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/26-8145X	**Issue**	0
Issue Date	02 April 2026	**Expiry Date**	02 April 2029
**** Based on Certificate No**	IECEx DEK 17.0021X	**Issue / Variations / Amendment**	0
Requested by	**Beckhoff Automation (Pty) Ltd** 7 Ateljee Street, Randpark Ridge, Randburg		
Manufacturer	**Beckhoff Automation GmbH & Co. KG** Hülsthorstweg 20, 33415 Verl, Germany		
Description	Embedded PC Series CX9020 for use in I/O and Fieldbus systems. See Base Certificate** Annex for the type code, the ambient temperature range and the temperature class of the modules that shall be taken from Table 1. The electrical data of the supply and the input and output circuits shall be taken from Table 1.		
Equipment	Embedded PC	**Type**	CX9020
MARKING: **Original marking as per certificate ** remains applicable.** **IA number must be added.**	**Type:** **Ex Marking:** **IA Number:** **Warnings:**	Embedded PC Series CX9020 Ex nA IIC T4 Gc and Ex tc IIIC T135 °C Dc MASC S/26-8145X (To be additionally marked on equipment) See Base Certificate ** (original marking must be applied)	
Quality Assurance report (QAR) / Notification (QAN):	DE/BVS/QAR16.0010/10		

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) 60079-15: 2010 Equipment protection by type of protection "n"
- 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.

Specific conditions of 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).

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 DEK 17.0021X.	
Description (According to Base Certificate) **	
"Refer to description in Base Certificate ** (and any applicable schedules/issues/variations)."	
Standard compliance	See Base Certificate ******
Specific conditions of use ("X")	*For Ex nA:* • The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1. • The equipment shall be installed in a suitable enclosure providing a degree of protection of at least IP54 according to IEC 60079-15, taking into account the environmental conditions under which the equipment is used. • Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V. *For Ex t:* • The equipment shall be installed in a suitable enclosure providing a degree of protection of IP54 according to IEC 60079-31 for group IIIA or IIIB and IP6X according to IEC 60079-31 for Group IIIC, taking into account the environmental conditions under which the equipment is used.
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: 2018 / NCoP 2398: 2022 (as applicable) 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 0108:2018 / NCoP 2398: 2022 (as applicable), 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).

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 DEK 17.0021X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2017-05-08

Applicant: **Beckhoff Automation GmbH & Co. KG**
Hülsthorstweg 20
33415 Verl
Germany

Equipment: **Embedded PC Series CX9020**

Optional accessory:

Type of Protection: **Ex nA and Ex tc**

Marking: Ex nA IIC T4 Gc and
Ex tc IIIC T135 °C Dc

Approved for issue on behalf of the IECEx Certification Body: **R. Schuller**

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:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

IECEx Certificate of Conformity

Manufacturer: **Beckhoff Automation GmbH & Co. KG**
Hülsthorstweg 20
33415 Verl
Germany

Manufacturing locations:

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 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

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 Report:

NL/DEK/ExTR16.0086/01

Quality Assessment Report:

DE/BVS/QAR16.0010/00

IECEx Certificate of Conformity

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

Embedded PC Series CX9020 for use in I/O and Fieldbus systems.

The type code, the ambient temperature range and the temperature class of the modules shall be taken from Table 1, see Annex.

Electrical data
The electrical data of the supply and the input and output circuits shall be taken from Table 1, see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:
For Ex nA:
The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

The equipment shall be installed in a suitable enclosure providing a degree of protection of at least IP54 according to IEC 60079-15, taking into account the environmental conditions under which the equipment is used.

Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 119 V.

For Ex t:
The equipment shall be installed in a suitable enclosure providing a degree of protection of IP54 according to IEC 60079-31 for group IIIA or IIIB and IP6X according to IEC 60079-31 for Group IIIC, taking into account the environmental conditions under which the equipment is used.

Annex:

DEK 17.0021X - issue 0 - ExTR16.0086-01.pdf

Annex 1 to Certificate of Conformity IECEx DEK 17.0021X, issue 0 / Testreport NL/DEK/ExTR16.0086/01

Table 1

Description	Type/MLFB No.	Temp. code	Ambient Range	Technical Data	Supply Volt.
CX9020 | Basic CPU module	CX9020-xxxx	T4	-25...+60°C	----	24Vdc
i.MX535 1GHz 1024MB Emb.-CPU CX9020	CX9020.3-V1	T4	-25...+60°C	----	----
Backplane + Netzteil CX9020	CX9320.2-V1	T4	-25...+60°C	----	----
Power supply	CX2125.3	T4	-25...+60°C	----	24Vdc
Batteriehalter CX2020, CX9020	CX2325.0	T4	-25...+60°C	----	----
2x Eth. 4x USB 1x DVI Interface CX9020	CX9220.1	T4	-25...+60°C	----	----
Optional interfaces	CX9020-xxxx	T4	-25...+60°C	----	----
Accessories	CX9020-U900	T4	-25...+60°C	----	----
Optional interfaces					
audio interface	CX9020-N020	T4	-25...+60°C	----	----
RS232 interface, D-sub plug, 9-pin	CX9020-N030	T4	-25...+60°C	----	----
RS485 interface, D-sub socket, 9-pin	CX9020-N031	T4	-25...+60°C	----	----
PROFIBUS master, D-sub socket,9-pin	CX9020-M310	T4	-25...+60°C	----	----
PROFIBUS slave, D-sub socket,9-pin	CX9020-B310	T4	-25...+60°C	----	----
CANopen master, D-sub plug, 9-pin	CX9020-M510	T4	-25...+60°C	----	----
CANopen slave, D-sub plug, 9-pin	CX9020-B510	T4	-25...+60°C	----	----
PROFINET RT, controller interface, Ethernet (2 x RJ45)	CX9020-M930	T4	-25...+60°C	----	----
PROFINET RT, device, Ethernet (2x RJ 45 switch)	CX9020-B930	T4	-25...+60°C	----	----
EtherNet/IP slave, Ethernet (2 x RJ 45 switch)	CX9020-B950	T4	-25...+60°C	----	----
Accessories					
internal, capacitive 1-second UPS to ensure secure backup of persistent application data on the microSD card	CX9020-U900	T4	-25...+60°C	----	----