Challenge Electronics
95 East Jefryn Boulevard
Deer Park, NY 11729

Tel: 1-800-722-8197
1-631-595-2217
Fax: 1-631-667-5484

EMAIL: Sales@ChallEelec.com
WEB: WWW.ChallengeElectronics.com
ISO 9001:2008; ISO-TS 16949:2009 Certified

PRODUCT INFORMATION

Lead Free RoHS COMPLIANCE

Part #: CED-ME516AQSW **Revision: 0-2016**

New from Challenge Electronics: SMART-CONTROL-ALERT™

Multi Tone Extra Loud Rear Panel Mount Piezoelectric Alarm

DESCRIPTION

Challenge Electronics Digital Multi-Tone; EXTRA Loud; **5** to **16** Vdc; **A** style case Rear Panel Mounting in 1.125" (28.6 mm) Hole; **3,000** Hz. Output Frequency; typical Sound Pressure Level of **103** dB(A) at 16 Vdc at 61 cm; 2 0.25" **Q**uick Disconnect Blades termination; with 4 Poles, **DIP Switch** Sound Tone selection, Piezoelectric Alarm

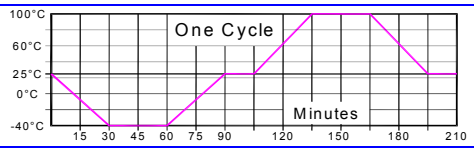
FEATURES

- Controlled Sound Microcontroller Programing Technology
- Reliable Solid State Piezoelectric Technology
- Corrosion resistant Stainless Steel Diaphragm
- Polarity and Voltage Surge Protected
- Flame Retardant Plastic
- Hermetically Sealed Alarm
- IP-68; Water and Dust Proof
- NEMA 3R, 4X, or 12 with Gasket (not supplied)
- RoHS, Lead Free and REACH Compliance

SPECIFICATIONS

Operating Mode	Extra Loud, 15 Multi-Sound Tones Selection (see page # 2)					Tone Selection	4 Poles, DIP Switch		
Operating Voltage	5 to 16 Vdc		Nominal Operating Voltage	12 Vdc					
Operating Frequency	3,000 ± 50 Hz.					Pulse Rate			
Typical Loudness	At 5 Vdc	90 (+8/-5) dB(A)		At 12 Vdc	102 (+7/-4) dB(A)		At 16 Vdc	103 (+6/-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	Typ. 15 mA	Max. 25 mA	At 12 Vdc	Typ. 30 mA	Max. 40 mA	At 16 Vdc	Typ. 40 mA	Max. 60 mA
Operating Temperature	-30°C to +65°C		Storage Temperature	-40°C to +85°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								
Materials – Diaphragm	Stainless Steel 304								
Materials – Encapsulation	Silicon Potting covering SMD components, topped with 2 parts epoxy potting, Black								
Materials – Termination	Two 2 0.25 (6.4 mm) Quick Connect Blades, 0.032Ø (0.8Ømm) wide, Brass, Electro-Tin plated								
Physical Dimensions	Length or Diameter (L /D)	1.41" (35.8 mm) Ø		Width (W)			Height (H)	1.40" (35.7 mm)	
Approximate Weight	35 grams	With Volume Control	No	Compliance	RoHS, Lead Free, and REACH (SVHC)				

RELIABILITY

Thermal Operating Temperature Test		**96 hours** continuous operation **at Rated Power**, at **Maximum Rated Operating Temperature** *
		96 hours continuous operation **at Rated Power**, at **Minimum Rated Operating Temperature** *
Thermal Storage Temperature Test		**96 hours** storage at **Maximum Rated Storage Temperatures** *
		96 hours storage at **Minimum Rated Storage Temperatures** *
Thermal Shock Test		**5 cycles** of **Minimum and Maximum Operating Temperature** Each cycle shell be set per diagram below and is three (3) hours long. Make sure to limit temperature range to specifications listed above * 
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 10mm 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	

Challenge Electronics
95 East Jefryn Boulevard
Deer Park, NY 11729

Tel: 1-800-722-8197
1-631-595-2217
Fax: 1-631-667-5484

EMAIL: Sales@ChallEelec.com
WEB: WWW.ChallengeElectronics.com
ISO 9001:2008; ISO-TS 16949:2009 Certified

SOUND TONES TYPE and SELECTION

Tone #	Output Sound Tone		Rate	DIP Switch Setting (1)			
				1	2	3	4
1	Continuous	A Steady Tone	NA	Off	Off	Off	Off
2	Moderate Chime	Sound Pressure Level (Loudness) which exponential decays, at	1 Hz.	On	On	Off	On
3	Fast Chime	Sound Pressure Level (Loudness) which exponential decays, at	2 Hz.	Off	On	On	On
4	Slow Intermittent	An Interrupted Sound at 50% of the duty cycle, at	1 Hz.	On	Off	Off	Off
5	Fast Intermittent	An Interrupted Sound at 50% of the duty cycle, at	3 Hz.	Off	On	Off	Off
6	Very-Fast Intermittent	An Interrupted Sound at 50% of the duty cycle, at	6 Hz.	On	On	Off	Off
7	Ultra-Fast Intermittent	An Interrupted Sound at 50% of the duty cycle, at	10 Hz.	On	Off	Off	On
8	Slow Warble	A Sound Frequency Switching between 2,800 Hz. and 3,200 Hz. at 50% duty cycle, at	1 Hz.	Off	Off	On	Off
9	Fast Warble,	A Sound Frequency Switching between 2,800 Hz. and 3,200 Hz. at 50% duty cycle, at	3 Hz.	Off	Off	Off	On
10	Very-Fast Warble	A Sound Frequency Switching between 2,800 Hz. and 3,200 Hz. at 50% duty cycle, at	6 Hz.	On	Off	On	Off
11	Very-Fast Warble	A Sound Frequency Switching between 2,800 Hz. and 3,200 Hz. at 50% duty cycle, at	10 Hz.	Off	On	On	Off
12	Fast Pulsating	An Interrupted Sound of 4 Pulses within 0.5 Second and 0.5 Second OFF per Cycle	1.0 Second	On	On	On	Off
13	Slow Pulsating	An Interrupted Sound of 4 Pulses within 0.5 Second and 1.0 Seconds OFF per Cycle	1.5 Second	Off	On	Off	On
14	Gentle Pulsating	An Interrupted Sound of 8 Pulses within 1.0 Second and 1.0 Second OFF per Cycle	2.0 Second	Off	Off	On	On
15	Tender Pulsating	An Interrupted Sound of 8 Pulses within 1.0 Second and 4.0 Seconds OFF per Cycle	5.0 Second	On	Off	On	On

Notes: (1)

Current Draw and Loudness Vs. Input Voltage

Typical Output Sound Level ± 4 dB(A), with Type 2 Meter

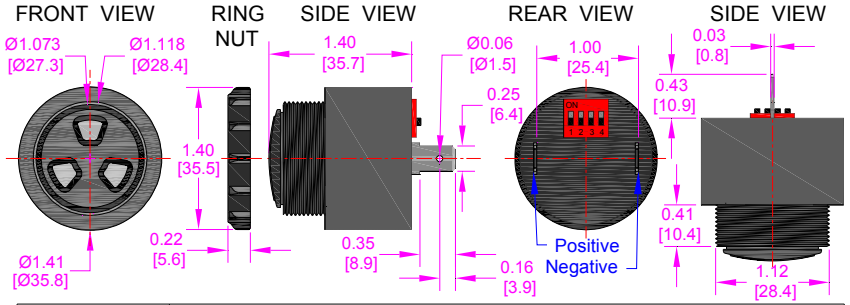
Input Current (mA)

Input Voltage (V)

DIMENSIONS

Units: Inches (mm)

Tolerance: 0.030 (0.7)



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
DIP Switch:	4 Poles, Contacts: Gold Plated, Terminal: Tin Plated, UL 94V-0, Color Red
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)

INFORMATION

Challenge Electronics
95 East Jefryn Boulevard
Deer Park, NY 11729

Tel: 1-800-722-8197
1-631-595-2217
Fax: 1-631-667-5484

EMAIL: Sales@ChallEelec.com
WEB: WWW.ChallengeElectronics.com
ISO 9001:2008; ISO-TS 16949:2009 Certified

ALARM MAKING

On side Case:	Part Number Sound Type Operating Voltage Range / Date Code Challenge Electronics Made in China	
On Back:	Polarity Identification (when Required)	

RECOMMENDED MOUNTING HOLE PROCESS

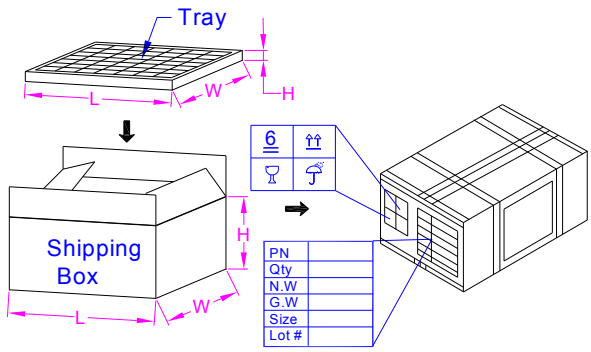
SUBSTANCE OF VERY HIGH CONCERN (REACH) and RoHS LEAD FREE COMLIANCE

This product does NOT contain any of the REACH Substances of Very High Concern (SVHC), and complies with European Union REACH Regulation No.1907/2006 regarding chemical substances, which must be registered or disclosed.

Cadmium (Cd) / Cadmium Compounds	≤ 100 ppm	In compliance	Poly Brominated Biphenyls (PBB)	≤1,000 ppm	In compliance
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	Arsenic (As)	≤1,000 ppm	In compliance
Hexavalent-Chromium (Cr6+)	≤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	34.7 cm
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 Weighjt		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