



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx EPS 17.0088X**

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Certificate history:

Status: **Current**

Issue No: 3

Issue 2 (2021-04-26)

Issue 1 (2020-08-18)

Issue 0 (2018-07-23)

Date of Issue: **2023-09-13**

Applicant: **Tissin Co., Ltd.**
201-1105, No 397, Seokcheon-ro, Ojeong-gu
Bucheon-si, Gyeonggi-do, Korea 14449
Korea, Republic of

Equipment: **TS800 TS805 Series Smart Valve Positioner**

Optional accessory:

Type of Protection: **intrinsic safety "i"**

Marking: **Ex ia IIC T5/T6 Ga**
Ex ia IIIC T112°C/T92°C Da IP66

Approved for issue on behalf of the IECEx
Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)



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Certificate issued by:

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





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Manufacturing
locations: **Tissin Co., Ltd.**
201-1105, No 397, Seokcheon-ro,
Ojeong-gu
Bucheon-si, Gyeonggi-do, Korea
14449
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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 equipment 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 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/ExTR17.0087/03

Quality Assessment Report:

DE/EPS/QAR18.0004/05



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The electropneumatic positioners TS800/TS805 control the position of linear or rotary valves according to the input signal 4 - 20 mA DC. The output signal is a pneumatic pressure – single or double acting - regulated by an inductive actuator, called torque motor. The supply pressure is 0.14 to 0.7 MPa. The pressure unit is a compact block built in into the housing of the positioner with air supply and air output connectors on the side of the housing.

The electronic circuit supplied by the analogue supply and signal current 4 - 20 mA works digitally supported by a microprocessor. The microprocessor serves for many additional tasks as Auto Calibration or PID-control. The position is measured by a single turn potentiometer. The device can be manually parameterized and adjusted by push buttons when the cover is removed. As an option the supply current can be superimposed by the digital HART- signal to communicate with a control unit.

As another option the feedback of the valve position (PTM) is possible via the current output signal 4 - 20 mA. The feedback signal is galvanically isolated from the supply circuit.

The status information can be displayed by a LCD-Display. The axis of the limit switches and the indicator is driven by a gear connected with the potentiometer.

Type TS805 has stainless steel enclosure.

Type TS820 has an external measuring potentiometer in an own housing.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The enclosure made of aluminum alloy is considered to present a potential risk of ignition by impact or friction. Particularly, care must be taken during installation and use to prevent impact or friction for applications that specifically require EPL Ga equipment.

If the enclosures of the equipment incorporates the non-metallic parts which may generate an ignition capable level of electrostatic charge, the equipment shall be installed in a location where the external conditions cannot result in the build-up of electrostatic charge on such surfaces. For example, the equipment shall be installed in the location protected from direct airflow causing a charge transfer. Additionally, the equipment shall only be cleaned with a damp cloth and caution should be used when being handled.

Do not open when an explosive atmosphere is present.

The equipment shall not be opened for installation, repair or overhaul in hazardous area. The use shall consult the manufacturer if there is any problem during the usage.

T5 / T112°C: -40 °C to +60 °C

T6 / T92°C: -40 °C to +40 °C



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Rev. 3: Change of EPL to Ga, Da.

Annex:

[IECEx EPS 17.0088X_3 - Annex.pdf](#)



Annex to IECEX Certificate of Conformity

IECEX EPS 17.0088X – Issue No.: 3



Applicant:

Tissin Co., Ltd.
201-1105, No 397, Seokcheon-ro, Ojeong-gu
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Republic of Korea

Electrical Apparatus:

TS800 TS805 Series Smart Valve Positioner

Description:

Electrical data:

For the main circuit and the option PTM, Alarm 1, Alarm 2, Limit Switches "Dry Contact".
Maximum values:

U_i = 28 V
I_i = 101 mA
P_i = 707 mW
Linear characteristic

C_i = 0.6 nF differentially between the lines or 2.2 nF against ground
L_i = 6 µH
The circuit is galvanically isolated against earth and against each other.

For the option Limit switches "Proximity".
Maximum values:

U_i = 16 V
I_i = 26 mA
P_i = 34 mW
Linear characteristic

C_i = 30 nF differentially between the lines or 2.2 nF against ground
L_i = 50 µH
The circuit is galvanically isolated against earth and the other circuits.