

Ex de, Weatherproof



Introduction

This range of beacon/sounder units, intended for use in potentially explosive gas atmospheres, has a sound output of up to 116dB(A) and tube energy of up to 10 joules (beacon). It is suitable for use in the harsh environmental conditions found offshore and onshore in the oil, gas and petrochemical industries.

The flamepaths, flare and body are manufactured from a UV stable glass reinforced polyester. Stainless steel screws and mounting stirrup are incorporated to ensure a corrosion-free product. A tapered flamepath is used to overcome the problems of assembly of parallel spigot flamepaths.

Features

- Zone 1, Zone 2 & non-Ex use.
- Ex de IIB T4.
- ATEX approved, Ex II 2 G.
- IECEx approved, Gb.
- CUTR certified.
- BASEEFA certified.
- Brazilian (Inmetro) certified.
- IP66 and 67.
- Certified temperature: -50°C to $+70^{\circ}\text{C}^{*}$.
- Up to 116 dB(A)*.
- Version with independent beacon/sounder operation now available.
- 27 Tones, user selectable (dual tone option - d.c. voltage).
- Tones comply with UKOOA/PFEER guidelines.
- Integral volume control.
- GRP corrosion-free flamepath.
- Ratcheted swivel mounting stirrup.
- Stainless steel fixtures.
- Tapered flamepath.

**Model dependent.*

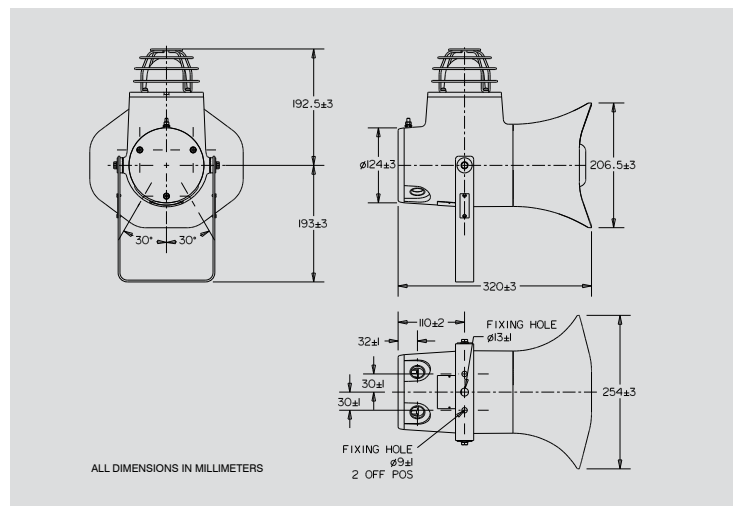


**THORNE &
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Certification and Specification

ATEX Ex de:	Cert. no. Baseefa04ATEX0273X. Certified to: EN60079-0, EN60079-1, EN60079-7. Ex II 2G, Ex de IIB T4 Gb.
IECEX Ex de:	Cert. no. IECEX BAS 11.0149X. Certified to: IEC60079-0, IEC60079-1, IEC60079-7. Ex de IIB T4 Gb.
CUTR Ex de:	1Ex de IIB T3 Gb. Russian Fire Approved.
Inmetro Ex de:	Ex de IIB T3 Gb. (T4 Pending).
ABS:	American Bureau of Shipping Type Approval for CU1S, CU1SW, CU1H & CU1HW only.
Material:	Body, flares & covers: Glass Reinforced Polyester (GRP). Lens: Glass. Guard fitted as standard. Cover screws & mounting strap: Stainless steel.
Finish:	Natural black or painted to customer specification.
Certified Temp:	Standard unit: -50°C to +50°C (CU1-S & CU1-SP). High temperature unit: -50°C to +70°C (CU1-H & CU1-HP).
Weight:	6.5kg approx.
Ingress Protection:	IP66 & IP67.
Entries:	Up to 2 x M25, 2 x M25 ISO, 2 x M20 with 1/2" NPT adaptor or 2 x M25 with 3/4" NPT adaptors into termination (Exe) chamber.
Terminals:	8 x 4.0mm ² .
Relay Initiate:	Available on all versions – operates with 24V d.c. initiate supplies only.
Mounting:	Stainless steel bracket with ratchet facility.
Earth Continuity:	Available as an option.
Labels:	Duty and tag label option to customer's requirements.
Tube Energy:	5 or 10 Joules
Sound Output:	Sound Standard unit: 116dB(A) ± 3 dB(A) (tone dependent). High temp. unit: 110 dB(A) ± 3 dB(A) (tone dependent).
Tone Selection:	27 user selectable tones.
Two Stage Unit: (d.c. only)	Switchable between any two tones by either: (i) Reversing the polarity* of the supply, or (ii) By a 3 wire common +ve system, switching between the two -ve lines. If a two stage unit is ordered with either Independent Sounder/Beacon operation or Telephone or Relay Initiate, it will be wired for reverse polarity tone switching only, to allow loop in, loop out installation.. *Will not affect beacon operation.



Independent Beacon DC: 3 wire common-ve as standard (4 wire available on request).
/Sounder Operation: AC: 4 wire.

Reverse Line Available on request. Please contact MEDC Technical Sales for more

Monitoring: details.

Current Consumption at full power (60fpm):

Input Voltage	CU1S 10J	CU1H 10J	CU1S 5J	CU1H 5J
24Vd.c.	1680mA	960mA	1390mA	750mA
48Vd.c.	864mA	-	-	-
110Va.c.	365mA	360mA	-	-
120Va.c.	417mA	370mA	-	-
230Va.c.	172mA	165mA	-	-
240Va.c.	182mA	165mA	-	-
254Va.c.	241mA	220mA	-	-

Integral volume control (beacon set to 60fpm) (Not applicable to CU1H)

* Nominal Output (dB(A))	CU1S 10J	CU1S 5J
105dB(A)	850mA	650mA
108dB(A)	1000mA	780mA
111dB(A)	1150mA	940mA
114dB(A)	1400mA	1190mA
116dB(A)	1680mA	1390mA

* Output measure with 24V input voltage. Tone set to 970Hz continuous.

High temperature CU1H is set to 107dB(A). For the 24Vd.c. version 960mA @ 10J & 750mA @ 5J.

Ordering Requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box.

Unit Type		Certification		Voltage		Power		Flashrate		Lens		Labels		Options		Entries		Finish			
Type	Code			Voltage	Code			Flashrate	Code			Label	Code			Options	Code	Entries	Code	Finish	Code
Standard unit	CU1S			24Vd.c.	024			60 / min	06			None	N			Tel. Initiate	T†	1 x M20	1B	Natural Black	N
Two stage	CU1SP*			48Vd.c.	048			80 / min	08			Duty Label	D*			Relay Initiate	R†	2 x M20	2B	Red	R
High temp.	CU1H			110V a.c.	110			120 / min	12			Tag label	T*			Independent	I†	1 x M25	1C	Special	S*
Standard unit	CU1HP*			120V a.c.	120											Operation		2 x M25	2C		
Two stage				230V a.c.	230											Earth cont.	C	1 x 1/2" NPT	1M		
				240V a.c.	240											Special Tone	S*	2 x 1/2" NPT	2M		
				254V a.c.	254											EOL Res.	E*	1 x 3/4" NPT	1N		
																None	N	2 x 3/4" NPT	2N		

*DC versions only.

* Current consumption available for 80/min and 120/min on request.

* Please specify.

* Please specify.

* Please specify.

To specify certified plug, suffix appropriate code with 'P', e.g. 2BP is 2 x M20 entries with one certified plug.

* Russian Fire Approval as standard.

* Available 24Vd.c. only.

