

Smart Positioners YT-2500 / YT-2550 / YT-2501

Piezo technology with communications

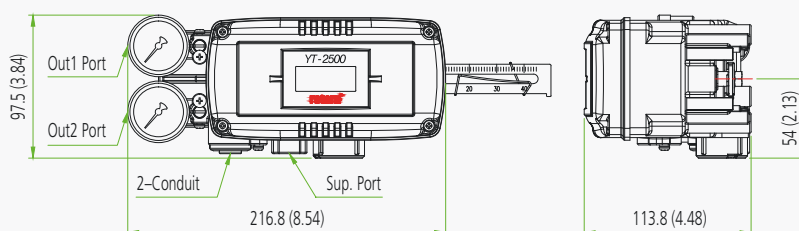
Design features

- **Fail-freeze and fail-safe functions.** Enables the valve maintain the last position (fail-freeze) or move to a pre-determined position (fail-safe) on the loss of electrical power supply or the pneumatic supply air.
- **Auto calibration.** Simple menu structure with options to auto calibrate all parameters or zero and end points only.
- **LCD display.** Alphanumeric digital display for process values and calibration.
- **Low air consumption level.** Almost zero air leakage.

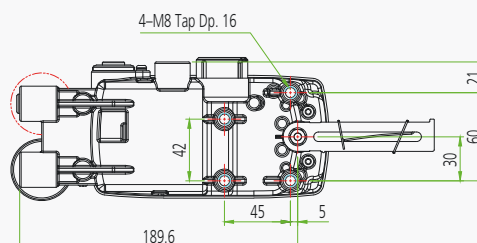
- **Feedback signal.** Analogue feedback signals with 4-20 mA, mechanical and proximity switch options.
- **PD control.** Pre-calibrated and user configurable variables via front panel pushbutton menu.
- **HART® communication.** Allows commands, position feedback and diagnostics to be sent digitally over the current loop.
- **Front panel pushbuttons for configuration.** Four robust and positive acting pushbuttons for field configuration.



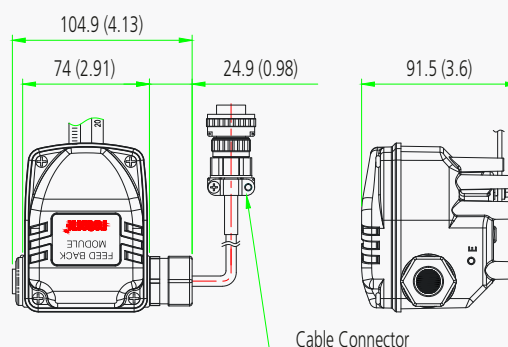
YT-2500 Aluminium Enclosure



YT-2550 Stainless Steel Enclosure



YT-2501 Remote Mounting Option



Dimensions: mm (Inches ")

Smart Positioners YT-2500 / YT-2550 / YT-2501

Item Type		YT-2500	YT-2550	YT-2501
Input Signal		4-20 mA DC		
Supply Pressure		0.14 to 0.7 MPa = 1.4 to 7 bar = 20 to 102 psi		
Stroke	Linear Type	10 to 150 mm (0.4 to 6")		
	Rotary Type	55 to 110°		
Impedance		Max. 500 Ω @ 20 mA DC		
Air Connection		Rc 1/4, 1/4 NPT, G 1/4	1/4 NPT	Rc 1/4, 1/4 NPT, G 1/4
Gauge Connection		Rc 1/8, 1/8 NPT	1/8 NPT	Rc 1/8, 1/8 NPT
Conduit		G 1/2, 1/2 NPT, M20x1.5P	G 1/2	G 1/2, 1/2 NPT, M20x1.5P
Operating Temp.	Standard Type	-30 to +80 °C (-22 to +176 °F) ¹		
	Explosion Temp.	-30 to +60 °C (-22 to +140 °F) (T5) -30 to +40 °C (-22 to +104 °F) (T6)		
	Remote Sensor	-40 to +120 °C (-40 to +248 °F)		
Linearity		±0.5% F.S.		
Hysteresis		±0.5% F.S.		
Sensitivity		±0.2% F.S.		
Repeatability		±0.3% F.S.		
Air Consumption	Fail-freeze	0.01 LPM (sup = 0.14 MPa) 0 CFM (sup = 20 psi)		
	Fail-safe	0.06 LPM (sup = 0.14 MPa) 0.002 CFM (sup = 20 psi)		
Flow Capacity	Fail-freeze	60 LPM (sup = 0.14 MPa) 2.12 CFM (sup = 20 psi)		
	Fail-safe	40 LPM (sup = 0.14 MPa) 1.41 CFM (sup = 20 psi)		
Output Characteristics		Linear, EQ%, Quick Open, User Set (5 or 18 Points)		
Material		Aluminium Diecasting	Stainless Steel 316	Aluminium Diecasting
Ingress Protection		IP66		
Explosion Protection Type		ATEX / IECEx Ex ia IIC T5/T6 Gb Ex ia IIIC T100°C/T85°C IP6X		
		CCC Ex ia IIC T5/T6 Gb Ex iaD 21 T100°C/T85°C		
		KCs Ex ia IIC T5/T6 Ex iaD IIIC T100°C/T85°C		
		NEPSI (YT-2500 only) Ex ia IIC T5/T6 Gb Ex iaD 21 T100°C/T85°C		
		EAC (YT-2500 only) 1Ex ia IIC T5...T6 Gb X Ex ia IIIC T100°C...T85°C Db X IP66		
Communication (Option)		HART (ver.5)		
L/S Rating	Mechanical Type (Omron)	AC 125 V, 3 A DC 30 V, 2 A		-
	Proximity Type (P&F)	DC 8.2 V 8.2 mA		-
Weight	Body	1.5 kg (3.3 lb)	2.9 kg (6.4 lb)	1.6 kg (3.4 lb)
	Linear Remote sensor	-	-	0.6 kg (1.3 lb)
	Rotary Remote sensor	-	-	1.0 kg (2.1 lb)

Product Code

YT-2501 - L - S - N - 2 - 4 - 2 - 3 - S - (1)

Model

YT-2500 = Aluminium housing
YT-2550 = Stainless steel house
YT-2501 = Aluminium housing with remote sensor

Motion Type

L = Linear
R = Rotary

Acting Type

S = Single
D = Double

Explosion Protection

Check certification restrictions.

N = Non-Explosion
i = ATEX, IECEx, KCs, NEPSI (YT-2500 only)
E = EAC (YT-2500 only)
Z = CCC

Lever Type

Linear	Rotary
1 = 10 to 40 mm	1 = M6 x 34L (N/A for YT-2501)
2 = 20 to 70 mm	2 = M6 x 63L (N/A for YT-2501)
3 = 50 to 100 mm	3 = M8 x 34L (N/A for YT-2501)
4 = 100 to 150 mm	4 = M8 x 63L (N/A for YT-2501)
	5 = NAMUR

Conduit & Air Connection

1 = G1/2 - Rc1/4 (N/A for YT-2550)
2 = G1/2 - 1/4 NPT
3 = G1/2 - G1/4 (N/A for YT-2550)
4 = M20 - 1/4 NPT (YT-2501 will come with electrical conduit adaptors, N/A for YT-2550)
5 = 1/2 NPT - 1/4 NPT (YT-2501 will come with electrical conduit adaptors, N/A for YT-2550)

Communications

0 = None
2 = HART protocol communication

Output Options

0 = None
1 = 4-20 mA feedback
2 = Limit switch - Mechanical Type (YT-2500 and YT-2550R only)
3 = Limit switch - Proximity Type (YT-2500 and YT-2550R only)¹
4 = 4-20 mA feedback + Limit switch - Mechanical Type (YT-2500 and YT-2550R only)
5 = 4-20 mA feedback + Limit switch - Proximity Type¹ (YT-2500 and YT-2550R only)¹

Fail Option

F = Fail-freeze
S = Fail-safe

Cable Length (YT-2501 only)

Standard cable length is 5 m.
1 = 5 m
2 = 10 m
3 = 15 m
4 = 20 m

Notes:

1. Inductive proximity limit switch internal type: -25 to +80 °C (-13 to 176 °F).