



Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC MS/21-2775X	Issue	0
Issue Date	27 October 2021	Expiry Date	27 October 2031
Applicant	KAMA Industries (Pty) Ltd, 285 Granville Avenue, Robertville, Johannesburg, South Africa		
Manufacturer	KAMA Industries (Pty) Ltd, 285 Granville Avenue, Robertville, Johannesburg, South Africa		
Description (See "Annex A" below)			
Equipment	BANSHEE Ex Multisounder S1	Type	BANSHEE Ex Multisounder S1
Photo			
MARKING: <i>Must be additionally applied to the equipment</i>	Applicant / Manufacturer Type Ex Marking IA Number Serial Number Rating	KAMA Industries (Pty) Ltd BANSHEE Multisounder S1 Ex db [ia] I Mb Ex db IIC [ia] T4 Gb MASC MS/21-2775X (See "Conditions of Certification") As per description below	
WARNING(S)	"DO NOT OPEN WHEN ENERGIZED OR AN EXPLOSIVE ATMOSPHERE IS PRESENT" "DO NOT SEPARATE WHEN ENERGIZED OR WHEN IN AN HAZARDOUS ARIA"		
Compliance:	The equipment as described above and in report MASC 21-2775 has been allocated the rating <u>Explosion Protected Ex db I [ia] Mb & Ex db IIC[ia] T4 Gb</u> utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> SANS (IEC) 60079-0: 2019 General requirements SANS (IEC) 60079-1: 2015 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" ARP 0108: 2018 Regulatory requirements for explosion protected apparatus <i>Note: This certificate covers only the listed standards and does not imply compliance to any other standard, related or inferred. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application.</i>		
Special conditions of safe use X:	<ul style="list-style-type: none"> See "Annex A" below 		
Conditions of manufacture:	<ul style="list-style-type: none"> See "Annex A" below 		
	 J. Peens TECHNICAL SPECIALIST	 M. Erasmus TECHNICAL SPECIALIST	
<p style="text-align: center;">This certificate only covers the sample submitted and does not cover production units.</p> <p>According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory).</p>			



Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- SANS 10086 requirements;
- Any conditions mentioned in the above certificate;
- Any relevant requirements of the MHS Act;
- Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).



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IA CERTIFICATE: MASC MS/21-2775X
Equipment: BANSHEE Ex Multisounder S1

ANNEX A

Description	Enclosure	Populated	Unpopulated
		General	<ul style="list-style-type: none"> The BANSHEE Ex Multisounder S1 was manufacturer by KAMA Industries (Pty) Ltd. The unit consisted of a stainless steel cylindrical body with the following dimensions of 114 mm cylindrical x 180 mm. The unit had a front and rear screw on lid to complete the flameproof enclosure. Both lids were secured with a M105 x 1.5p (6H) thread to the main cylindrical body. An electronic circuit is mounted inside the body. The electronic circuit feeds an electromagnetic sounder through one of the flanges. The other flange is blank (no holes). Supply to the unit was done via a M20 x 1.5p threaded weld on bush on the side of the cylindrical body. The unit utilizes O-rings to maintain the IP65 rating.
	Dimensions	<ul style="list-style-type: none"> The unit had the following approximate dimensions of 114 mm cylindrical x 180 mm. 	
	Covers	<ul style="list-style-type: none"> See "General" above 	
	Entries	<ul style="list-style-type: none"> See "General" above 	
	Material	<ul style="list-style-type: none"> See "General" above 	
	Population	<ul style="list-style-type: none"> HV populated PSU, Barrier (MASC MS/18-2275X) and sounder Terminal block 	
Safety Parameters	<ul style="list-style-type: none"> 220VAC Barrier (MASC MS/18-2275X) 		
Standard compliance	See "certificate" above		
Warnings	See "certificate" above		
Conditions of Certification			
Special conditions of safe use X:	<ul style="list-style-type: none"> Only suitably certified glands may be used. All unused entries must be sealed using suitably certified blanking elements. The special fasteners used may only be grade 12.9 or higher. Corrosion inhibiting grease in accordance with clause 5.2.1 of SANS60079-1 should be used on flamepaths. All connections must be done in an Ex manner. Only Barrier (MASC MS/18-2275X) may be used. The IP65 rating of the unit must be maintained at all times. 		
Conditions of manufacture	<ul style="list-style-type: none"> A copy of the instruction / parts manual and the type certificate must be provided with each unit. The equipment must be provided with internal and external earthing / bonding facilities e.g. stud, spring washer and nut (Stainless steel) Non-corrosive A routine overpressure test of 1400kPa must be conducted on each compartment of all production enclosures, according to the requirements of SANS 60079-1. A copy of the type MASC certificate must be issued with each enclosure. 		

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MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

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