DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

[2] **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**

[3] EC-Type Examination Certificate Number: **DNV 14 ATEX 4192X** Rev. 1

[4] Equipment or Protective System: **BAF3A, BXF3S, and BXFMS Ethernet Couplers**

[5] Applicant – Manufacturer or Authorized representative: **Solexy USA, LLC**

[6] Address: **10178 International Blvd.**
Cincinnati, Ohio, 45246
USA

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential reports listed in section 14.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2012, EN 60079-1:2007, EN 60079-11:2012, and EN 60079-18:2009

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.

[12] The marking of the equipment or protective system shall include the following:

BAF3S	**I (M1)**	**[Ex ia Ma] I**	**BXF3S & BXFMS**	**I M2 (M1)**	**Ex d mb [ia Ma] I Mb**
	II (1) G	**[Ex ia Ga] IIC**		**II 2 (1) G**	**Ex d mb [ia Ga] IIC T5 Gb**
	II (1) D	**[Ex ia Da] IIIC**		**II 2 (1) D**	**Ex mb [ia Da] IIIC T100°C Db**

Høvik, 2014-11-06
for Det Norske Veritas AS

Asle Kaastad
Certification Manager

NORSK AKKREDITERING
PROD 021

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The digitally signed and electronically distributed document is the original and valid certificate. Ref.: **www.dnv.com/digitalsignatures**

[13] # Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV 14 ATEX 4192X Rev. 1

Certificate History

Revision	Description	Report no.	Issue date
-	Original certificate	2013-3399 Rev 1	2014-04-30
1	Add Models BXF3S and BXFMS. Add Solexy Italy as a manufacturing location.	2013-3399 Rev 2	2014-11-06

[15] **Description of Equipment or Protective System**

The Solexy BAF3A, BXF3S and BXFMS Ethernet Couplers are an integrated protection device that facilitates Ethernet cabling installation in hazardous areas making the signal intrinsically safe. The coupler incorporates limiting circuitry which protects the field cabling from voltages and currents high enough to cause a spark ignition.

The BAF3A circuit is completely encapsulated and is housed in an aluminum (T6061) enclosure. The BAF3A itself is installed in a non-hazardous area, with only the energy limited Ethernet wiring entering the hazardous area for connection to another Ethernet coupler unit located elsewhere.

The BXF3S and BXFMS circuit is also completely encapsulated and is housed in a 303 Stainless Steel enclosure. The BXF3S and BXFMS are installed in a threaded entry of a suitable enclosure utilizing one of the protection types listed in Clause 1 of EN 60079-0. As with the BAF3A, the BXF3S and BXFMS provide energy limited Ethernet wiring into the hazardous area for connection to another Ethernet coupler unit located elsewhere.

Type Identification

BAF3A******
BXF3S******
BXFMS*****

Electrical Data

Um = 250 V
Uo = 3.4 V
Io = 701 mA
Co = 100 µF
Lo = 85 µH

Ambient Temperature Limits

-20°C to +60°C

EC-TYPE EXAMINATION CERTIFICATE No.: DNV 14 ATEX 4192X Rev. 1

[16] Project No.: PRJC-251407-2010-PRC-USA

Descriptive Documents

Number	Title	Rev.	Date
DA00100	Assembly, Model BXFMS Explosion Proof Ethernet Coupler (ATEX)	7	2014-07-29
DA00101	Assembly, Model BXF3S Explosion Proof Ethernet Coupler (ATEX)	7	2014-07-29
DA00105	Assembly, Model BAF3A Intrinsically Safe Ethernet Coupler - ATEX	8	2014-07-29
DC00057	Control Drawing – BXF Explosion-Proof Ethernet Coupler (ATEX)	6	2014-09-19
DC00060	Control Drawing – BAF Intrinsically Safe Ethernet Coupler (ATEX)	8	2014-09-19
DD00056	Dimensional Drawing BXF and BAF - ATEX	7	2014-07-29
DE00142	PCBs for BXF/BAF Ethernet Coupler - ATEX	6	2014-07-29
DM00046	Product Markings, BXF3S Explosion-Proof Ethernet Coupler (ATEX)	7	2014-11-05
DM00047	Product Markings, BXFMS Explosion-Proof Ethernet Coupler (ATEX)	7	2014-11-05
DM00048	Product Markings, BAF3A Intrinsically Safe Ethernet Coupler (ATEX)	8	2014-09-19
DS00079	Schematic, EA00160 BXF/BAF Main PCB Assy	4	2013-03-05
DS00080	Schematic, EA00161 BXF/BAF Diode PCB Assy	2	2013-03-05
EA00160	BOM PCB Assembly BXF/BAF Main Board	6	2011-01-05
EA00161	BOM PCB Assembly BXF/BAF Diode Board	4	2011-01-05

[17] Special Conditions for Safe Use

All Ethernet Coupler Models:

1. Because the Ethernet coupler limitation circuitry is referenced to earth/case, it does not meet the dielectric strength requirement specified in Clause 6.3.13 of EN 60079-11. This must be considered during installation.
2. Installation of the Ethernet couplers shall be in accordance with the control drawing specified on the product label.

Model BAF3A Only:

3. The Model BAF3A is an associated apparatus and shall only be installed in a non-hazardous location.

Model BXF3S and BXFMS Only:

4. The free end of the cemented bushing and its associated integral cable shall be protected by a suitable enclosure utilizing one of the protection types listed in Clause 1 of EN 60079-0. The protection type utilized shall be applicable to the specific area of use (i.e. Gas or Dust).

5. *For EPL Ma Only*: In accordance with Clause 26.4.2 of EN 60079-0, the BXF3S and BXFMS have been tested corresponding to a low risk of mechanical danger for Group I hazardous locations. This must be considered during installation.

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.:	IECEx DNV 14.0024X	Issue No: 0	Certificate history: Issue No. 0 (2014-11-06)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2014-11-06**		

Applicant:
Solexy USA, LLC
10178 International Blvd.
Cincinnati, Ohio, 45246
United States of America

Electrical Apparatus: **Ethernet Couplers**
Optional accessory:

Type of Protection: **Ex d, Ex mb, and [Ex ia]**

Marking:

BAF3S	[Ex ia Ma] I [Ex ia Ga] IIC [Ex ia Da] IIIC	**BXF3S & BXFMS**	Ex d mb [ia Ma] I Mb Ex d mb [ia Ga] IIC T5 Gb Ex mb [ia Da] IIIC T100°C Db

Approved for issue on behalf of the IECEx Certification Body: Asle Kaastad

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 the Official IECEx Website.

Certificate issued by:

DNV
Det Norske Veritas AS
Veritasveien 1
1322 Hovik
Norway

IECEx Certificate of Conformity

Certificate No:	IECEx DNV 14.0024X	Issue No: 0
Date of Issue:	**2014-11-06**	Page 2 of 3

Manufacturer:

Solexy USA, LLC
10178 International Blvd.
Cincinnati, Ohio, 45246
United States of America

Additional Manufacturing location(s):

Solexy SRL
via Enrico Fermi, 2
2015 Desenzano del Garda (BS)
Italy

Solexy SRL
via Enrico Fermi, 2
25015 Desenzano del Garda (BS)
Italy

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 electrical apparatus 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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2009 Edition:3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"

*This Certificate **does not** indicate compliance with electrical 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:

HR/EXA/ExTR14.0004/00 NO/DNV/ExTR14.0017/00

Quality Assessment Report:

HR/EXA/QAR14.0001/00 NO/DNV/QAR14.0007/00

IECEx Certificate of Conformity

Certificate No:	IECEx DNV 14.0024X	Issue No: 0
Date of Issue:	**2014-11-06**	Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Solexy BAF3A, BXF3S and BXFMS Ethernet Couplers are an integrated protection device that facilitates Ethernet cabling installation in hazardous areas making the signal intrinsically safe. The coupler incorporates limiting circuitry which protects the field cabling from voltages and currents high enough to cause a spark ignition.

The BAF3A circuit is completely encapsulated and is housed in an aluminum (T6061) enclosure. The BAF3A itself is installed in a non-hazardous area, with only the energy limited Ethernet wiring entering the hazardous area for connection to another Ethernet coupler unit located elsewhere.

The BXF3S and BXFMS circuit is also completely encapsulated and is housed in a 303 Stainless Steel enclosure. The BXF3S and BXFMS are installed in a threaded entry of a suitable enclosure utilizing one of the protection types listed in Clause 1 of IEC 60079-0. As with the BAF3A, the BXF3S and BXFMS provide energy limited Ethernet wiring into the hazardous area for connection to another Ethernet coupler unit located elsewhere.

Rated Ambient Range: -20 ° C to +60 ° C

CONDITIONS OF CERTIFICATION: YES as shown below:

All Ethernet Coupler Models:

1) Because the Ethernet coupler limitation circuitry is referenced to earth/case, it does not meet the dielectric strength requirement specified in Clause 6.3.13 of IEC 60079-11. This must be considered during installation.

2) Installation of the Ethernet couplers shall be in accordance with the control drawing specified on the product label.

Model BAF3A Only:

3) The Model BAF3A is an associated apparatus and shall only be installed in a non-hazardous location.

Model BXF3S and BXFMS Only:

4) The free end of the cemented bushing and its associated integral cable shall be protected by a suitable enclosure utilizing one of the protection types listed in Clause 1 of IEC 60079-0. The protection type utilized shall be applicable to the specific area of use (i.e. Gas or Dust).

5) For EPL Ma Only: In accordance with Clause 26.4.2 of IEC 60079-0, the BXF3S and BXFMS have been tested corresponding to a low risk of mechanical danger for Group I hazardous locations. This must be considered during installation.