



# 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 BVS 19.0040X Issue No: 0 Certificate history:  
Issue No. 0 (2019-07-05)

Status: **Current**

Date of Issue: **2019-07-05** Page 1 of 3

Applicant: **steute Technologies GmbH & Co. KG**  
Brückenstraße 91  
32584 Löhne  
Germany

Equipment: **Wireless position switch and Wireless universal transmitter types EX RF 96 \* SW\*\*\* and  
EX RF 96 ST SW\*\*\***

*Optional accessory:*

Type of Protection: **Intrinsic Safety "I"**

Marking: Ex ib IIC T4 Gb Ex ib IIIC T135°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

Jörg Koch

Position:

Head of Certification Body

Signature:  
(for printed version)

Date:



5.7.19

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:

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



**DEKRA**  
On the safe side.



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Manufacturer: **steute Technologies GmbH & Co. KG**  
Brückenstraße 91  
32584 Löhne  
**Germany**

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:

**IEC 60079-0 : 2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

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

*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:

[DE/BVS/ExTR19.0042/00](#)

Quality Assessment Report:

[DE/BVS/QAR06.0023/11](#)



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## Schedule

### EQUIPMENT:

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

### Subject and Type

See Annex

### General product information:

The wireless position switches are used for position determination and act as limit switches. The first star "\*" in the type designation is replaced by a sequence of letters - describes the type of actuator.

The wireless universal transmitters type Ex RF 96 ST \* SW\*\*\* are used to connect external certified sensors via a plug-in connection. The external wireless inductive sensor type Ex RF IS M\*\* nb-ST Xm, for example, can be connected to the device via an M12x1 plug connection.

Separately certified sensors can also be connected via this M12x1 plug-in connection. The electrical supply is provided by a battery type Ex RF Bat 3.6V/+, \* AH which has been separately tested for intrinsic safety. The battery may be changed within the Ex-area.

### Parameters

See Annex

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

- 1 For use in potentially explosive gas atmospheres, the wireless position switch and the wireless universal transmitter must be set up in such a way that dangerous electrostatic charging is not to be expected.
- 2 For use in dust explosion hazardous areas, the wireless position switch and the wireless universal transmitter must be set up in such a way that sliding handle bush charges are not to be expected.
- 3 The wireless inductive sensors type Ex RF IS M\*\* nb-ST Xm are to be included in the equipotential bonding via installation in a metal holder.
- 4 The external sensors must be included in the equipotential bonding.

### Annex:

[BVS\\_19\\_0040X\\_steute\\_Annex.pdf](#)



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**Annex**  
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## Subject and Type

Wireless position switch type EX RF 96 \* SW\*\*\*

EX RF 96 \*1) SW\*\*\*2)

### Star      Explanation

- 1      Mechanical actuation  
W      = Plunger with collar  
R      = Roller plunger  
RL     = Long roller plunger  
WH     = Roller lever  
WHLM = Long roller level metal  
WHKM = Rocking roller lever collar metal  
WPH   = Parallel roller lever  
WPHM = Parallel roller lever metal  
D      = Roller lever  
DL     = Long roller lever  
DD     = Wire lever  
DF     = Spring lever  
DS     = Adjustable-length roller lever  
TL     = Long spring rod  
TF     = Spring rod with rounded steel tip  
TK     = Spring rod with plastic rod  
SB     = Hinge activity  
ST     = Plug-in connection M12x1 for connecting external inductive sensors

- 2      868-transmission frequency 868 MHz  
915-transmission frequency 915 MHz  
  
Wireless universal transmitter type EX RF 96 ST SW\*\*\*  
  
EX RF 96 ST SW\*\*\*1)  
  
ST      = plug-in connection M12x1 or connecting external inductive sensors

### Star      Explanation

- 1      868-transmission frequency 868 MHz  
915-transmission frequency 915 MHz  
  
Wireless inductive sensor  
  
Type EX RF IS M \*\*1) nb-ST \*2)m

### Star      Explanation

- 1      M12      = size 12  
M18      = size 18  
M30      = size 30  
  
2      Cable length in meter max. length 10 m for using with Wireless universal transmitter  
type EX RF 96 ST SW\*\*\*.

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**Annex**  
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## Parameters

1	Wireless position switch			
1.1	Supply circuit from the battery type EX RF Bat 3.6V/*,* Ah			
	Nominal voltage	$U_n =$	3.6	VDC
	Open circuit voltage	$U_o =$	3.9	VDC
	Maximum output current	$I_o =$	0.12	ADC
	Maximum output power	$P_o =$	0.099	W
1.2	Transmission frequency			
	Type SW868	$f =$	863 up to 870	MHz
	Type SW915	$f =$	902 up to 928	MHz
1.3	Transmission power			
	Nominal transmission power	$P_{Nenn} =$	20	mW
	Max. transmission power (ib)	$P_{ma} =$	140	mW
1.4	Ambient temperature range			-20 °C up to +60 °C
2	Wireless universal transmitter			
2.1	Supply circuit from the battery type Typ EX RF Bat 3.6V/*,* Ah			
	Nominal voltage	$U_n =$	3.6	VDC
	Open circuit voltage	$U_o =$	3.9	VDC
	Maximum output current	$I_o =$	0.12	ADC
	Maximum output power	$P_o =$	0.099	W
2.2	Transmission frequency			
	Type SW868	$f =$	863 up to 870	MHz
	Type SW915	$f =$	902 up to 928	MHz
2.3	Transmission power			
	Nominal transmission power	$P_{Nenn} =$	20	mW
	Max. transmission power (ib)	$P_{max} =$	140	mW
2.4	Output over the M12 Connector to external sensors			
	Open circuit voltage	$U_o =$	3.9	VDC
	Maximum output current	$I_o =$	0.12	ADC
	Maximum output power	$P_o =$	0.099	W from battery
	Maximum external capacitance	$C_o =$	200	uF
	Maximum external inductance	$L_o =$	1.9	mH
2.5	Ambient temperature range			-20 °C up to +60 °C
3	Wireless inductive sensor type EX RF IS M** nb-ST Xm			
3.1	Input values			
	Max. Input voltage	$U_i =$	3.9	VDC
	Max. Input current	$I_i =$	0.12	ADC
	Max. Input power	$P_i =$	0.099	W
	Maximum internal effective inductance	$L_i =$	0.9	mH
	Maximum internal effective capacitance	$C_i =$	1.5	uF
3.2	Ambient temperature range			-20 °C up to +60 °C