



Smart Valve Positioner TS900 Series

- Quick and easy auto calibration
- Flapper / Nozzle type Torque motor
- By-pass valve (A/M switch) installed
- PST & Alarm & Diagnostic function
- Advanced diagnostics



Smart Valve Positioner TS900/TS905 Series (Flame proof type)

Description

TS900 Smart Valve Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

Certified

























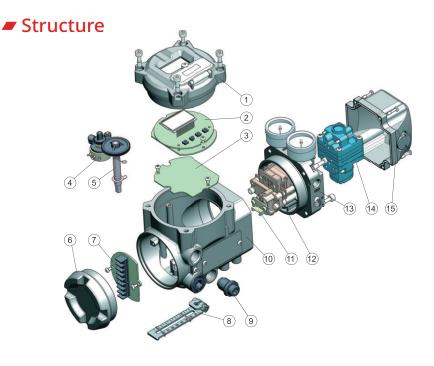
Features





TS905

- + Quick and easy auto calibration
- + Large flow pilot valve (Over than 100LPM)
- + Flapper / Nozzle type Torque motor
- + By-pass valve (A/M switch) installed
- → HART communication (HART 7)
- + Partial stroke test (PST) function
- Alarm function (Option)
- → Advanced diagnostics (Option)



- 1. Body cover
- 2. Main PCB
- 3. PCB guide
- 4. Potentiometer
- 5. Main shaft
- 6. Junction box cover
- 7. Terminal PCB
- 8. Feedback lever
- 9. Plug drain
- 10. Base body
- 11. Pressure sensor(Option)
- 12. Torque motor
- 13. Air connection block
- 14. Pilot valve
- 15. Pilot valve cover

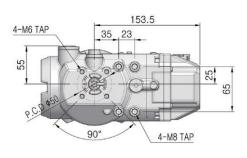
Smart Valve Positioner TS900/TS905 Series (Flame proof type)

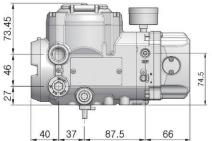
Specifications

Weight 3.5kg 7.0kg HART version* HART 7 Position Connection type 2 Wire transmitter* Supply voltage 9~30V DC	Model		TS900	TS905						
Supply pressure Stroke 10~150mm(Linear), 0~90°(Rotary) Air connection NPT1/4, G1/4 Gauge connection NPT1/2, M20 Explosion proof type Explosion proof type II 2G Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T85°C/T100 °C Db Enclosure IP66 (EN60529) Ambient Temp. Explosion proof LCD operating LCD operating LCD operating LCD operating Explosion proof Explosion proof LCD operating Explosion proof Explosion proof Explosion proof LCD operating Explosion proof Explosion proo	Input signal		4~20mA DC							
Stroke Air connection RPT1/4, G1/4 Gauge connection RPT1/8 Conduit RPT1/2, M20 Explosion proof type Explosion proof type Enclosure Standard type Low temp type LCD operating LCD operating LCD operativity Hysteresis Repeatability Air consumption Required air quality Flow capacity Material Weight HART version* Air connection NPT1/4, G1/4 NPT1/2, M20 II 2G Ex db IIC T5/T6 Gb III 2D Ex tb IIIC T85°C/T100°C Db II 2G Ex db IIC T5/T6 Gb III 2D Ex tb IIIC T85°C/T100°C Db II 2G Ex db IIC T5/T6 Gb III 2G Ex db III C T5/T6 III 2G Ex db III C T5/T6 III 2G Ex db III C T5/T6 III 2G Ex db	Impedance		500Ω at 20mA DC							
Air connection NPT1/4, G1/4 Gauge connection NPT1/8 Conduit NPT1/2, M20 Explosion proof type II 2G Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T85°C/T100°C Db Enclosure IP66 (EN60529) Ambient Low temp type -40°C~80°C Explosion proof -40°C~80°C(T5) / -40°C~70°C(T6) LCD operating -30°C~85°C Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART version* HART 7 Position transmitter* Supply voltage 9~30V DC	Supply pres	sure	0.14~0.7MPa							
Gauge connection Conduit NPT1/2, M20 II 2G Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T85°C/T100 °C Db Enclosure Standard type Ambient Temp. Explosion proof LCD operating LOD operating Long terms Long term	Stroke		10~150mm(Linear), 0~90°(Rotary)							
Conduit Explosion proof type Explosion proof type Explosion proof type II 2G Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T85°C/T100 °C Db Enclosure IP66 (EN60529) Standard type -30°C~80°C Low temp type -40°C~80°C(T5) / -40°C~70°C(T6) LCD operating -30°C~85°C Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Repeatability ±0.3% F.S. Repeatability Air consumption Required air quality Flow capacity Material Weight Aluminum die cast Weight Tonnection type Supply voltage Supply voltage Position transmitter* NPT1/2, M20 II 2G Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T5/T6 Gb II 2D Ex db IIC T5/T6 Gb II 2D Ex tb IIIC T5/T6 Gb II 2D Ex db IIIC T8/T6 II 2D Ex db III 2D Ex	Air connection		NPT1/4, G1/4							
Explosion proof type Il 2G Ex db IIC T5/T6 Gb Il 2D Ex tb IIIC T85°C/T100°C Db Enclosure	Gauge connection		NPT1/8							
Explosion proof type Il 2D Ex tb IIIC T85°C/T100 °C Db	Conduit		NPT1/2, M20							
Enclosure Standard type	Explosion proof type		II 2G Ex db IIC T5/T6 Gb							
Ambient Low temp type -40°C~80°C Temp. Explosion proof -40°C~80°C(T5) / -40°C~70°C(T6) LCD operating -30°C~85°C Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART 7 Position Connection type 2 Wire Supply voltage 9~30V DC			II 2D Ex tb IIIC T85°C/T100°C Db							
Ambient Temp. Low temp type -40°C~80°C Explosion proof -40°C~80°C(T5) / -40°C~70°C(T6) LCD operating -30°C~85°C Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Meight Aluminum die cast Weight 3.5kg 7.0kg HART 7 Position transmitter* Connection type Supply voltage 9~30V DC	Enclosure		IP66 (EN	N60529)						
Temp. Explosion proof		Standard type	-30°C~80°C							
LCD operating -30°C~85°C Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Weight 3.5kg 7.0kg HART 7 Position transmitter* Connection type Supply voltage 9~30V DC	Ambient	Low temp type	-40°C~80°C							
Linearity ±0.5% F.S. Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART 7 Position Connection type 2 Wire Supply voltage 9~30V DC	Temp.	Explosion proof	-40°C~80°C(T5) / -40°C~70°C(T6)							
Sensitivity ±0.2% F.S. Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART version* HART 7 Position Connection type 2 Wire Supply voltage 9~30V DC		LCD operating	-30°C~85°C							
Hysteresis ±0.5% F.S. Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART 7 Position Connection type 2 Wire Supply voltage 9~30V DC	Linearity		±0.5% F.S.							
Repeatability ±0.3% F.S. Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART version* HART 7 Position Connection type 2 Wire Supply voltage 9~30V DC	Sensitivity	Sensitivity		±0.2% F.S.						
Air consumption Below 2.3LPM (Sup=0.14MPa) Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART version* HART 7 Position Connection type 2 Wire transmitter* Supply voltage 9~30V DC	Hysteresis		±0.5% F.S.							
Required air quality Class 3 (ISO 8573-1) Flow capacity Over 100LPM (Sup=0.14MPa) Material Weight Aluminum die cast Stainless Steel 316 7.0kg HART version* HART 7 Position transmitter* Connection type Supply voltage 9~30V DC	Repeatability		±0.3% F.S.							
Flow capacity Over 100LPM (Sup=0.14MPa) Material Aluminum die cast Weight 3.5kg 7.0kg HART version* Position transmitter* Connection type Supply voltage Supply voltage	Air consumption		Below 2.3LPM (Sup=0.14MPa)							
Material Aluminum die cast Stainless Steel 316 Weight 3.5kg 7.0kg HART version* HART 7 Position Connection type 2 Wire supply voltage 9~30V DC	Required air quality		Class 3 (ISO 8573-1)							
Weight 3.5kg 7.0kg HART version* HART 7 Position transmitter* Connection type 2 Wire transmitter* Supply voltage 9~30V DC	Flow capacity		Over 100LPM (Sup=0.14MPa)							
HART version* HART 7 Position Connection type 2 Wire transmitter* Supply voltage 9~30V DC	Material		Aluminum die cast	Stainless Steel 316						
Position transmitter* Connection type 2 Wire 5 Supply voltage 9~30V DC	Weight		3.5kg	7.0kg						
transmitter* Supply voltage 9~30V DC	HART version*		HART 7							
Supply voltage 3 300 De		Connection type	2 Wire							
Alarm quitch*		Supply voltage	9~30V DC							
Alamii Swilch 9~30V DC	Alarm switch*		9~30V DC							

^{*} Options

Dimension [Unit:mm]

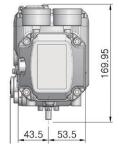


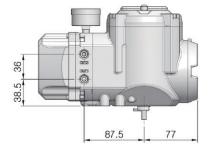


Product code

Model		TS9									
	6. 1 1										
Option	Standard type 0 Natural gas type* 9										
Body material	Aluminum 0 Stainless steel 316 5										
Acting type	Linear (Potentiometer type) L Rotary (Potentiometer type) R Linear (Non-Contact Sensor) S Rotary (Non-Contact Sensor) Q										
Explosion proof type	ATEX & IECEX A KCS K CCC, EAC C CSA/US S										
Connection type	Conduit entry Air connection NPT1/2 NPT1/4 3 M20 NPT1/4 4 M20 G1/4 5										
Lever (Linear type)	10 ~ 70mm 1 70 ~ 150mm 2 For tubeless actuator (30mm) 3 For tubeless actuator (70mm) 4										
Lever (Rotary type)	M6 x 39L 1 NAMUR 5										
Ambient Temp.	-30°C~80°C S -40°C~80°C L -60°C~80°C (For EAC) U										
Communication	Position None 0 Position transmitter(4~20mA) 1 HART communication 2 HART with Position transmitter(4~20mA) 3 HART with Advanced diagnostics 4 HART with Advanced diagnostics and Position transmitter(4~20mA)							1 2 3 4			
Alarm switch	nlarm switch None Included									0 A	

^{*} Natural gas type is only available with CSA and EAC.







Tissin Co.,Ltd. (주)티씬

201-1105, No 397, Seokchen-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea 14449

Tel: +82-32-624-4573, Fax: +82-32-624-4574

www.tissin.co.kr



Version: PC-900EN_04/2024