

# AL121H Alarm Horn Sounder & LED Beacon

The AL121H is a very high output 124dB(A) alarm horn sounder combined with a high output LED beacon. Globally approved for fire, marine and general signalling applications. Featuring 64 alarm tone frequencies and 4 remotely activated stages/channels.

Low current consumption and high SPL in a outdoor rated enclosure ensure the AL121H is suitable for all applications including fire, security and process control. Designed to withstand the harshest of environments. The AL121H employs the latest in reliable D Class amplifier technology for superior sound output with low current consumption. The alarm horn sounder & LED 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
- 4 remotely activated alarm stages/channels
- Available with custom tone configurations and frequencies
- Diode polarized for use in supervised circuits

## Approvals

- UL: UL464 & UL1638
- cUL: CSA C22.2 No 205-17
- ULC: CAN/ULC-S525 & CAN/ULC-S526
- 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)

### L.E.D Beacon:

Light source: High intensity L.E.D. array.  
18 x Cree© SMT White LED

High Power Steady: 180 cd - measured ref. to I.E.S.

1Hz Flash cd: 113 cd - measured ref. to I.E.S.

LED life: 60,000 hours

Settings:

1. High Power Steady
2. Blinking - 425ms ON 75ms OFF
3. 1.0Hz (60 fpm) - 200ms ON 800ms OFF
4. 1.33Hz (80fpm) - 150ms ON 600ms OFF
5. Double Flash
6. Triple Flash
7. 2.0Hz (120fpm) - 125ms ON 375ms OFF
8. Temporal Pattern Flash

### 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: 66.52 years / 582,750 hours - MIL 217

MTBF AC: 36.35 years / 318,420 hours - MIL 217

Weight DC: 2.30kg / 5.06lbs

Weight AC: 2.90kg / 6.39lbs

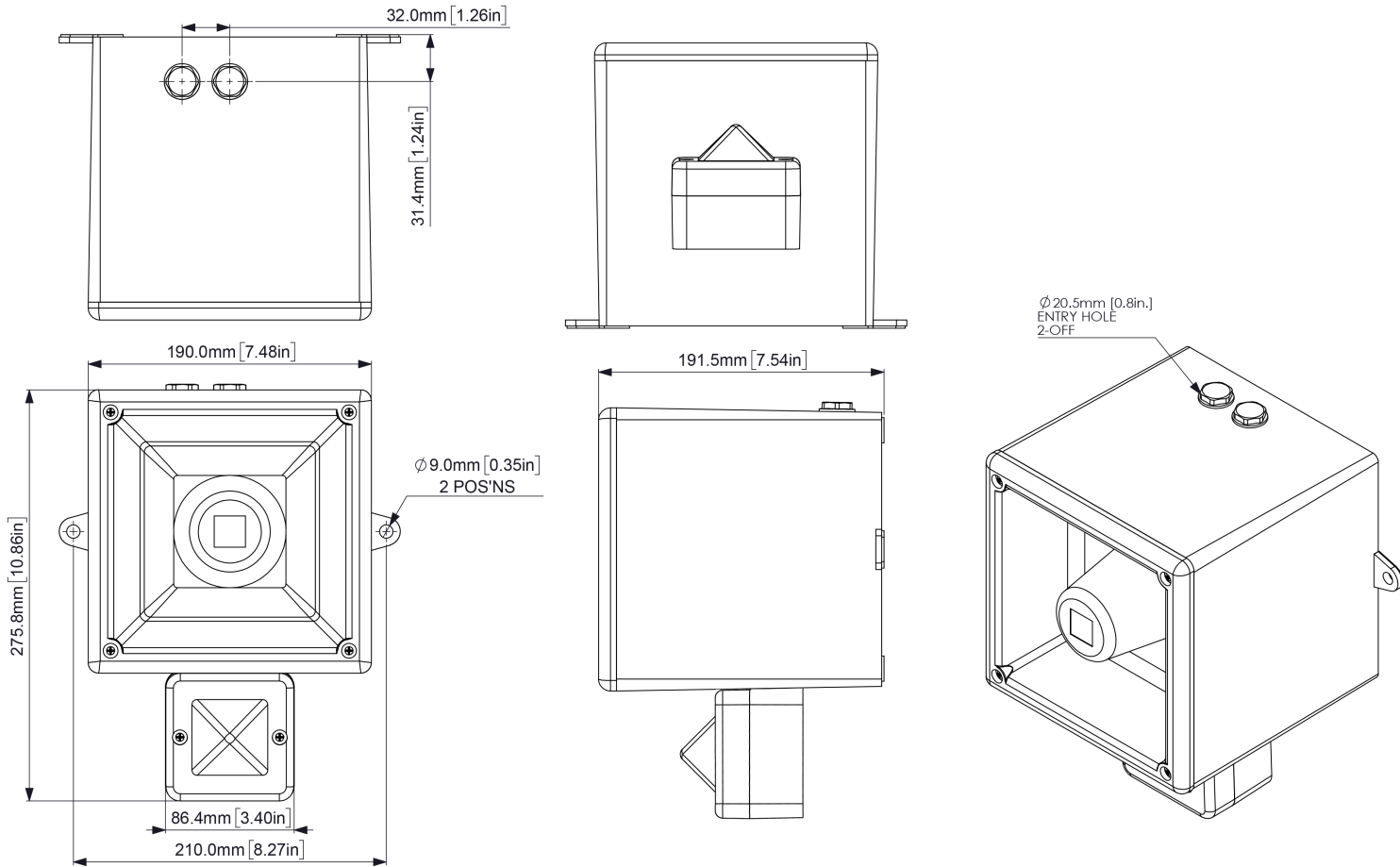
## Part Codes

Variable: Identifier: Description:

Product type:	AL121H	Combined alarm horn sounder & LED beacon
Voltage:	DC024	12Vdc (11.5-14Vdc)/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, ULC, 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:
DC024	12Vdc	11.5-14Vdc	79.5mA	376mA	440mA
DC024	24Vdc	20-28Vdc	87mA	391mA	888mA
DC048	48Vdc	42-54Vdc	60mA	223mA	453mA
AC115	115Vac	103.5-126.5 Vac 50/60Hz	34mA	173mA	340mA
AC230	230Vac	207-240 Vac 50/60Hz	19mA	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