



# 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](http://www.iecex.com)

Certificate No.: IECEx MSC 19.0001X

Issue No: 0

Certificate history:

Issue No. 0 (2019-02-11)

Status: **Current**

Page 1 of 4

Date of Issue: **2019-02-11**

Applicant: **Solexy Srl**  
Via Enrico Fermi, 2  
I-25015 Desenzano del Garda (BS)  
**Italy**

Equipment: **Antenna Couplers RX and SX Series**

Optional accessory:

Type of Protection: **Flameproof "db", Intrinsic safety "ia", Encapsulation "m" and protection by enclosure "tb"**

Marking:

Ex db mb [ia Ma] I Mb

Ex db mb [ia Ga] IIA/IIB/IIC T5....T6 Gb

Ex mb tb [ia Da] IIIC T80°....T100°C Db

Um = 250Vdc or 250 Vac 50 – 60 Hz

Approved for issue on behalf of the IECEx  
Certification Body:

Geoff Slater

  
(G. BROWNING - ACTING MANAGER)

Position:

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](http://www.iecex.com).

Certificate issued by:

MSTC Mine Safety Technology Centre  
8 Hartley Drive  
Thornton NSW 2322  
PO Box 343  
Australia



Planning &  
Environment



# IECEX Certificate of Conformity

Certificate No: IECEx MSC 19.0001X

Issue No: 0

Date of Issue: 2019-02-11

Page 2 of 4

Manufacturer: **Solexy Srl**  
Via Enrico Fermi, 2  
I-25115 Desenzano del Garda (BS)  
Italy

Additional Manufacturing location(s):

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 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:

<b>IEC 60079-0 : 2017</b> Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-18 : 2017</b> Edition:4.1	Explosive atmospheres - Part 18: Protection by encapsulation "m"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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:

[AU/MS/ExTR19.0001/00](#)

[CA/QPS/ExTR18.0018/01](#)

### Quality Assessment Report:

[GB/ITS/QAR17.0007/00](#)



# IECEX Certificate of Conformity

Certificate No: IECEx MSC 19.0001X

Issue No: 0

Date of Issue: 2019-02-11

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Solexy Antenna Coupler RX and SX series permits the installation of non-Ex certified radio antenna in hazardous area.

The Antenna Couplers are designed to be installed and threaded onto a flameproof enclosure and acts as a capacitive coupling between an RF transmitter/receiver that is installed in an approved enclosure and a passive antenna installed outside the enclosure directly connected to the antenna coupler or through cable.

The Antenna Couplers can be installed in safe area and connected to an antenna that it is installed in hazardous area.

The Antenna Coupler function is to blocks DC signal and provides very high impedance to low frequency AC signals; the Antenna Coupler output provides an intrinsically safe output for the connected passive antenna and blocks any unsafe energy from reaching the antenna under fault conditions.

The Antenna Coupler is available with a surge protection option, model SX series, and the standard RX antenna coupler series is also available with an isolated ground configuration.

The standard RX series antenna coupler and the SX series antenna coupler are available in different RF options of connection, as summarised in the attached Annex product nomenclature.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Solexy RX and SX series antenna couplers must be connected to an RF source with a minimum internal impedance of 50  $\Omega$
2. It is considered inappropriate to provide conventional IS parameters for this equipment. For connection to external antenna, refer to the Instruction and Operating Manual for clarification of the antenna requirements and calculation of the RF power
3. Solexy RX and SX series antenna coupler does not provide any RF power limitation. The threshold power must be limited by the user in order to achieve the levels defined in IEC/EN 60079-0 Table 5
4. Equipment marked with an ambient temperature of  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}/+85^{\circ}\text{C}$  is limited to a max RF input of 2 W.

### Routine test:

Each piece of "m" equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening.



# IECEX Certificate of Conformity

Certificate No: IECEx MSC 19.0001X

Issue No: 0

Date of Issue: 2019-02-11

Page 4 of 4

**Additional information:**

Refer to the attached Annex.

**Annex:**

[Annex of IECEx MSC 19.0001-00 .pdf](#)



# IECEX Certificate of Conformity Annex

Annex for Certificate No.: IECEx MSC 19.0001X

Issue No: 00

### Model Nomenclature:

Standard RX Model	Isolated Ground Option	RF Connection
RXN	RX1	N Female
RXF	N/A	RP-SMA Female
RXS	N/A	SMA Female
RXT	RX2	TNC Female
RXB	RX3	BNC Female

SX Model	Isolated Ground Option	RF Connection
SXN	N/A	N Female
SXF	N/A	RP-SMA Female
SXS	N/A	SMA Female
SXT	N/A	TNC Female
SXB	N/A	BNC Female

### Technical data:

Maximum input voltage	250 Vdc / 250 Vac 50-60Hz
Maximum input frequency	6 Ghz
Minimum Internal Impedance of RF transmitter	50 $\Omega$

Ambient Temperature Range		
Gas	Dust	Ta
T5	100°C	-40°C to +80°C (When max RF input = 6W)
		-40°C to +85°C (When max RF input = 2W)
T6	80°C	-40°C to +65°C (When max RF input = 6W)
		-40°C to +70°C (When max RF input = 2W)

Equipment Group	Threshold Power Pth (W)	Threshold Power Pth (dbm)
Group I / IIA / III	6	37.7
Group IIB	3.5	35.4
Group IIC	2	33.0

Maximum RF input power	
6 W (37.7 dbm)	when ta=-40°C to +80°C
	when ta=-40°C to +65°C
2W (33 dbm)	when ta=-40°C to +85°C
	when ta=-40°C to +70°C

Certificate issued by:



Planning &  
Environment

Mine Safety Technology Centre



## IECEX Certificate of Conformity Annex

**Annex for Certificate No.: IECEx MSC 19.0001X**

**Issue No: 00**

<b>RX</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>XX</b>	<b>XX</b>	<b>X</b>	<b>XX</b>	<b>-</b>	<b>XXXXX</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>		<b>8</b>

1	Series	F	RP-SMA
		S	SMA Female
		N	N Female
		B	BNC Female
		T	TNC Female
		1	N Female Isolated Ground
		2	TNC Female Isolated Ground
		3	BNC Female Isolated Ground
2	Thread	M	M25x1.5
		3	3/4" NPT-m
3	Material	S	AISI 303
		C	AISI 316
		L	AISI 316L
4	Coaxial cable type / Radio Connector	xx	2 digit for coax connector and cable type
5	Cable length	xx	2 digits for coax cable length (inches) 00 for double connector execution (no cable)
6	Version	x	1 digit for version
7	Standard Reference	xx	2 digits for certification marking
		X0	European - IECEx
		N0	North American (USA & CANADA)
8	Special Execution	XXXXX	Up to 5 digits for special execution in terms of marking, labelling, instruction, packaging, etc.

<b>SX</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>XX</b>	<b>XX</b>	<b>X</b>	<b>XX</b>	<b>-</b>	<b>XXXXX</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>		<b>8</b>

1	Series	F	RP-SMA
		S	SMA Female
		N	N Female
		B	BNC Female
		T	TNC Female
2	Thread	M	M25x1.5
		3	3/4" NPT-m
3	Material	S	AISI 303
		C	AISI 316
		L	AISI 316L
4	Coaxial cable type / Radio Connector	xx	2 digit for coax connector and cable type
5	Cable length	xx	2 digits for coax cable length (inches) 00 for double connector execution (no cable)
6	Version	x	1 digit for version
7	Standard Reference	xx	2 digits for certification marking
		X0	European - IECEx
		N0	North American (USA & CANADA)
8	Special Execution	XXXXX	Up to 5 digits for special execution in terms of marking, labelling, instruction, packaging, etc.

Certificate issued by:

 <b>NSW</b> GOVERNMENT	<b>Planning &amp; Environment</b>	<h3 style="margin: 0;">Mine Safety Technology Centre</h3>
------------------------------	---------------------------------------	---



# IECEX Certificate of Conformity Annex

Annex for Certificate No.: IECEx MSC 19.0001X

Issue No: 00

### Manufacturer's documents pertaining to issue 0 of this certificate:

Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date: YYYY/MM/DD
RX Series Assembly 1/4-36 ATEX/IECEX	DDAD-0006-S	00	2018 /09/10
RX Series Assembly 5/8-24 ATEX/IECEX	DDAD-0007-S	00	2018 /09/10
RX Series Assembly 5/8-24 Isolate Ground ATEX/IECEX	DDAD-0011-S	00	2018 /09/10
Control Drawing RX series ATEX/IECEX	DDCD-0006-S	00	2018 /09/10
Control Drawing SX series ATEX/IECEX	DDCD-0008-S	00	2018 /09/10
Compound Thickness RX series 5/8-24	DDDD-0001-0	00	2018 /09/10
Compound Thickness RX series 1/4-36	DDDD-0002-0	00	2018 /09/10
Compound Thickness SX series 5/8-24	DDDD-0003-0	00	2018 /09/10
Compound Thickness SX series 1/4-36	DDDD-0004-0	00	2018 /09/10
Housing RX Series M25x1.5 – 1/4-36	DDDM-0007-S	00	2018 /09/10
Housing RX Series M25x1.5 – 5/8-24	DDDM-0008-S	00	2018 /09/10
Housing RX Series 3/4-14 NPT – 1/4-36	DDDM-0009-S	00	2018 /09/10
Housing RX Series 3/4-14 NPT – 5/8-24	DDDM-0010-S	00	2018 /09/10
Product Marking RX Series ATEX/IECEX	DDMD-0009-S	00	2018 /09/10
Product Marking SX Series ATEX/IECEX	DDMD-0012-S	00	2018 /09/10
Schematic RX Series	DDSD-0003-S	00	2018 /09/10
Schematic RX Series Isolate Ground	DDSD-0004-S	00	2018 /09/10
Schematic SX Series Surge Resistance	DDSD-0005-S	00	2018 /09/10
PCB RX Series	PE010-0041	00	2018 /09/10
PCB RX and SX Series	PE010-0041	01	2018 /09/17
PCB RX Series Isolate Ground	PE010-0043	00	2018 /09/10
BOM RX Assembly (3 Sheets)	TDBM-0003	00	2018 /10/15
BOM SX Assembly (3 Sheets)	TDBM-0004	00	2018 /10/15
BOM RX Isolate Ground Assembly (3 Sheets)	TDBM-0005	00	2018 /10/15

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

Reference documents			
Title:	Drawing No:	Rev. Level:	Date:
RX Installation & Operation Manual	IM0005	00	-----
SX Installation & Operation Manual	IM0006	00	-----

Certificate issued by:

 NSW GOVERNMENT	Planning & Environment	<h2>Mine Safety Technology Centre</h2>
---	---------------------------	--