



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 KTL 14.0005X Issue No: 0 Certificate history:
Issue No. 0 (2015-03-09)

Status: **Current** Page 1 of 3

Date of Issue: **2015-03-09**

Applicant: **KSB Seil Co., Ltd.**
76, Noksansaneopbuk-ro 313beon-gil, Gangseo-gu, Busan
Korea, Republic of

Electrical Apparatus: **Valve Position Indicator Model FIMM series**
Optional accessory:

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

Marking:

- ◆Ex ia IIC T5 Ga
- ◆Ambient Temperature Range: $-20\text{ °C} \leq T_a \leq +70\text{ °C}$
- ◆Electrical parameters
- <FIMM-A HEAD>
- Power & Output(Plug 1: Pin1-Pin3): $U_i = 30\text{ V}$, $I_i = 100\text{ mA}$, $P_i = 0.75\text{ W}$, $C_i = 0$, $L_i = 18.1\mu\text{H}$
- <FIMM-D HEAD>
- Power (Plug 1: Pin1-Pin3): $U_i = 30\text{ V}$, $I_i = 100\text{ mA}$, $P_i = 0.75\text{ W}$, $C_i = 0$, $L_i = 18.1\mu\text{H}$
- Photomos Relay Output (Plug 2: Pin6-Pin4/Pin5): $U_i = 30\text{ V}$, $I_i = 100\text{ mA}$, $P_i = 0.75\text{ W}$, $C_i = 0$, $L_i = 9.1\mu\text{H}$

Approved for issue on behalf of the IECEx
Certification Body:

Kang Ho-Woo

Position:

Certification Manager

Signature:
(for printed version)

Date:

2015-03-09

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:

Korea Testing Laboratory
87, Digital-ro, 26-gil, Guro-gu
Seoul
Korea, Republic of





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Manufacturer: **KSB Seil Co., Ltd.**
76, Noksansaneopbuk-ro 313beon-gil, Gangseo-gu, Busan
Korea, Republic of

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 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:5

IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"
Edition:5

*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:

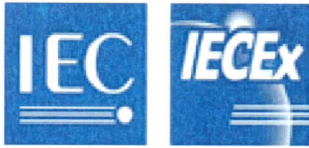
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[KR/KTL/ExTR14.0005/00](#)

Quality Assessment Report:

[NO/DNV/QAR15.0002/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Model FIMM-A/D Valve Position Indicators are intrinsically safe equipments that are applied in hazardous area, which are designed to indicate the position of hydraulically operated actuator by measuring the actual quantity of oil flowing to or from the actuator.

Each of the indicators contains electronic components on a single printed circuit board, housed in the enclosure which consists of an aluminum alloy body, a stainless middle plate and a non-metallic cover with a display window. All the electronic components except LCD on the board are encapsulated with silicon in the enclosure body. Plugs and sockets are used for external connections of the indicator.

The energy supplied to the indicator is limited by certified intrinsically safe power supplies (barriers).

The indicator has an ambient temperature range of -20 °C to +70 °C.

<Model code description>

FIMM-a HEAD b

a=Product type: A-4~20mA Current Loop, D-Photomos Relay Output

b=Approval: E-IECEx certified Ex ia IIC T5 Ga

For the detailed information, refer to the instruction manual.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. WARNING-POTENTIAL ELECTROSTATIC CHARGING HAZARD-SEE INSTRUCTIONS.

The non-metallic parts incorporated in the enclosure of the equipment may generate an ignition capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions can result in the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.

2. The enclosure is made of aluminium and is considered to present a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.