



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 21.0063X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2022-05-20
Applicant: **SHIN HWA ENG Co., LTD.**
242, Cheongneung-daero (Gojan-dong 80B 2L),
Namdong-gu,
Incheon, 21695
Korea, Republic of
Equipment: **Electropneumatic positioner type SP520**
Optional accessory:
Type of Protection: **db, ia, mb, tb**
Marking: Ex db mb IIB/IIC T6/T5 Gb
Ex ia IIC T6/T5 Gb
Ex tb IIIC T80°C/T100°C Db IP66
Ex ia IIIC T80°C/T100°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Position:

Signature:
(for printed version)

Date:
(for printed version)

Ulrich Feike

Certification Manager

2022-05-20



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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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Manufacturing
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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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC
60079-31:2022-01 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/ExTR21.0052/00

Quality Assessment Report:

KR/KTL/QAR19.0009/03



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Electro-Pneumatic valve positioner SP520 series controls the valve stroke in response to an input signal of 4~20mA DC from the control panel, DCS or calibrator. Enclosure fulfils IP66 rating according to IEC/EN 60529. The SP520 is designed in different types of ignition protection: Flameproof enclosure "db" and encapsulated coil type "mb", or Intrinsic safety protection "i". In the case of intrinsic safety, the ignition protection type is "ia" and the equipment protection level EPL is Gb or Db. The unit is suitable for gas group IIC and dust group IIIC. The SP520 contains 3 separate circuit areas: IP module, feedback electronics and limit switch L/S. Each area is galvanically isolated and is supplied by a galvanically isolated intrinsically safe power supply unit or barrier. Non Ex-i variant is constructed by flameproof enclosure junction box and IP66 enclosure incorporating encapsulated coil in type of protection "mb".

Electrical data:

Supply: 4~20mA DC

Intrinsically safe version:

Main power:	Feedback signal power:	Limit switch power:
U _i = 28 V	U _i = 28 V	U _j = 28 V
I _i = 93 mA	I _i = 93 mA	I _i = 100 mA
P _i = 650 mW	P _i = 650 mW	P _i = 650 mW
C _i = 0.5 nF	C _i = 57.5 nF	C _i = 0 uF
L _i = 10 uH	L _i = 10 uH	L _i = 0 mH

Ambient conditions:

T5 / T100°C: -20 °C ≤ Ta ≤ +60 °C

T6 / T80°C: -20 °C ≤ Ta ≤ +40 °C

SPECIFIC CONDITIONS OF USE: YES as shown below:

Intrinsic safe version must be supplied by certified power supply.

Do not open the power terminal box cover of the SP520 product in potentially explosive atmosphere.

For Ex-mb type a fuse corresponding to the device's rating current (max. 3 x I_N or, resp. I_B according to IEC/EN 60127-2) shall be used in supply circuit.

Enclosure with viewing window must be protected from high impact energy.

Flameproof type junction box must be equipped with certified Ex-d cable glands. Ex-i and Ex-tb type junction box must be equipped with min. IP64 rated Ex certified cable glands.

The layout uses Annex F of IEC 60079-11. Therefore, the installation environment shall comply with IEC/EN 60664-1 pollution degree 2 requirements.