

## **12CXA400Fe**

**COAXIAL TRANSDUCER** 

### **KEY FEATURES**

- Program power: 800 / 160 W<sub>AES</sub> (LF / HF)
- Sensitivity: 96 / 105 dB (1W / 1m) (LF / HF)
- 4" voice coil woofer
- 2.85" voice coil compression driver
- Common ferrite magnet system design

- Demodulating rings in both LF and HF units
- Composite titanium / polyester diaphragm
- Waterproof LF cone
- 60° coverage horn for HF dispersion control





### **TECHNICAL SPECIFICATIONS**

Nominal diameter	300 mm		12 in
Rated impedance (LF/HF)			8 / 16 Ω
Minimum impedance (LF/HF)		6,	2 / 12,2 Ω
Power capacity 1 (LF/HF)		400 /	80 W <sub>AES</sub>
Program power <sup>2</sup> (LF/HF)		80	0 / 160 W
Sensitivity (LF/HF <sup>3</sup> )	96 dB	1W /	1m @ Z <sub>N</sub>
	105 dB	1W /	1m @ Z <sub>N</sub>
Frequency range		40 - 2	20.000 Hz
Recom. HF crossover	1,5 kHz or higher (12 dB/oct min slope)		
Voice coil diameter (LF/HF)	101,6	mm	4 in
	72,2	2 mm	2,87 in
BI factor			19,8 N/A
Moving mass			0,066 kg
Voice coil length			16 mm
Air gap height			10 mm
X <sub>damage</sub> (peak to peak)			51 mm

### THIELE-SMALL PARAMETERS 4

Resonant frequency, f <sub>s</sub>	42 Hz
D.C. Voice coil resistance, R <sub>e</sub>	6,6 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	7,2
Electrical Quality Factor, Qes	0,26
Total Quality Factor, Qts	0,25
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	94 I
Mechanical Compliance, C <sub>ms</sub>	220 μm / N
Mechanical Resistance, R <sub>ms</sub>	2,4 kg/s
Efficiency, η <sub>0</sub>	2,2 %
Effective Surface Area, S <sub>d</sub>	0,055 m <sup>2</sup>
Maximum Displacement, X <sub>max</sub> <sup>5</sup>	6 mm
Displacement Volume, V <sub>d</sub>	210 cm <sup>3</sup>
Voice Coil Inductance, L <sub>e</sub>	1,1 mH

#### Notes

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

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

<sup>&</sup>lt;sup>3</sup> Sensitivity was measured at 1m distance, on axis, with 1W input, averaged in the range 1 - 7 kHz

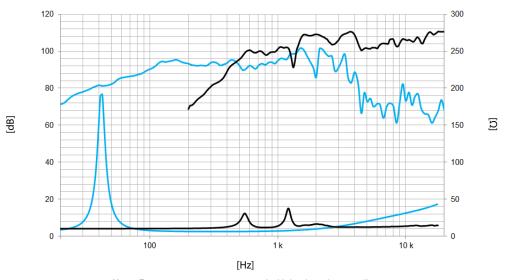
<sup>4</sup> T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

 $<sup>^{6}</sup>$  The  $\rm X_{max}$  is calculated as ( $\rm L_{vc}$  -  $\rm H_{ag}$ )/2 + ( $\rm H_{ag}$ /3,5), where  $\rm L_{vc}$  is the voice coil length and  $\rm H_{ag}$  is the air gap height.



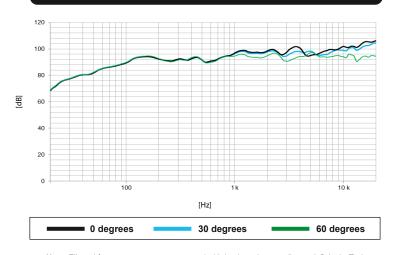
# 12CXA400Fe

**COAXIAL TRANSDUCER** 



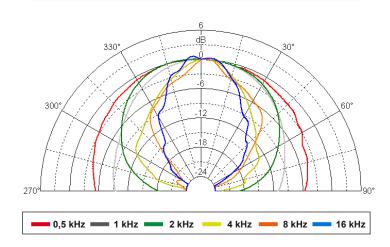
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

### FILTERED FREQUENCY RESPONSE



Note: Filtered frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m using filter FD-2XA

### **POLAR PATTERN**



### **MOUNTING INFORMATION**

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	165 mm	6,5 in
Net weight	11,3 kg	24,9 lb
Shipping weight	11,7 kg	25,8 lb

### **DIMENSION DRAWING**

