

A Higher Level of Performance



Data Sheet

Centurion Guided Radar

HART



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

Overview / Dimensions

Centurion Guided Radar - HART



Principle of Operation

Guided-wave technology sends the radar pulse down a probe to measure either liquids, solids or a low dielectric to high dielectric Interface level.

The pulse hits the surface and / or Interface and is reflected back up the probe to the sensor, where the transit time is translated into a distance using time of flight and time expansion.

The amplitude of the reflection depends on the dielectric constant of the product.



Function

The HAWK range of Guided Radar products are ideal for level measurement of liquids, solids, bulk materials, sludge, powders, granules for Level and Interface to a distance of 38m (124ft).

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

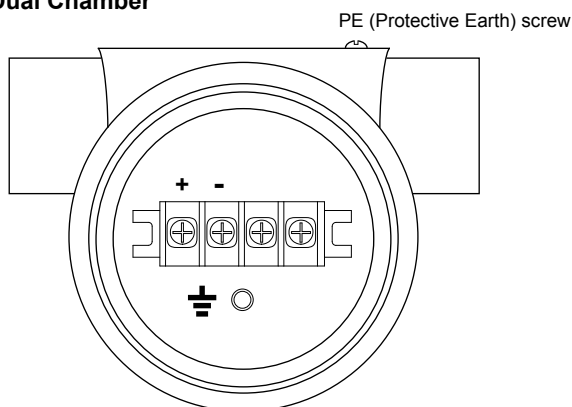
- | | |
|-----------------------|--------------------|
| • Chemicals | • Food & Beverages |
| • Petrochemicals | • Oil & Gas |
| • Cement | • Pharmaceutical |
| • Building Aggregates | • Pulp & Paper |
| • Mining / Minerals | • Wastewater |

Features

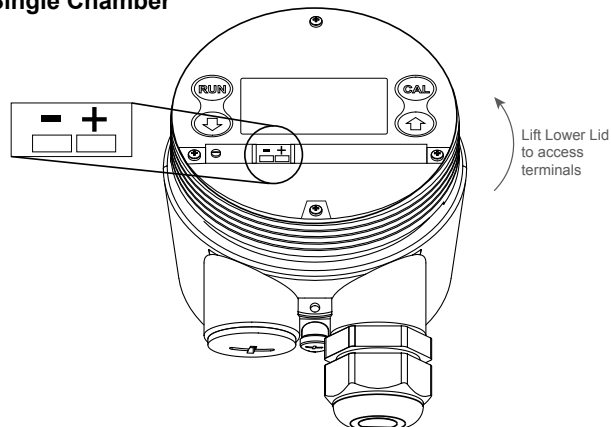
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|---|---|
| • Hazardous rated for Gas & Dust with IECEx, FM, CSA & ATEX | • Automatic Sensitivity Control |
| • Safety Rated to SIL2, SIL3 (multi channel) | • Precise & continuous measurement |
| • Interface Level measurement option | • 2 wire loop |
| • Up to 38m (124ft) range | • 4-20mA with HART 7 |
| • Very short minimum range ($\leq 150\text{mm}$, 6") | • Protection class IP66, NEMA 4x |
| • Simple setup | • Measures extremely low dielectric (1.5) |
| • Auto-calibration to any dielectric ≥ 1.5 | • Programmable fail safe mode |

Wiring Terminal Compartment

Dual Chamber



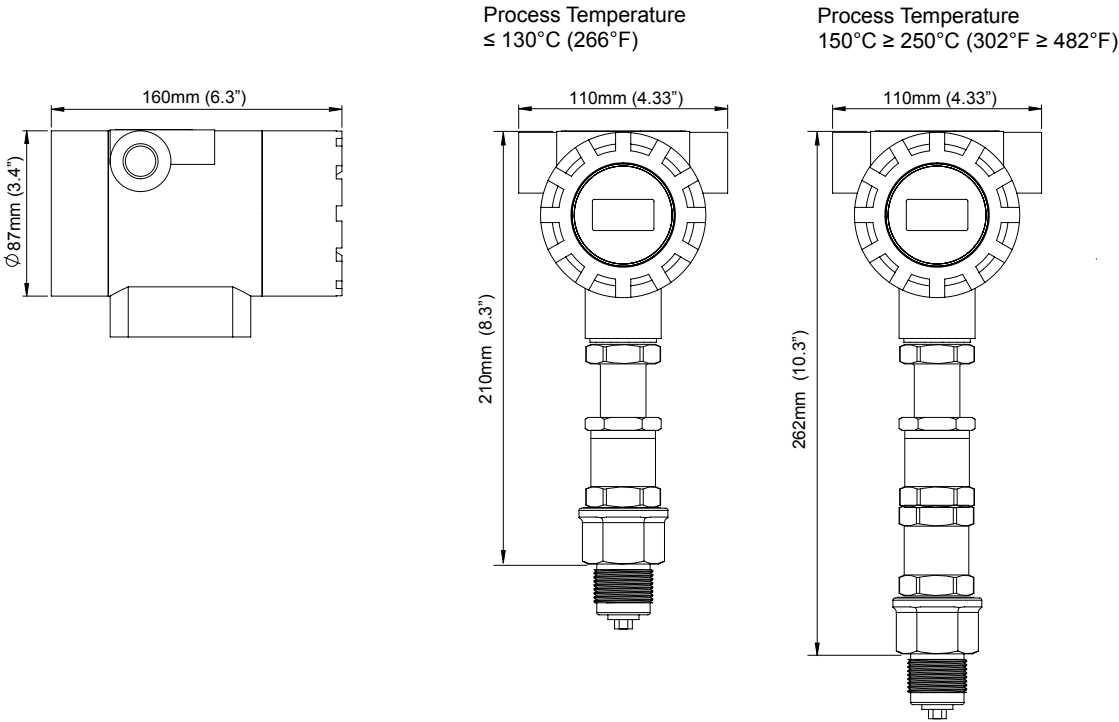
Single Chamber





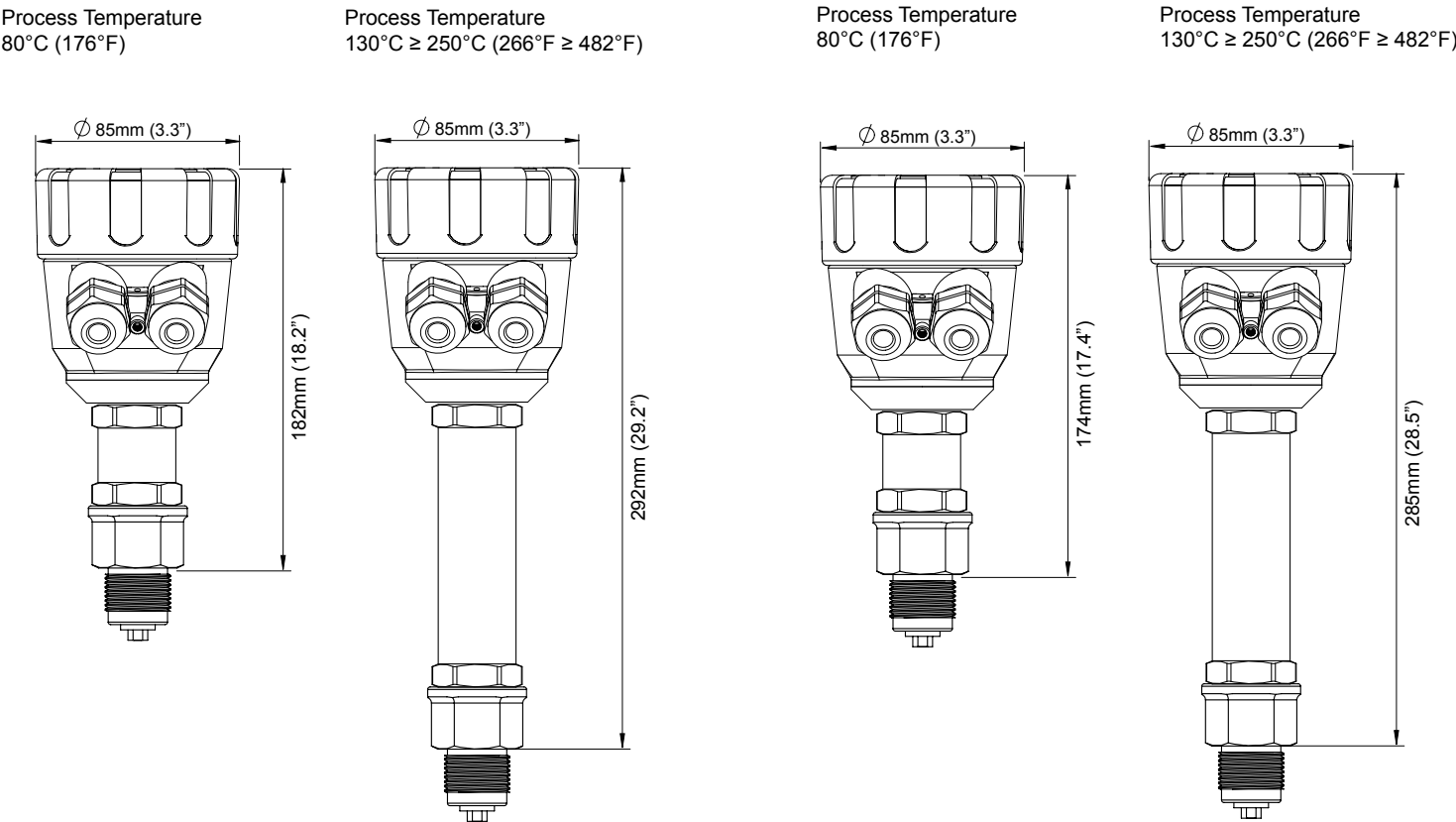
Dimensions - Housing

Dual Chamber



Single Chamber with Viewing Window

Single Chamber with no Viewing Window

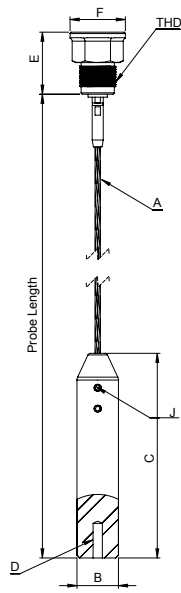




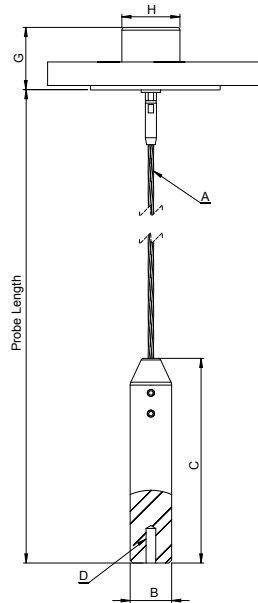
Dimensions - Probe Variants

A04 / A06 / A08 / J04 / J06 / J08

Threaded

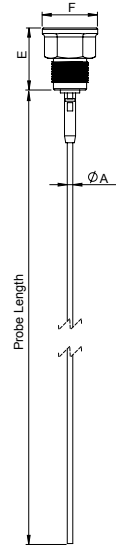


Integrated Flange

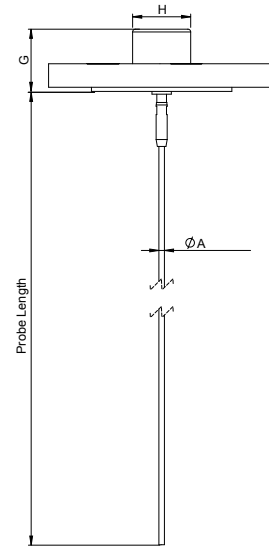


B04 / B06 / B08 / K04 / K06 / K08 / B11

Threaded



Integrated Flange



Probe / Cable Dimensions

Probe Type	THD BSP or NPT	A		B		C		E		F		D Internal Threads (A04, A06, A08 only)	J (Tightening Torque = 20Nm)	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.		Set Screw	Hex Key Size
A04, B04, J04, K04	3/4	4	0.16	22	0.9	120	4.7	45	1.8	40	1.6	M10x1.25, 24mm deep	3x M8x1.25x12	4mm
A06, B06, J04, K04	1	6	0.24	28	1.1	150	5.9	45	1.8	40	1.6	M10x1.25, 24mm deep	3x M8x1.25x12	4mm
B11	1	6	0.43	NA		NA		NA		40	1.6	NA	NA	NA
A08, B08, J04, K04	1-1/2	8	0.31	36	1.4	200	7.8	72	2.8	64	2.5	M10x1.25, 24mm deep	3x M10x1.5x18	5mm
	Integrated Flange	G		H										
		mm	in.	mm	in.									
A04, B04, J04, K04, A06, B06, J06, K06, B11		45	1.8	42	1.6									
A08, B08, J04, K04		72	2.8	70	2.7									



Centurion Guided Radar System

HART Type - 3/4" & 1" Threaded Units (mounting option TN07, TB07, TN10, TB10, Flanged)

Model

CGR2 2 wire Centurion Guided Radar

Communication

- H 4-20mA with HART 7
- I 4-20mA with HART 7 and Interface Level
- L 4-20mA with HART 7 and SIL2

Housing

- | | |
|---|--|
| 1 Dual Chamber Aluminium, epoxy painted with viewing window | A Single Chamber Aluminium, powder coated with viewing window ⁴ |
| 2 Dual Chamber 316L Stainless Steel, with viewing window | B Single Chamber Aluminium, powder coated, no viewing window ⁴ |

Conduit / Cable Entry

- 1 1/2" NPT
- 3 M20 x 1.5

Probe Type

- A04 4mm flexible cable
- A06 6mm flexible cable
- B04 4mm rigid probe
- B06 6mm rigid probe
- J04 Detached 4mm flexible cable
- J06 Detached 6mm flexible cable
- K04 Detached 4mm rigid probe
- K06 Detached 6mm rigid probe
- B11 11mm rigid probe. TB10/TN10 mounting only, Lengths greater than 3m will be segmented, if using centering disc allow for extra 50mm probe length

Probe Variant / Materials

- S 316L
- L Monel 400

Mounting

- TN07 3/4" NPT Thread
- TB07 3/4" BSP Thread
- TN10 1" NPT Thread
- TB10 1" BSP Thread
- FXXX¹ Integrated Flange (replace XXX with 3 character Integrated Flange Code)

Process O-ring Seal / Process Temperature

- | | | |
|------------------|-------------------|---|
| V1 FKM (Viton) | (-40°C to +80°C) | (-40°F to +176°F) |
| V4 FKM (Viton) | (-40°C to +150°C) | (-40°F to +302°F) |
| B1 NBR | (-40°C to +80°C) | (-40°F to +176°F) |
| E1 EPDM | (-40°C to +80°C) | (-40°F to +176°F) |
| E3 EPDM | (-40°C to +130°C) | (-40°F to +266°F) |
| M1 FFKM (Markez) | (-10°C to +80°C) | (+14°F to +176°F) |
| M4 FFKM (Markez) | (-10°C to +150°C) | (+14°F to +302°F) |
| M5 FFKM (Markez) | (-10°C to +200°C) | (+14°F to +392°F) |
| M6 FFKM (Markez) | (-5°C to +250°C) | (+23°F to +482°F) (Max Process Pressure 40 bar) |
| S1 Silicone | (-40°C to +80°C) | (-40°F to +176°F) |

Process Pressure

- 1 6 bar (87 psig)
- 3 20 bar (290 psig)
- 4 40 bar (580 psig)
- 5 100 bar (1450 psig)



Approval Standard

- XX Not Required
- 1D IECEx Ex ia/db [ia Ga] IIC T6...T2 Ga/Gb
- 2D IECEx Ex ia tb [ia Da] IIIC T85°C...T250°C Da Db
- 1U FM XP Cl I, Div 1, Gp B-D with IS Probe Cl I, Div I, Gp A-D, T6...T2B, Ta = T* to 60°C; Cl. I Zone 0/1 AEx ia/db [ia Ga] IIC T6...T2 Ga/Gb
- 2U FM DIP-IS, Cl II, III, Div 1, Grp E, F and G, T6...T2B, Ta = T* to +60°C; Zone 20/21 AEx ia IIIC T85°C...T250°C Da; AEx tb IIIC T85°C Db, Ta = T* to +60°C
- GP FM/CSA General Purpose
- 1C CSA XP Cl I, Div 1, Gp B-D with IS Probe Cl I, Div I, Gp A-D, T6...T2B³
- 2C CSA Ex ia/db IIC T6...T2 Ga/Gb³
- 3C CSA DIP-IS, Class II, III, Division 1, Groups E, F and G, T6...T2B³
- 4C CSA Ex ia IIIC T85°C...T250°C Da; Ex tb IIIC T85°C Db³
- 1A ATEX II 1/2 G Ex ia/db IIC T6...T2 Ga/Gb
- 2A ATEX II 1/2 D Ex ia IIIC T85°C...T250°C Da / Ex tb IIIC T85°C Db
- 3A ATEX II 3 G Ex ia/d IIC T6... T2 Gc Tamb -40°C to 60°C⁵
- 6A ATEX II 3 D Ex ia IIIC T85°C...T255°C Dc Tamb -40°C to 60°C, Ex tb IIIC T85°C Dc⁵
- 3A ATEX II 3 G Ex ic/dc IIC T6... T2 Gc Tamb -40°C to 60°C
- 6A ATEX II 3 D Ex tc IIIC T85°C ... T250°C Dc Tamb -40°C to 60°C

Probe Length

Specify in cm

CGR2 H 1 3 B04 S TN10 B1 1 XX 200

Probe / Mounting Combination Table

Probe Code	Variant / Materials	Mounting	Flange Sizes ²		Max. Length
			Min. Size	Max size	
A04 / J04	S, L	TN07, TB07, FXXX	1", DN25, 25mm	4", DN100, 100mm	3800cm
A06 / J06	S, L	TN10, TB10	2", DN50, 50mm	4", DN100, 100mm	3800cm
B04 / K04	S, L	TN07, TB07, FXXX	1", DN25, 25mm	4", DN100, 100mm	400cm
B06 / K06	S, L	TN10, TB10	2", DN50, 50mm	4", DN100, 100mm	400cm
B11	S, L	TN10, TB10	2", DN50, 50mm	4", DN100, 100mm	600cm

¹See Integrated selection in Flange Table.

²Hawk Supplied Flanges. End user can use any appropriate flange with suitable bore hole.

³NPT conduit / cable thread only

⁴Hazardous Approval 'XX, 6A' only

* Refer to Safety Instructions

⁵Housing Option A, B only



Centurion Guided Radar System

HART Type - 1.5" Threaded Units (mounting option TN15, TB15, Flanged)

Model

CGR2 Centurion Guided Radar 2 Wire

Communication

- H 4-20mA with HART
- I 4-20mA with HART and Interface Level
- L 4-20mA with HART and SIL2

Housing

- | | | | |
|---|---|---|--|
| 1 | Dual Chamber Aluminium, Epoxy Painted with viewing window | A | Single Chamber Aluminium, powder coated with viewing window ⁴ |
| 2 | Dual Chamber 316L Stainless Steel, with viewing window | B | Single Chamber Aluminium, powder coated, no viewing window ⁴ |

Conduit / Cable Entry

- | | | | |
|---|----------|---|-----------|
| 1 | 1/2" NPT | 3 | M20 x 1.5 |
|---|----------|---|-----------|

Probe Type

- | | | | |
|-----|--------------------|-----|-----------------------------|
| A08 | 8mm flexible cable | J08 | Detached 8mm flexible cable |
| B08 | 8mm rigid probe | K08 | Detached 8mm rigid probe |

Probe Variant / Materials

- S 316L
- L Monel 400

Mounting

- TN15 1.5" NPT
- TB15 1.5" BSP
- FXXX¹ Flanged (no threaded connection) (replace XXX with 3 character Integrated Flange Code)

Process O-ring Seal / Process Temperature

- | | | | |
|----|-------------|-------------------|---|
| V1 | FKM (Viton) | (-40°C to +80°C) | (-40°F to +176°F) |
| V3 | FKM (Viton) | (-40°C to +130°C) | (-40°F to +266°F) |
| B1 | NBR | (-40°C to +80°C) | (-40°F to +176°F) |
| E1 | EPDM | (-40°C to +80°C) | (-40°F to +176°F) |
| E3 | EPDM | (-40°C to +130°C) | (-40°F to +266°F) (Max. Process Pressure 6 bar / 87 psig) |
| S1 | Silicone | (-40°C to +80°C) | (-40°F to +176°F) |
| S3 | Silicone | (-40°C to +130°C) | (-40°F to +266°F) (Max. Process Pressure 6 bar / 87 psig) |

Process Pressure

- 1 6 bar (87 psig)
- 3 20 bar (290 psig)
- 4 40 bar (580 psig)

Approval Standard

- XX Not Required
- 1D IECEx Ex ia/db [ia Ga] IIC T6...T2 Ga/Gb
- 2D IECEx Ex ia tb [ia Da] IIIC T85°C...T250°C Da Db
- 1U FM XP CI I, Div 1, Gp B-D with IS Probe CI I, Div I, Gp A-D, T6...T2B, Ta = T* to +60°C; CI. I Zone 0/1 AEx ia/db [ia Ga] IIC T6...T2 Ga/Gb
- 2U FM (USA) DIP-IS, CI II, III, Div 1, Grp E, F and G, T6...T2B, Ta = T* to +60°C; Zone 20/21 AEx ia IIIC T85°C...T250°C Da; AEx tb IIIC T85°C Db, Ta = T* to +60°C
- GP FM/CSA General Purpose
- 1C CSA XP CI I, Div 1, Gp B-D with IS Probe CI I, Div I, Gp A-D, T6...T2B³
- 2C CSA Ex ia/db IIC T6...T2 Ga/Gb3
- 3C CSA DIP-IS, Class II, III, Division 1, Groups E, F and G, T6...T2B³
- 4C CSA Ex ia IIIC T85°C...T250°C Da; Ex tb IIIC T85°C Db³
- 1A ATEX II 1/2 G Ex ia/db IIC T6...T2 Ga/Gb
- 2A ATEX II 1/2 D Ex ia IIIC T85°C...T250°C Da / Ex tb IIIC T85°C Db
- 3A ATEX II 3 G Ex ia/d IIC T6... T2 Gc Tamb -40°C to 60°C5
- 6A ATEX II 3 D Ex ia IIIC T85°C...T255°C Dc Tamb -40°C to 60°C, Ex tb IIIC T85°C Dc5
- 3A ATEX II 3 G Ex ic/dc IIC T6... T2 Gc Tamb -40°C to 60°C
- 6A ATEX II 3 D Ex tc IIIC T85°C ... T250°C Dc Tamb -40°C to 60°C

Probe Length

Specify in cm

CGR2 H 1 3 B08 S TN15 B1 1 XX 200

Probe / Mounting Combination Table

Probe Code	Variant / Materials	Mounting	Flange Sizes ²		Max. Length
			Min. Size	Max size	
A08 / J08	S, L	TN15, TB15, FXXX	2", DN50, 50mm	4", DN100, 100mm	3800cm
B08 / K08	S, L	TN15, TB15, FXXX	2", DN50, 50mm	4", DN100, 100mm	400cm

¹See Integrated Flange selection in Flange Table.

²Hawk Supplied Flanges. End user can use any appropriate flange with suitable bore hole.

³NPT conduit / cable thread only

⁴Hazardous Approval 'XX, 6A' only

⁵Housing Option A, B only

* Refer to Safety Instructions



Mounting Flanges

Threaded Flanges

Model

FLA - Flange Size

- 1 1" or DN25 or 25mm
- H 1 1/2" or DN40 or 40mm
- 2 2" or DN50 or 50mm
- K 2 1/2" or DN65 or 65mm
- 3 3" or DN80 or 80mm
- L 3 1/2" (ANSI ONLY)
- 4 4" or DN100 or 100mm

Flange Type

- A1 ANSI B16.5 150LB FLANGE
- A3 ANSI B16.5 300LB FLANGE
- A6 ANSI B16.5 600LB FLANGE
- A9 ANSI B16.5 900LB FLANGE
- AA ANSI B16.5 1500LB FLANGE
- AB ANSI B16.5 2500LB FLANGE
- D6 DIN2527 PN6 FLANGE
- D0 DIN2527 PN10 FLANGE
- D1 DIN2527 PN16 FLANGE
- D2 DIN2527 PN25 FLANGE
- D4 DIN2527 PN40 FLANGE
- J5 JIS 5K FLANGE
- J0 JIS 10K FLANGE
- J1 JIS 16K FLANGE
- J2 JIS 20K FLANGE
- J4 JIS 40K FLANGE
- S1 AS 2129 Table D
- S2 AS 2129 Table E
- S3 AS 2129 Table F
- S4 AS 2129 Table H

Material

- SS SS316L

Thread Type

- TB07 3/4" BSP THDs
- TB10 1" BSP THDs
- TB15 1 1/2" BSP THDs
- TN07 3/4" NPT THDs
- TN10 1" NPT THDs
- TN15 1 1/2" NPT THDs

FLA - 2 A1 - SS - TB15

Integrated Flanges

Model

F Flange Size

- 1 1" or DN25 or 25mm
- H 1 1/2" or DN40 or 40mm
- 2 2" or DN50 or 50mm
- K 2 1/2" or DN65 or 65mm
- 3 3" or DN80 or 80mm
- L 3 1/2" (ANSI ONLY)
- 4 4" or DN100 or 100mm

Flange Type

- A1 ANSI B16.5 150LB FLANGE
- A3 ANSI B16.5 300LB FLANGE
- A6 ANSI B16.5 600LB FLANGE
- A9 ANSI B16.5 900LB FLANGE
- AA ANSI B16.5 1500LB FLANGE
- AB ANSI B16.5 2500LB FLANGE
- D6 DIN2527 PN6 FLANGE
- D0 DIN2527 PN10 FLANGE
- D1 DIN2527 PN16 FLANGE
- D2 DIN2527 PN25 FLANGE
- D4 DIN2527 PN40 FLANGE
- J5 JIS 5K FLANGE
- J0 JIS 10K FLANGE
- J1 JIS 16K FLANGE
- J2 JIS 20K FLANGE
- J4 JIS 40K FLANGE
- S1 AS 2129 Table D
- S2 AS 2129 Table E
- S3 AS 2129 Table F
- S4 AS 2129 Table H

F 2 D4

Tank Fastening Kits For Probes

Flexible Probes (316L)

CGR-A0X-WL-SS

Rigid Probes (316L)

CGR-B0X-PL-SS

Centering Discs

Centering disc will add 50mm (2") to the end of the probe

CGR-CDAAXX-11-PK

CGR-CDAAXX-11-PT

CGR-CDAAXX-11-S6

CGR-CDAAXX-11-MN

Centering Disc Kit For 11mm Probe (PEEK)

Centering Disc Kit For 11mm Probe (PTFE)

Centering Disc Kit For 11mm Probe (316L)

Centering Disc Kit For 11mm Probe (Monel 400)

Specifications

Centurion Guided Radar - HART

Specifications dependent on model selection.



Electronics

Power

- 2 wire loop powered
- 24VDC (14 to 28VDC)

Power Consumption

- <500mW @ 24VDC

Analog Output

- 14V @ 0 Ohm
- 19V @ 250 Ohms
- 24V @ 500 Ohms
- Current park at 4mA, 8mA, 12mA

Communications

- HART (Revision 7)
- GoshawkII via HART

Maximum Range

- Flexible cable probe: 38m (124ft)
- Rigid probe: 4m (13ft 1in)
- Segmented Rigid probe (B11 type): 6m (13ft 1in)

Minimum Range (Blanking)

- <=150mm (6.0")

Dielectric Range

- ≥ 1.5 (Interface mode requires low to high dielectric layers)

Frequency

- 2.2 GHz

Resolution

- Analog: 1uA
- Display: 1.0mm

Accuracy

- +/- 3mm

Measurements per second

- 3

Response Time

- <1 second (application dependant)

Sum of non linearity, non repeatability, hysteresis

- Analog +/- 0.02%

Repeatability

- +/- 3mm

Memory

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

Operating Temperature (Electronics)

- -40°C to +80°C (-40°F to +176°F)

Display

- 4 line graphic display (128 x 64 pixels)

Language

- English

Configuration

- 4 button (up down, Cal, Run), GoshawkII via HART. HART 7 DD/DTM

Approvals

- **Certificate No. IECEx TSA 14.0037X**
IECEx Zone 0/1, Zone 1
Ex ia/d [ia Ga] IIC T6...T2 Ga/Gb Tamb = -40°C to +60°C

IECEx Zone 20/21
Ex ia tb [ia Da] IIIC T85°C...T255°C Da Db Tamb = -40°C to +60°C
- **Certificate No. FM18US0194X**
FM Class I Div 1 & Class I, Zone 0/1
XP Cl. I Div 1 Gp B-D with IS Probe Cl I, Div I, Gp A-D, T6...T2B Ta = -**°C to +60°C
Cl I, Zone 0/1 AEx ia/db IIC T6...T2 Ga/Gb Ta = -**°C to +60°C

FM Class II,III Div 1 & Zone 20/21
DIP-IS Class II, III, Division 1, Groups E, F and G T6...T2B Ta = -**°C to +60°C
Zone 20/21 AEx ia IIIC T85°C...T255°C Da; AEx tb IIIC T85°C Db, Ta = -**°C to +60°C
- **Certificate No. FM18CA0091X**
CSA Class I Div 1
XP-AIS Cl. I Div 1 Grp B-D with IS Probe Cl I, Div I, GP A-D, T6...T2B Ta = -**°C to +60°C

CSA Class I, Zone 0/1
Ex ia/db IIC T6...T2 Ga/Gb Ta = -**°C to +60°C

CSA Class II,III Div 1
DIP-IS Cl. II,III Div 1 Groups E, F and G T6...T2B Ta = -**°C to +60°C

CSA Zone 20/21
Ex ia IIIC T85°C...T250°C Da; Ex tb T85°C, Db Ta = -**°C to +60°C
- **Certificate No. FM18ATEX0046X**
ATEX Ex II 1/2 G Ex ia/db IIC T6...T2 Ga/Gb Ta = -**°C to +60°C
ATEX Ex II 1/2 D Ex ia IIIC T85°C...T250°C Da; Ex tb IIIC T85°C Db Ta = -**°C to +60°C
- **Certificate No. FM18NUS0014**
FM General Purpose
FM Class 3810: 2018, ANSI/ISA 61010-1: 2012, ANSI/NEMA 250:2003, ANSI/IEC 60529:2004
- **Certificate No. FM18NCA0005**
CSA General Purpose
CSA-C22.2 No. 94:2011, CSA-C22.2 No. 60529: 2010, CAN/CSA-C22.2 No. 61010-1:2012
- **Self Declaration**
ATEX II 3 G Ex ia/d IIC T6... T2 Gc Tamb -40°C to 60°C
ATEX II 3 D Ex ia IIIC T85°C...T255°C Dc Tamb -40°C to 60°C, Ex tb IIIC T85°C Dc
ATEX II 3 G Ex ic/dc IIC T6... T2 Gc Tamb -40°C to 60°C
ATEX II 3 D Ex tc IIIC T85°C ... T250°C Dc Tamb -40°C to 60°C Ex tb IIIC T85°C Dc

**Refer to Safety Instructions

Specifications

Centurion Guided Radar - HART

Specifications dependent on model selection.



Electromagnetic Compatibility



CAN ICES-3(A)/NMB-3(A)

This device complies with Part 15, Subpart B Class A of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

SIL Rating

- Certificate No. 968/FSP 1375.01/18
- SIL2
- SIL3 (multi channel)

Enclosure

Type

- Dual Chamber with viewing window
- Single Chamber with or without viewing window

Material

- Die-cast Copper-Free Aluminium, Epoxy Painted
- 316L Stainless

Conduit / Cable Entry

- 1/2" NPT
- M20 x 1.5

IP Rating

- NEMA 4X
- IP66

Probe

Probe Size / Material

- 4mm SS316L / Monel 400 rod
- 4mm DIN3055 (7x7 strand) SS316L flexible cable
- 6mm SS316L / Monel 400 rod
- 6mm DIN3055 (7x7 strand) SS316L flexible cable
- 8mm SS316L / Monel 400 rod
- 8mm DIN3055 (7x7 strand) SS316L flexible cable
- 11mm SS316L / Monel 400 rod

Wetted Materials²

- TN07 / TB07 / TN10 / TB10 / Integrated Flange¹ SS316L / Monel, PEEK
- TN15 / TB15 / Integrated Flange¹ - SS316L / Monel, PTFE, GF25

¹ See Probe / Mounting Combination Table for flange types

Probe O-Ring Seals / Process Temperature*

- | | | |
|-----------------|-----------------|-------------------|
| • FKM (Viton) | -40°C to +150°C | (-40°F to +302°F) |
| • EPDM | -40°C to +130°C | (-40°F to +266°F) |
| • FFKM (Markez) | -10°C to +200°C | (+14°F to +392°F) |
| • FFKM (Markez) | -5°C to +250°C | (+23°F to +482°F) |
| • Silicone | -40°C to +80°C | (-40°F to +176°F) |
| • Silicone | -40°C to +130°C | (-40°F to +266°F) |
| • NBR | -40°C to +80°C | (-40°F to +176°F) |

Process Connections

- | | | |
|---------------------|----------|------------|
| • 3/4" NPT | • 1" NPT | • 1.5" NPT |
| • 3/4" BSP | • 1" BSP | • 1.5" BSP |
| • Threaded Flange | | |
| • Integrated Flange | | |

Process Pressure

- -1 to 100 BAR

Tensile Load (flexible cable probes)

- | | |
|-------------------------|---------|
| • Probe Type: A04 / J04 | 0.5 ton |
| • Probe Type: A06 / J06 | 1.0 ton |
| • Probe Type: A08 / J08 | 4.0 ton |

Lateral Load (rigid probes)

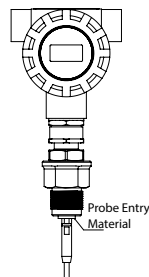
- | | |
|-------------------------|-------|
| • Probe Type: B04 / K04 | 1 Nm |
| • Probe Type: B06 / K06 | 3 Nm |
| • Probe Type: B08 / K08 | 8 Nm |
| • Probe Type: B11 | 11 Nm |

Probe Length

Max

Min

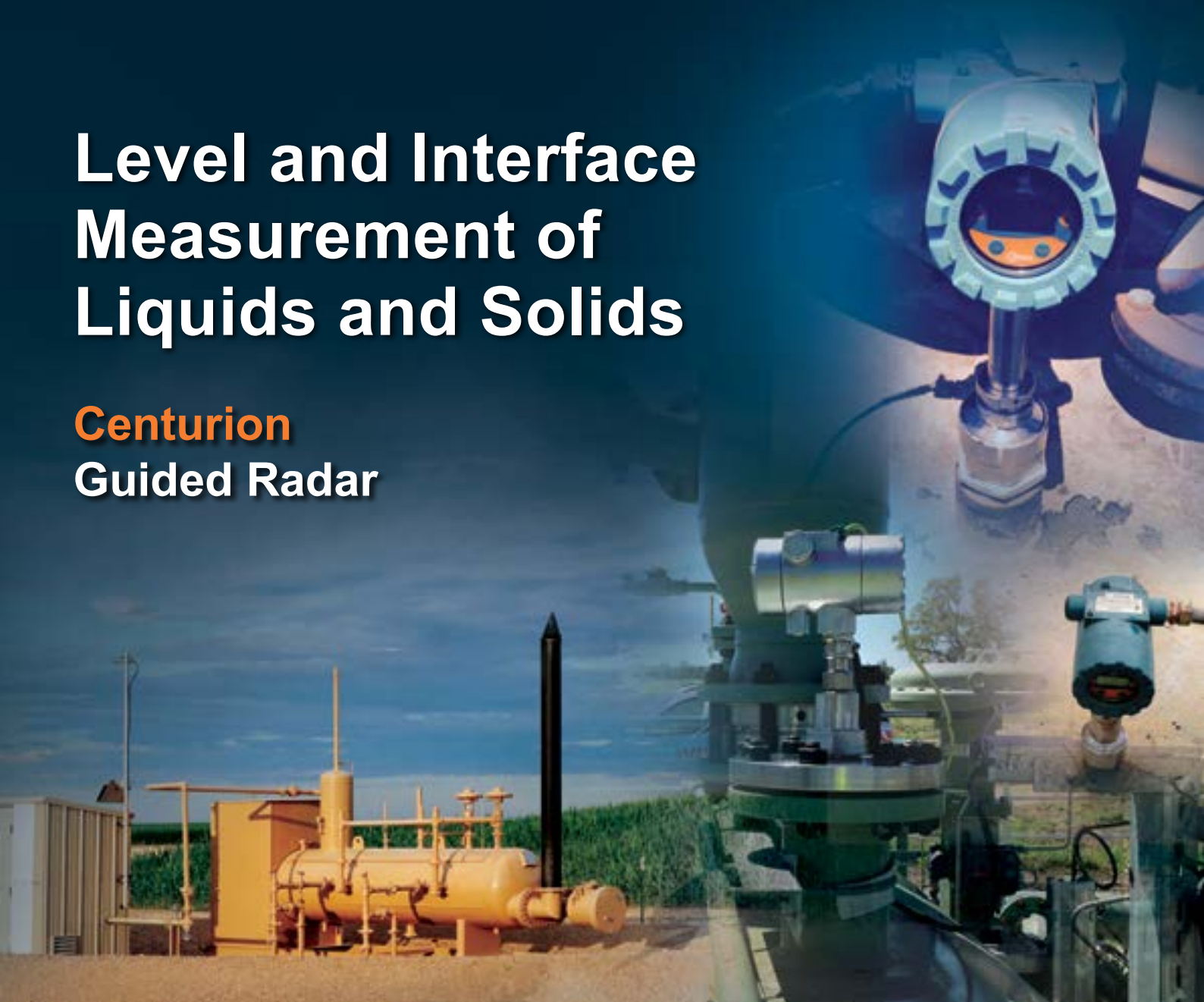
- | | | |
|-------------------------|--------|-------|
| • Probe Type: A04 / J04 | 3800cm | 100cm |
| • Probe Type: A06 / J06 | 3800cm | 100cm |
| • Probe Type: A08 / J08 | 3800cm | 100cm |
| • Probe Type: B04 / K04 | 400cm | 20cm |
| • Probe Type: B06 / K06 | 400cm | 20cm |
| • Probe Type: B08 / K08 | 400cm | 20cm |
| • Probe Type: B11 | 600cm | 20cm |



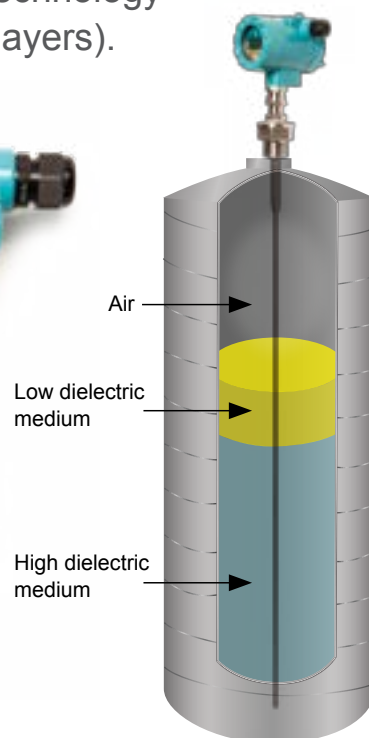
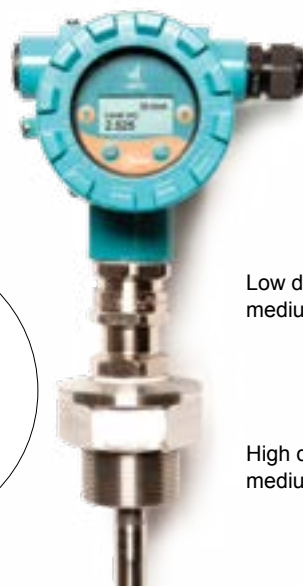
² PEEK or PTFE/GF25 probe entry

Level and Interface Measurement of Liquids and Solids

Centurion Guided Radar



Centurion Guided Radar (CGR) is HAWK's advanced radar technology for measuring liquids & liquid interface (low to high dielectric layers).





Ordering Instructions

Threaded unit type

Assemble part number taking note of the valid combinations and exclusions for the full system. The unit is ordered as a single line item. For example:

CGR2H13B08STB15B11XX200

Flanged type - Threaded flange

Assemble part number taking note of the valid combinations and exclusions for the full system. The unit and the threaded flange are ordered as separate line items.

For example:

CGR2H13B08STN15B11XX200

FLA-FA4-SS-TN15

or

CGR2H13B08STN07B11XX200

FLA-FA1-SS-TN07

Flanged type - Integrated flange

Assemble part number taking note of the valid combinations and exclusions for the full system. In the Mounting part code enter 4 character Integrated flange code from the table. All Integrated flanges have F as the first character. For example.

CGR2H13B08SF4A1B11XX200