



Certificate of Compliance

Certificate: 70131426

Master Contract: 227951

Project: 80031706

Date Issued: 2020-03-05

Issued To: Rotork YTC Limited
81, Hwanggeum-ro 89 beon-gil
Yangchon-eup
Gimpo-si,, Gyeonggi-do, 10048
South Korea

Attention: Stan Przbylowicz

The products listed below are eligible to bear the CSA Mark shown

Issued by: Jignesh Dabhi
Jignesh Dabhi



PRODUCTS

CLASS - C225804 - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations

Class I, Division 1, Groups A, B, C, and/or D T5/T6

Class I, Division 2, Groups A, B, C, and/or D T5/T6

Class II, Division 1, Groups E, F, and/or G T100°C/T85°C

Class II, Division 2, Groups E, F, and/or G T100°C/T85°C

Class III

Ex ia IIC T5/T6 Ga

Ex tb IIIC T100°C/T85°C Db

Electro-pneumatic smart valve positioners, models YT-33aa 123456789 & RI-33aa 123456789. Rated 30 Vdc max, 100 mA max, Class 2 / SELV. Intrinsically safe or non-incendive field wired when connected per control drawing SKC-8465 for the YT-33aa versions and SKC-8773 for the RI-33aa versions. Ambient temperature



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range $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ (T5) / $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ (T6). Air supply rated 0.14 – 0.7 MPa (1.4 – 7 bar). Non-incendive field wiring parameters and entity parameters per Tables 1 & 2. IP66.

Where:

Complete model number to appear on label of finished product:

aa = Base model type; 00, 01, 02, 03,
or 50

00	=	Standard model
01	=	Remote potentiometer version with MS Connector
02	=	Remote potentiometer version with Junction Box
03	=	Compact version
50	=	Stainless steel version

1 = Mechanical motion type; any alphanumeric character; not critical to certification

2 = Pneumatic action type; any alphanumeric character; not critical to certification

3 = Method of explosion protection:
N - Non-Explosion
A - intrinsically safe and protection by enclosure

4 = Lever type; any number; not critical to certification

5 = Conduit – air connection type:

1 - G 1/2 -Rc 1/4)
2 - (G 1/2 –1/4 NPT)
3 - (G 1/2 – G 1/4)
4 - (M20 – 1/4 NPT)
5 - (1/2 NPT– 1/4 NPT)

6 = Communication; 0 or 2

0	=	None
2	=	HART

7 = Option; 0, 1, 2, 3, 4, or 5; options 2, 3, 4, and 5 not applicable to 3301/3302/3303

0	=	None
1	=	PTM
2	=	Limit switches, mechanical type; N/A to 3301/3302/3303
3	=	Limit switches, proximity type; N/A to 3301/3302/3303
4	=	PTM + limit switches, mechanical type; N/A to 3301/3302/3303
5	=	PTM + limit switches, proximity type; N/A to 3301/3302/3303

8 = For installation in hazardous location :Ambient temperature : T5 or T6



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T5 = $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

T6 = $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$

Or

For installation in non-hazardous location: Ambient temperature: S or L

S = $-30^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$

L = $-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$

9 = Cable length (3301/3302 only); any alphanumeric character; not critical to certification

Table 1: I.S. & Non-incendive field wiring (NIFW) parameters

	Terminal Pairs			
	Power (HART) Positioner input	4-20 mA Transmitter	Limit switch (Mechanical)	Limit switch (Proximity)
V_{\max} (Ui)	28 Vdc	28 Vdc	28 Vdc	16 Vdc
I_{\max} (Ii)	100 mA	93 mA	93 mA	52 mA
Ci	0.5 nF	57.5 nF	N/A	30 nF
Li	10 μH	10 μH	N/A	50 μH

Table 2: Associated apparatus (barrier) entity parameters

	Terminal Pairs			
	Power (HART) Positioner input	4-20 mA Transmitter	Limit switch (Mechanical)	Limit switch (Proximity)
V_{\max} (Ui)	28 Vdc	28 Vdc	28 Vdc	16 Vdc
I_{\max} (Ii)	93 mA	93 mA	93 mA	52 mA
Pi	0.65 W	0.65 W	0.65 W	0.169 W
Ci	0.5 nF	57.5 nF	N/A	30 nF
Li	10 μH	10 μH	N/A	50 μH

Notes:

1. Hazardous area with carbon disulfide is excluded.
2. The equipment must be earth-grounded during installation.
3. The equipment shall be connected to a metallic conduit system or make use of suitably certified cable glands when connected to a cabling system.
4. The product can be used in -40°C to 85°C ambient temperature when used in locations classified as non-hazardous locations.

CLASS 2258 02 – PROCESS CONTROL EQUIPMENT – For Hazardous Locations



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Ex tb IIIC T100°C/T85°C Db

Electro-pneumatic smart valve positioners, models YT-33aa 123456789 & RI-33aa 123456789. Rated 30 Vdc max, 100 mA max, Class 2 / SELV. Ambient temperature range $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ (T5) / $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ (T6). Air supply rated 0.14 – 0.7 MPa (1.4 – 7 bar). IP66.

Where:

Complete model number to appear on label of finished product:

aa = Base model type; 00, 01, 02, 03,
or 50

00	=	Standard model
01	=	Remote potentiometer version with MS Connector
02	=	Remote potentiometer version with Junction Box
03	=	Compact version
50	=	Stainless steel version

1 = Mechanical motion type; any alphanumeric character; not critical to certification

2 = Pneumatic action type; any alphanumeric character; not critical to certification

3 = Method of explosion protection:
N - Non-Explosion
A - intrinsically safe and protection by enclosure

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5 = Conduit – air connection type:
1 - (G 1/2 - Rc 1/4)
2 - (G 1/2 - 1/4 NPT)
3 - (G 1/2 - G 1/4)
4 - (M20 - 1/4 NPT)
5 - (1/2 NPT - 1/4 NPT)

6 = Communication; 0 or 2

0	=	None
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7 = Option; 0, 1, 2, 3, 4, or 5; options 2, 3, 4, and 5 not applicable to 3301/3302/3303

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4	=	PTM + limit switches, mechanical type; N/A to 3301/3302/3303
5	=	PTM + limit switches, proximity type; N/A to 3301/3302/3303



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8 = For installation in hazardous location : Ambient temperature; T5 or T6

T5 = $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

T6 = $-40^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$

Or

For installation in non-hazardous location: Ambient temperature: S or L

S = $-30^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$

L = $-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$

9 = Cable length (3301/3302 only); any alphanumeric character; not critical to certification

Notes:

1. Hazardous area with carbon disulfide is excluded.
2. The equipment must be earth-grounded during installation.
3. The equipment shall be connected to a metallic conduit system or make use of suitably certified cable glands when connected to a cabling system.
4. The product can be used in -40°C to 85°C ambient temperature when used in locations classified as non-hazardous locations.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10 (<i>Reaffirmed 2015</i>)	General requirements – Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 157-92 (<i>Reaffirmed 2012</i>)	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CAN/CSA-C22.2 No. 61010-1-12 (<i>May 2012</i>)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements
CAN/CSA-C22.2 No. 60079-0 (<i>October 2015</i>)	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No. 60079-11 (<i>February 2014</i>)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
CAN/CSA-C22.2 No. 60079-31 (<i>October 2015</i>)	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”
CAN/CSA-C22.2 No. 60529:05 (<i>Reaffirmed 2015</i>)	Degrees of protection provided by enclosures (IP Code)

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.



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Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown without an indicator for Canada only (indicating that products have been manufactured to the requirements of Canadian Standards). The products listed are eligible to bear the CSA Mark shown without an indicator for Canada only (indicating that products have been

manufactured to the requirements of Canadian Standards).

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All Models utilize an aluminum nameplate, approximately 85 mm long, by 43 mm wide.



- Manufacturer's name: "Young Tech", or CSA Master Contract Number "227951", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model number: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Ambient temperature rating for Hazloc: As specified in the PRODUCTS section, above.
- Ambient temperature rating for Ordloc (Non-Hazardous locations): As specified in the PRODUCTS section (notes), above.
- Manufacturing date in MMY format, or serial number, traceable to year and month of manufacture.
- Enclosure ratings: As specified in the PRODUCTS section, above.
- The CSA Mark, as shown on the Certificate of Conformity.
- The certificate reference in the format 'yy.nnnnnnnn.X', where yy is the two-digit year in which the certificate was issued, and nnnnnnnn is the eight-digit certificate number, followed by the 'X' mark.
- Hazardous Location designations: As specified in the PRODUCTS section, above (may be abbreviated).
- Temperature code: As specified in the PRODUCTS section, above.
- Supply pressure range.
- The following:
 - "Install per drawing SKC-8465" for YT-33aa series or "Install per drawing SKC-8773" for RI-33aa series (*as appropriate for nonincendive field wiring only*).
 - ISO 3864 Symbol B.3.1  or ISO 7000 symbol 0434  (triangle with exclamation point) directing the user to the installation / operation manual.
 - "WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2" (may appear in manual).
 - "AVERTISSEMENT – RISQUE D'EXPLOSION – Remplacement des composants peut nuire à la conformité de Classe I, Division 2" (may appear in manual).
 - "WARNING – EXPLOSION HAZARD – Do not connect while circuit is live unless area is known to be nonhazardous" (may appear in manual).
 - "AVERTISSEMENT – RISQUE D'EXPLOSION – Ne pas connecter lorsque le circuit est moins que l'environnement est classé non dangereux" (may appear in manual).



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An installation manual or data sheet shall be supplied with each unit, containing the following minimum marking information:

- Manufacturer's name and address.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Specification for ambient temperature rating: As specified in the PRODUCTS section, above.
- Specification for process temperature and pressure ratings (if applicable).
- Specification for materials in contact with the process fluids or gasses (if applicable).
- Specification for appropriate wiring to terminal blocks, including definition of terminal functions, and specification for wire gauge.
- Mounting and installation instructions, including dimensions, and the following words, or equivalent:
 - Wiring to or from this device, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations, as appropriate for the installation.
- ISO 3864 Symbol B.3.1  or ISO 7000 symbol 0434  (triangle with exclamation point) where required.
- The following words, or suitable equivalent:
 - WARNING – EXPLOSION HAZARD – Do not connect or disconnect this equipment unless power has been removed or the area is known to be nonhazardous.
 - AVERTISSEMENT – RISQUE D'EXPLOSION – NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, A MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.
 - WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.
 - AVERTISSEMENT – RISQUE D'EXPLOSION – LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2.

General:

Technical specifications, instructions for use and details of where technical assistance may be obtained if required.

Equipment Ratings:

This includes definition and ratings of air supply, description of I/O connections, duty cycle, and operating environmental conditions.

1. Pollution degree 2;
2. Overvoltage category I;
3. Altitude 2000m max.

Equipment Installation:

This includes instructions for assembly, mounting, and location requirements.

PERMANENTLY CONNECTED EQUIPMENT requires special considerations to satisfy the CEC, the Canadian deviations in the standards, wiring methods, and overcurrent and fault protection as required.



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Equipment Operation:

This includes explanations of operating controls and warning symbols used, and instructions for interconnection, replacement of any consumables, and cleaning and decontamination as required.

1. Guidance on how to determine that the equipment is functioning correctly;
2. Detailed instructions about risk reduction procedures relating to flammable liquids or other hazards;
3. Statement that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Equipment Maintenance and Service:

This includes instructions for preventative maintenance, inspection and cleaning, replacement of parts, etc.

1. Instructions for trained service personnel need not be supplied, but should be made readily available to the service personnel if needed.

Marking Stencils:

Drafts of the marking drawings were reviewed and found to be adequate.



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80031706	2020-03-05	Update to report 70131426 to add separate ordloc temperature and update nameplate drawings to reflect the change.
80000503	2019-05-14	Update to Report 70131426 to reflect Submittor's new name and address.
000070200164	2018-10-18	Evaluation to update report 70131426 to add FM approval information on the labels.
000070191870	2018-08-14	Evaluation to update report 70131426 to add RI Series of models and tapped exhaust option. Quote assumes no testing is required.
000070131426	2017-11-29	Original assessment of Young Tech electro-pneumatic smart positioners YT Series: YT-3300, YT-3350, YT-3301 and YT-3303 for CSA Canada as I.S. for Class I, Div 1 & 2, Groups ABCD, Class II/III, Groups EFG and Ex ia IIC and Ex tb IIIC; IP66