

2.4 Product Code

YT-3400 / 3450 series follows suffix symbols as follows.

YT-3400 / 3450 1 2 3 4 5 6 7 8

1	Motion Type	L : Linear R : Rotary
2	Acting type	S : Single D : Double
3	Explosion Proof	¹⁾ C : ATEX, IECEx, INMETRO, KCs, NEPSI A : FM, CSA AG : FM, CSA + Tapped Exhaust E : EAC Z : CCC
4	Lever Type	Linear 1 : 10 ~ 40 mm 2 : 20 ~ 70 mm 3 : 50 ~ 100 mm 4 : 100 ~ 150 mm Rotary 1 : M6 x 34L 2 : M6 x 63L 3 : M8 x 34L 4 : M8 x 63L 5 : Namur
5	Conduit - Air Connection Type	1 : G 1/2 – Rc 1/4 (N/A for FM & CCC, N/A for YT-3450) 2 : G 1/2 – 1/4 NPT (N/A for FM & CCC) 3 : G 1/2 – G 1/4 (N/A for FM & CCC, N/A for YT-3450) 4 : M20x1.5P – 1/4 NPT (N/A for YT-3450) 5 : 1/2 NPT – 1/4 NPT
6	Communication	0 : None 2 : + HART ²⁾ 5 : + HART with Enhanced Diagnostics & DI / DO ※ Digital Output(DO) operation is configurable in synchronization with specific event or alarm including limit switch function.
7	Option	0 : None 1 : + 4 to 20 mA feedback 2 : + Limit Switch ³⁾ 3 : + 4 to 20 mA feedback + Limit Switch ⁴⁾
8	Operating Temp.	S : -30 ~ 80 °C (-22 ~ 176 °F, except EAC) L : -40 ~ 80 °C (-40 ~ 176 °F) A : -55 ~ 80 °C (-67 ~ 176 °F, only EAC)

¹⁾ Please put the name of certificate in a purchase order.

- 2) DO (Digital Output) already is included in this option, so it can't be selected with 2 or 3 of 7 Option together.
- 3) 4) Limit switch: DC 24V (50 mA) and transistor type.

2.5 Product Specification

Model		YT-3400		YT-3450	
Housing Material		Aluminum		Stainless Steel 316	
Motion Type		Linear	Rotary	Linear	Rotary
Acting Type		Single / Double			
Input Signal		4 ~ 20 mA DC			
Minimum Current Signal		3.2 mA(Standard) or 3.8 mA(HART Included)			
Supply Pressure		0.14 ~ 0.7 MPa (1.4 ~ 7 bar)			
Stroke		10~150 mm	55 ~ 110°	10~150 mm	55 ~ 110°
Impedance		Max. 450 Ω @ 20 mA DC			
Air Connection		Rc 1/4 or G 1/4 or 1/4 NPT		1/4 NPT	
Gauge Connection		Rc 1/8 or 1/8 NPT		1/8 NPT	
Conduit Entry		G 1/2(N/A for FM & CCC) or 1/2 NPT or M20x1.5P		G 1/2(N/A for FM & CCC) or 1/2 NPT	
Tapped Exhaust (Only AG option of Product code)		1/4 NPT			
Ingress Protection		Type 4, 4X(CSA), IP66			
Explosion Proof		Flameproof enclosure. Refer to “2.7 Certifications”			
Operating Temperature	Standard Type	-30 ~ 80 °C (-22 ~ 176 °F, except EAC explosion proof)			
	Low Temp. Type	-40 ~ 80 °C (-40 ~ 176 °F)			
	Arctic Temp. Type	-55 ~ 80 °C (-67 ~ 176 °F, only EAC explosion proof)			
Ambient Temperature Of Explosion proof		Refer to “2.7 Certifications”			
Linearity		± 0.5 % F.S.			
Hysteresis		± 0.5 % F.S.			
Sensitivity		± 0.2 % F.S.			
Repeatability		± 0.3 % F.S.			
Flow Capacity		70 LPM (Sup.=0.14 MPa)			
Air Consumption		Below 2 LPM (Sup.=0.14 MPa @ idle)			
Output Characteristic		Linear, Quick Open, EQ%, User Set			
Vibration		No Resonance up to 100 Hz @ 6 G			
Humidity		5 ~ 95 % RH @ 40 °C			

Communication (Option)	HART Communication (HART 7)	
Feedback Signal (Option)	4 ~ 20 mA (DC 9 ~ 28 V)	
Weight	3.4 kg (7.5 lb)	7.0 kg (15.4 lb)
Painting	Polyester Powder Coating	-



Tested under ambient temperature of 20 °C, absolute pressure of 760 mmHg, and humidity of 65 %.

Please contact Rotork YTC Limited for detailed testing specification.

2.6 Specification of Digital Input, Digital Output

1) Digital Input

(Applicable to 6 Communication "5" of Product code)

- Supply voltage : 0 ~ 5 V DC → Logical switching state "0"
10 ~ 28 V DC → Logical switching state "1"
- Current : Max. 4 mA

2) Digital Output

- Supply voltage 5 ~ 28 V DC
- Current < 1 mA → Switching state logical "0"
- Current > 2.2 mA → Switching state logical "1"

2.7 Certifications

※ All certifications below are posted on Rotork YTC Limited homepage(www.ytc.co.kr).

➤ **KCs (Korea)**

Type : Explosion proof construction for internal pressure

Rating : Ex d IIC T5/T6 IP66 (YT-3400)

Ex d IIC T5/T6, Ex tb IIIC T85°C/T100°C (YT-3450)

Certification No. : 10-KB2BO-0077 (YT-3400)

15-KA2BO-0366 (YT-3450)

Ambient temperature : -40 ~ +70°C(T6), -40 ~ +85°C(T5) ← YT-3400

-40 ~ +70°C(T6), -40 ~ +80°C(T5) ← YT-3450

➤ **NEPSI**

Type : Explosion proof construction for internal pressure

Rating : Ex d IIC T5/T6 Gb, Ex tD A21 IP66 T85°C/T100°C

Certification No. : GYJ18.1380X

Ambient temperature : -40 ~ +70°C(T6), -40 ~ +80°C(T5)

➤ **ATEX**

Type : Explosion proof construction for internal pressure

Rating : II 2G Ex db IIC T5/T6 Gb, II 2D Ex tb IIIC T85°C/T100°C Db

Certification No. : EPS 11 ATEX 1 308 X

Ambient temperature : -40/-30 ~ +70°C T6(T85°C), -40/-30 ~ +80°C T5(T100°C)

➤ **IECEX**

Type : Explosion proof construction for internal pressure

Rating : Ex db IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db

Certification No. : IECEx EPS 11.0002X

Ambient temperature : -40/-30 ~ +70°C T6(T85°C), -40/-30 ~ +80°C T5(T100°C)

➤ **CSA**

Type : Explosion proof construction for internal pressure

Rating : Ex db IIC Gb T5 or T6

Class I, Division 1, Groups C, D

Class II, Division 1, Groups E, F and G

Ex tb IIIC Db T100°C/T85°C

Type 4, 4X ; IP66

Certification No. : CSA 12CA2541710X

Ambient temperature : -40/-30°C to +70°C(T6), -40/-30°C to +80°C(T5)

➤ **FM**

Type : Explosion proof construction for internal pressure

Rating : Class I, Div 1, Groups ABCD; T6/T5

Class II/III, Div 1, Groups EFG; T6/T5

Class I, Zone 1, AEx db IIC T6/T5

Zone 21 AEx tb IIIC

T85°C Ta=-40°C to +70°C , T100°C Ta=-40°C to +80°C; Type 4X/IP66

Certification No. : FM16US0132X

Ambient temperature : (T6) -40°C to +70°C, (T5) -40°C to +80°C

➤ **EAC (TRCU)**

Type : Explosion proof construction for internal pressure

Rating : 1Ex d IIC T6/T5 Gb X, Ex tb IIIC T85°C/T100°C Db X, IP66

Certification No. : RU C-KR.MIO62.B.04778

Ambient temperature : -55 ~ +70°C (T6/T85°C), -55 ~ +80°C (T5/T100°C)

➤ **INMETRO (Brazil)**

Rating : Ex db IIC T5/T6 Gb IP66, Ex tb IIC T85°C/T100°C Db IP66

Certification No. : DNV 17.0068 X

Ambient temperature : -40 ~ +70°C (T6), -40 ~ +80°C (T5)

➤ **CCC (China)**

Type : Explosion proof construction for internal pressure

Rating : Ex d IIC T5/T6 Gb, Ex tD A21 IP66 T85°C/T100°C

Certification No. : 2020322307000616

Ambient temperature : -20(-40) ~ +70°C T6(T85°C), -20(-40) ~ +80°C T5(T100°C)

➤ **SIL2 (in a redundant structure up to SIL 3)**

Intended application : Safety function is defined as to move into fail-safe-position, when signal to positioner is interrupted.

Certification No. : 968/V 1155.00/20

➤ **Electromagnetic Compatibility (EMC)**

- EMC directive 2014/30/EC from April 2016

- EC Directive for CE conformity marking

2.8 Parts and Assembly

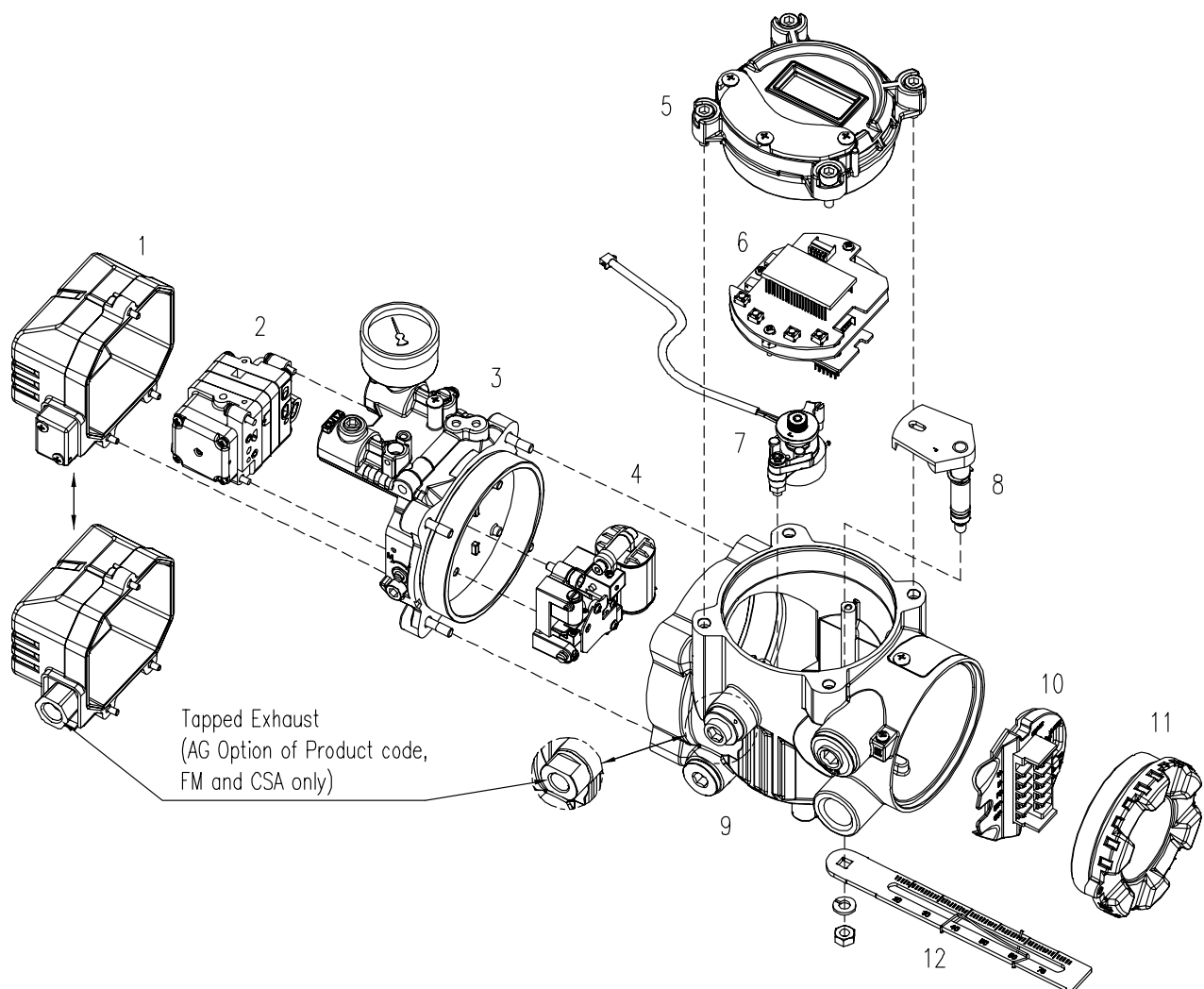


Fig. 2-1: Exploded view

- | | |
|-----------------|--------------------|
| 1. Pilot Cover | 7. Main Shaft |
| 2. Pilot Unit | 8. Main Body |
| 3. Manifold | 9. Terminal PCB |
| 4. Torque Motor | 10. Terminal Cover |
| 5. Main Cover | 11. Feedback Lever |
| 6. Main PCB | |

2.9 Product Dimension

2.9.1 YT-3400

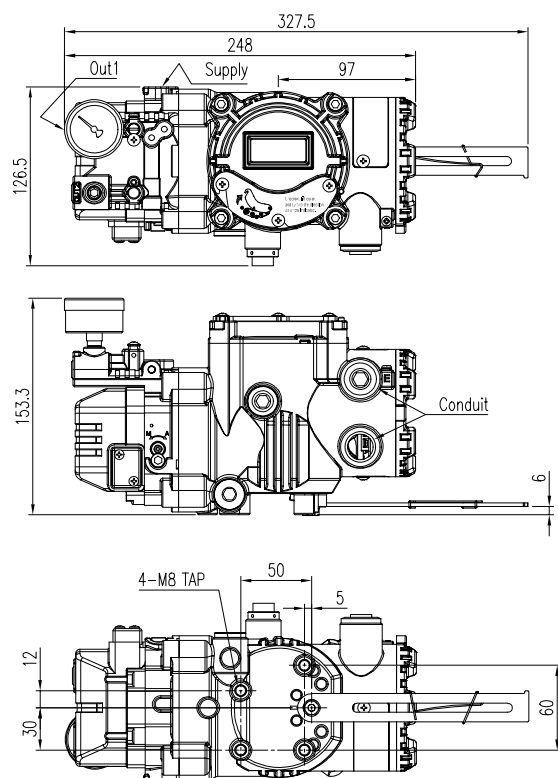


Fig. 2-2: YT-3400L (Linear type)

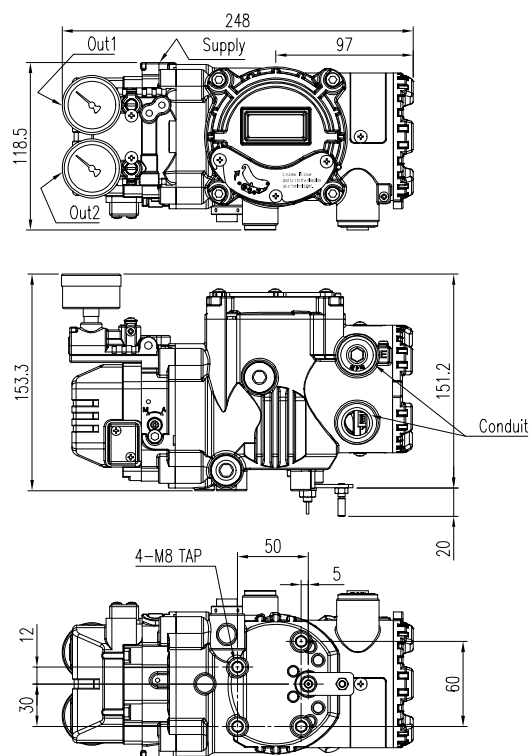


Fig. 2-3: YT-3400R (Rotary, Fork lever type)

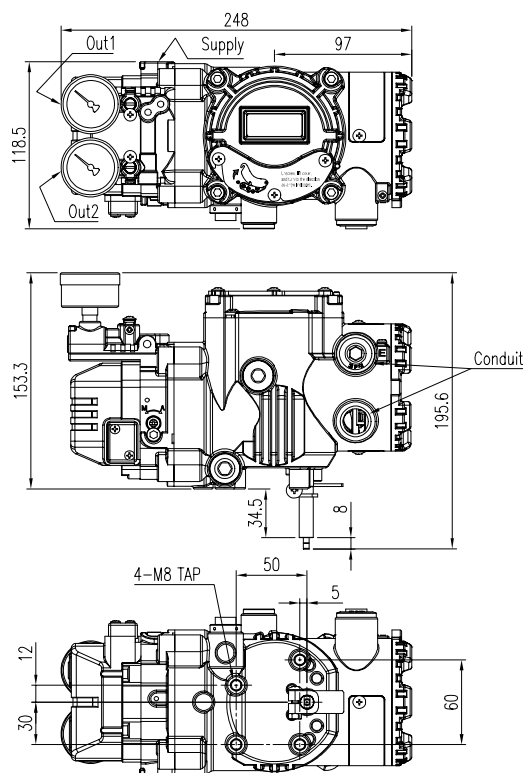


Fig. 2-4: YT-3400R (Rotary, Namur type)

2.9.2 YT-3450

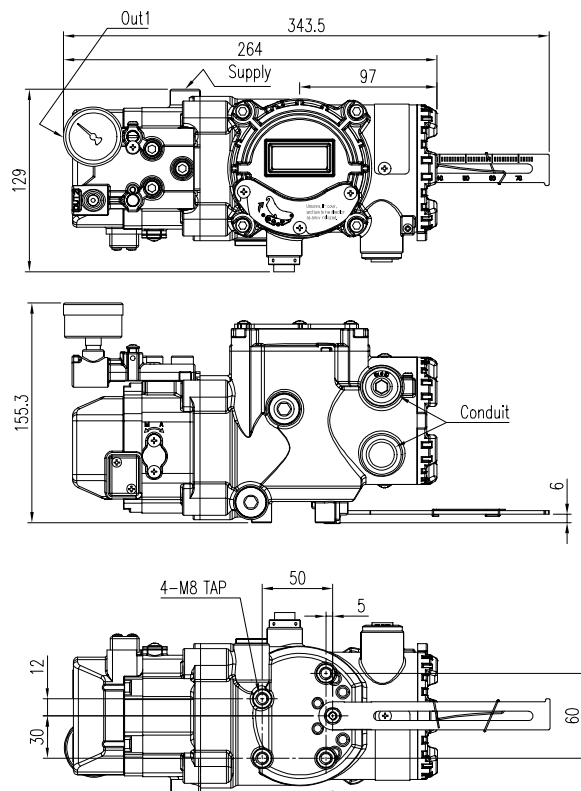


Fig. 2-5: YT-3450L (Linear type)

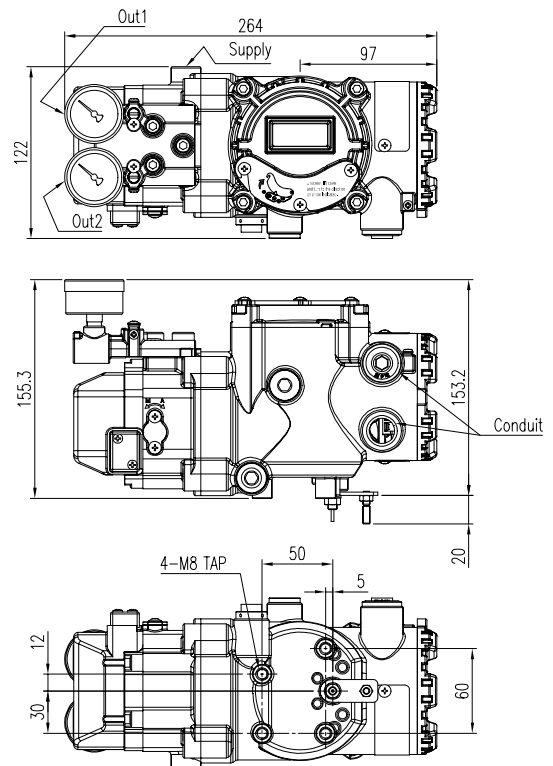


Fig. 2-6: YT-3450R (Rotary, Fork lever type)

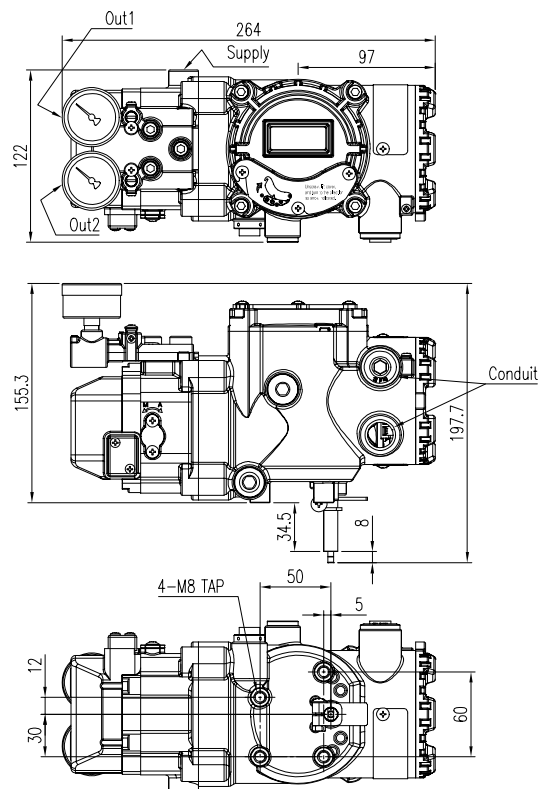


Fig. 2-7: YT-3450R (Rotary, Namur type)