



PULSAR DB RANGE OF ULTRASONIC TRANSDUCERS

Item code: DB

The patented Pulsar dB Transducer Series are ultrasonic transducers that can measure level in a wide range of liquids, powders and solids as well as open channel flow applications.

The dB Transducers have a compact, low power transducer design that can be I.S. certified and uses standard interconnecting cables, yet produces extremely high acoustic power to give exceptional results in a wide variety of challenging situations.

FEATURES:

- 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.
- I.S. ATEX (EEx ia) for zone 0 (Option)
- Integral temperature compensation.
- Narrow beam angles.
- Robust, IP68 construction.
- All transducers also have flammable atmosphere approval as standard.
- dB Transducers can be teamed with any of Pulsar's control units to create the perfect solution for your application.
- Standard 2 or 3 core screened cable extensions to 1000m (3280ft). High acoustic power output.
- ATEX (EEx m) II T6 as standard, ATEX (EEx ia T6) I.S. Intrinsically Safe optional.
- FM approved Ex-proof FM/FMC, Class 1, Div. 1, Grp. A, B, C,D; Class II, Div.1, Grp. E, F, G
- Optional Intrinsically Safe ATEX EEx ia IIC T6.

TRANSDUCER OPTIONS:

Threaded	dB3, dB6 and dB10 are available with threaded noses for easy mounting. dB3 and dB6 models feature 1.5inch universal thread while dB10 has 2inch universal thread. All performance parameters of the transducers remain unchanged.
Flanged	Available in a flange option, ANSI or DIN specification, all featuring full PTFE coating on the process wetted side, up to the dB15 size.
Sanitary Flanged	For standard transducers up to dB10 an option of an sanitary flange construction exists. The flange has a full face PTFE or PVDF seal for use in hygienic applications.
Foam Face	A foam face option is available for all standard range transducers to provide more acoustic power output in dry, dusty environments.
Submergence Shield	A shield can be fitted to keep the transducer face clean and dry in applications at risk of submergence. The shield can be fitted on the standard transducers up to dB25 size. Note: All dB3 transducers are fitted with a shallow drip shield.

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dB RANGE:

	Range	Nominal Operating Frequency		Radiating Face Diameter	Beam Angle
dB3 Liquid and solid level measurement	0.12m to 3m	125kHz	PZT Ceramic Transducer Element	19mm	10° @-3 dB (inclusive)
dB6 Liquid and solid level measurement	0.3m to 6m (0.2m deadband option available at 50 kHz)	75kHz		30mm	10° @-3 dB (inclusive)
dB10 Liquid and solid level measurement	0.3m to 10m	50kHz		45mm	10° @-3 dB (inclusive)
dB15 Narrow beam transducer for liquid & solid level measurement	0.5m to 15m	41kHz		60mm	8° @-3 dB (inclusive)
dB25 Narrow beam, mid-range transducer for solids and liquid level measurement	0.6m to 25m	30kHz		78mm	6° @-3 dB (inclusive)
dB40 Narrow beam, long range transducer for liquid & solid level measurement	1.2m to 40m	20kHz		160mm	5° @-3 dB (inclusive)

ORDERING INFO:

DB3-5	3m Depth - 5m Cable
DB3-20	3m Deep - 20m Cable
DB6-10	6m Deep - 10m Cable
DB10-10	10m Deep - 10m Cable
DB10-20	10m Deep - 20m Cable
DB15-10	15m Deep - 10m Cable
DB25-5	25m Deep - 5m Cable
DB3-MACH5	3m Deep - 5m Cable
DB3-MACH10	3m Deep - 10m Cable

dB SPECIFICATIONS:

Operating temperature	-40°C to +90°C (-40°F to +194°F) (Hazardous area versions +75°C/+167°F max)
Hazardous area approval	Standard ATEX EEx m II T6 or optional EEx ia T6 (FM approved available) N.B. not dB50
IP Rating	IP68 to BS EN 60068-2-17: 1995 and BS EN 60529 (Nema 6P available)
Integral cable length	Standard 5, 10, 20 or 30m
CE Approvals	See EC Declaration of Conformity
Bump, shock and vibration	BS EN 60068-2-29, BS EN 60068-2-27 and BS EN 60068-2-6



HOUSING DETAILS:

	Material	Diameter	Height	Mounting Connection
dB3	Valox 357 *PBT	86mm	98mm	BSP or 1" NPT
dB6[†]		86mm	106mm	
dB10[†]		86mm	106mm	
dB15		86mm	120mm	
dB25		114mm	140mm	
dB40		205mm	215mm	

*Available in optional PVDF body material / *PBT - Polybutylene Terephthalate

OPTIONAL FLANGES:

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

All have PTFE full face on process side.

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.