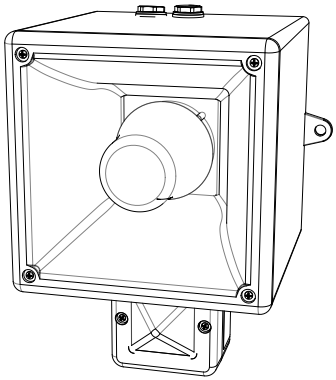
Installation/Anschluss
Installation/Raccordement
Installation/Connection

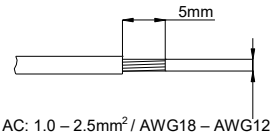
AL121

- -40°C to +66°C (104°F to 151°F)
- Type 4 / 4X / 3R / 13, IP66
- 2Kg (4.4lb)
- CE, AL121.024.2 & AL121.048.2 CPR compliant, All units UL Listed

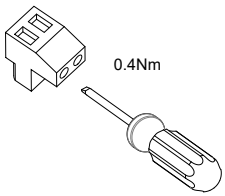


Unit Type Code	Nominal Voltage	Voltage Range	Nominal Beacon Current*	Nominal Sounder Current* P2 / P3	Nominal SPL P2 / P3	Max SPL P2 / P3	Average SPL P2 / P3
AL121.012.2	12 Vdc	11.5-14Vdc	341mA	376mA / 440mA	116.9dB(A) / 120.2dB(A) Tone 44 @ 1m	120.7dB(A) / 123.4dB(A) Tone 4 @ 1m	115.3dB(A) / 118.1dB(A) All Tones @ 1m
AL121.024.2	24 Vdc	20-28 Vdc	250mA	430mA / 930mA			
AL121.048.2	48 Vdc	42-52 Vdc	170mA	223mA / 453mA			
AL121.115.7	115 Vac	103.5-126.5 Vac 50/60Hz	70mA	173mA / 340mA			
AL121.230.7	230 Vac	207-240 Vac 50/60Hz	35mA	105mA / 212mA			

*Nominal current at nominal voltage

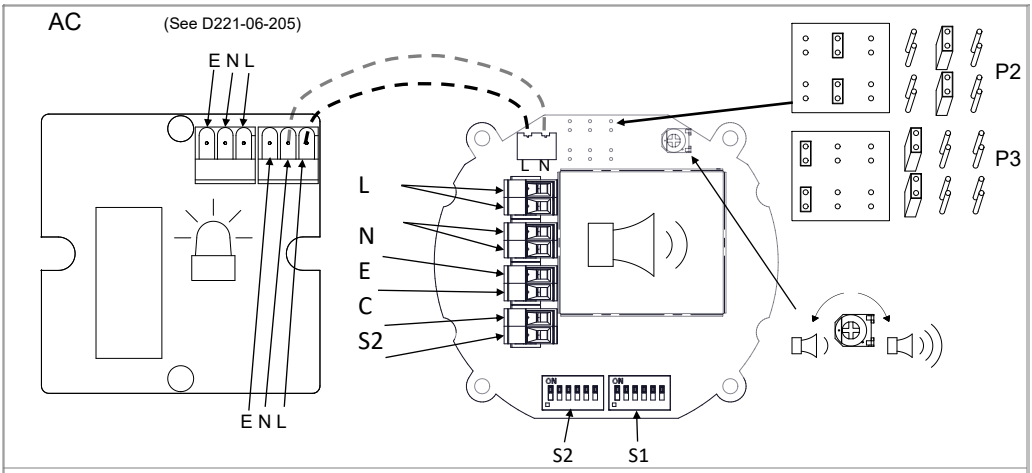


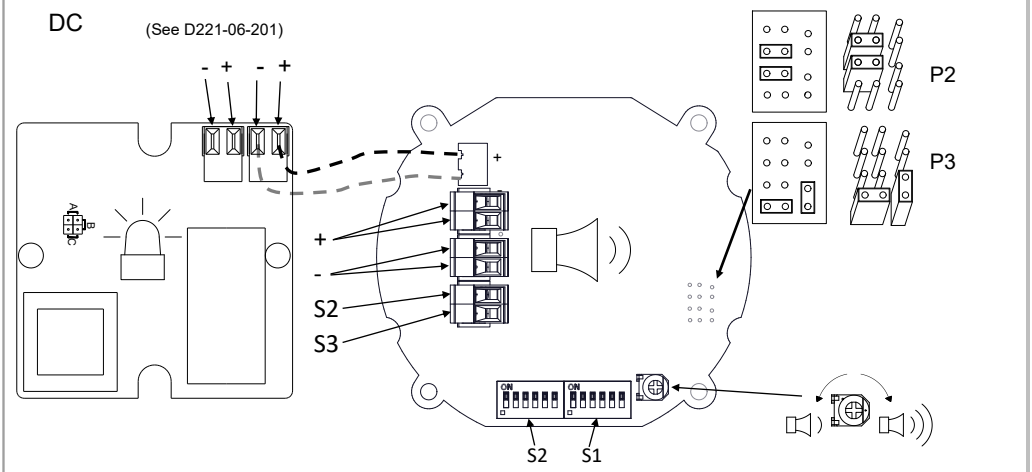
AC: 1.0 – 2.5mm^2 / AWG18 – AWG12
DC: 0.2 – 2.5mm^2 / AWG24 – AWG12

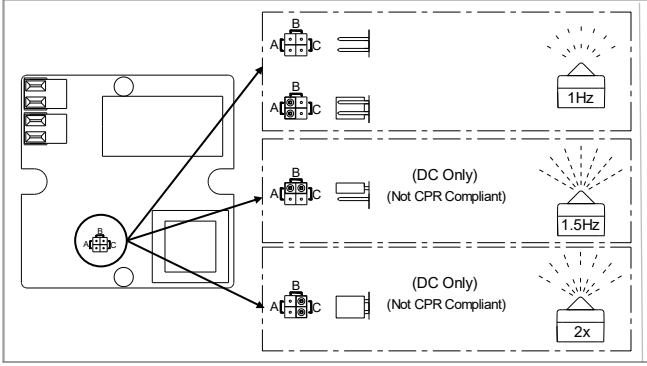


Attention: Installation must be carried out by an electrician in compliance with the latest codes and regulations.
Attention: L'installation doit être effectuée par un électricien conformément aux derniers codes et réglementations.
Achtung: Die Installation muss von einem Elektriker gemäß den neuesten Vorschriften und Bestimmungen durchgeführt werden.

Attention: Disconnect from power source before installation or service to prevent electric shock
Attention: Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.
Achtung: Vor Installation oder Wartung von der Stromquelle trennen, um einen Stromschlag zu vermeiden.



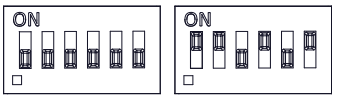




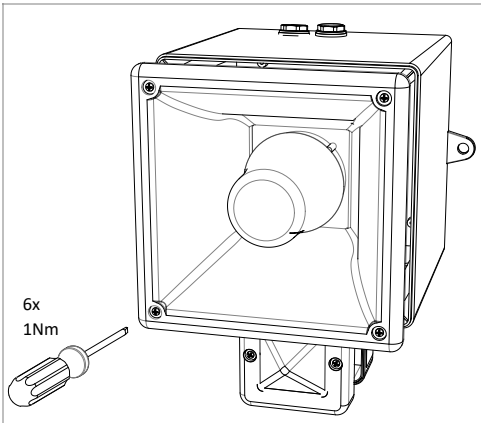
(AC & DC, See D221-95-001)

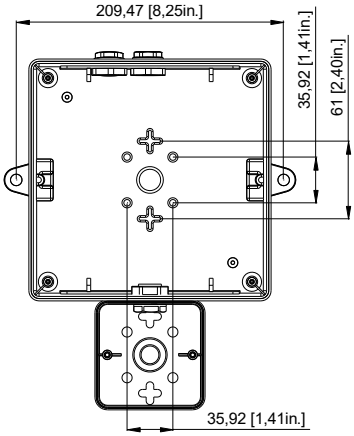
Default = S2 - Tone 1

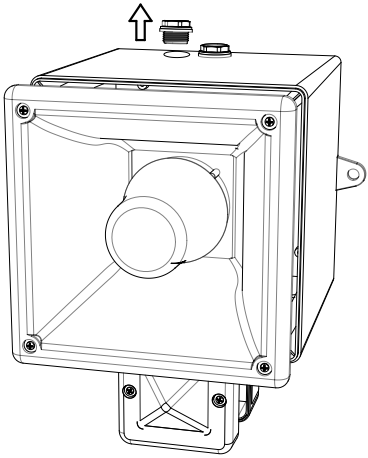
Default = S1 - Tone 44

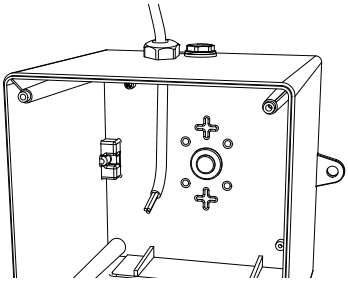


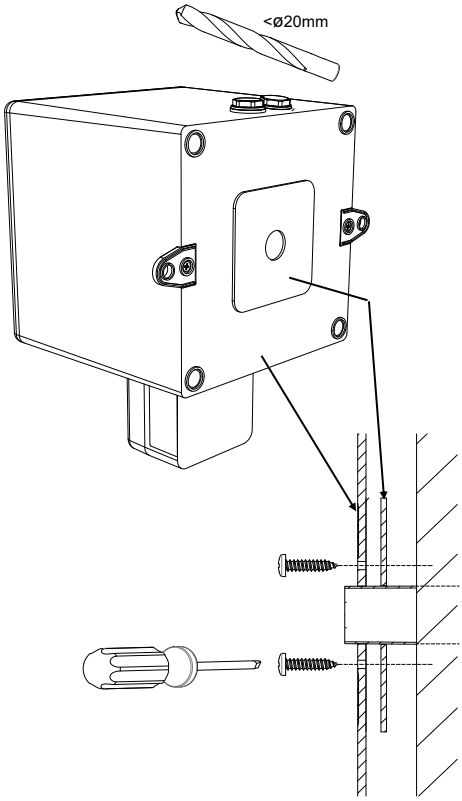
(ON = 1, OFF = 0)


6x
1Nm


209,47 [8,25in.]
35,92 [1,41in.]
61 [2,40in.]
35,92 [1,41in.]






<ø20mm

Construction Product Regulation

- AL121.024.2 & AL121.048.2 are compliant to EN54-3:2001+A1+A2 & EN54-23:2010
- VAD for use in fire detection and fire alarm systems installed in and around buildings
- Type 4 / 4X / 3R / 13, IP66, Independently tested to EN60529:1991, (IP33C Compliant to EN54-3)
- Type B Product, For Indoor & Outdoor use
- Observe Precautions for handling electrostatic devices
- -25°C to +55°C compliant to EN54-3
- Cable Glands must be suitably sealed and meet minimum IP33 for EN54-3 applications
- Storage Temperature: -40°C to +70°C
- Maintenance – None
- Mounting - Units can be mounted using the 2-off ø9mm holes in the mounting lugs or through the back of the housing using the supplied gasket seal.

Approved Tones for EN54-3 Applications:

•(Alternating Tone) 800/1000Hz @ 2Hz Alternating Tone 44
•(Rising Tone) 500/1200Hz @ 0.26Hz (3.3s on, 0.5s off) Tone 8
•(Fainting Tone) 1200/500Hz @ 1Hz Tone 2
•(Continuous Tone) 800Hz Tone 21
•(Pulsed Tone) 660Hz (150mS on, 150mS off) Tone 31
•(Alternating Tone) 544Hz(100mS)/440Hz (400mS) Tone 5

Order Code: AL121.024.2
Voltage Range: 20-28Vdc
Nominal Voltage: 24Vdc
Max Sounder Current: P2: 430mA
Max Beacon Current: 271mA @ 20Vdc
DP-2821-CPR-0110

EU
S36282

21
2821

Order Code: AL121.048.2
Voltage Range: 42-52Vdc
Nominal Voltage: 48Vdc
Max Sounder Current: P2: 430mA
Max Beacon Current: 160mA @ 42Vdc
DP-2821-CPR-0110

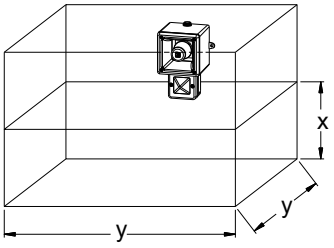
EU
S36282

21
2821

AL121.024.2 / AL121.048.2 (P2) @ 1m												
	Horizontal Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Horizontal Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
Angle	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5
15°	106.1	105.8	105.1	105.4	105.2	93.9	101.2	101.6	101.1	101	101.2	91
45°	105.2	107.2	106.3	104.1	98.7	101.6	101.3	102.9	102.1	100.2	94.7	99
75°	112.1	112.6	111.9	111.7	110.1	104.8	108.1	108.5	107.7	108.1	106.5	103
105°	111.9	112.5	111.7	111.7	110.2	104.8	107.9	108.4	107.6	108.1	106.4	103
135°	104.8	107.4	106.4	103.8	99.2	101.6	101.1	103.2	102.1	99.8	95.5	99
165°	105.2	105.8	105.2	105.3	105.1	93.8	100.8	101.5	100.8	100.9	102	90.8
	Vertical Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Vertical Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
Angle	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5
15°	107.2	107.1	105.9	107.4	105.5	95.5	103.1	102.8	101.5	103.1	101.5	91.8
45°	106	109.3	107.9	104.6	100.5	103.7	102.2	105.4	103.8	100.4	96.6	99.9
75°	113.2	113.3	112.9	113	110.8	106.1	109.2	109.3	108.7	109.1	107.1	103
105°	112.9	113.1	112.7	112.8	111.4	106.1	109	108.9	108.5	108.9	107.7	103.1
135°	105.5	109.3	107.7	104.7	100.3	104.3	101.4	105.3	103.5	100.7	96.5	100.7
165°	107	106.5	105.9	106.4	105.3	95	102.6	102.1	101.5	102.2	101.1	91.2

AL121.024.2 (P3) @ 1m												
	Horizontal Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Horizontal Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
Angle	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5
15°	107.5	108.4	107.1	106.8	106.5	105.1	104.2	105.3	104.6	103.5	104.7	102.6
45°	112.8	114.8	113.7	111.9	102.5	104.5	109.7	111.2	110.7	108.9	100.4	101.7
75°	115.2	116.7	115.4	115.5	112.5	113	112.2	113.2	112.7	112.5	110.1	110.3
105°	115.6	116.5	115.7	116	113.7	113	112.6	113.4	113.1	112.9	111.1	110.1
135°	112.8	114.7	113.7	111.7	102.3	104.6	109.7	111.2	110.7	108.9	100.1	101.7
165°	107.5	108.4	106.9	107	106.5	104.9	104.3	104.9	104.2	103.5	104.5	102.3
	Vertical Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Vertical Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
Angle	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5
15°	107.4	108.2	107.3	105.9	106.3	105.3	104.2	105.3	104.7	103.3	104.6	102.7
45°	112.7	114.7	113.5	111.8	102.4	104.6	109.8	111.2	110.8	109	100.3	101.7
75°	115.3	116.4	115.6	115.4	113.3	112.5	112.4	112.8	112.8	112.5	110.7	110.1
105°	115.3	116.4	115.6	115.6	113.5	113	112.3	112.9	113	112.7	111	110
135°	112.6	114.7	113.5	112.3	102.5	104.8	109.7	111.3	110.9	109.2	100.3	101.9
165°	107.6	108.1	106.9	105.8	106.3	104.9	104.4	105.1	104.4	103.3	104.4	102.3

AL121.024.2 & AL121.048.2 LIGHT OUTPUT



Category W-x-y (Wall mounted):
Wall mounted, where x is the maximum mounting height from the floor and y is the maximum length of the sides of the square floor area covered by the VAD.

Note: CPR aproved units must be pos
top,
beacon below.

Coverage Area According to EN54-23

(Only units in the following table are VdS Approved)

Unit	Category W	Power
AL121.024.2	W-2.4-4.8	11W
	V=55.3m	
AL121.048.2	W-2.5-5	14W
	V=62.5m	

Approved Beacon for EN54-23 Applications:
Clear lenses are compliant with EN54-23

- All models are approved for use as Audible Signal Appliance for use as General Signaling: UL464A & CSA C22.2 No 205-17
- Type 4 / 4X / 3R / 13, IP66
- -40°C to +66°C / -40°C to +151°F

  General Signaling Canada:
  AL121.024.2: -40°C to +55°C / -40°F to +131°F
  AL121.230.7: -40°C to +40°C / -40°F to +104°F

- To maintain Ingress Protection, cable entries must be fitted with suitably rated cable glands or stopping plugs
- Mounting - Units can be mounted using 2-off ø9mm holes in the mounting lugs or through the back of the housing using the supplied gasket.
- EOL Monitoring (DC Only): End of Line Devices may be fitted between the +ve & -ve terminals of the PCBA. Please ensure that the device legs meet the wire size range stated for the connection terminals and are fitted correctly in order to avoid a short. Refer to the compatible control panel specification for EOL device values and ratings.

Model	Nominal Voltage	Voltage Range	Nominal Operating Current*		Max Operating RMS#	
			Beacon	Sounder P2 / P3	Beacon	Sounder P2 / P3
AL121.012.2	12V dc	11.5-14Vdc	341mA	376mA / 440mA	531mA	430mA / 930mA
AL121.024.2	24V dc	20-28Vdc	250mA	430mA / 930mA	271mA	
AL121.048.2	48V dc	42-52Vdc	170mA	223mA / 453mA	170mA	
AL112.115.7	115 Vac	103.5-126.5 Vac 50/60Hz	70mA	173mA / 340mA	58mA	181mA / 383mA
AL121.230.7	230 Vac	207-240 Vac 50/60Hz	35mA	105mA / 212mA		

*Nominal Voltage, 1Hz Flash Pattern & Tone 12 #Worst-case input voltage and worst case flash pattern

Attention: Installation must be carried out by an electrician in compliance with the National Electrical Code, NFPA 70 or CSA 22.1 Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32. / L'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain, NFPA 70 ou CSA 22.1 Code canadien de l'électricité, première partie, norme de sécurité relative aux installations électriques, Section 32

The units have been tested and approved to DNVGL-CG-0339 & EN54-3:2014 incl. A1:2019 for the installation on ships in the following locations:

Temperature:	A, B, C & D (Machinery spaces, control rooms, accommodation, bridge, inside cubicles, desks, etc..., pump rooms, holds, rooms with no heating, Open deck, masts)
Humidity:	A & B (All locations)
Vibration:	A (Bulkheads, Beams, Deck, Bridge)
EMC:	A & B (All locations Including Bridge & open deck)
Enclosure:	A, B & C (Control rooms, accommodation, bridge, engine room, open deck masts, below floor plates in engine room)

The units comply with Solas 74 Chapter II-2, Regulation 7 & Chapter X, Regulation 3 for installation on ships in the following locations:

Temperature:	D (Location -25° to +70°C)
Vibration:	A (General Applications)
EMC:	B (Bridge & Open Deck Zone)
Enclosure:	IP56, Salt mist

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

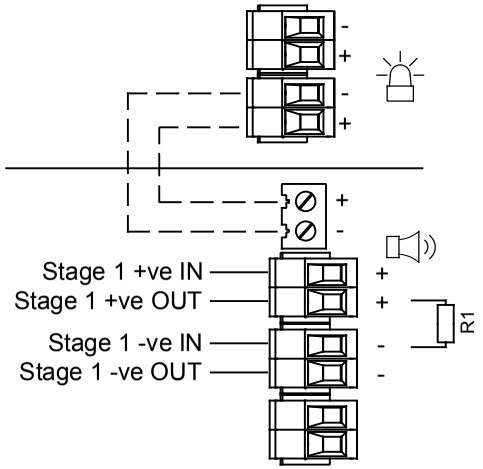
WIRING LINKING BEACON & SOUNDER FACTORY FITTED

R1 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

Linked Sounder & Beacon Activation (Default)

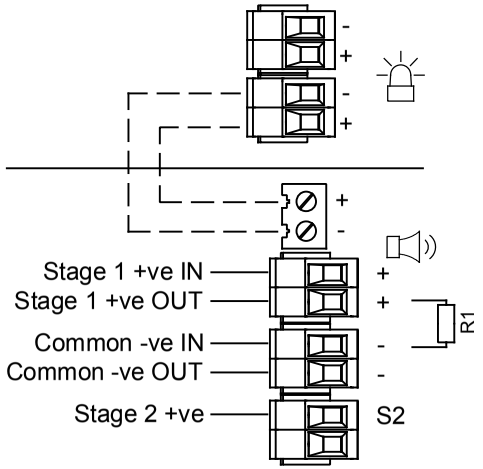
Single Stage Configuration — Config.: 1a

Line Monitoring
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve



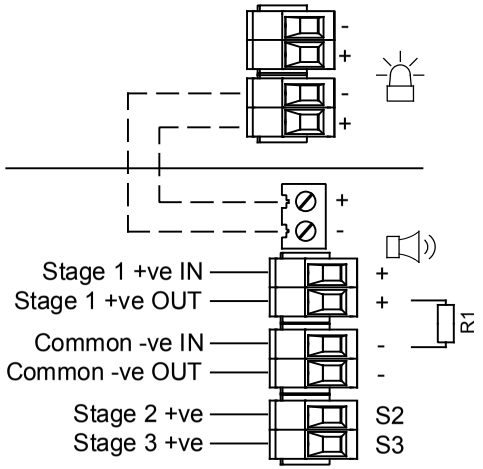
Two Stage Configuration — Config.: 1b

Common Negative
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Common -ve
Stage 2: Apply Power to Stage 2 +ve & Common -ve



Three/Four Stage Configuration — Config.: 1c

Common Negative
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Common -ve
Stage 2: Apply Power to Stage 2 +ve & Common -ve
Stage 3: Apply Power to Stage 3 +ve & Common -ve
Stage 4: Apply Power to Stage 2 +ve, Stage 3 +ve & Common -ve



DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	1 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

WIRING LINKING BEACON & SOUNDER FACTORY FITTED

R1 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

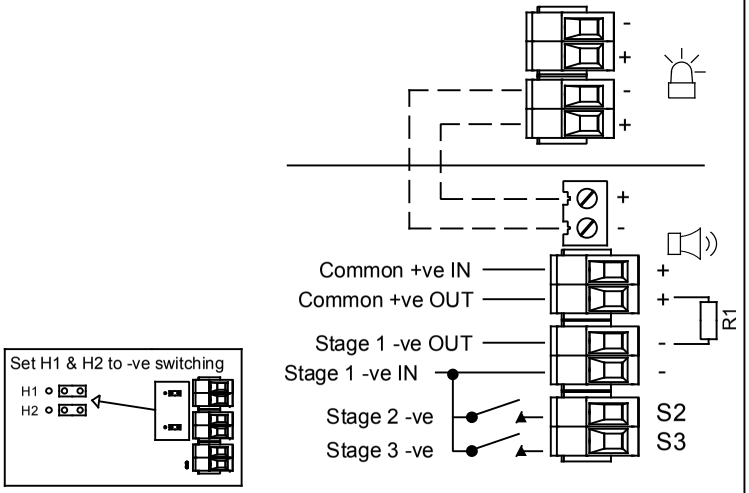
SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED

Linked Sounder & Beacon Activation (Default)

Three/Four Stages. Voltage Free 2nd, 3rd & 4th Stage Activation Configuration — Config.: 2

Common Positive
Customer Set H1 & H2 to Negative Switching (See Below)

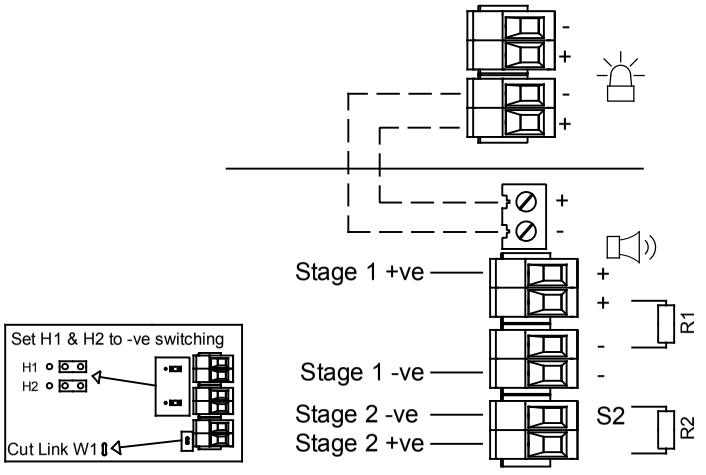
Stage 1: Apply Power to Common +ve & Stage 1 -ve
Stage 2: Apply Power to Common +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve
Stage 3: Apply Power to Common +ve & Stage 1 -ve & connect Stage 3 -ve to Stage 1 -ve
Stage 4: Apply Power to Common +ve & Stage 1 -ve
& connect Stage 2 -ve & Stage 3 -ve to Stage 1 -ve



Two Stage Configuration — Config.: 3

Independent Stage Input
Reverse Polarity Stage Monitoring

Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve
Stage 2: Apply Power to Stage 1 +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve



DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK - DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	2 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

WIRING LINKING BEACON & SOUNDER FACTORY FITTED

R1 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

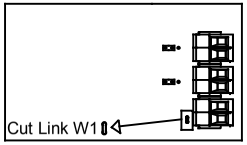
SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED

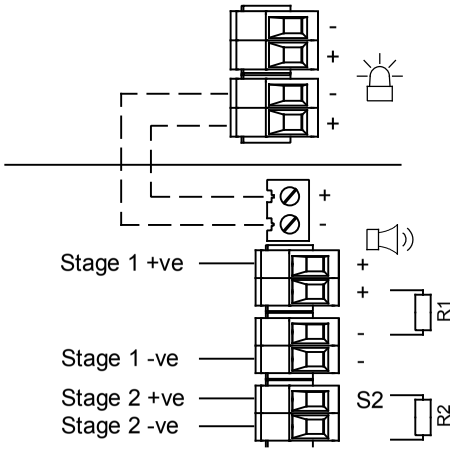
Linked Sounder & Beacon Activation (Default)

Two Stage Configuration Config.: 4

independent Stage Input
Line Stage Monitoring (Use suitable monitoring relays/modules)
Not to be used for reverse polarity monitoring
Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve
Stage 1: Apply Power to Stage 2 +ve & Stage 2 -ve

CUSTOM CONFIGURATION CONTACT E2S WHEN ORDERING





DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK - DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

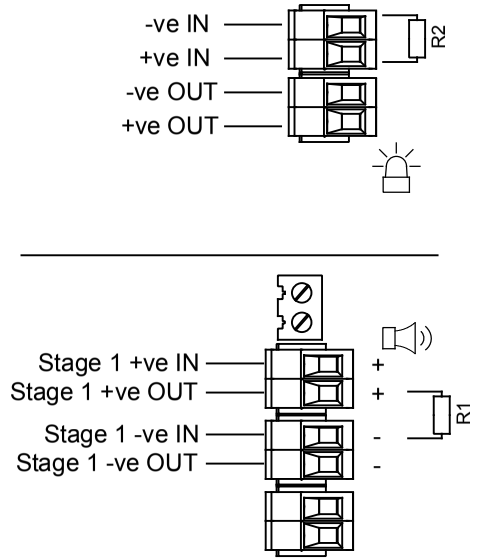
SCALE	SHEET	DRAWING NUMBER
NTS	3 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

Independent Sounder & Beacon Activation (Remove Link Wires)

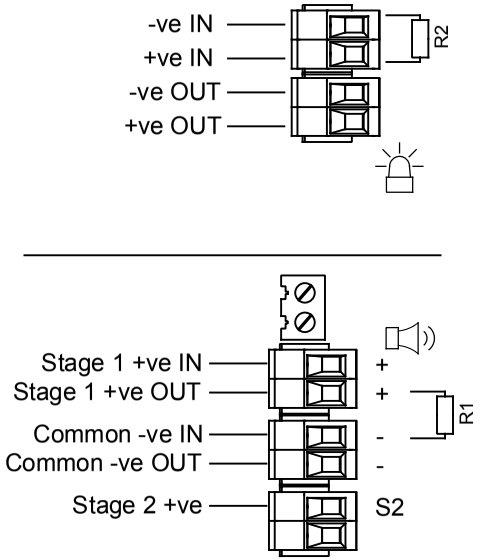
Single Stage Configuration — Config.: 5a

Line Monitoring
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve



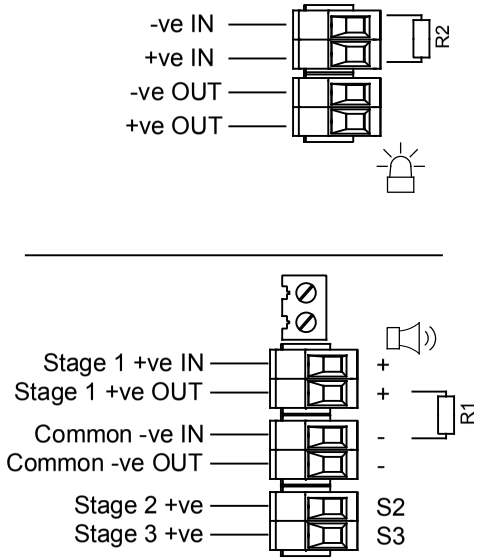
Two Stage Configuration — Config.: 5b

Common Negative
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Common -ve
Stage 2: Apply Power to Stage 2 +ve & Common -ve



Three/Four Stage Configuration — Config.: 5c

Common Negative
Set to positive switching (default)
Stage 1: Apply Power to Stage 1 +ve & Common -ve
Stage 2: Apply Power to Stage 2 +ve & Common -ve
Stage 3: Apply Power to Stage 3 +ve & Common -ve
Stage 4: Apply Power to Stage 2 +ve, Stage 3 +ve & Common -ve



DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	DATE 16/03/2021
CHECKED	B.ISARD	DATE 16/03/2021
APPROVED	R.N.POTTS	DATE 16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	4 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

R1 OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

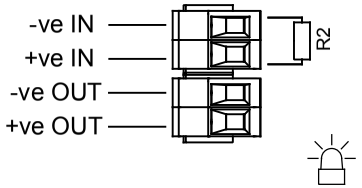
SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED

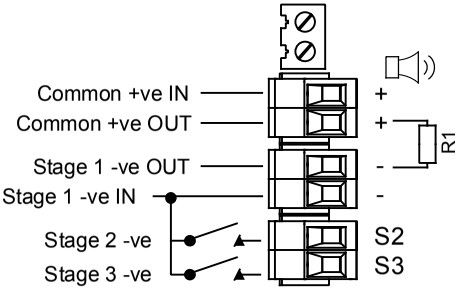
Independent Sounder & Beacon Activation (Remove Link Wire)

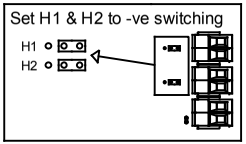
Three/Four Stages. Voltage Free 2nd, 3rd & 4th Stage Activation Configuration — Config.: 6

Common Positive
Customer Set H1 & H2 to Negative Switching (See Below)

Stage 1: Apply Power to Common +ve & Stage 1 -ve
Stage 2: Apply Power to Common +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve
Stage 3: Apply Power to Common +ve & Stage 1 -ve & connect Stage 3 -ve to Stage 1 -ve
Stage 4: Apply Power to Common +ve & Stage 1 -ve
& connect Stage 2 -ve & Stage 3 -ve to Stage 1 -ve



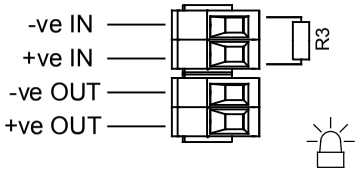


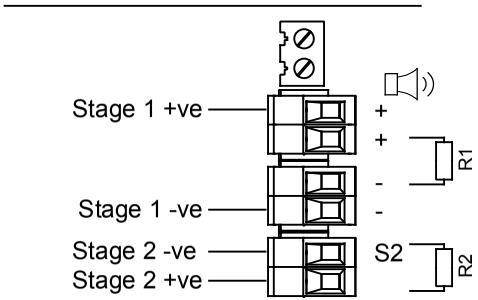


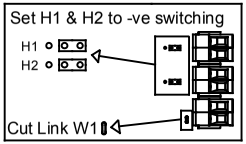
Two Stage Configuration — Config.: 7

Independent Stage Input
Reverse Polarity Stage Monitoring

Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve
Stage 2: Apply Power to Stage 1 +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve







DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	5 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

R1 — OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES:
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

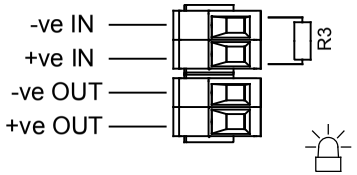
SWITCHES FOR STAGE OPERATION
*CUSTOMER SUPPLIED

Independent Sounder & Beacon Activation (Remove Link Wires)

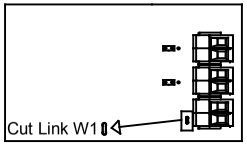
Two Stage Configuration — Config.: 8

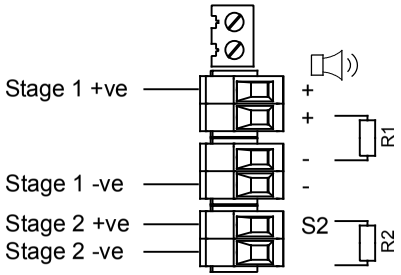
Independent Stage Input
Line Stage Monitoring (Use suitable monitoring relays/modules)
Not to be used for reverse polarity monitoring

Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve
Stage 1: Apply Power to Stage 2 +ve & Stage 2 -ve



CUSTOM CONFIGURATION CONTACT E2S WHEN ORDERING





DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK - DO NOT SCALE

A3

TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	6 OF 6	D221-06-201

ISSUE	MOD No.	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

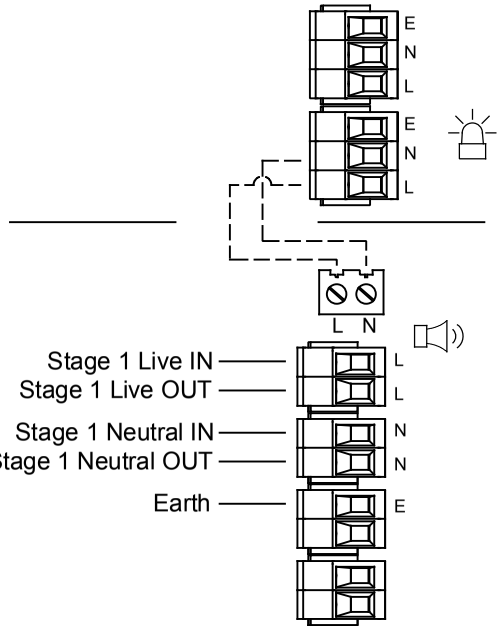
WIRING LINKING BEACON & SOUNDER
FACTORY FITTED

SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

Linked Sounder & Beacon Activation (Default)

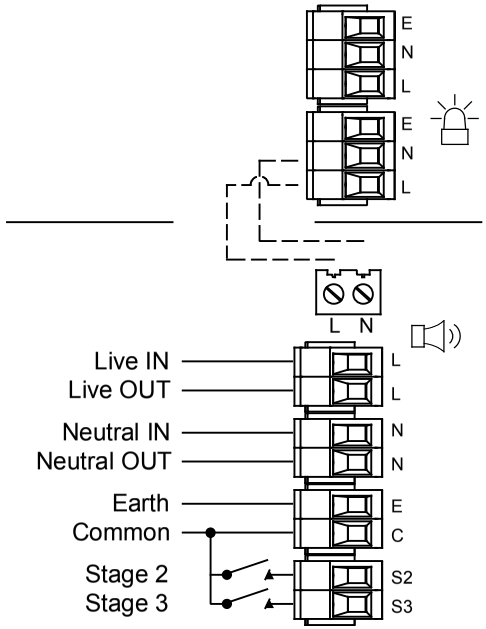
Single Stage Configuration — Config.: 1a

Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral



Three/Four Stage Configuration — Config.: 1b

Stage 1: Apply Power to Live & Neutral
Stage 2: Apply Power to Live & Neutral & connect Stage 2 to Common
Stage 3: Apply Power to Live & Neutral & connect Stage 3 to Common



DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

DRAWN	R.S.RAIT	16/03/2021
CHECKED	B.ISARD	16/03/2021
APPROVED	R.N.POTTS	16/03/2021

SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

A3

TITLE AL112 & AL121 COMBINED SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	1 OF 2	D221-06-205

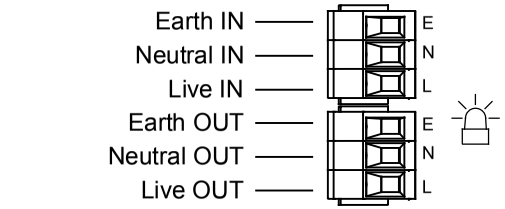
ISSUE	MOD No	REASON - INITIAL - DATE
A		INTRODUCTION RSR - 16/03/2021

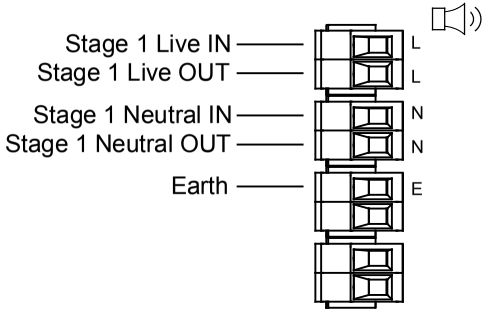
SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

Independent Sounder & Beacon Activation (Remove Link Wires)

Single Stage Configuration — Config.: 2a

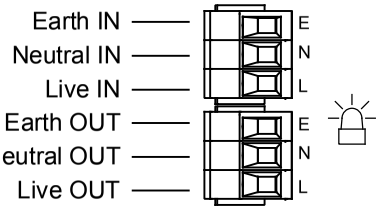
Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral

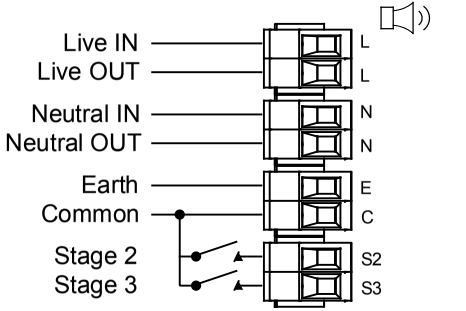




Three/Four Stage Configuration — Config.: 2b

Stage 1: Apply Power to Live & Neutral
Stage 2: Apply Power to Live & Neutral & connect Stage 2 to Common
Stage 3: Apply Power to Live & Neutral & connect Stage 3 to Common





DRAWING TO BS8888:2000
GEOMETRIC TOLERANCES TO ISO1101:1983
LINEAR DIMENSIONAL TOLS
ANGULAR DIMENSIONAL TOLS

STANDARDS
ALERTALARM RANGE

	DRAWN	DATE
	R.S.RAIT	16/03/2021
	CHECKED	DATE
	B.ISARD	16/03/2021
	APPROVED	DATE
	R.N.POTTS	16/03/2021

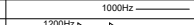
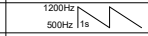
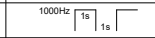
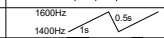
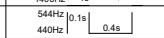
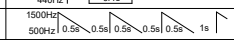
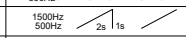
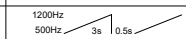
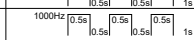
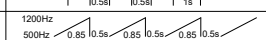
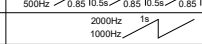
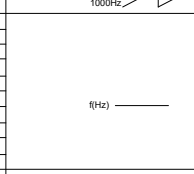
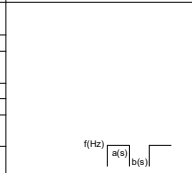
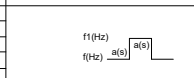
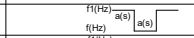
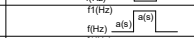
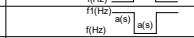
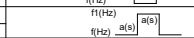
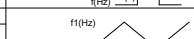
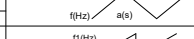
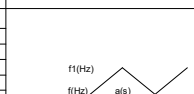
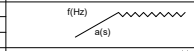
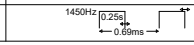
SURFACE FINISH | WEIGHT (Kg)
MATERIAL
ALTERNATIVE MATERIAL

ALL DIMENSIONS IN MM
IF IN DOUBT, ASK -
DO NOT SCALE

A3

TITLE AL112 & AL121 COMBINED
SOUNDER & XENON WIRING DIAGRAMS

SCALE	SHEET	DRAWING NUMBER
NTS	2 OF 2	D221-06-205

Stage 1 Set DIP SW 1 Tone No.	Tone Description	Tone Visual	Stage 1 & 2 DIP SW 1/2 Settings 1 2 3 4 5 6	Stage 3 Set DIP SW 1 (S3)	Stage 4 Set DIP SW 1 (S2 + S3)
1	1000Hz PFEER Toxic Gas		0 0 0 0 0 0	2	44
2	1200/500Hz @ 1Hz DIN /PFEER P.T.A.P.		1 0 0 0 0 0	3	44
3	1000Hz @ 0.5Hz(1s on, 1soff) PFEER Gen. Alarm		0 1 0 0 0 0	2	44
4	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s NF C 48-265		1 1 0 0 0 0	24	1
5	544Hz(100mS)/440Hz (400mS) NF S 32-001		0 0 1 0 0 0	19	1
6	1500/500Hz - (0.5s on , 0.5s off) x3 + 1s gap AS4428		1 0 1 0 0 0	44	1
7	500-1500Hz Sweeping 2 sec on 1 sec off AS4428		0 1 1 0 0 0	44	1
8	500/1200Hz @ 0.26Hz (3.3son, 0.5s off) Netherlands - NEN 2575		1 1 1 0 0 0	24	35
9	1000Hz (1s on, 1s off)x7 + (7s on, 1s off) IMO Code 1a		0 0 0 1 0 0	34	1
10	1000Hz (1s on, 1s off)x7 + (7s on, 1s off) IMO Code 1a		1 0 0 1 0 0	34	1
11	420Hz(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 Temporal Pattern		0 1 0 1 0 0	1	8
12	1000Hz(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 Temporal Pattern		1 1 0 1 0 0	1	8
13	422/775Hz - (0.85 on, 0.5 off) x3 + 1s gap NFPA - Temporal Coded		0 0 1 1 0 0	1	8
14	1000/2000Hz @ 1Hz Singapore		1 0 1 1 0 0	3	35
15	300Hz Continuous (f=300)		0 1 1 1 0 0	24	1
16	440Hz Continuous (f=440)		1 1 1 1 0 0	24	1
17	470Hz Continuous (f=470)		0 0 0 0 1 0	24	8
18	500Hz Continuous IMO code 2 (Low) (f=500)		1 0 0 0 1 0	24	8
19	554Hz Continuous (f=554)		0 1 0 0 1 0	24	8
20	660Hz Continuous (f=660)		1 1 0 0 1 0	24	35
21	800Hz IMO code 2 (High) (f=800)		0 0 1 0 1 0	24	35
22	1200Hz Continuous (f=1200)		1 0 1 0 1 0	24	35
23	2000Hz Continuous (f=2000)		0 1 1 0 1 0	3	35
24	2400Hz Continuous (f=2400)		1 1 1 0 1 0	20	35
25	440Hz @0.83Hz (50 cycles/minute) Intermittent (f=440, a=0.6, b=0.6)		0 0 0 1 1 0	44	8
26	470Hz @0.9Hz - 1.1s Intermittent (f=470, a=0.55, b=0.55)		1 0 0 1 1 0	44	8
27	470Hz @5Hz - (5 cycles/second) Intermittent (f=470, a=0.1, b=0.1)		0 1 0 1 1 0	44	8
28	544Hz @ 1.14Hz - 0.875s Intermittent (f=470, a=0.43, b=0.44)		1 1 0 1 1 0	24	8
29	655Hz @ 0.875Hz Intermittent (f=655, a=0.57, b=0.57)		0 0 1 1 1 0	24	8
30	660Hz @0.28Hz - 1.8sec on, 1.8sec off Intermittent (f=660, a=1.8, b=1.8)		1 0 1 1 1 0	24	8
31	660Hz @3.34Hz - 150mS on, 150mS off Intermittent (f=660, a=0.15, b=0.15)		0 1 1 1 1 0	24	8
32	745Hz @ 1Hz Intermittent (f=745, a=0.5, b=0.5)		1 1 1 1 1 0	24	8
33	800Hz - 0.25sec on, 1 sec off Intermittent (f=800, a=0.25, b=1)		0 0 0 0 0 1	24	8
34	800Hz @ 2Hz IMO code 3.a (High) Intermittent (f=800, a=0.25, b=0.25)		1 0 0 0 0 1	24	19
35	1000Hz @ 1Hz Intermittent (f=1000, a=0.5, b=0.5)		0 1 0 0 0 1	24	19
36	2400Hz @ 1Hz Intermittent (f=2400, a=0.5, b=0.5)		1 1 0 0 0 1	24	19
37	2900Hz @ 5Hz Intermittent (f=2900, a=0.1, b=0.1)		0 0 1 0 0 1	24	19
38	363/518Hz @ 1Hz Alternating (f=363, f1=518, a=0.1)		1 0 1 0 0 1	8	19
39	450/500Hz @ 2Hz Alternating (f=450, f1=500, a=0.25)		0 1 1 0 0 1	8	19
40	554/440Hz @ 1Hz Alternating (f=440, f1=554, a=0.5)		1 1 1 0 0 1	24	19
41	554/440Hz @ 0.625Hz Alternating (f=440, f1=554, a=0.8)		0 0 0 1 0 1	8	19
42	561/760Hz @0.83Hz (50 cycles/minute) Alternating (f=561, f1=760, a=0.6)		1 0 0 1 0 1	8	19
43	780/600Hz @ 0.96Hz Alternating (f=600, f1=780, a=0.52)		0 1 0 1 0 1	8	19
44	800/1000Hz @ 2Hz Alternating (f=800, f1=1000, a=0.25)		1 1 0 1 0 1	24	19
45	970/800Hz @ 2Hz Alternating (f=800, f1=970, a=0.25)		0 0 1 1 0 1	8	19
46	800/1000Hz @ 0.875Hz Alternating (f=800, f1=1000, a=0.57)		1 0 1 1 0 1	24	19
47	2400/2900Hz @ 2Hz Alternating (f=2400, f1=2900, a=0.25)		0 1 1 1 0 1	24	19
48	500/1200Hz @ 0.3Hz Sweeping (f=500, f1=1200, a=3.34)		1 1 1 1 0 1	24	12
49	560/1055Hz @ 0.18Hz Sweeping (f=560, f1=1055, a=5.47)		0 0 0 0 1 1	24	12
50	560/1055Hz @ 3.3Hz Sweeping (f=560, f1=1055, a=0.3)		1 0 0 0 1 1	24	12
51	600/1250Hz @ 0.125Hz Sweeping (f=600, f1=1250, a=8)		0 1 0 0 1 1	24	12
52	660/1200Hz @ 1Hz Sweeping (f=660, f1=1200, a=1)		1 1 0 0 1 1	24	12
53	800/1000Hz @ 1Hz Sweeping (f=800, f1=1000, a=1)		0 0 1 0 1 1	24	12
54	800/1000Hz @ 7Hz Sweeping (f=800, f1=1000, a=0.14)		1 0 1 0 1 1	24	12
55	800/1000Hz @ 50Hz Sweeping (f=800, f1=1000, a=0.02)		0 1 1 0 1 1	24	12
56	2400/2900Hz @ 7Hz Sweeping (f=2400, f1=2900, a=0.14)		1 1 1 0 1 1	24	12
57	2400/2900Hz @ 1Hz Sweeping (f=2400, f1=2900, a=1)		0 0 0 1 1 1	24	12
58	2400/2900Hz @ 50Hz Sweeping (f=2400, f1=2900, a=0.02)		1 0 0 1 1 1	24	12
59	2500/3000Hz @ 2Hz Sweeping (f=2500, f1=3000, a=0.5)		0 1 0 1 1 1	24	12
60	2500/3000Hz @ 7.7Hz Sweeping (f=2500, f1=3000, a=0.13)		1 1 0 1 1 1	24	12
61	800Hz Motor Siren (f=800, a=1.6)		0 0 1 1 1 1	24	12
62	1200Hz Motor Siren (f=1200, a=2)		1 0 1 1 1 1	24	
63	2400Hz Motor Siren (f=2400, a=1.7)		0 1 1 1 1 1	24	12
64	Simulated Bell		1 1 1 1 1 1	21	12