# AL100X Alarm Horn Sounder & Xenon Strobe Beacon

**The AL100X is a compact, high output, 110dB(A) alarm horn sounder with a 5 Joule, 200cd Xenon strobe beacon. CPR complaint, EN54-3 & EN54-23 tested and UL/cUL approved for private mode fire use. Featuring 64 alarm tone frequencies and 4 remotely activated stages/channels.**

The AL100X features the A100 alarm horn sounder combined with the L101X Xenon strobe beacon. The compact, robust enclosure is ideal for all general signalling applications including fire, security and process control. The alarm horn sounder & Xenon strobe beacon may be connected from a single or separate supplies for simultaneous or independent operation.

## Features

- Automatic synchronisation
- Continuously rated
- Dual M20 or 1/2"NPT clearance cable entries
- Duplicate pluggable cable terminations – Class A
- Ingress protection IP66 Type 3R/13
- 64 alarm tone frequencies and 4 remotely activated alarm stages
- Available with custom tone configurations and frequencies
- Diode polarized for use in supervised circuits

## Approvals

- UL: UL464, UL464A, UL1638, UL1638A
- cUL: CSA C22.2 No 205-17
- ULC: CAN/ULC-S525 & CAN/ULC-S526
- UL EU: (EN54-3 & EN54-23) UL-EU-01154-CPR
- CPR 305/2011: 2821-CPR-0109
- EAC CU TR 043/2017: B.00291/21
- EAC: RU D-GB.GA05.B.12595-20
- RMRS Marine: No. 19.00193.278
- CE, UKCA





## Specification

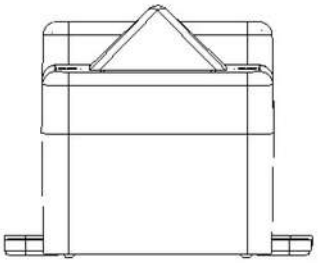
| Alarm Horn: | |
|---|---|
| Maximum output: | 110dB(A) @ 1 m ±3dB<br>[101dB(A) @ 10ft/3m ±3dB] |
| Nominal output: | 102dB(A) @ 1m ±3dB<br>[93dB(A) @ 10ft/3m ±3dB] |
| No. of tones: | 64 (UKOOA / PFEER compliant) |
| No. of stages: | 4 |
| Volume control: | -12dB(A) tone dependent |
| Effective range: | 38m/124ft @ 1KHz |
| In rush: | 636mA within 4.0ms @ 24Vdc |
| Stage switching: | Negative (common positive) |
| **Xenon Strobe:** | |
| Energy: | 5 Joules(5Ws) |
| Flash rate: | 1Hz (60 fpm)<br>DC units: 1.5Hz (90 fpm) & Double strike |
| Peak Candela: | 500,000 cd – calculated from energy (J) |
| Effective cd: | 250 cd – calculated from energy (J) |
| Peak Candela: | 86,935 cd* – measured ref. to I.E.S. |
| Effective cd: | 200 cd* – measured ref. to I.E.S. |
| Tube life: | Emissions may reduce to 70% after 8 million flashes |
| **General:** | |
| Ingress protection: | IP66 Type 3R/13 |
| Enclosure: | High impact UL94 V0 & 5VA FR ABS/PC |
| Lens colour filter: | Field replaceable UV stable PC |
| Terminals: | 0.5 – 2.5mm² (20-14 AWG) |
| Line monitoring: | Diode polarized for use in supervised circuits |
| Operating: | -40 to +66°C [-40° to +151°F] |
| Storage: | -40 to +70°C [-40° to +158°F] |
| Relative humidity: | 95% at 20°C [68°F] |
| Vibration test: | 35Hz for a duration 4Hr (UL464/UL1638) |
| Jarring test: | 3ft/lb Energy (UL464/UL1638) |
| Impact test: | 3x 5lb (UL464/UL1638) |
| MTBF DC: | 114.79 years / 1,005,530 hours – MIL 217 |
| MTBF AC: | 86.29 years / 755,857 hours – MIL 217 |
| Weight DC: | 0.46kg / 1.01lbs |
| Weight AC: | 0.57kg / 1.25lbs |

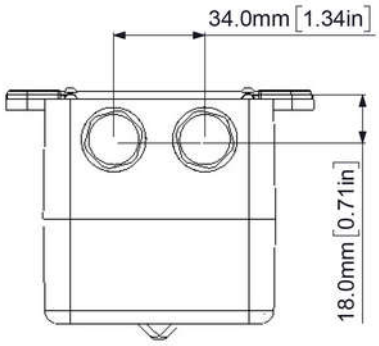
## Part Codes

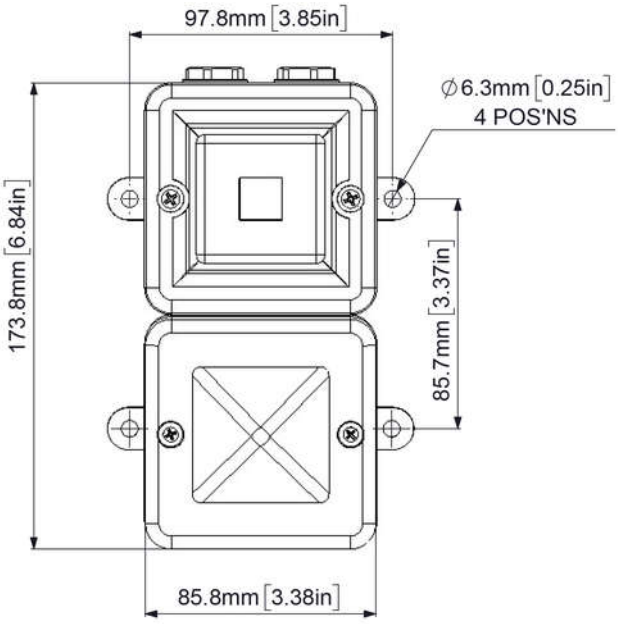
| Variable: | Identifier: | Description: |
|---|---|---|
| Product type: | AL100X | Combined alarm horn sounder & Xenon strobe |
| Voltage: | DC012 | 12Vdc (11.5-14Vdc) |
| | DC024 | 24Vdc (20-28Vdc) |
| | DC048 | 48Vdc (42-54Vdc) |
| | AC024 | 24Vac 50/60Hz |
| | AC048 | 48Vac 50/60Hz |
| | AC115 | 115Vac 50/60Hz |
| | AC230 | 230Vac 50/60Hz |
| Back box/cable entries: [e] | M | Back box with mounting lugs – 2 x M20, 1/2"NPT clearance |
| Stopping plug material: [m] | A | ABS |
| Equip. tag/Duty label: [s] | 0 | No equip. tag or Duty label |
| | 1 | 316 (A4) St/St Equip. tag/Duty label |
| | 2 | Metalised Polyester Equip. tag/Duty label |
| Product version: [v] | A | UL/cUL, CPR, RMRS, EAC, CE, UKCA |
| Product option: [o] | 1 | Standard product |
| | X | Custom configuration – contact E2S |
| | Z | Custom alarm tone software – contact E2S |
| Enclosure: [x] | R | Red (RAL 3000) |
| | G | Grey (RAL7038) |
| | W | White |
| Lens colour: [y] | A | Amber |
| | B | Blue |
| | C | Clear |
| | G | Green |
| | M | Magenta |
| | R | Red |
| | Y | Yellow |

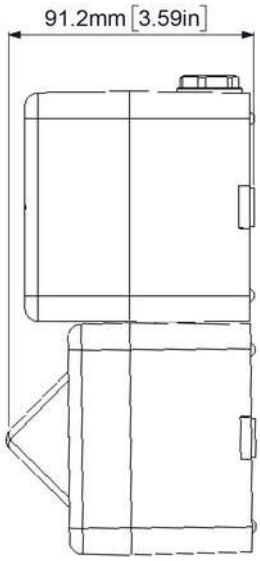
## Current Consumption

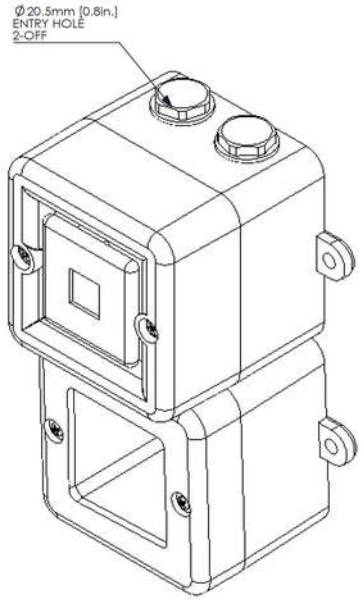
| Product Version: | Nominal Voltage: | Voltage Range: | Beacon Current: | Horn Current: |
|---|---|---|---|---|
| DC012 | 12Vdc | 11.5-14Vdc | 341mA | 17mA |
| DC024 | 24Vdc | 20-28Vdc | 250mA | 33.5mA |
| DC048 | 48Vdc | 42-54Vdc | 170mA | 113mA |
| AC024 | 24Vac | 24-28Vac 50/60Hz | 300mA | 42.5mA |
| AC048 | 48Vac | ±10% 50/60Hz | 250mA | 42.5mA |
| AC115 | 115Vac | ±10% 50/60Hz | 70mA | 25mA |
| AC230 | 230Vac | ±10% 50/60Hz | 35mA | 17mA |





## Tone table

| S 1 | Description | S 2 | S 3 | S 4 |
|---|---|---|---|---|
| T 1 | 1000 Continuous - PFEER Toxic Gas | Any | T 2 | T 44 |
| T 2 | 1200/500 @ 1Hz Sweeping - DIN / PFEER P.T.A.P. | Any | T 3 | T 44 |
| T 3 | 1000 @ 0.5Hz (1s on, 1s off) Intermittent - P... | Any | T 2 | T 44 |
| T 4 | 1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - NF C 48... | Any | T 24 | T 1 |
| T 5 | 544(100mS)/440 (400mS) - NF S 32-001 | Any | T 19 | T 1 |
| T 6 | 1500/500 - (0.5s on , 0.5s off) x3 + 1s gap -... | Any | T 44 | T 1 |
| T 7 | 500-1500Hz Sweeping 2 sec on 1 sec off - AS4428 | Any | T 44 | T 1 |
| T 8 | 500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) - NEN ... | Any | T 24 | T 35 |
| T 9 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1 |
| T 10 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM... | Any | T 34 | T 1 |
| T 11 | 420(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201 ... | Any | T 1 | T 8 |
| T 12 | 1000(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201... | Any | T 1 | T 8 |
| T 13 | 422/775 - (0.85 on, 0.5 off) x3 + 1s gap - ... | Any | T 1 | T 8 |
| T 14 | 1000/2000 @ 1Hz - Singapore | Any | T 3 | T 35 |
| T 15 | 300 Continuous | Any | T 24 | T 35 |
| T 16 | 440 Continuous | Any | T 24 | T 35 |
| T 17 | 470 Continuous | Any | T 24 | T 35 |
| T 18 | 500 Continuous - IMO code 2 (Low) | Any | T 24 | T 35 |
| T 19 | 554 Continuous | Any | T 24 | T 35 |
| T 20 | 660 Continuous | Any | T 24 | T 35 |
| T 21 | 800 Continuous - IMO code 2 (High) | Any | T 24 | T 35 |
| T 22 | 1200 Continuous | Any | T 24 | T 35 |
| T 23 | 2000 Continuous | Any | T 3 | T 35 |
| T 24 | 2400 Continuous | Any | T 20 | T 35 |
| T 25 | 440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent | Any | T 44 | T 8 |
| T 26 | 470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent | Any | T 44 | T 8 |
| T 27 | 470 @ 5Hz (0.10s on, 0.10s off) Intermittent | Any | T 44 | T 8 |
| T 28 | 544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent | Any | T 24 | T 8 |
| T 29 | 655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent | Any | T 44 | T 8 |
| T 30 | 660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent | Any | T 24 | T 8 |
| T 31 | 660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent | Any | T 24 | T 8 |
| T 32 | 745 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 33 | 800 (0.25s on, 1.00s off) Intermittent | Any | T 24 | T 8 |
| T 34 | 800 @ 2Hz (0.25s on, 0.25s off) - IMO code 3.... | Any | T 24 | T 8 |
| T 35 | 1000 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 36 | 2400 @ 1Hz (0.50s on, 0.50s off) Intermittent | Any | T 24 | T 8 |
| T 37 | 2900 @ 5Hz (0.10s on, 0.10s off) Intermittent | Any | T 24 | T 8 |
| T 38 | 363/518 @ 1Hz (0.50s / 0.50s) Alternating | Any | T 8 | T 19 |
| T 39 | 450/500 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 8 | T 19 |
| T 40 | 554/440 @ 1Hz (0.50s / 0.50s) Alternating | Any | T 24 | T 19 |
| T 41 | 554/440 @ 0.65Hz (0.76s / 0.76s) Alternating | Any | T 8 | T 19 |
| T 42 | 561/760 @ 0.83Hz (0.60s / 0.60s) Alternating | Any | T 8 | T 19 |
| T 43 | 780/600 @ 0.96Hz (0.52s / 0.52s) Alternating | Any | T 8 | T 19 |
| T 44 | 800/1000 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 24 | T 19 |
| T 45 | 970/800 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 8 | T 19 |
| T 46 | 800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating | Any | T 24 | T 19 |
| T 47 | 2400/2900 @ 2Hz (0.25s / 0.25s) Alternating | Any | T 24 | T 19 |
| T 48 | 500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping | Any | T 24 | T 12 |
| T 49 | 560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping | Any | T 24 | T 12 |
| T 50 | 560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping | Any | T 24 | T 12 |
| T 51 | 600/1250 @ 0.125Hz (4s / 4s) Sweeping | Any | T 24 | T 12 |
| T 52 | 660/1200 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 53 | 800/1000 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 54 | 800/1000 @ 7Hz (0.07s / 0.07s) Sweeping | Any | T 24 | T 12 |
| T 55 | 800/1000 @ 50Hz (0.01s / 0.01s) Sweeping | Any | T 24 | T 12 |
| T 56 | 2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping | Any | T 24 | T 12 |
| T 57 | 2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping | Any | T 24 | T 12 |
| T 58 | 2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping | Any | T 24 | T 12 |
| T 59 | 2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping | Any | T 24 | T 12 |
| T 60 | 2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping | Any | T 24 | T 12 |
| T 61 | 800Hz Motor Siren | Any | T 24 | T 12 |
| T 62 | 1200Hz Motor Siren | Any | T 24 | T 12 |
| T 63 | 2400Hz Motor Siren | Any | T 24 | T 12 |
| T 64 | Simulated Bell | Any | T 21 | T 12 |



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