

Additional product warranty and application guarantees upon request.
Technical data subject to change without notice.