AcousticDesign Series

AD-C821R and AD-C821S Ceiling-Mount Loudspeaker Systems

Summary description:

A high-output full-range two-way loudspeaker system that combines coentrant low- and high-frequency transducers, passive crossover electronics, and a multi-tap transformer into fully integrated, factory-sealed system in a blind-mount design for finished ceilings.

Drivers:

The loudspeaker system shall incorporate an 8-inch (203 mm) ferrite cone transducer of treated paper on a steel frame with a coentrant 1.4-inch (44 mm) neodymium diaphragm compression driver that is acoustically mated to the woofer for a smooth transition at the crossover point.

Enclosure:

The loudspeaker system shall be mounted on a ported ABS baffle sealed into an acoustically optimized enclosure with a volume of 0.64 cubic feet (18 L). The baffle shall accept a magnetically-attached white paintable grille, either round (AD-C800RG) or square (AD-C800SG).

Electronics:

The loudspeaker system shall include a passive crossover. The loudspeaker system shall include a custom low-distortion, wide-bandwidth laminated-core transformer that shall be switchable between 16 Ohm bypass and constant-voltage operation. Transformer taps at 70V shall be 100, 50, 25, and 12.5 watts. Transformer taps at 100V shall be 100, 50, and 25 watts.

Connectors:

Input to the AD-C821 loudspeaker system shall be via two 2-pin Euro-style connectors.

Performance criteria:

The AD-C821 loudspeaker system shall meet the following performance criteria:

- Frequency response shall be within -6 dB at 61 Hz to 18 kHz;

- Useable frequency range shall be within -10 dB at 52 Hz to 18 kHz;

- Peak output at 1 meter (calculated) shall be 120 dB SPL in half space at rated RMS power (pink noise input, 50 Hz – 20 kHz);

- Continuous output at 1 meter (calculated) shall be 114 dB SPL in half space;

- Nominal coverage shall be 90 degrees horizontal and vertical;

- Nominal impedance shall be 16 ohms;

- RMS power handling shall be 200 watts tested per IEC recommendations;

- Recommended max amplifier power shall be 400 watts RMS;

- Sensitivity shall be 91 dB SPL at 1 watt/1 meter.

Agency Rating:

The loudspeaker system shall have the following agency ratings:

- CE

- UL 1480 (commercial/professional use)

- UL 2043 (air handling spaces)

Mounting hardware:

The AD-C821 loudspeaker system shall include captive, integral mounting clamps. Optional tie rails and an optional split ring must be used when mounting in suspended ceilings. A split ring may also be used for additional reinforcement when mounting in non-suspended ceilings.

Dimensions and weight:

The AD-C821R and AD-C821S shall each have the following physical characteristics:

- Diameter shall be 13.4 inches (340 mm);

- Depth shall be 11.9 inches (211 mm);

- Net weight shall be no more than 16 pounds (7.3 kg).

Model:

The loudspeaker system shall be the QSC Audio Products AD-C821R or AD-C821S.