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 EPS 11.0009X

Issue No: 5

Status: **Current**

Date of Issue: **2019-02-01**

Certificate history:
Issue No. 5 (2019-02-01)
Issue No. 4 (2017-05-31)
Issue No. 3 (2013-10-25)
Issue No. 2 (2012-11-23)
Issue No. 1 (2012-06-13)
Issue No. 0 (2011-11-18)

Applicant: **Rotork YTC Limited**
81, Hwanggeum-ro 89 beon-gil, Yangchon-eup,
Gimpo-si, Gyeonggi-do
Korea, Republic of

Equipment: **Smart Positioner, Type YT-2500/2550/YT-2501, YT-2500+LS(dry-contact, non-contact)/YT-2550+LS(dry-contact, non-contact)**

Optional accessory:

Type of Protection: **intrinsic safety**

Marking:
Ex ia IIC T5/T6 Gb
Ex ia III C T100°C/T85°C Db IP6X

Approved for issue on behalf of the IECEx Certification Body:

Holger Schaffer

Position:

Head of certification

Signature:
(for printed version)

Date:

2019-02-01

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:

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

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Manufacturer: **Rotork YTC Limited**
81, Hwanggeum-ro 89 beon-gil, Yangchon-eup,
Gimpo-si, Gyeonggi-do
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 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/EPS/ExTR11.0011/00 DE/EPS/ExTR11.0011/01 DE/EPS/ExTR11.0011/02
DE/EPS/ExTR11.0011/03 DE/EPS/ExTR11.0011/04 DE/EPS/ExTR11.0011/05

Quality Assessment Report:

DE/EPS/QAR11.0002/08

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The YT-2500/2550/2501 and YT-2500+LS(dry-contact, non-contact)/YT-2550+LS(dry-contact, non-contact) is an electro pneumatic positioner to control linear and rotary valves. The pressure is regulated by a piezo valve and the position of the pneumatic valve is measured by a potentiometer. The YT-2500/2550/2501 and YT-2500+LS(dry-contact, non-contact)/YT-2550+LS(dry-contact, non-contact) has as an option a superimposed HART signal. Additionally the PTM module serves as feedback for the position of the valve. Two optional limit switches (contacts) can be built in. The different intrinsically safe circuits are galvanically isolated against each other and against ground.

(see attachment)

SPECIFIC CONDITIONS OF USE: YES as shown below:

The ambient temperature range deviates from standard temperature range and amounts:

Temperature class T5 / T100°C: -40 °C to +60 °C
Temperature class T6 / T85°C: -40 °C to +40 °C

Impact testing on light transmitting part was carried out with low impact energy. Applications with a high risk of impact or with risk of high impact energies are to be avoided .

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Revision 5: Company name change

Annex:

IECEx EPS 11.0009X_Issue 5 - Annex.pdf

Applicant: Rotork YTC Limited

Apparatus: Smart Positioner, Type YT-2500/2550/2501,
YT-2500+LS(dry-contact, non-contact)/YT-2550+LS
(dry-contact, non-contact)

Electrical data:

Supply circuit (versions YT-2500/2550/2501 and YT-2500+LS(dry-contact, non-contact)/YT-2550+LS(dry-contact, non-contact)) type of protection: Intrinsic Safety Ex ia IIC/IIB;

Maximum values:

Ui = 28 V
Ii = 93 mA
Pi = 651 mW
Linear characteristic
Ci = 0.6 nF differentially between the lines or 2.2 nF against ground
Li = 10 µH

The supply circuit is galvanically isolated against earth.

Option circuits "Limit switches 1 and 2" (only version YT-2500+LS(dry-contact)/ YT-2550+LS(dry-contact)); type of protection Intrinsic Safety Ex ia IIC/IIB maximum values:

Ui = 28 V
Ii = 93 mA
Pi = 651 mW
Linear characteristic
Ci = 0 nF
Li = 0 µH

The limit switch circuits are galvanically isolated against earth. All circuits are galvanically isolated against each other.

The Smart Positioner can also be operated by power supplies with the electrical data as follows.

YT-2500+LS can also be equipped instead of the dry-contact switches with the inductive non-contact switches NJ1,5-F-N, manufactured by Pepperl+Fuchs, certified under PTB 00 ATEX 2032 X, 5. supplement.

Evaluation and supply circuit — type of protection Intrinsic Safety Ex ia IIC/IIB
resp. Ex ib IIC/IIB
only for connection to certified intrinsically safe circuits
Maximum values
Ui = 16 V
Ii = 25 mA
Pi = 34 mW
For the application as category 1 equipment the evaluation and supply circuit must correspond to type of protection intrinsic Safety Ex ia IIC/IIB

Type 1	Type 2	Type 3	Type 4
Ui = 16 V	Ui = 16 V	Ui = 16 V	Ui = 16 V
Ui = 25 mA	Ii = 25 mA	Ii = 52 mA	Ii = 76 mA
Pi = 34 mW	Pi = 64 mW	Pi = 169 mW	Pi = 242 mW

The examination and test results are recorded in the confidential report 10TH0214.

Option circuit "PTM" (versions YT-2500/2550/2501 and YT-2500+LS(dry-contact, non-contact)/YT-2550+LS(dry-contact, non-contact)); type of protection: Intrinsic safety Ex ia IIC/IIB;

Maximum values:

Ui = 28 V
Ii = 93 mA
Pi = 651 mW
Linear characteristic
Ci = 0.6 nF differentially between the lines or 2.2 nF against ground
Li = 10 µH

Type-specific temperature conditions, please refer to the switch certificate.

The PTM circuit is galvanically isolated against earth.

YT-2501
The version YT-2501 equipped with an external potentiometer as position sensor has been added. The isolation voltage is 500 V. Only the original units "Linear Feedback Module" and "Rotary Feedback Module", manufactured by the company Rotork YTC Limited may be connected via the "Cable Connector".

Maximum supply values for the potentiometer:
Uo = 6.51 V
Io = 93 mA
Io_wiper = 6 mA
Po = 0.465 W
Ci = 13 µF
Li = 0 µH
Trapezoidal characteristic