

AL105NH Alarm Horn Sounder & LED Beacon

The AL105NH is the industry standard for combined audible and visual signalling. The high output 113dB(A) alarm horn sounder is combined with a high output LED beacon. Featuring 64 alarm tone frequencies and 4 remotely activated stages/channels.

Globally approved for fire, marine and general applications the low current consumption and high SPL in a robust fire-retardant enclosure ensure the AL105NH is suitable for all signalling applications including fire, security and process control. The alarm horn sounder & LED beacon may be connected from a single or separate supplies for simultaneous or independent operation. SIL1 & SIL2 Route 2H compliant to IEC61508 (2010) as standard.

Features

- Automatic synchronisation
- Continuously rated
- Dual M20x1.5mm threaded cable entries - adaptors available
- 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, UL464A, UL1638, UL1638A
- 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
- SIL1 & SIL2 compliant to IEC61508 (2010)
- CE, UKCA



Specification

Alarm Horn:

Maximum output: 113dB(A) @ 1 m ±3dB
[104dB(A) @ 10ft/3m ±3dB]

Nominal output: 106dB(A) @ 1m ±3dB
[97dB(A) @ 10ft/3m ±3dB]

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

No. of stages: 4

Volume control: -12dB(A) tone dependent

Effective range: 58m/190ft @ 1KHz

In rush: 636mA 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:

Safety Integrity Level: SIL1 and SIL2 Route 2H IEC61508 (2010)

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 – 2.5mm² (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: 113.31 years / 992,555 hours – MIL 217

MTBF AC: 75.37 years / 660,283 hours – MIL 217

Weight DC: 0.95kg / 2.10lbs

Weight AC: 1.20kg / 2.64lbs

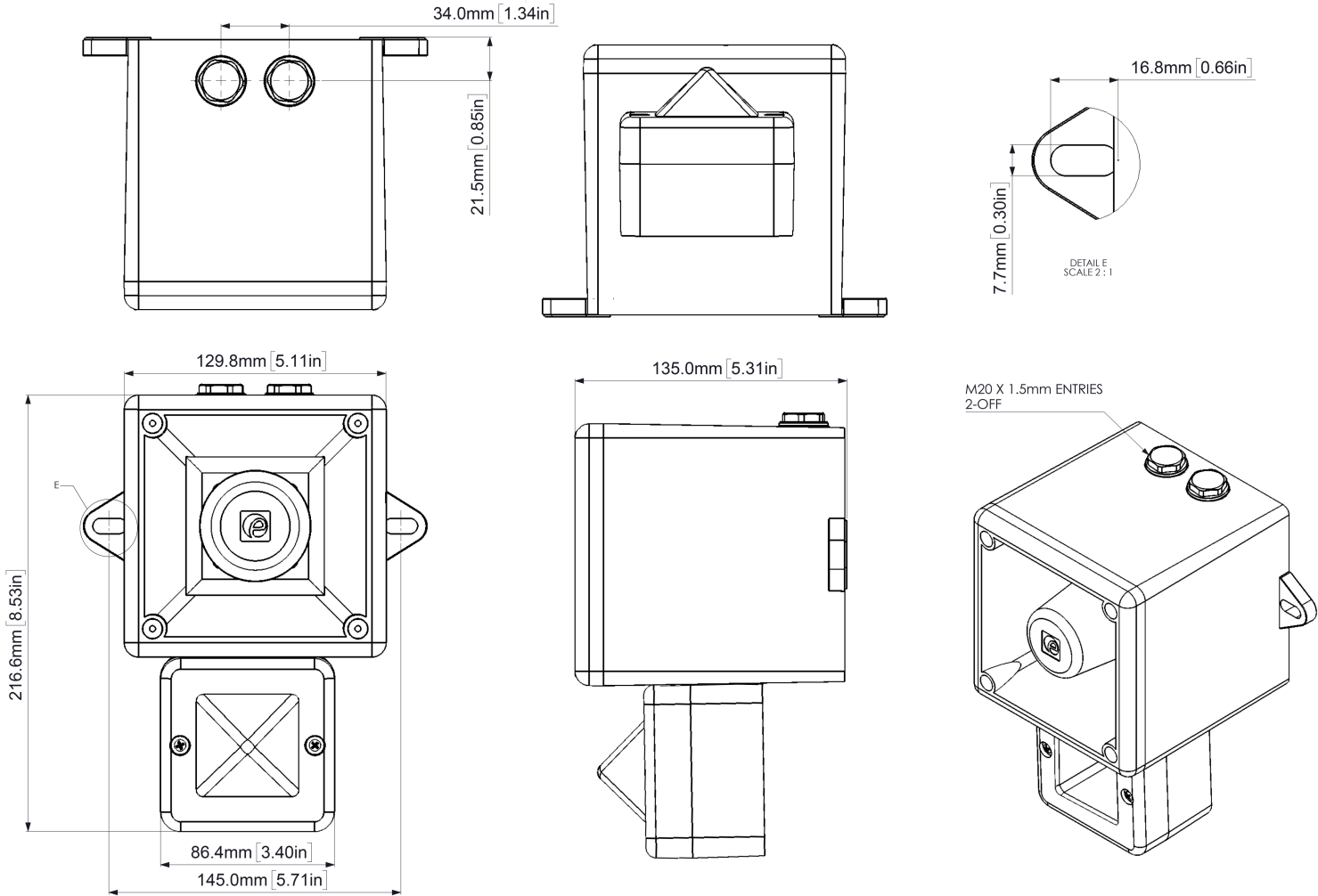
Part Codes

Variable: Identifier: Description:

Product type:	AL105NH	Combined alarm horn sounder & LED beacon
Voltage:	DC024 DC048 AC230	12Vdc (11.5-14Vdc)/24Vdc (20-28Vdc) 48Vdc (48-54Vdc) 48-260Vac 50/60Hz
Back box/cable entries: [e]	A B	Back box with mounting lugs – 2 x M20x1.5mm entries Back box with mounting lugs – 2 x 1/2"NPT (adaptors)
Stopping plug material: [m]	A	ABS
Equip. tag/Duty label: [s]	0 1 2	No equip. tag or Duty label 316 (A4) St/St Equip. tag/Duty label Metalised Polyester Equip. tag/Duty label
Product version: [v]	A	UL/cUL, ULC, RMRS, EAC, CE, UKCA – SIL1 & SIL2
Product option: [o]	1 X Z	Standard product Custom configuration – contact E2S Custom alarm tone software – contact E2S
Enclosure colour: [x]	R G	Red Grey
Lens colour: [y]	A B C G M R Y	Amber Blue Clear Green Magenta Red Yellow

Current Consumption

Product Version:	Nominal Voltage:	Voltage Range:	Beacon Current:	Horn Current:
DC024	12Vdc	11.5-14Vdc	79.5mA	17mA
DC024	24Vdc	16-33Vdc (Regulated)	87mA	33.5mA
DC048	48Vdc	48-60Vdc	60mA	113mA
AC230	115Vac 230Vac	48-260Vac 50/60Hz	34mA 19mA	25mA 17mA



Tone table

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