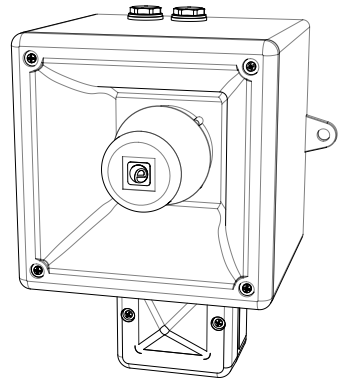


INSTRUCTION & SERVICE MANUAL

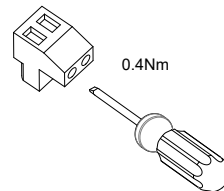
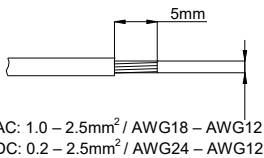
AL112NH AlertAlight Combined Sounder LED

- -40°C to +66°C (104°F to 151°F)
- Type 4 / 4X / 3R / 13, IP66
- 2.7Kg (5.94lb)
- CE, 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
AL112NHDC024	#12 Vdc	11.5-14Vdc	79.5mA	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
	24 Vdc	16-33 Vdc (Regulated)	87mA	225mA / 430mA			
AL112NHDC048	48 Vdc	48-54 Vdc	60mA	122mA / 223mA			
AL112NHAC230	115 Vac	100-240 Vac 50/60Hz	34mA	100mA / 173mA			
	230 Vac		19mA	65mA / 105mA			

*Nominal current at nominal voltage; #Factory Default setting 24Vdc, beacon customer settable to 12Vdc



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.

Attenzione: L'installazione deve essere eseguita da un elettricista in conformità con i codici e le normative più recenti.

Atención: La instalación debe ser realizada por un electricista de acuerdo con los últimos códigos y regulaciones.

Atenção: A instalação deve ser realizada por um electricista de acordo com os códigos e regulamentos mais recentes.

Внимание: установка должна выполняться электриком в соответствии с последними нормами и правилами.

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.

Attenzione: scollegare dall'alimentazione prima dell'installazione o dell'assistenza per evitare scosse elettriche.

Atención: desconéctelo de la fuente de alimentación antes de la instalación o el servicio para evitar descargas eléctricas.

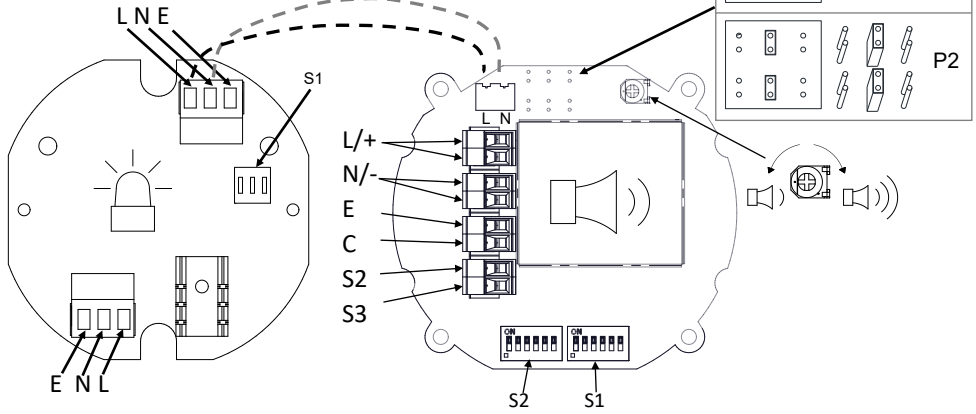
Atenção: Desconecte da fonte de alimentação antes da instalação ou serviço para evitar choque elétrico

Внимание: отключите от источника питания перед установкой или обслуживанием, чтобы предотвратить поражение электрическим током.



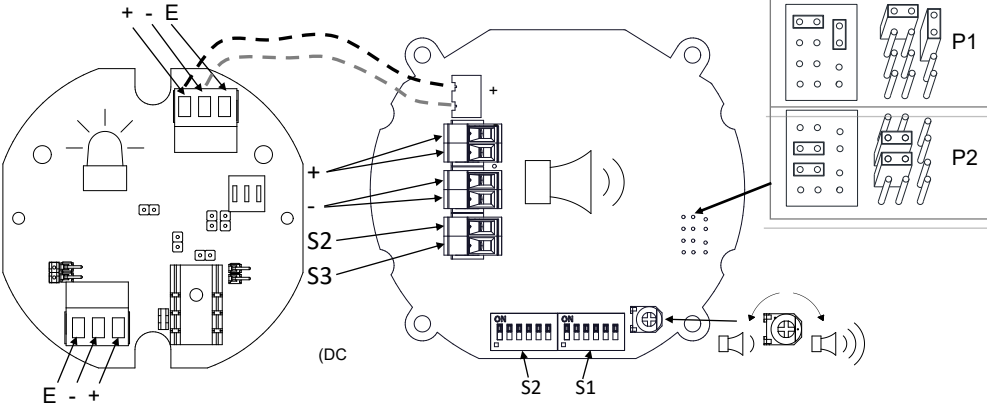
AC

See D221-06-305



DC

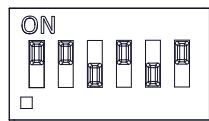
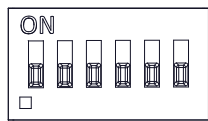
See D221-06-301



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

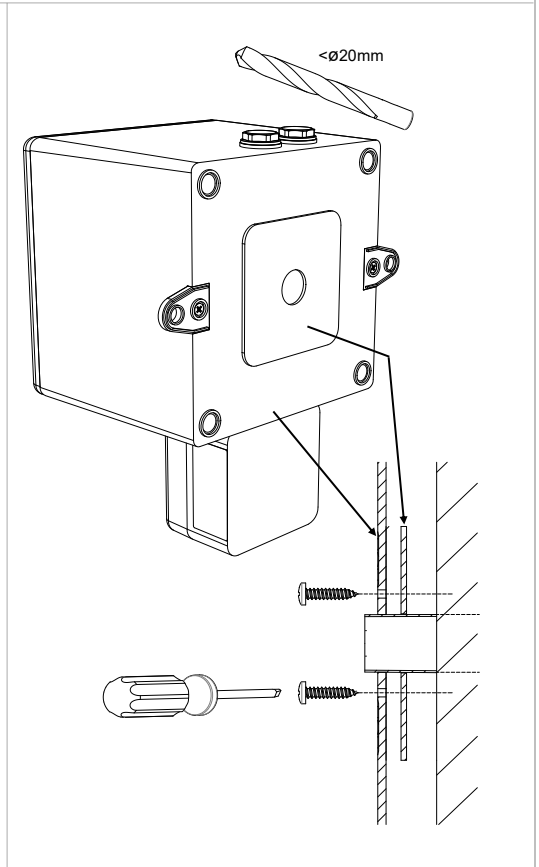
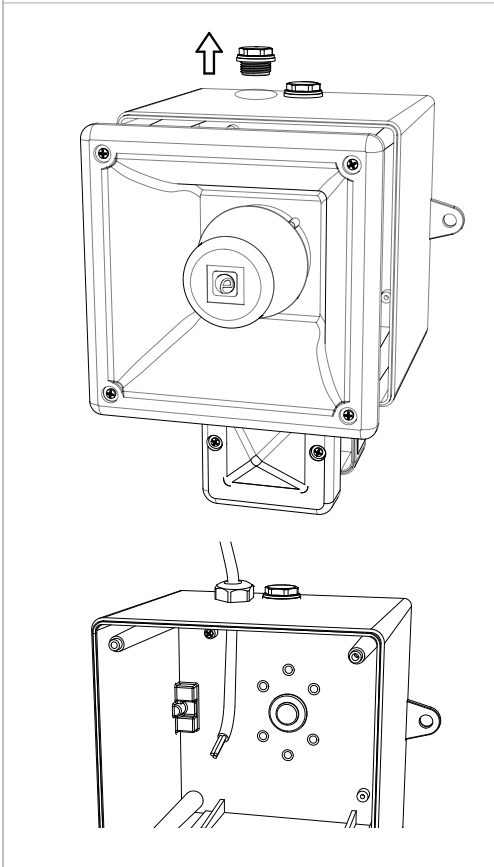
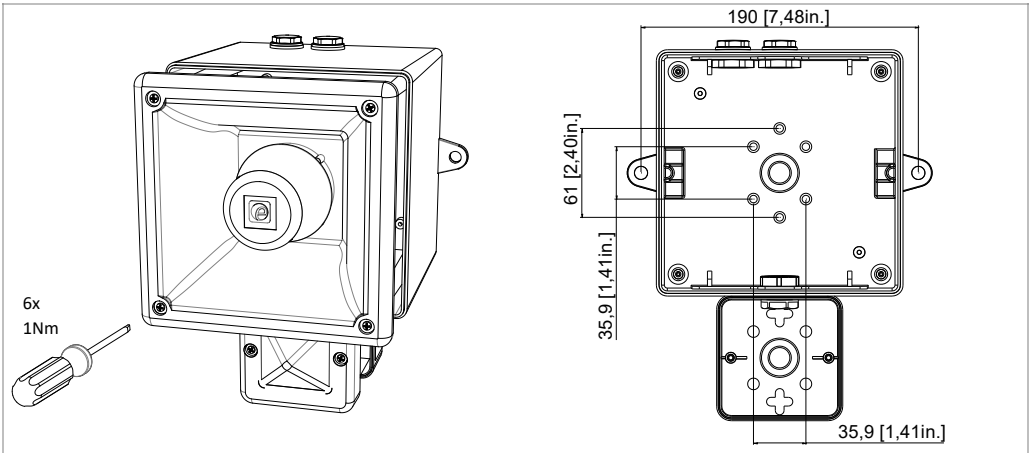
Default = S2 - Tone 1

Default = S1 - Tone 44



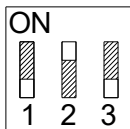
(ON = 1, OFF = 0)

INSTRUCTION & SERVICE MANUAL
AL112NH AlertAlight Combined Sounder LED



S1 - LED Flash Mode Settings (AC & DC)

The Flash Mode Dip Switch can be changed to set the desired flash pattern



Flash Mode DIP Switch – Shown with 1-OFF, 2-ON, 3-OFF (0 1 0), This denotes Flash mode 1Hz. For further flash modes refer to table:

Switch Setting	Flash Mode
0 0 0	Steady on
1 0 0	Blinking
0 1 0	Flashing 1Hz*
1 1 0	Flashing 1.5Hz*
0 0 1	Flashing - Double Strike
1 0 1	Flashing - Triple Strike
0 1 1	Flashing 2Hz*
1 1 1	Flashing - Temporal

- All models are approved for use as Audible Signal and Visual 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:

AL112NHDC: -40°C to +55°C / -40°F to +131°F

AL112NHAC: -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
- 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
AL112NHDC024	12V dc	11.5-14Vdc	79.5mA	280mA / 376mA	168mA	280mA / 430mA
	24V dc	16-33Vdc (Regulated)	87mA	225mA / 430mA	183mA	
AL112NHDC048	48V dc	48-54Vdc	60mA	122mA / 223mA	115mA	
AL112NHAC230	115 Vac	100-240Vac 50/60Hz	34mA	100mA / 173mA	166mA	101mA / 181mA
	230 Vac		19mA	65mA / 105mA		

*Max Operating current for worst-case input voltage and worst case flash pattern

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FIRE INSTRUCTION & SERVICE MANUAL

AL112NH Range AlertAlight Combined Sounder LED Beacons

UL464 / CAN/ULC-S525 & UL1638 / CAN/ULC-S526

Model: AL112NHDC



Attention: Installation must be carried out by an electrician in compliance with the National Electrical Code, NFPA 70, and the National Fire Alarm Signaling Code, NFPA 72 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, et le code national d'alarme incendie et de signalisation NFPA 72 ou CSA 22.1 Code canadien de l'électricité, première partie, norme de sécurité relative aux installations électriques, Section 32



Attention: Disconnect from power source before installation or service to prevent electric shock / Débranchez-le de la source d'alimentation avant l'installation ou l'entretien pour éviter tout choc électrique.



Attention: Do not paint / Ne pas Peinturer

- -40°C to +66°C / -40°F to +151°F
- Units can be mounted using the 2-off ø7mm holes in the mounting lugs or through the back of the housing using the supplied gasket seal.
- AL112NHDC024 is approved for use as an Audible & Visual signal appliance for fire alarm use – Private Mode. (UL464 & CAN/ULC-S525 & UL1638 & CAN/ULC-S526).
- AL112NHDC024 produces a minimum sound pressure level of P1: US: 93.37dB(A); CA: 101.6dB(A) / P2: US: 94.64dB(A); CA: 103.9dB(A) at 10 feet (figures @ worst case 11.5Vdc).
- AL112NHDC024 produces a minimum sound pressure level of P1: US: 95.6dB(A); CA: 104.3dB(A) / P2: US: 98.55dB(A); CA: 107.6dB(A) at 10 feet (@24Vdc)
- For Fire Alarm applications, the Sounder Volume must be at the highest setting, (see volume control section). For fire alarm use, Tone 12 as shown below must be selected:

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)
12	1000Hz(0.5s on, 0.5s off)x3 + 1s gap ISO 8201 Temporal Pattern		1 1 0 1 0 0	1	8

- For private mode fire alarm use, the beacons must only be fitted with clear plastic lens covers and must be set to one of the certified flash patterns of 1Hz, 1.5Hz or 2Hz. Flash Pulse 196ms.
- For light output ratings see below:

On-axis light output rating per UL1638

Model	Intensity (cd) at 1Hz flash rate	Intensity (cd) at 1.5Hz flash rate	Intensity (cd) at 2Hz flash rate
AL112NHDC024 (12Vdc Mode)	5.9	5.97	6.35
AL112NHDC024 (24Vdc Mode)	11.65	12.32	12.38

- Connection Terminals: Pluggable
AC: 1.0 - 2.5mm² / AWG18 - AWG12
DC: 0.2 - 2.5mm² / AWG24 - AWG12
- Terminal Tightening torque 0.4Nm
- To maintain Ingress Protection, cable entries must be fitted with suitably rated cable glands or stopping plugs
- Units can be located indoor or outdoor wet use, wall or ceiling mounted and there are no limitations on orientation
- Factory finishes are not intended to be modified

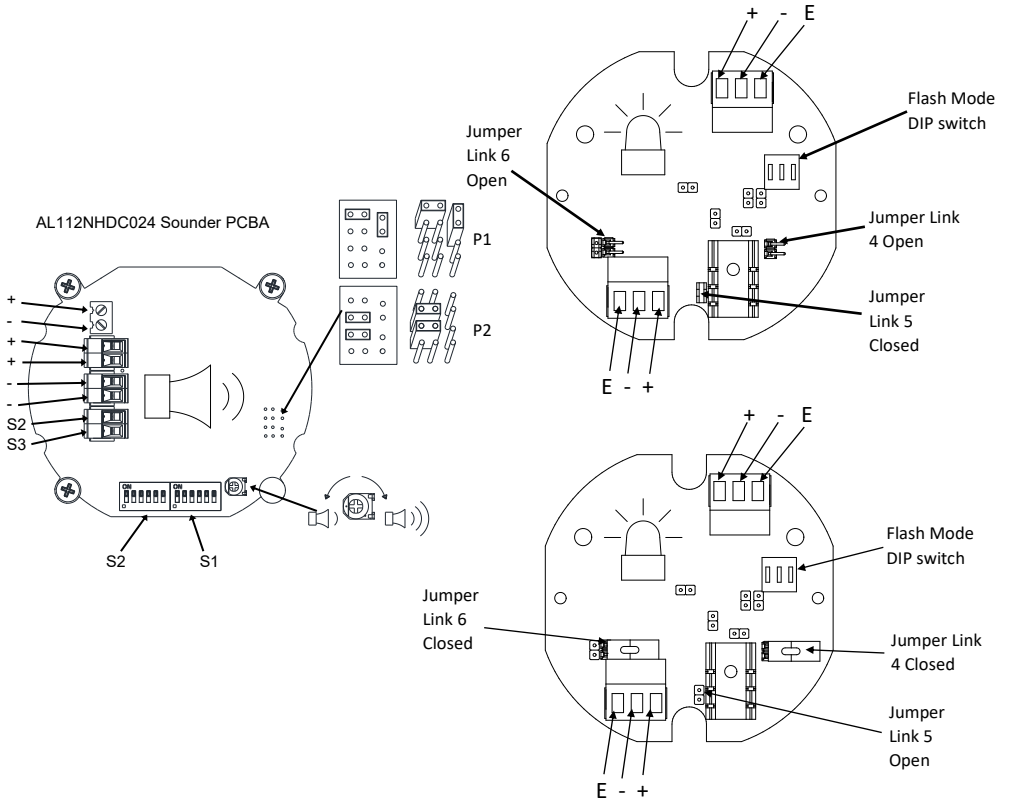
Surge current ratings for use in fire alarm systems

Model	Nominal Voltage	Voltage Range	Flash Rate	Initial Peak (mA)		Initial RMS (mA)	
				Beacon	Sounder	Beacon	Sounder
AL112HDC024	12Vdc	11.5 to 14Vdc	1 Hz	202	P1: 1455mA / P2: 1164mA	172	P1: 140mA / P2: 286mA
			1.5Hz	216		172	
			2Hz	224		172	
	24Vdc	16 to 33Vdc (Regulated)	1 Hz	950	204.3		
			1.5Hz	968.5	206.7		
			2Hz	969	205.2		

AL112HDC024 Sounder Directional Characteristics for Canadian Fire CAN/ULC-S525 at 10 feet

Horizontal Axis				Vertical Axis			
Angle	OSPL	Angle	OSPL	Angle	OSPL	Angle	OSPL
Reference 90°	103.7 dB(A)	Reference 90°	103.7 dB(A)	Reference 90°	103.8 dB(A)	Reference 90°	103.78dB(A)
129°	-3 dB(A)	49°	-3 dB(A)	126°	-3 dB(A)	49°	-3 dB(A)
131°	-6 dB(A)	39°	-6 dB(A)	140°	-6 dB(A)	40°	-6 dB(A)
180°	92.6 dB(A)	0°	91.2 dB(A)	180°	92.5 dB(A)	0°	90.8 dB(A)

AL112NHDC024 Beacon PCBA (24VDC Mode – Default Setting)



AL112NHDC024 Beacon PCBA (12VDC Mode – Customer to Set)

Jumper Setting	Jumper Link 4	Jumper Link 5	Jumper Link 6
24VDC Mode (Default)	Open	Closed	Open
12VDC Mode (Customer Set)	Closed	Open	Closed

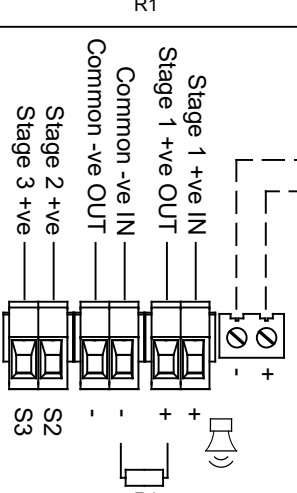
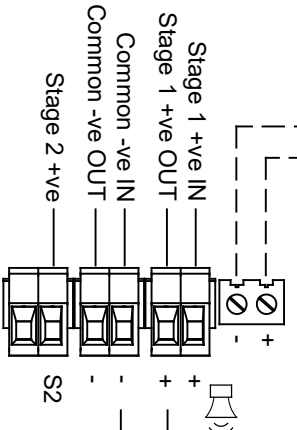
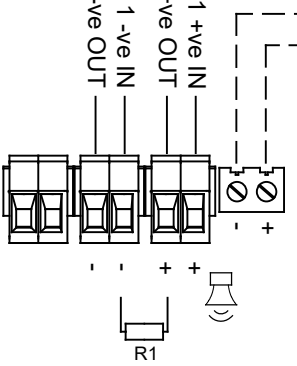
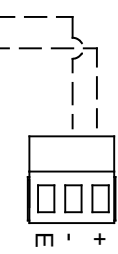
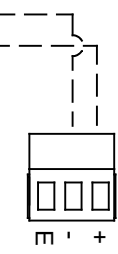
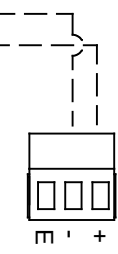
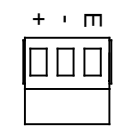
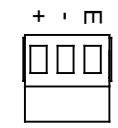
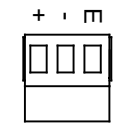
--- WIRING LINKING BEACON & SOUNDER
 --- FACTORY FITTED

OPTIONAL LINE MONITORING RESISTOR. CUSTOMER SUPPLIED.
 RECOMMENDED MINIMUM VALUES:
 12V: 100 OHM, 0.5W MIN.
 24V: 200 OHM, 0.5W MIN.
 48V: 400 OHM, 0.5W MIN.
 240V: 20K OHM, 2W MIN OR 24K OHM, 0.5W MIN

Linked Sounder & Beacon Activation (Default)

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

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



DRAWING TO BE ENHANCED TO ISO 10111:1983 GEOMETRIC TOLERANCES TO ISO 10111:1983 UNLESS OTHERWISE SPECIFIED ANGULAR DIMENSIONAL TOLS	DRAWN R.S. RAIT	DATE 16/03/2021	SURFACE FINISH	WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTION THEREIN IS UNCLASSIFIED IN COMPLIANCE WITH THE EXPORT CONTROL REGULATIONS AND SYSTEMS TO WHICH THE POLICE AND EXPORT CONTROL SYSTEMS APPLY. IT IS NOT TO BE RELEASED TO THE MEDIA OR TO THE PUBLIC WITHOUT THE WRITTEN CONSENT OF THE MANUFACTURER OR THE DESIGNING OFFICES WITHOUT THEIR PERMISSION. © ASPHER/RAIT DATE OF ISSUE SHOWN ABOVE	 ALL DIMENSIONS IN MM IF IN QUOTE, RSK - DO NOT SCALE	 TITLE: AL112NH & AL121H DC COMBINED SOUNDER & LED WIRING DIAGRAMS	SCALE: NTS	SHEET: 1 OF 6	DRAWING NUMBER: D221-06-251
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STANDARDS ALERT/ARM RANGE	CHECKED R.S. RAIT	DATE 16/03/2021	MATERIAL	APPROVED R.N. POTTS	DATE 16/03/2021	ALTERNATIVE MATERIAL
------------------------------	----------------------	--------------------	----------	------------------------	--------------------	----------------------

1	2	3	4	5	6	7	8	9	10
<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 2.4KQ MIN, 0.5W MIN</p>			
<p>SWITCHES FOR STAGE OPERATION CUSTOMER SUPPLIED</p>						<p>ISSUE MOD NO. REASON INITIAL DATE 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

Customer Positive

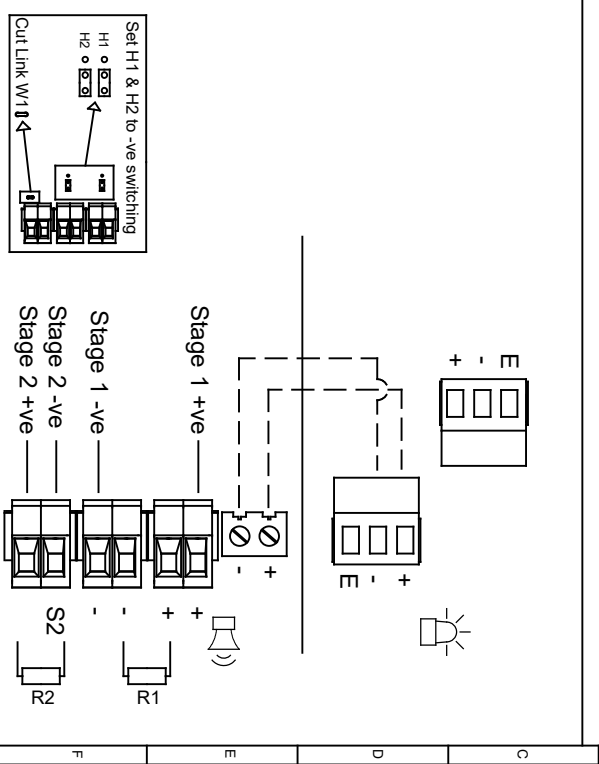
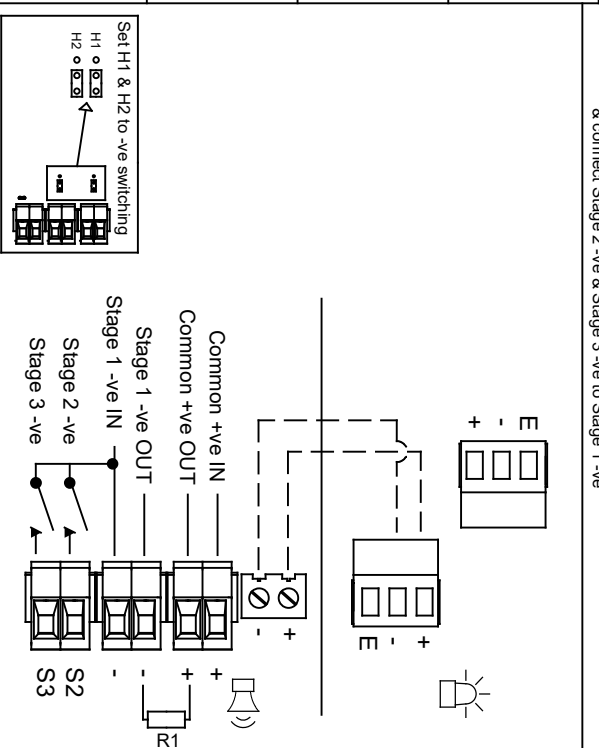
Customer: Set H1 & H2 to Negative Switching (See Below)

- 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

Two Stage Configuration
Independent Stage Input
Reverse Polarity Stage Monitoring

Config.: 3

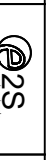
- Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve
- Stage 2: Apply Power to Stage 1 +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve



DRAWING TO BE ENRICHED TO ISO 1011:1983
GEOMETRIC TOLERANCES TO ISO 1101:1983
ANGULAR DIMENSIONAL TOLS

DRAWN	DATE	SURFACE FINISH	WEIGHT (KG)
R.S. RAIT	16/03/2021		

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AS PER LAST DATE OF ISSUE SHOWN ABOVE



ALL DIMENSIONS IN MM IF IN QUOTE 'ASK' DO NOT SCALE	A3
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CHECKED	DATE	MATERIAL
B. ISARD	16/03/2021	

APPROVED	DATE	ALTERNATIVE MATERIAL
R.N.POTTS	16/03/2021	

TITLE	SHEET	DRAWING NUMBER
AL112NH & AL121H DC COMBINED SOUNDER & LED WIRING DIAGRAMS	2 OF 6	D221-06-251

STANDARDS	ALERT/ALARM RANGE
-----------	-------------------

--- WIRING LINKING BEACON & SOUNDER
FACTORY FITTED



OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED.
RECOMMENDED MINIMUM VALUES: ΩR 100.0MIN, 0.5W MAX
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN



SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

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

Linked Sounder & Beacon Activation (Default)

Config.: 4

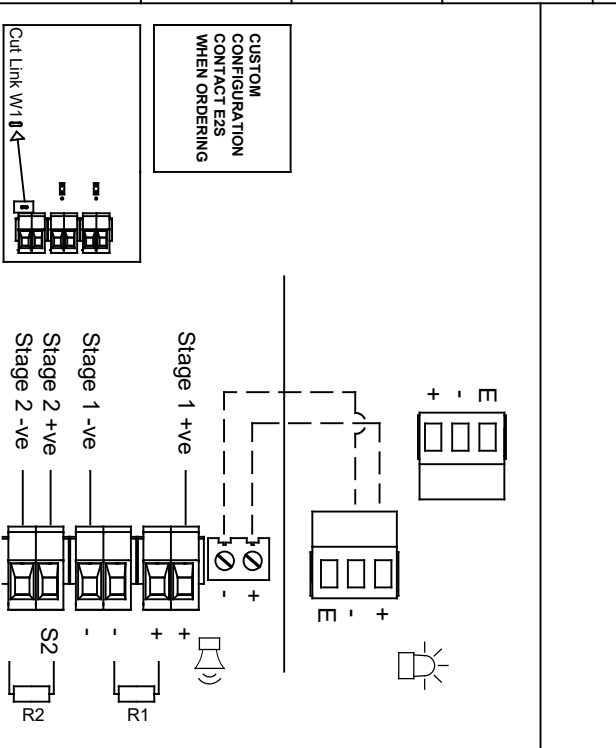
Two Stage Configuration
Independent Stage Input

Line Stage Monitoring (Use suitable monitoring relays/modules)

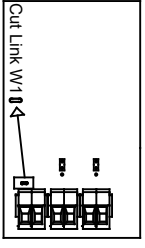
Not to be used for reverse polarity monitoring

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

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




CUSTOM CONFIGURATION CONTACTS WHEN ORDERING



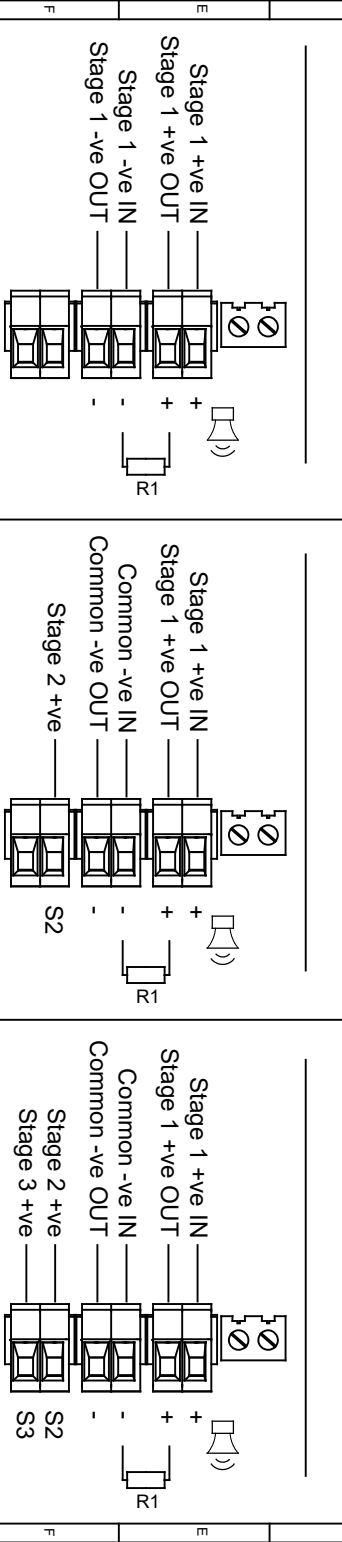
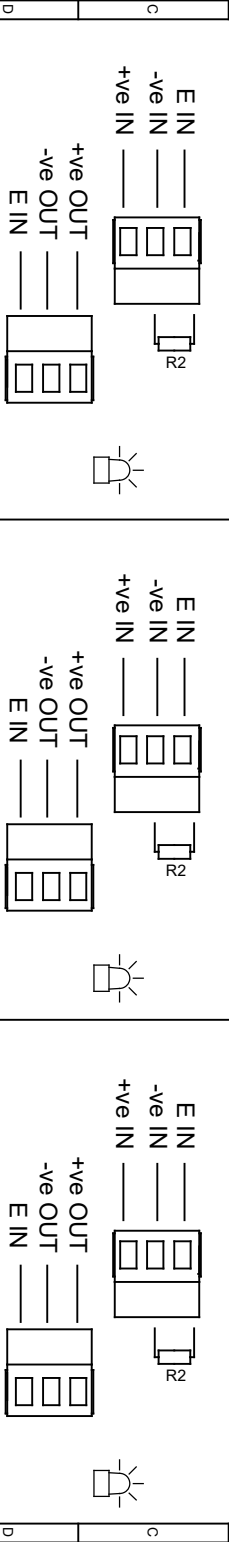
DRAWING TO BE ENRANGED TO ISO 10111:1983 GENERAL TOLERANCES TO ISO 1101:1983 ANGULAR DIMENSIONAL TOLS		DRAWN		DATE	SURFACE FINISH	WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENTIAL SYSTEMS TO ALL PARTS OF THE WHOLE OR ANY EXTRA FACTORY MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT. © AS PER LATEST DATE OF ISSUE SHOWN ABOVE		 EUROPEAN SAFETY SYSTEMS LTD MAWSELL ROAD LONDON W10 7QH WWW.E2S.COM		ALL DIMENSIONS IN MM IF IN QUOTE ASK - DO NOT SCALE				A3			
STANDARDS		ALERT/ALARM RANGE	CHECKED	DATE			APPROVED		ALTERNATIVE MATERIAL		TITLE AL12NH & AL121H DC COMBINED SOUNDER & LED WIRING DIAGRAMS		SCALE NTS		SHEET 3 OF 6		DRAWING NUMBER D221-06-251	
			R. S. PAIT	16/03/2021			DATE 16/03/2021											
			B. ISARD	16/03/2021			DATE 16/03/2021											
			R. N. POTTS	16/03/2021			DATE 16/03/2021											

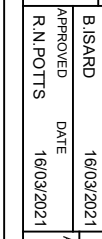
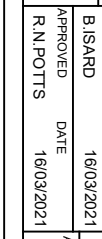
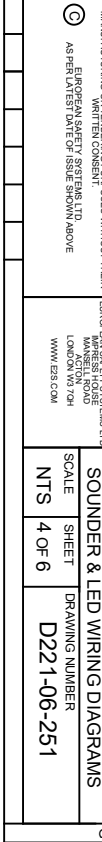
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIER, RECOMMENDED MINIMUM VALUES: OR 10.0µN, 0.5W 1MM 25V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W 1MM



Independent Sounder & Beacon Activation (Remove Link Wires)

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



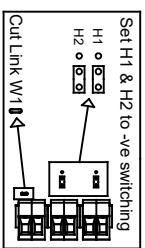
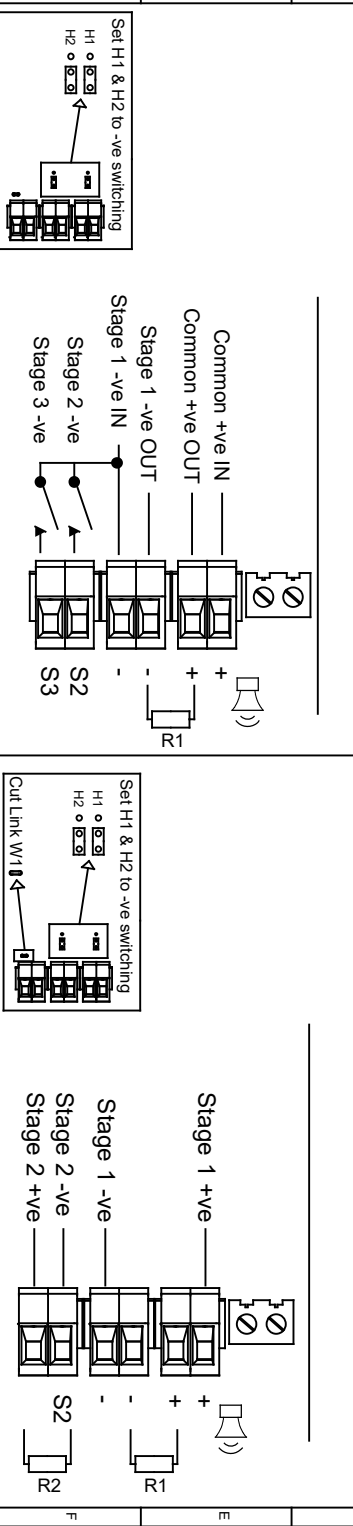
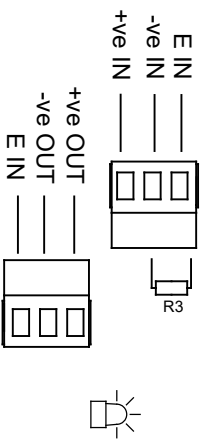
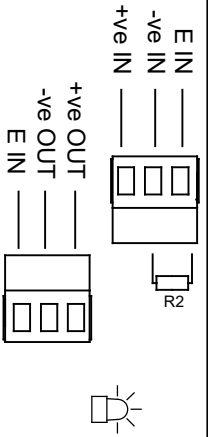
DRAWING TO BE ENRICHED TO ISO 10111:1988 GEOMETRIC TOLERANCES TO ISO 1101:1984 ANGULAR DIMENSIONAL TOLS	DRAWN R. S. RAIT	DATE 16/03/2021	SURFACE FINISH	WEIGHT (KG)	MATERIAL	ALTERNATIVE MATERIAL
STANDARDS ALERT/ARM RANGE	CHECKED B. ISARD	DATE 16/03/2021	<p>THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS UNMAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN CONSENT OF THE DRAWING OR THE MANUFACTURER OR THE DESIGNER. THE USER MAY MANUFACTURE OR REPRODUCE THE DRAWING OR THE MANUFACTURER OR THE DESIGNER WITHOUT THEIR WRITTEN CONSENT.</p> <p>© ASPER/AVI/AVI LTD ASPER/AVI/AVI LTD</p>			
<p>ALL DIMENSIONS IN MM IF IN QUOTE ASK - DO NOT SCALE</p>				<p>SCALE SHEET 4 OF 6</p>	<p>TITLE AL112NH & AL121H DC COMBINED SOUNDER & LED WIRING DIAGRAMS</p>	<p>DRAWING NUMBER D221-06-251</p>
<p>EUROPEAN SAFETY SYSTEMS LTD MANCHESTER ROAD LONDON W10 7QH WWW.ESS.CO.UK</p>				<p>A3</p>		

OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED, RECOMMENDED MINIMUM VALUES: 10K OHM, 0.5W MAX 28V MAX SYSTEM = 4700 MIN, 2W MIN OR 24KQ 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 Positive Common	Config.: 6	Two Stage Configuration Independent Stage Input Reverse Polarity Stage Monitoring	Config.: 7
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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 to Stage 1 -ve



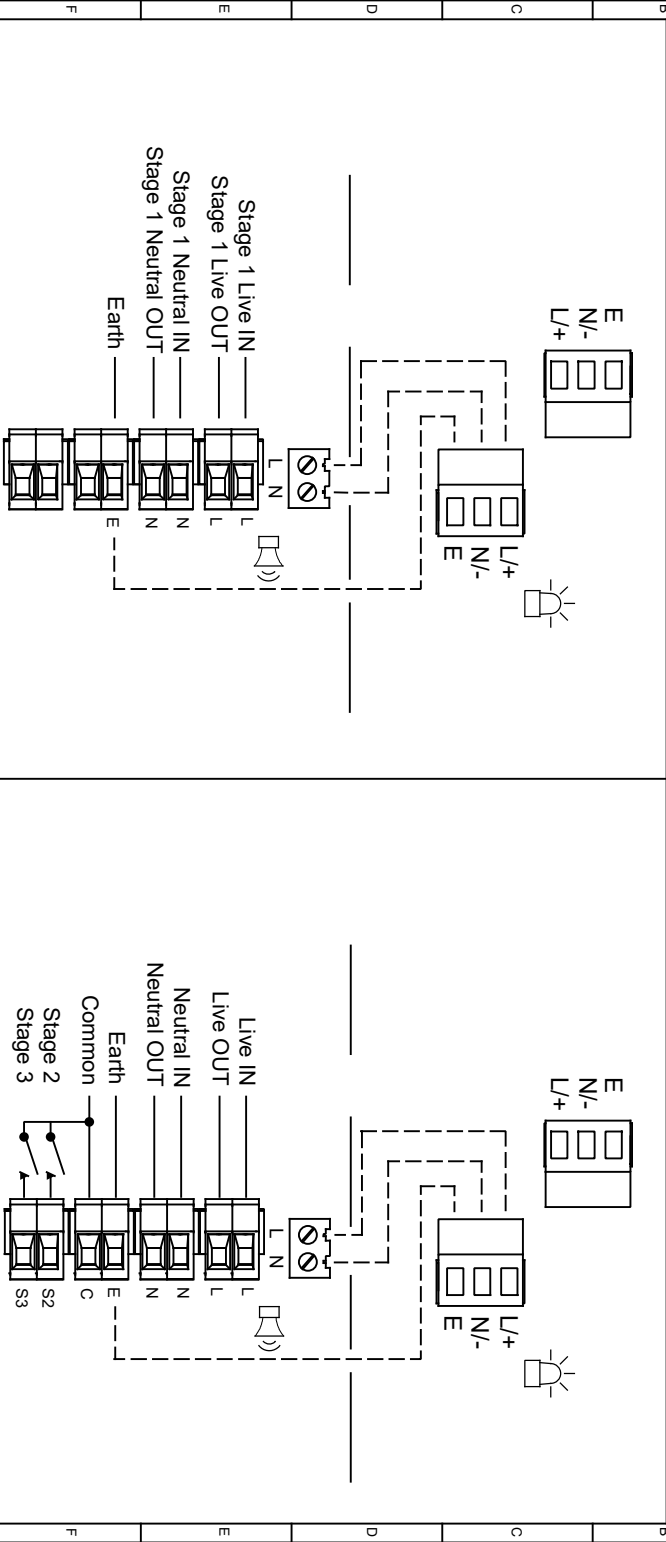
DRAWING TO BE ISSUED IN ACCORDANCE WITH THE REQUIREMENTS OF ISO 10111:1983 AND BS EN ISO 10111:2003 GEOMETRIC TOLERANCES TO ISO 1101:1983 SURFACE FINISH TO ISO 13715:2002 ANGULAR DIMENSIONAL TOLS		DRAWN R.S. RAIT		DATE 16/03/2021	SURFACE FINISH		WEIGHT (KG)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS UNCLASSIFIED IN CONFERENCE AND SYSTEMS DESIGN. THE WHOLE OR ANY PART THEREOF MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN CONSENT OF AIRBUS HELIX SERVICES LTD. BY REFERENCE TO THE DATE OF ISSUE SHOWN ABOVE.		EUROPEAN SAFETY SYSTEMS LTD MANCHESTER ROAD LONDON W14 7QH WWW.ESS.COM		ALL DIMENSIONS IN MM IF IN QUOTE ASK DO NOT SCALE		TITLE AL112NH & AL121H DC COMBINED SOUNDER & LED WIRING DIAGRAMS		DRAWING NUMBER D221-06-251	
STANDARDS ALERT/ALARM RANGE		CHECKED B.ISARD	DATE 16/03/2021	MATERIAL		ALTERNATIVE MATERIAL		APPROVED R.N.POTTS		DATE 16/03/2021	A3		SCALE 5 OF 6		SHEET		

1	2	3	4	5	6	7	8	9	10
							ISSUE MOD No		REASON - INITIAL - DATE
							A		INTRODUCTION RSK - 12/03/2021

Linked Sounder & Beacon Activation (Default)

Single Stage Configuration
 Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral
 Config.: 1a

Two/Three Stage Sounder Configuration
 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
 Config.: 1b



DRAWING TO BE ENRICHED TO ISO 11011:1983 GEOMETRIC TOLERANCES TO ISO 11011:1983 ANGULAR DIMENSIONAL TOLS		DRAWN R.S. RAIT		DATE 12/03/2021	SURFACE FINISH		WEIGHT (KG)
STANDARDS ALERT/ALARM RANGE		CHECKED B.ISARD	DATE 12/03/2021	MATERIAL			
		APPROVED R.N.POTTS	DATE 12/03/2021	ALTERNATIVE MATERIAL			
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<p>ALL DIMENSIONS IN MM IF IN QUOTE 'RSK' DO NOT SCALE</p>		<p>TITLE A 12NH & A1 12H AC COMBINED SOUNDER & LED WIRING DIAGRAMS</p>		<p>SCALE NTS 1 OF 2</p>		<p>DRAWING NUMBER D221-06-255</p>	
<p>EUROPEAN SAFETY SYSTEMS LTD MANDEL ROAD LONDON W3 7QH WWW.ESR.COM</p>							

ISSUE	MOD No	REASON - INITIAL - DATE
A	INTRODUCTION RSK - 12/03/2021	

--- WIRING LINKING BEACON & SOUNDER
FACTORY FITTED

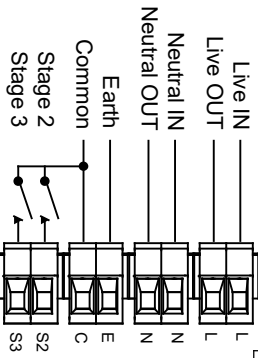
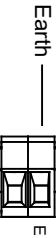
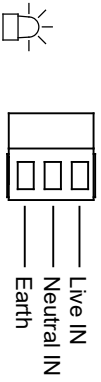
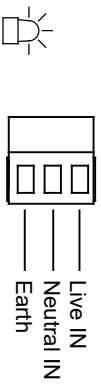
SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

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

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 ISSUED IN ACCORDANCE WITH ISO 1101:1983
GEOMETRIC TOLERANCES TO ISO 1101:1983
ANGULAR DIMENSIONAL TOLS

DRAWN	DATE	SURFACE FINISH	WEIGHT (KG)
R.S. RAIT	12/03/2021		
CHECKED	DATE	MATERIAL	
B.ISARD	12/03/2021		
APPROVED	DATE	ALTERNATIVE MATERIAL	
R.N.POTTS	12/03/2021		

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ALL DIMENSIONS IN MM IF IN QUOTE 'ASK' DO NOT SCALE	A3
TITLE A112NH & A112H AC COMBINED SOUNDER & LED WIRING DIAGRAMS	
SCALE NTS 2 OF 2	DRAWING NUMBER D221-06-255

STANDARDS
ALERT/ALARM RANGE

DRAWN	DATE	SURFACE FINISH	WEIGHT (KG)
R.S. RAIT	12/03/2021		
CHECKED	DATE	MATERIAL	
B.ISARD	12/03/2021		
APPROVED	DATE	ALTERNATIVE MATERIAL	
R.N.POTTS	12/03/2021		

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RISK MANAGEMENT SYSTEMS LTD.
ASPERLAVEY DATE OF ISSUE SHOWN ABOVE



ALL DIMENSIONS IN MM IF IN QUOTE 'ASK' DO NOT SCALE	A3
TITLE A112NH & A112H AC COMBINED SOUNDER & LED WIRING DIAGRAMS	
SCALE NTS 2 OF 2	DRAWING NUMBER D221-06-255

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