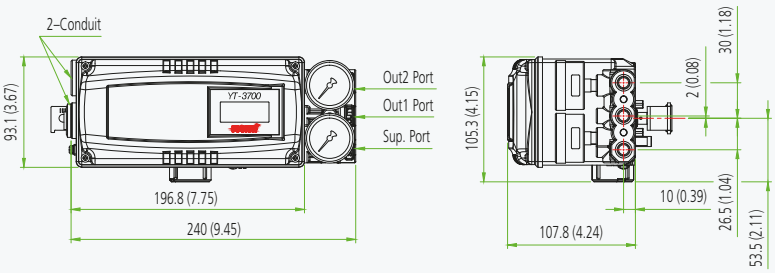
Smart Positioners YT-3700 / YT-3750

Digital smart positioner with enhanced diagnostics

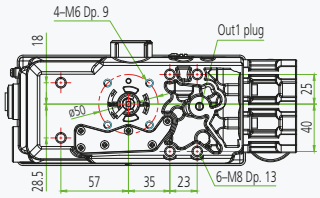
Design features

- **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 ")

Smart Positioners YT-3700 / YT-3750

Item Type		YT-3700	YT-3750
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 ¼, ¼ NPT, G ¼	¼ NPT
Gauge Connection		Rc 1/8, 1/8 NPT	1/8 NPT
Conduit		G ½, M20, ½ NPT	G ½
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 = O.14 Mpa) Below 0.07 CFM (sup = 20 psi)	
Flow Capacity		70 LPM (sup = O.14 MPa) 2.47 CFM (sup = 20 psi)	
Output Characteristics		Linear, EQ%, Quick Open, User Set (5, 21 points)	
Material		Aluminium Diecasting	Stainless Steel 316
Ingress Protection		IP66, NEMA 4X	
Explosion Protection Type		**ATEX / IECEx** Ex ia IIC T5/T6 Gb Ex ia IIIC T100°C/T85°C Db IP 6x **CCC / Nepsi** Ex ia IIC T5/T6 Gb Ex iaD 21 T100°C/T85°C **FM / CSA / EAC** Intrinsically Safe. Refer to the product manual for details. **KCs** Ex ia IIC T5/T6 Gb Ex ia IIIC T100°C/T85°C **INMETRO** Ex ia IIC T5/T6 Gb Ex ia IIC T100°C/T85°C Db IP66 **SIL** SIL2 and SIL3 Non-interference device statement for SIS	
Communication (Option)		HART (ver.7)	
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		2 kg (4.4 lb)	5.1 kg (11.2 lb)
Digital Input		Low level control voltage 0 to 5 VDC High level control voltage 11 to 28 VDC Max current < 4 mA	
Digital Output		Supply voltage 5 to 28 VDC Low level current < 1 mA High level current > 2.1 mA @5 VDC, < 14mA @28 VDC	

Product Code

YT-3700 - L - S - N - 2 - 4 - 2 - 4 - S

Model
YT-3700 = Aluminium housing
YT-3750 = Stainless steel housing

Motion Type
L = Linear
R = Rotary (in case of a switches request the device will have visual position indicator as standard)

Acting Type
S = Single
D = Double

Explosion Protection
N = Non-explosion
i = Intrinsically Safe ATEX, IECEx. NEPSI, KCs
A = Intrinsically Safe CSA, FM (Both S and L of Operating Temp. available.)
AG = Intrinsically Safe CSA, FM - Tapped Exhaust
E = Intrinsically Safe EAC
Z = Intrinsically Safe CCC

Lever Type

Linear	Rotary
0 = 10 to 40 mm	5 = NAMUR
1 = 20 to 100 mm	
2 = 90 to 150 mm	

Conduit & Air Connection
1 = G ½ - Rc ¼ (N/A for YT-3750)
2 = G ½ - ¼ NPT
3 = G ½ - G ¼ (N/A for YT-3750)
4 = M20 - ¼ NPT (N/A for YT-3750)
5 = ½ NPT - ¼ NPT (N/A for YT-3750)

Communication Protocols
2 = HART communication

Output Options
0 = None (Digital I/O are built-in)
1 = 4-20 mA feedback (Digital I/O are built-in)
4[1] = 4-20 mA feedback + Limit Switch - Mechanical Type (potentiometer drive without digital I/O communication)
5[2] = 4-20 mA feedback + Limit Switch - Proximity Type (potentiometer drive without digital I/O communication)

Operating Temp. (Non-explosion proof)[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) (EAC only)

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