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 ZLM 14.0006X	Issue No: 0	Certificate history: Issue No. 0 (2015-10-16)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2015-10-16**		
Applicant:	**JAQUET Technology Group Ltd.** Thannerstrasse 15 CH-4009 Basel **Switzerland**		
Electrical Apparatus:	**Rotation speed sensor type FTG 1088... Ex**		
Optional accessory:			
Type of Protection:	**Intrinsic Safety**		
Marking:	Ex ia IIC T6 Ga Ex ia IIIC T...°C Da		

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Harald Zelm

Position: Head of Certification Body

Signature:
(for printed version)

Date: 2015-10-16

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:

ZELM Explosionsschutz GmbH
Siekgraben 56
D-38124 Braunschweig
Germany

ZELM ex

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Manufacturer:	**JAQUET Technology Group Ltd.** Thannerstrasse 15 CH-4009 Basel **Switzerland**	
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"

*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/ZLM/ExTR14.0006/00

Quality Assessment Report:

DE/ZLM/QAR13.0002/01

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The rotation speed sensors type FTG 1088... Ex are used for the contactless measuring of the rotation speed of ferromagnetic pole wheels, gears, camshafts and the like.

Refer to Annex for details.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to Annex for details.

Annex:

IECExZLM14.0006X_Annex.pdf

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The minimum ambient temperature is for all versions and applications -20°C.

The maximum ambient temperature depends on the temperature class resp. the maximum surface temperature and the maximal permissible input power (Pi) and is shown in the following tables:

For group IIC atmospheres:

	Maximum ambient temperature in °C for the temperature class					
P_i [mW]	T1	T2	T3	T4	T5	T6
510	100	100	100	100	69	54
200	100	100	100	100	80	65

For group IIIC atmospheres:

P_i [mW]	Maximum ambient temperature	Maximum surface temperature
510	100 °C	135 °C
200	100 °C	125 °C

Electrical data

Supply and signal circuit

Type of Protection Intrinsic Safety Ex ia IIC resp. IIB resp. IIIC
only for the connection to certified intrinsically safe circuits

maximum values:

U_i = 10 V
I_i = 204 mA
P_i = 510 mW resp. 200 mW

Maximum effective internal capacitance C_i = 8 nF
The maximum effective internal inductance is negligibly small.

The above-stated values consider a maximum cable length of 5 m. For cables exceeding a length of 5 m, the cable must be considered additionally with the values C = 240 pF/m and L = 1.5 µH/m.

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Reference for the use of the equipment

1. The rotation speed sensors may be used only in intrinsically safe electric circuits in accordance with the information in this IECEx Certificate of Conformity. Because of possible ignition hazards, which can arise due to mistakes and/or transient currents in the potential equalization system galvanic separation is to be favored in the supply and signal circuit. Associated apparatus without galvanic separation may be used only if the corresponding requirements are kept according to IEC 60079-14.

2. The permissible ambient temperature range is to be determined according to the determination of this IECEx Certificate of Conformity.

3. The versions with plug adapter resp. with single laces are only intended for mounting in an appropriate enclosure, which assures an adequate protection corresponding to the environmental conditions and allows the proper electric connection. The supply cable of the corresponding version is to protect against mechanical hazards and against electrostatic charge where appropriate by correct installation.

4. The metal case of the rotation speed sensors is to be included in the local potential equalization as far as dangerous electrostatic charge for example through flowing media or mechanical friction must be reckoned on.

5. The tightness for the purposes of zone separating measures for the mounting across the boundary between different zones is not subject of this certification and must be ensured by appropriate measures of installation.

6. The instruction manual has to be considered.

7. The equipment shall be installed in a way that the free surface of the casting compound is protected from mechanical impacts. This can be achieved by installing the sensor into a wall of an enclosure with a degree of protection IP20 in a way that the connection side ensures a degree of protection IP20 or if the installation ensures in another suitable way, that mechanical impacts on the surface of the casting compound or the edge of the sensor enclosure are not possible.

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