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DATA SHEET

LBR-ARCSAA1HAAX

LBR SicWave
Level sensors

SICK Sensor Intelligence



LEVEL SENSORS

LBR-ARCSAA1HAAX

ORDERING INFORMATION

Type	part no.
LBR-ARCSAA1HAAX	6080468

Further device versions and accessories at www.sick.com/LBR_SicWave

DETAILED TECHNICAL DATA

FEATURES

Medium	Bulk solids
Measurement	Continuous
Probe type	Metal jacketed lens antenna / PEEK / c/w air purge connection
Frequency band	W-band (within 75 ... 85 GHz)
Measuring range	Up to 120 m (393.7 ft), recommended measuring range in thread version with integrated horn antenna up to 20 m (65.62 ft)
Angle of dispersion	4° [1]
Process pressure	–1 bar ... 3 bar [2]
Process temperature	–40 °C ... +130 °C
ATEX approval	ATEX II 1D, 1/2D, 1/3D, 2D Ex ta, ta/tb, ta/tc, tb IIIC T* Da, Da/Db, Da/Dc, Db
Type examination	KIWA 20ATEX0041 X
Display	Installed
Control element	Pushbutton operation

[1] Outside the specified aperture angle, the level of the radar signal energy is lowered by 50% (-3 dB).

[2] (-100 kPa ... 300 kPa / –14.5 psig ... 43.5 psig).

PERFORMANCE

Accuracy of sensor element	≤ 5 mm [1]
Non-repeatability	≤ 1 mm
Digital measurement resolution	< 1 mm
Analog measurement resolution	0.3 µA
Digital output temperature drift	≤ 3 mm / 10 K, max. 10 mm
Current output temperature drift	≤ 0.03% / 10 K relating to the 16 mA span or ≤ 0.3%

[1] Measurement distance > 0.25 m / 0.8202 ft.

[2] Time span after abrupt change to the measurement distance by max. 2 m for bulk material applications until the output signal has assumed 90% of its steady-state value for the first time (IEC 61298-2).

Deviation on current output due to digital-analog conversion	< 15 µA
Measurement cycle time	Approx. 700 ms
Step response time	≤ 3 s [2]
MTBF	3,37*10^6 h
Display	✓

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[2] Time span after abrupt change to the measurement distance by max. 2 m for bulk material applications until the output signal has assumed 90% of its steady-state value for the first time (IEC 61298-2).

ELECTRONICS

Communication interface	HART
Supply voltage	9 V DC ... 30 V DC [1]
Protection class	I (IEC 61010-1)
Connection type	M20 x 1.5 / without cable
Output signal	4 mA ... 20 mA / HART [2]
Contamination rating	4
Enclosure rating	IP66 IP68
Start-up current	< 3.6 mA
Overvoltage category	III (IEC 61010-1)
Short-circuit protection	✓
Isolation	✓
EMC	EN 61326-1

[1] All connections are polarity protected. All outputs are overload and short-circuit protected.

[2] Range of the output signal: 3.8 mA ... 20.5 mA / HART (factory setting); fault current < 3.6 mA or 22 mA.

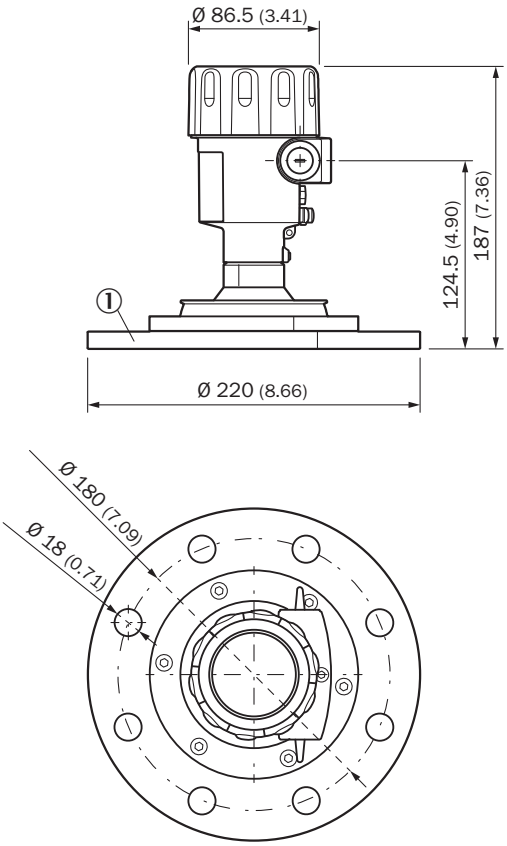
MECHANICS

Process connection	Swivel holder with flange DN100, PN16, form B, DIN / 316/316L
Housing design	Single-chamber housing
Sealing material	FKM (SHS FPM 70C3 GLT)
Antenna material	PEEK

AMBIENT DATA

Ambient operating temperature	–40 °C ... +80 °C
Ambient temperature, storage	–40 °C ... +80 °C

DIMENSIONAL DRAWING



Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6080468

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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