

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

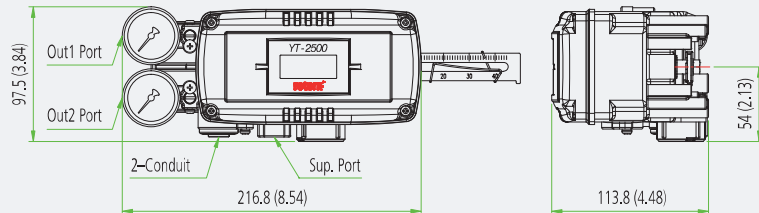
Piezo technology with communications

Design features

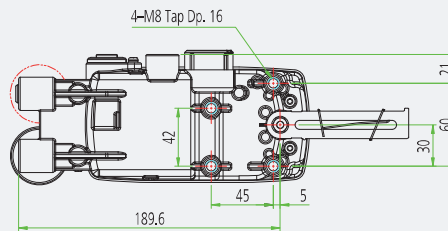
- **Fail-freeze and fail-safe functions.** Enables the valve maintain the last position (fail-freeze) or move to a pre-determined position (fail-safe) on the loss of electrical power supply or the pneumatic supply air.
- **Auto calibration.** Simple menu structure with options to auto calibrate all parameters 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 to 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.



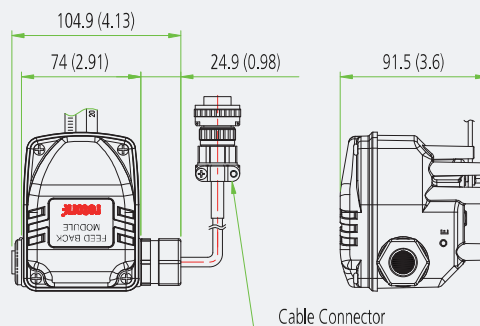
YT-2500 Aluminium Enclosure



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 to 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 T85°C/T100°C IP6X | | |
| | | CCC Ex ia IIC T5/T6 Gb Ex iaD 21 T100/T85 | | |
| | | KCs Ex ia IIC T5/T6, EX iaD IIIC T100°C/T85°C | | |
| | | NEPSI (only YT-2500) Ex ia IIC T5/T6 Gb Ex iaD 21 T100/T85 | | |
| | | EAC (only YT-2500) 1Ex ia IIC T6...T5 Gb X Ex ia IIIC T85°C...T100°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

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

Lever Type

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

Conduit & Air Connection

1 = G1/2 - Rc1/4
2 = G1/2 - 1/4 NPT (YT-2550 only available with conduit connection code 2)
3 = G1/2-G1/4
4 = M20-1/4 NPT (YT-2501 will come with electrical conduit adaptors)
5 = 1/2 NPT-1/4 NPT (YT-2501 will come with electrical conduit adaptors)

Communications

0 = None
2 = HART protocol communication

Output Options

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

Fail Option

F = Fail-freeze
S = Fail-safe

Cable Length (YT-2501 only)

Option for 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).