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 SIR 13.0089X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2020-05-06) Issue 2 (2018-05-04) Issue 1 (2014-02-21) Issue 0 (2013-10-03)
Date of Issue:	2022-02-10		

Applicant: **Phoenix Contact GmbH & Co.KG**
FlachsmarktstraBe
32825 Blomberg
Germany

Equipment: **FB-4SP/B, 4 Spur Coupler Module, FB-6SP, 6 Spur Coupler Module, FB-8SP, 8 Spur Coupler Module, FB-10SP, 10 Spur Coupler Module and FB -12SP, 12 Spur Coupler Module**

Optional accessory:

Type of Protection: **Intrinsically Safe FISCO (ic) and Type nA**

Marking:
Ex nA [nL] IIC T4 Gc
Ex nA [ic] IIC T4 Gc
Ex ic IIC T4 Gc FISCO ic
Ta = -50°C to +90°C

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**

Position: **Certification Manager**

Signature:
(for printed version)

Date:

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:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

IECEx Certificate of Conformity

Manufacturer: **Phoenix Contact Development and Manufacturing Inc**
586 Fulling Mill Road
Middletown
Pennsylvania 17057
United States of America

Additional 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 60079-0:2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11:2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15:2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-15:2005-03 Edition:3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus

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/SIR/ExTR13.0274/00 GB/SIR/ExTR14.0041/00 GB/SIR/ExTR18.0072/00
GB/SIR/ExTR20.0094/00 GB/SIR/ExTR22.0012/00

Quality Assessment Report:

NL/DEK/QAR11.0012/04

IECEx Certificate of Conformity

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

The fieldbus device couplers are suitable for FOUNDATION Fieldbus™ and Profibus PA. They provide an interface between the fieldbus trunk cable and field devices. The block coupler module connects to the trunk utilizing a T-Connector terminal block with pre-installed terminator, ensuring termination is always available and error free.
The device is rail-mounted and the circuit is contained inside a plastic case, with exposed terminals. An additional outer enclosure is required to achieve the requirement of IP54.
Refer to the Annexe for additional information

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to the Annexe

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This issue, Issue 4, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Update of two transistors.
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed 6 was replaced by IEC 60079-0:2017 Ed 7.

Annex:

IECEx SIR 13.0089X Annexe Issue 4.pdf

Annexe to: **IECEx SIR 13.0089X Issue 4 Annexe**

Applicant: **Phoenix Contact GmbH and Co, KG**

Apparatus: **FB-6SP, 6-Spur Coupler Module**
FB-8SP, 8 Spur Coupler Module
FB-12SP, 12-Spur Coupler Module

The FB-4SP/B, FB-6SP, FB-8SP, FB-10SP and FB-12SP modules may be used in the following configurations.

1) Use in a FISCO ic system

The certification code is Ex ic IIC T4 Gc

The system is current limited by the FISCO supply and live working on the trunk and spurs is permitted.

2) Use in a non-FISCO system with entity spurs

The certification code is Ex nA [nL] IIC T4 Gc or Ex nA [ic] IIC T4 Gc

The FB-4SP/B, FB-6SP, FB-8SP, FB-10SP and FB-12SP are powered from a supply with an output that is voltage-limited in accordance with IEC 60079-11 or 60079-15:2005. There is no requirement for the supply to have current limitation. The input voltage depends on whether the FB-6SP and FB-12SP modules are being used in a IIB or a IIC system:

	IIB	IIC
Ui	32 Vdc	24 Vdc

The maximum source inductance that may be connected to the input (trunk) connection is 20 mH.

The FB-4SP/B, FB-6SP, FB-8SP, FB-10SP and FB-12SP provide current limitation, and live working on the spurs is permitted. The spur outputs have the following entity parameters:

	IIB	IIC
Uo	Ui	Ui
Io	0.056 A	0.056 A
Po	Uo x Io	Uo x Io
Ci	0	0
Co	80 nF	80 nF
Li	0	0
Lo	0.26 mH	0.26 mH

The spurs shall be installed as separate intrinsically safe circuits.

3) Use in non-FISCO ic system to create FISCO ic spurs

The certification code is Ex nA [ic] IIC T4 Gc.

The FB-4SP/B, FB-6SP, FB-8SP, FB-10SP and FB-12SP and is powered from a supply with an output that is voltage-limited in accordance with IEC 60079-11 to a maximum of 17.5 V. There is no requirement for the supply to have current limitation.

The maximum source inductance that may be connected to the input (trunk) connection is 20 mH.

The FB-4SP/B, FB-6SP, FB-8SP, FB-10SP and FB-12SP and provides current limitation such that the spurs are FISCO ic compliant and live working is permitted.

The spurs shall be installed as separate intrinsically safe circuits.

CSA Group Testing UK Ltd.
Unit 6 Hawarden Industrial Park,
Hawarden Deeside CH5 3US, UK.

Specific Conditions of Use

1. If the module is installed in a zone 2 hazardous area, it shall be housed in an enclosure that is coded Ex nA, Ex e, Ex d or Ex p. If the module is installed in a zone 22 or zone 21 hazardous area, it shall be housed in an enclosure that is coded Ex tD or Ex t. For some types of enclosure, additional certification will be required to permit the installation of the module within the enclosure. Reference should be made to the enclosure certificate. The installer shall ensure that the maximum ambient temperature of the module when installed is not exceeded.
2. If the module is installed in a non-hazardous area, the enclosure or location shall provide suitable protection. This may either be by the use of an outer enclosure approved for use in zone 2 or 22 or otherwise meeting the following requirements:
    - Non-metallic enclosures must be capable of withstanding the thermal endurance requirements of IEC 60079-0, prior to impact and IP 54 testing.
    - Any enclosure must be capable of withstanding an impact of 7J or the module otherwise protected from impact.
    - The enclosure or location must provide an ingress protection of at least IP 54.
    - If exposed to sunlight, non-metallic enclosures must be capable of meeting the resistance to light requirements of IEC 60079-0.
3. When the module is mounted in a zoned area, connection and disconnection of the trunk terminal while live is only permitted if the potentially explosive atmosphere is shown to be absent

Full certificate change history

Issue 1 – this Issue introduced the following changes:

1. The products were allowed to be used with IIC gases, whilst their design is relatively unchanged, the content of the certificate has been modified to recognise that:
    - The marking has been changed.
    - The product description now differentiates between IIC (Ui = 24 Vdc) and IIB (Ui = 32 Vdc) applications (the connection to the input terminals was increased from 8.4 mH to 20 mH for both IIC and IIB), new entity parameters were also included.
    - A Condition of Certification was amended to show that the new value for the connection to the input terminals.

    Because the content of Issue 1 has changed considerably, the reader should refer to Issue 0 to review the previous usage of these products.

Issue 2 – this Issue introduced the following changes:

1. Recognition of Phoenix Contact Development and Manufacturing Inc. at Middletown Pennsylvania as the Manufacturing site.
2. Introduction of the following new models, the description was amended accordingly:
    - FB-4SP/B, 4 Spur Coupler Module
    - FB-8SP, 8 Spur Coupler Module
    - FB-10SP, 10 Spur Coupler Module

Issue 3 – this Issue introduced the following change:

1. Replacement of safety critical diode due to obsolescence of part.

CSA Group Testing UK Ltd.
Unit 6 Hawarden Industrial Park,
Hawarden Deeside CH5 3US, UK.

Issue 4 – this Issue introduced the following changes:

1. Update of two transistors.
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed 6 was replaced by IEC 60079-0:2017 Ed 7.

CSA Group Testing UK Ltd.
Unit 6 Hawarden Industrial Park,
Hawarden Deeside CH5 3US, UK.