

12P80FeV2 LOW FREQUENCY TRANSDUCER P80 Series

## **KEY FEATURES**

- 700 W<sub>AES</sub> power handling capacity
- High sensitivity: 99 dB (1W / 1m)
- Wide usable frequency range
- Low harmonic distortion
- Low resonant frequency: 48 Hz
- Low power compression losses

- Weatherproof cone with treatment for both sides
- 4" DUO double layer in/out aluminium voice coil
- Conex spider
- Extended controlled displacement: Xmax ± 7,5 mm
- 52 mm peak-to-peak excursion before damage



### TECHNICAL SPECIFICATIONS

| Nominal diameter                   | 300 mm 12 i            |                       |
|------------------------------------|------------------------|-----------------------|
| Rated impedance                    |                        | 8 Ω                   |
| Minimum impedance                  |                        | 7 Ω                   |
| Power capacity <sup>1</sup>        | 7                      | 00 W <sub>AES</sub>   |
| Program power <sup>2</sup>         |                        | 1.400 W               |
| Sensitivity                        | 99 dB 1W /             | 1m @ Z <sub>N</sub>   |
| Frequency range                    | 50 -                   | 4.000 Hz              |
| Recom. enclosure                   |                        | V <sub>b</sub> = 40 I |
| (Bass-reflex design)               | F <sub>b</sub> = 75 Hz |                       |
| Voice coil diameter                | 101,6 mm               | 4 in                  |
| BI factor                          |                        | 23 N/A                |
| Moving mass                        |                        | 0,076 kg              |
| Voice coil length                  |                        | 20 mm                 |
| Air gap height                     |                        | 12 mm                 |
| X <sub>damage</sub> (peak to peak) |                        | 52 mm                 |
|                                    |                        |                       |



### **THIELE-SMALL PARAMETERS**<sup>3</sup>

| Resonant frequency, f <sub>s</sub>                         | 48 Hz               |
|--|---------------------|
| D.C. Voice coil resistance, R <sub>e</sub>                 | 5,Ω                 |
| Mechanical Quality Factor, Q <sub>ms</sub>                 | 6,5                 |
| Electrical Quality Factor, Q <sub>es</sub>                 | 0,22                |
| Total Quality Factor, Q <sub>ts</sub>                      | 0,21                |
| Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub> | 61 I                |
| Mechanical Compliance, C <sub>ms</sub>                     | 143 μm / N          |
| Mechanical Resistance, R <sub>ms</sub>                     | 3,5 kg / s          |
| Efficiency, η <sub>0</sub>                                 | 3 %                 |
| Effective Surface Area, S <sub>d</sub>                     | 0,055 m²            |
| Maximum Displacement, X <sub>max</sub> <sup>4</sup>        | 7,5 mm              |
| Displacement Volume, V <sub>d</sub>                        | 412 cm <sup>3</sup> |
| Voice Coil Inductance, L <sub>e</sub>                      | 1,1 mH              |

Notes:

<sup>1</sup> The power capaticty is determined according to AES2-1984 (r2003) standard.

<sup>2</sup> Program power is defined as power capacity + 3 dB.

<sup>3</sup> T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

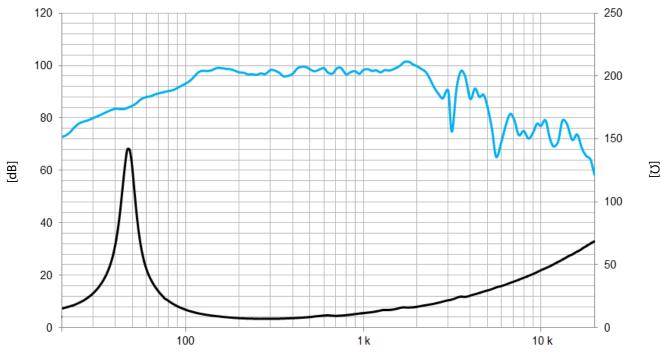
<sup>4</sup> The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.



12P80FeV2

# LOW FREQUENCY TRANSDUCER

**P80 Series** 



[Hz]

Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m  $\,$ 

| Overall diameter        | 312 mm  | 12,3 in |
|-------------------------|---------|---------|
| Bolt circle diameter    | 298 mm  | 11,7 in |
| Baffle cutout diameter: |         |         |
| - Front mount           | 283 mm  | 11,1 in |
| Depth                   | 135 mm  | 5,3 in  |
| Net weight              | 11,5 kg | 25,3 lb |
| Shipping weight         | 12,2 kg | 26,9 lb |
|                         |         |         |

**MOUNTING INFORMATION** 

#### **DIMENSION DRAWING**

