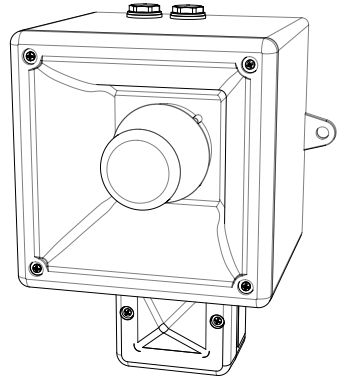


Installation/Anschluss
 Installation/Raccordement
 Installation/Connection

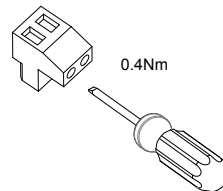
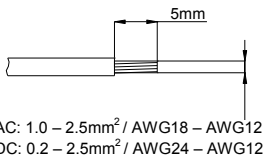
AL112

- -40°C to +66°C (104°F to 151°F)
- Type 4 / 4X / 3R / 13, IP66
- 2Kg (4.4lb)
- CE, AL112.024.2 & AL112.048.2 CPR compliant, All units UL Listed



Unit Type Code	Nominal Voltage	Voltage Range	Nominal Beacon Current*	Nominal Sounder Current* P1 / P2	Nominal SPL P1 / P2	Max SPL P1 / P2	Average SPL P1 / P2
AL112.012.2	12 Vdc	11.5-14Vdc	341mA	280mA / 376mA	113.7dB(A) / 116.6dB(A) Tone 44 @ 1m	115dB(A) / 118.4dB(A) Tone 4 @ 1m	110.8dB(A) / 114.8dB(A) All Tones @ 1m
AL112.024.2	24 Vdc	20-28 Vdc	250mA	225mA / 430mA			
AL112.048.2	48 Vdc	42-52 Vdc	170mA	122mA / 223mA			
AL112.115.7	115 Vac	103.5-126.5 Vac 50/60Hz	70mA	100mA / 173mA			
AL112.230.7	230 Vac	207-240 Vac 50/60Hz	35mA	65mA / 105mA			

*Nominal current at nominal voltage



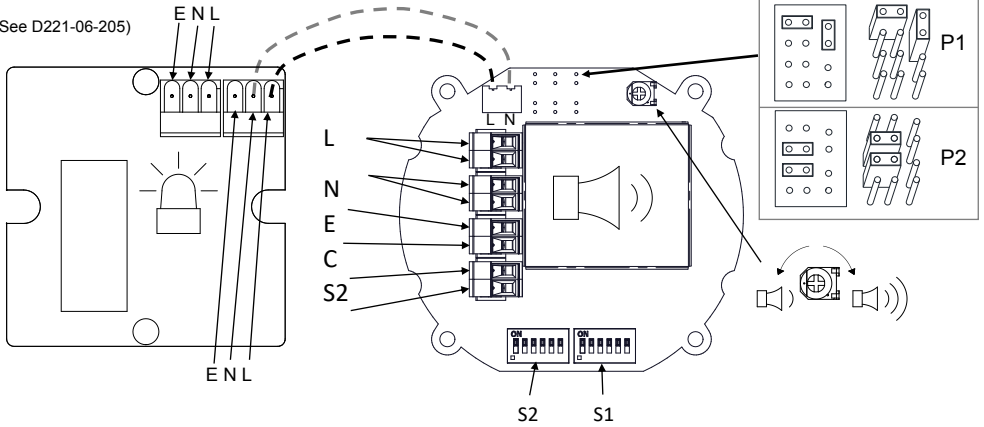
Attention: Installation must be carried out by an electrician in compliance with the latest codes and regulations.
 Attention: L'installation doit être effectuée par un électricien conformément aux derniers codes et réglementations.
 Achtung: Die Installation muss von einem Elektriker gemäß den neuesten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

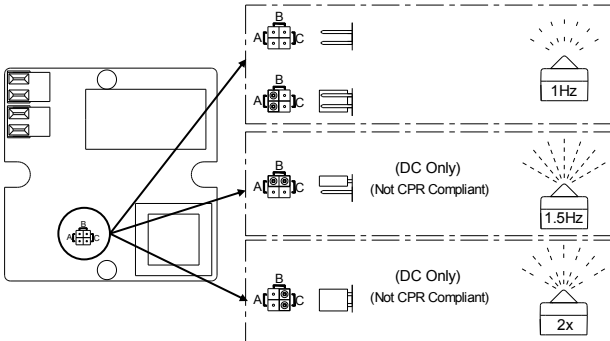
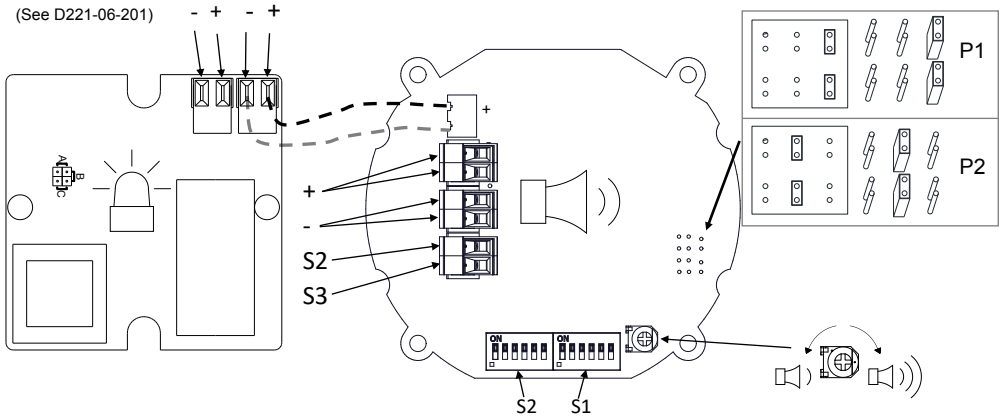
AC

(See D221-06-205)



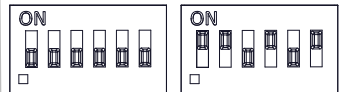
DC

(See D221-06-201)



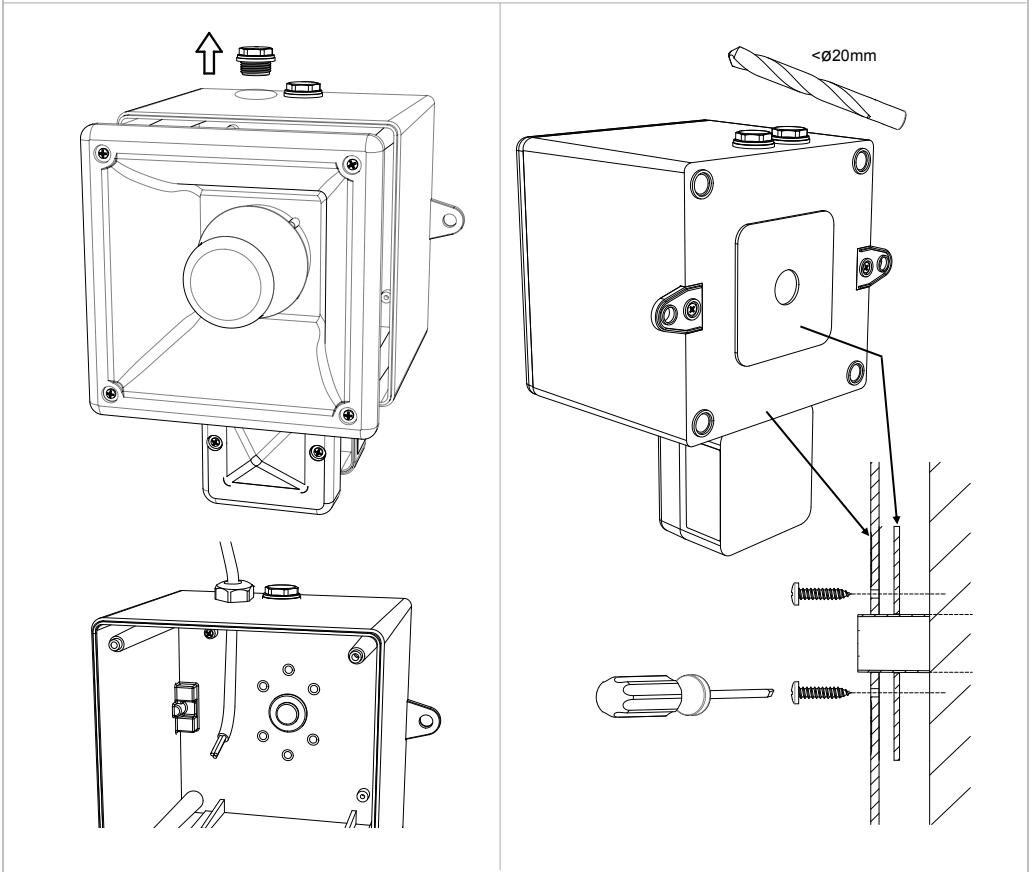
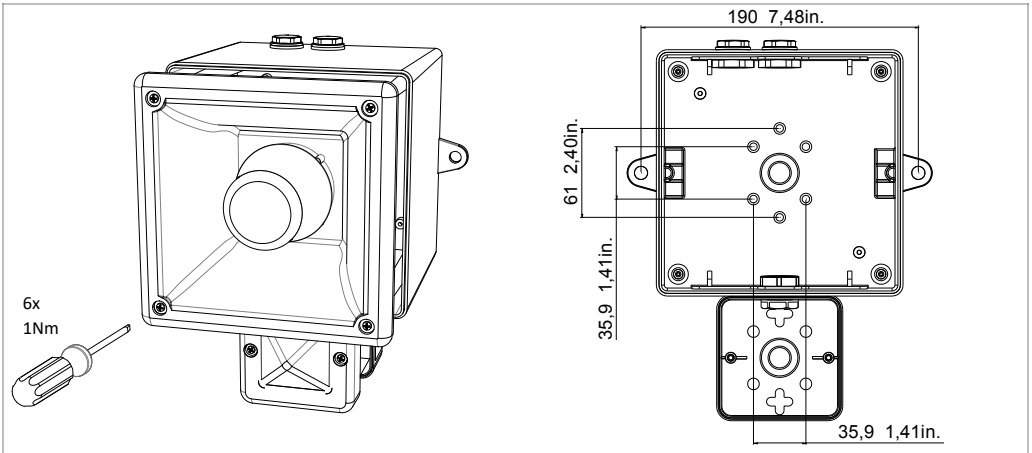
(AC & DC, See D221-95-001)

Default = S2 - Tone 1 Default = S1 - Tone 44



(ON = 1, OFF = 0)

INSTRUCTION & SERVICE MANUAL
AL112



Construction Product Regulation

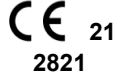
- AL112.024.2 & AL112.048.2 are compliant to EN54-3:2001+A1+A2 & EN54-23:2010
- VAD for use in fire detection and fire alarm systems installed in and around buildings
- Type 4 / 4X / 3R / 13, IP66, Independently tested to EN60529:1991, (IP33C Compliant to EN54-3)
- Type B Product, For Indoor & Outdoor 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.

Order Code: AL112.024.2 Voltage

Range: 20-28Vdc
 Nominal Voltage: 24Vdc
 Max Sounder Current: P1: 280mA @ 20Vdc; P2: 430mA @24Vdc
 Max Beacon Current: 271mA @ 20Vdc
 DP-2821-CPR-0110



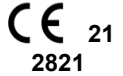
S36282



Order Code: AL112.048.2
 Voltage Range: 42-52Vdc
 Nominal Voltage: 48Vdc
 Max Sounder Current: P1: 280mA @42Vdc; P2: 430mA @42Vdc
 Max Beacon Current: 160mA @ 42Vdc
 DP-2821-CPR-0110



S36282



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

AL112.024.2 / AL112.048.2 (P2) @ 1m

Angle	Horizontal Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Horizontal Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
	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

Angle	Vertical Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Vertical Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
	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

AL112.024.2 (P1) @ 1m

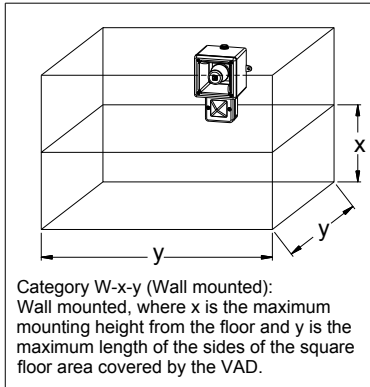
Angle	Horizontal Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Horizontal Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5	Tone 44	Tone 8	Tone 2	Tone 21	Tone 31	Tone 5
15°	103.3	103.7	103.1	103.3	103.2	91.5	101	101.5	100.9	101	100.3	89.4
45°	103.4	104.8	104.2	101.6	96.3	99.4	101.5	102.7	101.8	99.6	94.3	97.4
75°	109.1	110.4	109.7	109.6	108.3	103.2	107.1	108.2	107.4	107.7	105.9	101.4
105°	109.9	110.2	109.6	109.7	108.6	103	107.7	108.1	107.4	107.6	105.9	101.6
135°	103.4	104.8	104	101.8	96.5	99.4	101.1	102.8	101.7	99.6	94.5	97.4
165°	103.4	103.5	103	103.3	103	91.6	101	101.4	100.8	101.1	100.2	89.4

Angle	Vertical Sound Output Max Voltage (54 Vdc) LAFmax,T dB(A)						Vertical Sound Output Min Voltage (11.5 Vdc) LAFmax,T dB(A)					
	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°	104.1	104.1	103.2	104.1	102.3	92.3	101.8	101.8	100.8	101.8	100	90.4
45°	103.4	106.4	105.2	101.9	96.3	100.2	101.3	104.3	103.1	99.7	94.1	98.2
75°	109.8	110.1	109.8	110.4	108.3	103.2	107.7	107.8	107.7	108.4	106.2	101.4
105°	109.1	109.9	109.5	110	108.3	102.9	106.9	107.7	107.1	107.6	105.7	101.3
135°	101.1	106.4	104.7	101.8	96.6	101	100.6	104.1	102.3	99.6	94.5	99.1
165°	103.6	103.1	102.8	103.6	102.8	91.8	101.2	100.9	100.7	101.4	99.8	89.8

INSTRUCTION & SERVICE MANUAL

AL112

AL112.024.2 & AL112.048.2 LIGHT OUTPUT



Note: CPR approved units must be positioned sounder on top, beacon below.

Coverage Area According to EN54-23

(Only units in the following table are VdS Approved)

Unit	Category W	Power
AL112.024.2	W-2.4-4.8	11W
	V=55.3m	
AL112.048.2	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: AL112.024.2: -40°C to +55°C / -40°F to +131°F
AL112.230.7: -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 P1 / P2	Beacon	Sounder P1 / P2
AL112.012.2	12V dc	11.5-14Vdc	341mA	280mA / 376mA	531mA	280mA / 430mA
AL112.024.2	24V dc	20-28Vdc	250mA	225mA / 430mA	271mA	
AL112.048.2	48V dc	42-52Vdc	170mA	122mA / 223mA	170mA	
AL112.115.7	115 Vac	103.5-126.5 Vac 50/60Hz	70mA	100mA / 173mA	58mA	181mA / 383mA
AL112.230.7	230 Vac	207-240 Vac 50/60Hz	35mA	65mA / 105mA		

*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

1	2	3	4	5	6	7	8	9	10		
							ISSUE	MOD NO.	REASON	INITIAL	DATE
							A		INTRODUCTION		
									RSK - 16/03/2021		

--- WIRING LINKING BEACON & SOUNDER
 --- FACTORY FITTED

OPTIONAL LINE MONITORING RESISTOR. CUSTOMER SUPPLIED.
 RECOMMENDED MINIMUM VALUES:
 12V MAX SYSTEM = 470Ω MIN, 24V MIN OR 24V DC MAX. 0.5W MIN

Linked Sounder & Beacon Activation (Default)

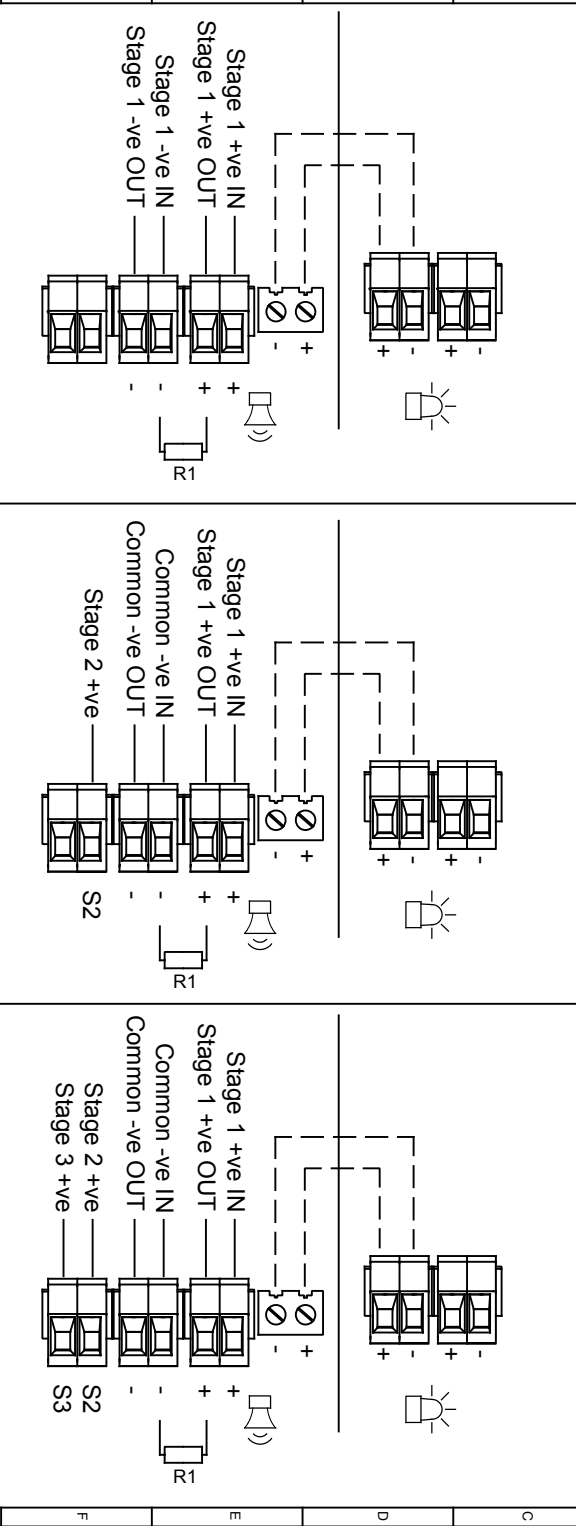
Single Stage Configuration	Config.: 1a	Two Stage Configuration	Config.: 1b	Three/Four Stage Configuration	Config.: 1c
----------------------------	-------------	-------------------------	-------------	--------------------------------	-------------

Line Monitoring
 Set to positive switching (default)

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



DRAWING TO BE ENRICHED TO ENHANCE TO ISO 10111:1983 GEOMETRIC TOLERANCES TO ISO 1101:1983 SURFACE FINISH TO ISO 13715:1983 ANGULAR DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS UNMUTATED IN COMPLIANCE WITH THE DEFENCE AND SECURITY (RESERVE) ACT 1967 AND SYSTEMS DESIGN, DEVELOPMENT, MANUFACTURE AND SUPPORT (DMS) ACT 2013. THE POLICE OR ANY OTHER MANUFACTURER OR TENDERING OFFICERS WITHOUT THEIR WRITTEN CONSENT. BIRCHWOOD AIRFIELD LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE	ALL DIMENSIONS IN MM IF IN QUOTE ASK - DON'T SCALE	A3	
	R.S. RAIT	16/03/2021						
STANDARDS	CHECKED	DATE			TITLE AL112 & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS	SCALE	SHEET	DRAWING NUMBER
	B.ISARD	16/03/2021						
ALERT/ARM RANGE	APPROVED	DATE						
	R.N.POTTS	16/03/2021						

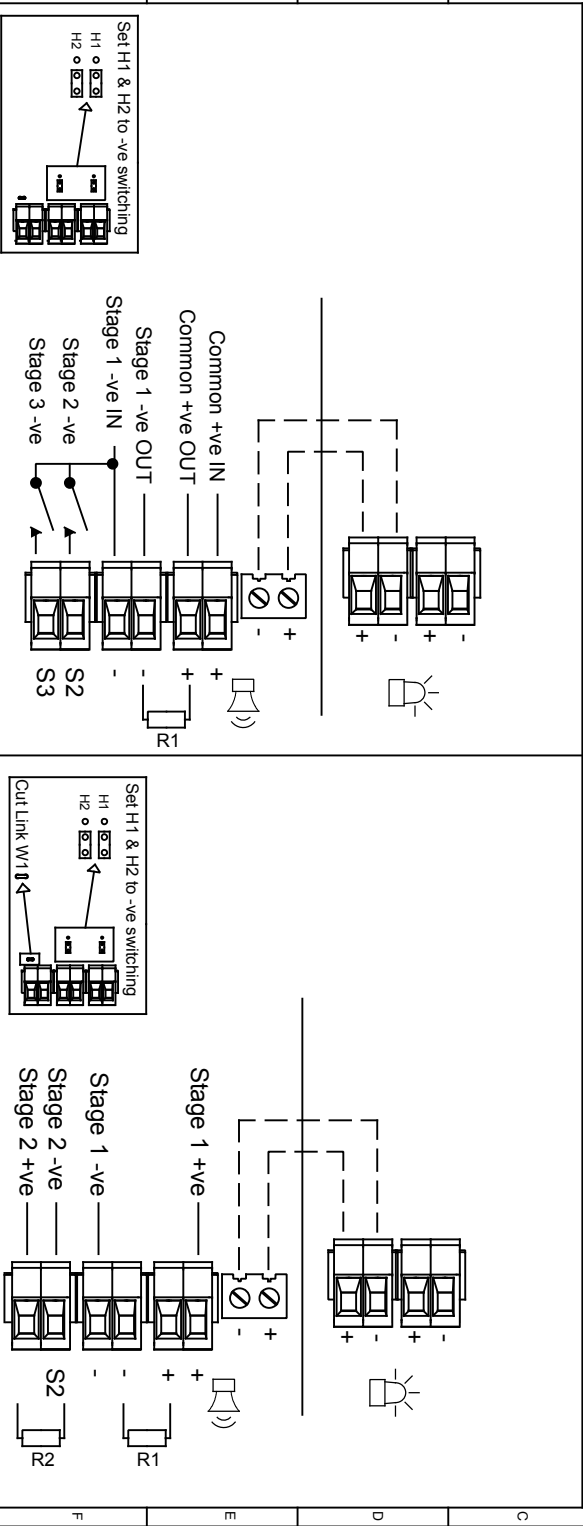
<p>--- WIRING LINKING BEACON & SOUNDER FACTORY FITTED</p>		<p>OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES: ΩR 10Ω MIN, 0.5W MIN, 28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 24ΩΩ MIN, 0.5W MIN</p>	
<p>SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED</p>		<p>ISSUE MOD NO. REASON INITIAL DATE</p> <p>A A INTRODUCTION RSK - 16/03/2021</p>	

Linked Sounder & Beacon Activation (Default)

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

Customer 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



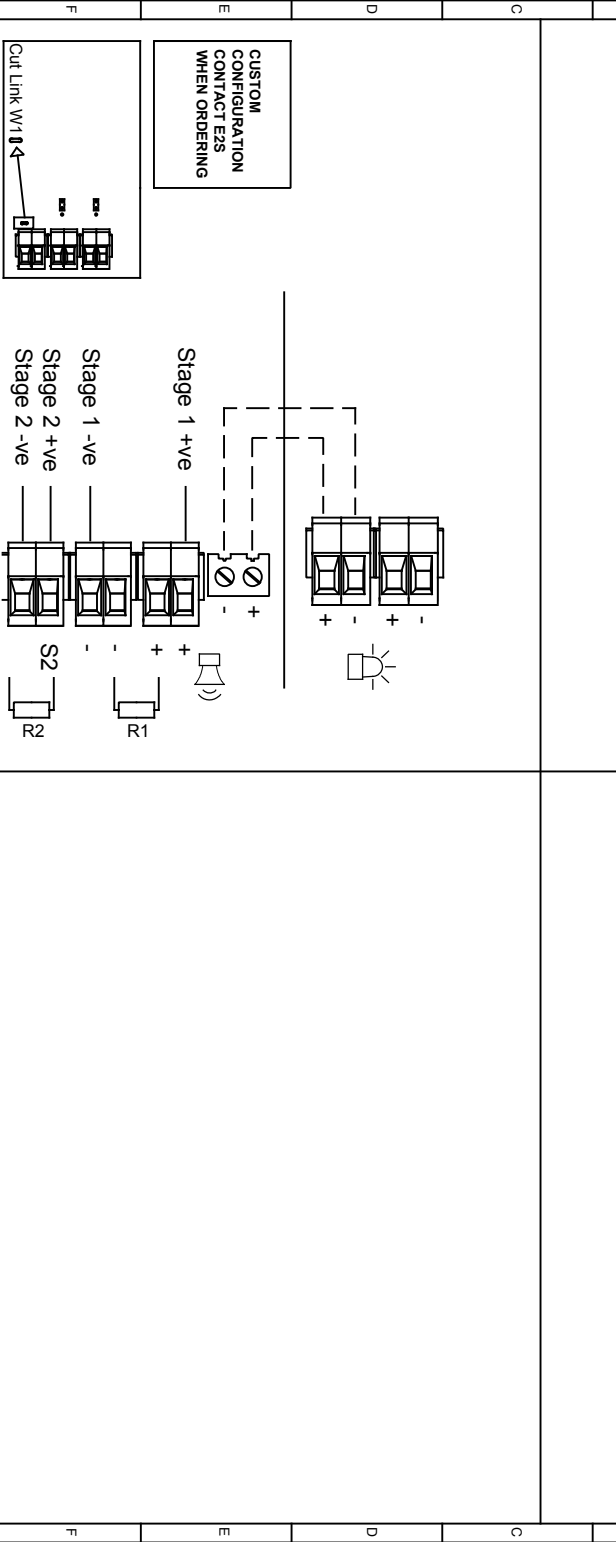
DRAWING TO BE ISSUED TO ENRICHES TO ISO11011:1983 GEOMETRIC TOLERANCES TO ISO11011:1983 ANGULAR DIMENSIONAL TOLS		DRAWN		DATE		SURFACE FINISH		WEIGHT (KG)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTION MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE MANUFACTURER WHICH IS LIMITED TO THE PURPOSES FOR WHICH IT IS ISSUED. THE DATE OF ISSUE IS SHOWN ABOVE		ALL DIMENSIONS IN MM IF IN QUOTE ASK - DON'T SCALE		TITLE A112N & A121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS		SCALE SHEET		DRAWING NUMBER	
STANDARDS		R.S. RAIT		16/03/2021		MATERIAL				AS PER LATEST DATE OF ISSUE SHOWN ABOVE		A3		2 OF 6		D221-06-201			
ALERT/ALARM RANGE		CHECKED		DATE		ALTERNATIVE MATERIAL													
		B. ISARD		16/03/2021															
		APPROVED		DATE															
		R. N. POTTS		16/03/2021															

<p>--- WIRING LINKING BEACON & SOUNDER FACTORY FITTED</p>		<p>OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES: 10K OHM, 0.5W MAX 28V MAX SYSTEM - 4700 MIN, 2W MIN OR 2.4KJ MIN, 0.5W MIN</p>		<p>SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED</p>		<p>ISSUE MOD NO REASON INITIAL DATE</p>
				<p>A</p>		<p>A</p>

Linked Sounder & Beacon Activation (Default)


Config.: 4

Two Stage Configuration
 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



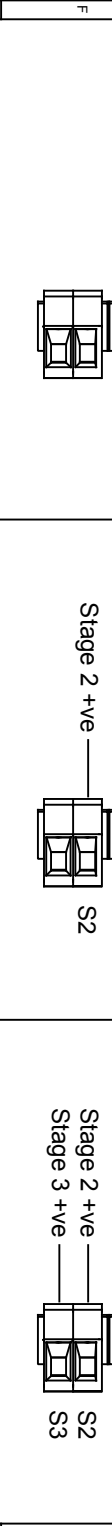
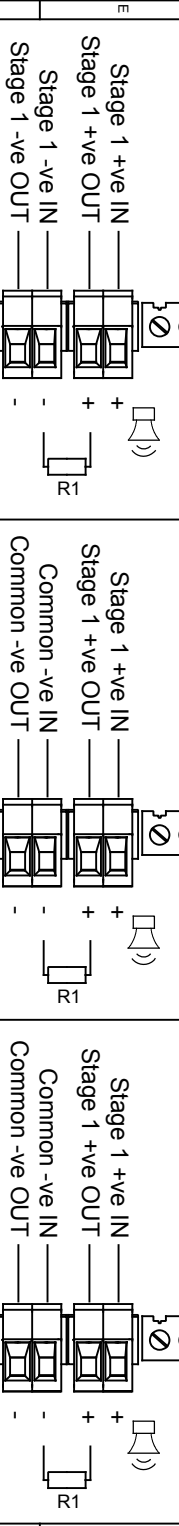
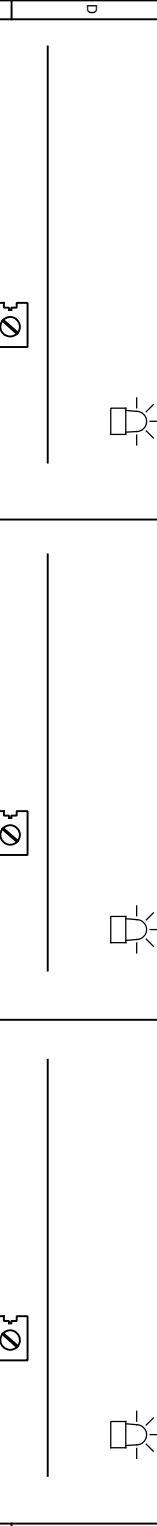
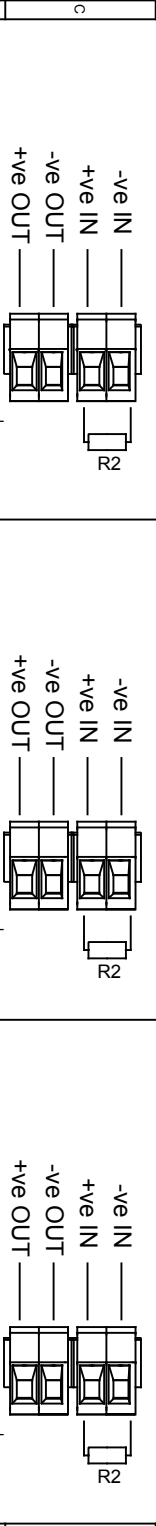
<p>DRAWING TO BE ENHANCED TO ISO 11:1:1983 GEOMETRIC TOLERANCES TO ISO 11:1:1983 UNLESS OTHERWISE SPECIFIED ANGULAR DIMENSIONAL TOLS</p>		<p>DRAWN R. S. PAIT</p>	<p>DATE 16/03/2021</p>	<p>SURFACE FINISH</p>	<p>WEIGHT (KG)</p>	<p>THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE MANUFACTURER WHOSE NAME AND ADDRESS IS SHOWN ABOVE</p>		<p>ALL DIMENSIONS IN MM IF IN DOUBT ASK DON'T SCALE</p>	<p></p>	<p>A3</p>
<p>STANDARDS ALERTALARM RANGE</p>		<p>CHECKED B. ISARD</p>	<p>DATE 16/03/2021</p>	<p>MATERIAL</p>		<p>APPROVED R. N. POTTS</p>		<p>DATE 16/03/2021</p>	<p>ALTERNATIVE MATERIAL</p>	<p>TITLE AL112N & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS</p>
								<p>SCALE NTS</p>	<p>SHEET 3 OF 6</p>	<p>DRAWING NUMBER D221-06-201</p>

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIER, RECOMMENDED MINIMUM VALUES: 10K OHM, 0.5W MAX, 28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 24KΩ MIN, 0.5W MIN



Independent Sounder & Beacon Activation (Remove Link Wires)

Single Stage Configuration Line Monitoring Set to positive switching (default)	Config.: 5a	Config.: 5c
Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve	Two Stage Configuration Common Negative Set to positive switching (default)	Three/Four Stage Configuration 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 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



<p>DRAWING TO BE ENRICHED TO ISO 10111:1983 GEOMETRIC TOLERANCES TO ISO 1101:1984 ANGULAR DIMENSIONAL TOLS</p>	<p>DRAWN R.S. RAIT</p> <p>CHECKED B.ISARD</p> <p>APPROVED R.N.POTTS</p>	<p>DATE 16/03/2021</p> <p>DATE 16/03/2021</p> <p>DATE 16/03/2021</p>	<p>SURFACE FINISH</p> <p>WEIGHT (KG)</p> <p>MATERIAL</p> <p>ALTERNATIVE MATERIAL</p>	<p>THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS UNMAYBE REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE MANUFACTURER OR THE HOLDER OF ANY PATENT RIGHTS IN THE SYSTEM OR THE DESIGN OR THE PROCESS WITHIN THEIR RESPECTIVE JURISDICTIONS.</p> <p>© AIRTEL/AL12N & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS</p>	<p>ALL DIMENSIONS IN MM IF IN QUOTE ASK- DO NOT SCALE</p> <p>TITLE AL12N & AL121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS</p> <p>SCALE NTS</p> <p>SHEET 4 OF 6</p>	<p>DRAWING NUMBER D221-06-201</p> <p>A3</p>
--	---	--	--	--	---	---

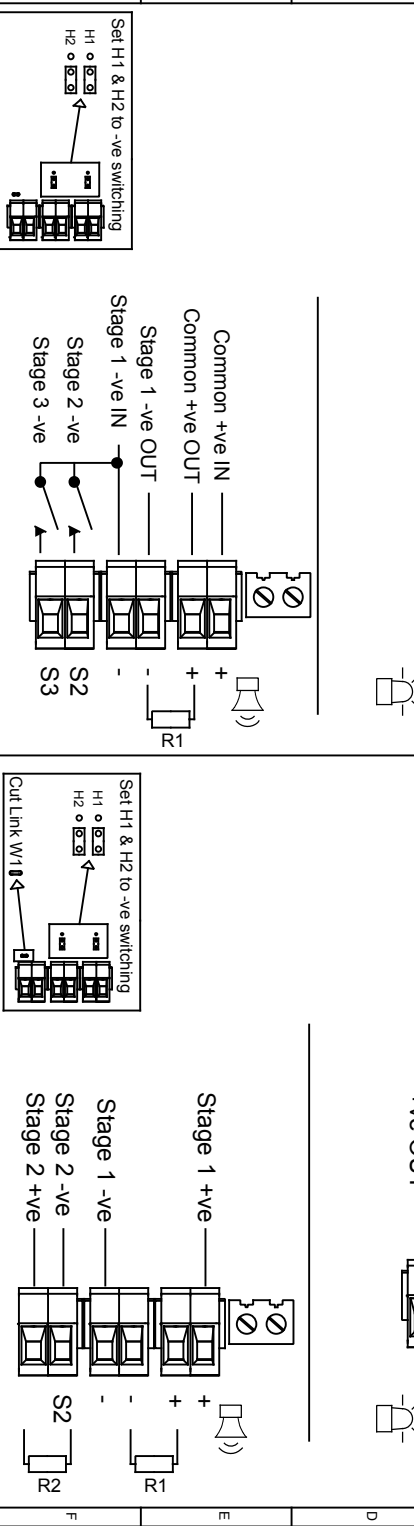
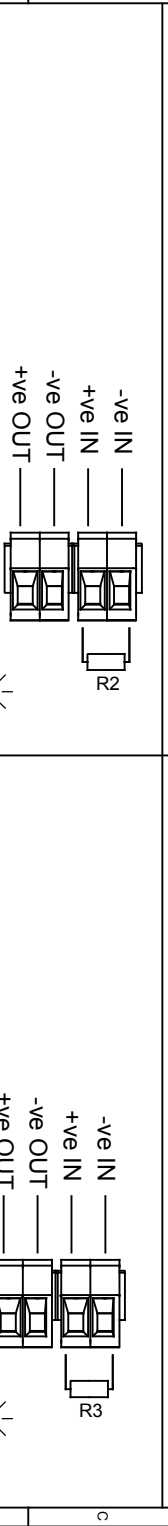
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES: 10K OHM, 0.5W MIN, 25V MAX SYSTEM = 4700 MIN, 2W MIN OR 24K0 MIN, 0.5W MIN		ISSUE MOD NO. REASON INITIAL DATE	
SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED		A INTRODUCTION RSK - 16/03/2021	

Independent Sounder & Beacon Activation (Remove Link Wire)

Three/Four Stages, Voltage Free 2nd, 3rd & 4th Stage Activation Configuration Customer: Set H1 & H2 to Negative Switching (See Below)	Config.: 6	Two Stage Configuration Independent Stage Input Reverse Polarity Stage Monitoring	Config.: 7
--	------------	---	------------

B 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

B 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



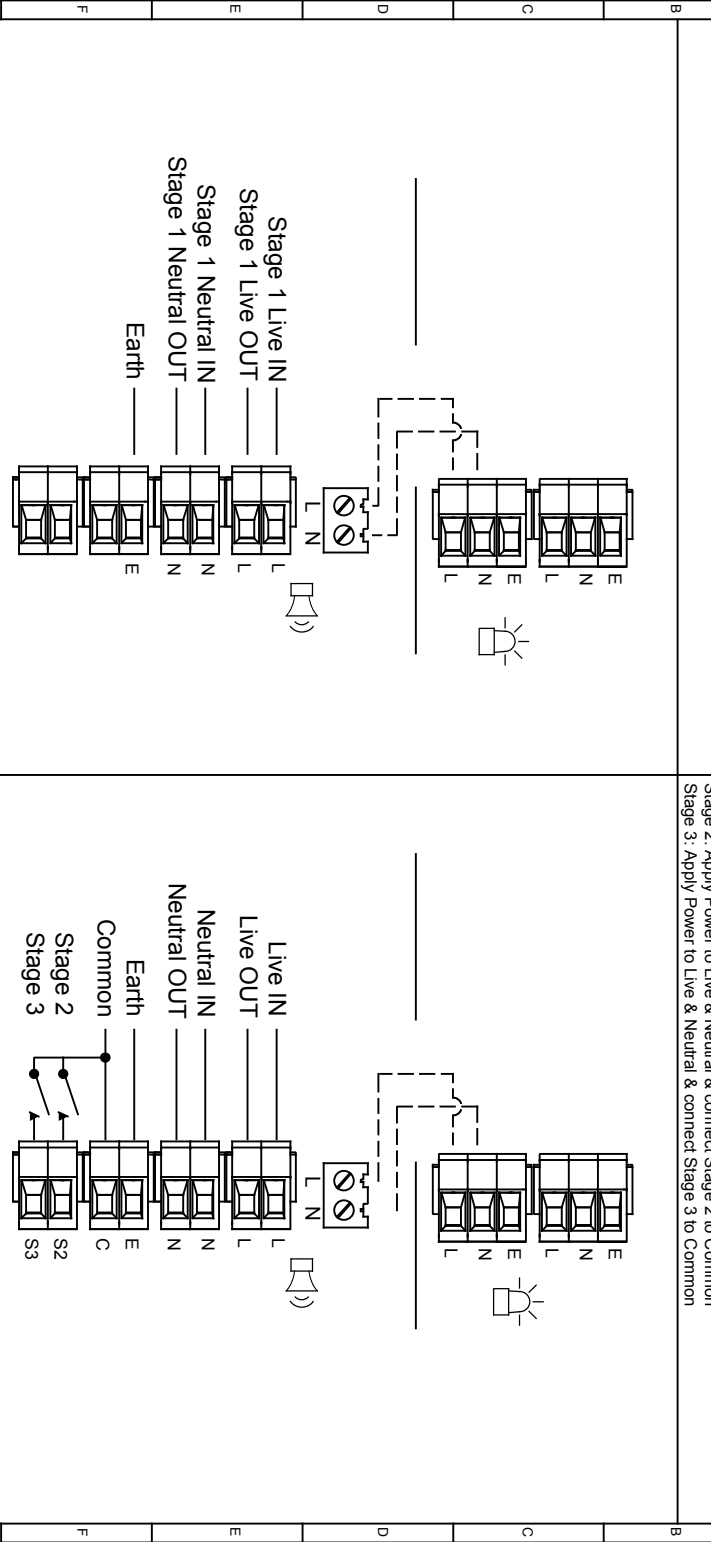
DRAWING TO BE ISSUED TO ENRICH THE GEOMETRIC DIMENSIONS TO ISO 1011:1983 AND QUAD DIMENSIONAL TOLS		DRAWN R.S. RAIT DATE 16/03/2021		SURFACE FINISH WEIGHT (KG)		THIS DRAWING AND ANY INFORMATION OR DESCRIPTION MATTER HEREIN IS UNCLASSIFIED INFORMATION AND IS NOT TO BE RELEASED TO THE PUBLIC OR ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF THE MANUFACTURER OR FURNISHER OF THIS DRAWING. AS PER LATEST DATE OF ISSUE SHOWN ABOVE		ALL DIMENSIONS IN MM IF IN QUOTE ASK - DO NOT SCALE		TITLE A112N & A121 DC COMBINED SOUNDER & XENON WIRING DIAGRAMS		SCALE SHEET DRAWING NUMBER NTS 5 OF 6 D221-06-201	
STANDARDS ALERT/ALARM RANGE		CHECKED B.ISARD DATE 16/03/2021		APPROVED R.N.POTTS DATE 16/03/2021		APPROVED R.N.POTTS DATE 16/03/2021		APPROVED R.N.POTTS DATE 16/03/2021		APPROVED R.N.POTTS DATE 16/03/2021		APPROVED R.N.POTTS DATE 16/03/2021	



Linked Sounder & Beacon Activation (Default)

Single Stage Configuration Config.: 1a1 Three/Four Stage Configuration Config.: 1b

Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral 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 BE ENHANCED TO ISO 1011:1983 GEOMETRIC TOLERANCES TO ISO 1101:1983 ANGULAR DIMENSIONAL TOLS		DRAWN R.S. PAIT	DATE 16/03/2021	SURFACE FINISH	WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTION MATTER THEREIN IS UNMUTATED IN COMPLIANCE WITH THE REQUIREMENTS OF THE UK DATA PROTECTION ACT 1998. IT IS THE USER'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMISSIONS FROM THE DATA CONTROLLER FOR ANY MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. © 1998 AS PER LATEST DATE OF ISSUE SHOWN ABOVE	ALL DIMENSIONS IN MM IF IN QUOTE 'RSK' DO NOT SCALE	 A3
STANDARDS ALERT/ALARM RANGE	CHECKED B.ISARD	DATE 16/03/2021	MATERIAL	ALTERNATIVE MATERIAL	TITLE A1,12N & A121 COMBINED SOUNDER & XENON WIRING DIAGRAMS		SCALE NTS	

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

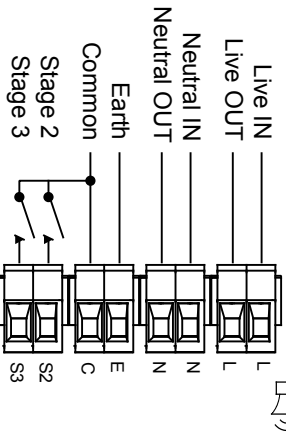
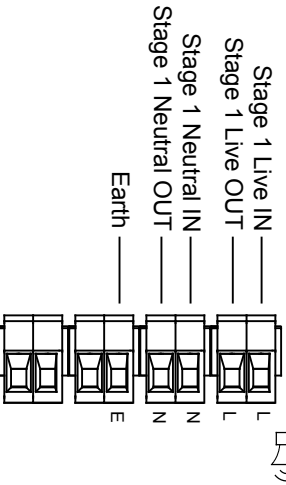
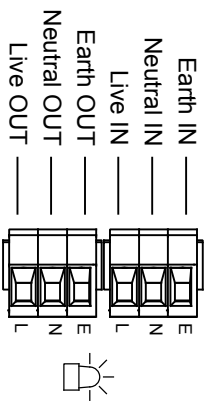
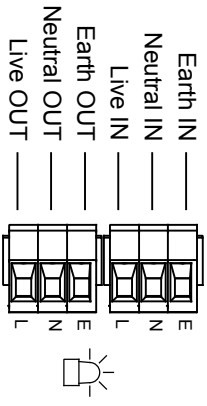
SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

Independent Sounder & Beacon Activation (Remove Link Wires)

Single Stage Configuration Config.: 2a

Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral Config.: 2b

Config.: 2a
 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 BE ENRAGED TO ISO 11011:1983 AND QUAD DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS UNMAY BE REPRODUCED OR SYSTEMS USED WITHOUT THE WRITTEN CONSENT OF MANUFACTURING OR TRADING PURPOSES WITHOUT THEIR WRITTEN CONSENT. BROGUE (LAST DATE OF ISSUE SHOWN ABOVE)	ALL DIMENSIONS IN MM IF IN QUOTE "ASK" DO NOT SCALE	TITLE: A112N & A121 COMBINED SOUNDER & XENON WIRING DIAGRAMS	DRAWING NUMBER
	R.S. RAIT	16/03/2021						
STANDARDS	CHECKED	DATE			A3			
ALERT/ALARM RANGE	B. ISARD	16/03/2021	ALTERNATIVE MATERIAL			SCALE	SHEET	D221-06-205
	APPROVED	DATE						
	R.N.POTTS	16/03/2021						

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, 1s off) 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 1 0 1 0 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 1 0 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 0 1 0 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	12
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

