User's Manual

YVP110 Advanced Valve Positioner

Manual Change No. 15-006

Please use the attached sheets for the pages listed below in the following manuals. IM 21B04C01-01E (10th)

Page and Item	Contents of Correction
Page 1-3 1.8 EMC Conformity Standards	Change specifications
Page 7-2 EMC Conformity Standards	Change specifications
CMPL 21B04C01-01E item 2	F9341JP→F9176JW

1.8 EMC Conformity Standards

EN 61326-1 Class A, Table 2 (For use in industrial locations)

EN 61326-2-5



CAUTION

This instrument is a Class A product, and it is designed for use in the industrial environment. Please use this instrument in the industrial environment only.

1.9 Installation of Explosion Protected Type Positioner



CAUTION

To preserve the safety of explosion proof equipment requires great care during mounting, wiring and piping. Safety requirements also place restrictions on maintenance and repair activities. Please read the following section very carefully.

1.9.1 FM Certification

A) FM Intrinsically Safe Type

Cautions for FM Intrinsically safe type. (Following cotents refer "Doc No. IFM017-A12 P.1, 1-1, 2, 2-1, and 2-2.")

- Note 1. Model YVP110 Advenced Valve Positioner with optional code /FS15 are applicable for use in hazardous locations.
 - Applicable standard: FM3600, FM3610, FM3611, FM3810, ANSI/NEMA250
 - Intrinsically safe, with FISCO parameters, for use in Class I, II, III, Division 1, Groups A, B, C, D, E, F, G and Class I, Zone 0, AEx ia IIC
 - Non-incendive for Class I, Division 2, Groups A, B, C, D and Class I, Zone 2, Group IIC
 - · Indoor/Outdoor hazardous locations, NEMA 4X
 - Ambient Temperature: -40 to 60°C

Note 2. Electrical Data

Rating 1

For Groups A, B, C, D, E, F and G or Group IIC Maximum Input Voltage Vmax: 24 V Maximum Input Current Imax: 250 mA Maximum Input Power Pmax: 1.2 W Maximum Internal Capacitance Ci: 1.76 nF Maximum Internal Inductance Li: 0 µH

or

Rating 2

For Groups A, B, C, D, E, F and G or Group IIC Maximum Input Voltage Vmax: 17.5 V Maximum Input Current Imax: 360 mA Maximum Input Power Pmax: 2.52 W Maximum Internal Capacitance Ci: 1.76 nF Maximum Internal Inductance Li: 0 µH

or

Rating 3

For Groups C, D, E, F and G or Group IIB Maximum Input Voltage Vmax: 17.5 V Maximum Input Current Imax: 380 mA Maximum Input Power Pmax: 5.32 W Maximum Internal Capacitance Ci: 1.76 nF Maximum Internal Inductance Li: 0 µH

- In the rating 1, the output current of the barrier must be limited by a resistor "Ra" such that
 - lo = Uo/Ra.
- In the rating 2 or 3, the output characteristics of the barrier must be the type of trapezoid which are certified as the FISCO model.
- · The safety barrier may include a terminator.
- More than one field instruments may be connected to the power supply line.

Note 3. Installation

- Dust-tight conduit seal must be used when installed in Class II and Class III environments.
- Control equipment connected to the Assoiciated Apparatus must not use or generate more than 250 Vrms or Vdc.
- Installation should be in accordance with ANSI/ISA RP12.6 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code (ANSI/NFPA 70) Sections 504 and 505.
- The configuration of Associated Apparatus must be Factory Mutual Research Approved under FISCO Concept.
- Associated Apparatus manufacturer's installation drawing must be followed when installing this equipment.
- The YVP series are approved for Class
 I, Zone 0, applications. If connecting
 AEx[ib] associated Apparatus or AEx ib I.S.
 Apparatus to the YVP series the I.S. circuit
 is only suitable for Class I, Zone 1, or Class
 I, Zone 2, and is not suitable for Class I,
 Zone 0, or Class I, Division 1, Hazardous
 (Classified) Locations.

Span Adjustment Range:

Within 300% of span

Valve-stem Travel Range:

Linear Motion:

10 to 100 mm (0.4 to 4.0 inch) (Rotation Range: ±10 to ±25 deg)

Rotary Motion: 20 to 90 deg

Air Consumption and Output Capacity:

	Diaphragm, Single Acting Cylinder				
Maximum Air Consumption	0.20 SCFM (0.32 Nm ³ /h) at 140 kPa				
Maximum Output Capacity	4.1 SCFM (6.6 Nm ³ /h) at 140 kPa				

	Double Acting Cylinder				
Maximum Air Consumption	0.62 SCFM (1.0 Nm ³ /h) at 400 kPa				
Maximum Output Capacity	8.5 SCFM (13.7 Nm ³ /h) at 400 kPa				

Ambient Temperature Limits:

Single Acting Actuator:

-40 to 85°C (-40 to 185°F)

Double Acting Actuator:

-40 to 60°C (-40 to 140°F) for standard

-10 to 85° C (14 to 185° F) for high

temperature use with option code /HT

Ambient Humidity Limits:

5 to 95% RH at 40°C (104°F)

EMC Conformity Standards:

EN 61326-1 Class A, Table 2 (For use in

industrial locations)

EN 61326-2-5

Immunity influence during the test:

Output shift is specified within ±1% of span.

Degrees of Protection:

IP65, NEMA4X

Connections:

Air Connection: Rc 1/4 or 1/4 NPT female Electrical Connection: G 1/2, 1/2 NPT, M20 and

Pg13.5 female

Pressure Gauge Connection:

		Pressure	With pressure	
		gauge connection	gauge (Optional)	
Connections	1,5 and 6	Rc 1/8 female	/GP, /GM, and /GB	
Codes	3	1/8 NPT female	/GE	

Mounting:

Front of Actuator with bracket.

Direct Connection for rotary valve.

Weight:

Single Acting Actuator: 2.4 kg (5.3 lb) Double Acting Actuator: 2.8 kg (6.2 lb)

■ Performance Specifications

Linearity:

Single Acting Actuator:

±0.5% of Span (including linkages)

Double Acting Actuator:

±1.0% of Span (including linkages)

Hysteresis:

Single Acting Actuator: 0.3% of Span Double Acting Actuator: 0.5% of Span

Ambient Temperature Effect:

±0.08% of Span/°C

Position Effect:

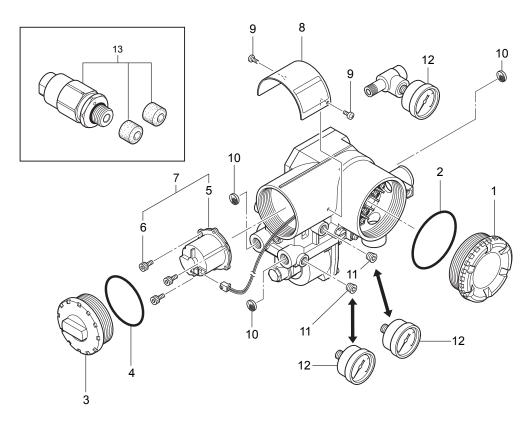
±0.3% of Span/90 deg

Vibration Effect:

±2% of Span at 2G (15 to 2000 Hz)

Customer Maintenance Parts List

YVP110 Advanced Valve Positioner



<u>Item</u>	Part No.	_Qty_	Description
1 2 3 4 5	F9341RA F9176JW — G9303AG	1 1 1 1	Cover O-Ring I/P Cover O-Ring I/P Module
6 7 8 9 10	Y9408ZU — — F9300AG U0103FP	3 1 1 2 3	Bolt Hex. Socket I/P Module Assembly Name Plate Screw Screen (Single Acting Actuator)
11	Below G9612EJ G9612EL See Table 1	4 2 2	Screen (Double Acting Actuator) Plug For Connection code 1, 5, and 6 For Connection code 3 Pressure Gauge (Single Acting Actuator)
13	G9601AM	3 1	Pressure Gauge (Double Acting Actuator) Cable Gland Assy for TIIS Flameproof Type (Option code /G11)

Table 1. Pressure Gauge Part Number (item 12).

Applicable Actuator code	Connection code	Option code				
Applicable Actuator code	Connection code	/GP	/GM	/GB	/GE	
1	1, 5, and 6	G9615ED	G9615AR	G9615EF	_	
(Single Acting Actuator)	3	_	_	_	G9615EE	
2	1, 5, and 6	G9615EG	G9615AS	G9615EH	_	
(Double Acting Actuator)	3	_	_	_	G9615EJ	



YVP110 Advanced Valve Positioner

Manual Change No. 15-021

Please use this manual change with the user's manual below. IM 21B04C01-01E (10th)

Page	Item	Revised Contents
CONTENTS	ATEX Documentation 1.9.3 ATEX Certification	Delete ATEX Documentation Delete 1.9.3 ATEX Certification
X	ATEX Documentation	Delete page X
1-1	Nameplate	Delete CE mark (See below)
1-7 to 1-11	1.9.2 ATEX certification	Delete 1.9.2 ATEX Certification
6-1	6.1 General	Delete CAUTION Precautions for ATEX flameproof type and type nA instruments
7-4	Optional Specifications (For Explosion Protected types)	Delete KF2, KS25, and KN25

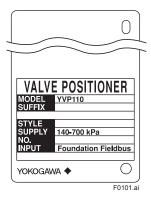


Figure 1.1 Nameplate

User's Manual

PK200, YVP110, and YPK110

電子情報製品汚染制御管理弁法(中国版RoHS)

Manual Change No.16-021

はじめに

本書は、中華人民共和国国内でのみ有効です。

Foreword

This manual is valid only in China.

产品中有害物质或元素的名称及含量

7								
		有害物质						
型号	部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI)))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	
PK200 电-气转换器	壳体	×	0	0	0	0	0	
	基板组件	×	0	0	×	0	0	
	电源连接线	×	0	0	0	0	0	
YVP110 先进阀门定位器 YPK110 现场总线气动转换器	壳体	×	0	×	×	0	0	
	基板组件	×	0	×	×	0	0	
	电源连接线	×	0	×	×	0	0	

- 〇:表示该部件的所有均质材料中的有害物质的含量均在 GB/T26572 标准中所规定的限量以下。
- ×:表示至少该部件的某些均质材料中的有害物质的含量均在 GB/T26572 标准中所规定的限量以上。

讨

环保使用期限:

该标识适用于SJ/T11364中所述,在中华人民共和国销售的电子电气产品的环保使用期限。

注)该年数为"环保使用期限",并非产品的质量保证期。