Clifford & Snell®

Yodal® Ex

YL4IS

Intrinsically Safe Device

Audible signal for use in Potentially Explosive Atmospheres



PRODUCT FEATURES

- Max sound output 100 dB (A) 1m
- IP65 rated**
- LED Long Life Array
- 32 selectable tones meeting international regulations
- 2 stage alarm
- Flame retardant ABS & Polycarbonate enclosure
- Low current consumption
- Modular signal flexibility
- Lenses available in 8 colours
- ATEX & IECEx* Approved
- Zones 0, 1, 2, 20, 21, 22

Product Approvals

CE

Sounder Certificate Number:
ERO22ATEX0002X

Ex ATEX

Beacon Certificate Number:
ERO22ATEX0001X

UK CA

Sounder Certificate Number:
EMA22UKEX0004X

Beacon Certificate Number:
EMA22UKEX0003X

IEC IECEx

Beacon Certificate Number:
IECEx EMT 22.0001X (Pending)

Issue 2

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TECHNICAL DATA

Certification	
Type	**Product Approvals**
YL4IS/ISC/T4	II 1 G Ex ia IIC T4 Ga II 1 D ia IIIC T_{200} 110°C Da
Zones	0, 1 & 2 (Gas Groups > IIC) 20, 21 & 22 (Dust Group > IIIC)
Conforms to	IEC 60079-0:2017, EN IEC 60079-0:2018 IEC 60079-11:2011, EN 60079-11:2012
*Sounder ATEX approved only, LED Beacon ATEX & IECEx approved	

Mechanical Data	
Enclosure Material	ABS FR UL94 5VB
Lens Material	UV Stable Polycarbonate
External Fixings	Stainless Steel
Degree of protection	Up to IP65 (IEC60529) ** Subject to the correct cable gland being fitted

Ambient Conditions	
Operating temperature	-25 °C to +40 °C
Storage temperature	-40 °C to +70 °C
Max. Relative humidity	95% at 40 °C

Acoustic Data	
Maximum Volume Output	100dB (A)
Volume Control Adjustment	-15 dB (A)
32 selectable tones via DIL-switch	
2 Stage Alarm with predetermined second stage as standard.	

Luminous characteristics	
Light Emitting Diode	8 off LED Array
Flash Rate	60 FPM (1Hz)
Lens Colour	Amber, Yellow, Red, Green, Opal, Blue, Magenta, Clear

Electrical Data			
Operating Voltage	16.2 to 26.4V		
Current consumption	Power Supply	Certified barrier / Isolator parameters	Current Consumption Tone 1
	24vDC	28v/300 Ω	24 mA
	18vDC	28v/300 Ω	33 mA
	(Current for combined operation)		
Certified input parameters		**Beacon**	**Sounder**
Independent Wiring	U_i =	28v	28v
	I_i =	93 mA	93 mA
	P_i =	0.66w	0.66w
	C_i =	0	0
	L_i =	0	0
Combined Supply (1x Beacon & Sounder)	U_i =	28v	
	I_i =	93 mA	
	P_i =	0.66w	
	C_i =	0	
	L_i =	0	
Line monitoring	Yes		

Line integrity on DC systems

If line monitoring is required an end-of-line resistor is needed and should have a minimum resistance of 750 Ohm and rated power of at least 2W or a 4700 Ohm and a rated power of at least 0.4W. For end of line monitoring, a suitable barrier/isolator will be required that allows for reverse polarity connection (see page 4 for Moflash recommend barriers)

Mounting

The back boxes should be securely mounted to suitably flat wall or bulkhead using the internal fixing points moulded into the back boxes. Areas of undue vibration should be avoided. Always use the mounting gaskets supplied. The recommended fixing screws are 4.5mm Dia x 20mm long. To maintain the IP rating of the enclosure the cable entries used must be fitted with a suitably rated cable gland (not included). Max cable termination is 2.5mm^2.

Installation

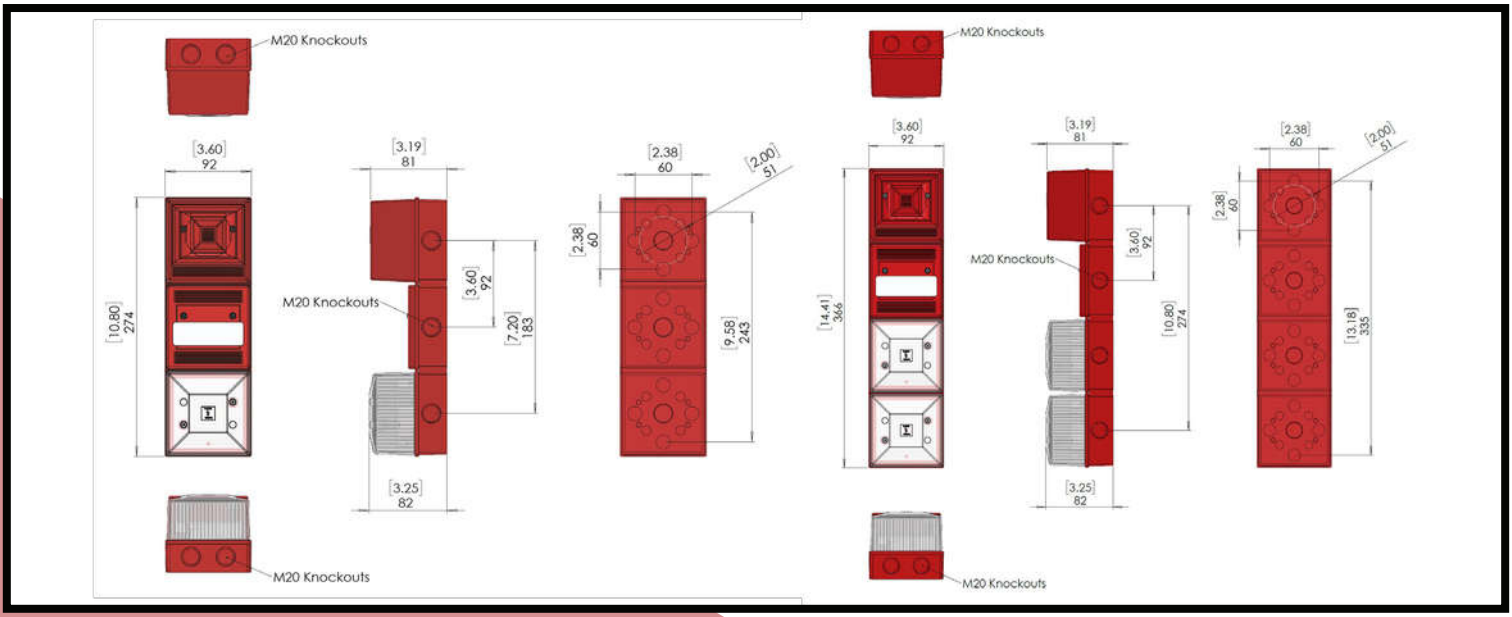
To maintain the Intrinsically Safe integrity of the product a suitable rated Galvanic Isolator or Zener barrier must be used (see Electrical Data table for entity parameters and also page 4 for Moflash recommended products).

The YL4IS can be wired as individual components (i.e. sounder and beacon on separate channels) or the sounder and beacon can be wired together to activate at the same time on one channel, however the entity parameters must be observed for both variations.

A YL4IS unit with multiple beacons must have a separate isolator/barrier channel for each beacon, this allows independent operation of each colour beacon and also maintains the safety of the product. Under no circumstances can 2 beacons be powered from the same channel of a Barrier/Isolator.

Dimensional Drawing

Moflash reserves the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding. All Dimensions in mm [inches] - Subject to alterations



SELECTION

Product Approval	Enclosure Colour	Safety Barrier	Temperature Class	Lens Colour	Effective Candela	Order Code (Single Beacon)	Art. No.	Weight (Kg)
YL4IS Sounder/Beacon ATEX Approved	Red Normal (RN) RAL 3001	ISC	T4	Amber	2.68	YL4/ISC/T4/A/RN	211533	0.64
				Red	2.08	YL4/ISC/T4/R/RN	205450	0.64
				Green	21.12	YL4/ISC/T4/G/RN	212118	0.64
				Opal	3.52	YL4/ISC/T4/O/RN	212120	0.64
				Blue	1.88	YL4/ISC/T4/B/RN	212142	0.64
				Clear	8.16	YL4/ISC/T4/C/RN	212119	0.64
				Yellow	9.46	YL4/ISC/T4/Y/RN	245530	0.64
				Magenta	2.31	YL4/ISC/T4/M/RN	245531	0.64

Version	Lens Colour	Order Code (Multiple Beacons)
YL4IS		YL4/ISC/T4/ - / - / RN YL4/ISC/T4/ - / - / - / RN

Please fill in lens colour

Lens Colour							
Amber	Red	Green	Opal	Blue	Clear	Yellow	Magenta
A	R	G	O	B	C	Y	M

Systems Installation
The Sounder must be installed in accordance with the latest EN 60079-0 & EN 60079-11 standards or equivalent IEC standards, with consideration for any local installation requirements, and should only be carried out by appropriately competent and qualified personnel. Moflash Signalling is not able to offer any assistance with additional system parameters beyond that included on the installation sheet, and can not give advise on individual system installations. The system integrators should be contacted for any additional installation requirements.

ACCESSORIES

WARNING: Connection into the Sounder/Beacons must be via a suitably rated Zener Barrier or Galvanic Isolator. Never connect the sounder or beacon directly to the voltage supply without a barrier in place. Failure to do so will result in permanent damage to the PCB & void the warranty.

Product		Description	Order number	Art. No.	Weight
Zener Barrier		Single Channel DC	Z 728	071788	0.150
		Single Channel AC	Z 928	071857	0.150
Galvanic Solenoid Driver		Single Channel	KCDO-SD3-Ex1.1045	304983	0.150
		Dual Channel	KFDO-SD2-Ex2.1045	242032	0.100
Relay Module		Dual Channel	KFDO-RO-Ex2	038975	0.100
Cable Gland		M20 Nylon IP68		50224	0.05
Lock Nut		M20 Flanged Lock Nut		C00039	