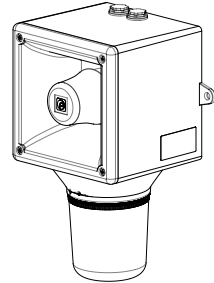


# INSTRUCTION & SERVICE MANUAL

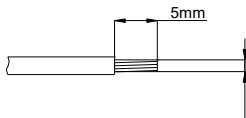
## AB112STR SpectrAlarm Combined Alarm Horn Sounder & Xenon Beacon

- Sounder unit: Alarm horn sounder: 64 tones, 4 stages
- Xenon Strobe Flashing Beacon: 5 Joules
- Flash rates (DC versions): 1Hz, 1.5Hz, Double flash or Stage Switchable to Double Flash
- Flash rate (AC versions): 1Hz
- IP Rating: IP65
- Temp: -25°C to + 50°C
- Unit weight: 2.1kg DC 2.4kg AC
- CE & UKCA
- 2-off M20 x 1.5 thread entries.

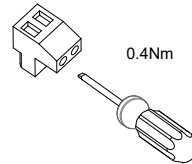


Unit Type Code	Nominal Voltage	Voltage Range	Nominal Current		Nominal Beacon Current	Nominal SPL P1 / P2	Max SPL P1 / P2	Average SPL P1 / P2
			P1	P2				
AB112STRDC012	12VDC	10-15Vdc	280mA	376mA	600mA	113.7dB(A) / 116.6dB(A) Tone 44 @ 1m	115dB(A) / 118.4dB(A) Tone 4 @ 1m	110.8dB(A) / 114.8dB(A) All Tones @ 1m
AB112STRDC024	24VDC	20-28Vdc	225mA	430mA	300mA			
AB112STRDC048	48VDC	42-54Vdc	122mA	223mA	250mA			
AB112STRAC115	115VAC	103.5-126.5Vac 50/60Hz	100mA	173mA	70mA			
AB112STRAC230	230VAC	207-253Vac 50/60Hz	65mA	105mA	35mA			

Supply voltage variation of +/-10% outside the voltage range is permissible  
Nominal current at nominal voltage



AC: 1.0 – 2.5mm<sup>2</sup> / AWG18 – AWG12  
DC: 0.2 – 2.5mm<sup>2</sup> / 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.

**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.

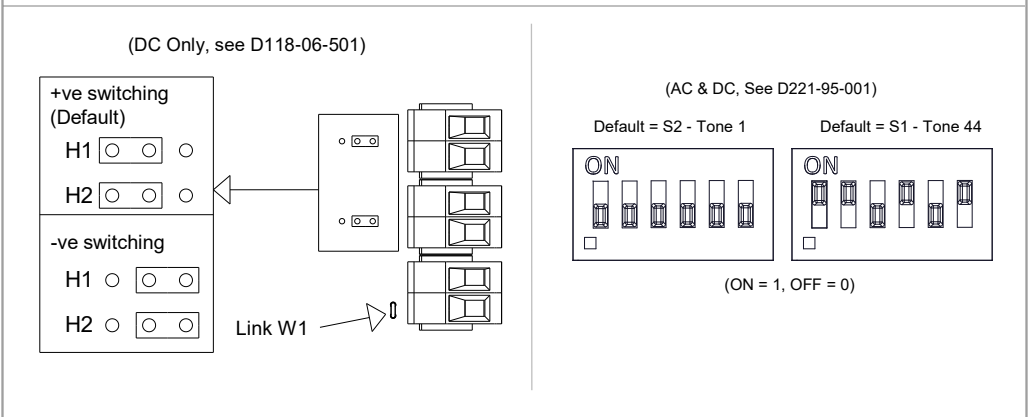
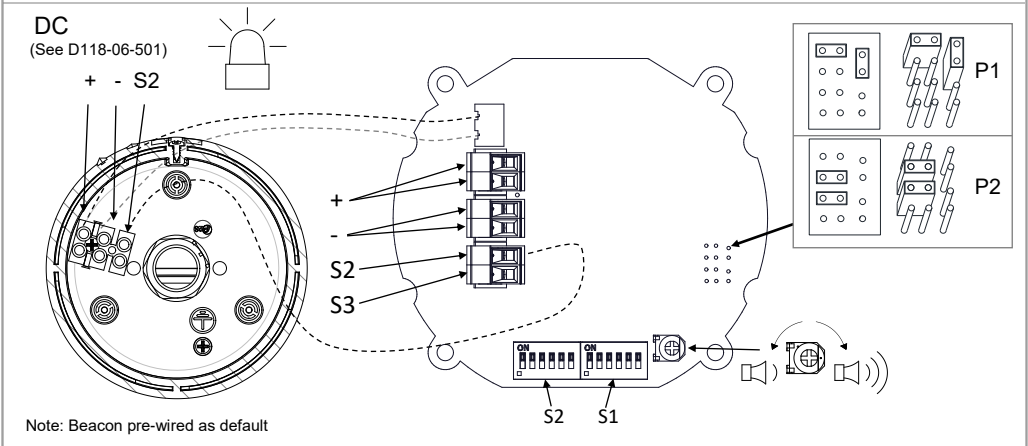
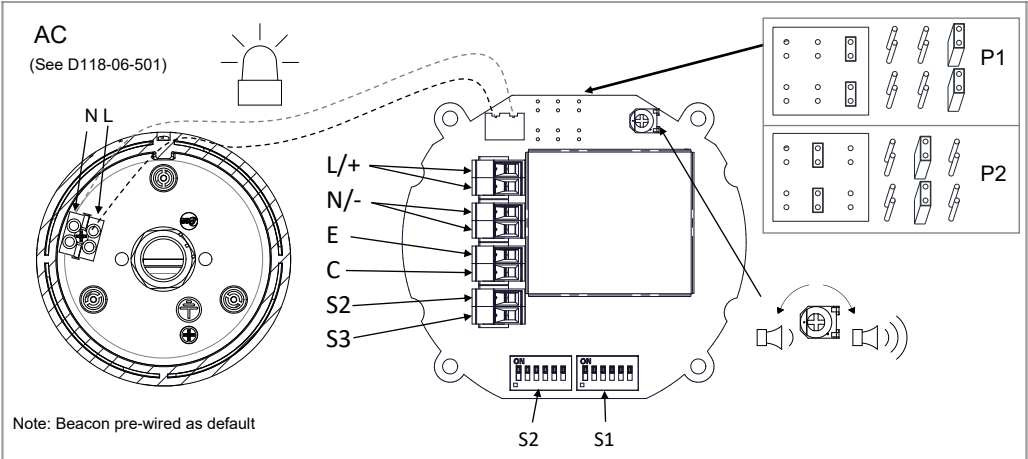
**Atención:** desconéctelo de la fuente de alimentación antes de la instalación o el servicio para evitar descargas eléctricas.

**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.



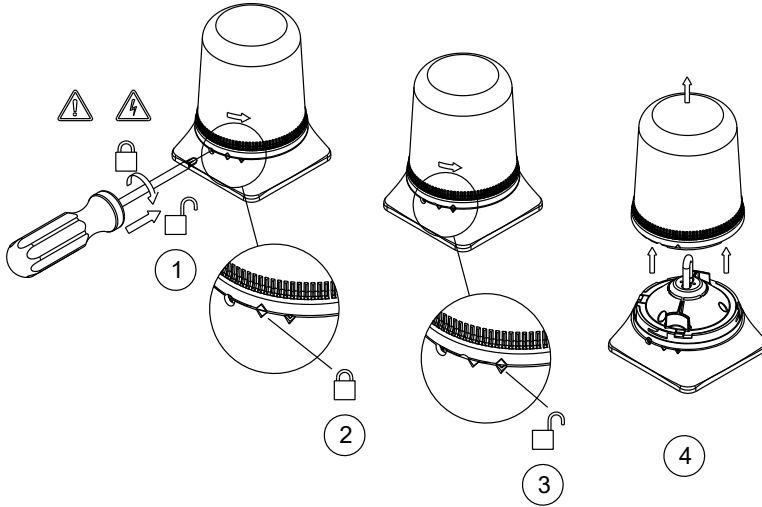
**INSTRUCTION & SERVICE MANUAL**  
**AB112STR SpectrAlarm Combined Alarm Horn Sounder & Xenon Beacon**



**INSTRUCTION & SERVICE MANUAL**  
**AB112STR SpectrAlarm Combined Alarm Horn Sounder & Xenon Beacon**

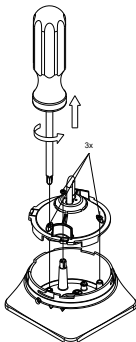
The Beacon lens cover is field replaceable.

To change the lens cover, rotate 1-off M4 pozi head screw clockwise, remove the existing lens by rotating the lens to align with the unlock markings as shown below. Replace the lens cover and rotate to the locked marking position. Rotate the 1-off M4 pozi head fastener anti-clockwise to secure the lens.

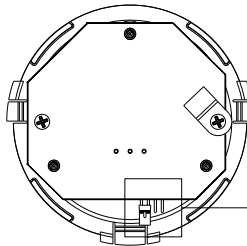








Attention: On strobe beacons allow a minimum of 2 minutes for hazardous high voltage to discharge from unit. Lens on unit will be hot allow to cool prior to removal.

To access the beacon mode settings, remove the beacon lens following the steps above then remove the 3-off pozi head screws. Reinstall the beacon in the same orientation.

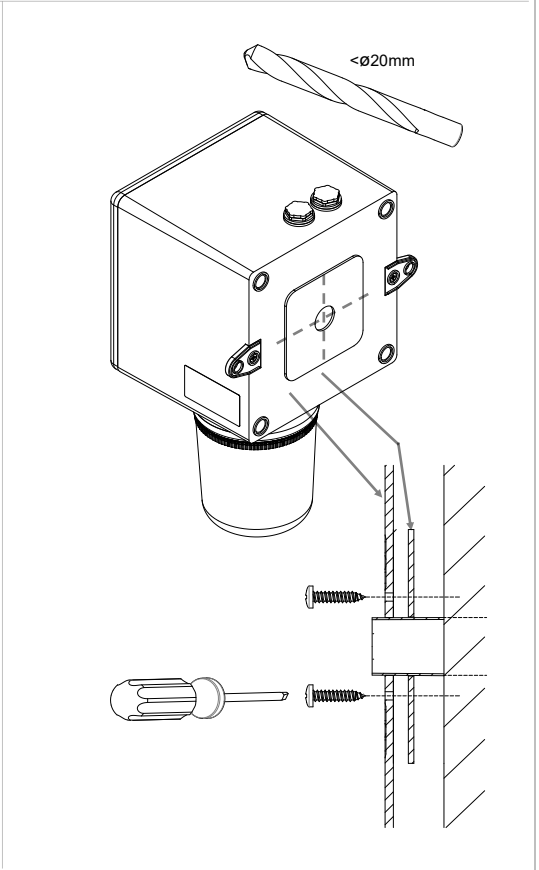
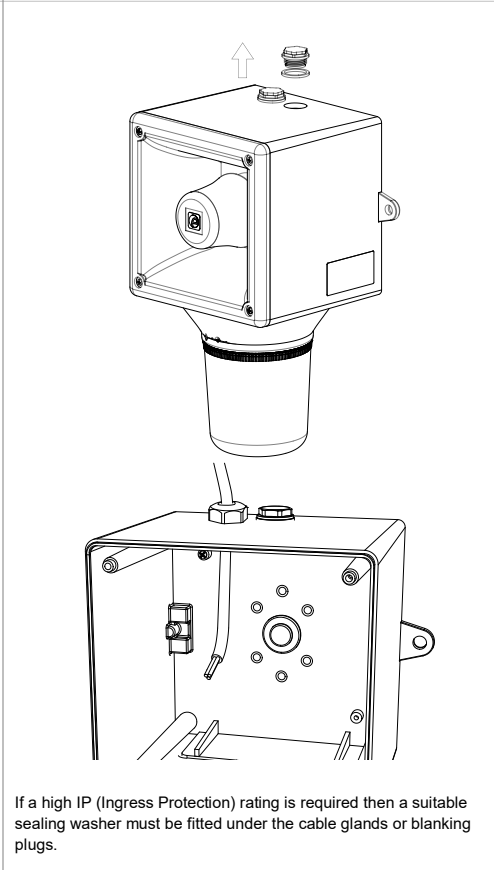
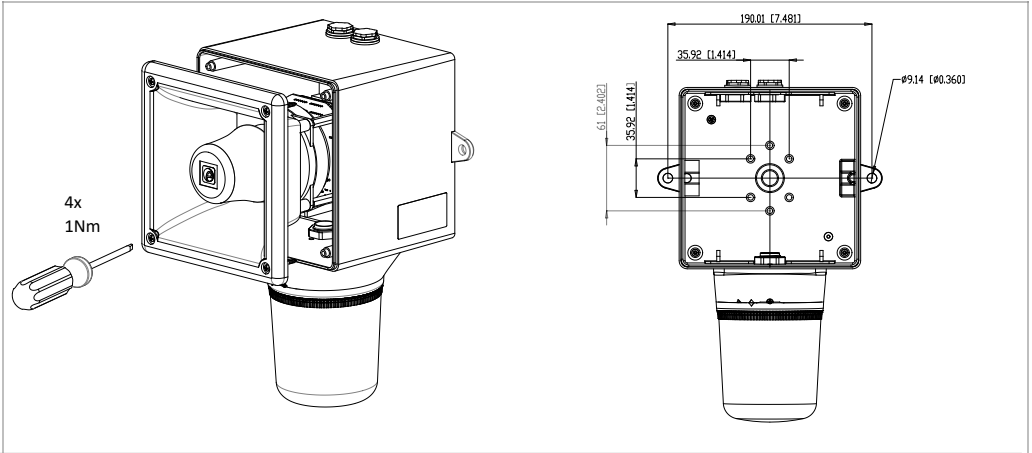


**DC UNIT  
 MODE SELECTION**



	1Hz Flash (60FFM)	
	1.5Hz Flash (90FFM)	
	Double Strike Flash Pattern	

INSTRUCTION & SERVICE MANUAL  
 AB112STR SpectrAlarm Combined Alarm Horn Sounder & Xenon  
 Beacon



If a high IP (Ingress Protection) rating is required then a suitable sealing washer must be fitted under the cable glands or blanking plugs.

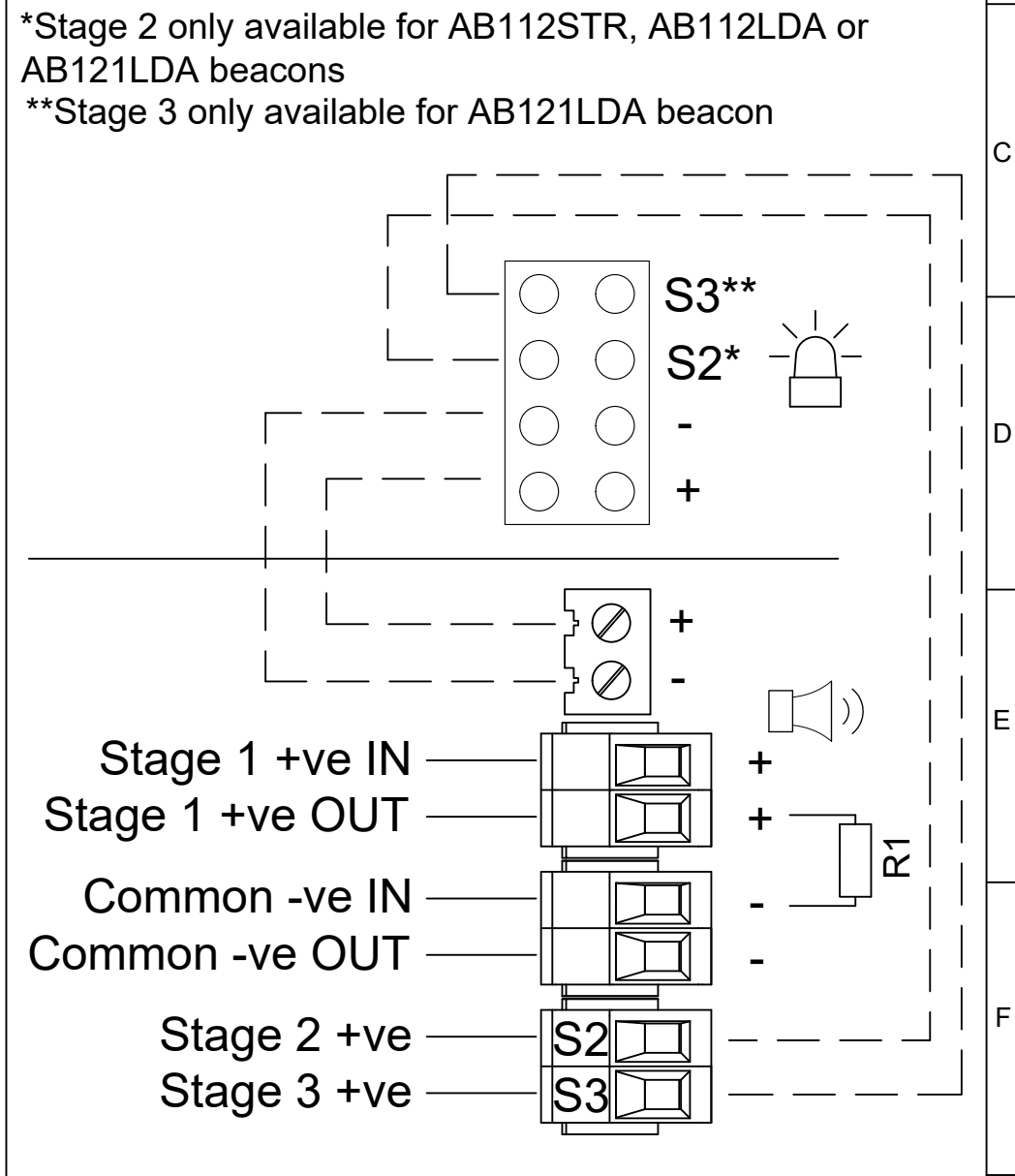
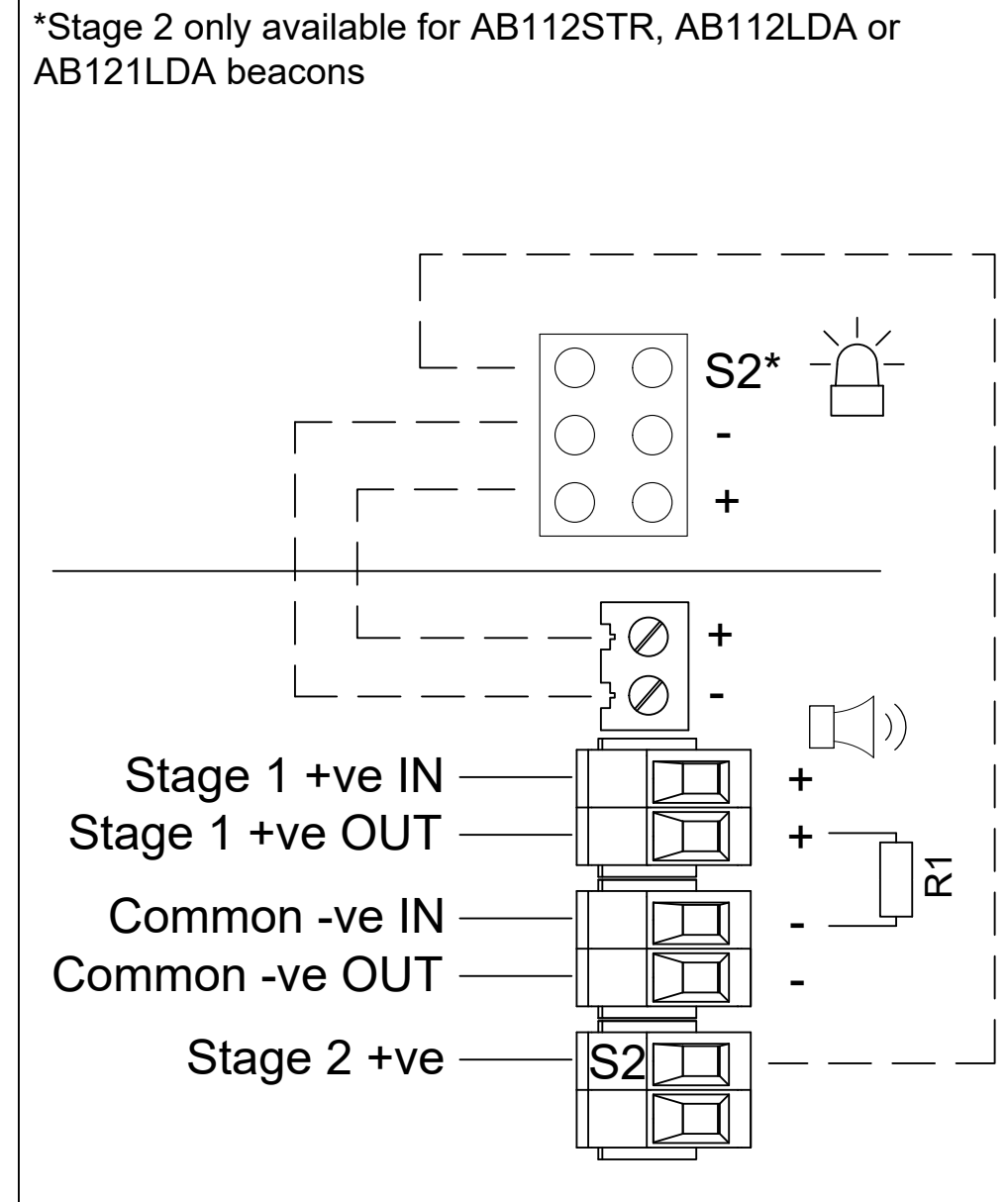
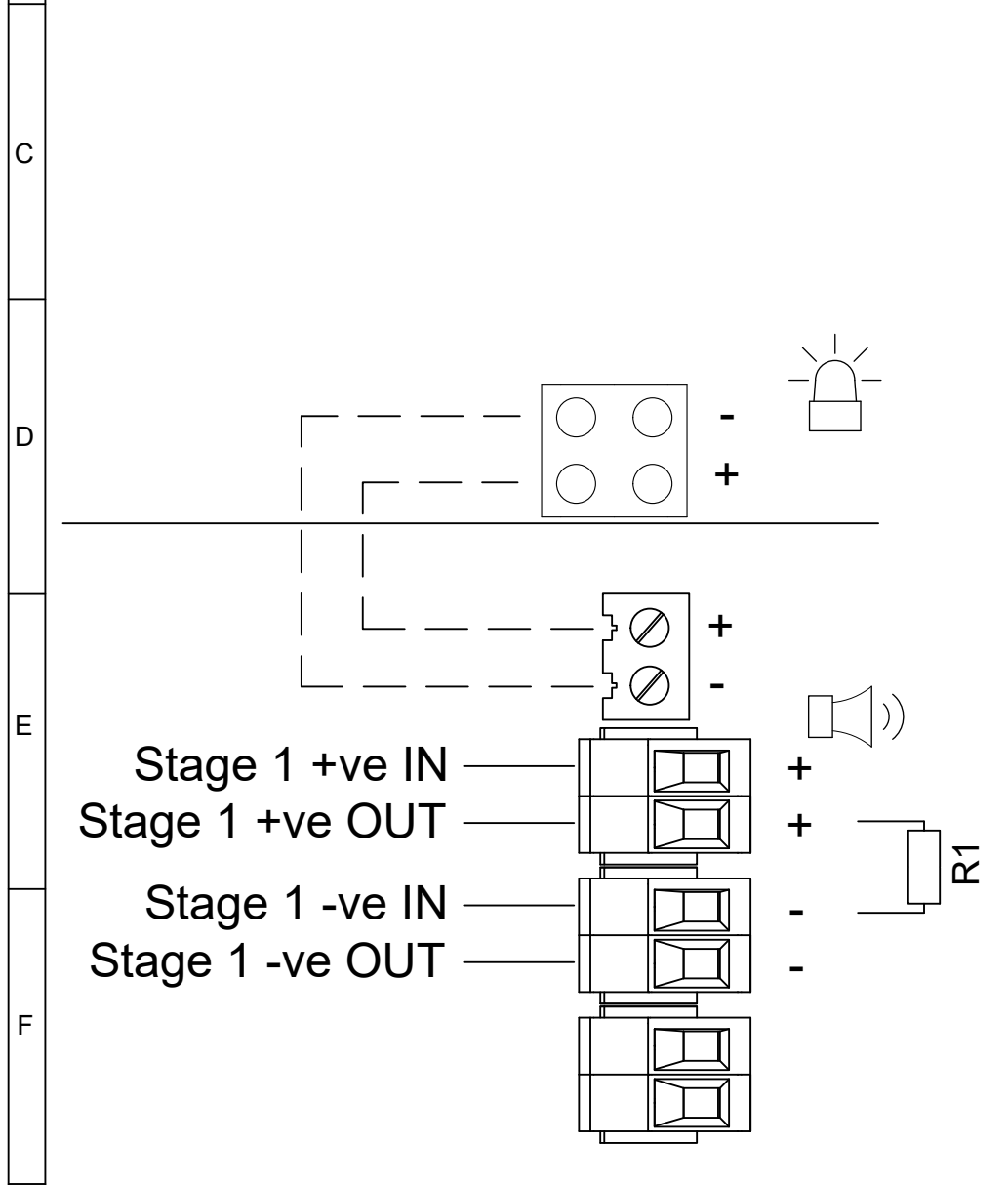
Stage 1 Set DIP SW 1 Tone No.	Tone Description	Tone Visual	Stage 1 & 2 DIP SW 1/2 Settings 1 2 3 4 5 6	Stage 3 Set DIP SW 1 (S3)	Stage 4 Set DIP SW 1 (S2 + S3)
1	1000Hz PFEER Toxic Gas		0 0 0 0 0	2	44
2	1200/500Hz @ 1Hz DIN /PFEER P.T.A.P.		1 0 0 0 0	3	44
3	1000Hz @ 0.5Hz(1s on, 1s off) PFEER Gen. Alarm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

— — WIRING LINKING BEACON & SOUNDER  
FACTORY FITTED

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)**

<b>Single Stage Configuration</b>	Config.: 1a	<b>Two Stage Configuration</b>	Config.: 1b	<b>Three/Four Stage Configuration</b>	Config.: 1c
Line Monitoring Set to positive switching (default)		Common Negative Set to positive switching (default)		Common Negative Set to positive switching (default)	
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 BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN <b>J.SPILLER</b>	DATE <b>28/06/2021</b>	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.	 warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE		<b>A3</b>	
STANDARDS SPECTRALARM RANGE	CHECKED <b>B.ISARD</b>	DATE <b>28/06/2021</b>	MATERIAL	ALTERNATIVE MATERIAL			© EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE	<b>TITLE AB112/AB121 COMBINED SOUNDER &amp; BEACON WIRING DIAGRAMS</b>		
	APPROVED <b>R.N.POTTS</b>	DATE <b>28/06/2021</b>					SCALE <b>NTS</b>	SHEET <b>1 OF 8</b>	DRAWING NUMBER <b>D118-06-501</b>	

1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS- 28/06/2021

— — WIRING LINKING BEACON & SOUNDER  
FACTORY FITTED

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	Two Stage Configuration	Config.: 3
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Common Positive  
Customer Set H1 & H2 to Negative Switching (See Below)

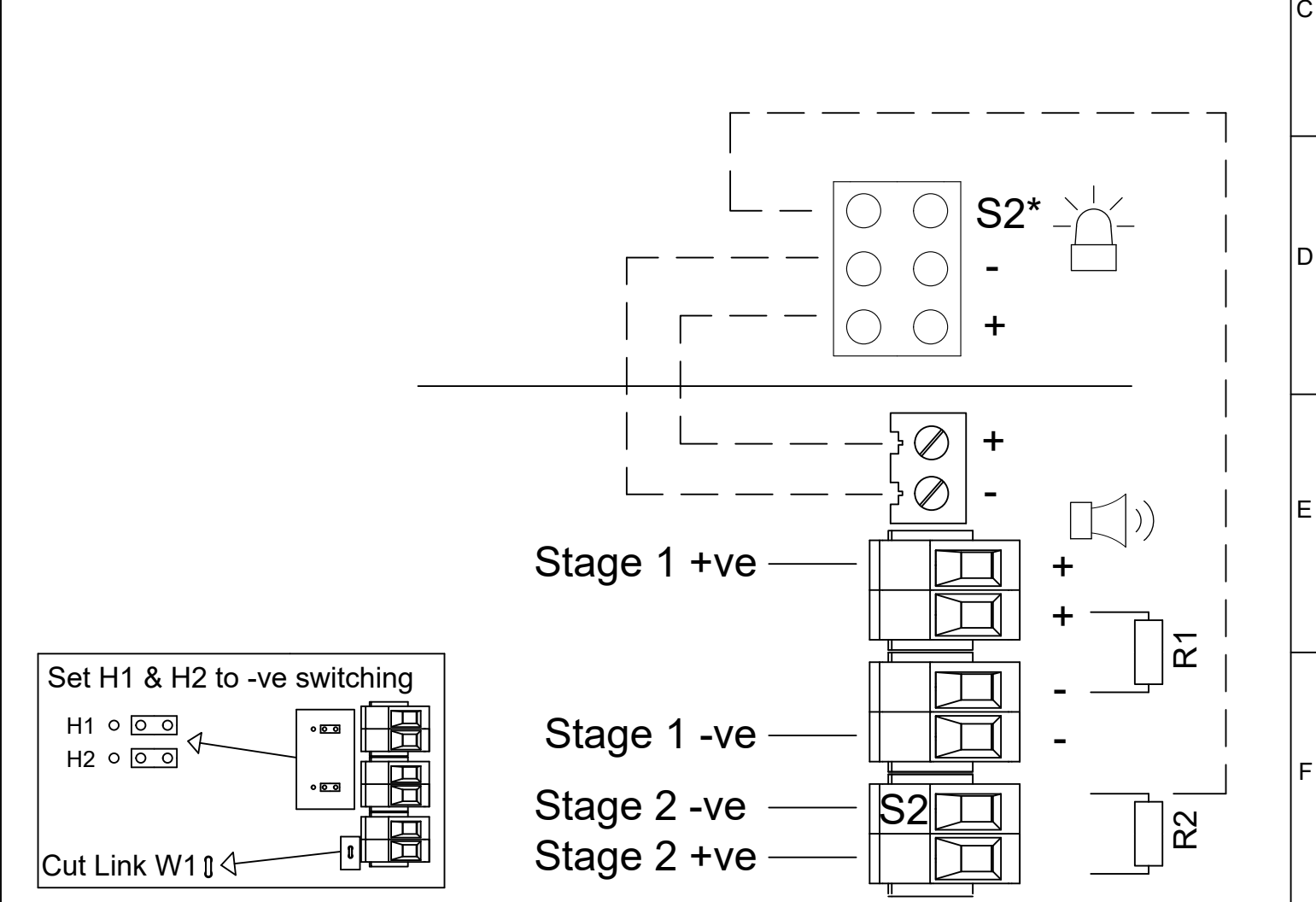
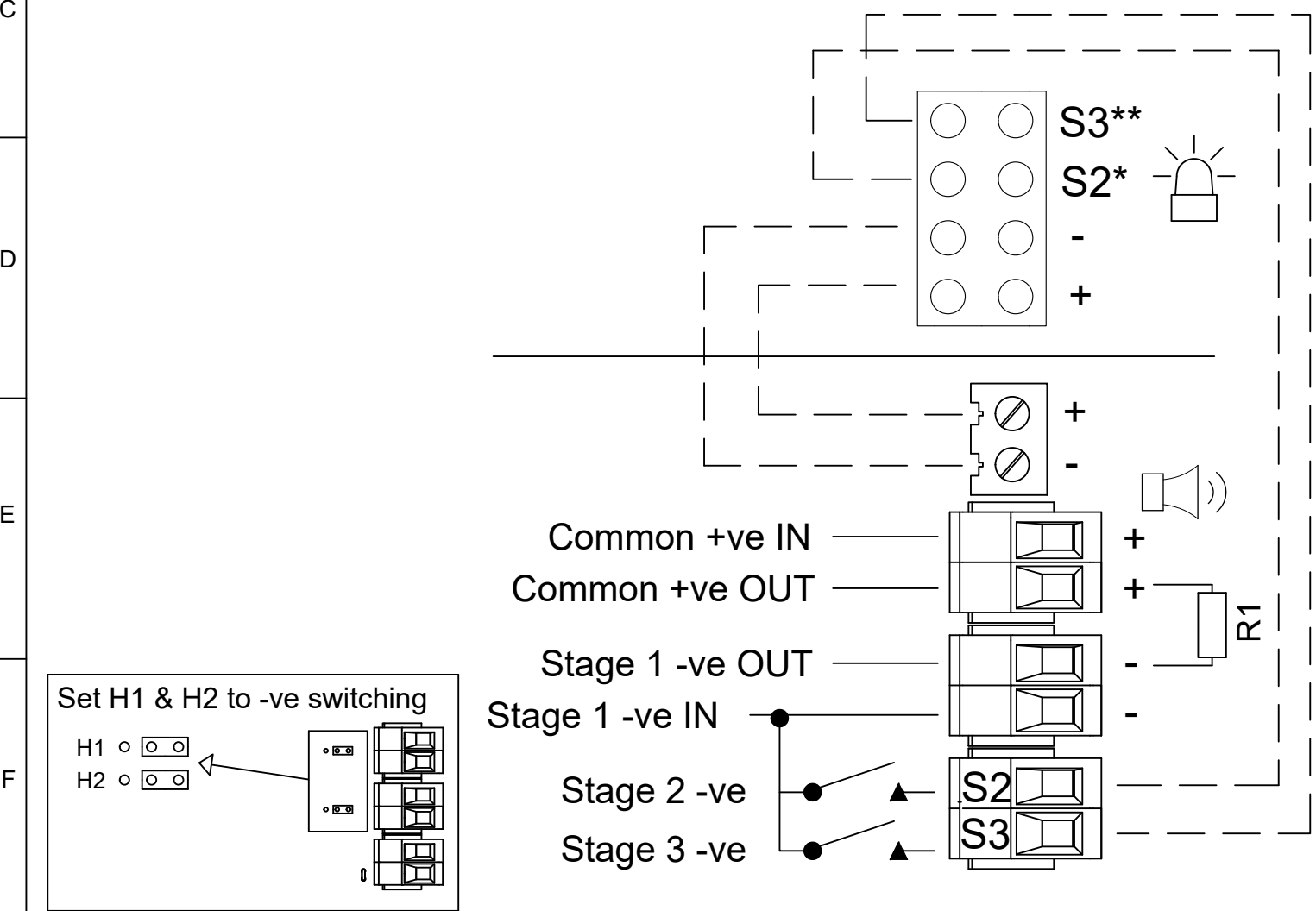
Stage 1: Apply Power to Common +ve & Stage 1 -ve  
Stage 2: Apply Power to Common +ve & Stage 1 -ve & connect Stage 2 -ve to Stage 1 -ve  
Stage 3: Apply Power to Common +ve & Stage 1 -ve & connect Stage 3 -ve to Stage 1 -ve  
Stage 4: Apply Power to Common +ve & Stage 1 -ve  
& connect Stage 2 -ve &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

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

\*Stage 2 only available for AB112STR, AB112LDA or AB121LDA beacons  
\*\*Stage 3 only available for AB121LDA beacon

\*Stage 2 only available for AB112STR, AB112LDA or AB121LDA beacons



DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.	 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM	 A3	
	J.SPILLER	28/06/2021	MATERIAL	IF IN DOUBT, ASK - DO NOT SCALE					
	CHECKED	DATE	ALTERNATIVE MATERIAL	TITLE AB112/AB121 COMBINED SOUNDER & BEACON WIRING DIAGRAMS					
	B.ISARD	28/06/2021	SCALE	SHEET			DRAWING NUMBER		
STANDARDS	APPROVED	DATE	EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE				NTS	2 OF 8	D118-06-501
SPECTRALARM RANGE	R.N.POTTS	28/06/2021							

1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS- 28/06/2021

— — WIRING LINKING BEACON & SOUNDER  
FACTORY FITTED

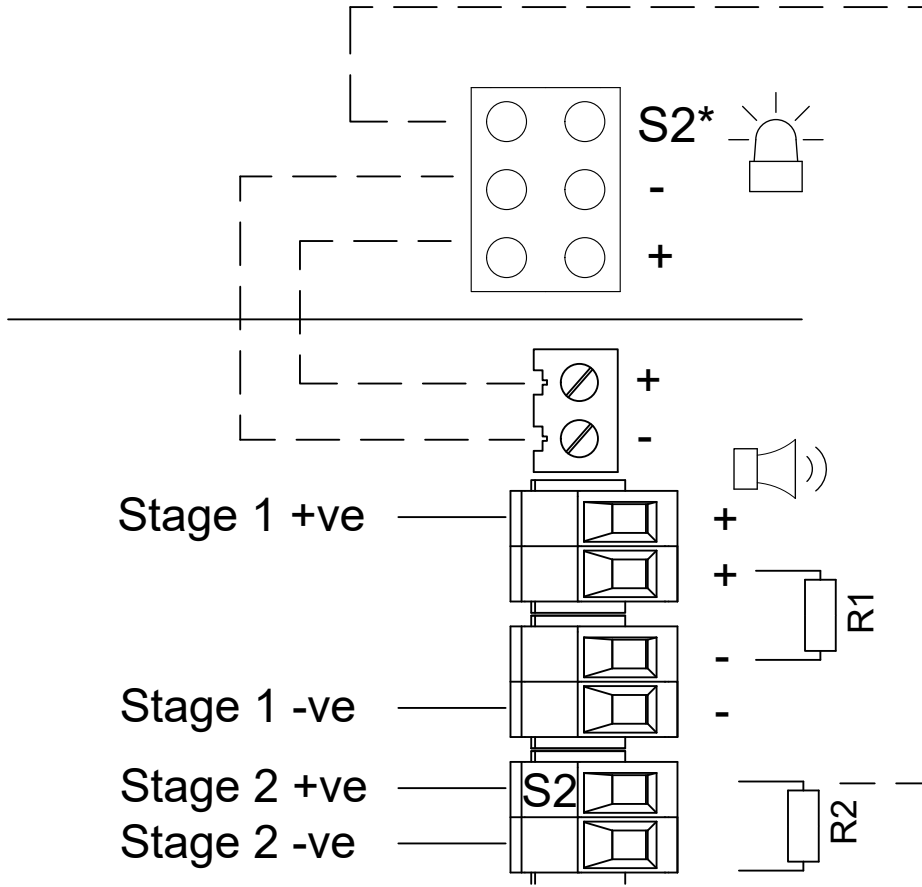
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,  
RECOMMENDED MINIMUM VALUES:  
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN  
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

SWITCHES FOR STAGE OPERATION  
CUSTOMER SUPPLIED

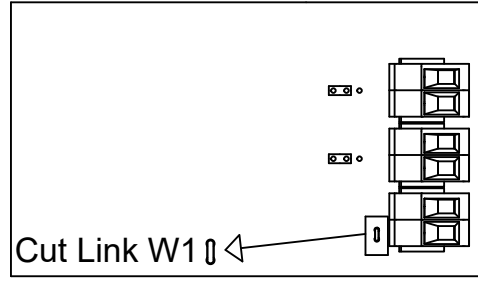
Linked Sounder & Beacon Activation (Default)

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		

\*Stage 2 only available for AB112STR, AB112LDA or AB121LDA beacons



CUSTOM CONFIGURATION  
CONTACT E2S  
WHEN ORDERING



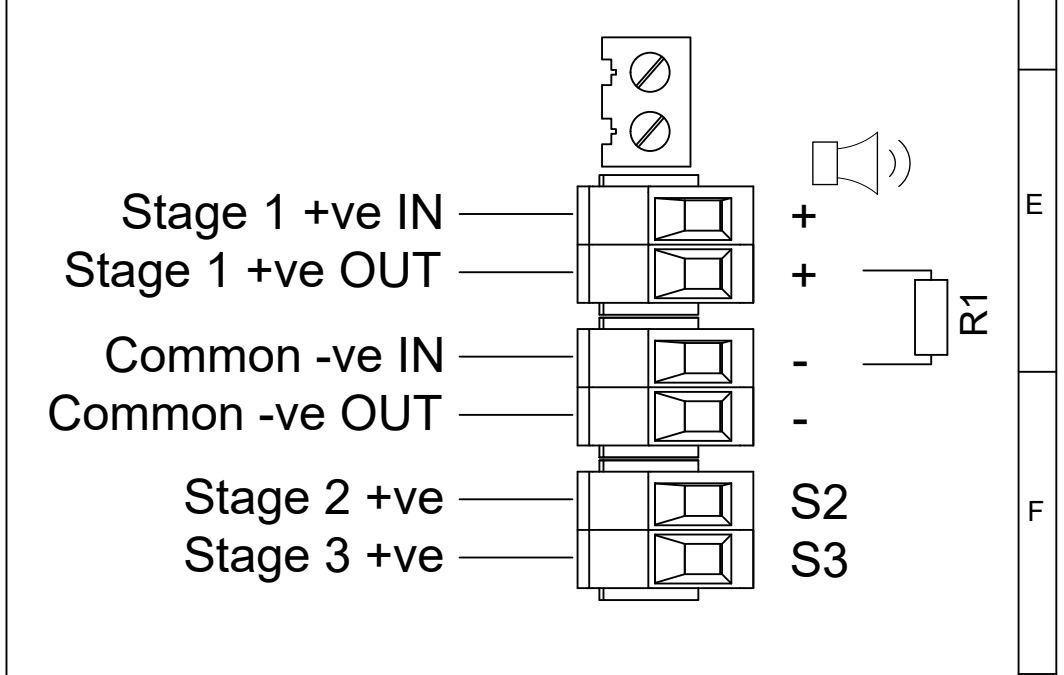
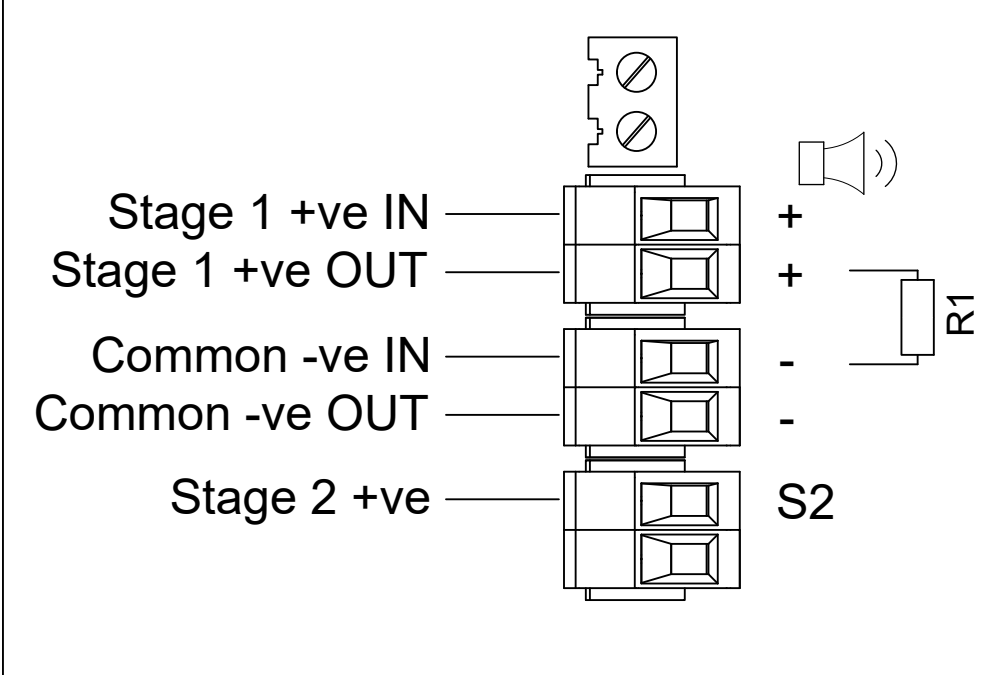
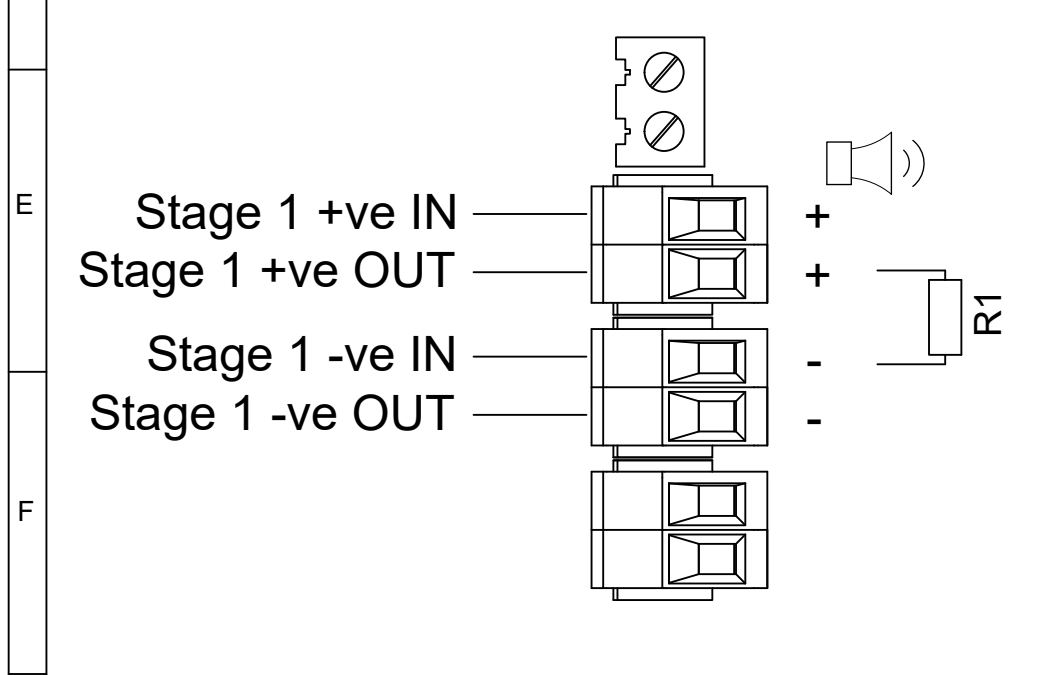
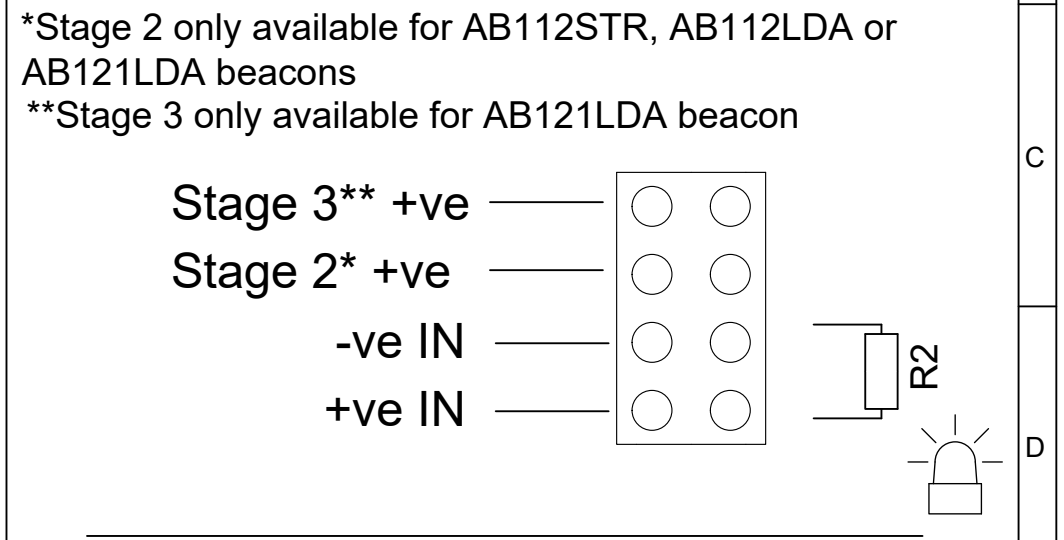
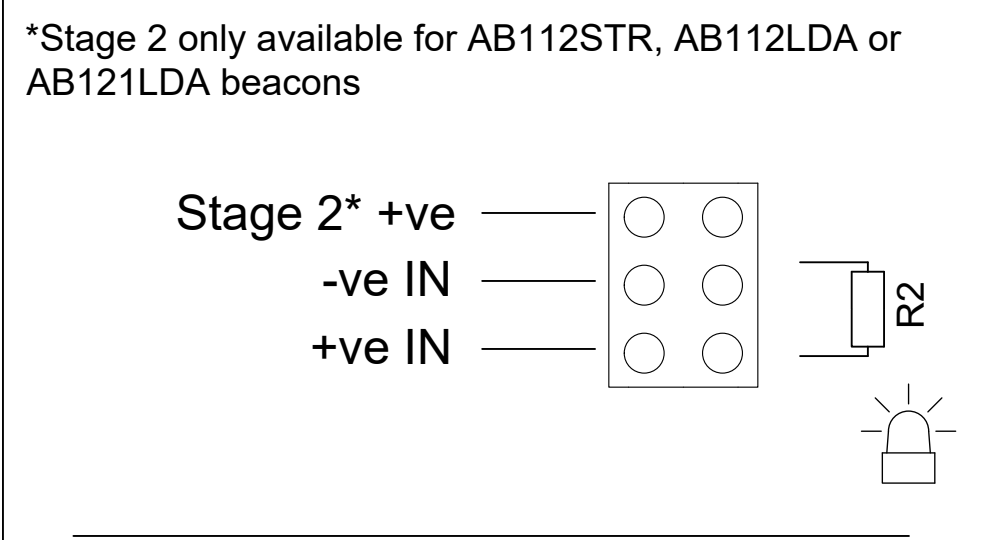
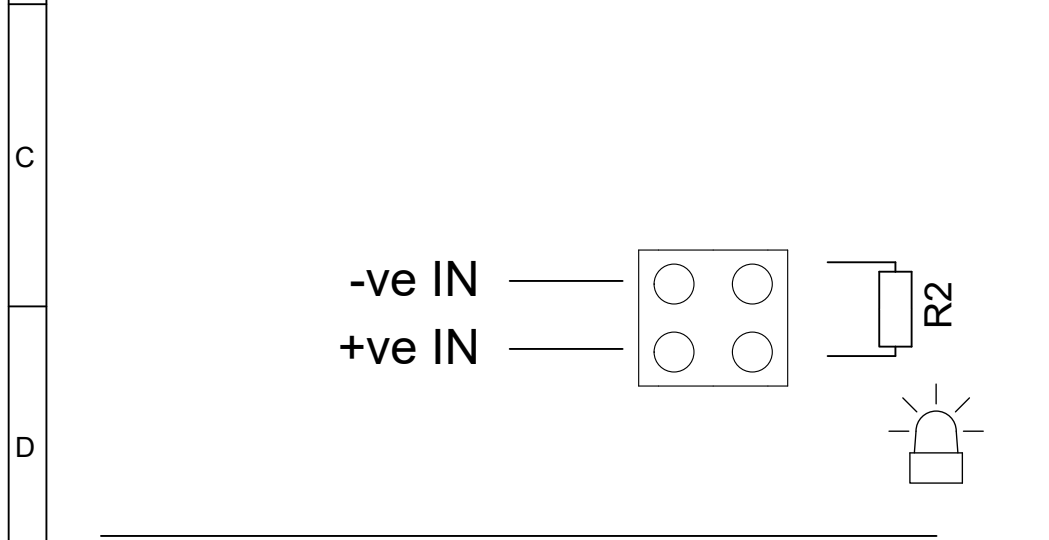
G	DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN J.SPILLER	DATE 28/06/2021	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.  © EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE	 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE		A3
	STANDARDS	CHECKED B.ISARD	DATE 28/06/2021	MATERIAL				TITLE AB112/AB121 COMBINED SOUNDER & BEACON WIRING DIAGRAMS		
	SPECTRALARM RANGE	APPROVED R.N.POTTS	DATE 28/06/2021	ALTERNATIVE MATERIAL				SCALE NTS	SHEET 3 OF 8	DRAWING NUMBER D118-06-501



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

**Independent Sounder & Beacon Activation (Remove Link Wires)**

<b>Single Stage Configuration</b>	<b>Config.: 5a</b>	<b>Two Stage Configuration</b>	<b>Config.: 5b</b>	<b>Three/Four Stage Configuration</b>	<b>Config.: 5c</b>
Line Monitoring Set to positive switching (default)		Common Negative Set to positive switching (default)		Common Negative Set to positive switching (default)	
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	



1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS- 28/06/2021

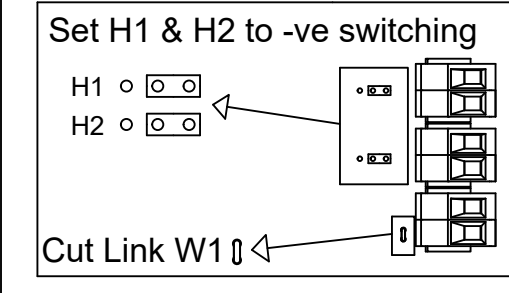
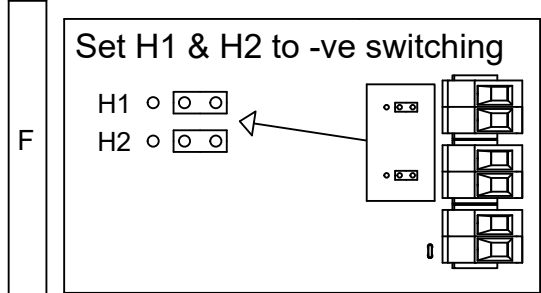
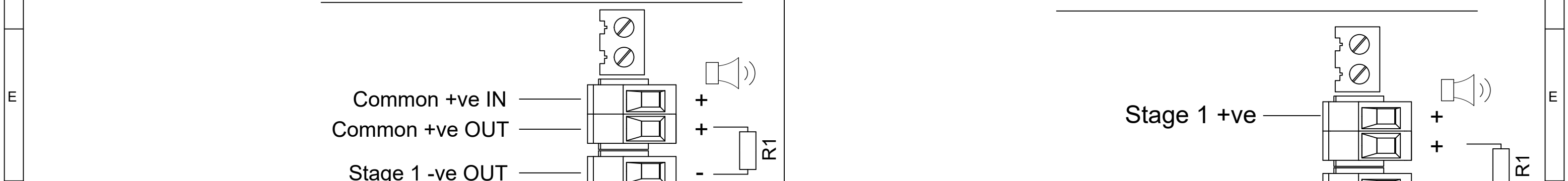
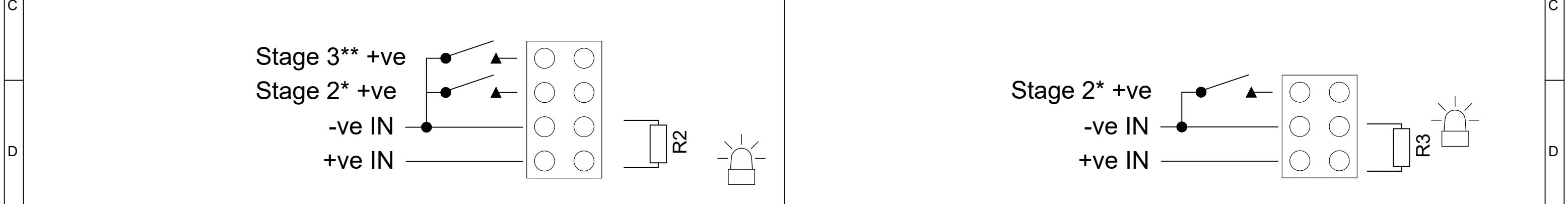
OPTIONAL LINE MONITORING RESISTOR, CUSTOMER SUPPLIED,  
RECOMMENDED MINIMUM VALUES:  
14V MAX SYSTEM = 120Ω MIN, 2W MIN OR 1KΩ MIN, 0.5W MIN  
28V MAX SYSTEM = 470Ω MIN, 2W MIN OR 2.4KΩ MIN, 0.5W MIN

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	Two Stage Configuration	Config.: 7
Common Positive Customer Set H1 & H2 to Negative Switching (See Below)		Independent Stage Input Reverse Polarity Stage Monitoring	
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		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	

\*Stage 2 only available for AB112STR, AB112LDA or AB121LDA beacons  
\*\*Stage 3 only available for AB121LDA beacon



DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.	 warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE	 	A3
	J.SPILLER	28/06/2021					MATERIAL		
	CHECKED	DATE	ALTERNATIVE MATERIAL	SCALE			SHEET	DRAWING NUMBER	
	B.ISARD	28/06/2021		NTS			5 OF 8	D118-06-501	
STANDARDS	APPROVED	DATE							
SPECTRALARM RANGE	R.N.POTTS	28/06/2021							

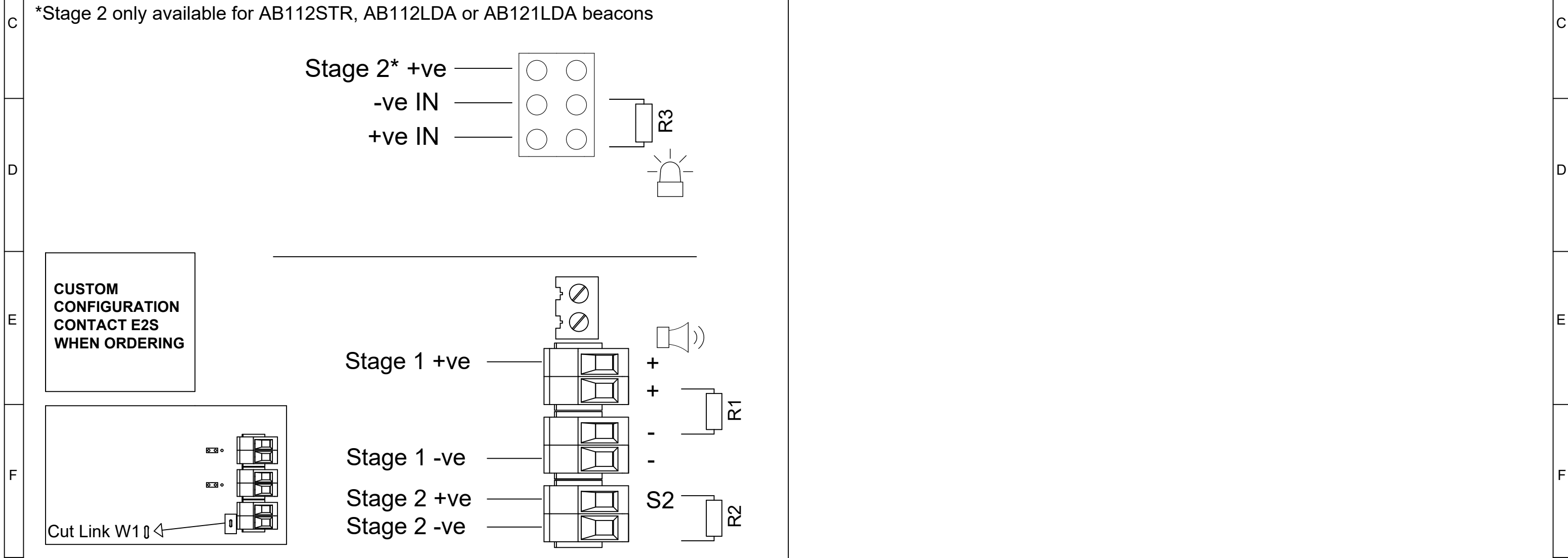
1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS- 28/06/2021

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				



G	DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN J.SPILLER	DATE 28/06/2021	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.  © EUROPEAN SAFETY SYSTEMS LTD. AS PER LATEST DATE OF ISSUE SHOWN ABOVE	 EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE		A3
	STANDARDS SPECTRALARM RANGE	CHECKED B.ISARD	DATE 28/06/2021	MATERIAL	TITLE AB112/AB121 COMBINED SOUNDER & BEACON WIRING DIAGRAMS					
		APPROVED R.N.POTTS	DATE 28/06/2021	ALTERNATIVE MATERIAL	SCALE NTS			SHEET 6 OF 8	DRAWING NUMBER D118-06-501	

1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS- 28/06/2021

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

SWITCHES FOR STAGE OPERATION  
CUSTOMER SUPPLIED

Linked Sounder & Beacon Activation (Default)

Single Stage Configuration Config.: 9a

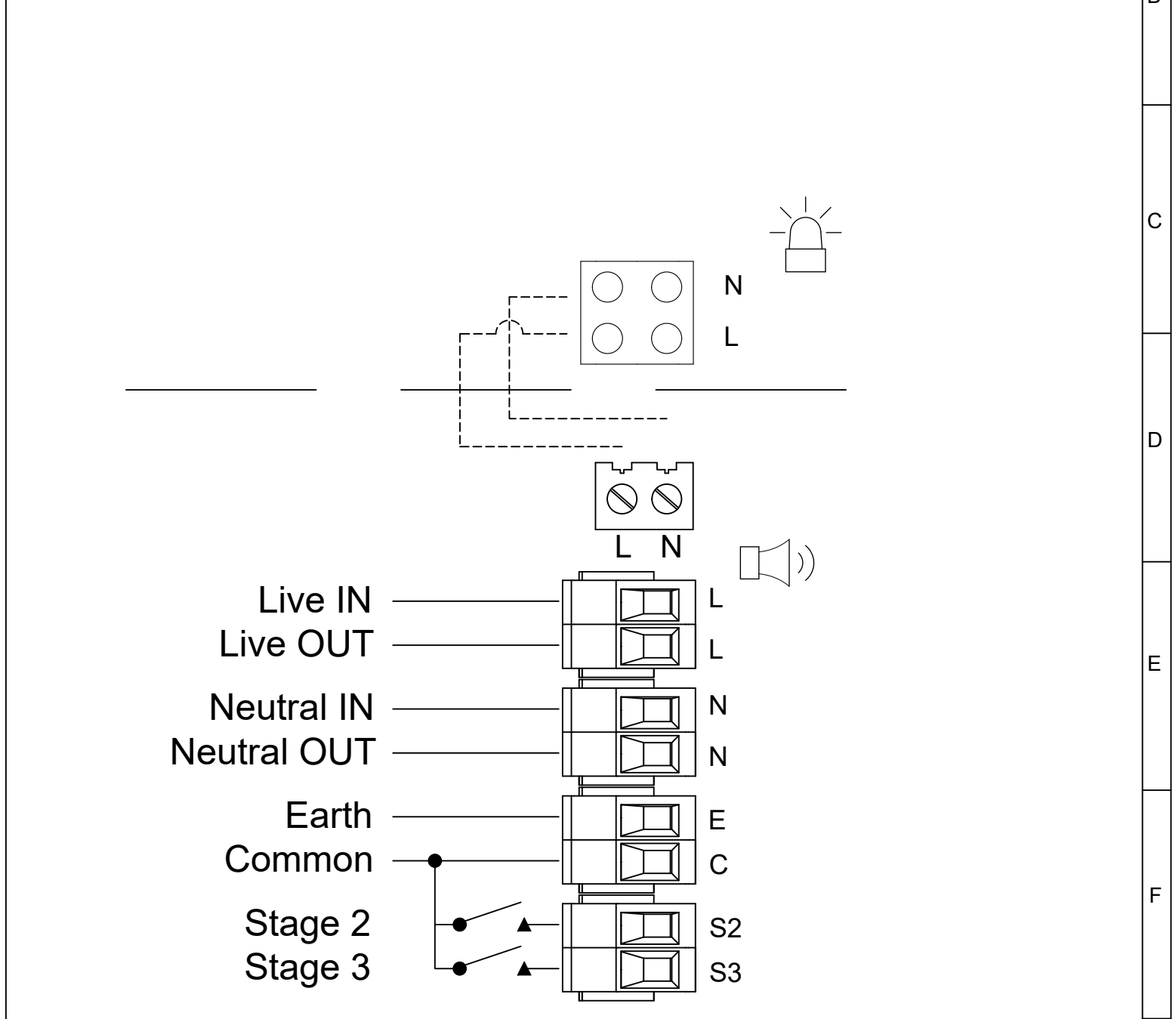
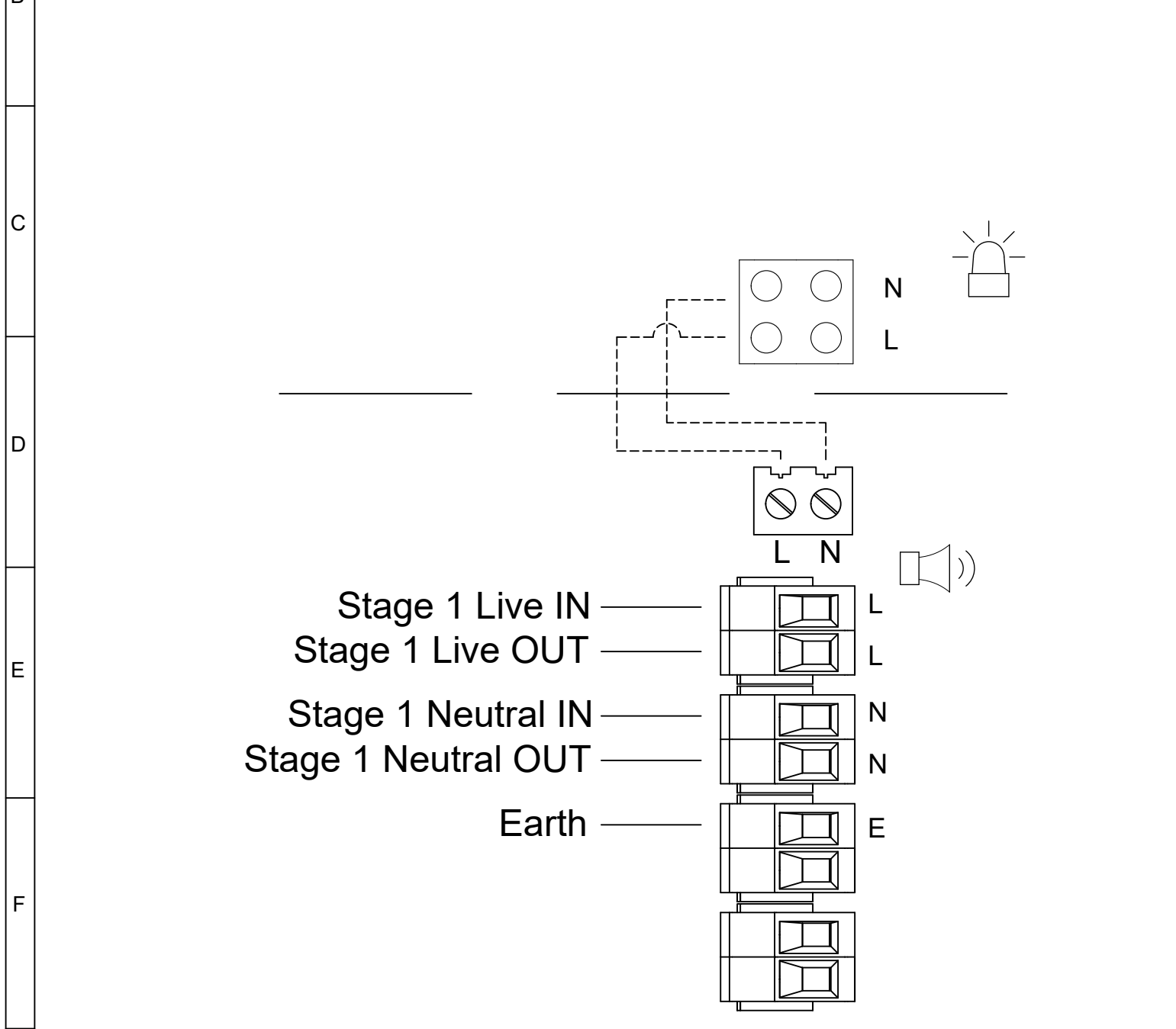
Three/Four Stage Configuration Config.: 9b

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

STANDARDS  
SPECTRALARM RANGE

DRAWN	DATE
J.SPILLER	28/06/2021
CHECKED	DATE
B.ISARD	28/06/2021
APPROVED	DATE
R.N.POTTS	28/06/2021

SURFACE FINISH	WEIGHT (Kg)
MATERIAL	
ALTERNATIVE MATERIAL	

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**e2S**  
warning signals

EUROPEAN SAFETY SYSTEMS LTD  
IMPRESS HOUSE  
MANSELL ROAD  
ACTON  
LONDON W3 7QH  
WWW.E2S.COM

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

**A3**

TITLE **AB112/AB121 COMBINED SOUNDER  
& BEACON WIRING DIAGRAMS**

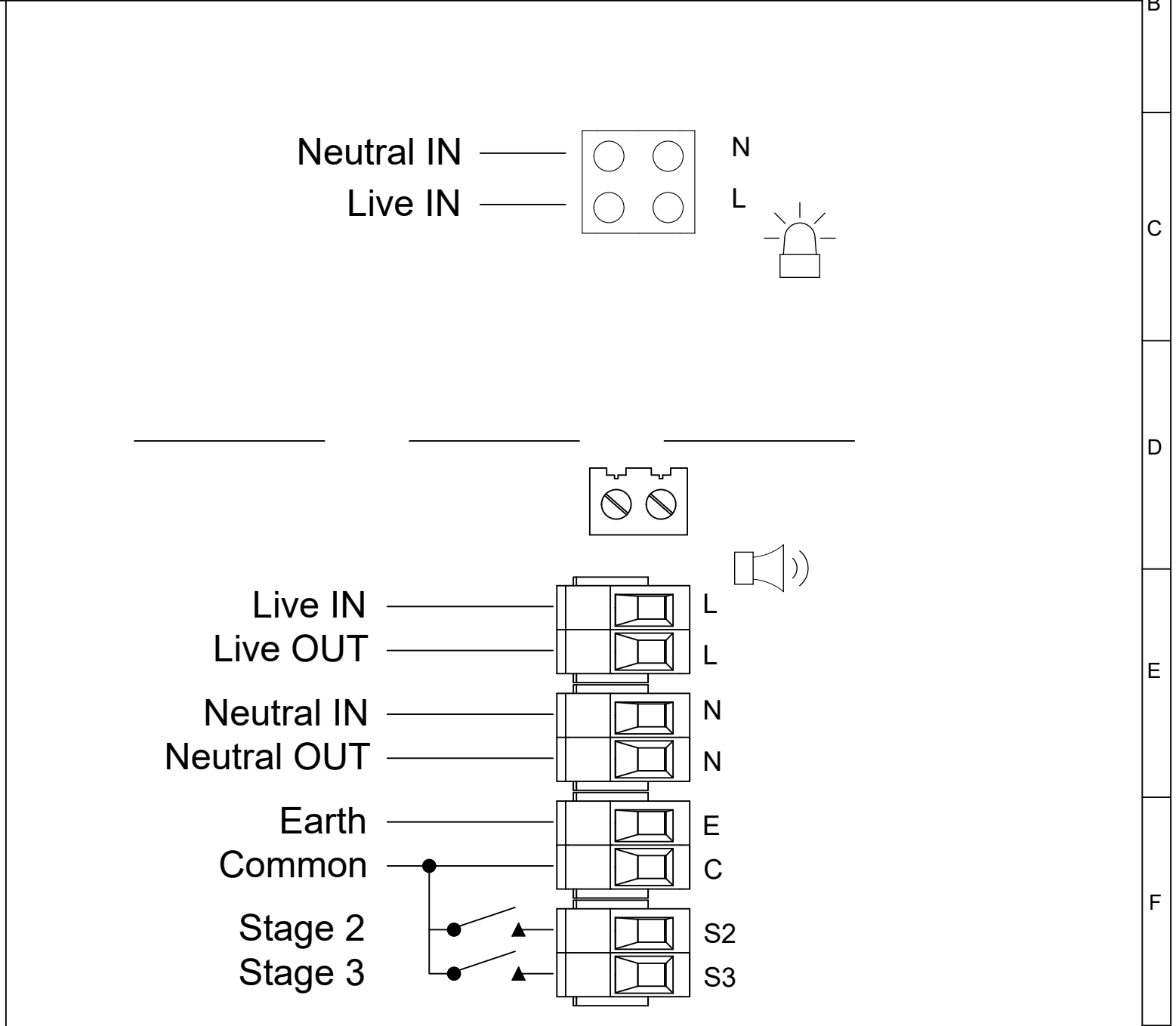
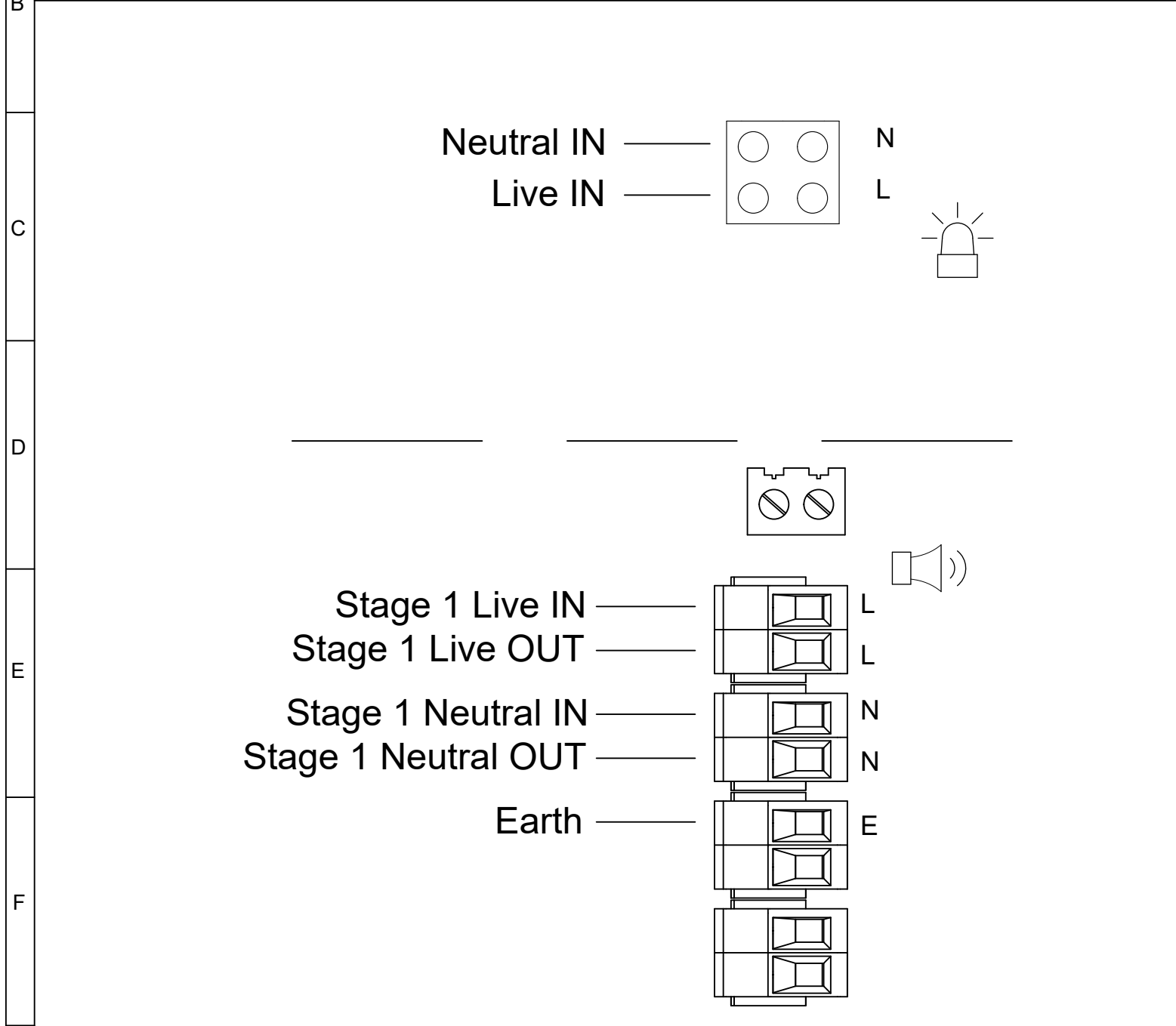
SCALE	SHEET	DRAWING NUMBER
NTS	7 OF 8	D118-06-501

SWITCHES FOR STAGE OPERATION  
 CUSTOMER SUPPLIED

Independent Sounder & Beacon Activation (Remove Link Wires)

**Single Stage Configuration** Config.: 10a  
 Stage 1: Apply Power to Stage 1 Live & Stage 1 Neutral

**Three/Four Stage Configuration** Config.: 10b  
 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	DRAWN	DATE	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. NEITHER THE WHOLE OR ANY EXTRACT MAY BE DISCLOSED, LOANED, COPIED OR USED FOR MANUFACTURING OR TENDERING PURPOSES WITHOUT THEIR WRITTEN CONSENT.	 warning signals EUROPEAN SAFETY SYSTEMS LTD IMPRESS HOUSE MANSSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM		A3		
	J.SPILLER	28/06/2021					IF IN DOUBT, ASK - DO NOT SCALE				
	CHECKED	DATE	MATERIAL				TITLE AB112/AB121 COMBINED SOUNDER & BEACON WIRING DIAGRAMS				
	B.ISARD	28/06/2021	ALTERNATIVE MATERIAL				SCALE	SHEET	DRAWING NUMBER		
STANDARDS	APPROVED	DATE			NTS	8 OF 8	D118-06-501				
SPECTRALARM RANGE	R.N.POTTS	28/06/2021									