

# Smart Positioners YT-3300 / YT-3350 / YT-3301 / YT-3303

Torque motor technology with communications

## Design features

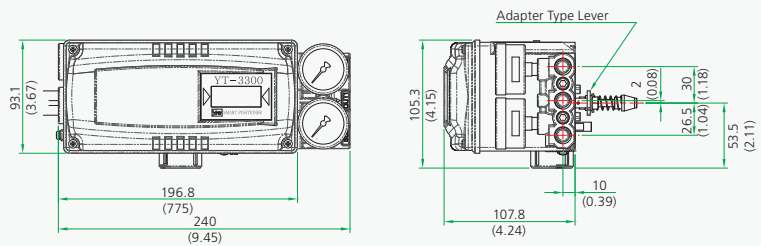
- **Auto calibration.** Simple menu structure with options to auto calibrate all parameters or zero and end points only.
- **LCD display.** Alphanumeric digital display for process values and calibration.
- **Partial Stroke Test (PST).** Fully adjustable Partial Stroke Test. All functionality can be performed and selected locally, through push buttons, or remotely with communication protocol.
- **Feedback signal.** Analogue and Digital feedback signals with 4 to 20 mA, mechanical and proximity switch options (Limit switch options for YT-3300 and YT-3350 models).
- **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.** 4 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-3300 Aluminium Enclosure

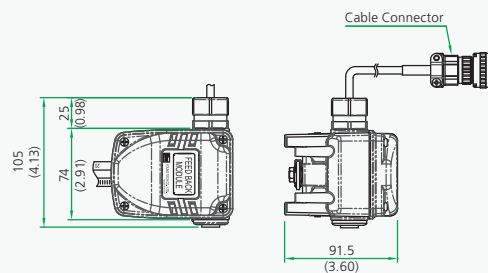


### YT-3350 STS316 Enclosure

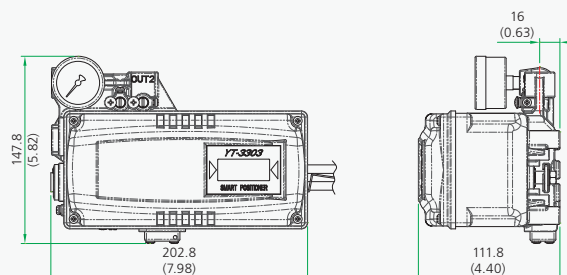


Dimensions: mm (Inches ")

### YT-3301 Remote Mounting Option



### YT-3303 Left Side Mounting Option



# Smart Positioners YT-3300 / YT-3350 / YT-3301 / YT-3303

Item Type	YT-3300	YT-3303	YT-3350	YT-3301	
Input Signal	4 to 20 mA DC				
Supply Pressure	0.14 to 0.7 MPa (1.4 to 7 bar)				
Stroke	Linear Type	10 to 150 mm			
	Rotary Type	0 to 90°			
Impedance	Max. 500 Ω @ 20 mA DC				
Air Connection	PT(NPT,G)1/4	NPT1/4	PT(NPT,G)1/4		
Gauge Connection	PT(NPT)1/8	NPT1/8	PT(NPT)1/8		
Conduit	G(PF,NPT)1/2, M20	G(PF)1/2	G(PF,NPT)1/2, M20		
Operating Temp.	Standard Type	-30 to 85 °C (-22 to 185 °F)			
	Low Temp. Type	-40 to 85 °C (-40 to 185 °F)			
	LCD	-30 to 85 °C (-22 to 185 °F)			
	Explosion Temp.	-40 to 60 °C (T5) -40 to 40 °C (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	Below 2 LPM (sup = 0.14 MPa)				
Flow Capacity	70 LPM (sup = 0.14 MPa)				
Output Characteristics	Linear, EQ%, Quick Open user set (18 Point)				
Material	Aluminium Diecasting	Stainless Steel 316	Aluminium Diecasting		
Ingress Protection	IP66				
Explosion Protection Type	<b>ATEX, IECEx</b> Ex ia IIC T5/T6 Gb, EX iaD IIIC T100°C/T85°C Db IP66				
	<b>NEPSI</b> Ex ia IIC T5/T6				
	<b>KCs</b> Ex ia IIC T5/T6, EX iaD IIIC T100°C/T85°C				
	<b>CSA</b> Certification in progress				
	<b>FM</b> Class I, Div 1, Groups ABCD Class I, Zone 0 AEx ia IIC Class II/III, Div 1, Groups EFG Class I, II, III, Div 2, Groups ABCDEFG NEMA Type 4X IP66 AMBIENT TEMP: -40 - 60°C (T5) / -40 - 40°C (T6)				
Communication (Option)	HART (ver.7)				
L/S Rating	Mechanical Type (Omron)	AC 125 V, 3 A DC 30 V, 2 A	-	AC 125 V, 3 A DC 30 V, 2 A	-
	Proximity Type (P&F)	DC 8.2 V 8.2 mA	-	DC 8.2 V 8.2 mA	-
Weight	Body	2 kg (4.4 lb)	5.1 kg (11.2 lb)	2 kg (4.4 lb)	
	Remote Sensor	-	-	0.9 kg (2.0 lb)	

## Product Code

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

### Model

YT-3300 = Aluminium housing  
YT-3301 = Aluminium housing with remote sensor  
YT-3303 = Aluminium housing with right side lever  
YT-3350 = Stainless steel housing

### Motion Type

L = Linear  
R = Rotary

### Acting Type

S = Single  
D = Double

### Area Protection

N = Safe Area  
I = Intrinsically Safe ATEX, IECEx, NEPSI, KCs  
A = Intrinsically Safe CSA, FM

### Lever Type

Linear	Rotary	} fork type
0 = 10 to 40 mm	1 = M6 x 34L	
1 = 20 to 100 mm	2 = M6 x 63L	
2 = 90 to 150 mm	3 = M8 x 34L	
3 = 16 to 30 mm	4 = M8 x 63L	
4 = 16 to 60 mm	5 = NAMUR	
5 = 16 to 100 mm		} roller type
6 = 90 to 150 mm		

### Conduit & Air Connection

1 = G1/2 - PT1/4  
2 = G1/2 - NPT1/4  
3 = G1/2 - G1/4  
4 = M20 - NPT1/4  
5 = NPT1/2 - NPT1/4

### Communications

0 = NONE  
2 = HART protocol communication

### Output Options

0 = NONE  
1 = 4 to 20 mA feedback  
2 = Limit Switch - Mechanical Type (YT-3300 and YT-3350 only)  
3 = Limit Switch - Proximity Type (YT-3300 and YT-3350 only)  
4 = 4 to 20 mA + Limit Switch - Mechanical Type (YT-3300 and YT-3350 only)  
5 = 4 to 20 mA + Limit Switch - Proximity Type (YT-3300 and YT-3350 only)

### Operating Temp.

S = -30 to 85 °C  
L = -40 to 85 °C

### Cable Length (YT-3301 only)

Option for YT-3301 only. Standard cable length is 5 m.

1 = 5 m  
2 = 10 m  
3 = 15 m  
4 = 20 m