MOFLASH SIGNALLING

IS-B



Overview

VISUAL SIGNALS - INTRINSICALLY SAFE - LED BEACONS

The Moflash Intrinsically Safe IS-B Series is a reliable signalling solution for hazardous environments, approved for explosive atmospheres in both Group I (mining) and Group II (above ground) applications. Designed to meet strict safety standards, it provides a visual warning where traditional electrical equipment cannot be used safely.

Fully certified for areas with flammable gases, dust, or vapours, the IS-B Series ensures safety and compliance with international standards. Its Group I approval suits underground mining and methane or coal dust environments, while Group II approval makes it ideal for above-ground industrial sectors like oil, gas, and chemical plants.

The IS-B Series features nine SMT LEDs and offers two modes: **flashing (60 FPM) and static**, selectable via an internal DIP switch.

For safety and compliance, the units must be powered through a suitably rated and approved Zener Barrier or Galvanic Isolator. **Please note that 1 barrier/isolator must be used to power each product.**

Features

- Flashing or Static
- Diode Polarised & End of Line resistor compatible
- Suitable for surface, ceiling or wall mounting
- 120° light output around the horizontal axis
- Cable entry : 3 x M20
- Available in 24vDC
- Group I (Mining) & Group II (Above Ground)
- Zone: Gas 0, 1, 2 & Dust 20, 21, 22

Material

- Flame Retardant Polycarbonate UL94 V2

IP 66

9 LED

60 FPM*

ATEX, IECEx & UKEX

>90% at 20°C (Humidity)

-40 to +60°C (Ambient)

*Flashes Per Minute

ISSUE 1

APPROVALS & CONFORMITIES

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Ordering Information

Voltage		Ordering Information					Mode & Current Consumption*	
Nominal Voltage	Voltage Range	Amber	Red	Blue	Green	Clear	Flashing @60FPM	Static
24vDC	16-28vDC	IS-B-02-01	IS-B-02-02	IS-B-02-03	IS-B-02-04	IS-B-02-05	10mA @24vDC	15mA @24vDC

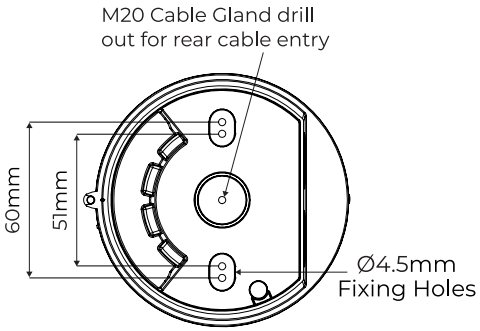
*Current draw may vary depending on the Barrier or Isolator used. Moflash obtained these figures through testing with the Barriers and Isolators listed on this Datasheet. Whilst other manufacturers' products can be used, their parameters must meet the product's requirements.

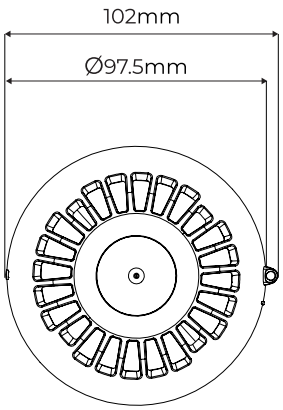
Certification Information

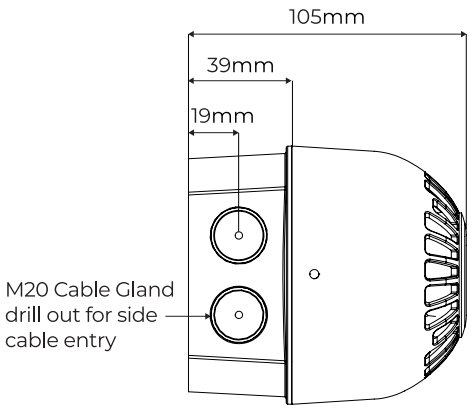
Certification / Approvals for Hazardous Area									
Certificates	·	EMT17ATEX0012X **(ATEX)**, EMT 17.0005X **(IECEx)** & EMA21UKEX0022X **(UKEX)**							
Groups	·	Group I : Mining		·	Group II : Above Ground				
EX Codes	·	I M1 Ex ia I Ma		·	II G D Ex ia IIC T5 Ga · II G D Ex ia IIIC T_{200}85°C Da				
Standards	·	EN / IEC 60079-0		·	EN / IEC 60079-11				
Zones	·	Gas Zone : 0, 1 & 2		·	Dust Zone : 20, 21 & 22				
Entity Parameters	·	Ui = 28v	· Ii = 93mA	·	Pi = 660mW	· Ci = 0	· Li = 0		

Weights & Dimensional Drawings

Kg	24v
Net Weight	0.222
Gross Weight	0.278







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System Installation

The IS Beacons must be installed in accordance with the latest IEC & EN 60079-0, IEC & 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 these Beacons must be via a suitably rated Zener Barrier or Galvanic Isolator.

Never connect the Beacons 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	Part Code	Weight
Zener Barrier		**Single Channel DC** Zener Barrier Single Barrier DC Z 728 (IS)	071788	0.150
		**Single Channel AC** Zener Barrier Single Channel AC Z 928 (IS)	071857	0.150
Galvanic Solenoid Driver		**Single Channel** Galvanic Solenoid Driver Single Channel KCDO-SD3-Ex1.1045 (IS)	304983	0.150
		**Dual Channel** Galvanic Solenoid Driver Dual Channel KFDO-SD2-Ex2.1045 (IS)	242032	0.100
Cable Gland + Washer & Lock Nut		**M20 Nylon IP68** Cable Gland M20>IP68 + 2mm Washer & Lock Nut	50002	0.015

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