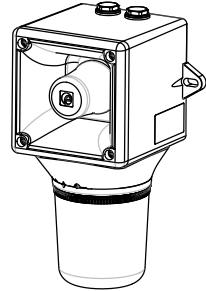


INSTRUCTION & SERVICE MANUAL

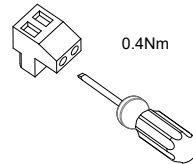
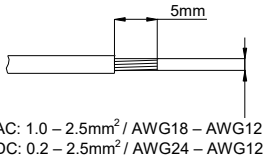
AB105LDA SpectrAlarm Combined Alarm Horn Sounder & LED Beacon

- Sounder unit: Alarm horn sounder: 64 tones, 4 stages
- L.E.D. Array Beacon
- 16 x High powered L.E.D's
- IP Rating: IP65
- 9 Selectable user modes
- 2 Stages on DC units only
- Temp: -40°C to + 66°C
- Unit weight: 1.15kg DC 1.40kg AC
- CE & UKCA
- 2-off M20 x 1.5 thread entries.



Unit Type Code	Nominal Voltage	Voltage Range	Nominal Sounder Current	Nominal Beacon Current	Nominal SPL	Max SPL	Average SPL
AB105LDADC024	12VDC	10-50Vdc	17mA	250mA	105.3dB(A) Tone 44 @ 1m	110.9dB(A) Tone 4 @ 1m	105.2dB(A) All tones @ 1m
AB105LDADC024	24VDC		33.5mA	250mA			
AB105LDADC024	48VDC		113mA	250mA			
AB105LDAAC15	115VAC	90-253Vac/dc 50/60Hz	25mA	90mA			
AB105LDAAC230	230VAC		17mA	50mA			

Supply voltage variation of +/-10% outside the voltage range is permissible
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.

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

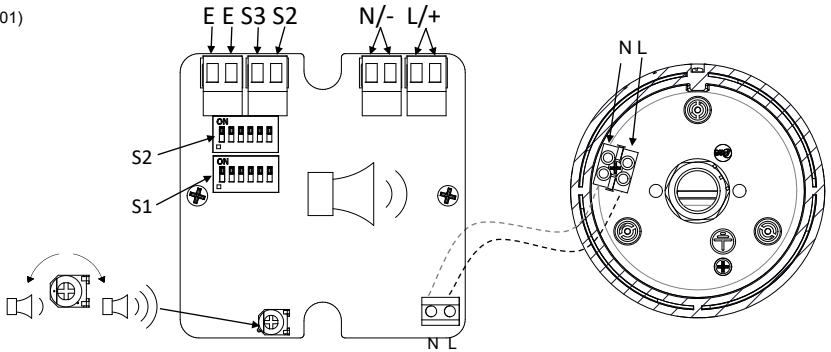
ВНИМАНИЕ: отключите от источника питания перед установкой или обслуживанием, чтобы предотвратить поражение электрическим током.



INSTRUCTION & SERVICE MANUAL
AB105LDA SpectrAlarm Combined Alarm Horn Sounder
& LED Beacon

AC

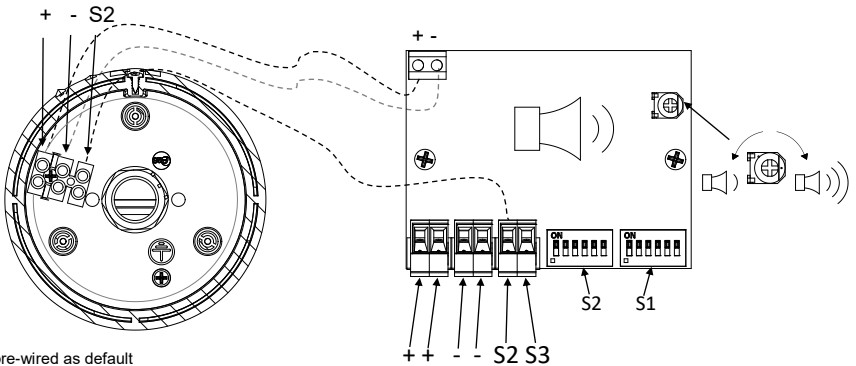
(See D118-06-001)



Note: Beacon pre-wired as default

DC

(See D118-06-001)

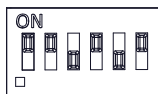
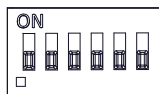


Note: Beacon pre-wired as default

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

Default = S2 - Tone 1

Default = S1 - Tone 44



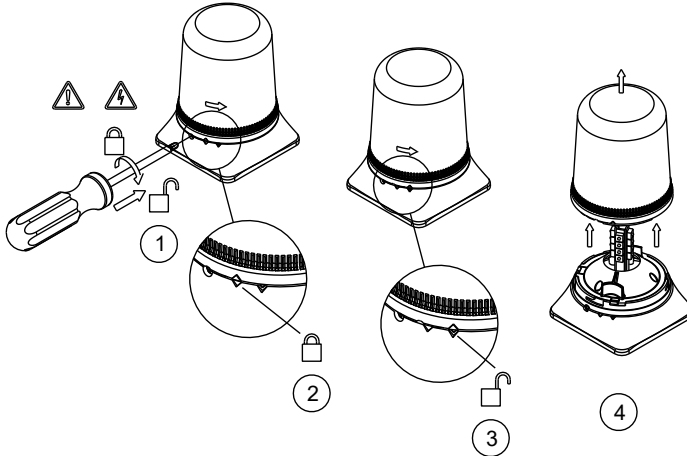
(ON = 1, OFF = 0)

INSTRUCTION & SERVICE MANUAL
AB105LDA SpectrAlarm Combined Alarm Horn Sounder
& LED Beacon



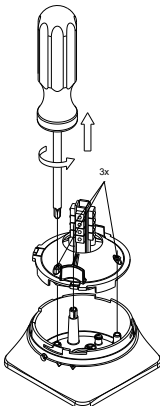
The Beacon lens cover is field replaceable.

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: 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.



AB105LDA

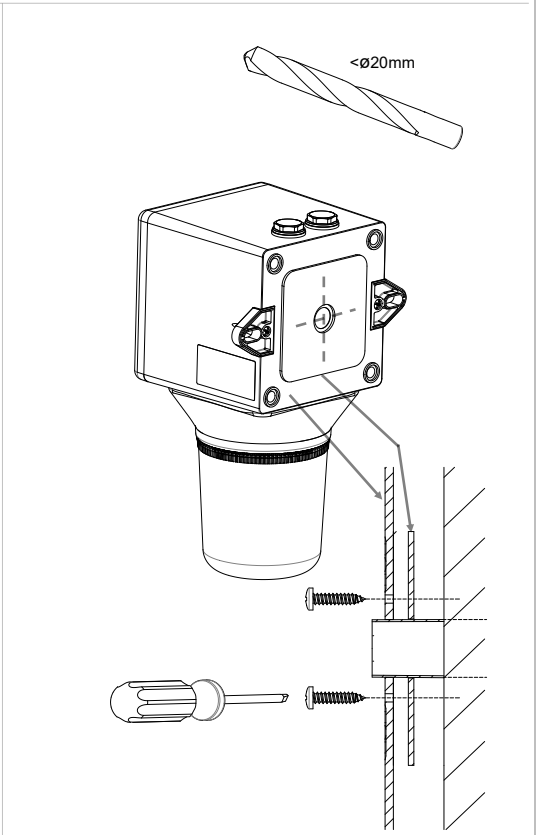
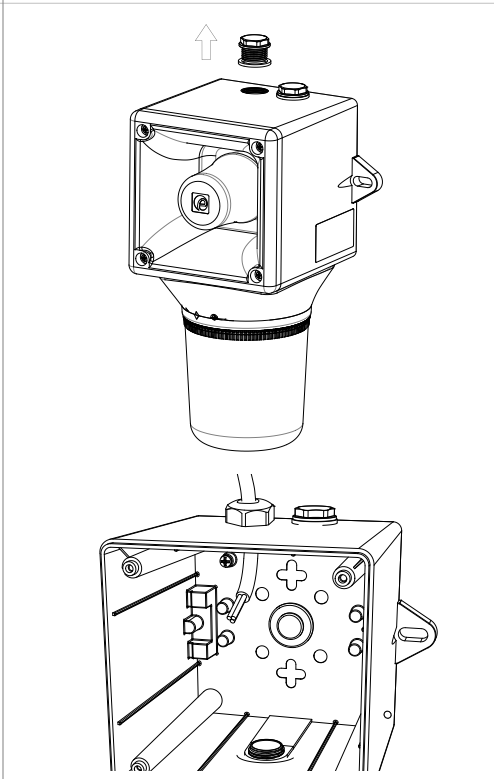
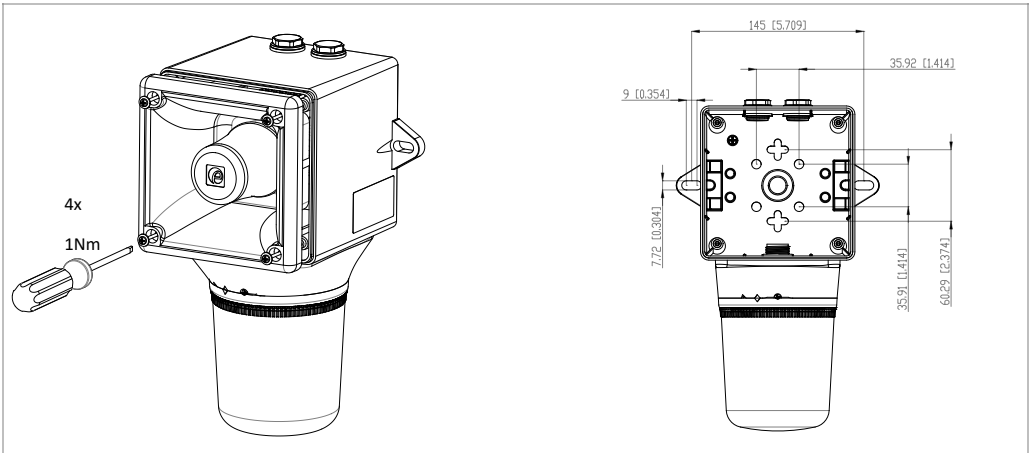
L.E.D Array Option Setting Table

Default setting is 6

PCB EDGE	1	2	3	4	5	6	7	8	9
	○ ○ ○	○ ○ ○	○ ○ ○	□ ○ □	□ ○ □	□ ○ □	○ □ ○	○ □ ○	○ □ ○
	○ ○ ○	□ ○ □	○ □ ○	○ ○ ○	□ ○ □	○ □ ○	○ ○ ○	○ □ ○	○ □ ○

Stage 1	Frequency Description: Stage 1 (Ac & DC units)	Frequency Description: Stage 2 (DC unit only)
1	All L.E.D's on	Alternate Side Flash 2Hz
2	Rotating: Slow 1	Alternate Side Flash 2Hz
3	Single Strike Flash 2Hz	Rotating: Fast 2
4	Rotating: Fast 1	Single Strike Flash 2Hz
5	Rotating: Slow 2	Double Strike Flash 1Hz
6	Double Strike Flash 2Hz	Rotating: Fast 2
7	Rotating: Fast 2	Double Strike Flash 2Hz
8	Double Strike Flash 1Hz	Alternate Side Flash 2Hz
9	Alternate Side Flash 2Hz	Rotating: Fast 2

INSTRUCTION & SERVICE MANUAL
AB105LDA SpectrAlarm Combined Alarm Horn Sounder
& LED 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, 1soff) 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	44	8
26	470Hz @0.9Hz - 1.1s Intermittent (f=470, a=0.55, b=0.55)		1 0 0 1 1	44	8
27	470Hz @5Hz - (5 cycles/second) Intermittent (f=470, a=0.1, b=0.1)		0 1 0 1 1	44	8
28	544Hz @ 1.14Hz - 0.875s Intermittent (f=470, a=0.43, b=0.44)		1 1 0 1 1	24	8
29	655Hz @ 0.875Hz Intermittent (f=655, a=0.57, b=0.57)		0 0 1 1 1	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	24	8
31	660Hz @3.34Hz - 150mS on, 150mS off Intermittent (f=660, a=0.15, b=0.15)		0 1 1 1 1	24	8
32	745Hz @ 1Hz Intermittent (f=745, a=0.5, b=0.5)		1 1 1 1 1	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 1 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

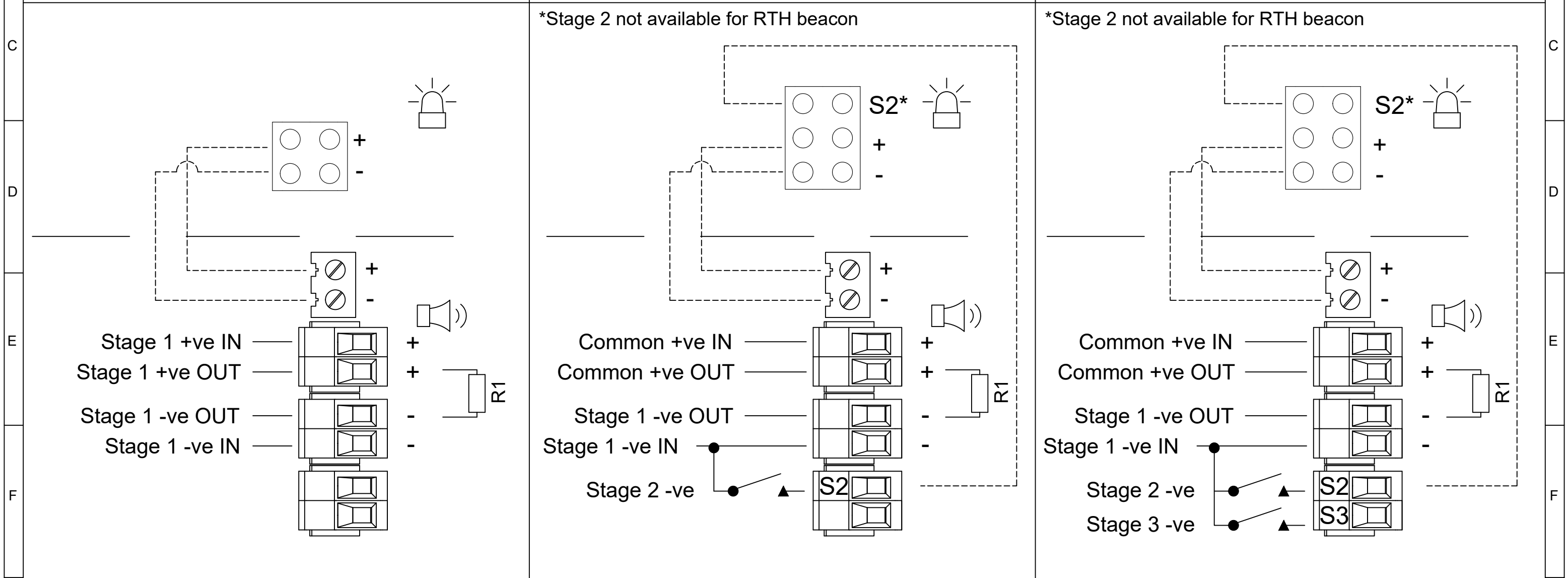
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							A		INTRODUCTION JS - 11/06/21

----- 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

DC configuration -Linked Sounder & Beacon Activation (Default)

Single Stage Configuration	Config.: 1a	Two Stage Configuration	Config.: 1b	Three/Four Stage Configuration	Config.: 1c
Line Monitoring		Common Positive		Common Positive	
Stage 1: Apply Power to Stage 1 +ve & Stage 1 -ve		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 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	



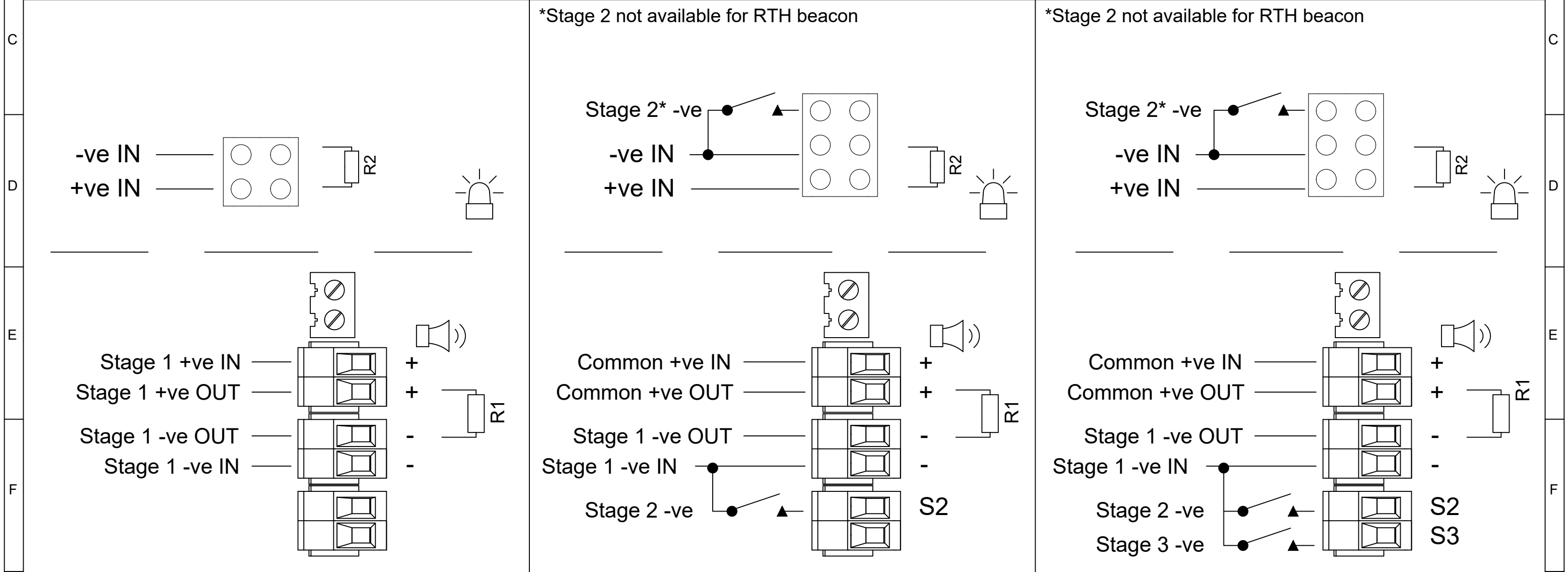
DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. 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 IF IN DOUBT, ASK - DO NOT SCALE			A3
	J.SPILLER	11/06/2021					TITLE			
	STANDARDS	CHECKED	DATE	ALTERNATIVE MATERIAL			SCALE	SHEET	DRAWING NUMBER	
AB105 RANGE	R.N.POTTS	11/06/2021			NTS	1 OF 4	D118-06-001			

1	2	3	4	5	6	7	8	9	10
							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS - 11/06/21

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

DC configuration -Independent Sounder & Beacon Activation (Remove Link Wires)

Single Stage Configuration	Config.: 2a	Two Stage Configuration	Config.: 2b	Three/Four Stage Configuration	Config.: 2c
Line Monitoring		Common Positive		Common Positive	
Stage 1: Apply Power to Stage 1 -ve & Stage 1 +ve		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 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 BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN J.SPILLER	DATE 11/06/2021	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 IMPRESS HOUSE MANSELL ROAD ACTON LONDON W3 7QH WWW.E2S.COM	ALL DIMENSIONS IN MM IF IN DOUBT, ASK - DO NOT SCALE		A3
	CHECKED	DATE 11/06/2021	MATERIAL	TITLE AB105 SPECTRAALARM COMBINED SOUNDER & BEACON WIRING SHCEMATIC					
	APPROVED R.N.POTTS	DATE 11/06/2021	ALTERNATIVE MATERIAL	SCALE NTS			SHEET 2 OF 4	DRAWING NUMBER D118-06-001	

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							ISSUE	MOD No.	REASON - INITIAL - DATE
							A		INTRODUCTION JS - 11/06/21

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

SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

AC configuration - Linked Sounder & Beacon Activation (Default)

Single Stage Configuration Config.: 3a

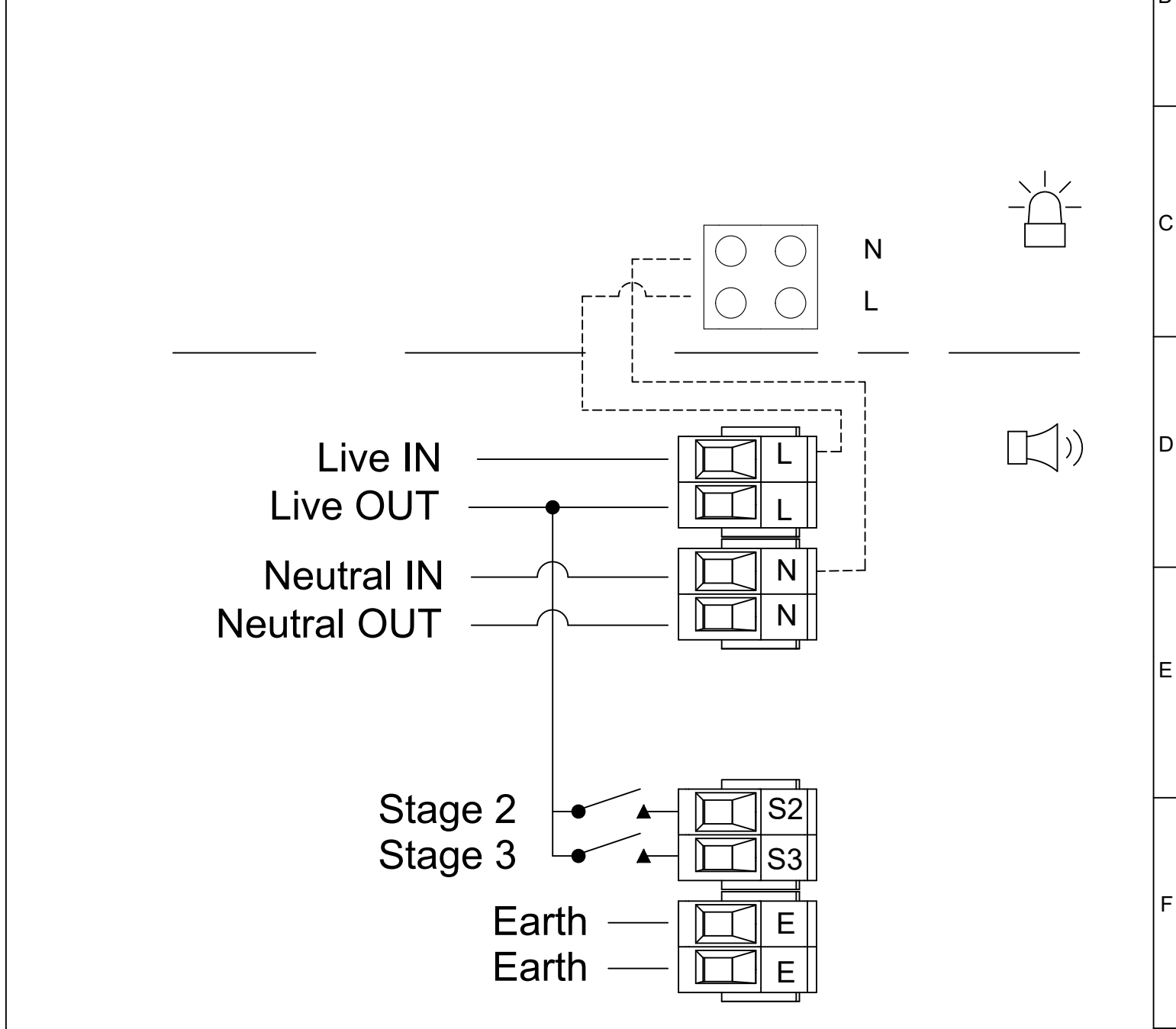
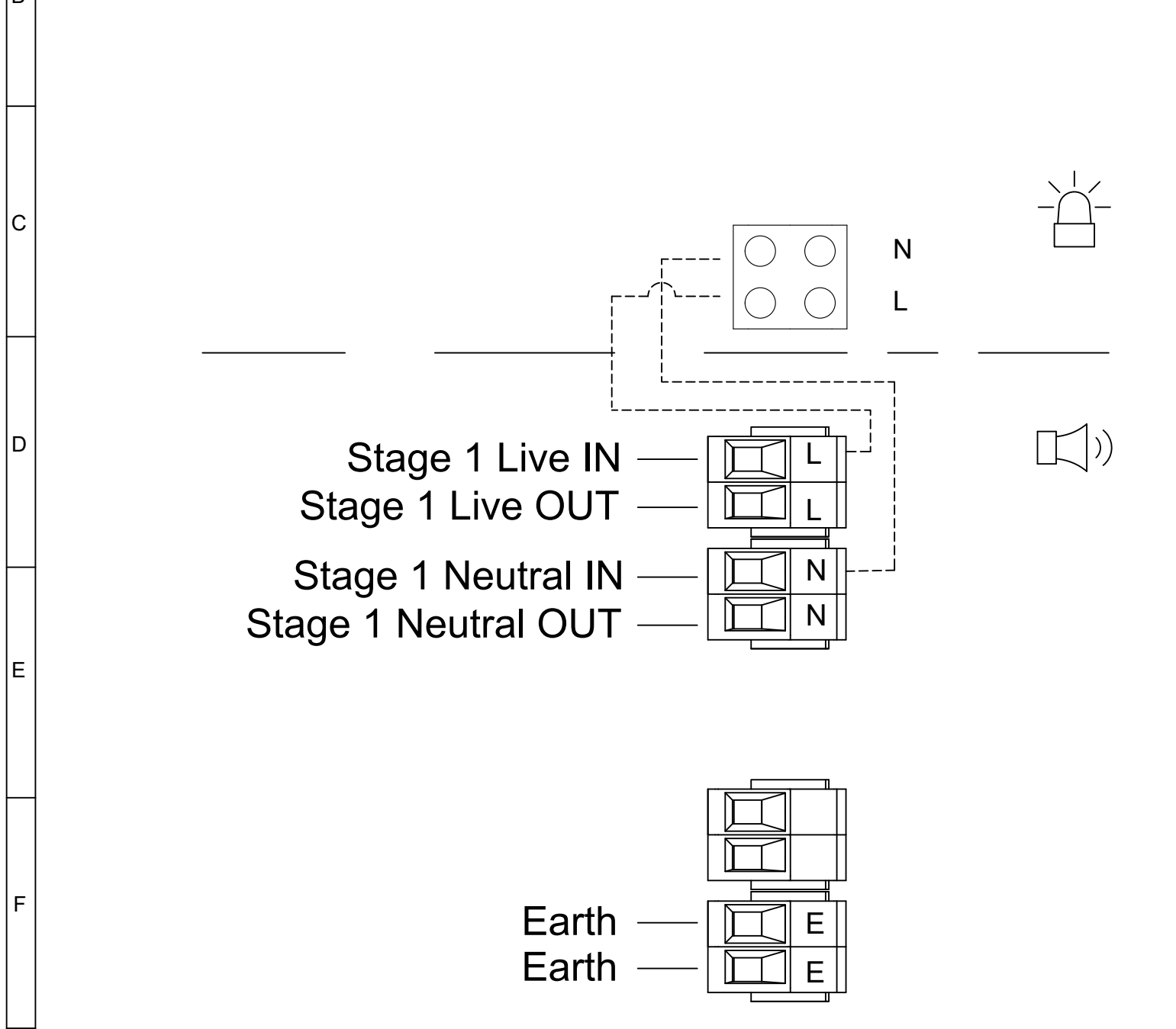
Three/Four Stage Configuration Config.: 3b

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 Live

Stage 3: Apply Power to Live & Neutral & connect Stage 3 to Live

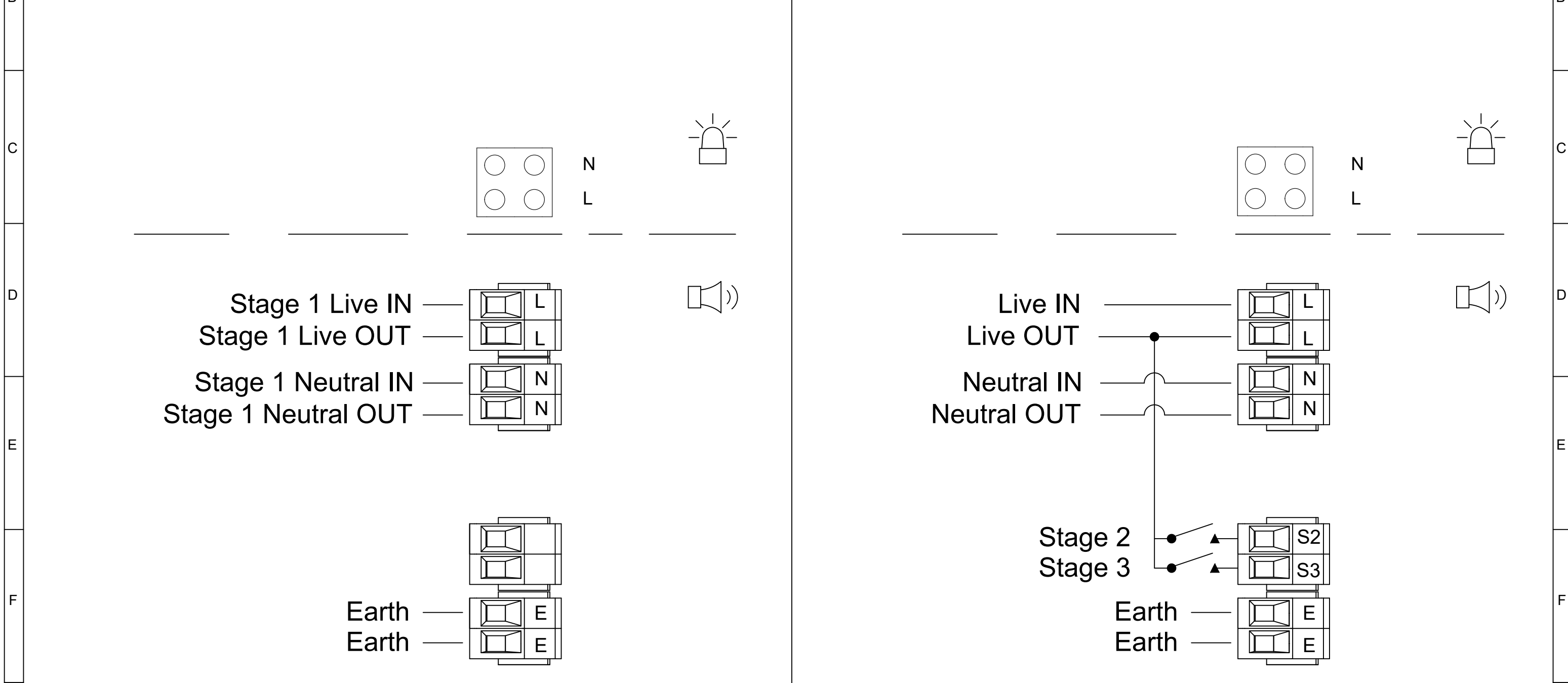


DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN	DATE	SURFACE FINISH	WEIGHT (Kg)	THIS DRAWING AND ANY INFORMATION OR DESCRIPTIVE MATTER THEREIN IS COMMUNICATED IN CONFIDENCE AND IS THE COPYRIGHT PROPERTY OF EUROPEAN SAFETY SYSTEMS LTD. 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	11/06/2021					MATERIAL			
	CHECKED	DATE	ALTERNATIVE MATERIAL				SCALE	SHEET	DRAWING NUMBER	
	R.N.POTTS	11/06/2021					NTS	3 OF 4	D118-06-001	
STANDARDS	APPROVED	DATE								
AB105 RANGE	R.N.POTTS	11/06/2021								

SWITCHES FOR STAGE OPERATION
CUSTOMER SUPPLIED

AC configuration - Independent Sounder & Beacon Activation (Remove Link Wires)

Single Stage Configuration	Three/Four Stage Configuration
Config.: 4a	Config.: 4b
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 Live Stage 3: Apply Power to Live & Neutral & connect Stage 3 to Live



DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS ANGULAR DIMENSIONAL TOLS	DRAWN J.SPILLER	DATE 11/06/2021	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	 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
	CHECKED R.N.POTTS	DATE 11/06/2021	MATERIAL	TITLE AB105 SPECTRAALARM COMBINED SOUNDER & BEACON WIRING SHCEMATIC					
	APPROVED R.N.POTTS	DATE 11/06/2021	ALTERNATIVE MATERIAL	SCALE NTS			SHEET 4 OF 4	DRAWING NUMBER D118-06-001	