

## CS-64U / CS-154U / CS-304U (UL LISTED)

The wide-range paging speaker shall be CS-154U / CS-304U: constant directivity; CS-64U: exponential, direct radiator design suitable for paging, background music and tone signaling distribution. The speaker component shall be a 4.72" (12 cm) cone-type dynamic speaker, treated for weather-resistance. Power handling shall be CS-64U: 6 W; CS-154U: 15 W; CS-304U: 30 W. The paging speaker shall include a matching transformer to accommodate 70.7 V and 100 V lines. Transformer wattage taps shall include CS-64U: 70.7 V: 6 W (830 ohms), 3 W (1.7k ohms), 1.5 W (3.3k ohms), 0.5 W (10k ohms), 100 V: 6 W (1.7k ohms), 3 W (3.3k ohms), 1 W (10k ohms); CS-154U: 70.7 V: 15 W (330 ohms), 7.5 W (670 ohms), 2.5 W (2k ohms), 100 V: 15 W (670 ohms), 10 W (1k ohms), 5 W (2k ohms); CS-304U: 70.7 V: 30 W (170 ohms), 15 W (330 ohms), 10 W (500 ohms), 5 W (1k ohms), 100 V: 30 W (330 ohms), 20 W (500 ohms), 10 W (1k ohms). Sound pressure level measured at one meter with one Watt of power applied shall be CS-64U: 96 dB SPL; CS-154U: 97 dB SPL; CS-304U: 98 dB SPL. Frequency response shall be CS-64U: 130 - 13k Hz; CS-154U: 150 - 15k Hz; CS-304U: 120 - 15k Hz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 2k Hz shall be CS-64U: 100° H x 100° V; CS-154U: 110° H x 85° V; CS-304U: 100° H x 85° V.

The paging speaker shall be UL Listed under category UL 1480 and include external "UL Listed" labeling. The paging speaker shall comply with the IEC IP-64 standard for dust and moisture-resistance and operate within a temperature range from -4° F to 131° F (-20° C to +55° C). The material and finish of the horn/cover shall be fire-resistant ABS resin and coated with polyurethane resin paint, off-white in color, to resist long-term exposure to ultraviolet light. The speaker shall include a protective net/grille to prevent damage and the material and finish shall be CS-154U/304U: punched, surface treated steel plate, dark gray powder coating and CS-64U: aluminum, gray paint. All mounting hardware, including screws and bolts, shall be stainless steel. The paging horn shall include an integral speaker cable, insulated polyvinyl chloride type, with strain-relief, 0.24" (6 mm) diameter and 24" (600 mm) length.

Dimensions (W x H x D) shall be CS-64U: 9.17" x 8.82" x 8.19" (233 x 224 x 208 mm); CS-154U/304U: 14.40" x 9.06" x 10.71" (366 x 230 x 272 mm). Weight shall be CS-64U: 3.31 lbs. (1.5 kg); CS-154U: 6.17 lbs. (2.8 kg); CS-304U: 6.83 lbs. (3.1 kg).

The wide-range paging speaker shall be TOA model CS-64U / CS-154U / CS-304U.

## CS-64 / CS-154 / CS-304

The wide-range paging speaker shall be CS-154/CS-304: constant directivity; CS-64: exponential, direct radiator design suitable for paging, background music and tone signaling distribution. The speaker component shall be a 4.72" (12 cm) cone-type dynamic speaker, treated for weather-resistance. Power handling shall be CS-64: 6 W; CS-154: 15 W; CS-304: 30 W. The paging speaker shall include a matching transformer to accommodate 70.7 V and 100 V lines. Transformer wattage taps shall include CS-64: 70.7 V: 6 W (830 ohms), 3 W (1.7k ohms), 1.5 W (3.3k ohms), 0.5 W (10k ohms), 100 V: 6 W (1.7k ohms), 3 W (3.3k ohms), 1 W (10k ohms); CS-154: 70.7 V: 15 W (330 ohms), 7.5 W (670 ohms), 2.5 W (2k ohms), 100 V: 15 W (670 ohms), 10 W (1k ohms), 5 W (2k ohms); CS-304: 70.7 V: 30 W (170 ohms), 15 W (330 ohms), 10 W (500 ohms), 5 W (1k ohms), 100 V: 30 W (330 ohms), 20 W (500 ohms), 10 W (1k ohms). Sound pressure level measured at one m with one W of power applied shall be CS-64: 96 dB SPL; CS-154: 97 dB SPL; CS-304: 98 dB SPL. Frequency response shall be CS-64: 130 - 13k Hz; CS-154: 150 - 15k Hz; CS-304: 120 - 15k Hz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 2k Hz shall be CS-64: 100° H x 100° V; CS-154: 110° H x 85° V; CS-304: 100° H x 85° V.

The paging speaker shall comply with the IEC IP-64 standard for dust and moisture-resistance and operate within a temperature range from -4° F to 131° F (-20° C to +55° C). The material and finish of the horn/cover shall be fire-resistant ABS resin and coated with polyurethane resin paint, off-white in color, to resist long-term exposure to ultraviolet light. The speaker shall include a protective net/grille to prevent damage and the material and finish shall be CS-154/304: punched, surface treated steel plate, dark gray powder coating and CS-64: aluminum, gray paint. All mounting hardware, including screws and bolts, shall be stainless steel. The paging horn shall include an integral speaker cable, insulated polyvinyl chloride type, with strain-relief, 0.24" (6 mm) diameter and 24" (600 mm) length.

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