

dB Transducer datasheet



Pulsar's main dB series of non-contacting ultrasonic level measurement transducers offer compact, robust measurement. An innovative approach to transducer design in combating electrical noise, Pulsar has incorporated a low voltage communication and the use of digital echo processing, makes cable splicing issues a thing of the past.



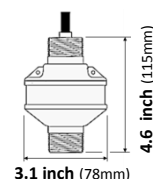
dB range - General

Maximum Separation:	3,280 ft. (12,600 ft is achievable) cable splicing is not an issue (1km (3.8km is achiev.))
Cable Extension:	3-conductor 20 AWG shield
Enclosure Material:	Valox 357 PBT (Polybutylene terephthalate) (other option available)
Enclosure Rating:	NEMA 6P (IP68)
Area Classification:	FM/FMc: Class I, Div. 1, Groups A-D and Class II, Div. 1, Groups E-G . ATEX EEx m IIC
Option Classification:	Intrinsically Safe, ATEX EEx ia
Return Echo:	A digital current signal (for eliminating electrical noise) and returned back to the microprocessor for signal processing.

dB3 - short range solids and liquids

Range:	0.4ft. – 10.0 ft. (0.125m – 3.0m)
Accuracy:	0.1% of max range.
Resolution:	0.02 inch (0.5mm)
Operating Temperature:	-22 to 176°F (-30 to +80°C)
Technical Info:	Effective 3° full beam angle <10° full beam angle at -3dB, 125KHz
Mounting:	1" NPT rear and 1" NPT front
Optional:	1.5" NPT front nose, Intrinsically Safe, Submersible Shield,
Chemical Resistant Options:	PVDF body, 2"-3" Sanitary Flange PTFE face.

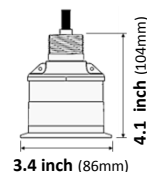
dB3



dB6 - short range solids and liquids

Range:	1.0ft. – 20.0 ft. (0.3m – 6.0m)
Accuracy:	0.1% of max range.
Resolution:	0.04 inch (1.0mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle <10° full beam angle at -3dB, 75KHz
Mounting:	1" NPT rear
Optional:	1.5" NPT front nose, Intrinsically Safe, Submersible Shield.
Chemical Resistant Options:	2" - 8" Flange PTFE face, 3" Sanitary Flange PVDF body.

dB6, dB6S



dB6S - short deadband version, solids and liquids

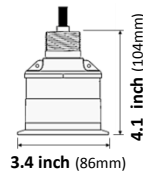
Range:	0.7ft. – 20.0 ft. (0.2m – 6.0m)
Accuracy:	0.1% of max range.
Resolution:	0.04 inch (1.0mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle <10° full beam angle at -3dB, 50KHz
Mounting:	1" NPT rear
Optional:	2" NPT front nose, Intrinsically Safe, Submersible Shield,
Chemical Resistant Options:	2" - 8" Flange PTFE face, 3" Sanitary Flange PVDF body.

...continued.

dB10 - solid, powders and liquids

Range:	1.0ft. – 33.0 ft. (0.3m – 10.0m)
Accuracy:	0.1% of max range.
Resolution:	0.04 inch (1.0mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle with algorithms <10° full beam angle at -3dB, 50KHz
Mounting:	1" NPT rear
Optional:	2" NPT front nose, Intrinsically Safe, Submersible Shield, Foam Face (solids),
Chemical Resistant Options:	2"- 8" Flange PTFE face, 3" Sanitary Flange PVDF body.

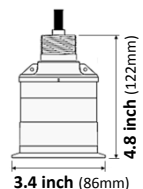
dB10



dB15 - narrow beam for solids, powders and liquids

Range:	1.6ft. – 50.0 ft. (0.5m – 15.0m)
Accuracy:	0.1% of max range.
Resolution:	0.06 inch (1.5mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle with algorithms <8° full beam angle at -3dB, 41KHz
Mounting:	1" NPT rear
Optional:	Submersible Shield, Intrinsically Safe, Foam Face (solids),
Chemical Resistant Options:	3"- 8" Flange PTFE face

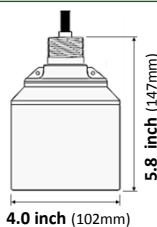
dB15



dB25 - narrow beam, mid range for solids, powders and liquids

Range:	2.0ft. – 82.0 ft. (0.6m – 25.0m)
Accuracy:	0.1% of max range.
Resolution:	0.1 inch (2.5mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle with algorithms <6° full beam angle at -3dB, 30KHz
Mounting:	1" NPT rear
Optional:	Submersible Shield , Intrinsically Safe, Foam Face (solids)

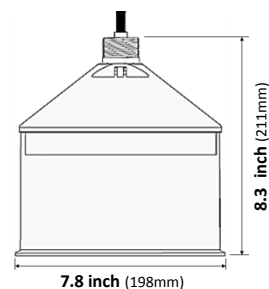
dB25



dB40 - narrow beam, long range for solids, powders and liquids

Range:	4.0ft. – 131.0 ft. (1.5m – 40.0m)
Accuracy:	0.25% of measured range or 0.24 inches (6mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle with algorithms <5° full beam angle at -3dB, 20KHz
Mounting:	1" NPT rear
Optional:	Foam Face (solids)

dB40, dB50



dB50 - narrow beam, long range for solids, powders and liquids

Range:	6.6ft. – 164.0 ft. (2.0m – 50.0m)
Accuracy:	0.1% of max range.
Resolution:	0.2 inch (5.0mm)
Operating Temperature:	-40 to 194°F (-40 to +90°C)
Technical Info:	Effective 3° full beam angle with algorithms <5° full beam angle at -3dB, 20KHz
Mounting:	1" NPT rear
Optional:	Foam Face (solids)
Technical Note:	No Hazardous Area Approvals are available for the dB50

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Other Mounting Options

Submersible Shield

Front Nose Mount

PVDF Front Nose Mount

PVDF Body

Flange PTFE Face

Sanitary Flange PVDF

Foam Face



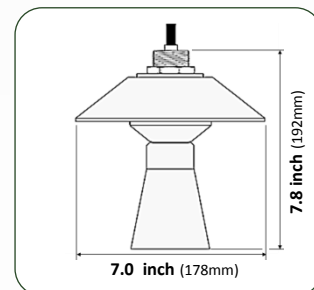
NOTE: Not all other mounting options are available on all transducers.

Specialized OCM Transducer datasheet

dBMACH3 - high accuracy open channel flow

Range:	0 inches – 8.0 ft. (0.0m – 2.4m)
Accuracy:	+/- 0.04 inches (+/- 1mm)
Resolution:	0.02 inches (0.5mm)
Operating Temperature:	-22 to 176°F (-30 to +80°C)
Technical Info:	Effective 3° full beam angle with algorithms <12° full beam angle at -3dB, 125KHz
Mounting:	1" NPT rear
Optional:	Intrinsically Safe ATEX Eex ia.
Technical Note:	Can also be used in normal level applications.

dBMACH3



DUET - World's most accurate open channel flow

Range:	1.0 ft. – 6.5 ft. (0.3m – 2.0m)
Accuracy:	0.025% of the measured range (typically 0.02 inch (0.5mm))
Resolution:	0.004 inch (0.1mm)
Temperature:	-22 to 176°F (-30°C to +80°C)
Technical Info:	Effective 3° full beam angle with algorithms <10° full beam angle at -3dB, 125KHz
Mounting:	Stainless Steel Bracket 9/16" x 4 mounting holes (15mm x 4)
Technical Note:	The World's most accurate ultrasonic and totally immune to solar radiation.

DUET

