

Solutions for Control valve Accessories

TISSIN CO.,LTD.

PRODUCTS CATALOG 2023



- + Smart Valve Positioner
- + Electro-Pneumatic Positioner
- + Pneumatic-Pneumatic Positioner
- + Volume Booster
- + Lock Up Valve
- + Snap Acting Relay
- + Air Filter Regulator
- + Limit Switch Box
- + Smart Position Transmitter

tissin
Solutions for Control valve Accessories

Solutions for control valve accessories!

Tissin Co.,Ltd.

Tissin is a professional brand for control valve accessories in Korea and provides high quality of products that are based on long-term field experience.

Tissin's team members with many experiences who are in charge of the technical department, the sales department and the production department have overcome various problems that have occurred in the field over the years, so with that we have been trying for the customer's trust constantly.

Tissin takes pride in that the company can offer its customers the best and most competitive prices to choose from, as well as our company can solve the problems that other companies can not solve, and solve them through close relationships with our customers.

Tissin's technical department team understands the conditions of the field very well and continues to develop new product lines in the direction that customers want. In addition, Tissin's sales and production department team is using all of its methods to service the most competitive pricing to meet the customer's requirements.

Tissin will be able to do whatever needs to be done whatever the customer wants, in any field.

■ Company overview

Company Name	: Tissin Co.,Ltd.
Address	: 201-1105, No 397, Seokcheon-ro, Ojeong-gu, Bucheon-si, Gyeonggi-do, Korea
Established	: Apr.2015
President	: An Sun Ho
Main Products	: Valve Positioner, Volume Booster, Lock Up Valve, Air Filter Regulator, Control valve accessories.
Homepage	: www.tissin.co.kr

■ History

- 2023.07 Produced Snap acting relay TS250 series
- 2023.07 Award 'Bucheon Small Giants' in 2023 from Bucheon City Government
- 2023.05 Produced P-P Positioner TS610 series
- 2022.11 Produced Position transmitter TS500 series
- 2022.11 Produced Limit switch box TS400 series
- 2021.12 Produced Fail freeze type Smart positioner TS700 series
- 2021.04 Certified Technology Innovation-Oriented Small and Medium Enterprise(Inno-Biz)
- 2020.06 Established R&D center
- 2018.04 Produced Smart positioner TS900 series
- 2017.09 Produced Air filter regulator TS300 series
- 2017.08 Certified patent for TS800 torque motor
- 2017.06 Produced Smart positioner TS800 series
- 2017.04 Certified Venture Business
- 2016.01 Produced Lock up valve TS200 series
- 2016.01 Produced Volume booster TS100 series
- 2015.09 Produced E-P Positioner TS600 series
- 2015.04 Established Tissin Co.,Ltd.



			_____	05-06				
	TS800	TS805						
✦ Smart Valve Positioner			_____	07-08				
	TS900	TS905						
			_____	09-10				
	TS700							
✦ Electro-Pneumatic Positioner			_____	11-14				
	TS600L	TS600R						
✦ Pneumatic-Pneumatic Positioner			_____	15-16				
	TS610L	TS610R						
✦ Volume Booster				_____	17			
	TS100	TS110	TS120					
✦ Lock Up Valve							_____	18
	TS200S	TS200D	TS205S	TS205D	TS210S	TS210D		
✦ Snap Acting Relay							_____	19
	TS250S	TS250D	TS260S	TS260D				
✦ Air Filter Regulator							_____	20
	TS300	TS310	TS305					
✦ Limit Switch Box							_____	21-22
	TS400	TS410	TS415					
✦ Smart Position Transmitter							_____	23-24
	TS500	TS510	TS515					
✦ Brackets							_____	25-26



Certifications



IECEx



ATEX



CE



CSA/US



EAC



KCS



CCC



NEPSI



SIL



RoHS



Inno-Biz



Venture Enterprise



ISO9001:2015



R&D Center



Patent of Invention



HART Membership





Product name	Model	Certificate type	Certificate number	Grade
Smart positioner	TS800 TS820 TS805	IECEX	IECEX EPS 17.0088X	II 2G Ex ia IIC T5/T6 Gb II 2D Ex ia IIIC T100°C/85°C Db IP66
		ATEX	EPS 17 ATEX 1 174 X	
		EAC	RU C-KR.HA65.B.01513/22	0 Ex ia IIC T5/T6 Ga X
		KCS	20-KA2BO-0188X	Ex ia IIC T5/T6
			20-KA2BO-0189X	Ex ia IIIC T85°C/100°C
		CCC	2020322307002407	Ex ia IIC T5/T6 Gb Ex ia IIIC T100/T85 Db
		NEPSI	GYJ18.1239X	Ex ia IIC T5/T6 Gb
		CSA/US	80139740	Class I, Div2, Groups A,B,C,D; T5...T6 Ex ib IIC T5...T6 Gb Class I, Zone 1 AEx ib IIC T5...T6 Gb Class II, Div2, Groups E,F,G; T100°C...T85°C; Class III Ex ib IIIC T100°C...T85°C Db Zone 21 AEx ib IIIC T100°C...T85°C Db
SIL	FS/71/220/19/0378 (SGS TUV SAAR)	SIL2 at HFT=0 SIL3 at HFT=1		
Smart positioner	TS900 TS905	IECEX	IECEX EPS 19.0052X	Ex db IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db IP66
		ATEX	EPS19 ATEX1 112 X	
		EAC	RU C-KR.AD07.B.01961/20	1Ex d IIC T5/T6 Gb Ex tb IIIC T100°C/T85°C Db
		KCS	18-KA2BO-0294X1	Ex d IIC T6/T5
		CCC	2020322307000493	Ex db IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db
		NEPSI	GYJ18.1238X	Ex d IIC T5/T6 Gb
		SIL	FS/71/220/19/0378 (SGS TUV SAAR)	SIL2 at HFT=0 SIL3 at HFT=1
Electro-Pneumatic Positioner	TS600	CCC	2020322307000492	Ex db mb IIC/IIB T5/T6 Gb Ex ia IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db
		NEPSI	GYJ21.1313X	Ex dmb IIC T5/T6 Gb
			GYJ21.1314X	Ex ia IIC T5/T6 Gb
		IECEX	IECEX EPS 18.0078X	Ex db mb IIB/IIC T6/T5 Gb Ex ia IIC T6/T5 Gb Ex tb IIIC T85°C/T100°C Db IP66
		ATEX	EPS 18 ATEX 1 156 X	
		EAC	RU C-KR.HA65.B.01513/22	1Ex d mb IIC T5/T6 Gb X 1Ex d mb IIB T5/T6 Gb X
		KCS	16-KA2BO-0353	Ex dmb IIB T5/T6 Gb
16-KA2BO-0424	Ex dmb IIC T5/T6 Gb			



Description

TS800 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



TS800 Standard type



TS805 Stainless steel 316 type



TS800 with Limit switch type

- + 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)
- + Limit switch (Mechanical or Proximity type)
- + Partial stroke test (PST) function
- + Alarm function
- + Self diagnostic

TS820 (Remote type)

TS820 Body



TS820 Sensor



Interface structure



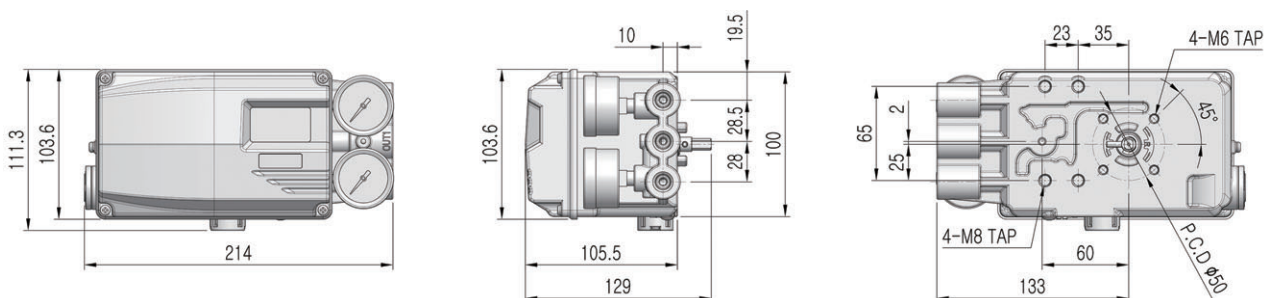
1. LCD
2. Button (4)
3. Alarm modules
4. Input signal (4~20mA DC)
5. Ground
6. Position transmitter (Option)
 - 2 Wire
 - 4~20mA DC feedback signal
7. Limit switch (Option)
 - Mechanical type
 - Proximity type

Specifications

Model	TS800/TS820	TS805
Input signal	4~20mA DC	
Impedance	500Ω at 20mA DC	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm (Linear), 0~90° (Rotary)	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	PT1/8, NPT1/8	
Conduit	G1/2, NPT1/2, M20	
Explosion proof type	ATEX, IECEx CCC, NEPSI, KC	Ex ia IIC T5/T6 Gb Ex ia IIIC T100°C/85°C Db
	EAC	1 Ex ia IIC T5/T6 Ga
	CSA/US	Class I, Div2, Groups A,B,C,D; T5...T6 Class I, Zone 1 AEx ib IIC T5...T6 Gb Class II, Div2, Groups E,F,G; T100°C...T85°C Zone 21 AEx ib IIIC T100°C...T85°C Db
Enclosure	EN60529	IP66
	NEMA	Type 4 Type 4X
Ambient Temp.	Standard type	-30°C~85°C
	Low temp type	-40°C~85°C
	Explosion proof	-40°C~60°C(T5) / -40°C~40°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	2.6kg	4.2kg
HART version*	HART 7	
Position transmitter*	Connection type	2 Wire
	Supply voltage	10~30V DC
Limit switch rating*	Mechanical type	AC 125V, 3A DC30V, 2A
	Proximity type	DC8.2V 8.2A

* Options

Dimension [Unit:mm]



Product code

Model	TS800							
Standard type	TS800							
Remote type	TS820							
STS 316 type	TS805							
Acting type	Linear type	L						
	Rotary type	R						
Explosion proof type	Non-explosion proof	N						
	ATEX, IECEx, KCS, CCC, NEPSI, EAC	A						
	CSA/US	S						
Connection type*	Conduit entry	Air connection						
	G1/2	PT1/4	1					
	G1/2	NPT1/4	2					
	NPT1/2	NPT1/4	3					
M20	NPT1/4	4						
M20	G1/4	5						
Lever (Linear type)	10 ~ 80mm							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~85°C							S
	-40°C~85°C							L
	-60°C~85°C (For Russia EAC)							U
Communication	None							0
	4~20mA Position transmitter							1
	HART							2
	HART with 4~20mA Position transmitter							3
Limit switch (For TS800) & TS805)	None							0
	Mechanical type							M
	Proximity type							P
	With dome cover (Without Limit switch)							D
Cable length (For TS820)	5m							1
	10m							2
	User define (Less than 20 meters)							x

*Connection type for CSA is only available with No.3~4.

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



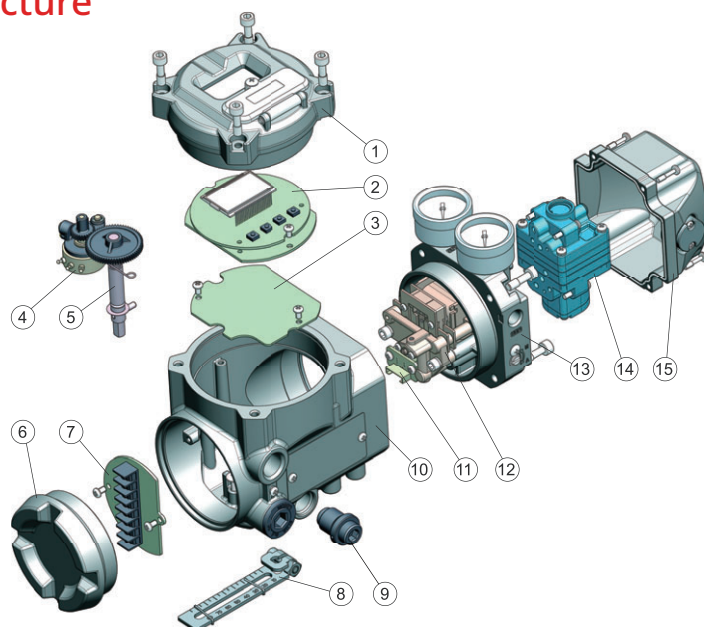
TS900



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
- + Self diagnostic

Structure



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. Drain plug
10. Base body
11. Pressure sensor(Optional)
12. Torque motor
13. Air connection block
14. Pilot valve
15. Pilot valve cover

Specifications

Model	TS900	TS905
Input signal	4~20mA DC	
Impedance	500Ω at 20mA DC	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm(Linear), 0~90°(Rotary)	
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 Temp.	Standard type	-30°C~80°C
	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*	Connection type	2 Wire
	Supply voltage	9~30V DC
Alarm switch*	9~30V DC	

* Options

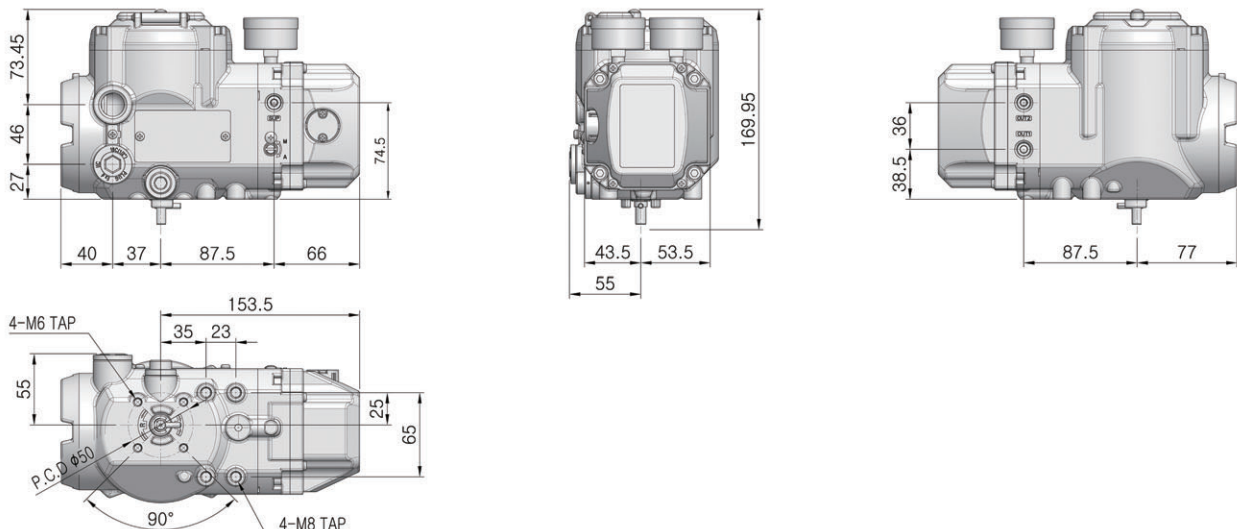
Product code

Model	TS900						
Standard type	TS900						
STS316 type	TS905						
Acting type	Linear type	L					
	Rotary type	R					
Explosion proof type	ATEX, IECEx, KCS		C				
	CCC, NEPSI, EAC						
Connection type	Conduit entry	Air connection					
	G1/2	PT1/4	1				
	G1/2	NPT1/4	2				
	NPT1/2	NPT1/4	3				
	M20	NPT1/4	4				
M20	G1/4	5					
Lever (Linear type)	10 ~ 80mm					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 Russia EAC)						U
Communication	None						0
	4~20mA Position transmitter						1
	HART						2
	HART with 4~20mA Position transmitter						3
Alarm switch	None						0
	Included Alarm switch						A

Notes:

1. Conduit entry for ATEX/IECEX/CCC/NEPSI should be "NPT1/2" or "M20".

Dimension [Unit:mm]



Description

TS700 Smart Valve Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

Features



Certified

In progress

- + Fail freeze function
- + Zero air consumption when standby signal
- + Prevents circuit board corrosion by external air exhaust design
- + Quick and easy auto calibration
- + Built in air filter(5 micron)
- + HART communication (HART 7)
- + Limit switch (Mechanical or Proximity type)
- + Partial stroke test (PST) function
- + Self diagnostic

TS720 (Remote type)

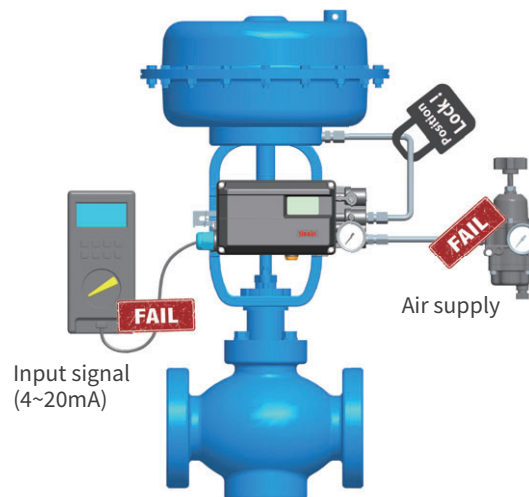
TS720 Body

TS720 Sensor



Fail freeze function diagram

When the 4~20mA input signal or air supply signal is fail, cut off the air pressure to the actuator to hold the current valve position



Description

TS600 Electro-Pneumatic Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

Certified



Features

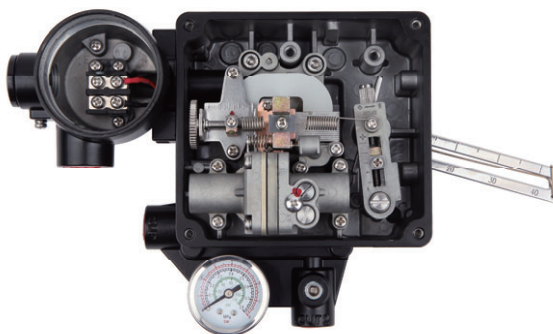


- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Strong anti vibration performance
- + By-pass valve (A/M switch) installed
- + Air connection part is designed for detachability and it can be changed PT/NPT tapping threads in the field easily
- + Integrated Flameproof and Intrinsically safe protection (ATEX&IECEX version)

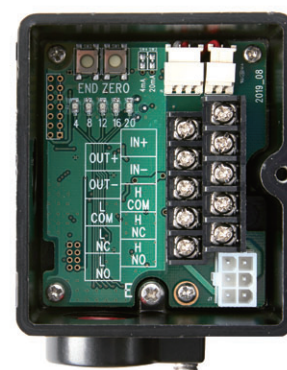
Installation example



Internal structure



Position transmitter PCB



Specifications

Model	TS600L(Single)	TS600L(Double)
Input signal	4~20mA DC	
Impedance	250 ±15Ω	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	PT1/8, NPT1/8	
Conduit	G(PF)1/2, NPT1/2, M20	
Explosion proof type	Ex db mb IIB/IIC T6/T5 Gb Ex ia IIC T6/T5 Gb Ex tb IIIC T85°C/T100°C Db	
Intrinsically safe parameters	Ui=28V, li=101mA, Pi=707mV	
Enclosure	IP66 (EN60529)	
Ambient Temp.	Operating Temp.	-20°C~70°C (Standard type)
	Explosion proof	-40°C~60°C(T5) / -40°C~40°C(T6)
Linearity	±1.0% F.S.	±2.0% F.S.
Sensitivity	±0.2% F.S.	±0.5% F.S.
Hysteresis	±1.0% F.S.	
Repeatability	±0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Weight	2.8kg	

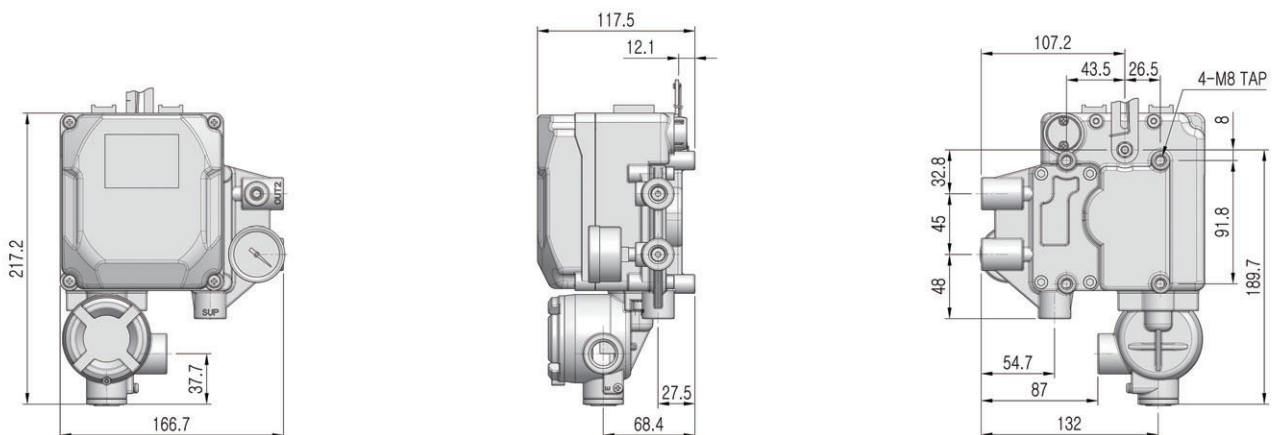
Product code

Model	TS600	L				
Acting type	Linear type	L				
Explosion proof type	Non-explosion proof	N				
	Ex dmb IIB T5/T6	B				
	Ex dmb IIC T5/T6	C				
	Ex ia IIC T5/T6	A				
	ATEX&IECEx version Ex db mb IIB/IIC T5/T6 Gb Ex ia IIC T5/T6 Gb	X				
Connection	Conduit entry	Air connection				
	G1/2	PT1/4	1			
	G1/2	NPT1/4	2			
	NPT1/2	NPT1/4	3			
	M20	NPT1/4	4			
Lever type	M20	G1/4	5			
	10 ~ 40mm			1		
	40 ~ 70mm			2		
	70 ~ 100mm			3		
Ambient Temp.	100~ 150mm			4		
	-20°C~70°C				S	
	-20°C~120°C *				H	
	-40°C~70°C				L	
Option	-60°C~70°C(For Russia EAC)				U	
	None (Standard type)					0
	With 4~20mA Position transmitter (Positioner is RA type) *					1
	With 4~20mA Position transmitter (Positioner is DA type) *					2

Notes:

- * Must be Non-explosion proof type.
- Conduit entry for ATEX/IECEx/CCC/NEPSI should be "NPT1/2" or "M20".

Dimension [Unit:mm]



Description

TS600 Electro-Pneumatic Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

Certified



Features



- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Strong anti vibration performance
- + By-pass valve (A/M switch) installed
- + Air connection part is designed for detachability and it can be changed PT/NPT tapping threads in the field easily
- + Integrated Flameproof and Intrinsically safe protection (ATEX&IECEX version)

Options



Option code No.1

TS600R with Position transmitter
(Non-explosion proof type)



Option code No.2 or No.4

TS600R with Limit switch
(Non-explosion proof type)



Option code No.3

TS600R with Limit switch
(Explosion proof type)



Option code No.5

TS600R with Position transmitter and
Limit switch (Explosion proof type)



Option code No.6

With external Limit switch
mounting device



Option code No.7

With Position transmitter and
external Limit switch mounting device



For KCS certificate type



Option code No.1

TS600R with Position transmitter
With LCD(Special type)

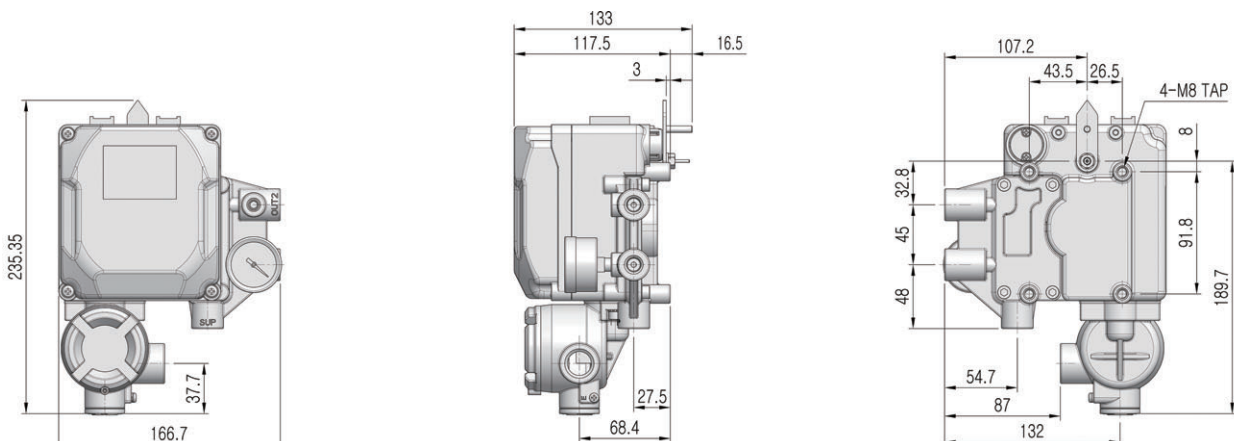
Specifications

Model	TS600R(Single)	TS600R(Double)
Input signal	4~20mA DC	
Impedance	250 ±15Ω	
Supply pressure	0.14~0.7MPa	
Stroke	0~90°	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	PT1/8, NPT1/8	
Conduit	G(PF)1/2, NPT1/2, M20	
Explosion proof type	Ex db mb IIC T6/T5 Gb Ex ia IIC T6/T5 Gb	
Intrinsically safe parameters	Ui=28V, li=101mA, Pi=707mV	
Enclosure	IP66 (EN60529)	
	Ambient Temp.	-20°C~70°C (Standard type)
Temp.	Explosion proof	-40°C~60°C(T5) / -40°C~40°C(T6)
	Linearity	±1.0% F.S.
Sensitivity	±0.2% F.S.	±0.5% F.S.
Hysteresis	±1.0% F.S.	
Repeatability	±0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Weight	2.8kg	

Product code

Model	TS600	R				
Acting type	Rotary type	R				
Explosion proof type	Non-explosion proof	N				
	Ex dmb IIB T5/T6	B				
	Ex dmb IIC T5/T6	C				
	Ex ia IIC T5/T6	A				
	ATEX&IECEx version Ex db mb IIC T6/T5 Gb Ex ia IIC T6/T5 Gb	X				
Connection	Conduit entry	Air connection				
	G1/2	PT1/4	1			
	G1/2	NPT1/4	2			
	NPT1/2	NPT1/4	3			
	M20	NPT1/4	4			
Lever type	M6 x 39L				1	
	NAMUR				5	
Ambient Temp.	-20°C~70°C					S
	-20°C~120°C *					H
	-40°C~70°C					L
	-60°C~70°C(For Russia EAC)					U
Option	None					0
	With Position transmitter(4~20mA)					1
	Internal Limit switch*					2
	External Limit switch box (According to TS410 model number)					3
	Internal Position transmitter and Limit switch*					4
	External Position transmitter and Limit switch (According to TS510 model number)					5
	With external Limit switch mounting device					6
With Position transmitter and external Limit switch mounting device*					7	

Dimension [Unit:mm]



Notes:

1. * Must be Non-explosion proof type.

2. Conduit entry for ATEX/IECEx/CCC/NEPSI should be "NPT1/2" or "M20".



Description

TS610 series Pneumatic-Pneumatic Positioner controls the valve stroke in response to an input signal pressure of 0.02~0.1MPa from the controller.

Features



TS610L(Linear type)



TS610R(Rotary type)

- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Low air consumption
- + By-pass valve (A/M switch) installed
- + Position transmitter and Limit switch (Options)

Options



Option code No.1
TS610R with Dome cover



Option code No.2
TS610R with Position transmitter
(External TS500)



Option code No.3 and No.6
TS610R with Position transmitter
(External TS510)



Option code No.4
TS610R with Limit switch box
(External TS400)



Option code No.5
TS610R with Limit switch box
(External TS410)



Option code No.7
TS610R With external Limit switch
mounting device

Specifications

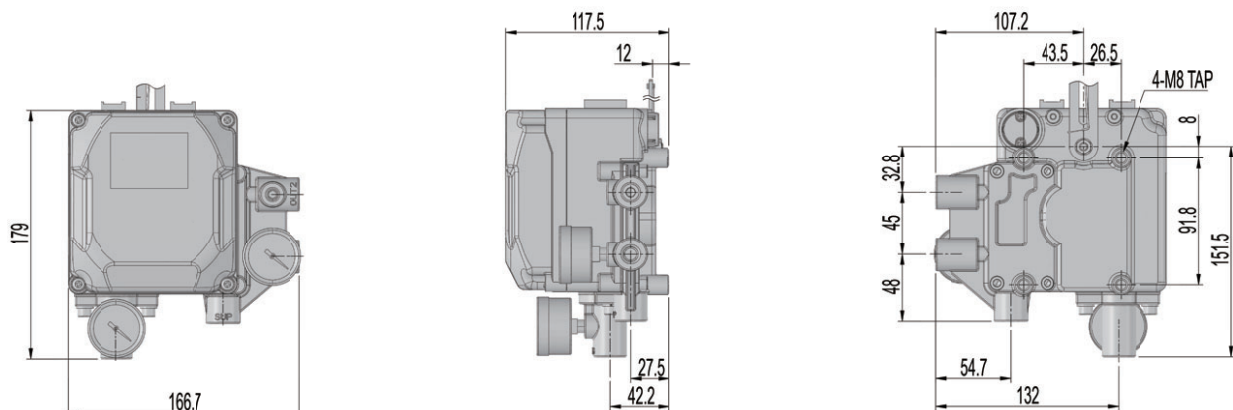
Model	TS610(Single)	TS610(Double)
Input signal	0.02~0.1MPa	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm (Linear), 0~90°(Rotary)	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	NPT1/8	
Enclosure	IP66 (EN60529)	
Ambient Temp.	-20°C~70°C (Standard type)	
Linearity	±1.0% F.S.	±2.0% F.S.
Sensitivity	±0.2% F.S.	±0.5% F.S.
Hysteresis	±1.0% F.S.	
Repeatability	±0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Painting	Polyester powder coating	
Weight	2.8kg	

Product code

Model	TS610					
Acting type	Linear type	L				
	Rotary type	R				
Connection	PT1/4		1			
	NPT1/4		2			
	G1/4		3			
Lever (Linear type)	10 ~ 40mm			1		
	40 ~ 70mm			2		
	70~100mm			3		
	100~150mm			4		
Lever (Rotary type)	M6 x 39L			1		
	NAMUR			5		
Ambient Temp.	-20°C~70°C				S	
	-20°C~120°C				H	
	-40°C~70°C				L	
	-60°C~70°C				U	
Option	None					0
	With Dome cover					1
	External position transmitter (TS500)					2
	External Position transmitter (TS510)					3
	External Limit switch (TS400)					4
	External Limit switch (TS410)					5
	External Position transmitter and Limit switch (TS510)					6
With Limit switch mounting device					7	

*Option No.1~7 are only available with TS610R(Rotary type).

Dimension [Unit:mm]



Description

Volume Booster TS100 is one-to-one Signal to output supply Air, when used with a positioner/actuator, it is a control device to increase the stroking speed of control valves.

Features



TS100



TS120



TS110

- + Precise and fast response
- + Soft seats provide tight shut off
- + Adjustable Sensitivity
- + Options available (High and Low temperature)
- + Speed up valve regulation

Specifications

Model	TS100	TS110	TS120	
Max supply pressure	1MPa			
Signal pressure	0.14~0.7MPa			
Signal to output ratio	1:1			
Linearity	1%			
Flow capacity(CV)	Exhaust	1.3	2.1	5.2
	Output	1.2	2.7	4.9
Supply / Output port	NPT(PT)1/4	NPT(PT)1/2	NPT3/4	
Signal port	NPT1/4, PT1/4			
Ambient temperature	-20°C~70°C			
Material	Aluminum die cast			
Weight	0.55kg	0.75kg	1.9kg	

Product code

Model			
Supply / Output port size	1/4"	TS100	N P
	1/2"	TS110	
	3/4"	TS120	
Air connection type	NPT		N
	PT		P
Ambient temperature	-20°C~70°C		S
	-20°C~120°C		H
	-40°C~70°C		L
	-60°C~70°C		U

Description

The pneumatic Lock Up Valve TS200 series shuts off the signal pressure line either when the air supply falls below an adjusted value or upon complete air supply failure. This causes the actuator to remain in its last position.

Features



- + Quick Response and high precision
- + Easy set-up of lock up air pressure
- + Small size and light weight
- + Options available (High & Low Temperature)

Specifications

Model	TS200S TS205S	TS200D TS205D	TS210S TS215S	TS215D TS215D
Signal pressure	0.14~0.7MPa			
Max supply pressure	1MPa			
Max lock up pressure	0.7MPa			
Differential pressure	Below 0.01MPa			
Flow capacity(CV)	0.9		1.8	
In/Out connection	NPT1/4, PT1/4		NPT3/8, PT3/8	
Signal connection	NPT1/4, PT1/4			
Operating temperature	-20°C~70°C(Standard type)			
Material	TS200, TS210		Aluminum die cast	
	TS205, TS215		Stainless steel 316	
Weight	0.5kg	0.6kg	1.2kg	2.1kg
	1.2kg	1.6kg	-	-

Product code

Model				
Model	1/4 (Aluminum)	TS200		
	3/8 (Aluminum)	TS210		
	1/4 (STS316)	TS205		
	3/8 (STS316)	TS215		
Acting type	Single		S	
	Double		D	
Air connection	NPT			N
	PT			P
Ambient temperature	-20°C~70°C			S
	-20°C~120°C			H
	-40°C~70°C			L
	-60°C~70°C			U

Description

Snap Acting Relay is a device that moves the control valve to the desired position in case of an emergency by switching or locking OUT port of pneumatic pipe when the signal pressure is lower than the set pressure.

Features



- + Quick Response and high precision
- + Easy set-up of lock up air pressure
- + Can be performed Lock up valve
- + Options available (High & Low Temperature)

Specifications

Model	TS250S	TS250D	TS260S	TS260D
Signal pressure	0.14~0.7MPa			
Max supply pressure	1MPa			
Max lock up pressure	0.7MPa			
Differential pressure	Below 0.01MPa			
Flow capacity(CV)	0.9	1.8		
In/Out connection	NPT1/4, PT1/4		NPT3/8, PT3/8	
Signal connection	NPT1/4, PT1/4			
Operating temperature	-20°C~70°C(Standard type)			
Material	Aluminum die cast			
Weight	0.6kg	1.1kg	1.2kg	2.1kg

Product code

Model				
Model	1/4 (Aluminum)	TS250		
	3/8 (Aluminum)	TS260		
	1/4 (STS316)	TS255		
	3/8 (STS316)	TS265		
Acting type	Single		S	
	Double		D	
Air connection	NPT			N
	PT			P
Ambient temperature	-20°C~70°C			S
	-20°C~120°C			H
	-40°C~70°C			L
	-60°C~70°C			U

20 TS300/TS310/TS305/TS315 Series

Air Filter Regulator

Description

Air filter regulator TS300 series are used to provide pneumatic measuring and control equipment with a constant air supply.

Features



- + Remove particles from compressed air
- + Excellent flow and regulation characteristics
- + Filter and Regulator in one compact unit
- + Easy Installation, Repair and Replacement
- + 2 gauge port, 5 micron filter
- + Auto drain option

Specifications

Model	TS300	TS310	TS305	TS315
Max supply pressure	1.7MPa			
Max output pressure	0.84MPa			
Air connection	NPT1/4, PT1/4	NPT1/2, PT1/2	NPT1/4, PT1/4	NPT1/2, PT1/2
Gauge connection	NPT1/4, PT1/4			
Operating Temp.	-20°C~70°C (Standard type)			
Filtering capacity	5 micron			
Material	Aluminum die cast		Stainless steel 316	
Weight	0.6kg	0.9kg	1.5kg	2.2kg

Product code

Model					
Model	Aluminium1/4"	TS300			
	Aluminium1/2"	TS310			
	STS 316 1/4"	TS305			
	STS 316 1/2"	TS315			
Air connection type	NPT		N		
	PT		P		
Ambient temperature	-20°C~70°C			S	
	-20°C~120°C			H	
	-40°C~70°C			L	
	-60°C~70°C			U	
Pressure gauge	None				0
	Included (0~1MPa)				1
Option	None				0
	Auto drain				A



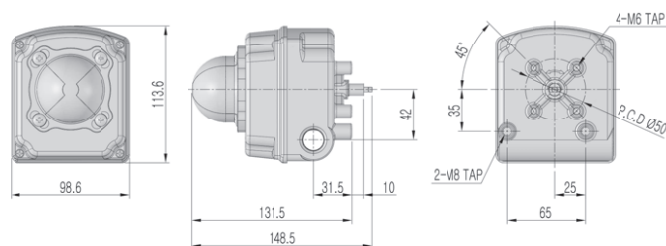
Description

Limit switch box is a device which notifies the central control room or controller when the valve reaches the set position.

Features



Dimension [Unit:mm]



- + Compact design with high visibility indicator
- + Aluminum die casting with polyester powder coating
- + With spring loaded cams, easily set limit positions
- + Dual cable entries
- + NAMUR VDI/VDE 3845

Specifications

Model	TS400M	TS400P
Switch type	Mechanical switch 2xSPDT	Inductive proximity sensor
	KW3A-16Z3-A100 (Dongnan)	PSN17-5DNU (Autonics)
Switch rating	AC	16A,125/250V
	DC	30V, 10A
Ingress protection	IP67	
Conduit entry	2 x NPT1/2, G(PF)1/2, M20	
Ambient Temp.	-20°C~70°C (Standard type)	
Terminal	8 Points	
Material	Aluminum die cast	
Painting	Polyester powder coating	
Weight	0.7kg	

Product code

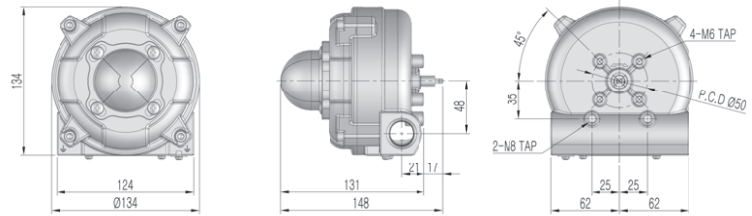
Model	TS400		
Switch type	Mechanical(2xSPDT)	M	
	Proximity	P	
	Mechanical (2xDPDT)	D	
Conduit entry	NPT1/2		1
	M20x1.5P		2
	G1/2		3
Bracket type	None		0
	ST-1 (30x80,H20)		1
	ST-2 (30x80,H30)		2
	ST-3 (30x130,H30)		3
	ST-4 (30x130,H50)		4

Description

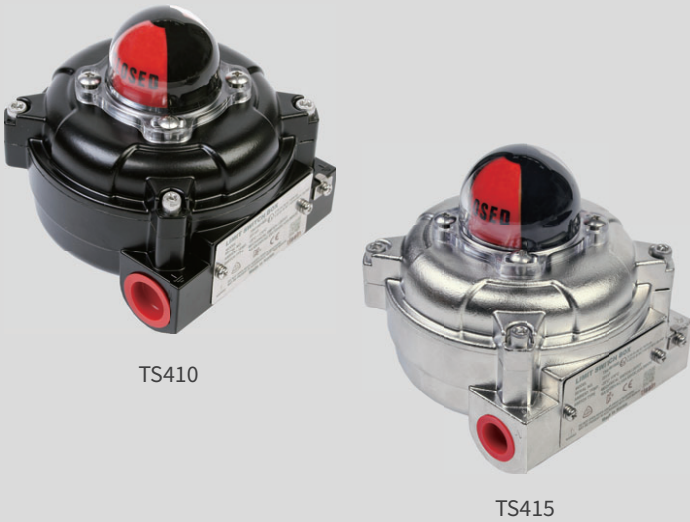
Limit switch box is a device which notifies the central control room or controller when the valve reaches the set position

Features

Dimension [Unit:mm]



- + Flame proof type
- + Compact design with high visibility indicator
- + Aluminum die casting with polyester power coating
- + With spring loaded cams, easily set limit positions
- + Dual cable entries
- + NAMUR VDI/VDE 3845



TS410

TS415

Specifications

Model	TS410M	TS415M	TS410P	TS415P
Switch type	Mechanical switch 2xSPDT		Inductive proximity sensor	
	KW3A-16Z3-A100 (Dongnan)		PSN17-5DNU (Autonics)	
Switch rating	AC	16A, 125/250V	-	
	DC	30V, 10A	10~30V	
Explosion proof	Ex db IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db			
Ingress protection	IP67			
Conduit entry	2 x NPT1/2, NPT3/4, M20, M25			
Ambient Temp.	-20°C~70°C (Standard type)			
Terminal	8 Points			
Painting	Polyester powder coating	-	Polyester powder coating	-
Material	Aluminum die cast	STS 316	Aluminum die cast	STS 316
Weight	1.3kg	3.2kg	1.3kg	3.2kg

Product code

Model	TS410				
Material	Aluminum	TS410			
	STS 316	TS415			
Switch type	Mechanical(2xSPDT)	M			
	Proximity	P			
	Mechanical (2xDPDT)	D			
Explosion proof type	ATEX&IECEX		A		
	KCS		K		
	CCC&NEPSI		C		
	EAC(TR CU)		E		
Conduit entry	NPT1/2			1	
	M20x1.5P			2	
	NPT3/4			3	
	M25x1.5P			4	
Bracket type	None				0
	ST-1 (30x80,H20)				1
	ST-2 (30x80,H30)				2
	ST-3 (30x130,H30)				3
	ST-4 (30x130,H50)				4



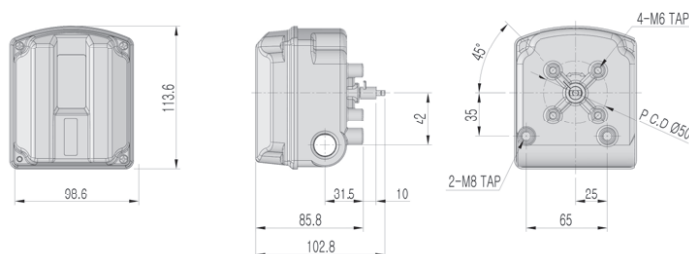
Description

TS500 Series is 2 wire type transmitter which transmits 4 ~ 20 mA DC signal according to changes in valve or damper position.

Features



Dimension [Unit:mm]



- + 2 wire connection type
- + LCD displays current output signal
- + Easy and simple setting with 2 buttons
- + High accuracy and reliability
- + Two or five points smart setup

Specifications

Model	TS500
Connection type	2 Wire
Supply voltage	9~28V DC
Output signal	4~20mA
Ingress protection	IP67
Conduit entry	2 x NPT1/2, G1/2, M20
Ambient Temp.	-40°C~70°C (Standard type)
Linearity	±1% F.S.
Hysteresis	±0.2% F.S.
Sensitivity	±0.2% F.S.
Material	Aluminum die cast
Painting	Polyester powder coating
Weight	0.6kg

Product code

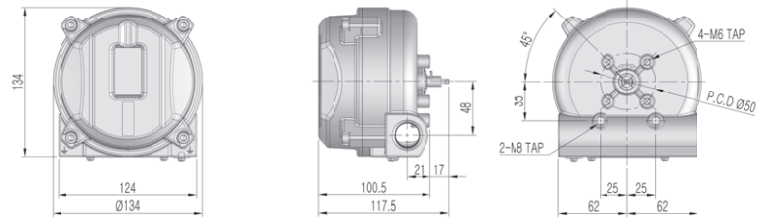
Model	TS500			
Motion type	Linear	L		
	Rotary	R		
Conduit entry	NPT1/2		1	
	M20x1.5P		2	
	G1/2		3	
Lever type	Linear (10~80mm)			1
	Linear (70~150mm)			2
	Rotary (NAMUR)			5
Option	With LCD			1
	Without LCD			2
	With Limit switch and Dome cover			3
	With Limit switch and LCD			4



Description

TS500 Series is 2 wire type transmitter which transmits 4 ~ 20 mA DC signal according to changes in valve or damper position.

Dimension [Unit:mm]



Features



TS510

TS515

- + Flame proof type
- + LCD displays current output signal
- + Easy and simple setting with 2 buttons
- + High accuracy and reliability
- + Two or five points smart setup
- + Limit switch option

Specifications

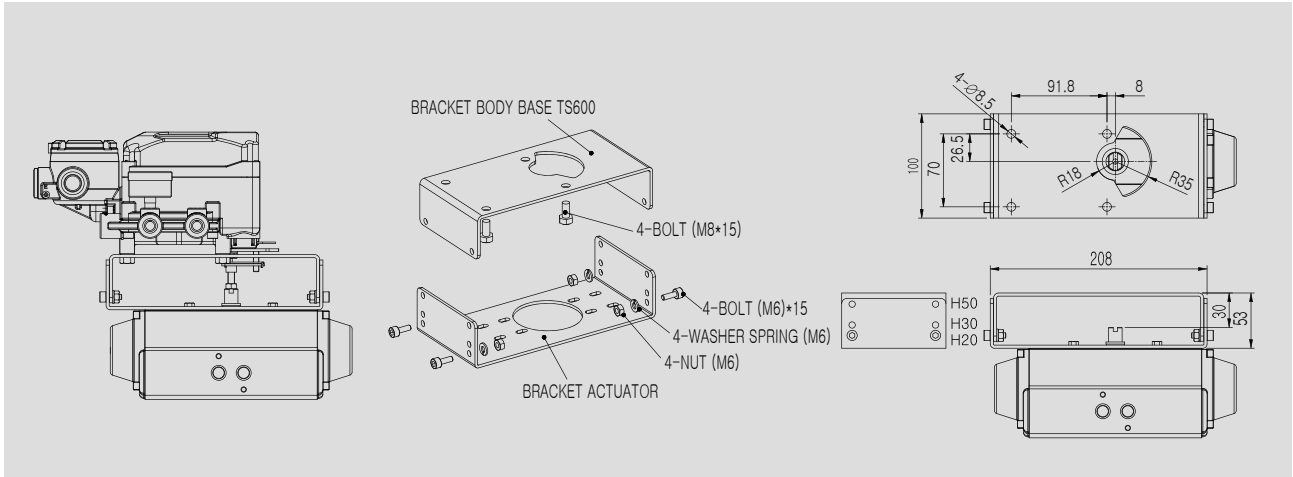
Model	TS510	TS515
Connection type	2 Wire	
Supply voltage	9~28V DC	
Output signal	4~20mA DC	
Explosion proof	Ex db IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db	
Ingress protection	IP67	
Conduit entry	2 x NPT1/2, NPT3/4, M20, M25	
Explosion proof Temp.	-20°C~80°C (T5)/-20°C~70°C (T6)	
Ambient Temp.	-20°C~70°C (Standard type)	
Linearity	±1% F.S.	
Hysteresis	±0.2% F.S.	
Sensitivity	±0.2% F.S.	
Material	Aluminum die cast	Stainless steel 316
Painting	Polyester powder coating	-
Weight	1.4kg	3.3kg

Product code

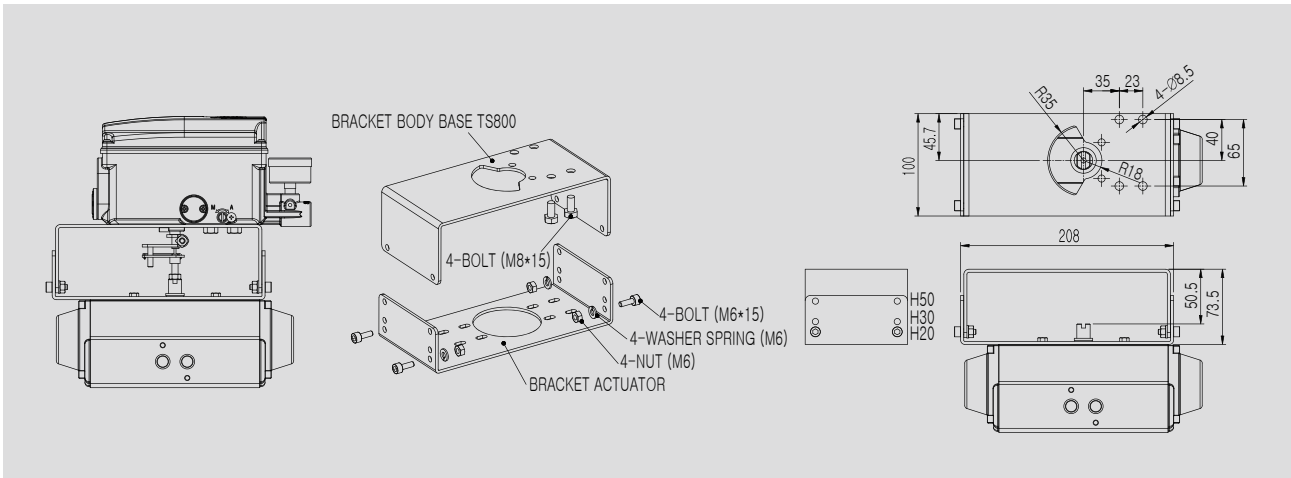
Model	TS510				
Material	Aluminum	TS510			
	STS 316	TS515			
Motion type	Linear		L		
	Rotary		R		
Explosion proof type	ATEX&IECEX			A	
	KCS			K	
	CCC&NEPSI			C	
	EAC(TR CU)			E	
Conduit entry	NPT1/2				1
	M20x1.5P				2
	NPT3/4				3
	M25x1.5P				4
Lever type	Linear (10~80mm)				1
	Linear (70~150mm)				2
	Rotary (NAMUR)				5
Option	With LCD				1
	Without LCD				2
	With Limit switch and Dome cover				3
	With Limit switch and LCD				4



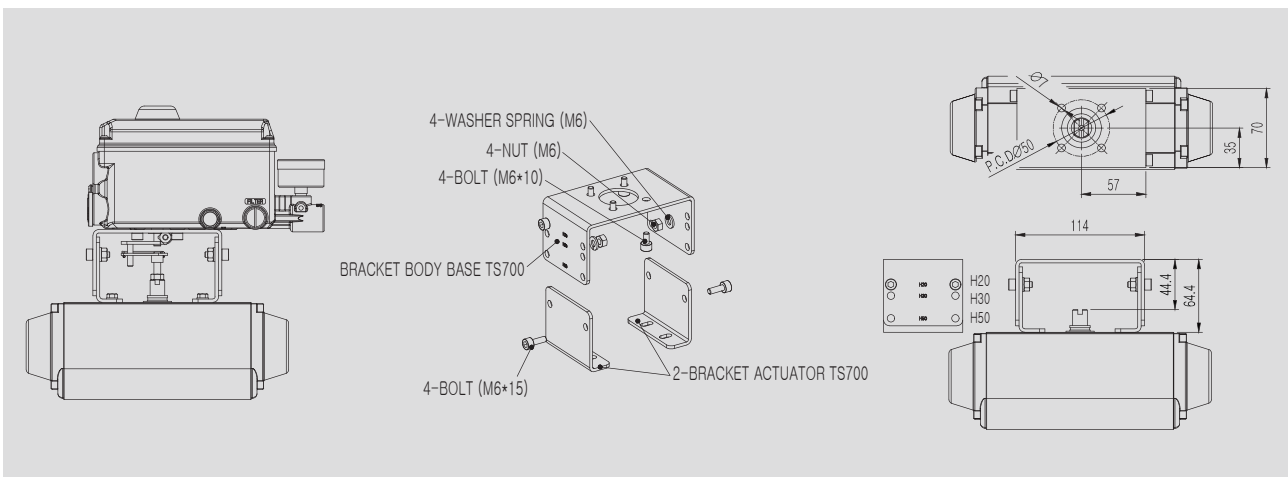
TS600R Bracket



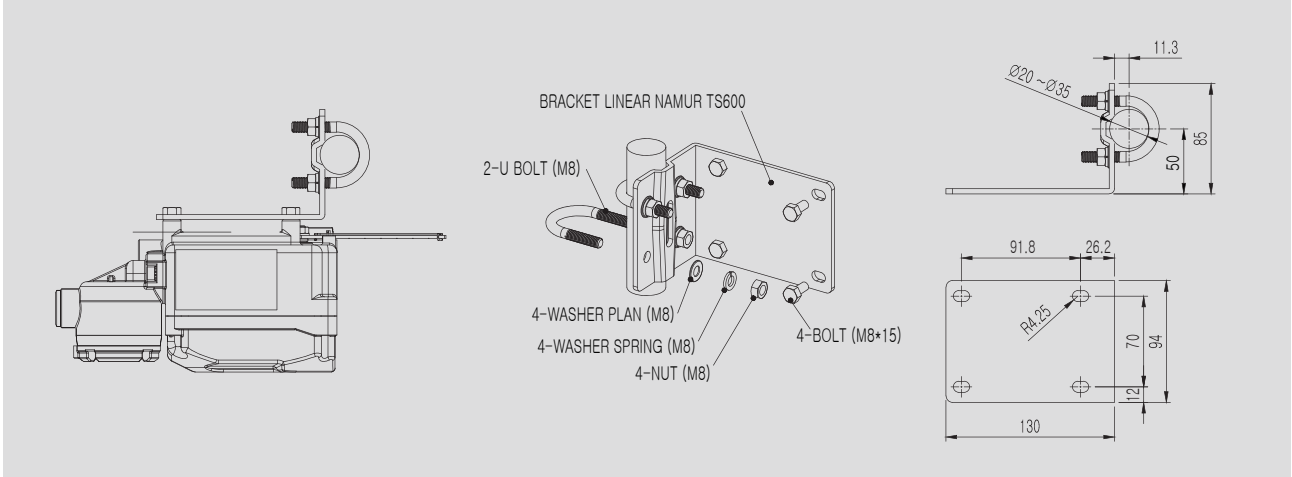
TS800R / TS900R Bracket



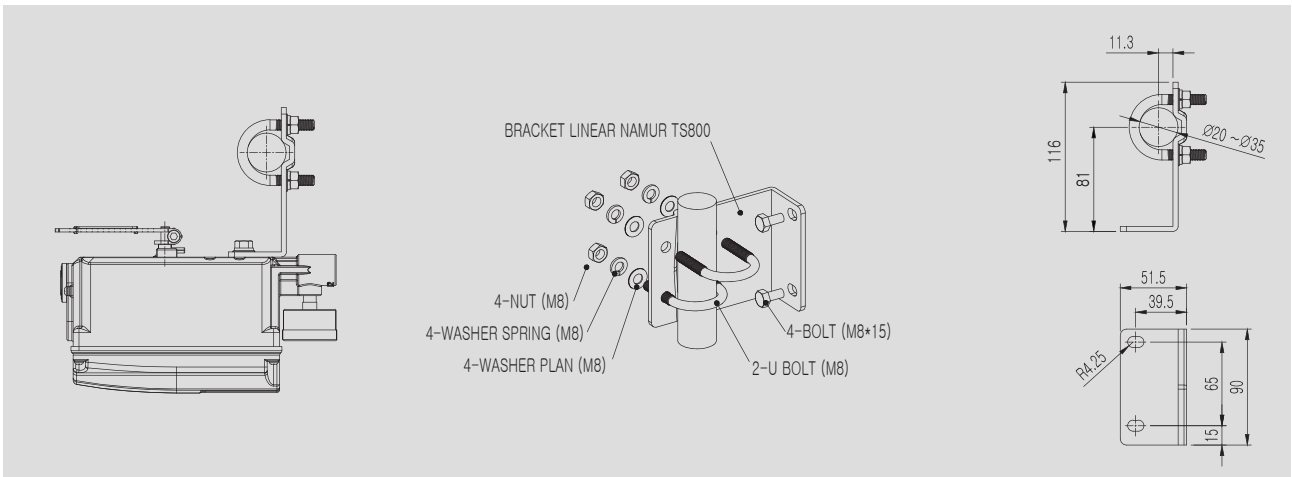
TS700R Bracket



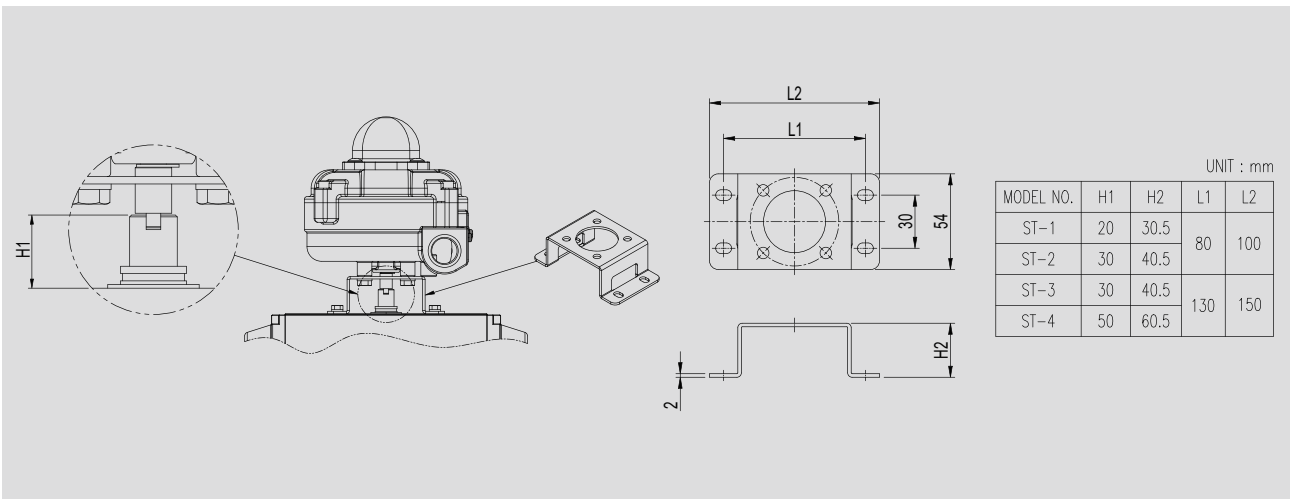
TS600L NAMUR type bracket



TS800L / TS900L / TS700L NAMUR type bracket



TS400 / TS410 / TS415 / TS500R / TS510R / TS515R bracket



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

