



Standard, short, medium and long range dB transducers

Continued innovative design has led to the dB range of transducers being quite unlike anything seen in ultrasonic level measurement before.

Previously, there were high voltage, frequency dependent transducers, susceptible to electrical noise and requiring special, protected interconnection cables, or weak low voltage transducers designed with flammable atmosphere approval and not application performance in mind.

Pulsar's engineers have re-written the rules. The proven transducer design, which is **low power**, permitting certification to intrinsic safety standards and utilising standard screened cable, is capable of the **power and range necessary** to achieve industry's demands.

The Pulsarultra range of dB transducers have, as standard

- High Resolution
- Encapsulated ATEX (EEx m) for zones 1&2
On NPT threaded versions, FM approved Class I, Div 1, Group A, B, C & D
Class II, Div 1, Group E, F & G
Class III

dB3

Liquid and solid level measurement

Range: 0.15m to 3m
Nominal operating frequency: 125kHz
Radiating face: 19mm
Beam angle: 10° @-3 dB (inclusive)

dB6

Liquid and solid level measurement

Range: 0.3m to 6m (0.2m deadband option available at 50 kHz - dBS6 version)
Nominal operating frequency: 75 kHz
Radiating face: 30mm diameter
Beam angle: 10° @-3 dB (inclusive)

dB10

Liquid and solid level measurement

Range: 0.3m to 10m
Nominal operating frequency: 50 kHz
Radiating face: 45mm diameter
Beam angle of 10° @-3 dB (inclusive)



- I.S. ATEX (EEx ia) for zone 0 (option)
- Integral temperature compensation
- Narrow beam angles
- Robust IP68 construction
- Patented
- PZT ceramic transducer element

dB15

Narrow beam transducer for liquid & solid level measurement

Range: 0.5m to 15m
Nominal operating frequency: 41 kHz
Radiating face: 60mm diameter
Beam angle of 8° @-3 dB (inclusive)

dB25

Narrow beam, mid-range transducer for solid and liquid level measurement

Range: 0.6m to 25m
Nominal operating frequency: 30 kHz
Radiating face: 76mm diameter
Beam angle of 6° @-3 dB (inclusive)

dB40

Narrow beam, long range transducer for liquid & solid level measurement

Range: 1.2m to 40m
Nominal operating frequency: 20 kHz
Radiating face: 158mm diameter
Beam angle of 5° @-3 dB (inclusive)

dB transducers

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Technical Specification: PULSAR^{Ultra} dB transducers

Data applicable to all transducers

Operating temperature range	-40°C to +90°C (Hazardous area versions +75°C max)
Hazardous area approval	Standard ATEX EEx m II T6 or optional EEx ia T6 (FM approved available)
Ingress protection (IP) rating	IP68 to BS EN 60068-2-17 : 1995 & BS EN 60529 (Nema 4x available)
Integral cable length	Standard 5, 10 or 20 metres
CE Approvals	EMC tested to BS EN 50081-1 : 1992 for emissions and BS EN 50082-2 : 1995 for immunity Electrical safety tested to BS EN 61010-1 : 1993
Bump, shock and vibration	To BS EN 60068-2-29, BS EN 60068-2-27 & BS EN 60068-2-6

Housing details

	Housing material	Housing diameter mm	Housing height mm	Mounting connection
dB3	Valox 357 *PBT	86	98	BSP or 1" NPT
dB6†	Valox 357 *PBT	86	106	BSP or 1" NPT
dB10†	Valox 357 *PBT	86	106	BSP or 1" NPT
dB15	Valox 357 *PBT	86	120	BSP or 1" NPT
dB25	Valox 357 *PBT	114	140	BSP or 1" NPT
dB40	Valox 357 *PBT	205	215	BSP or 1" NPT

† Available in optional PVDF body material (Polyvinylidene fluoride)

*PBT - Polybutylene terephthalate

Optional Flanges

All have PTFE full face on process side

Flanges	ANSI	2"	3"	4"	6"	8"	DIN	50	80	100	150	200	Sanitary	2"	3"
dB3		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓
dB6		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓
dB10		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓
dB15			✓	✓	✓	✓			✓	✓	✓	✓			

Options

Facings	Closed cell soft foam for increased power in dry dusty environments PTFE standard on all flanged transducers for chemical compatibility
Submergence shield	For continuous operation in applications at risk of submergence
Beam aiming kit	Recommended for easy transducer aiming in solids applications (drawing available on request)



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Certificate N°: 950136

Our policy is one of constant development and improvement. Pulsar reserves the right to amend technical details as necessary.

Represented by

Aiming Kit

We recommend the installation of an aiming kit when measuring solids material. This kit allows the transducer to be aimed towards the draw off point at the bottom of the silo or tank. The location of the aiming kit should be as far away from the fill point as possible to avoid falling material. It should be aimed to co-incide with the material's angle of repose, enabling a more powerful signal return to the transducer.

