

# AL121X Alarm Horn Sounder & Xenon Strobe Beacon

The AL121X features the 126dB(A) A121 alarm horn sounder combined with the L101X Xenon strobe beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

Low current consumption and high SPL in a outdoor rated enclosure ensure the AL121X is suitable for all applications including fire, security and process control. Designed to withstand the harshest of environments. The AL121X employs the latest in reliable D Class amplifier technology for superior sound output with low current consumption. 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 4/4X/13/3R
- 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 & UL1638A
- cUL: CSA C22.2 No 205-17
- UL EU: (EN54-3 & EN54-23) UL-EU-01155-CPR
- CPR 305/2011: 2821-CPR-0110
- MED 2020/1170: MEDB000074G
- DNV GL-CG-0339: TAA00002ZU
- 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: High power level: 124dB(A) @ 1 m ±3dB  
[115dB(A) @ 10ft/3m ±3dB]  
Default power level: 121dB(A) @ 1 m ±3dB  
[112dB(A) @ 10ft/3m ±3dB]

Nominal output: High power level: 121dB(A) @ 1m ±3dB  
[112dB(A) @ 10ft/3m ±3dB]  
Default power level: 118dB(A) @ 1m ±3dB  
[109dB(A) @ 10ft/3m ±3dB]

No. of tones: 64 (UK00A / PFEER compliant)

No. of stages: 4

Volume control: Full range to 0dB(A)

Effective range: High power level: 323m/1062ft @ 1KHz  
Default power level: 221m/726ft @ 1KHz

In rush: 815mA within 4.0ms @ 24Vdc

Stage switching: Negative (common positive)

### Xenon Strobe:

Energy: 5 Joules(5Ws)

Flash rate: 1Hz (60 fpm)  
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 4/4X/13/3R

Enclosure: High impact UL94 V0 & 5VA FR ABS/PC

Lens colour filter: Field replaceable UV stable PC

Terminals: 0.5 – 2.5mm<sup>2</sup> (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: 71.21 years / 623,830 hours – MIL 217

MTBF AC: 39,66 years / 347,463 hours – MIL 217

Weight DC: 2.30kg / 5.06lbs

Weight AC: 2.90kg / 6.39lbs

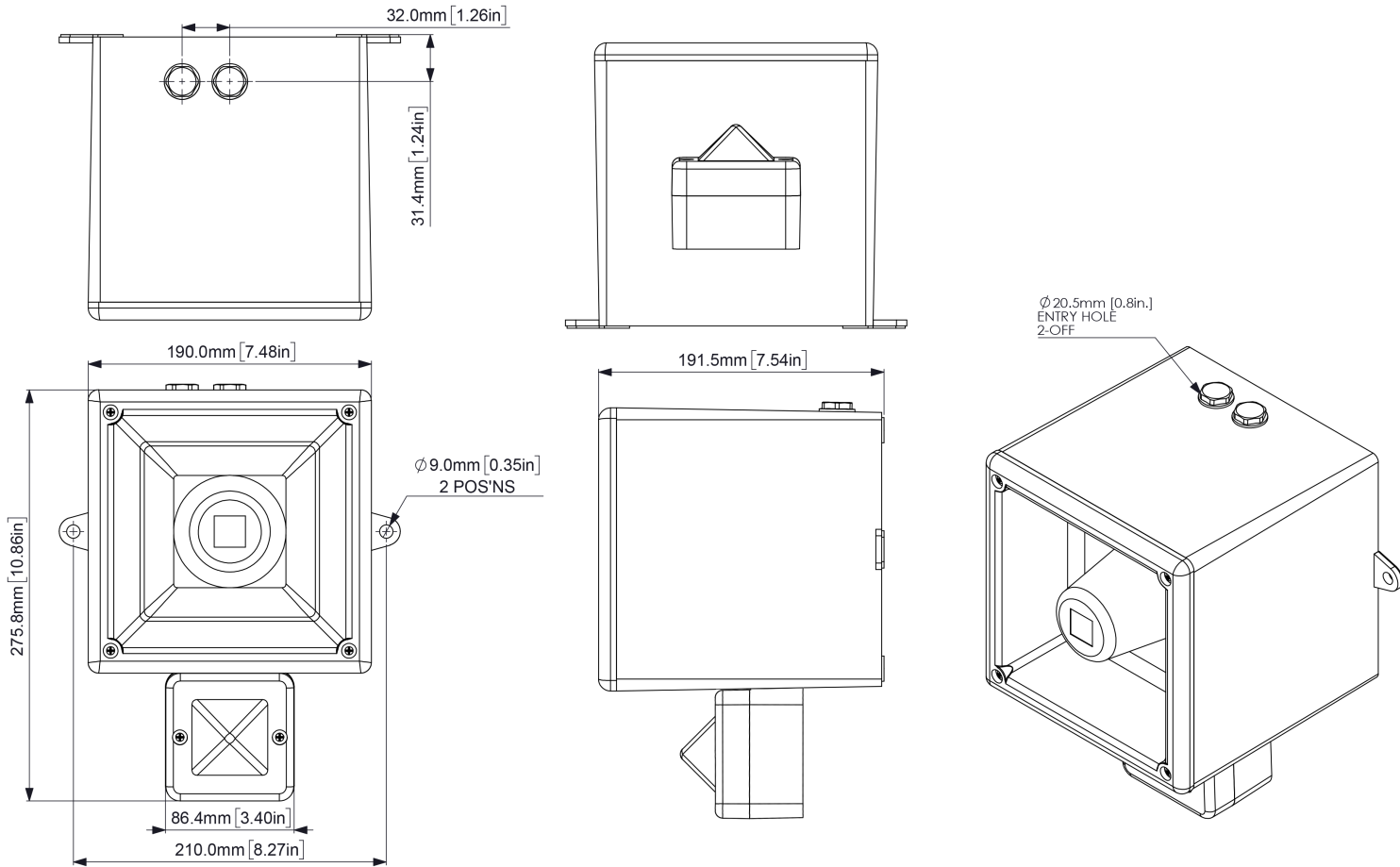
## Part Codes

Variable: Identifier: Description:

|                             |        |  |
|-----------------------------|--------|--|
| Product type:               | AL121X | Combined alarm horn sounder & Xenon strobe               |
| Voltage:                    | DC012  | 12Vdc (11.5-14Vdc)                                       |
|                             | DC024  | 24Vdc (20-28Vdc)   |
|                             | DC048  | 48Vdc (42-54Vdc)   |
|                             | AC115  | 115Vac 50/60Hz   |
|                             | AC230  | 230Vac 50/60Hz   |
| Back box/cable entries: [e] | A      | 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, MED, DNV, 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 (RAL 7038)  |
| 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 Default Power Level Current: | Horn High Power Level Current: |
|------------------|------------------|-------------------------|-----------------|-----------------------------------|--------------------------------|
| DC012            | 12Vdc            | 11.5-14Vdc              | 341mA           | 376mA                             | 440mA                          |
| DC024            | 24Vdc            | 20-28Vdc                | 250mA           | 391mA                             | 888mA                          |
| DC048            | 48Vdc            | 42-54Vdc                | 170mA           | 223mA                             | 453mA                          |
| AC115            | 115Vac           | 103.5-126.5 Vac 50/60Hz | 70mA            | 173mA                             | 340mA                          |
| AC230            | 230Vac           | 207-240 Vac 50/60Hz     | 35mA            | 107mA                             | 212mA                          |



## Tone table

| S 1  | Description                                       | S 2  | S 3  | S 4  |
|------|---|------|------|------|
| T 1  | 1000 Continuous - PFEER Toxic Gas                 | T 3  | T 2  | T 44 |
| T 2  | 1200/500 @ 1Hz Sweeping - DIN / PFEER P.T.A.P.    | T 1  | T 3  | T 44 |
| T 3  | 1000 @ 0.5Hz (1s on, 1s off) Intermittent - P...  | T 1  | T 2  | T 44 |
| T 4  | 1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - NF C 48...  | T 44 | T 24 | T 1  |
| T 5  | 544(100mS)/440 (400mS) - NF S 32-001              | T 52 | T 19 | T 1  |
| T 6  | 1500/500 - (0.5s on , 0.5s off) x3 + 1s gap - ... | T 7  | T 44 | T 1  |
| T 7  | 500-1500Hz Sweeping 2 sec on 1 sec off - AS4428   | T 6  | T 44 | T 1  |
| T 8  | 500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) - NEN ...  | T 44 | T 24 | T 35 |
| T 9  | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM...  | T 18 | T 34 | T 1  |
| T 10 | 1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM...  | T 21 | T 34 | T 1  |
| T 11 | 420(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201 ...  | T 44 | T 1  | T 8  |
| T 12 | 1000(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201...  | T 44 | T 1  | T 8  |
| T 13 | 422/775 - (0.85 on, 0.5 off) x3 + 1s gap - ...    | T 44 | T 1  | T 8  |
| T 14 | 1000/2000 @ 1Hz - Singapore                       | T 23 | T 3  | T 35 |
| T 15 | 300 Continuous                                    | T 44 | T 24 | T 35 |
| T 16 | 440 Continuous                                    | T 44 | T 24 | T 35 |
| T 17 | 470 Continuous                                    | T 44 | T 24 | T 35 |
| T 18 | 500 Continuous - IMO code 2 (Low)                 | T 44 | T 24 | T 35 |
| T 19 | 554 Continuous                                    | T 64 | T 24 | T 35 |
| T 20 | 660 Continuous                                    | T 44 | T 24 | T 35 |
| T 21 | 800 Continuous - IMO code 2 (High)                | T 44 | T 24 | T 35 |
| T 22 | 1200 Continuous                                   | T 44 | T 24 | T 35 |
| T 23 | 2000 Continuous                                   | T 15 | T 3  | T 35 |
| T 24 | 2400 Continuous                                   | T 48 | T 20 | T 35 |
| T 25 | 440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent   | T 1  | T 44 | T 8  |
| T 26 | 470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent    | T 1  | T 44 | T 8  |
| T 27 | 470 @ 5Hz (0.10s on, 0.10s off) Intermittent      | T 1  | T 44 | T 8  |
| T 28 | 544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent   | T 44 | T 24 | T 8  |
| T 29 | 655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent  | T 1  | T 44 | T 8  |
| T 30 | 660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent   | T 44 | T 24 | T 8  |
| T 31 | 660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent    | T 30 | T 24 | T 8  |
| T 32 | 745 @ 1Hz (0.50s on, 0.50s off) Intermittent      | T 44 | T 24 | T 8  |

| S 1  | Description                                     | S 2  | S 3  | S 4  |
|------|---|------|------|------|
| T 33 | 800 (0.25s on, 1.00s off) Intermittent          | T 53 | T 24 | T 8  |
| T 34 | 800 @ 2Hz (0.25s on, 0.25s off) - IMO code 3... | T 56 | T 24 | T 8  |
| T 35 | 1000 @ 1Hz (0.50s on, 0.50s off) Intermittent   | T 44 | T 24 | T 8  |
| T 36 | 2400 @ 1Hz (0.50s on, 0.50s off) Intermittent   | T 21 | T 24 | T 8  |
| T 37 | 2900 @ 5Hz (0.10s on, 0.10s off) Intermittent   | T 53 | T 24 | T 8  |
| T 38 | 363/518 @ 1Hz (0.50s / 0.50s) Alternating       | T 1  | T 8  | T 19 |
| T 39 | 450/500 @ 2Hz (0.25s / 0.25s) Alternating       | T 1  | T 8  | T 19 |
| T 40 | 554/440 @ 1Hz (0.50s / 0.50s) Alternating       | T 44 | T 24 | T 19 |
| T 41 | 554/440 @ 0.65Hz (0.76s / 0.76s) Alternating    | T 1  | T 8  | T 19 |
| T 42 | 561/760 @ 0.83Hz (0.60s / 0.60s) Alternating    | T 1  | T 8  | T 19 |
| T 43 | 780/600 @ 0.96Hz (0.52s / 0.52s) Alternating    | T 1  | T 8  | T 19 |
| T 44 | 800/1000 @ 2Hz (0.25s / 0.25s) Alternating      | T 5  | T 24 | T 19 |
| T 45 | 970/800 @ 2Hz (0.25s / 0.25s) Alternating       | T 1  | T 8  | T 19 |
| T 46 | 800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating  | T 53 | T 24 | T 19 |
| T 47 | 2400/2900 @ 2Hz (0.25s / 0.25s) Alternating     | T 57 | T 24 | T 19 |
| T 48 | 500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping       | T 44 | T 24 | T 12 |
| T 49 | 560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping      | T 44 | T 24 | T 12 |
| T 50 | 560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping       | T 44 | T 24 | T 12 |
| T 51 | 600/1250 @ 0.125Hz (4s / 4s) Sweeping           | T 44 | T 24 | T 12 |
| T 52 | 660/1200 @ 1Hz (0.50s / 0.50s) Sweeping         | T 64 | T 24 | T 12 |
| T 53 | 800/1000 @ 1Hz (0.50s / 0.50s) Sweeping         | T 56 | T 24 | T 12 |
| T 54 | 800/1000 @ 7Hz (0.07s / 0.07s) Sweeping         | T 57 | T 24 | T 12 |
| T 55 | 800/1000 @ 50Hz (0.01s / 0.01s) Sweeping        | T 54 | T 24 | T 12 |
| T 56 | 2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping        | T 57 | T 24 | T 12 |
| T 57 | 2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping        | T 47 | T 24 | T 12 |
| T 58 | 2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping       | T 54 | T 24 | T 12 |
| T 59 | 2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping        | T 44 | T 24 | T 12 |
| T 60 | 2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping      | T 44 | T 24 | T 12 |
| T 61 | 800Hz Motor Siren                               | T 44 | T 24 | T 12 |
| T 62 | 1200Hz Motor Siren                              | T 44 | T 24 | T 12 |
| T 63 | 2400Hz Motor Siren                              | T 44 | T 24 | T 12 |
| T 64 | Simulated Bell                                  | T 44 | T 21 | T 12 |