

# ROTEX POSITIONER



POSITIONER

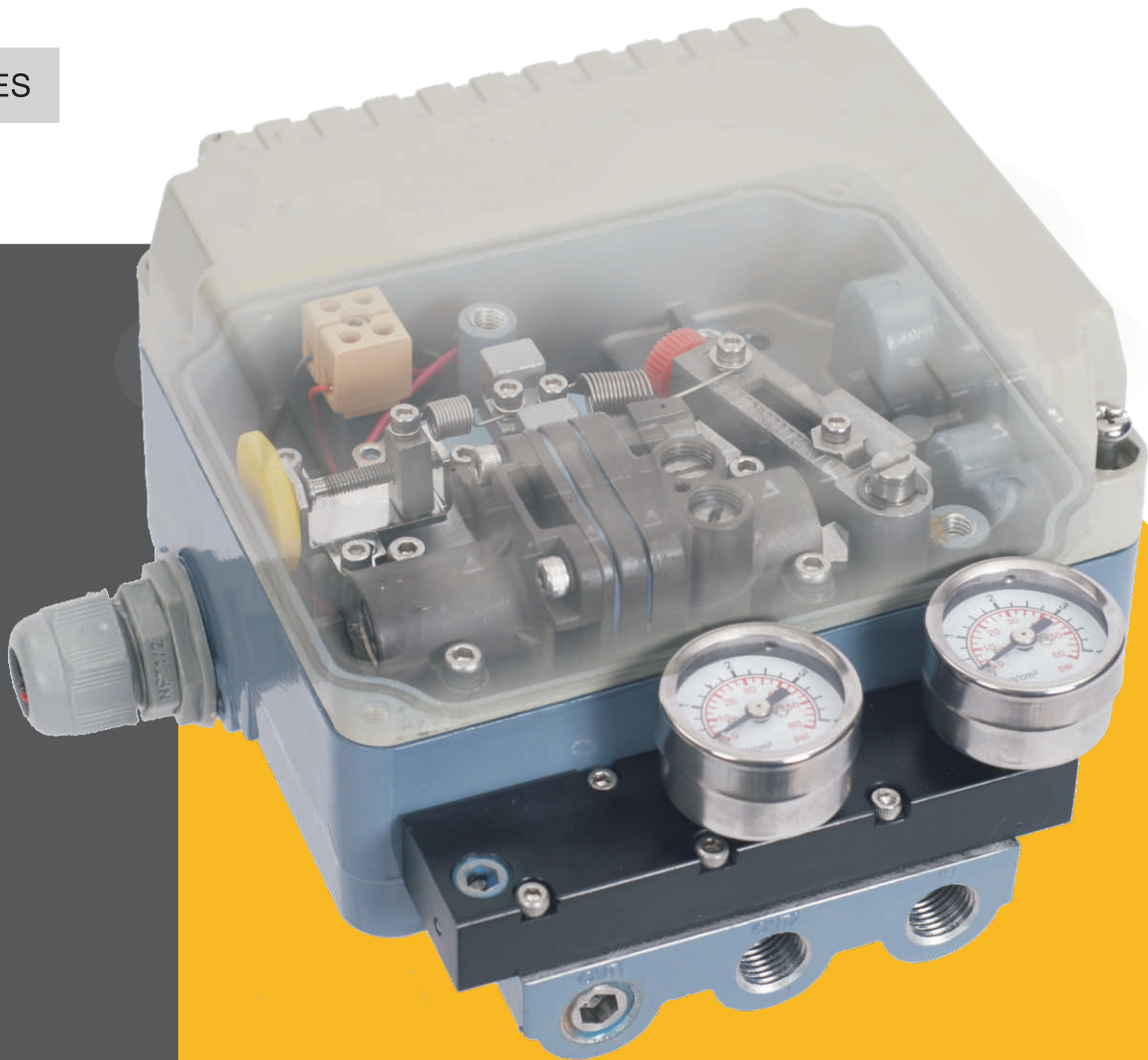
ELECTRO PNEUMATIC | PNEUMATIC

POSITION TRANSMITTER

 **ROTEX**

*Engineering For The Future*

## FEATURES



- ✓ Unique polymer diaphragms developed by Rotex offer long life and prevent malfunctioning of the device.
- ✓ Rotex poppet has all of its internal moving parts in Stainless Steel (SS). This helps fight corrosion and offers an improved surface finish, ensuring long-term repeatability.
- ✓ Rotex has the least air consumption as compared to other positioner manufacturers. The metal spool and metal poppet ensure minimum leakage.
- ✓ Rotex high temperature elastomer and class H E/P coil promise resistance to high temperature applications.
- ✓ Rotex has a strong service team across the globe and provides spares for all the items, leading to low installation and maintenance costs.

# WHY ROTEX POSITIONERS?



Does your positioner start to malfunction over a period?



Do you need to reset the zero and the span often?



Do you lose air over and above the theoretically calculated value?



Does your positioner fail in moderately high temperature zones?



Do you get spares and service when needed?



## PRODUCT RANGE



RTX 1000 R/L



RTX 1000 E



RTX 1200 R



RTX 1300



RTX 1000 R+ Transmitter



RTX 1200 R+ Transmitter

PRODUCT RANGE



RTX 1300 + Transmitter



Transmitter



SMART RTX 7

Also available:

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RTX 1000 R / L in SS

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SMART RTX 7 in SS

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Transmitter in SS

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## FEATURES SUMMARY

Type	P/P				E/P		Smart				
Model	RTX 1200	RTX 1200 + Transmitter Contactless (CS)	RTX 1300	RTX 1300+ Transmitter Contactless	RTX 1000	RTX 1000 + Transmitter Contactless (CS)	RTX 6	RTX 7	RTX 8	RTX 9	RTX 5 (IPST)
<b>HARDWARE</b>											
Technology	Flapper Nozzle	Flapper Nozzle	Flapper Nozzle	Flapper Nozzle	Flapper Nozzle	Flapper Nozzle	Piezo	Piezo	Piezo	Piezo	Piezo
Local Buttons	✗	Only for transmitter	✗	Only for transmitter	✗	Only for transmitter	✓	✓	✓	✓	✓
LCD Display	✗	Only for transmitter	✗	Only for transmitter	✗	Only for transmitter	✓	✓	✓	✓	✓
Double Acting/ Single	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotary/Linear	✓	✓	Linear	Linear	✓	✓	✓	✓	✓	✓	✓
Feedback	X	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓
Fail Safe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fail Freeze	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
IP rating	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66
Natural Gas Capability	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Enclosure Material	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS	AL/SS
Remote Mounting	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Operation	Poppet	Poppet	Spool	Spool	Poppet	Poppet	Servo	Servo	Servo	Servo	Servo
Exhaust port	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Encapsulated Electronics	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
<b>DIAGNOSTICS</b>											
No Dead zone	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Alerts	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓
Pressure Transducer	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓
Partial Stroke Test	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Online Diagnostics	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓
Offline Test	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓

## FEATURES SUMMARY

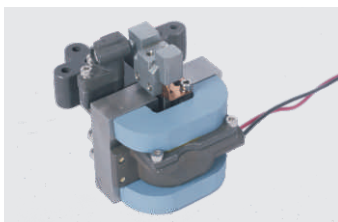
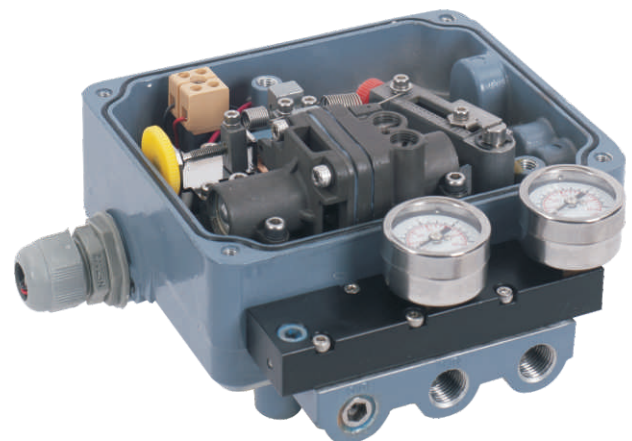
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<b>FEEDBACK MODULE</b>											
Analog 4-20 mA	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓
LCD display	x	✓	x	✓	x	✓	Buit-in	Buit-in	Buit-in	Buit-in	Buit-in
Push button for setting	x	✓	x	✓	x	✓	Buit-in	Buit-in	Buit-in	Buit-in	Buit-in
21 Freely configurable setpoint	x	✓	x	✓	x	✓	Buit-in	Buit-in	Buit-in	Buit-in	Buit-in
<b>COMMUNICATION</b>											
HART (version 5 and 7)	x	x	x	x	x	x	x	✓	✓	✓	✓
<b>CERTIFICATION</b>											
Explosion Proof	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓
Intrinsically Safe	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓
ATEX/ IECEx	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓
CuTR	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓
SIL Certified	x	✓	x	x	x	x	x	x	x	x	✓
Peso	✓	✓	x	x	✓	✓	✓	✓	✓	✓	✓

## ELECTRO-PNEUMATIC POSITIONER

RTX1000

### FEATURES

- Special low pressure diaphragm direct acting valve ensures quick and precise response to minor changes in signal pressure
- Low hysteresis increases overall efficiency
- Excellent performance under vibration up to 4g (3mm amplitude)
- High life of diaphragm and zero maintenance
- Compact design, rugged construction with a rigid ISO 5211 mounting
- Wide range of zero and span adjustment for easy and precise calibration
- Stable, fast and accurate response with change in supply pressure due to unique poppet and diaphragm valve design
- All internal parts are hard anodized
- Split range control can be easily adopted by change in few internal parts
- Simple to convert from direct acting to reverse acting or vice versa
- Orifice option prevents from hunting and also for controlling speed
- Bright visual indicator on both flat and high dome type positioners
- Internal and external mounting of the position transmitter and limit switch available
- Internal circuit of the positioner is highly corrosion resistant as no part (metal plate) is exposed
- IP 66 protection
- CE certified



TORQUE MOTOR

- High performance Nickel flapper
- Unique rocker mechanism to give low dead band
- Non sliding parts



HIGHLY BALANCED SPRING MECHANISM

- High repeatability and linearity
- Critically designed springs avail a wide range of zero and span setting



ADAPTABILITY

- Positioner can be easily converted from direct acting to reverse acting and vice versa
- SS cam for long life
- Unique clamping mechanism



# ELECTRO-PNEUMATIC POSITIONER

# RTX1000

## TECHNICAL SPECIFICATIONS

TYPE	LINEAR		ROTARY	
	Single Acting	Double Acting	Single Acting	Double Acting
Operation	Single Acting	Double Acting	Single Acting	Double Acting
Supply Pressure	0.3 bar above actuator requirement (minimum 1.4 bar and maximum 7 bar)			
Input Signal	4 to 20 mA DC constant current with maximum 30 VDC			
Stroke	10-150 mm		0-90°	
Air Connection	1/4" BSP / NPT			
Explosion Proof	ATEX			
Protection	IP 66			
Cam	Equal / Square / Square Root			
Ambient Temperature	-40 °C to +120 °C, see ordering code			
Linearity	± 1%	± 2%	± 1%	± 2%
Hysteresis	± 1%	± 1%	± 1%	± 1%
Sensitivity	± 0.2%	± 0.5%	± 0.5%	± 0.5%
Repeatability	± 0.5%	± 0.5%	± 0.5%	± 0.5%
Internal Bleeding	3 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 11 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )			
Flow Capacity	80 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 200 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )			
Material	Aluminium Die Casting			
Weight	2.9 Kg	2.9 Kg	3 Kg	3 Kg

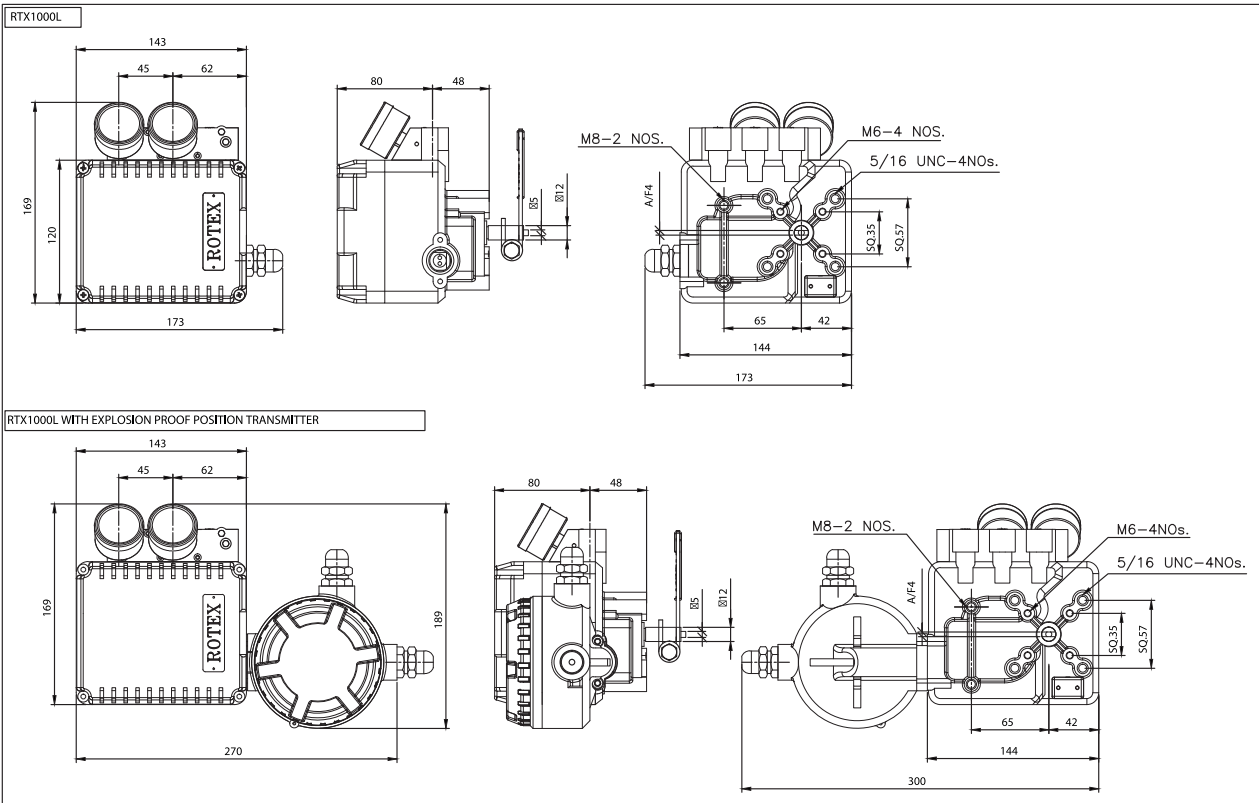
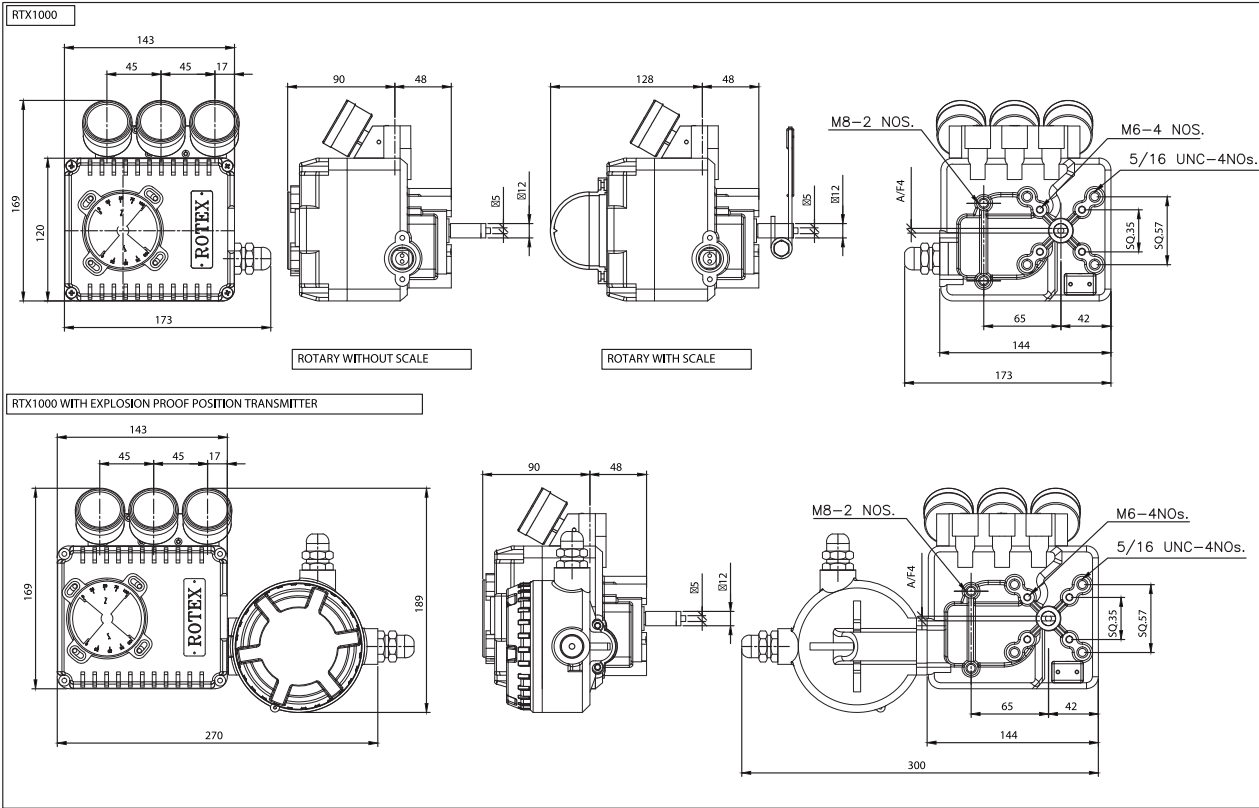
## BUILT IN SMART TRANSMITTER



## ELECTRO-PNEUMATIC POSITIONER

## RTX1000

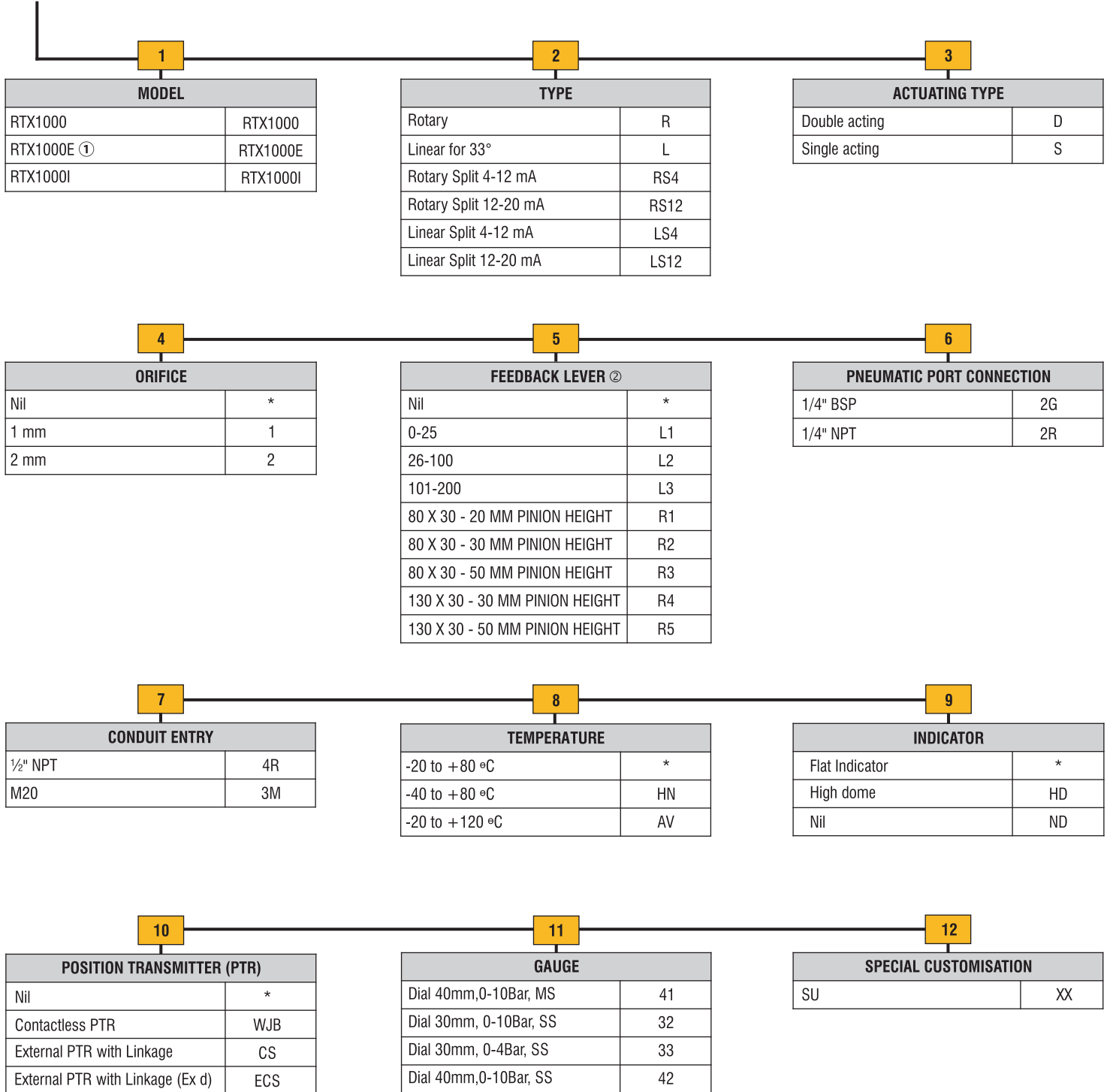
### DIMENSION DETAILS



# ELECTRO-PNEUMATIC POSITIONER

# RTX1000

## ORDERING CODE



### NOTE

\* Default

① For this model temperature will be -20 °C to +80 °C

② L1 to L3 applicable for type "L" models only and R1 to R5 applicable for type "R" models only.

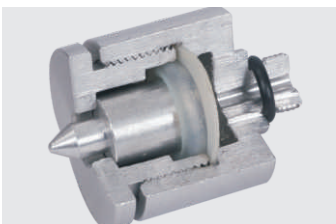
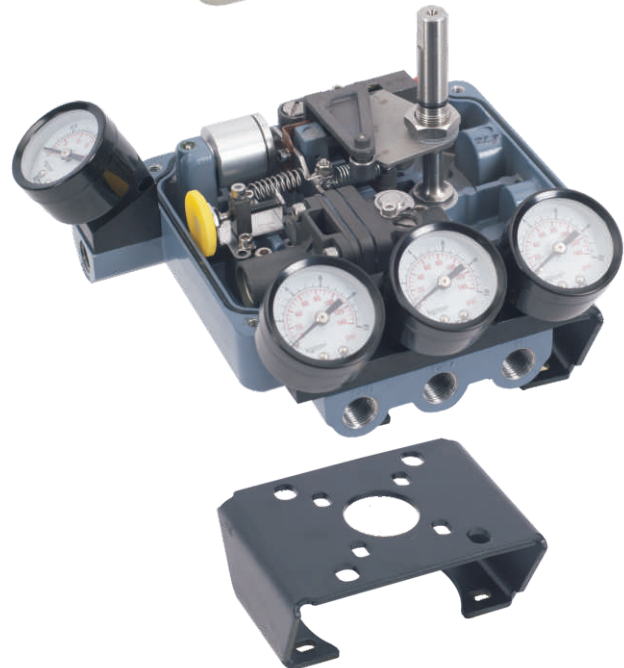
For any special requirement please coordinate with factory, ordering code for special will be MODEL-SUXX.

## PNEUMATIC POSITIONER

## RTX1200

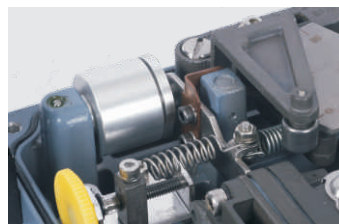
### FEATURES

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- High life of diaphragm and zero maintenance
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- Wide range of zero and span adjustment for easy and precise calibration
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- All internal parts are hard anodized
- Split range control can be easily adopted by change in few internal parts
- Simple to convert from direct acting to reverse acting or vice versa
- Orifice option prevents hunting and also for controlling speed
- Bright visual indicator on both flat and high dome type positioners
- Internal and external mounting of the position transmitter and limit switch available
- Internal circuit of the positioner is highly corrosion resistant as no part (metal plate) is exposed
- IP 66 protection
- CE certified



#### ZERO HYSTERESIS DIAPHRAGM VALVE

- Special polymer diaphragm
- Quick and precise response to change in signal pressure



#### FLAPPER MECHANISM

- Extremely high sensitivity
- Lower dead-band and hysteresis
- Excellent response to Poppet



#### RIGID CONNECTING PORTS

- Available in NPT/BSP
- Heavy duty cast pads ensure rugged application
- Adaptive gauge block can accommodate gauges Ø25-40

PNEUMATIC POSITIONER

RTX1200

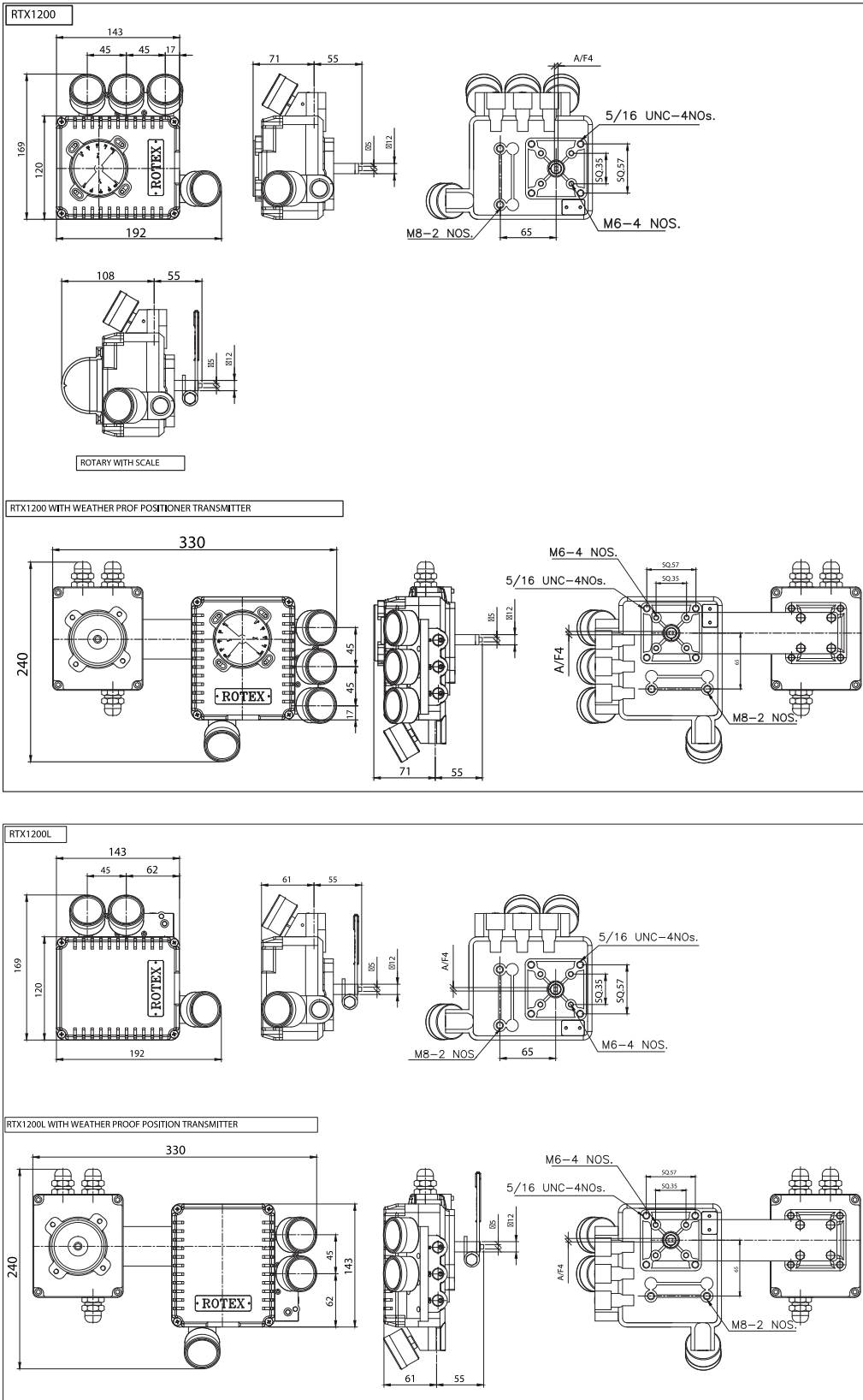
TECHNICAL SPECIFICATIONS

TYPE	LINEAR		ROTARY	
	Single Acting	Double Acting	Single Acting	Double Acting
Operation	Single Acting	Double Acting	Single Acting	Double Acting
Supply Pressure	1.4-8.0 kgf / cm <sup>2</sup> (20 -120 psi)			
Input Signal Pressure	0.2-1 kgf / cm <sup>2</sup> (3-15 psi)			
Stroke	10-150 mm		0-90°	
Air Connection	1/4" BSP / NPT			
Explosion Proof	Not Applicable			
Protection	IP 66			
Cam	Equal / Square / Square Root			
Ambient Temperature	-40 °C to +120 °C, see ordering code			
Linearity	± 1%	± 2%	± 2%	± 2%
Hysteresis	± 1%	± 1%	± 1%	± 1%
Sensitivity	± 0.2%	± 0.5%	± 0.5%	± 0.5%
Repeatability	± 0.5%	± 0.5%	± 0.5%	± 0.5%
Internal Bleeding	3 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 11 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )			
Flow Capacity	80 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 200 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )			
Material	Aluminium Die Casting			
Weight	2.1 Kg	2.1 Kg	2.2 Kg	2.2 Kg

PNEUMATIC POSITIONER

RTX1200

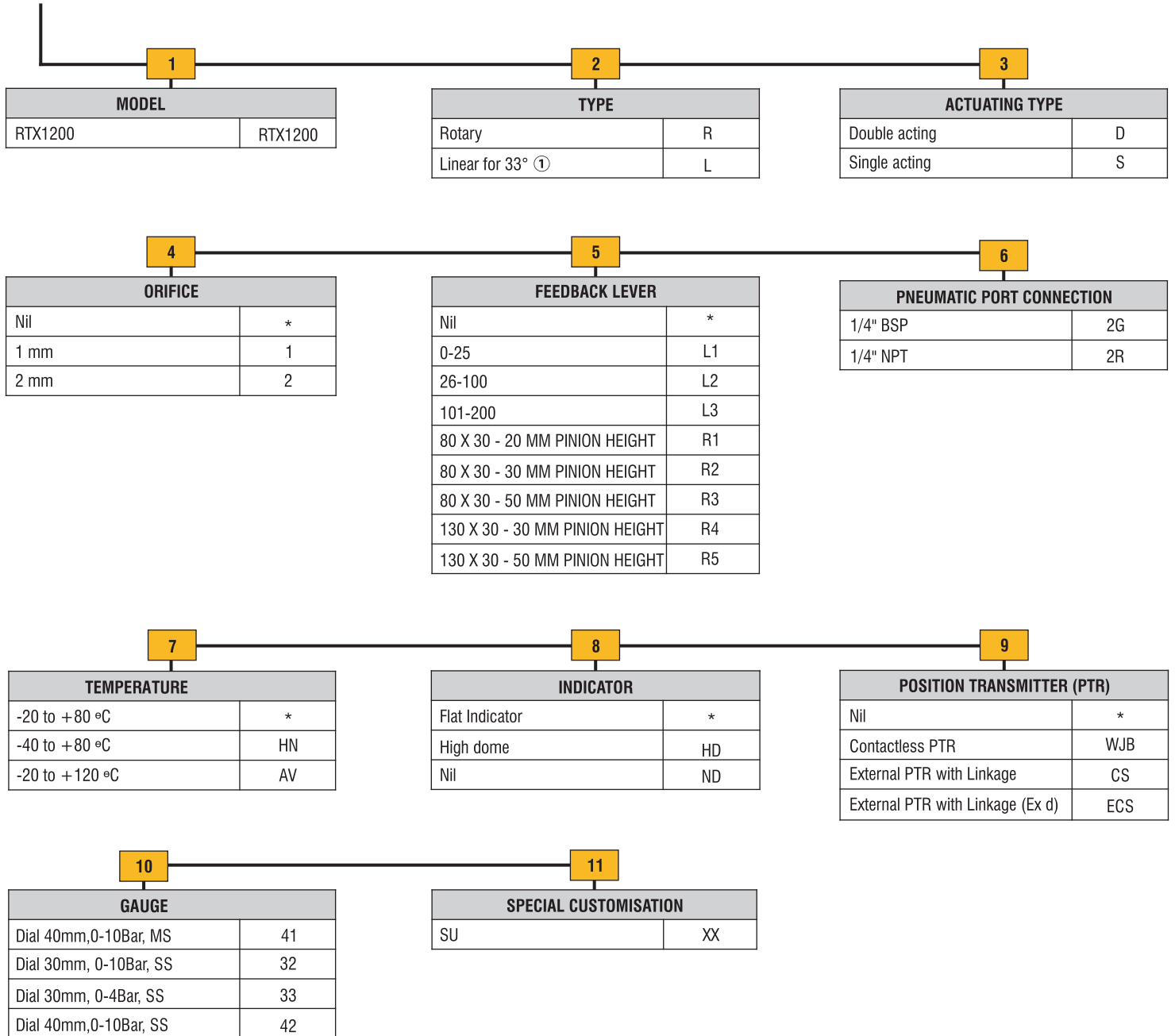
DIMENSION DETAILS



# PNEUMATIC POSITIONER

# RTX1200

## ORDERING CODE



### NOTE

\* Default

① For type Linear, indicator will be No Dome (Table 8)

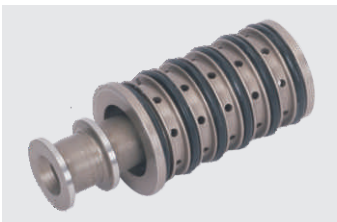
For any special requirement please coordinate with factory, ordering code for special will be MODEL-SUXX.

## PNEUMATIC POSITIONER

RTX1300

### FEATURES

- Ideal for linear actuators
- Unique mechanism ensures zero over travel
- Metal to metal spool valve
- Linkage mechanism on ball bearings
- Calibrated springs for precise operation
- Very few components ensure ease in maintenance
- Very easy to set zero and span
- Cam driver can decide various steps of operation like quick acting, slow opening or linear
- All parts are anodized
- IP 55
- CE certified



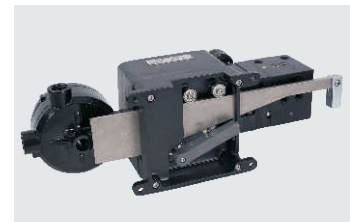
#### METAL – TO – METAL SPOOL

- Not sensitive to dirt and dust
- Hardened and ground for long life
- Very easy for maintenance



#### LINKAGE MECHANISM

- Unique ball bearings to support zero play
- Easy to set zero and span



#### CAM

- Cam can be profiled for various applications
- RTX 1300 is independent of cam performance



PNEUMATIC POSITIONER

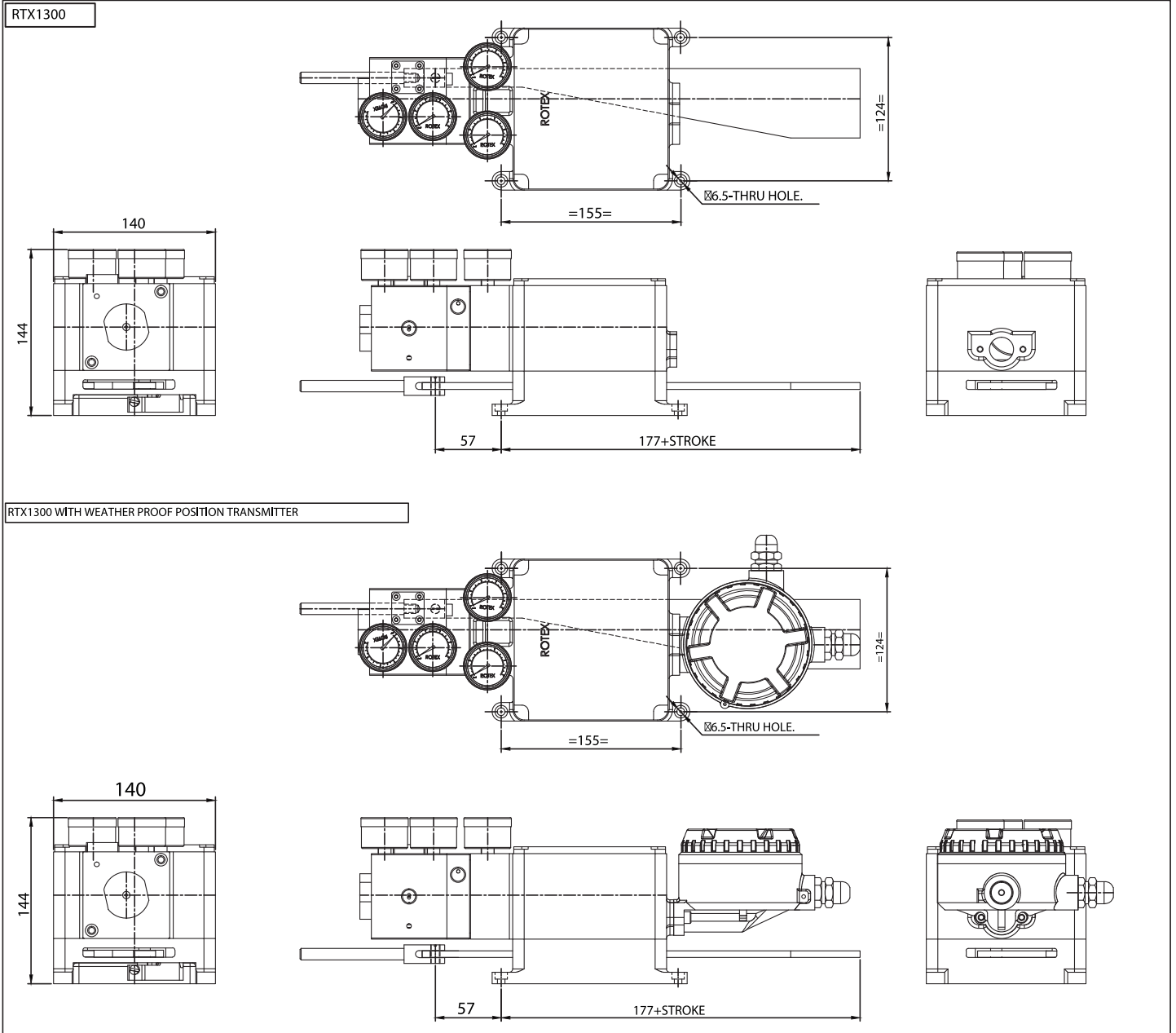
RTX1300

TECHNICAL SPECIFICATIONS

TYPE	LINEAR	
Operation	Single Acting	Double Acting
Supply Pressure	1.4-8.0 kgf / cm <sup>2</sup> (20 -120 psi)	
Input Signal Pressure	0.2-1 kgf / cm <sup>2</sup> (3-15 psi)	
Stroke	10-900 mm	
Air Connection	1/4" BSP / NPT	
Explosion Proof	Not Applicable	
Protection	IP55	
Cam	Equal / Square / Square Root	
Ambient Temperature	-40 °C to +120 °C, see ordering code	
Linearity	± 1%	± 2%
Hysteresis	± 1%	± 1%
Sensitivity	± 0.2%	± 0.5%
Repeatability	± 0.5%	± 0.5%
Internal Bleeding	10 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 14 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )	
Flow Capacity	120 lpm (supply pressure 1.4 kgf / cm <sup>2</sup> ), 300 lpm (supply pressure 4.0 kgf / cm <sup>2</sup> )	
Material	Aluminium Die Casting	
Weight	5 kg	

PNEUMATIC POSITIONER **RTX1300**

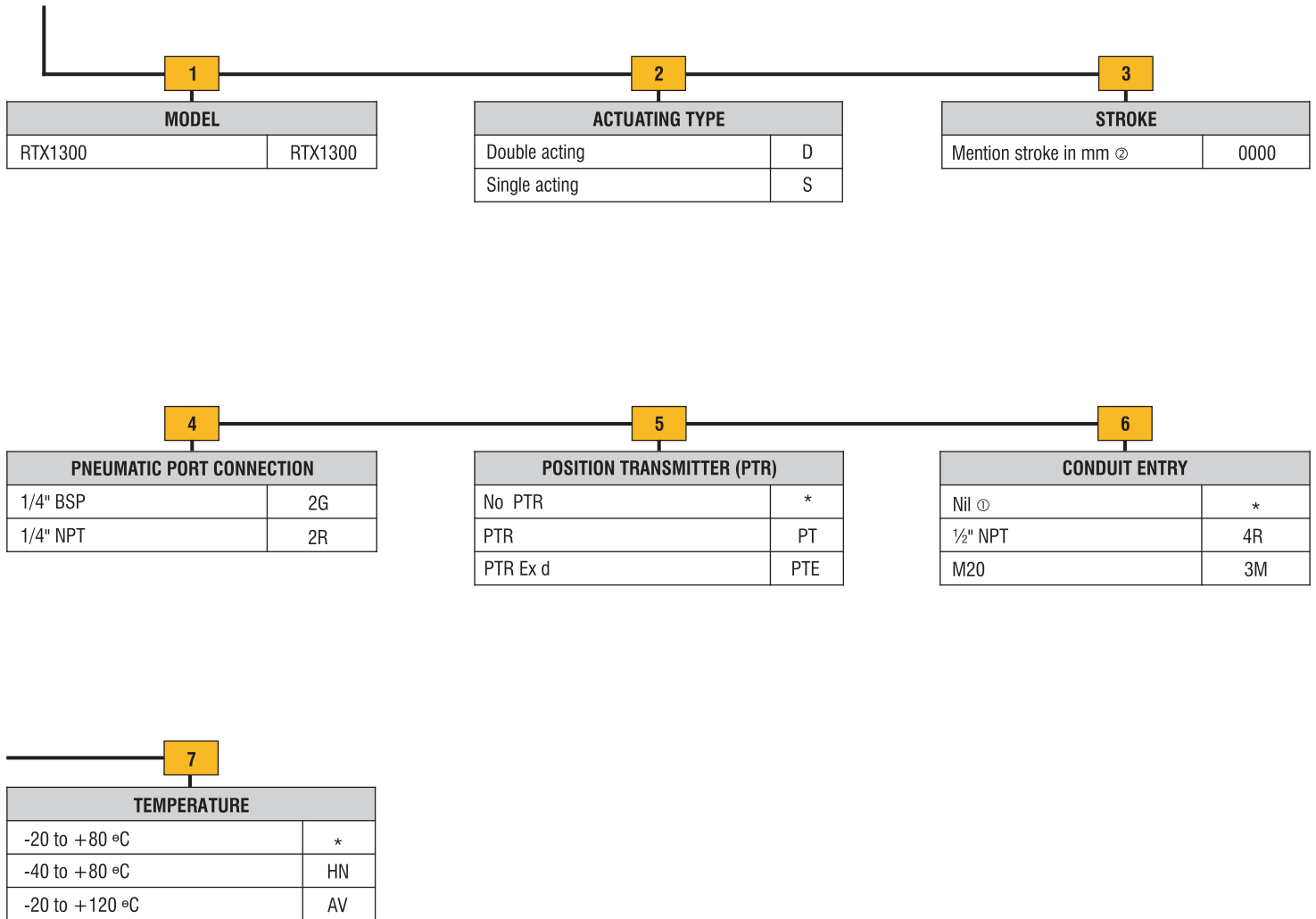
DIMENSION DETAILS



# PNEUMATIC POSITIONER

# RTX1300

## ORDERING CODE

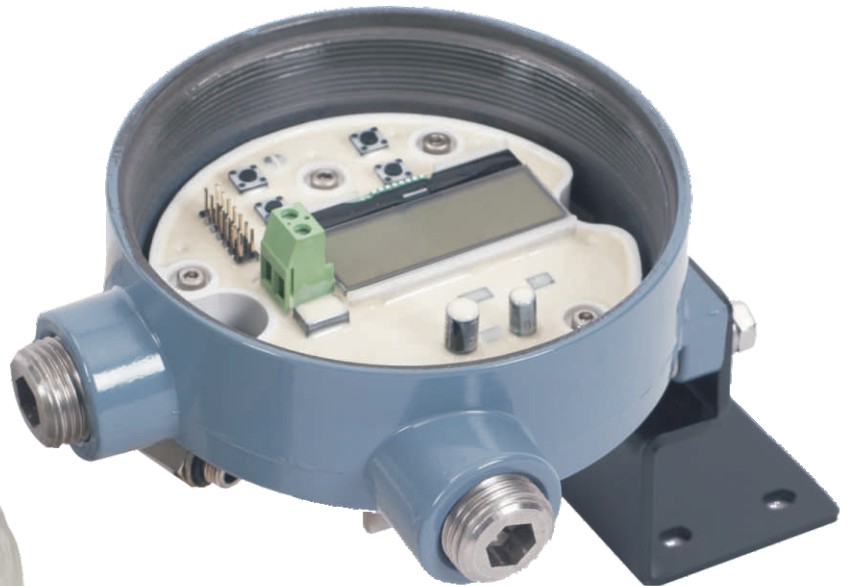


### NOTE

- \* Default
- ① Conduit type is Nil when PTR is Nil
- ② Digit indicates stroke of actuator

For any special requirement please coordinate with factory, ordering code for special will be MODEL-SUNUMBER

## POSITION TRANSMITTER (PTR)



### FEATURES

- Contactless position feedback
- Extremely reliable under vibration
- Life is practically infinite, as compared to a potentiometer, which wears every time it moves
- Microcontroller, MSP430 based transmitter, extremely reliable with a high performance chip
- Easy to set, by just pushing set buttons
- Digital display for the easy readability
- 21 freely configurable set points, for 4-20 mA output for variable span.
- Weather proof, flameproof and explosion proof available
- IP 67 Rating
- Available in Aluminum, Stainless Steel and Polycarbonate (Makrolon®)

## POSITION TRANSMITTER

(PTR)

### SPECIFICATIONS

Type	Weatherproof/ Flameproof
Field Calibration	Auto calibration with stroke settings
Custom Set Point	21 freely configurable set points
Position Sensing	Contactless
Indication	LCD display - Current (mA) and Position (%)
Setup	Push button on device
Conduit Entry	½" NPT (F) or M20
Temperature	-20 °C to +60 °C (Standard) -40 C to +80 °C (On Request)

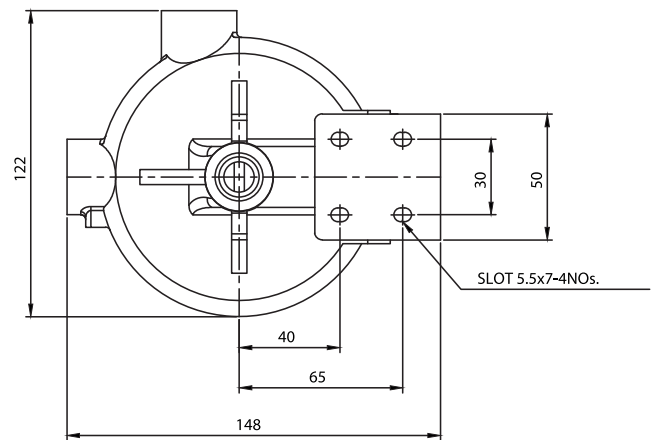
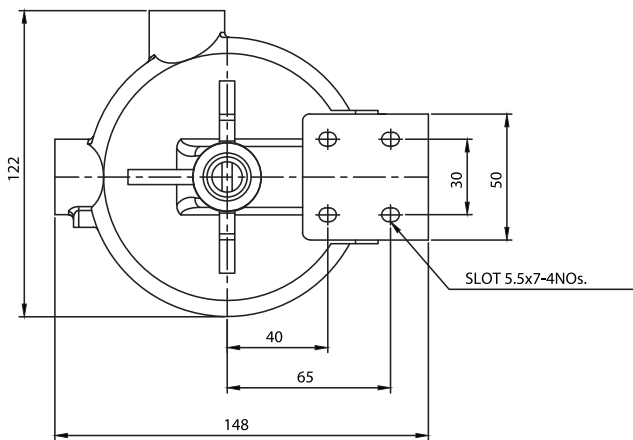
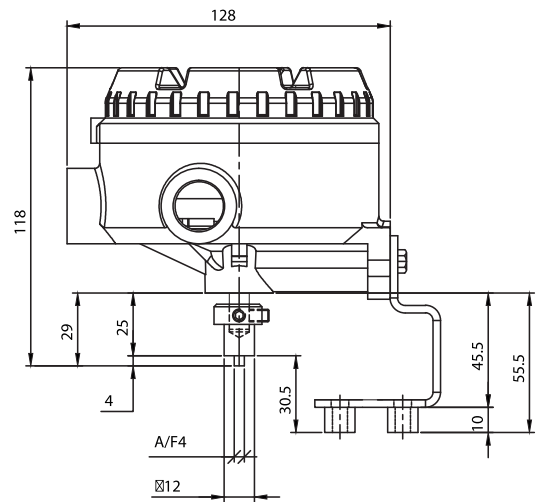
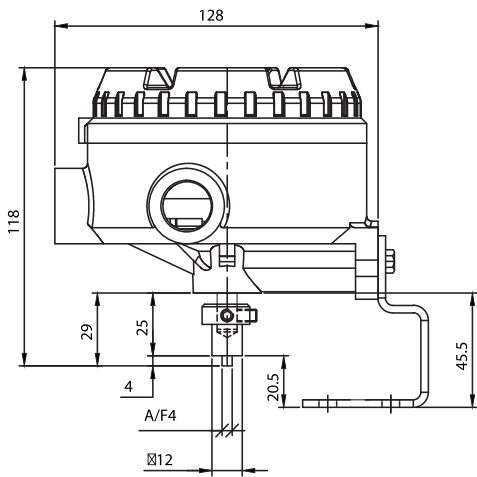
### CHARACTERISTICS

Accuracy	0.3% of full scale
Repeatability	0.2% of full scale
Hysteresis	0.3% of full scale
Linearity	0.2% of full scale
Supply Voltage	24V DC + / - 10% (Loop Feedback)
Supply Connection	Screw Terminal (standard), M8 socket 3/4 pin (M) (optional)
Operating Range	3.6 - 21mA
Influence of Temperature	0.35% / 10 °K
Transmission Error	< 0.3%
Electromagnetic	CE, directive EMC 89 / 336 / EEC Compatibility

POSITION TRANSMITTER (PTR)

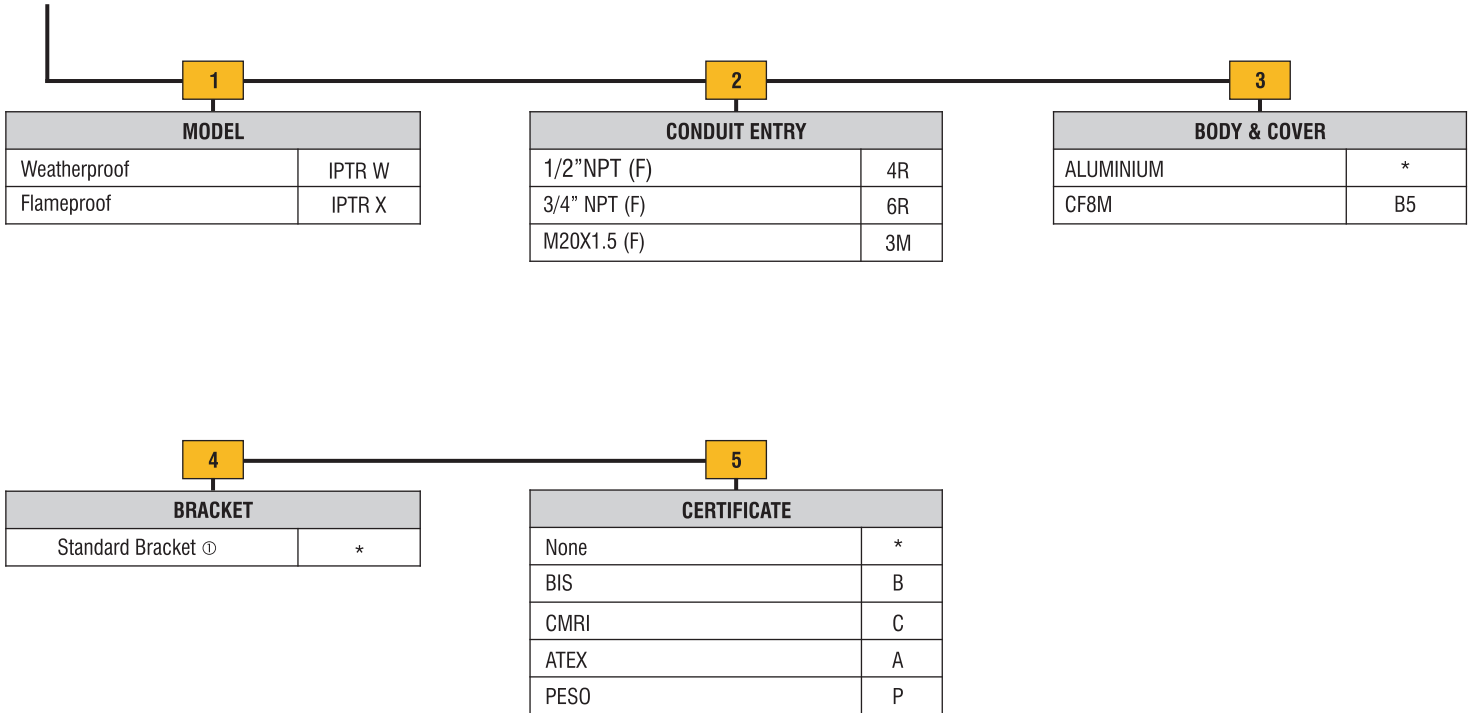
DIMENSION DETAILS

CONTACT LESS POSITION TRANSMITTER



# POSITION TRANSMITTER (PTR)

## ORDERING CODE



### NOTE

\* Default

① Conduit type is Nil when PTR is Nil



*Engineering For The Future*

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