



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 BVS 13.0015X issue No.: 0 Certificate history:

Status: **Current**

Date of Issue: 2013-02-22 Page 1 of 4

Applicant: **ifm electronic GmbH**
Friedrichstrasse 1
45128 Essen
Germany

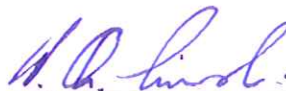
Electrical Apparatus: **Capacitive proximity sensor KG5079**
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment with equipment protection level (EPL) Ga**

Marking: **Ex ia IIB T4 Ga**
Ex ia IIIC T135°C Da

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature: 
(for printed version)

Date: 22/2/2013

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 EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany



DEKRA
DEKRA EXAM GmbH



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Manufacturer: **ifm electronic GmbH**
ifm-Strasse 1
88069 Tettnang
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 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 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

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/ExTR13.0025/00](#)

Quality Assessment Report:

[DE/BVS/QAR06.0010/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Subject and Type

Capacitive proximity sensor type KG5079

Description

The capacitive proximity sensor type KG5079 is an intrinsically safe apparatus used for the detection of non-metallic objects. It is supplied via a permanently connected cable.

CONDITIONS OF CERTIFICATION: YES as shown below:

For use in zone 0, the sensor and its permanently connected cable have to be installed in such way that intensive electrostatic charging can be excluded.



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EQUIPMENT(continued):

Parameters

1. Electrical parameters

Max. input voltage	U_i	DC	15	V
Max. input current	I_i		50	mA
Max. input power	P_i		120	mW
Min. internal resistance	R_i		218	Ω
Effective internal inductance	L_i		3.4	mH
Effective internal capacitance	C_i		0.7	μF

The aforementioned values L_i and C_i are valid for cable lengths up to 6 m.

For longer cables, the following values have to be additionally regarded:

Capacitance per unit length		160	pF/m
Inductance per unit length		0.6	$\mu H/m$

2. Ambient temperature range T_a -20 °C up to 60 °C