

# Smart Positioners YT-3301 / YT-3303

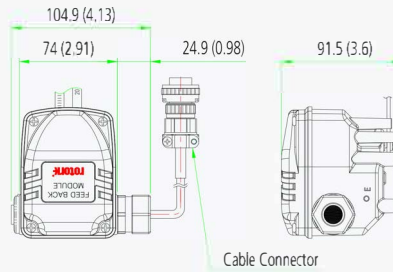
Torque motor technology with communications

## Design features

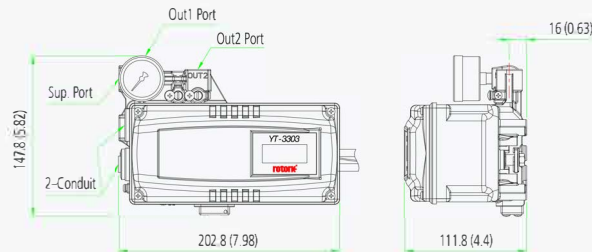
- **Auto calibration.** Simple menu structure with options to auto calibrate all parameters or zero and end points only.
- **LCD display.** Alphanumeric digital display for process values and calibration.
- **Partial Stroke Test (PST).** Fully adjustable Partial Stroke Test. All functionality can be performed and selected locally, through push buttons, or remotely with communication protocol.
- **Feedback signal.** Analogue 4-20 mA position feedback option.
- **PID control.** Pre-calibrated and user configurable variables via front panel pushbutton menu.
- **Auto / Manual switch.** Enables closed-loop automatic valve position control or manual positioning via the A/M switch. The manual mode is useful for troubleshooting, calibration, system testing or as a manual bypass.
- **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.
- **Remote Mounting Option (YT-3301 model).** Remote sensor via cable to enable the positioner to be mounted away from extreme temperature.



### YT-3301 Remote Mounting Option



### YT-3303 Left Side Mounting Option



Dimensions: mm (Inches \*)

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Item Type	YT-3301	YT-3303
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	Rc1/4, 1/4NPT, G1/4	
Gauge Connection	Rc1/8, 1/8NPT	
Conduit	G1/2, M20, 1/2NPT	
Operating Temp.	Standard Type	-30 to +85 °C (-22 to +185 °F)
	Low Temp.	-40 to +85 °C (-40 to +185 °F)
	Arctic Type	-55 to +85 °C (-67 to +185 °F)
	LCD	withstands -55 to +85 °C (-67 to +185 °F) only visible above -40 °C (-40 °F)
Linearity	±0.5% F.S.	
Hysteresis	±0.5% F.S.	
Sensitivity	±0.2% F.S.	
Repeatability	±0.3% F.S.	
Air Consumption	Below 2 LPM (sup = 0.14 Mpa) Below 0.07 CFM (sup = 20 psi)	
Flow Capacity	70 LPM (sup = 0.14 MPa) 2.47 CFM (sup = 20 psi)	
Output Characteristics	Linear, EQ%, Quick Open, User Set (5, 18 Points)	
Material	Aluminium Diecasting	
Ingress Protection	IP66, IP54	IP66
Explosion Protection Type	<b>ATEX / IECEx</b> Ex ia IIC T5/T6 Gb Ex ia IIIC T100°C/T85°C Db IP66	
	<b>CCC</b> Ex ia IIC T5/T6 Gb Ex iaD 21 T100°C/T85°C	
	<b>KCs</b> Ex ia IIC T6/T5 Ex ia IIIC T85°C/T100°C	
	<b>CSA</b> CSA certificate	
	<b>FM</b> Class I, Div 1, Groups A, B, C & D Class I, Zone 0 Aex ia IIC Class II/III, Div 1, Groups E, F & G Class II/III, Div 2, Groups A, B, C, D, E, F & G NEMA Type 4X, IP66, IP54 Ambient temp: -40 to +60°C (T5) / -40 to +40°C (T6)	
	<b>EAC</b> 1Ex ia IIC T6/T5 Ex ia IIIC T85/T100	
	<b>INMETRO</b> Ex ia IIC T6/T5 Gb Ex ia IIC T85°C/T100°C Db	
	Communication (Option)	
	HART (ver.7)	
	Weight	Body
Remote Sensor		1 kg (2.1 lb)      -

## Product Code

**YT-3301 - L - S - N - 2 - 4 - 2 - 1 - S - (1)**

### Model

YT-3301 = Aluminium housing with remote sensor  
YT-3303 = Aluminium housing with right side lever

### Motion Type

L = Linear  
R = Rotary

### Acting Type

S = Single  
D = Double

### Explosion Protection

N = Non-explosion  
I = Intrinsically Safe ATEX, IECEx, KCs, INMETRO  
E = Intrinsically Safe EAC  
A = Intrinsically Safe CSA, FM  
Z = Intrinsically Safe 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-3301)

### Conduit & Air Connection

1 = G1/2 - Rc1/4  
2 = G1/2 - 1/4 NPT  
3 = G1/2 - G1/4  
4 = M20 - 1/4 NPT (will come with electrical conduit adaptors)  
5 = 1/2 NPT-1/4 NPT (will come with electrical conduit adaptors)

### Communications

0 = None  
2 = HART protocol communication

### Output Options

0 = None  
1 = 4 to 20 mA feedback

### Operating Temp. (Non-explosionproof)<sup>1</sup>

S = -30 to +85 °C (-22 to +185 °F) (N/A for EAC)  
L = -40 to +85 °C (-40 to +185 °F)  
A = -55 to +85 °C (-67 to +185 °F) (EAC only)

### Cable Length (YT-3301 only)

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

### Notes:

1. This option is just the normal operating temperature of the product and is not related to explosion protection temperature. See certificates for explosion protection temperature.