

Explosion proof audible & visual alarms

Yodalex is a unique product family of multi configurable Ex. sounders and beacons. The units have been specifically designed for use in hazardous and hostile environments that require the highest degree of certification.

- **Omni-directional high sound output 110dB at 1m**
- **Unique product combinations**
- **Reduces installation cost**
- **Designed to meet universal approvals**
- **Low current device**
- **Dual cable entry - cable in / cable out**
- **User selectable tones to meet international regulations**

* approval to USA and European standards for flameproof equipment applied for
 * registered design
 * patent applied for



First Stage Signal	Description of Sound Signal	Frequencies Hz	Repetition Rate s.	Second Stage Signal	Special Applications	dB(A)	mA
1.	Alternate two-tone	800-1000	0.5	3	Fire alarms	110	250
2.	Alternate two-tone	2500-3100	0.5	4	Security alarms	110	265
3.	Alternative fast two-tone	800-1000	0.25	7	Increased urgency	110	250
4.	Alternate fast two-tone	2500-3100	0.25	8	Security deterrent	110	260
5.	Alternate two-tone	440-554	0.4/0.1	14	Evacuation alarm, France	104	250
6.	Alternate two-tone	430-470	1.0	14		104	250
7.	Alternate v.fast two-tone	800-1000	0.13	12		110	250
8.	Alternate v.fast two-tone	2500-3200	0.07	13		110	265
9.	Alternate two-tone	440-554	2.0	10	Turn-out, Sweden	104	250
10.	Continuous note	700	-	1	All clear, Sweden	108	250
11.	Continuous note	800	-	1		110	250
12.	Continuous note	1000	-	1		110	250
13.	Continuous note	2300	-	2		110	260
14.	Continuous note	440	-	9		104	250
15.	Interrupted tone	800	0.25	3		110	250
16.	Interrupted tone	800	0.5	1		110	250
17.	Interrupted tone	1000	0.5	1		110	250
18.	Interrupted tone	2500	0.25	4		110	260
19.	Interrupted tone	2500	0.5	2		110	260
20.	Interrupted tone	700	6/12	10	Pre-vital message, Sweden	108	250
21.	Interrupted tone	700	1.0	10		108	250
22.	Interrupted tone	700	4.0	10	Air-raid alarm, Sweden	108	250
23.	Interrupted tone	700	0.25	10	Local warning, Sweden	108	250
24.	Interrupted tone	720	0.7/0.3	10	Industrial alarm, Germany	108	250
25.	Int. fast, rising volume	1400	0.25	26		110	250
26.	Fast siren	250-1200	0.085	11		110	260
27.	Rising constant, fall	1000	10/40/10	17	Industrial alarm, Germany	110	250
28.	ISO 8201 Evacuation	800-1000	AS STD	11	Int'l evacuation alarm	110	250
29.	Fast whoop	500-1000	0.15	32		110	250
30.	Slow whoop	500-1200	4.5	12	Evacuation alarm, The Netherlands	110	250
31.	Reverse Sweep	1200-500	1	11	Evacuation alarm, Germany	110	250
32.	Siren	250-1200	0.8	26		108	250

Underwriters Laboratories

Factory Mutual

EN 50. 014

EN 50. 018

ATEX Directive 94/9/EC

EEx.d.IIC & IIB. T4

Complies with the PFEER regulations for audible and visual alarm signals

UL 1203

UL 464

UL 1971/1638

USA & European

Class 1 Division 1

Groups BCD

Class 2 Division 1

Groups EFG



Flash energy

5j (joules)

Operating voltage

24VDC \pm 25%

Operating temperature

-35 to +55°C

Storage temperature

-40 to +70°C

Relative humidity

93% at 40°C

Protection classification

IP66



Enclosure - LM6 aluminium alloy
 red 2 part epoxy coating

Glass dome - toughened glass

Lens - 6 colours in flame retardant polycarbonate

Horn - flame retardant ABS

Fastenings - stainless steel

Lens guard - provided as standard



YODALEX PROVISIONAL DATA

AMENDED DATA

APPROVED AS FLAMEPROOF EQUIPMENT

EUROPE DEMKO CERTIFICATE EX. 97E 122899
 EEx.d. IIB + H2. T6
 EEx.d. IIB. T6
 STANDARDS EN50. SECOND EDITION

NORTH AMERICA UL LISTED 8N 30
 CLASS 1 DIVISION 1 GROUPS BCD
 CLASS 1 DIVISION 1 GROUPS CD
(APPROVAL EXTENDS TO CLASS 2 DIVISION 1 GROUPS E.F.G.)
 STANDARDS UL 464
 UL 1638
 UL 1203

YODALEX IS A REGISTERED TRADEMARK AND THE DESIGN REGISTERED IN ALL MAJOR TERRITORIES.

DIMENSIONS

 SOUNDER YO6 HEIGHT 280
 STROBE V6 HEIGHT 270 (285 OVER GUARD)

OPERATING TEMPERATURE

IIB AND GROUPS C,D	-35°C TO +66°C
IIB + H2	-20°C TO +66°C
GROUPS B,C,D	-25°C TO +66°C

LENS COLOURS - CHOICE FROM 7
 CLEAR, OPAL, YELLOW, AMBER, RED, BLUE,
 GREEN

SOUND SIGNALS

No. 21 INTERRUPTED TONE	1000Hz.	1.0s
No. 32 SIREN	500-1200Hz	3.0s

SECOND STAGE SIGNAL IS FULLY SELECTABLE

SOUND OUTPUT AND CURRENT DEPEND ON SIGNAL SELECTED
TYPICAL SOUND OUTPUT 110 dB(A) AT 1 METRE
TYPICAL CURRENT AT 24VDC 350mA

STROBE

TYPICAL CURRENT AT 24VDC 220mA
PEAK CURRENT APPROXIMATELY 3.6A
FALLING TO <1A IN 300, μ S.

YODALEX ALARMS SHOULD BE MOUNTED VERTICALLY WITH THE STROBE DOWNWARDS.

ALTERNATIVE BRACKET TO PLACE CABLE ENTRY PARALLEL TO MOUNTING SURFACE.



Hazardous Area Range

Hazardous Area Range

Clifford & Snell was originally established in 1929 and has a history of pioneering many electronic systems and products. In 1967 the company developed the worlds first electronic sounder.

Hazardous Area Applications demand total product reliability. Our matchless pedigree enables market requirements to be interpreted into innovative designs leading to World Class Products. Products fall into 2 methodologies EX Flameproof or EX Intrinsically Safe.

APPROVALS

Clifford & Snell products offer a wide range of Approvals/Certification including:-

- U.L - Underwriters Laboratory
- BASEEFA - British Approvals Service for Electrical Equipment in Flammable Atmospheres
- GENELEC - Central European Norm for Electrical Equipment
- DEMKO - Danish National Certification

Universal certification remains an objective for many companies, at Clifford & Snell the objective has become reality with our new innovative YODALEX range.

Leading Edge microprocessor techniques enable a selection of 32 different sound signals to meet virtually all requirements, including PFEER/UKOOA. Always looking to the future the International Evacuation Signal I.S.O. 8201 is also featured.

The application of technology requires a blend of Experience and New Ideas, qualities abundant within our Engineering Facilities.

Conceptual Designs are subject to rigorous scrutiny to produce world beating products. Fitness for purpose approach ensures the correct materials are employed to provide the many features required in Hazardous Environments. Die Cast Aluminium Borosilicate Glass for strength. Plastics for Weatherproof qualities etc.

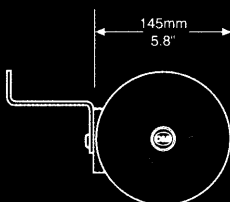
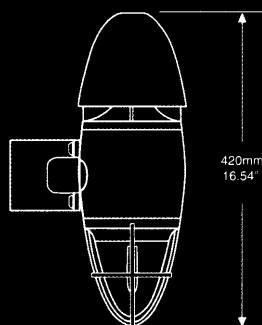
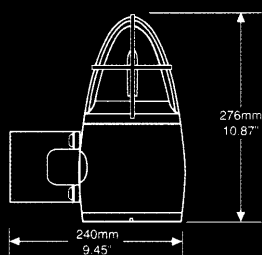
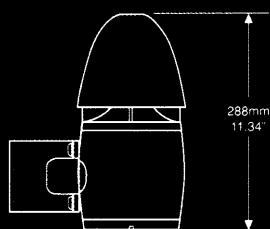
Electronics are designed to provide high power outputs, low power consumption.

YODALEX employs a modular concept to ensure maximum interchangeability, and flexibility.

World Champion products from a World Class Company



Yodalex Explosion proof audible & visual alarms



FINISH

- **Enclosure** - LM6 aluminium alloy red 2 part epoxy coating
- **Glass dome** - toughened glass
- **Lens** - 7 Colours in flame retardant polycarbonate
- **Horn** - flame retardant ABS
- **Fastenings** - stainless steel
- **Lens guard** - Provided as standard



The Yodalex range of flameproof alarms presently comprises a single sounder (Y06), a single strobe (V6) and a combined sounder/strobe (YL6).

These alarms have been designed to meet both UL United States, CENELEC (European) and Canadian standards.

The range offers:

- Omni Directional high output 110dB at 1m
- Unique product combinations
- Reduce installation costs
- Reduced meets universal approval
- Low current devices
- Dual cable entry - cable in / cable out
- User selectable tones (32) to meet international regulations

The innovations present in the Yodalex alarm range include the sharing of one explosion proof housing to produce a sounder and strobe in one unit. The ability to change the lens colour without disturbing the flameproof housing.

Underwriters Laboratories

UL Standards

UL 1203
UL 464
UL 1638
Control No.8N30

UL Classifications

Class I Division I
Gas Groups BCD
Class II Division I
Gas Groups EFG

ULC Canada

CSA C22.2 No. 30-M1986
CSA C22.2 No. 25-M1966

European Standards

EN.50.014.1992
EN.50.018.1994
Cert No. 97E 122899

European Classifications

EEx.d.IIB.+H₂T6
EEx.d.IIB.T6
Complies with PFEER regulations.

DESIGN DATA

Product Sounder (Y06)
Output 110dB @ 1M
Current 350mA

Product Strobe (V6)
Flash Energy 5 Joules
Current 220mA
Flash rate 1 per second
Colours Clear,Opal, Yellow, Red, Amber, Blue,Green

Operating Temperature

-35°C to +66°C IIB only
-25°C to +66°C Class II Div I
-20°C to +66°C European IIB +H₂

IP Rating

IP 66 NEMA 4X

YODAL

Hazardous Area Products

