

Electro-Pneumatic Positioners YT-1000 / YT-1050

Item Type	YT-1000	YT-1050
Input Signal	4 to 20 mA DC	
Impedance	250 ± 15 Ω	
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 100°
Air Connection	Rc 1/4, 1/4 NPT, G 1/4	1/4 NPT
Gauge Connection	Rc 1/8, 1/8 NPT	1/8 NPT
Conduit	G(NPT)1/2, M20	G 1/2
Explosion Protection Type	ATEX, EAC, IECEx, INMETRO (II 2 G) Ex dmb IIB T5	
	KCs Ex dmb IIB T5/T4 / Ex d IIC T5 IP66 /	KCs Ex dmb IIB T5
	TS Ex db mb IIB T5 Gb X	-
	CSA (Class I, Zone 1) Ex dm IIB T5	-
	FM XP-S/I/1/CD/T5 Ta = +60 °C; DIP/II,III/1/EF/G/T5 Ta = +60 °C; Type 4X	-
	CCC Ex d mb IIB T5 Gb Ex d mb IIC T6 Gb Ex ia IIC T6 Ga	CCC Ex d mb IIB T5 Gb
	TIIS Ex dmb IIB T5	
Ingress Protection	YT-1000: IP66, TYPE 4X (FM) YT-1050: IP66	
Linearity	Single	± 1% F.S.
	Double	± 2% F.S.
Hysteresis	±1% F.S.	
Sensitivity	Single	± 0.2% F.S.
	Double	± 0.5% F.S.
Repeatability	± 0.5% F.S.	
Air Consumption	2.5 LPM (sup = 0.14 MPa) 0.8 CFM (sup = 20 psi)	
Flow Capacity	80 LPM (sup = 0.14 MPa) 2.83 CFM (sup = 20 psi)	
Material	Aluminium Diecasting	Stainless steel 316
Weight	YT-1000L: 2.7 kg (6.1 lb) YT-1000R: 2.8 kg (6.2 lb) YT-1050: 5.71 kg (12.6 lb)	

Product Code

YT-1000 - R - S - N - 1 - 1 - 4 - S - 0 - (0)

Model

YT-1000 = Aluminium
YT-1050 = STS316

Motion Type

L = Linear
R = Rotary

Acting Type

S = Single
D = Double

Explosion Protection¹

N = Non-Explosion
M² = Ex d m IIB, ATEX, IECEx,
TS (YT-1000 only), KCs
A = CSA (YT-1000 only)
C = Ex d m IIC KCs (YT-1000 only)
E = Ex d EAC
X = TIIS (YT-1000 only)

T = Ex dm IIB INMETRO
Z = Ex dmb IIB T5 Gb CCC
B = Ex dmb IIC T6 Gb CCC
(YT-1000 only)
G = Ex ia IIC T6 Ga CCC
(YT-1000 only)
F = FM (YT-1000 only)

Lever Type

Linear	Rotary
1 = 10 to 40 mm	1 = M6 X 34L
2 = 30 to 70 mm	2 = M6 X 63L
3 = 60 to 100 mm	3 = M8 X 34L
4 = 100 to 150 mm	4 = M8 X 63L
	5 = NAMUR

Orifice Type

1 = Φ1
2 = Φ2
3 = None

Conduit & Air Connection

YT-1000	YT-1050
1 = G1/2 - Rc1/4	2 = G1/2 - 1/4 NPT (N/A for CCC)
2 = G1/2 - 1/4 NPT	5 = 1/2 NPT - 1/4 NPT (only CCC)
3 = G1/2 - G1/4	
4 = M20 - 1/4 NPT	
5 = 1/2 NPT - 1/4 NPT	

Operating Temp. (Non-explosionproof)³

S = -20 to +70 °C (-4 to +158 °F)
H = -20 to +120 °C (-4 to +248 °F)
L = -40 to +70 °C (-40 to +158 °F)

Option 1

YT-1000L	YT-1000R
0 = None	0 = None (St'd)
2 ⁴ = 4 to 20 mA feedback (Internal)	1 = Dome Cover
3 ⁴ = 4 to 20 mA feedback with LCD (Internal)	

Option 2 (YT-1000R only)

0 = None
1 = 4 to 20 mA feedback (Internal - only for non-explosion area protection)
2 = 4 to 20 mA feedback (External, SPTM-6V, Explosionproof)
3 = Limit Switch (Internal - only for non-explosion area protection)
4⁵ = Limit Switch (External, YT-850 (Non-explosion) or
YT-870 (Explosionproof))
5 = 4 to 20 mA feedback + Limit Switch
(Internal - only for non-explosion area protection)
6 = SPTM + Limit Switch (External, YT-870, Explosionproof)

Notes:

- Only S of Operating Temperature is available for M (except KCs of YT-1000), T, F, P, X, Z, B, G
Only S, H of Operating Temperature are available for M (only KCs of YT-1000)
Only S, L of Operating Temperature are available for A
Only L of Operating Temperature is available for E.
- Please put the name of the certificate in a purchase order.
- 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.
- Non-explosionproof.
- Please select one of between YT-850 and YT-870 and then put the name in a purchase order.

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

Torque motor technology with communications

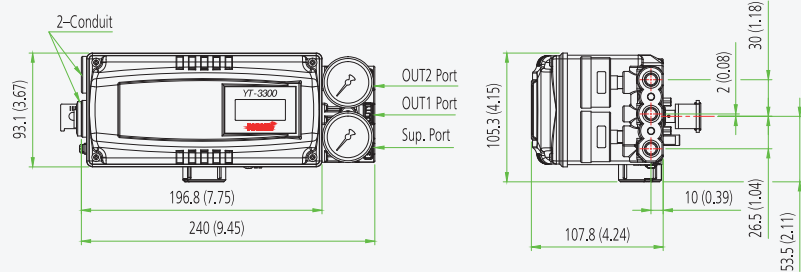
Design features

- **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.

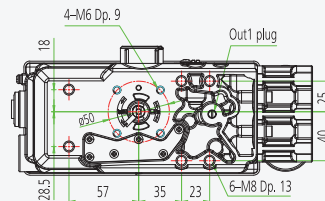
- **Auto / Manual switch.** Enables closed-loop automatic valve position control or manual positioning via the A/M switch. The manual mode is useful for troubleshooting, calibration, system testing or as a manual bypass.
- **HART® communication.** Allows commands, position feedback and diagnostics to be sent digitally over the current loop.
- **Front panel pushbuttons for configuration.** 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.



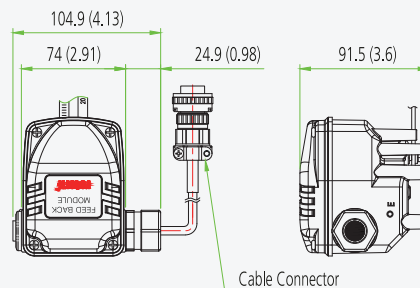
YT-3300 Aluminium Enclosure



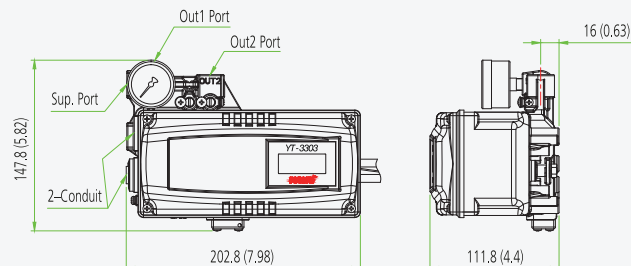
YT-3350 STS316 Enclosure



YT-3301 Remote Mounting Option



YT-3303 Left Side Mounting Option



Dimensions: mm (Inches ")

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

Item Type	YT-3300	YT-3303	YT-3301	YT-3350	
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		
Gauge Connection	Rc 1/8, 1/8 NPT		1/8 NPT		
Conduit	G 1/2, 1/2 NPT, M20x1.5P		G1/2		
Operating Temp.	Standard Type	-30 to +85 °C (-22 to +185 °F)			
	Low Temp. Type	-40 to +85 °C (-40 to +185 °F)			
	Arctic Temp. 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 0.08 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 or 18 Points)				
Material	Aluminium Diecasting	Aluminium Diecasting	Stainless Steel 316		
Ingress Protection	NEMA 4X, IP66	IP66	IP66, IP54	NEMA 4X, IP66	
Explosion Protection Type	ATEX, IECEx, EAC Ex ia IIC T5/T6 Gb, Ex ia IIIC T100°C/T85°C Db IP66 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 CSA CSA certificate FM 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, IP54 AMBIENT TEMP: -40 - 60°C (T5) / -40 - 40°C (T6) NEPSI (only YT-3300/3350) Ex ia IIC T5/T6 INMETRO Ex ia IIC T5/T6 Gb, Ex ia IIIC T100°C/T85°C Db				
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)	2.2 kg (4.9 lb)	5.1 kg (11.2 lb)	-
	Remote Sensor	-	-	1 kg (2.1 lb)	-

Product Code

YT-3300 - L - S - N - 2 - 4 - 2 - 4 - S - (1)

Model

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

Motion Type

L = Linear
 R = Rotary

Acting Type

S = Single
 D = Double

Explosion Protection

N = Non-explosion
 i = Intrinsically Safe ATEX, IECEx, KCs, INMETRO, NEPSI
 E = Intrinsically Safe EAC
 A = Intrinsically Safe CSA, FM
 Z = Intrinsically Safe CCC

Lever Type

Linear YT-3300/3350	Rotary	
0 = 10 to 40 mm	1 = M6 x 34L	fork type
1 = 20 to 100 mm	2 = M6 x 63L	
2 = 90 to 150 mm	3 = M8 x 34L	
3 to 6 = Adapter type	4 = M8 x 63L	
Linear YT-3301/3303	5 = NAMUR (YT-3301)	
1 = 10 to 40 mm		
2 = 20 to 70 mm		
3 = 50 to 100 mm		
4 = 100 to 150 mm		

Conduit & Air Connection

1 = G1/2 - Rc1/4
 2 = G1/2 - 1/4 NPT
 (YT-3350 only available with conduit connection code 2)
 3 = G1/2 - G1/4
 4 = M20 - 1/4 NPT (YT-3303 and YT-3301 will come with electrical conduit adaptors)
 5 = 1/2 NPT - 1/4 NPT
 (YT-3303 and YT-3301 will come with electrical conduit adaptors)

Communications

0 = None
 2 = HART protocol communication
 3 = Profibus PA communication protocol (only YT-3300/3350)
 4 = Foundation Fieldbus (only YT-3300/3350)

Output Options

0 = None
 1 = 4 to 20 mA feedback
 2¹ = Limit Switch - Mechanical Type (YT-3300 and YT-3350 only)
 3² = Limit Switch - Proximity Type (YT-3300 and YT-3350 only)
 4¹ = 4 to 20 mA + Limit Switch - Mechanical Type
 (YT-3300 and YT-3350 only)
 5² = 4 to 20 mA + Limit Switch - Proximity Type
 (YT-3300 and YT-3350 only)

Operating Temp. (Non-explosionproof)³

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) (only available with EAC certification)

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

Notes:

1. Only S, L of Operating Temperature are available for 2, 4 of Output Options.
2. Only S of Operating Temperature is available for 3, 5 of Output Options.
3. 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.

Smart Positioners YT-3700 / YT-3750

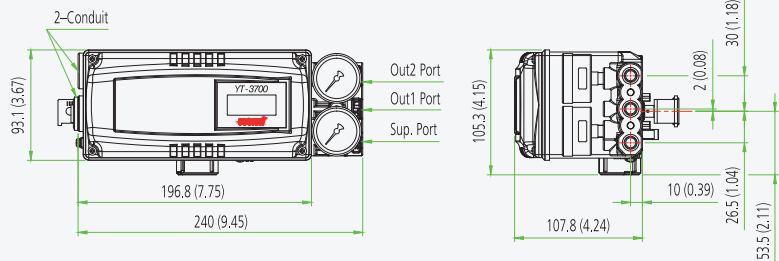
Digital smart positioner with enhanced diagnostics

Design features

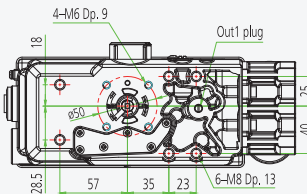
- Enhanced diagnostic** (including offline and online) to fully check the integrity of the system. Valve signature, advanced step tests and Partial Stroke Testing (PST) can be operated from local or remote positions. Device Description (DD) and Device Type Manager (DTM) files allow for full software compatibility.
- Visual diagnostic info** to NE107 standard for a user-friendly analysis with a severity alarm scale and a clear visual identification locally on the display or remotely through HART®.
- Digital input/output configurable** depending on the application and customer preferences. Multiple options are available e.g. start a pre-set PST event or receive error alarms, tailoring interaction with the device as necessary.
- Auto tuning** functionality.
- Non-contact sensor** for increased performance for high frequency operating valves and an enhanced lifetime.



YT-3700 Aluminium Enclosure



YT-3700 Aluminium Enclosure With Limit Switches and Dome Indicator



YT-3750 STS316 Enclosure



Dimensions: mm (Inches ")