


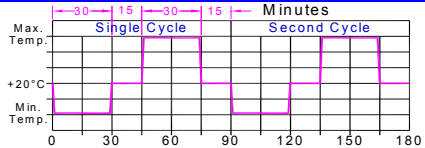


PRODUCT INFORMATION



Part #: **CE-CM530AVQ**

Revision: 5-2017

| DESCRIPTION | | FEATURES | |
|--|---|--|---|
| <p>Challenge Electronics CONTINUOUS Tone, MEDIUM Loud, 5 to 30 Vdc, A style Rear Panel Mounting in 1.125" (28.6 mm) Hole, with a mechanical Volume Control, Sound Pressure Level of 100 dB(A) at 30 Vdc at 61 cm, 2,900 Hz. Output Frequency, Quick Connect Blades termination, Piezoelectric Alarm</p> | | <ul style="list-style-type: none"> ◆ Reliable Solid State Piezoelectric Technology ◆ Polarity and Voltage Surge Protected ◆ Corrosion Resistant Stainless Steel Diaphragm ◆ Extended Storage Temperatures ◆ Flame Retardant Plastic ◆ IP-68; Water and Dust Proof Hermetically Sealed Alarm ◆ NEMA 3R, 4X, or 12 with Gasket (not supplied) ◆ RoHS, Lead Free and REACH Compliance | |
|  | | | |
| SPECIFICATIONS | | | |
| Operating Mode | Medium Loud, Continuous Tones | | Rate |
| Operating Voltage | 5 to 30 Vdc | Nominal Operating Voltage | 24 Vdc |
| Operating Frequency | 2,900 ± 250 Hz. | | |
| Typical Loudness | At 5 Vdc | 81 ± 8 dB(A) | At 12 Vdc |
| Typical Loudness | At 12 Vdc | 95 ± 8 dB(A) | At 24 Vdc |
| Typical Loudness | At 24 Vdc | 99 ± 8 dB(A) | At 30 Vdc |
| Typical Loudness | At 30 Vdc | 100 ± 3 dB(A) | |
| SPL is measured at 24" (61 cm), 25°C, Sound Level meter # 2240, Type 2, Fast Response, A-Weighted | | | |
| Operating Current | At 5 Vdc | 3 mA | At 12 Vdc |
| Operating Current | At 12 Vdc | 10 mA | At 24 Vdc |
| Operating Current | At 24 Vdc | 20 mA | At 30 Vdc |
| Operating Current | At 30 Vdc | 25 mA | |
| Volume Control | <p>Maximum Sound Pressure Level can be restricted up to 20 dB from maximum output. (Note, The Volume Control Rotor may reduce maximum loudness) To install, simply, push the ROTOR onto the front of alarm until it snapped in place To attenuate sound, while alarm is turned on, rotate the ROTOR until maximum desired sound is achieved</p> | | |
| Operating Temperature | -30°C to +65°C | Storage Temperature | -40°C to +100°C |
| Surge Voltage | 20% over maximum Operating Voltage for less than 5 minutes | | |
| Polarity Protection | Protected against Reversed Voltage to the Maximum Operating Voltage | | |
| Materials | Alarm Case | Plastic, "A" Case Style, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Black | |
| | Diaphragm | Stainless Steel 304 | |
| | Encapsulation | Silicon Potting covering SMD components, topped with 2 parts epoxy potting, Black | |
| | Termination | Two 2 0.25 (6.4 mm) Quick Connect Blades, 0.032 (0.8 mm) wide, Brass, Electro-Tin plated | |
| Physical Dimensions | Diameter (D) | 1.41" (35.8 mm) Ø | Width (W) |
| Physical Dimensions | | | Height (H) |
| Physical Dimensions | | | 1.40" (35.7 mm) |
| Approximate Weight | 37 grams | With Volume Control | No |
| Approximate Weight | | Compliance | RoHS, Lead Free, and REACH (SVHC) |
| RELIABILITY | | | |
| Thermal Operating Temperature Test | 96 hours continuous operation at Rated Power , at Maximum Rated Operating Temperature * | | |
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| Thermal Storage Temperature Test | 96 hours storage at Maximum Rated Storage Temperatures * | | |
| Thermal Storage Temperature Test | 96 hours storage at Minimum Rated Storage Temperatures * | | |
| Thermal Shock Test | <p>5 cycles of Minimum and Maximum Operating Temperature</p> <p>Each cycle shall be set per diagram below and is three (3) hours long. Make sure to limit temperature range to specifications listed above *</p> | |  |
| Humidity Test | 120 Hours at +60°C±2°C, 90-95% RH * | | |
| Salt Spray | Withstand exposure to salt spray per ASTM B117 for a period of 300 hours * | | |
| Water & Dust Exposure | Withstands water submergence and dust exposure per IP-68 * | | |
| Vibration Test | Alarm Functionality | Withstand 2 Hours of Sweeping 10 to 55 Hz. Vibration Frequency and Vibration Amplitude of 1.5 mm, in each of 3 perpendicular directions * | |
| | Mechanical Strength | Withstand 300 Hours of Continuous Reciprocating Vibrations, Vibration Range of 1.0" (25.4 mm) P-P and Vibration Frequency of 5 Hz. (300 rpm) * | |
| Drop Test | Dropped naturally from 1 meter height onto the surface of 10 mm wooden board, 2 directions upper and side of the part are applied * | | |
| Termination Strength | Maximum of 15 pounds (6.8 Kg) load pull test | | |
| * Reliability Test Performance | Parts should conform to original performance within ±3dB, after 3 hours of recovery and dry period | | |
| Life Test | Intermittent | 1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and Maximum Rated Voltage | |
| | Continuous | 250 hours continuous operation at Maximum Rated Voltage and maximum Operating Temperatures | |
| Warranty | For a period of Two (2) years from date of shipping under normal operations conditions This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair | | |



| Current Draw and Loudness Vs. Input Voltage | | DIMENSIONS | Units | Inches | Tolerance | 0.030 | | | | | | | | |
|---|--|------------|-------|--|--|-------|----------------|--|-------------------|--|----------------|---|--------------------|---|
| | | | | (mm) | | (0.7) | | | | | | | | |
| Typical Output Sound Level ± 4 dB(A), with Type 2 Meter | | | | <table border="1"> <tr> <td>Alarm Threads:</td> <td>1.125-24 UNS Threads, 2A Class, Major 1.118" Ø, Minor 1.065" Ø, Pitch 1.095" Ø</td> </tr> <tr> <td>Ring Nut Threads:</td> <td>1.125-24 UNS Threads, 2B Class, Major 1.128" Ø, Minor 1.075" Ø, Pitch 1.105" Ø</td> </tr> <tr> <td>Mounting Hole:</td> <td>1.128" (28.7 mm) Ø, Panel Thickness 0.03" (0.75 mm) to 0.25" (6.4 mm)</td> </tr> <tr> <td>Gasket (Optional):</td> <td>Rubber, ID 1.18" (30.0 mm), OD 1.40" (35.6 mm), Thickness 0.10" (2.54 mm)</td> </tr> </table> | | | Alarm Threads: | 1.125-24 UNS Threads, 2A Class, Major 1.118" Ø, Minor 1.065" Ø, Pitch 1.095" Ø | Ring Nut Threads: | 1.125-24 UNS Threads, 2B Class, Major 1.128" Ø, Minor 1.075" Ø, Pitch 1.105" Ø | Mounting Hole: | 1.128" (28.7 mm) Ø, Panel Thickness 0.03" (0.75 mm) to 0.25" (6.4 mm) | Gasket (Optional): | Rubber, ID 1.18" (30.0 mm), OD 1.40" (35.6 mm), Thickness 0.10" (2.54 mm) |
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| Input Voltage (V) | Input Current (mA) | | | | | | | | | | | | | |

ALARM MAKING

| | | | |
|---------------|---|------------|--|
| On side Case: | Part Number Sound Type Operating Voltage Range / Date Code Challenge Electronics Made in China | Date Code: | Date Code consists of 2 Digits for year, 2 for week, and last digit for the day of the week |
| On Back: | Polarity Identification (when required) | | |

REACH, IMDS, and RoHS LEAD FREE COMPLIANCE DECLARATION

This product does NOT contain any of the 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and Substances of Very High Concern (SVHC), and European Union Directive 2011/65/EU (RoHS Directive) of the European Parliament

| | | | | | |
|---|------------|-----------------------------|--|------------|---------------|
| Lead (Pb) / Lead Compounds | ≤1,000 ppm | ≤ 10,000 ppm ^(*) | Poly Brominated Diphenyl Ethers (PBDE) | ≤1,000 ppm | In compliance |
| Mercury (Hg) / Mercury Compounds | ≤1,000 ppm | In compliance | Bis (2-Ethylhexyl) Phthalate (DEHP) | ≤1,000 ppm | In compliance |
| Cadmium (Cd) / Cadmium Compounds | ≤ 100 ppm | In compliance | Butyl Benzyl Phthalate (BBP) | ≤1,000 ppm | In compliance |
| Hexavalent Chromium (Cr _{VI}) | ≤1,000 ppm | In compliance | Dibutyl Phthalate (DBP) | ≤1,000 ppm | In compliance |

(*) European Union Directive 2011/65/EU (RoHS Directive) of the European Parliament. And of the Council of 8 June 2011 and all subsequent amendments. The ANNEX III of the Directive Applications exempted from the restriction in Article 4(1): 7(c)-I, Electrical and electronic components containing lead in ceramic matrix compound Piezoelectric is also known as Lead Zirconate Titanate (PZT) ceramics. Lead content, homogeneous material compound is between 58% and 68% by weight depending on the proportion of zirconium (Zr) and titanium (Ti)

PACKAGING

| | | | |
|------------------------|-----------------------------|-------------|---------|
| | Shipping Box MARKING | TRAY | |
| | Part Number | Dimensions | L |
| Other PN (if required) | W | | 34.7 cm |
| Lot and/or Date Code | H | | 21.2 cm |
| Quantity | Quantity | 42 | |
| PO Number | SHIPPING BOX | | |
| Net Weight | Dimensions | L | 34.7 cm |
| Gross Weight | | W | 34.7 cm |
| Box Number of Boxes | | H | 21.2 cm |
| Made in China | Number of Trays | 6 | |
| | Quantity | 250 | |
| | Approximate Weight | 9 Kg. | |

| Revision | Description | By | Date |
|----------|--|-----------|-----------|
| 1-2009 | Corrected SPL and Current | Ely Zofan | 8/10/2009 |
| 2-2011 | | Ely Zofan | 3/8/2011 |
| 3-2012 | Changed Format | Ely Zofan | 7/16/2012 |
| 4-2016 | Corrected PN, added REACH, IMDS, and RoHS Lead Free Compliance, and changed the Warranty period | Ely Zofan | 4/19/2016 |
| 5-2017 | Updating SPL and current values at min and max voltages. Update mechanical drawing. Change terminal height to 11.4 mm. | WS | 7/6/2017 |