18NLW9400

Extended LF Neodymium Transducer

Key Features
- 98 dB SPL 1W / 1m average sensitivity
- 100 mm (4 in) Interleaved Sandwich Voice coil (ISV)
- 2400 Watt program power handling
- Fiberglass reinforced straight ribbed cone
- Double Silicon Spider (DSS) for increased excursion control and linearity
- High grade neodymium magnet assembly
- Recommended for subwoofer usage in compact vented or bandpass enclosures
- Weather protected cone and plates for outdoor usage

Description
The 18NLW9400 is a 18" (460 mm) extended low frequency loudspeaker, designed for use as a low bass or subwoofer component, in vented or bandpass configuration. The loudspeaker design provides clean and undistorted LF reproduction at a very high SPL and enables the transducer to withstand high power levels without damage. For optimum results we recommend amplifiers able to deliver 2400 Watt program power. The high grade neodymium magnet assembly is able to resist to the most demanding environmental operative conditions. 18NLW9400 features include a large displacement suspension system which, in conjunction with a fiberglass reinforced, straight ribbed cone and the Eighteen Sound proprietary Double Silicon Spider (DSS) technology, allows an ultra-linear piston action and provides full mechanical control across the entire working range. The 100mm (4 in) copper round wire state-of-the-art voice coil, based on Interleaved Sandwich Voice coil (ISV) technology, provides high levels of thermal stability and durability. The ISV technology achieves a balanced linear motor unit exerting an exceptionally high force factor. This is realised through a high strength fiberglass former with half the coil wound half on the outside and half on the inside and bonded together using unique high-temperature resin adhesives. 18NLW9400 is able to perform properly under inclement weather conditions: the exclusive cone treatment improves pulp strength and gives water repellent properties to both sides of the cone. In addition, the special treatment applied to top and back plates of the magnetic structure is far more resistant to the corrosive effects of salts and oxidization.

Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
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<tbody>
<tr>
<td>022188N940</td>
<td>022188N940</td>
<td>8Ohm</td>
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<td>022184N940</td>
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<td>4Ohm</td>
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Extended LF Neodymium Transducer

**General Specifications**

- **Nominal Diameter**: 460mm (18 in)
- **Rated Impedance**: 8 Ohm
- **AES Power**: 1200W
- **Program Power**: 2400W
- **Peak Power**: 7000W
- **Sensitivity**: 98 dB
- **Frequency Range**: 30 - 2500 Hz
- **Power Compression @-10dB**: 0.7 dB
- **Power Compression @-3dB**: 1.5 dB
- **Power Compression @Full Power**: 2.2 dB
- **Max Recomm. Frequency**: 500 Hz
- **Recomm. Enclosure Volume**: 110 ÷ 350 lt. (3.9 ÷ 12.36 cuft)
- **Minimum Impedance**: 6.1 Ohm at 25°C
- **Max Peak To Peak Excursion**: 50 mm (2 in)
- **Voice Coil Diameter**: 100 mm (4 in)
- **Voice Coil Winding Material**: Copper round wire
- **Suspension**: Triple roll, Treated Polycotton
- **Cone**: Straight ribbed, Fiberglass reinforced cellulose

**Thiele Small Parameters**

- **Fs**: 33 Hz
- **Re**: 5 Ohm
- **Sd**: 0.1225 sq.mt. (189.88 sq.in.)
- **Qms**: 6.1
- **Qes**: 0.28
- **Qts**: 0.26
- **Vas**: 268 lt. (9.47 cuft)
- **Mms**: 180 gr. (0.40 lb)
- **BL**: 26 Tm
- **Le (1kHz)**: 1.90 mH
- **Ref. Efficiency 1W@1m (half space)**: 97.4 dB

**Mounting information**

- **Overall diameter**: 462 mm (18.19 in)
- **N. of mounting holes and bolt**: 8
- **Mounting holes diameter**: 8.5 mm (0.33 in)
- **Bolt circle diameter**: 438-440 mm (17.24-17.32 in)
- **Front mount baffle cutout ø**: 416 mm (16.38 in)
- **Rear mount baffle cutout ø**: 422 mm (16.61 in)
- **Total depth**: 223.5 mm (8.8 in)
- **Flange and gasket thickness**: 26 mm (1.02 in)
- **Net weight**: 8.7 kg (19.2 lb)
- **Shipping weight**: 9.9 kg (21.8 lb)
- **Cardboard Packaging dimensions**: 482x482x257 mm (19x19x10.1 in)

**Notes**

1. **AES power** is determined according to AES2-1984 (2003) standard
2. **Program power rating** is measured in 180lit enclosure tuned 35Hz using a 40-400Hz band limited pink noise test signal 50% duty cycle applied continuously for 2 hours.
3. **The peak power rating** represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
4. **Sensitivity** represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83V sine wave test signal swept between 100Hz and 500Hz
5. **Frequency range** is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
6. **Power compression** represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
7. **Thiele-Small parameters** are measured after the test specimen has been conditioned by AES power and represent the expected long term parameters after a short period of use.
8. **Linear Math. Xmax** is calculated as (Hvc-Hg)/2 + Hg/4 where Hvc is the coil depth and Hg is the gap depth.