



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 23.0105X**

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Certificate history:

Status: **Current**

Issue No: 1

Issue 0 (2024-01-29)

Date of Issue: 2024-06-12

Applicant: **TISSIN Co., Ltd.**
201-1105, No397, Seokcheon-ro
Bucheon-si, Gyeonggi-do, Korea
Korea, Republic of

Equipment: **Smart Position Transmitter TS510/TS515 and Limit switch box TS410/TS415**

Optional accessory:

Type of Protection: **db, tb**

Marking: Ex db IIC T5/T6 Gb
Ex tb IIIC T100°C/T85°C Db IP67

Approved for issue on behalf of the IECEx
Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)



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 www.iecex.com or use of this QR Code.



Certificate issued by:

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





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Manufacturer: **TISSIN Co., Ltd.**
201-1105, No397, Seokcheon-ro
Bucheon-si, Gyeonggi-do, Korea
Korea, Republic of

Manufacturing
locations:

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 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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/ExTR23.0105/01](#)

Quality Assessment Report:

[DE/EPS/QAR18.0004/06](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Limit switch box TS410 (aluminium) and TS415 (stainless steel) is a device that notifies the open/closed state of the valve to the central control room or controller through ON/OFF electrical signals.

Smart position transmitter TS510 (aluminium) and TS515 (stainless steel) is a device that proportionally changes the valve opening into a 4-20 mA DC current signal and transmits this information to DCS room or controller.

The -40 °C aluminium housing models TS410 and TS510 must be subjected to routine overpressure batch testing.

Electrical data:

Model		TS410M	TS415M	
Switch type		Mechanical (2xSPDT)		
		KW3A-16Z3B-A200 (Dongnan)		
Switch specification	AC	16 A,125/250 V		
	DC	30 V,10 A		
Model		TS410P	TS415P	
Switch type		Inductive Proximity Sensor		
		PSN17-5DNU (Autonics)	NJ2-V3-N (P&F)	NBB2-V3-Z4 (P&F)
Switch type	DC	10~30 V	8.2 V	5~60 V
Model		TS410D	TS415D	
Switch type		Mechanical Switch(2*DPDT)		
		DZ-10GV-1B (Omron)		
Switch specification	AC	10 A, 125/250 V		
	DC	250 V 0.25 A, 125 V 0.5 A, 30 V 10 A		

SPECIFIC CONDITIONS OF USE: YES as shown below:

A repair of flameproof joints is only allowed according to manufacturer values.

The dome cover must be protected from electrostatic charge hazard.

Ambient temperature range:

TS410/TS415:

with NBR gasket: -30 °C to +80 °C (T5, T100 °C) or -30 °C to +70 °C (T6, T85 °C)

with silicone gasket: -40 °C to +80 °C (T5, T100 °C) or -40 °C to +70 °C (T6, T85 °C)

TS510/510:

with silicone gasket: -40 °C to +80 °C (T5, T100 °C) or -40 °C to +70 °C (T6, T85 °C)



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Equipment (continued):

Model	TS510	TS515
Connection type	2-Wire	
Supply voltage	9~28 V DC	
Output signal	4~20 mA DC	



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Change of gasket materials