



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 EPS 18.0030X

Issue No: 0

Certificate history:

Issue No. 0 (2018-05-09)

Status: Current

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Date of Issue: 2018-05-09

Applicant: **Balluff GmbH**
Schurwaldstraße 9, 73765 Neuhausen a.d.F.
Germany

Equipment: Inductive Proximity Switch Type: BES M**MF2-PSC***-BV**-EXE, BES M**EG2-PSC**B-B***-EXF

Optional accessory:

Type of Protection: increased safety "ec"; enclosure "tc"

Marking:

Ex ec IIC T6 Gc

Ex tc IIIC T70 °C Dc

Ex tc IIIC T75 °C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Holger Schaffer

Position:

Certification Manager

Signature:
(for printed version)

Date:

2018-05-09



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:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany





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Manufacturer: **Balluff GmbH**
Schurwaldstraße 9
73765 Neuhausen a. d. F.
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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

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/EPS/ExTR18.0032/00](#)

Quality Assessment Report:

[DE/PTB/QAR07.0009/06](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The inductive proximity switches series BES M**MF2-PSC***-BV**-EXE and BES M**EG2-PSC**B-B***-EXF are used in industrial control processes as non-cotakt, wear-free limit switches. They are installed within hazardous areas of Zone 2 and Zone 22. If additional design-related installation instructions exist, they must be observed (see user manual)

BES M**MF2-PSC***-BV**-EXE

Ex ec IIC T6 Gc

Ex tc IIIC T70 °C Dc

BES M**EG2-PSC**B-B***-EXF

Ex ec IIC T6 Gc

Ex tc IIIC T75 °C Dc

BES M**MF2-PSC***-BV**-EXE:

BES M12MF2-PSC20B-BV02-EXE, BES M12MF2-PSC40F-BV02-EXE, BES M18MF2-PSC50B-BV02-EXE,

BES M18MF2-PSC80F-BV02-EXE, BES M30MF2-PSC10B-BV02-EXE, BES M30MF2-PSC15F-BV02-EXE

BES M**EG2-PSC**B-B***-EXF:

BES M12EG2-PSC20B-BV02-EXF, BES M18EG2-PSC50B-BV02-EXF, BES M30EG2-PSC10B-BV02-EXF,

BES M12EG2-PSC20B-BS02-EXF, BES M18EG2-PSC50B-BS02-EXF, BES M30EG2-PSC10B-BS02-EXF

BES M**MF2-PSCxx-BVyy-EXE (PUR-cable)

BES M**EG2-PSCxx-BVyy-EXF (PUR-cable) BES M**EG2-PSCxx-BSyy-EXF (Silicon-cable)

x may be any digit (0-9) and stands for operating distance, not safety relevant

y may be any digit (0-9) and stands for the cable length, not safety relevant

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall be protected from impacts with high impact energy
- The equipment shall be protected from excessive UV light emission
- For installation in Group III dust areas: When using types with a plastic surface greater than 500 mm², installation of the equipment must ensure that no electrostatic charging of the non-metallic parts of the housing can occur. Refer to installation instructions.

Annex:

[IECEX EPS 18.0030X 2018-05-09.pdf](#)



Annex to Certificate
IECEX EPS 18.0030X Issue No.: 0



Applicant: Balluff GmbH
Schurwaldstr.9
73765 Neuhausen a.d.F.
Germany

Electrical Apparatus: Inductive Proximity Switch

Type: BES M**MF2-PSC***-BV**-EXE
BES M**EG2-PSC**B-B***-EXF

Description of equipment (continue):

Permissible range of ambient temperature in the temperature classes:

For the use in areas where the Equipment Protection Level Gc is required, the following values result:

BES M**MF2-PSC***-BV**-EXE (Design M12, M18, M30)

T6 $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T5 $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T4 $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T3 $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

BES M**EG2-PSC***-BV**-EXF (Design M12)

T6 $-5^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T5 $-5^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T4 $-5^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T3 $-5^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

BES M**EG2-PSC***-BV**-EXF (Design M18)

T6 $-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T5 $-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T4 $-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
T3 $-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$



BES MEG2-PSC***-BV**-EXF (Design M30)**

T6 -20 °C ≤ Ta ≤ +60 °C
T5 -20 °C ≤ Ta ≤ +60 °C
T4 -20 °C ≤ Ta ≤ +60 °C
T3 -20 °C ≤ Ta ≤ +60 °C

BES MEG2-PSC***-BS**-EXF (Design M12, M18, M30)**

T6 -20 °C ≤ Ta ≤ +60 °C
T5 -20 °C ≤ Ta ≤ +60 °C
T4 -20 °C ≤ Ta ≤ +60 °C
T3 -20 °C ≤ Ta ≤ +60 °C

Ambient temperature range for Dc:

BES M**MF2-PSC***-BV**-EXE	(Design M12, M18, M30)	-20 °C ≤ Ta ≤ +60 °C
BES M**EG2-PSC**B-BV**-EXF	(Design M12)	-5 °C ≤ Ta ≤ +60 °C
BES M**EG2-PSC**B-BV**-EXF	(Design M18)	-10 °C ≤ Ta ≤ +60 °C
BES M**EG2-PSC**B-BV**-EXF	(Design M30)	-20 °C ≤ Ta ≤ +60 °C
BES M**EG2-PSC**B-BS**-EXF	(Design M12, M18, M30)	-20 °C ≤ Ta ≤ +60 °C

Electrical data :

Rated voltage : 30 V DC
Rated current : 100 mA DC

Protection level (IEC 60529):

BES M**MF2-PSC***-BV**-EXE : IP67
BES M**EG2-PSC**B-B**-EXF : IP67