

product specification

CS215L

Dual 15 inch Subcardioid Subwoofer



Overview

The CS215L is a low profile, dual 15 inch subcardioid subwoofer module intended for permanent installation in a wide range of venues. Its premium, high power transducers are physically engaging, yet are musically articulate enough to reproduce the subtlety and harmonic nuance of an upright bass or the low strings of a piano. Twelve M10 mounting points facilitate either horizontal or vertical overhead suspension. Four vibration isolation feet prevent spurious vibrations and “walking” in horizontal ground stack applications.

The CS215L incorporates Fulcrum’s patented *Passive Cardioid Technology™* to overcome one of the major challenges of many loudspeakers: excessive rear LF radiation. Unlike active cardioid loudspeakers, Fulcrum’s passive cardioid technology does not require an additional amplifier channel or additional transducer to achieve its impressive low frequency directional control: >7 dB of rear rejection over the subwoofer’s operating range.

The subcardioid behavior is produced by a meticulously conceived acoustical circuit which balances the position of the low frequency driver, the enclosure depth and volume, and specially constructed rear-mounted ports which include a calibrated resistive element. By opting for a subcardioid pattern as opposed to a pure, hyper or super cardioid pattern, the rear rejection increases when the modules are deployed in a subwoofer array.

Fulcrum Acoustic’s **TQ™** processing is an integral part of the CS215L design. Sound, innovative acoustical design combined with state of the art digital processing leads to exceptional clarity and precise transient response, even at very high sound pressure levels. The required digital signal processing can be provided by one of many supported platforms.

Performance Specifications¹

Operating Mode

Single-amplified w/ DSP

Operating Range²

33 Hz to 141 Hz

Nominal Beamwidth

Subcardioid (>7 dB rear rejection) within operating range

Transducers

LF: (2) 15.0” woofers, 4.0” voice coil; ceramic magnet

Power Handling @ Nominal Impedance³

89 V / 2000 W @ 4 Ω

Nominal Sensitivity @ Input Voltage⁴ (half / whole space)

104 dB / 98 dB @ 2.00 V

Nominal Maximum Continuous SPL (half / whole space)

143 dB / 137 dB peak
137 dB / 131 dB continuous

Equalized Sensitivity @ Input Voltage⁵ (half / whole space)

98 dB / 92 dB @ 2.00 V

Equalized Maximum SPL⁶ (half / whole space)

137 dB / 131 dB peak
131 dB / 125 dB continuous

AES75 Maximum Linear Sound Levels (half space)⁷

126.9 dBZ / 140.4 dBZpk / 115.3 dBA
at an RMS input level of 36.5 dBV (66.5 V)

Recommended Power Amplifier

2000 W to 3000 W @ 4 Ω

Physical Specifications

Connections

(2) Neutrik NL4 Speakon
Pin 1+/-: LF1 + LF2
Pin 2+/-: NC

Mounting / Suspension Points

(12) M10 x 1.5 eye bolt angle points,
(4) vibration isolation feet*

* Indoor version only

Dimensions / Weight

See pages 4 & 5

Finish

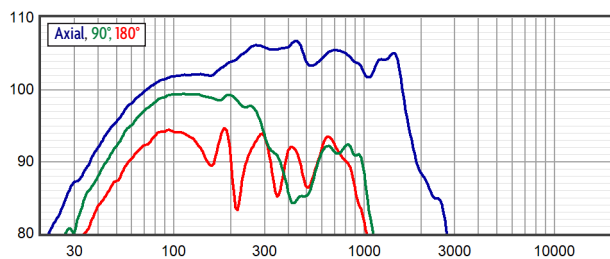
Black or white painted enclosure
White enclosure does not include handles

Options

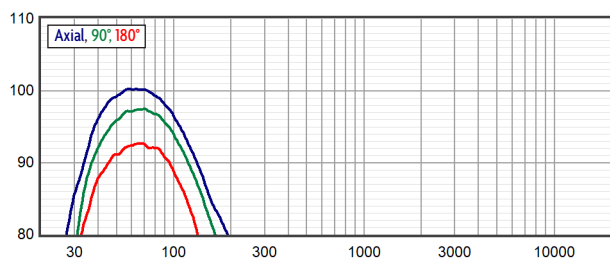
Phoenix block input, Custom color finish,
IP55 Weather-resistant (WR) enclosure & hardware

product specification

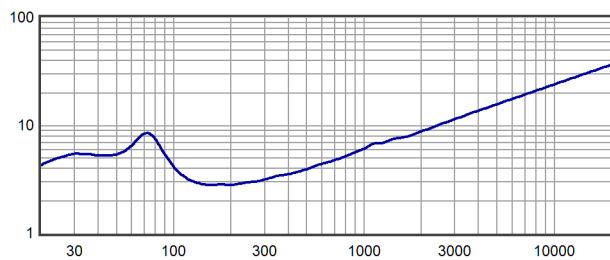
Axial Sensitivity (dB SPL, 2.00 V @ 1 m, half space)^{8,9}



Axial Processed Response (dB, half space)^{8,10}



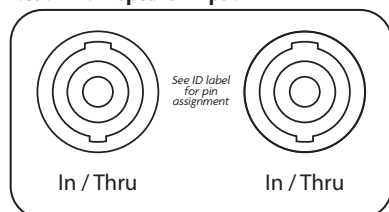
Impedance (ohms)



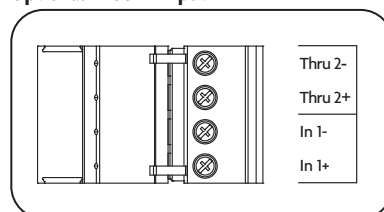
product specification

Connections

Neutrik NL4 Speakon Input



Optional Phoenix Input



Phoenix 1777749 plug:
Min 24 AWG / 0.2 mm²
Max 10 AWG / 6.0 mm²

Mechanical Specification Drawings

2D and 3D DWG dimensional drawings are available for download at www.fulcrum-acoustic.com/support.

Notes

¹ **Performance Specifications** All acoustic specifications rounded to nearest whole number. External DSP with Fulcrum Acoustic-provided settings is required to achieve the specified performance.

² **Operating Range** The frequency range within which the processed response is within 10 dB of the average.

³ **Power Handling** Based on the AES power handling of the transducers.

⁴ **Nominal Sensitivity** The 1-meter-referenced SPL produced by a 1 watt band limited pink noise signal, with no processing applied.

⁵ **Equalized Sensitivity** The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which produces a total power of 1 watt, in sum, to the loudspeaker subsections.

⁶ **Equalized Maximum SPL** The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which drives at least one subsection to its rated power.

⁷ **AES75 Maximum Linear Sound Levels** Per AES75-2023: "AES standard for acoustics – Measuring loudspeaker maximum linear sound levels using noise".

⁸ **Resolution** All response graphs are subjected to 1/6 octave cepstral smoothing with a gaussian weighting function.

⁹ **Axial Sensitivity** The SPL plotted against frequency for a 1 watt swept sine wave, referenced to 1 m with no signal processing.



¹⁰ **Axial Processed Response** The axial magnitude response with recommended signal processing applied.



fulcrum
ACOUSTIC®

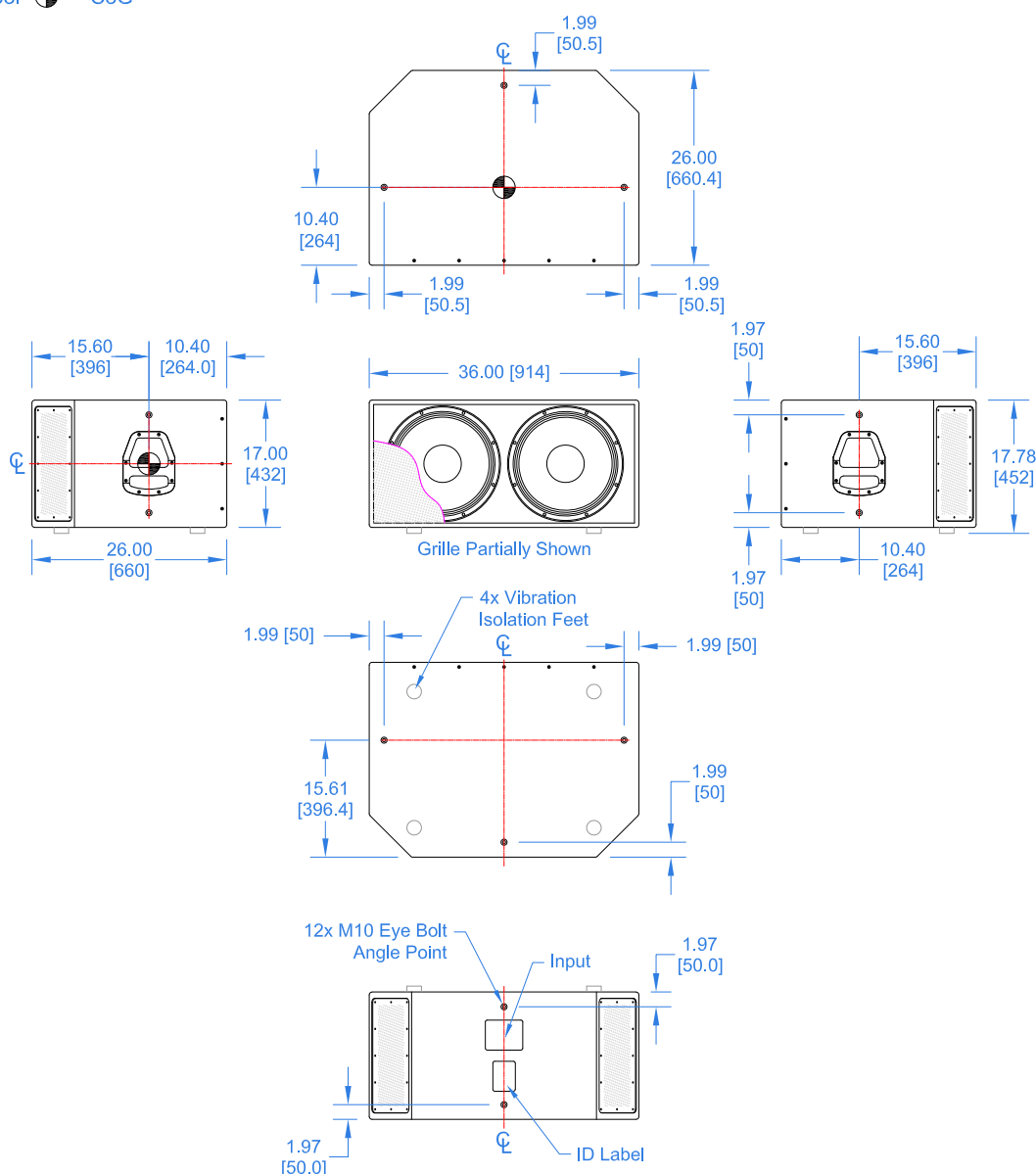
product specification

Notes:

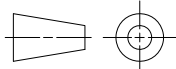
1. Net Weight = Approx. 128.0 lb / 58.1 kg
2. Symbol  = M10 eye bolt angle point
3. Symbol  = CoG

REVISIONS

REV	DESCRIPTION	APPR / DATE
1	NEW ISSUE	RAF 05/01/2025



THIRD ANGLE PROJECTION



THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOUT WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES

TOLERANCE IN INCHES
.XX±.015 .XXX±.005
FRACTIONS ±1/32
ANGLES ±1/2°

(X.XX) = REF DIMS NO TOLERANCE IMPLIED

TSC = THEORETICAL SHARP CORNER

DIMENSIONS ACROSS CENTERLINES
TO BE SYMMETRICAL

STATUS

RELEASED

APPROVALS

DATE

DRAWN:

RAF

5/01/25

CHECKED:

DES ENG:

MFG ENG:



FULCRUM ACOUSTIC, LLC
1 MAIN STREET, WHITINSVILLE, MA 01588 USA

TITLE:

Mechanical Spec,
CS215L

A

SHEET 1 OF 1

SCALE: 1:20

DWG. NO.

820-100-185

REV

1




Drawing is reduced. Do not scale.



fulcrum
ACOUSTIC®

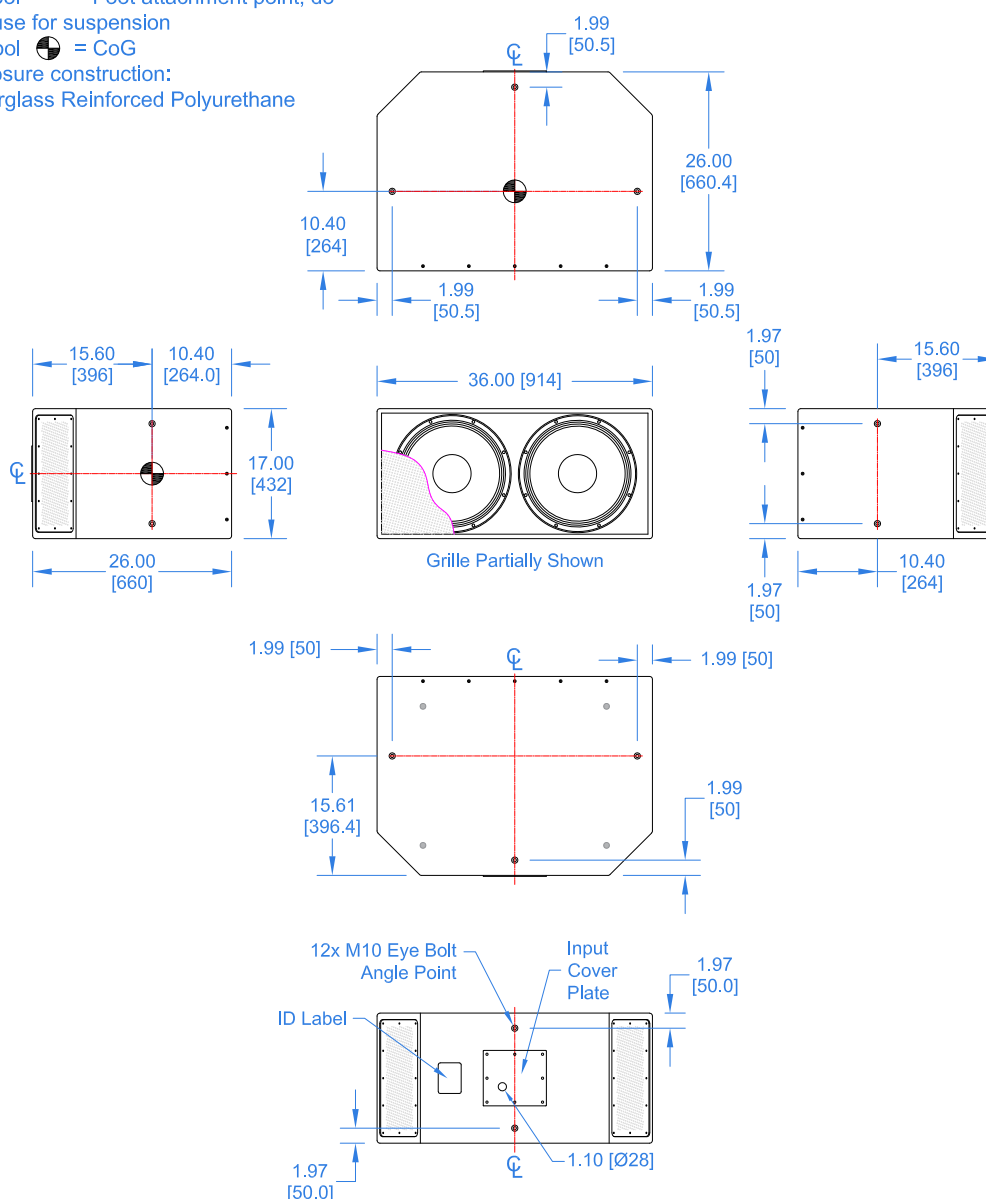
product specification, weather-resistant (WR) version

Notes:

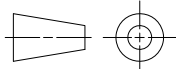
1. Net Weight <= Approx. 128.0 lb / 58.1 kg
2. Symbol  = M10 eye bolt angle point
3. Symbol  = Foot attachment point; do not use for suspension
4. Symbol  = CoG
5. Enclosure construction:
Fiberglass Reinforced Polyurethane

REVISIONS

REV	DESCRIPTION	APPR / DATE
1	NEW ISSUE	RAF 05/01/2025



THIRD ANGLE PROJECTION



THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOUT WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES

TOLERANCE IN INCHES
.XX±.015 .XXX±.005
FRACTIONS ±1/32
ANGLES ±1/2°

(XXX) = REF DIMS NO TOLERANCE IMPLIED

TSC = THEORETICAL SHARP CORNER

DIMENSIONS ACROSS CENTERLINES
TO BE SYMMETRICAL

STATUS

RELEASED

APPROVALS

DRAWN: RAF

CHECKED:

DES ENG:

MFG ENG:

DATE

5/01/25



FULCRUM ACOUSTIC, LLC
1 MAIN STREET, WHITINSVILLE, MA 01588 USA

TITLE:

Mechanical Spec,
CS215L-WR

SHEET

1 OF 1

SCALE: 1:20

DWG. NO.

820-100-186

REV

1

Drawing is reduced. Do not scale.