



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/22-8127X	Issue	2
Issue Date	07 June 2024	Expiry Date	17 May 2027
** Based on Certificate No	IECEX EXV 20.0017X	Issue / Variations / Amendment	3
Requested by	Axis Communications AB Gränden 1, 223 69 Lund, Sweden		
Manufacturer	Axis Ex AB Gränden 1, Lund 223 69, Sweden		
Description	Axis Ex Series Fixed Types F31, F33, PTZ Types P21, P23 series Camera Station systems comprise fixed (static) camera stations and motorised pan-tilt-zoom (PTZ) camera stations allowing up to 360° viewing depending on mounting arrangement and location. The camera stations are designed to allow either high-definition colour image generation or the use of infrared commonly used in night vision or thermal measurement applications. Image transmission from the camera stations is achieved via various media including ethernet, coaxial or fibre optics which is also the media that contains operator input to camera functionality, for example positioning or zoom functions. Each camera station is designed specifically for use in harsh and hazardous environments and uses 316L stainless steel and toughened glass as core materials. The IR variants utilise Germanium with a guard for impact protection. The static camera variants consist of one flame-proof enclosure whilst the PTZ versions consist of three interlinking flame-proof enclosures allowing full positioning mobility. The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66/IP67/IP68 (1.5 m / 30 min).		
Equipment	Fixed	Type	F31, F33, PTZ Types P21, P23 series
MARKING: Original marking as per certificate ** remains applicable. IA number must be added.	Type: Ex Marking:	Fixed Types F31, F33, PTZ Types P21, P23 series Ex db I Mb Ex db IIC T6 - T4 Gb Ex tb IIIC T85°C -T135°C Db Tamb -40°C to +60°C (Model F31111 only) Tamb -60°C to +60°C (All other models)	
	IA Number: Warnings:	MASC MS/22-8127X (To be additionally marked on equipment) See Base Certificate ** (original marking must be applied)	
Quality Assurance report (QAR) / Notification (QAN):	GB/EXV/QAR21.0005/03		
Quality Assurance report (QAR) / Notification (QAN) Expiry date:	17 May 2027		
Compliance:	The equipment as described above has been allocated the rating <u>Explosion Protected 'as above'</u> utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> • SANS (IEC) 60079-0: 2019 Equipment - General requirements • SANS (IEC) 60079-1: 2015 Equipment protection by flameproof enclosure "d" • SANS (IEC) 60079-31: 2014 Equipment dust ignition protection by enclosure "t" <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"> • Refer to Annex A below for more details. 		
Conditions of manufacture:	<ul style="list-style-type: none"> • Refer to Annex A below for more details. 		
 S. JORDAAN TECHNICAL SPECIALIST		 N. VILJOEN TECHNICAL OFFICER	
This certificate covers all units sold as long as the QAR/QAN remains valid. 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).			

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).

This certificate may only be reproduced in full

The certificate is not transferable and remains the property of the issuing body.

IA CERTIFICATE: MASC MS/22-8127X
Equipment: Fixed Types F31, F33, PTZ Types P21, P23
(Expiry date: 17 May 2027)

ANNEX A

This document is based on and must be read in conjunction with certificate IECEx EXV 20.0017X	
Description (According to Base Certificate) **	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variatioins)."	
Issue	Issue 1: Supplemented for review as per ARP 0108. Issue 2: Supplemented for review as per ARP 0108.
Standard compliance	See Base Certificate **
Special conditions of safe use ("X")	<ul style="list-style-type: none"> • Flameproof joints are not to be modified • Cable temperature can exceed 60°C – select suitable cable for the end application • Yield Strength of the end cap fasteners is A4-80 • Equipment must be placed in an area where there is low risk of mechanical damage
Conditions of manufacture	<ul style="list-style-type: none"> • None.
Conditions of Certification	<ul style="list-style-type: none"> • This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate. • As per ARP 0108 a maximum three yearly review is required on this IA Certificate (expiry is determined as per the QAR/QAN/QMS expiry date). • The apparatus must be additionally marked with the MASC marking details above. • This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date. • The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by the certificate on which this IA Certificate is based and any other conditions in this IA Certificate. • The certification on which this IA Certificate is based must remain valid. • The extent of the requirements in the ARP 0108 (or regulations), SANS 10108 and any other applicable regulations on the certification of the equipment must remain unchanged. • The Ex-quality assurance notification/report for the equipment must remain valid.
Conclusion:	<ul style="list-style-type: none"> • From the above and the selective examination of the documentation, nothing contrary to the requirements of the applicable standards was found, provided that the equipment / component is used as described in the above document / certificate and according to the MASC conditions below. A MASC IA certificate is issued based on the work done as per the Base Certificate **. • The routine tests for production units according to the Base Certificate ** must be complied with (if applicable).

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

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).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practices.

This document may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing body.
This document will not be supported by MASC for certification purposes outside the borders of South Africa.

Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
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IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX EXV 20.0017X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2023-07-11)
Date of Issue:	2023-11-28		Issue 1 (2022-02-08)
Applicant:	Axis Ex AB Gränden 1 Lund 223 69 Sweden		Issue 0 (2021-07-23)
Equipment:	Fixed Types F31, F33, PTZ Types P21, P23 series		
Optional accessory:			
Type of Protection:	Flameproof 'db' Enclosure 'tb'		
Marking:	Ex db I Mb		
	Ex db IIC T6 - T4 Gb		
	Ex tb IIIC T85°C -T135°C Db		
	Tamb -40°C to +60°C (Model F31111 only)		
	Tamb -60°C to +60°C (All other models)		

Approved for issue on behalf of the IECEx
Certification Body:

Sean Clarke CEng MSc FIET

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX EXV 20.0017X**

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Date of issue: 2023-11-28

Issue No: 3

Manufacturer: **Axis Ex AB**
Gränden 1
Lund 223 69
Sweden

Manufacturing
locations: **Axis Ex AB**
Gränden 1
Lund 223 69
Sweden

Axis Ex AB
Maskinvägen 1
Lund 227 30
Sweden

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/EXV/ExTR20.0036/00](#)
[GB/EXV/ExTR23.0099/00](#)

[GB/EXV/ExTR22.0010/00](#)

[GB/EXV/ExTR22.0046/00](#)

Quality Assessment Reports:

[GB/EXV/QAR21.0005/00](#)

[GB/EXV/QAR21.0005/01](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX EXV 20.0017X**

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Date of issue: 2023-11-28

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Axis Ex Series Fixed Types F31, F33, PTZ Types P21, P23 series Camera Station systems comprise fixed (static) camera stations and motorised pan-tilt-zoom (PTZ) camera stations allowing up to 360° viewing depending on mounting arrangement and location.

The camera stations are designed to allow either high definition colour image generation or the use of infrared commonly used in night vision or thermal measurement applications.

Image transmission from the camera stations is achieved via various media including ethernet, coaxial or fibre optics which is also the media that contains operator input to camera functionality, for example positioning or zoom functions.

Each camera station is designed specifically for use in harsh and hazardous environments and uses 316L stainless steel and toughened glass as core materials. The IR variants utilise Germanium with a guard for impact protection.

The static camera variants consist of one flame-proof enclosure whilst the PTZ versions consist of three interlinking flame-proof enclosures allowing full positioning mobility.

The equipment has been separately tested against the requirements of IEC 60529 and it meets IP66/IP67/IP68 (1.5 m / 30 min).

Type Structure for Axis Ex flameproof products

TYPE: AAABCDE

Letter:

AAA (Enclosure)	Comment	B (Battery)	Comment	C (Amb. Temp)	Comment	D (Power)	Comment	E (T-code)	Comment
P21	PTZ	0 or blank	No battery	0 or blank	-60°C to +60°C	0 or blank	• 100-240 VAC => Max. 150 W *	6	T6
P23	PTZ - Thermal	1	With battery	1	-40°C to +60°C	1	• 100-240 VAC => Max. 56 W • POE 802.3bt Type 3 => Max 56 W	5 or blank	T5
F31	Fixed			2	-20°C to +60°C	2	• POE 802.3bt Type 3 => Max 56 W	4	T4
F33	PTZ - Thermal								

Note: * Original certified Type 31 supports both 100 - 240 VAC and POE 802.3bt Type 3 => Max 56 W.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Special Conditions for Safe Use

- Flameproof joints are not to be modified
- Cable temperature can exceed 60°C – select suitable cable for the end application
- Yield Strength of the end cap fasteners is A4-80
- Equipment must be placed in an area where there is low risk of mechanical damage



IECEX Certificate of Conformity

Certificate No.: **IECEX EXV 20.0017X**

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Date of issue: 2023-11-28

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Minor updates to schedule drawings.
- Addition of model code to designate Temperature Classification or "T-code".
- Minor alteration to electrical ratings information.

Annex:

[IECEX Certificate Annex Issue 3_1.pdf](#)

Description Continued:

N/A

Routine Tests:

1. The enclosures must be subjected to a routine overpressure test in accordance with clause 16.1 of IEC 60079-1 at 23.67 Bar min for a period of at least 10s.

Manufacturer's documents:

Title:	Drawing No.:	Rev	Sheets	Date:
Certification Drawing	EX-001	005	1 to 5	25/09/2020
*Certification Drawing (P21)	2889424	M1	1 to 3	10/10/2023
*Certification Drawing (F31)	2660373	M3	1 to 2	11/10/2023
Certification Drawing critical cross section and volume (F31111)	DOCID-1032280532-221	2.0	10 & 13	02/06/2023
*General marking drawing – Axis Ex Types P21, P23, F31, F31111 and F33x	DOCID-1032280532-219	4.0	2 to 4	03/11/2023
Installation Manual IM001	2820140	3.0	4, 5, 6, 8, 11 to 15, 19	12/05/2023

*Note: An * is included before the title of documents that are new or revised.*