

# IS-AL105NL Intrinsically Safe Combined Signal

## Intrinsically Safe combination L.E.D beacon/light & alarm horn.

The IS-A105N+IS-L101L unit is an intrinsically safe field mounting combined alarm horn with L.E.D. beacon/light which provides a a loud audible and bright flashing visual signal utilising a common Zener barrier or galvanic isolator. The alarm horn features an alarm accept function – by closing a pair of external contacts (i.e push switch) the operator may silence the alarm for set periods between 5 seconds and 2 hours. If after the pre-set time the alarm condition still exists the sounder will activate again. Certified for use in application requiring Ex ia or Class I Div 1 equipment the IS-A105N+IS-L101L is a globally accepted solution to fire or process control signalling.

### Features

- Input overload and reverse current protection
- Prismatic lens optimises L.E.D effectiveness
- Auto synchronised sound output
- Unit can be mounted using external lugs or internal BESA compatible fixing positions.
- Duplicate cable terminations (in & out for daisy-chain installations).
- Available with custom tone configurations and frequencies.

### Approvals

- ATEX certificate: SIR A 04ATEX2301X
- IECEx certificate: IECEx SIR 04.0038X
- FM approved:
- Ex EAC certificate: POCC GB.JB05.B03365

### Coding

ATEX / IECEx / FM:

II 1G Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +60°C)

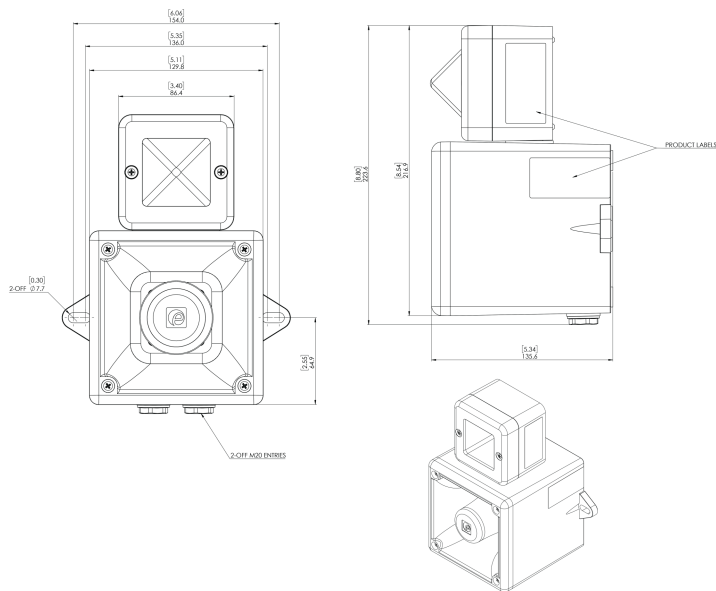
IS Class I, Zone 0, AEx ia IIC T4 Ta = +60°C

IS Class I, Division 1, Groups A, B, C, D T4

Ex EAC:

0ExialICT4 IP65 -40° to +60°C





## Specification

### Sounder/horn:

Nominal output: 105dB(A) @ 1m +/- 3dB - Tone 2\* [96dB(A) @ 10ft/3m]

No. of tones: 49 (UK00A/PFEER compliant)

No. of stages: 3

Volume control: Max. 105dB(A);  
Min. 96dB(A) - Tone 2

Effective range: 60m/197ft @ 1KHz

### Beacon/light:

Light source: Array of 6 high intensity L.E.D's

L.E.D. colours: Red, Amber, Blue, Green & White  
Note: Blue, Green & White LED versions utilise a Clear lens

Standalone mode: 2Hz (2 double flashes per second)

Effective intensity 48cd\* - measured ref. to I.E.S.  
cd:

Flash rate: On: 1 Hz (1 double flash per second)  
Silenced: 2 Hz (2 double flashes per second - alarm accepted)

### General:

Voltage: 16-28vdc via Zener barrier or galvanic isolator

Current: 25mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier

Ingress protection: IP66

Rating: Continuous

Enclosure material: UL94V0 & 5VA FR ABS

Enclosure colour: RAL 3000 Red, Grey RAL 7038

Fixings: Stainless Steel

Cable entries: 2 x M20 entries - stopping plugs included

Terminals: 0.5 to 2.5mm<sup>2</sup>

Operating temp: -40° to +60°C [-40° to +140°F]

Storage temp: -40° to +70°C [-40° to +158°F]

Relative humidity: 90% at 20°C [68°F]

Weight: 1.15kg/2.53lbs

\*SPL data +/-3dB(A). Measured at optimum voltage.

## Part Codes

ISAL 105NL-[x]/[y]

[x]: Enclosure colour:  
Red RAL 3000  
Grey RAL 7038

[y]: Lens/LED colour:  
A: Amber  
B: Blue  
G: Green  
R: Red  
W: White

Note: Note: Blue, Green & White LED versions utilise a Clear lens

May be powered from any certified Zener barrier or, galvanic isolator whose output parameters do not exceed:

Uo : 28VDC Io : 93mA Po : 1.2W

## Tone table

S 1	Description	S 2	S 3	S 1	Description	S 2	S 3
T 1	340 Hz Continuous	T 2	T 5	T 33	745Hz @ 1Hz Intermittent	T 2	T 5
T 2	800/1000Hz @ 0.25 sec Alternating	T 17	T 5	T 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	T 38	T 45
T 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	T 2	T 5	T 35	420Hz @ 0.625 sec Australian Alert	T 36	T 5
T 4	800/1000Hz @ 1Hz Sweeping	T 6	T 5	T 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	T 35	T 5
T 5	2400Hz Continuous	T 3	T 20	T 37	1000Hz Continuous - PFEER Toxic Gas	T 9	T 45
T 6	2400/2900Hz @ 7Hz Sweeping	T 7	T 5	T 38	2000Hz Continuous	T 34	T 45
T 7	2400/2900Hz @ 1Hz Sweeping	T 10	T 5	T 39	800Hz 0.25sec on, 1 sec off Intermittent	T 23	T 17
T 8	500/1200/500Hz @ 0.3Hz Sweeping	T 2	T 5	T 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	T 31	T 27
T 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	T 15	T 2	T 41	Motor Siren - slow rise to 1200 Hz	T 2	T 5
T 10	2400/2900Hz @ 2Hz Alternating	T 7	T 5	T 42	Motor Siren - slow rise to 800 Hz	T 2	T 5
T 11	1000Hz @ 1Hz Intermittent	T 2	T 5	T 43	1200 Hz Continuous	T 2	T 5
T 12	800/1000Hz @ 0.875Hz Alternating	T 4	T 5	T 44	Motor Siren - slow rise to 2400 Hz	T 2	T 5
T 13	2400Hz @ 1Hz Intermittent	T 15	T 5	T 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. ...	T 38	T 34
T 14	800Hz 0.25sec on, 1 sec off Intermittent	T 4	T 5	T 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	T 47	T 37
T 15	800Hz Continuous	T 2	T 5	T 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. ...	T 46	T 37
T 16	660Hz 150mS on, 150mS off Intermittent	T 18	T 5	T 48	420Hz @ 0.625 sec Australian Alert	T 49	T 5
T 17	544Hz (100mS)/440Hz (400mS) - NF S 32-001	T 2	T 27	T 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	T 26	T 37
T 18	660Hz 1.8sec on, 1.8sec off Intermittent	T 2	T 5				
T 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	T 2	T 5				
T 20	660Hz Continuous	T 2	T 5				
T 21	554Hz/440Hz @ 1Hz Alternating	T 2	T 5				
T 22	544Hz @ 0.875 sec. Intermittent	T 2	T 5				
T 23	800Hz @ 2Hz Intermittent	T 6	T 5				
T 24	800/1000Hz @ 50Hz Sweeping	T 29	T 5				
T 25	2400/2900Hz @ 50Hz Sweeping	T 29	T 5				
T 26	Bell	T 2	T 15				
T 27	554Hz Continuous	T 26	T 5				
T 28	440Hz Continuous	T 2	T 5				
T 29	800/1000Hz @ 7Hz Sweeping	T 7	T 5				
T 30	300Hz Continuous	T 2	T 5				
T 31	660/1200Hz @ 1Hz Sweeping	T 26	T 5				
T 32	Two T chime.	T 26	T 15				

## E2S Warning Signals

No liability is accepted for any consequence of the use of this document. The technical specification of this unit is subject to change without notice due to our policy of continual product development. All dimensions are approximate. This unit is sold subject to our standard conditions of sale, a copy of which is available on request.

2 Dec 2020