EXPLOLABS Explosion Prevention Services (Pty) Ltd
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GOVERNMENT APPROVED TEST LABORATORY

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE

Date Issued: **18 Oct 2017**
*Expiry date: **18 Oct 2020**

Issue: 0

Ex – Type Examination Certificate

Certificate Number: **S-XPL/15.1596 X**
Equipment: **Multigas Detector**
Model / Type: **Altair 5X PID/IR; Altair 5X PID**
Applicant: **MSA Africa (Pty) Ltd**
PO Box 83669
South Hills
2136
Manufacturer: **MSA-The Safety Company**
Serial No: All serial numbers imported between issued- and expire date and all serial numbers covered by a valid report or acceptable product certification mark.

Supplied by
MSA Africa (Pty) Ltd
Identified by Inspection Authority number
S-XPL/15.1596 X

And as described in the Explolabs file number **XPL/16923/15.1596** is hereby certified "Explosion Protected **Ex ia I Ma, Ex db ia I Ma, Ex db ia mb IIC T4 Gb, Ex ia IIC T4 Ga; Ex da ia IIC T4 Ga**", having been examined and inspected in accordance with the relevant requirements of South African Standards.

SANS 60079-0: 2012 Ed 5 **IEC 60079-0: 2011 Ed 6**	Explosive atmospheres Part 0: Equipment — General requirements
SANS 60079-1: 2015 Ed 5 **IEC 60079-1: 2014 Ed 7**	Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d"
SANS 60079-11: 2012 Ed 4 **IEC 60079-11: 2011 Ed 6**	Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"
SANS 60079-18:2009 Ed 3 **IEC 60079-18:2009 Ed 3**	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"

Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL) Group	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
Very high	Ma Group I	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning when explosive atmosphere present	150ºC
Very high	Ga Group II		Equipment remains functioning in zones 0, 1 and 2	135ºC
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	135ºC

1. GENERAL

The equipment is the hand held multigas detector type Altair 5X PID/IR. The equipment is designed to monitor gases in an ambient air and in a workplace. It is available with a maximum of five sensors which can display readings for six gases. The sensors have their own Ex component certificates. The equipment consists of four PCBs with display, three buttons and two charging pins. All PCBs with display are mounted inside a static dissipative moulded plastic enclosure. If the gas concentration reaches the alarm set points, a visual alarm, an audible alarm and a tactile alarm is given. The equipment is supplied by an encapsulated secondary Li-ion cell and includes one passive RFID tag. This certificate does not include the performance test according to EN 60079-29-1 and other relevant standards.

Parameters:
Degree of protection: IP65, Ambient temperature: -20°C to +50°C, Charging: Um = 6.7V

List of used Ex components:

Catalytic sensor MSA XCell Ex	certified FTZÚ 09 ATEX 0123U
EI.chem. sensor MSA XCell eChem	certified FTZÚ 09 ATEX 0223U
PID sensor Baseline-MoconTech PiD-TECH eVx	certified DEMKO 13 ATEX 1304446U
PID sensor Tech sensor plus ZPP60180	certified DEMKO 06 ATEX 0547796U
IR sensor Dynament MSH2ia	Certified FTZÚ 14 ATEX 0213U

1st Supplement to certificate FTZÚ 15 ATEX 0038X

Description of the variation to the Product:
The subject of this supplementary certificate is:
- evaluation according to the new list of standards,
- change of the marking,
- change of the product name,
- minor constructional changes,
- change of name of manufacturer.

The product has been newly evaluated according to the standard EN 60079-0:2012+A11 :2013. The marking has been updated. The product name has been changed from Multigas Detector ALTAIR 5X PID/IR to Multigas Detector ALTAIR 5X PID. Minor alternative construction changes have been done in the display assembly and in the filter disc and the list of the used Ex components has been updated. The manufacturer's name has been changed from Mine Safety Appliances Company to MSA - The Safety Company.

Updated list of Ex components:

Catalytic sensor MSA XCell Ex, Ex da ia IIC Ga, Ex ia Ma,	certified FTZÚ 09 ATEX 0123U
E1.chem. sensor MSA XCell eChem, Ex ia IIC Ga, Ex ia Ma,	certified FTZÚ 09 ATEX 0223U
PID sensor Baseline-MoconTech PiD-TECH eVx, Ex ia IIC Ga,	certified DEMKO 13 ATEX 1304446U
PID sensor Tech sensor plus ZPP60180, Ex ia IIC Ga,	certified DEMKO 06 ATEX 0547796U

2. INSTALLATION INSTRUCTIONS

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale as required by IEC/SANS 60079-0 Clause 30.

3. SPECIAL CONDITIONS FOR SAFE USE

- The equipment shall be charged by manufacturer's chargers only in an ambient temperature from 0ºC to +45ºC and opened when the hazardous area is not present.
- When using the equipment in a hazardous area, the equipment should be worn or carried on the body. It shall not be stored in a hazardous area. This prevents the possibility of the equipment building up an electrostatic charge. The measured capacitance of accessible metal parts: D-Ring 24pF and charge contact pins 17pF.
- The antenna used for activation of the internal RFID tag with the RF radiation power shall not exceed 6W for Group I and 2W for Group IIC.

1st Supplement to certificate FTZÚ 15 ATEX 0038X

Unchanged.

Based on the following documentation: FTZÚ 15 ATEX 0038X up to Supplement 1.

4. CONDITIONS OF CERTIFICATION

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

5. MARKING

The following (or similar) information have to be clearly and permanently marked on all units:

Supplier	: MSA Africa (Pty) Ltd
Manufacturer	: MSA-The Safety Company
Equipment	: Multigas Detector
Model/Type	: Altair 5X PID/IR; Altair 5X PID
Serial No.	: ---
Ex Rating	: Ex ia I Ma, Ex db ia I Ma, Ex db ia mb IIC T4 Gb, Ex ia IIC T4 Ga; Ex da ia IIC T4 Ga
IA Certificate No	: S-XPL/15.1596 X

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
ii) Any conditions mentioned in the above report;
iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
v) A revision certificate replaces all previous version of the certificate.
vi) * - Only covers equipment Imported between the "Issued" and "Expire" dates.
vii) If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd.

Responsible Testing Officer: **Reviewed by:**

P van Staden **D Maree**
Testing Officer **Senior Testing Officer**

EXPLOLABS EXPLOSION PREVENTION SERVICES