



**BUREAU  
VERITAS**



(1) **EC-Type Examination Certificate**

(2) **Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres  
– Directive 94/9/EC**

(3) **EC Type Examination Certificate Number**

**EPS 12 ATEX 1 456 X**

(4) **Equipment:** Smart Positioner, Type YT-3300/3350/3301,  
YT-3300+LS(dry contact)/YT-3350+LS(dry contact)

(5) **Manufacturer:** Young Tech Co., Ltd

(6) **Address:** #3022, Hagun-ri, Yangchon-myeon, Gimpo-si, Gyeonggi-do, Korea

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) Bureau Veritas Consumer Product Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23<sup>rd</sup> 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential report 11TH0413.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN60079-0:2009

EN60079-11:2007

EN 61241-11:2006

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:



II 2G Ex ia IIC T5/T6 Gb

II 2D Ex iaD IIIC T85°C/T100°C Db IP6X

Certification department of explosion protection

Türkheim, July 31, 2012

A. Hänchen

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Certificates without signature are void. This certificate is allowed to be distributed only if not modified.

Extracts of modifications must be authorized by Bureau Veritas Consumer Product Services Germany GmbH.

This certificate is internally administrated under the following number: 12-155



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- (13) **A n n e x e**
- (14) **EC Type Examination Certificate EPS 12 ATEX 1 456 X**
- (15) Description of equipment:

The YT-3300/YT-3350/YT-3301 and YT-3300+LS(dry contact)/YT-3350+LS(dry contact) are electropneumatic positioners to control linear and rotary valves. The pressure is regulated by an inductive torque motor and the position of the pneumatic valve is measured by a potentiometer. The YT-3300/YT-3350/YT-3301 and YT-3300+LS(dry contact)/YT-3350+LS(dry contact) have as an option a superimposed HART signal. Additionally the PTM module as another option serves as feedback for the position of the valve. Two optional limit switches (contacts) can be built in. All circuits are supplied by intrinsically safe power supplies with linear characteristic. The different intrinsically safe circuits are galvanically isolated against each other and against ground. The version YT-3301 is equipped with an external potentiometer as position sensor. The isolation voltage is 500 V. Only the original units "Linear Feedback Module" and "Rotary Feedback Module", manufactured by the company Youngtech may be connected via the "Cable Connector".

**Electrical data:**

**Supply circuit** (versions YT-3300/YT-3350/YT-3301 and YT-3300+LS(dry contact)/YT-3350+LS(dry contact)) type of protection Intrinsic Safety Ex ia IIC/IIB maximum values:

$U_i = 28 \text{ V}$   
 $I_i = 93 \text{ mA}$   
 $P_i = 651 \text{ mW}$   
Linear characteristic  
 $C_i = 0.6 \text{ nF}$  differentially between the lines or  $2.2 \text{ nF}$  against ground  
 $L_i = 300 \text{ }\mu\text{H}$

The supply circuit is galvanically isolated against earth.

**Option circuit "PTM"** (versions YT-3300/YT-3350/YT-3301 and YT-3300+LS(dry contact)/YT-3350+LS(dry contact)), type of protection Intrinsic safety Ex ia IIC/IIB maximum values:

$U_i = 28 \text{ V}$   
 $I_i = 93 \text{ mA}$   
 $P_i = 651 \text{ mW}$   
Linear characteristic  
 $C_i = 0.6 \text{ nF}$  differentially between the lines or  $2.2 \text{ nF}$  against ground  
 $L_i = 300 \text{ }\mu\text{H}$

The PTM circuit is galvanically isolated against earth.



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**YT-3301, Maximum supply values for the potentiometer:**

$U_o = 6,51 \text{ V}$   
 $I_o = 93 \text{ mA}$   
 $I_{o\_wiper} = 6 \text{ mA}$   
 $P_o = 0,465 \text{ W}$   
 $C_i = 13 \text{ }\mu\text{F}$   
 $L_i \sim 0 \text{ }\mu\text{H}$   
Trapezoidal characteristic

**Option circuits "Limit switches 1 and 2" (only version YT-3300+LS(dry contact)/YT-3350+LS(dry contact)) type of protection Intrinsic Safety Ex ia IIC/IIB maximum values:**

$U_i = 28 \text{ V}$   
 $I_i = 93 \text{ mA}$   
 $P_i = 650 \text{ mW}$   
Linear characteristic  
 $C_i = 0 \text{ nF}$   
 $L_i = 0 \text{ }\mu\text{H}$

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

(16) Test report: 11TH0413

(17) Special conditions for safe use:

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

Temperature class T5:  $-40 \text{ }^\circ\text{C}$  to  $+60 \text{ }^\circ\text{C}$   
Temperature class T6:  $-40 \text{ }^\circ\text{C}$  to  $+40 \text{ }^\circ\text{C}$ .

(18) Essential health and safety requirements:

Met by standards.

Certification department of explosion protection

Türkheim, July 31, 2012

