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 S/21-8152X	**Issue**	2	
Issue Date	13 November 2025	**Expiry Date**	13 November 2028	
**** Based on Certificate No**	IECEx BVS 17.0029X	**Issue / Variations / Amendment**	3	
Requested by	**Pepperl+Fuchs (Pty) Ltd** Zerwick Forum, 8 Glen Eagle Office Park Cnr Monument Rd and Braambos St, Glen Erasmia, Kempton Park 1619, South Africa			
Manufacturer	**Pepperl+Fuchs SE** Lilienthalstrasse 200, 68307 Mannheim, Germany			
Description	The Thin Client Unit / Personal Computer Unit is connected to the Display Unit via a plug and socket construction. The construction fulfills the requirements of type of protection Increased Safety “eb” and Intrinsic Safety “ib” resp. Protection by enclosure “tb”. The supply of the TCU / CPU coming from the PSU is realized by a cable entry which is separately certified for this purpose. This leads in the terminal compartment of the TCU / CPU which fulfils the requirements of type of protection Increased Safety "e". See Base Certificate** for full description.			
Equipment	Remote Monitor resp. Personal Computer	**Type**	See subject and type in ”General product information” of Base Certificate**	
MARKING: **Original marking as per certificate ** remains applicable.** **IA number must be added.**	**Type:** **Ex Marking:**	Remote Monitor resp. Personal Computer * see ”Subject and Type” in ”General product information” of Base Certificate** **Type **-GXP1100-*****-*-*****-**-X** Ex eb q ib [ib] IIC T4 Gb Ex tb [ib] IIIC T85°C Db **Type **-GXP1200-*****-*-*****-**-X** Ex ec q [ib] IIC T4 Gc Ex tc [ib] IIIC T85°C Dc		
	IA Number: **Warnings:**	MASC S/21-8152X (To be additionally marked on equipment) See Base Certificate ** (original marking must be applied)		
Quality Assurance report (QAR) / Notification (QAN):	HR/FIDI/QAR24.0001/01			

Compliance:

The equipment as described above has been allocated the rating Explosion Protected ‘as above’ utilizing the SANS/IEC Standards:

- SANS (IEC) 60079-0: 2019 Equipment - General requirements
- SANS (IEC) 60079-5: 2016 Equipment protection by powder filling “q”
- SANS (IEC) 60079-7: 2019 Equipment protection by increased safety "e"
- SANS (IEC) 60079-11: 2012 Equipment protection by intrinsic safety "i"
- SANS (IEC) 60079-31: 2014 Equipment dust ignition protection by enclosure "t"

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.

Special conditions of safe use “X”:

- Refer to Annex A below for more details.

Conditions of manufacture:

- Refer to Annex A below for more details.

S. JORDAAN
TECHNICAL SPECIALIST

N. VILOJEN
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.

Mining And Surface Certification (Pty) Ltd
Unit 5 Lelyta Park, 45 Jurg Avenue, Hennopspark, Ext 87
Centurion 0157

ANNEX A

This document is based on and must be read in conjunction with certificate IECEx BVS 17.0029X.	
Description (According to Base Certificate) **	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variations)."	
Issue	Issue 1: Supplemented for review as per ARP 0108. Issue 2: Supplemented for new IECEx issue.
Standard compliance	See Base Certificate **
Special conditions of safe use ("X")	• The danger of ignition due to propagating brush discharges must be avoided by mounting the apparatus in areas without intensive electro statical charging mechanism. • The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits potential equalization must exist.
Conditions of manufacture	• None.
Conditions of Certification	• 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:	• 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.

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 BVS 17.0029X**

Page 1 of 4

Certificate history:
Issue 2 (2020-12-18)
Issue 1 (2019-03-27)
Issue 0 (2017-04-21)

Status: **Current**

Issue No: 3

Date of Issue: 2025-07-15

Applicant: **Pepperl+Fuchs SE**
Lilienthalstrasse 200
68307 Mannheim
Germany

Equipment: **Remote Monitor resp. Personal Computer * see ”Subject and Type” in ”General product information”**

Optional accessory:

Type of Protection: **Intrinsic safety "i", Dust ignition protection by enclosure "t", Powder filling “q”, Increased safety "e"**

Marking: Type **-GXP1100-*****-*-*****-**-X
Ex eb q ib [ib] IIC T4 Gb
Ex tb [ib] IIIC T85°C Db

Type **-GXP1200-*****-*-*****-**-X
Ex ec q [ib] IIC T4 Gc
Ex tc [ib] IIIC T85°C Dc

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Senior Lead Auditor, Certification Manager and officially recognised expert**

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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 17.0029X**

Date of issue: 2025-07-15 Issue No: 3

Manufacturer: **Pepperl+Fuchs SE**
Lilienthalstrasse 200
68307 Mannheim
Germany

Manufacturing locations:

Pepperl+Fuchs SE
Bussmatten 10-12
77815 Buehl/Baden
Germany

Pepperl+Fuchs Asia Pte. Ltd.
15 Pioneer Turn
Singapore 627577
Singapore

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 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-5:2015 Explosive atmospheres –Part 5: Equipment protection by powder filling “q”
Edition:4.0

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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 Report:

DE/BVS/ExTR17.0032/02

Quality Assessment Report:

HR/FIDI/QAR24.0001/01

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

General product information:

The Remote Monitor type RM-GXP1100-*****-*-*****-**-X resp. Personal Computer type PC-GXP1100-*****-*-*****-**-X consists of the following three equipments:

1) Display unit type DPU1100-J1-*****-**-**-X acc. to BVS 16 ATEX E 084 X resp. IECEx BVS 16.0061X.
2) Thin Client Unit type TCU1100-J1-**-**-**-X resp. Personal Computer Unit type PCU1100-J1-**-**-**-X acc. to BVS 16 ATEX E 083 X resp. IECEx BVS 16.0060X.
3) Power supply unit type PSU1100-J1-**-* acc. to BVS 16 ATEX E 098 X resp. IECEx BVS 16.0063X.

The Remote Monitor type RM-GXP1200-*****-*-*****-**-X resp. Personal Computer type PC-GXP1200-*****-*-*****-**-X consists of the following three equipments:

1) Display unit type DPU1200-J2-*****-**-**-X acc. to BVS 16 ATEX E 081 X resp. IECEx BVS 16.0061X.
2) Thin Client Unit type TCU1200-J2-**-**-**-X resp. Personal Computer Unit type PCU1200-J2-**-**-**-X acc. to BVS 16 ATEX E 082 X resp. IECEx BVS 16.0060X.
3) Power supply unit type PSU1200- J2-**-* acc. to BVS 16 ATEX E 097 X resp. IECEx BVS 16.0063X.

The Thin Client Unit / Personal Computer Unit is connected to the Display Unit via a plug and socket construction. The construction fulfills the requirements of type of protection Increased Safety “eb” and Intrinsic Safety “ib” resp. Protection by enclosure “tb”.

The supply of the TCU / CPU coming from the PSU is realized by a cable entry which is separately certified for this purpose. This leads in the terminal compartment of the TCU / CPU which fulfils the requirements of type of protection Increased Safety "e".

Subject and type

See Annex

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The danger of ignition due to propagating brush discharges must be avoided by mounting theapparatus in areas without intensive electrostatical charging mechanism.
2. The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits potential equalization must exist.
3. All Special Conditions for Use must be kept, which are listed in: IECEx BVS 16.0060X, IECEx BVS 16.0061X and IECEx BVS 16.0063X.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Update of the standards from the appropriate certificates
- Extension of the **"Specific Conditions of Use"**
- Update of the parameters
- Update of model code
- Update of Ex marking

Annex:

BVS_17_0029X_Pepperl_Issue3_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 17.0029X **Issue No: 3**

Annex

Subject and type

-GXP1*-*****-*-*****-**-X

Without influence on explosion protection

Housing

NN	no additional enclosure
S*	bezel for mounting into enclosure (*: various sizes)
H1	built into standard system enclosure AG-XX00
H2	built into standard system enclosure AG1
H3	built into standard system enclosure AG1 (Basic-Line pedestal)
XX	other housings without influence on explosion protection

Computing unit

XXXXX	computing unit variants of product family TCU1* or PCU1* according to IECEx BVS 16.0060X (see reference table for Computing unit code)

Power supply

D	24 V DC
A	115/230 V AC according to IECEx BVS 16.0063X

Display

XXXXX	variants of product family DPU1* according to IECEx BVS 16.0061X (see reference table for Display code)

Ex-protection

100	Zone 1/21
200	Zone 2/22

Unit Type

RM	Remote Monitor
PC	Personal Computer

Reference table for Display unit code **-GXP1***-cde-*-*****-**-X

	**-GXP1* IECEx BVS 17.0029X	DPU1*00-J* IECEx BVS 16.0061X	**Description**
Display variants			
c	22F	22F	21.5" (16:9) Full HD display
	19S	19S	19" (5:4) SXGA display
	***	***	For further **display variants** see Display Unit codes in manual and IECEx BVS 16.0061X.
Touch			
d	N	EN	Anti-glare security glass, no touch screen
	C	EC	Anti-glare security glass, projective capacitive multi-touch screen
	*	**	For further **touch variants** see Display Unit codes in manual and IECEx BVS 16.0061X.
Front keys			
e	1	F1	5x capacitive system front keys
	2	F2	5x capacitive system front keys & Bluetooth interface
	3	F3	5x capacitive system front keys & Bluetooth interface & RFID Reader
	*	**	For further **front keys** see Display Unit codes in manual and IECEx BVS 16.0061X.

Reference table for Computing unit model code **-GXP1***-*****-*-ghij-**-X

	**-GXP1* IECEx BVS 17.0029X	*CU1*00-J* IECEx BVS 16.0060X	**Description**
Interfaces			
g	E	ET	1x 1000BASE-T LAN Ex e, 1x USB Ex e, 2x USB Ex i
	S	SX	1x 1000BASE-SX Multi-Mode Fiber Optic Ex, 1x USB Ex e, 2x USB Ex i
	L	LX	1x 1000BASE-LX Single-Mode Fiber Optic Ex, 1x USB Ex e, 2x USB Ex i
	*	**	For further **Interfaces** see Computing Unit codes in manual and IECEx BVS 16.0060X.
Interfaces Module A			
h	N	NN	No additional interface module
	B	BR	1x TTY Ex i for Barcode Reader (PSCAN-D / EX Dragon) and Base station (PSCAN-B)
	1	S1	RS232 Ex e
	2	S2	RS485 Ex e
	3	S3	1x RS232 Ex i for Scanner interface IDM (1D wired) and Base station
	4	S4	1x RS232 Ex i for Scanner interface IDM (2D wired)
	5	S5	1x RS232 Ex i for miscellaneous devices and peripherals
	E	ET	Ethernet module
	*	**	For further **Modules A** see Computing Unit codes in manual and IECEx BVS 16.0060X.
Interfaces Module B			
i	N	NN	No additional interface module
	B	BR	1x TTY Ex i for Barcode Reader (PSCAN-D / EX Dragon) and Base station (PSCAN-B)
	1	S1	RS232 Ex e
	2	S2	RS485 Ex e
	3	S3	1x RS232 Ex i for Scanner interface IDM (1D wired) and Base station
	4	S4	1x RS232 Ex i for Scanner interface IDM (2D wired)
	5	S5	1x RS232 Ex i for miscellaneous devices and peripherals
	E	ET	Ethernet module
	*	**	For further **Modules B** see Computing Unit codes in manual and IECEx BVS 16.0060X.
Computing Platform			
j	XX	XXX	stands for computing platform: options without impact on explosion protection, which can be any number or characters

Parameters

1	Electrical data		
1.1	Input data for the Power Supply Unit		
1.1.1	Type PSU1*00-J*-DC-*:		
	Input	DC	18…36 V, 5.3 A
1.1.2	Type PSU1*00-J*-AC-*:		
	Input	AC	115/230 V, 1.5 A

1.2 Non-intrinsically safe USB interface
Connection terminals X1.5 (VCC), X1.6 (D-), X1.7 (D+), X1.8 (GND)

For electrical data see “Non-intrinsically safe USB interface” in IECEx BVS 16.0060X

1.3 Non-intrinsically safe Ethernet interface with model code "E":
Connection terminals X2.1… X2.8

For electrical data see “Non-intrinsically safe Ethernet interface” in IECEx BVS 16.0060X.

1.4 Only for variants with model code "S": Optical Multi-Mode interface
Laser Class 1 according to IEC 60825-1

1.5 Only for variants with model code “L”: Optical Single-Mode interface
Laser Class 1 according to IEC 60825-1

1.6 Intrinsically safe interface for the connection of an external, passive keyboard or mouse e.g. for connection to the keyboard type EXTA* certified under IECEx BVS 08.0022X.
Connection terminals X3.1 (VCC), X3.2 (D-), X3.3 (D+), X3.4 (GND)

For electrical data see interface in IECEx BVS 16.0060X.

1.7 Intrinsically safe interface for the connection of an external, passive keyboard or mouse e.g. for connection to the keyboard type EXTA* certified under IECEx BVS 08.0022X.
Connection terminals X3.5 (VCC), X3.6 (D-), X3.7 (D+), X3.8 (GND)

For electrical data see interface in IECEx BVS 16.0060X.

1.8 Only for variants with model code "B": Intrinsically safe TTY-interface
Terminal block X4 resp. X5
The apparatus may contain one or two additional modules with an intrinsically safe TTY-interface (Module A, Module B assembled).

For variant **-GXP1***-*****-*-*B***-**-X: TTY-interface at terminal block X4
For variant **-GXP1***-*****-*-**B**-**-X: TTY -interface at terminal block X5
For variant **-GXP1***-*****-*-*BB**-**-X: TTY -interface at terminal block X4 and X5

For electrical data see TTX-interface “model code “BR” in IECEx BVS 16.0060X.

1.9 Only for variants with Computing unit model code „1“:
Non intrinsically safe RS232-interface
terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe RS232-interface.
For variant **-GXP1***-*****-*-*1***-**-X: RS232-interface at terminal block X4
For variant **-GXP1***-*****-*-**1**-**-X: RS232-interface at terminal block X5
For variant **-GXP1***-*****-*-*11**-**-X: RS232-interface at terminal block X4 and X5

For electrical data see interface “model code “S1” in IECEx BVS 16.0060X

1.10 Only for variants with Computing unit model code „2“:
Non-intrinsically safe RS485-interface
Terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe RS485-interface.

For variant **-GXP1***-*****-*-*2***-**-X: RS485-interface at terminal block X4
For variant **-GXP1***-*****-*-**2**-**-X: RS485-interface at terminal block X5
For variant **-GXP1***-*****-*-*22**-**-X: RS485-interface at terminal block X4 and X5

For electrical data see interface “model code “S2” in IECEx BVS 16.0060X.

1.11 Only for variants with Computing unit model code „3“:
Intrinsically safe RS232-interface terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with intrinsically safe RS232-interface.
For variant **-GXP1***-*****-*-*3***-**-X: RS232-interface at terminal block X4
For variant **-GXP1***-*****-*-**3**-**-X: RS232-interface at terminal block X5
For variant **-GXP1***-*****-*-*33**-**-X: RS232-interface at terminal block X4 and X5

For electrical data see interface “model code “S3” in IECEx BVS 16.0060X.

1.12 Only for variants with Computing unit model code „4“:
Intrinsically safe RS232-interface for connection to hand-held scanner type IDM-Z1-260-D-2D-J1* certified under IECEx IBE 18.0008/N1 terminal block X4 resp. X5

The equipment may have one additional module (Module A or Module B) with intrinsically safe RS232-interface.
For variant **-GXP1***-*****-*-*4***-**-X: RS232-interface at terminal block X4
For variant **-GXP1***-*****-*-**4**-**-X: RS232-interface at terminal block X5

For electrical data see interface “model code “S4” in IECEx BVS 16.0060X.

1.13 Only for variants with Computing unit model code „5“:
Intrinsically safe RS232-interface for miscellaneous devices and peripherals
Terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with intrinsically safe RS232-interface.
For variant **-GXP1***-*****-*-*5***-**-X: RS232-interface at terminal block X4
For variant **-GXP1***-*****-*-**5**-**-X: RS232-interface at terminal block X5
For variant **-GXP1***-*****-*-*55**-**-X: RS232-interface at terminal block X4 and X5

For electrical data see interface “model code “S5” in IECEx BVS 16.0060X.

1.14 Only for variants with Computing unit model code “E”:
additional non-intrinsically safe Ethernet-interface
Terminal block X4 resp. X5

The equipment may have one or two additional modules (Module A, Module B) with non-intrinsically safe Ethernet-interface.

For variant **-GXP1***-*****-*-*E***-**-X: Ethernet-interface at terminal block X4
For variant **-GXP1***-*****-*-**E**-**-X: Ethernet-interface at terminal block X5
For variant **-GXP1***-*****-*-*EE**-**-X: Ethernet-interface at terminal block X4 and X5

For electrical data see interface “Only for variants with model code "ET"” in IECEx BVS16.0060X.

1.15 For further interfaces not listed in this certificate see for corresponding interface codes in IECEx BVS 16.0060X and IECEx BVS 16.0061X.

2 Thermal data

Permissible ambient temperature range at the place of installation	-20 °C…+50 °C
Temperature class	T4
Maximum surface temperature T	85 °C