1-23-090 / STEx: Stainless Steel explosion/flameproof

STExC1X05F Alarm Horn & Xenon Strobe Beacon

The STExC1X05F is a UL, cUL, IECEx and ATEX certified alarm horn sounder featuring a re-entrant flare horn. The robust 316L stainless steel enclosure is approved for Zone 1, 2, 21 & 22 explosion proof signalling applications.

Featuring 64 alarm tone sounds, each of the available 4 stage/channels can be remotely triggered. Class D amplification provides a high sound output at optimum operating current. The threaded flameproof joint, multiple cable entries and duplicated, pluggable termination simplifies both installation and routine maintenance. SIL1 & SIL2 Route 2H compliant to IEC61508 (2010) as standard.

Features

- Maximum sound pressure level output of 115dB(A)
- Choice of 64 alarm tone frequencies
- 4 remotely selectable alarm stages/channels
- Positive or negative line stage/channel switching
- Automatic synchronisation on multi-beacon & sounder systems
- User selectable strobe flash rates
- Field replaceable lens colour filter
- Ratchet adjustable 316 stainless steel bracket
- Triple cable entries
- Available with custom tone configurations and frequencies
- Robust corrosion proof 316L stainless steel enclosure



Approvals

- UL/cUL – File ref: E230764
- IECEx ULD 16.0017X
- ATEX DEMKO 16 ATEX 1466X
- TR-CU Ex EAC certificate: RU C-GB.HA65.B.01252_21
- INMETRO IEx 20.0156X
- PESO CCOE certified: P622994

Coding

- NEC / Class / Zone (24Vdc & 230Vac only)
  Class I Zone 1 AEx db IIC T4 Ta -50°C to +70°C
  Class I Zone 1 AEx db IIC T5 Ta -50°C to +50°C (AC: 48°C)
- CEC / Class / Zone (24Vdc & 230Vac only)
  Class I Zone 1 Ex db IIC T4 Ta -50°C to +70°C
  Class I Zone 1 Ex db IIC T5 Ta -50°C to +50°C (AC: 45°C)
- NEC / CEC Class / Div (24Vdc & 230Vac only)
  Class I Div 2 ABCD T4 Ta -50°C to +70°C
  Class I Div 2 ABCD T5 Ta -50°C to +50°C (AC: 45°C)
- IECEx / ATEX
  II 2G Ex db IIC Gb T4 Ta -50°C to +70°C
  II 2G Ex db IIC Gb T5 Ta -50°C to +50°C (AC: 45°C)
  II 2D Ex tb IIIC Db T114°C Ta -50°C to +70°C (AC: T117°C)



Specification

Alarm Horn:	
Maximum output:	115dB(A) @ 1 m +/- 3dB [109dB(A) @ 10ft/3m +/- 3dB]
Nominal output:	110dB(A) @ 1m +/- 3dB [106dB(A) @ 10ft/3m] +/- 3dB
No. of tones:	64 (UKOOA / PFEER compliant)
No. of stages:	4
Volume control:	Full range
Effective range:	125m/410ft @ 1KHz
Voltages DC:	12Vdc (11.5-14Vdc), 24Vdc (20-28Vdc), 48Vdc (42-54Vdc
Voltages AC:	230vac (220-240vac)
Stage switching:	DC units: negative or positive AC units: common supply line
Strobe Beacon:	
Energy:	5 Joules (5Ws)
Flash rates:	1Hz flash (60 fpm) 1.5Hz flash (90 fpm) Double flash (120 fpm)
Eff. Intensity:	143 cd* – measured ref. to I.E.S.
Peak Candela:	46,976 cd* – measured ref. to I.E.S.
Eff. Intensity:	250 cd – calculated from energy (J)
Peak Candela:	500,000 cd – calculated from energy (J)
Lens colours:	Amber, Blue, Clear, Green, Magenta, Red & Yellow
Tube life :	Emissions are reduced to 70% after 5 million flashes
General:	
Safety Integrity Level:	SIL1 and SIL2 Route 2H IEC61508 (2010)
Ingress protection:	EN60529: IP66
Enclosure material:	316L Stainless Steel
Enclosure colour:	Red
Enclosure finish:	Chromate & powder coated finish ISO 12944-6 CX, C5VH & C5H
Cable entries:	3 x M20x1.5mm Stopping plugs included
Stopping plugs:	Stainless Steel
Terminals:	0.5 – 2.5mm² (20-14 AWG) Pluggable & duplicated terminals
Line monitoring:	Diode polarized for use in supervised circuits Blocking diode for reverse polarity monitoring
Ground/Earth stud:	M5
Line monitoring:	Blocking diode included EOL Min. 500 Ohm 2W, or 3k3 Ohm 0.5W resistor or diode (DC versions) can be fitted
Enclosure volume:	<2 litres
Installation temp:	-50° to +70°C (-58°F to +158°F)
Storage temp:	-50° to +70°C (-58°F to +158°F)
Relative humidity:	99%
Weight:	7.45kg/16.42lbs

Part Codes

Part Code:	Identifier:	Description:
Product type:	STExC1X05	STExC1 Combined Alarm
Horn type:	F	Flare re-entrant horn
Voltage:	DC012	11.5-14Vdc
	DC024	20-284Vdc
	DC048	42-54Vdc
	AC230	220-240Vac
Cable entries:[e]	A	3 x M20x1.5mm
	B	2 × 1/2" NPT – adaptors
	C	2 × 3/4" NPT – adaptors
	D	2 x M25x1.5mm – adaptors
	E	1 × 1/2" NPT – adaptor
	F	1 × 3/4" NPT – adaptor
	G	1 x M25x1.5mm – adaptor
Stopping plug/ adaptor material: [m]	B	Brass
	N	Nickel Plated
	S	Stainless Steel (standard)
Bracket / Guard material: [s]	1	A4 316 Stainless Steel
	3	A4 316 St/St with Equip. Tag
Product version: [v]	A	UL, cUL, IECEx, ATEX, Ex EAC, INMETRO – SIL1 & SIL2 Note: UL, cUL approval not applicable to 12Vdc or 115Vac variants
Product option: [o]	1	Standard product
	Z	Custom alarm tone software – contact E2S
	X	Custom configuration – contact E2S
	Y	Stage control Config. 4 or 8
Enclosure colour: [x]	R	Red
	S	Special colour – contact E2S
Lens colour: [y]	A	Amber
	B	Blue
	C	Clear
	G	Green
	M	Magenta
	R	Red
	Y	Yellow

Accessories:

SP65-0001-A4	Pole Mount Bracket Kit St/St A4 (316)
SP65-0003-A4	Sunshade – St/St A4 (316)

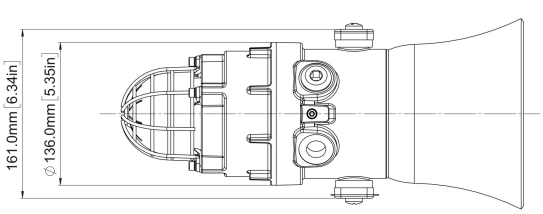
Alarm stage control:

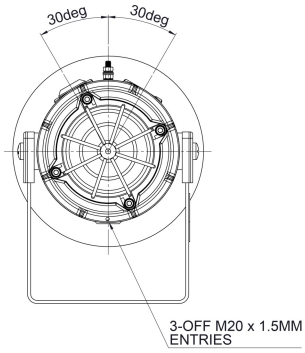
Please review the installation manual and wiring schematics for remote stage control and EOL resistor monitoring configuration options:

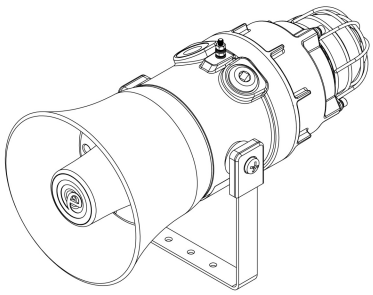
Config. 1 or 5 [DC]:	Factory default. Common negative, positive switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only
Config. 2 or 6 [DC]:	User setting. Common positive, negative switching. Up to 4 Alarm Stages. EOL monitoring Alarm Stage 1 only
Config. 3 or 7 [DC]:	User setting. Common negative, positive switching activation of Alarm Stages 1 & 2 with EOL on both stages. Reverse polarity monitoring
Config. 4 or 8 [DC]:	Product option 'Y'. Independent activation of Alarm Stages 1 & 2 with EOL on both stages. Forward polarity monitoring
Config. 1 or 2 [AC]:	Factory default. Up to 4 Alarm Stages. Stage 1 activated at power on. Stages 2, 3 and 4 via volt free contacts

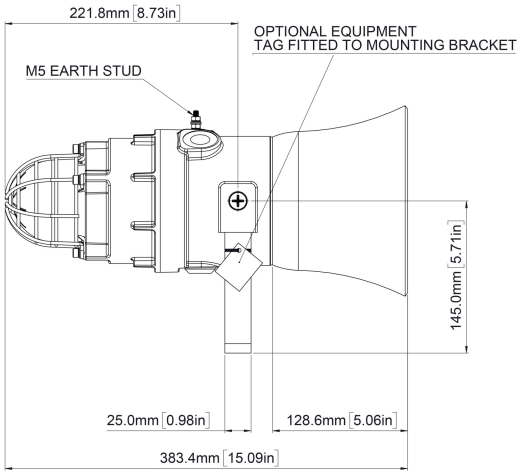
Current Consumption

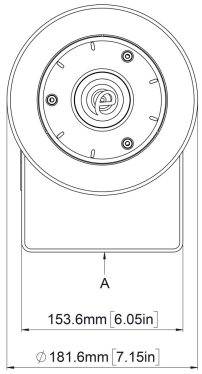
Nominal Voltage:	Voltage range:	Alarm Horn Nominal current:	Xenon Strobe Nominal current:	Combined Nominal current:	Combined Max. current:	In Rush
12Vdc	11.5-14Vdc	221mA	678mA	885mA	920mA	
24Vdc	20-28Vdc	185mA	323mA	508mA	555mA	786mA <5ms
48Vdc	42-54Vdc	115mA	198mA	325mA	420mA	
230Vac	220-240Vac 50/60Hz	48mA	79mA	127mA	149mA	

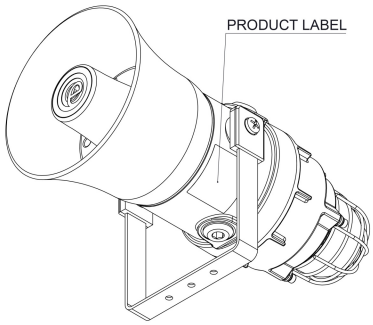


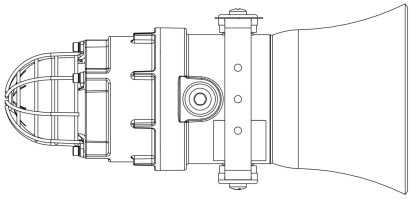


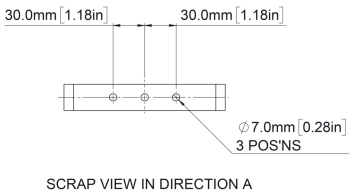












Tone table

S 1	Description	S 2	S 3	S 4
T 1	1000 Continuous - PFEER Toxic Gas	Any	T 2	T 44
T 2	1200/500 @ 1Hz Sweeping - DIN / PFEER P.T.A.P.	Any	T 3	T 44
T 3	1000 @ 0.5Hz (1s on, 1s off) Intermittent - P...	Any	T 2	T 44
T 4	1.4KH-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - NF C 48...	Any	T 24	T 1
T 5	544(100mS)/440 (400mS) - NF S 32-001	Any	T 19	T 1
T 6	1500/500 - (0.5s on , 0.5s off) x3 + 1s gap -...	Any	T 44	T 1
T 7	500-1500Hz Sweeping 2 sec on 1 sec off - AS4428	Any	T 44	T 1
T 8	500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) - NEN ...	Any	T 24	T 35
T 9	1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM...	Any	T 34	T 1
T 10	1000 (1s on, 1s off)x7 + (7s on, 1s off) - IM...	Any	T 34	T 1
T 11	420(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201 ...	Any	T 1	T 8
T 12	1000(0.5s on, 0.5s off)x3 + 1s gap - ISO 8201...	Any	T 1	T 8
T 13	422/775 - (0.85 on, 0.5 off) x3 + 1s gap - ...	Any	T 1	T 8
T 14	1000/2000 @ 1Hz - Singapore	Any	T 3	T 35
T 15	300 Continuous	Any	T 24	T 35
T 16	440 Continuous	Any	T 24	T 35
T 17	470 Continuous	Any	T 24	T 35
T 18	500 Continuous - IMO code 2 (Low)	Any	T 24	T 35
T 19	554 Continuous	Any	T 24	T 35
T 20	660 Continuous	Any	T 24	T 35
T 21	800 Continuous - IMO code 2 (High)	Any	T 24	T 35
T 22	1200 Continuous	Any	T 24	T 35
T 23	2000 Continuous	Any	T 3	T 35
T 24	2400 Continuous	Any	T 20	T 35
T 25	440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent	Any	T 44	T 8
T 26	470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent	Any	T 44	T 8
T 27	470 @ 5Hz (0.10s on, 0.10s off) Intermittent	Any	T 44	T 8
T 28	544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent	Any	T 24	T 8
T 29	655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent	Any	T 44	T 8
T 30	660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent	Any	T 24	T 8
T 31	660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent	Any	T 24	T 8
T 32	745 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T 24	T 8

S 1	Description	S 2	S 3	S 4
T 33	800 (0.25s on, 1.00s off) Intermittent	Any	T 24	T 8
T 34	800 @ 2Hz (0.25s on, 0.25s off) - IMO code 3....	Any	T 24	T 8
T 35	1000 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T 24	T 8
T 36	2400 @ 1Hz (0.50s on, 0.50s off) Intermittent	Any	T 24	T 8
T 37	2900 @ 5Hz (0.10s on, 0.10s off) Intermittent	Any	T 24	T 8
T 38	363/518 @ 1Hz (0.50s / 0.50s) Alternating	Any	T 8	T 19
T 39	450/500 @ 2Hz (0.25s / 0.25s) Alternating	Any	T 8	T 19
T 40	554/440 @ 1Hz (0.50s / 0.50s) Alternating	Any	T 24	T 19
T 41	554/440 @ 0.65Hz (0.76s / 0.76s) Alternating	Any	T 8	T 19
T 42	561/760 @ 0.83Hz (0.60s / 0.60s) Alternating	Any	T 8	T 19
T 43	780/600 @ 0.96Hz (0.52s / 0.52s) Alternating	Any	T 8	T 19
T 44	800/1000 @ 2Hz (0.25s / 0.25s) Alternating	Any	T 24	T 19
T 45	970/800 @ 2Hz (0.25s / 0.25s) Alternating	Any	T 8	T 19
T 46	800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating	Any	T 24	T 19
T 47	2400/2900 @ 2Hz (0.25s / 0.25s) Alternating	Any	T 24	T 19
T 48	500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping	Any	T 24	T 12
T 49	560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping	Any	T 24	T 12
T 50	560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping	Any	T 24	T 12
T 51	600/1250 @ 0.125Hz (4s / 4s) Sweeping	Any	T 24	T 12
T 52	660/1200 @ 1Hz (0.50s / 0.50s) Sweeping	Any	T 24	T 12
T 53	800/1000 @ 1Hz (0.50s / 0.50s) Sweeping	Any	T 24	T 12
T 54	800/1000 @ 7Hz (0.07s / 0.07s) Sweeping	Any	T 24	T 12
T 55	800/1000 @ 50Hz (0.01s / 0.01s) Sweeping	Any	T 24	T 12
T 56	2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping	Any	T 24	T 12
T 57	2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping	Any	T 24	T 12
T 58	2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping	Any	T 24	T 12
T 59	2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping	Any	T 24	T 12
T 60	2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping	Any	T 24	T 12
T 61	800Hz Motor Siren	Any	T 24	T 12
T 62	1200Hz Motor Siren	Any	T 24	T 12
T 63	2400Hz Motor Siren	Any	T 24	T 12
T 64	Simulated Bell	Any	T 21	T 12

No liability is accepted for any consequence of the use of this document. The technical specification of this unit is subject to change without notice due to our policy of continual product development. All dimensions are approximate. This unit is sold subject to our standard conditions of sale, a copy of which is available on request.