External Input Signal (Remote) Type

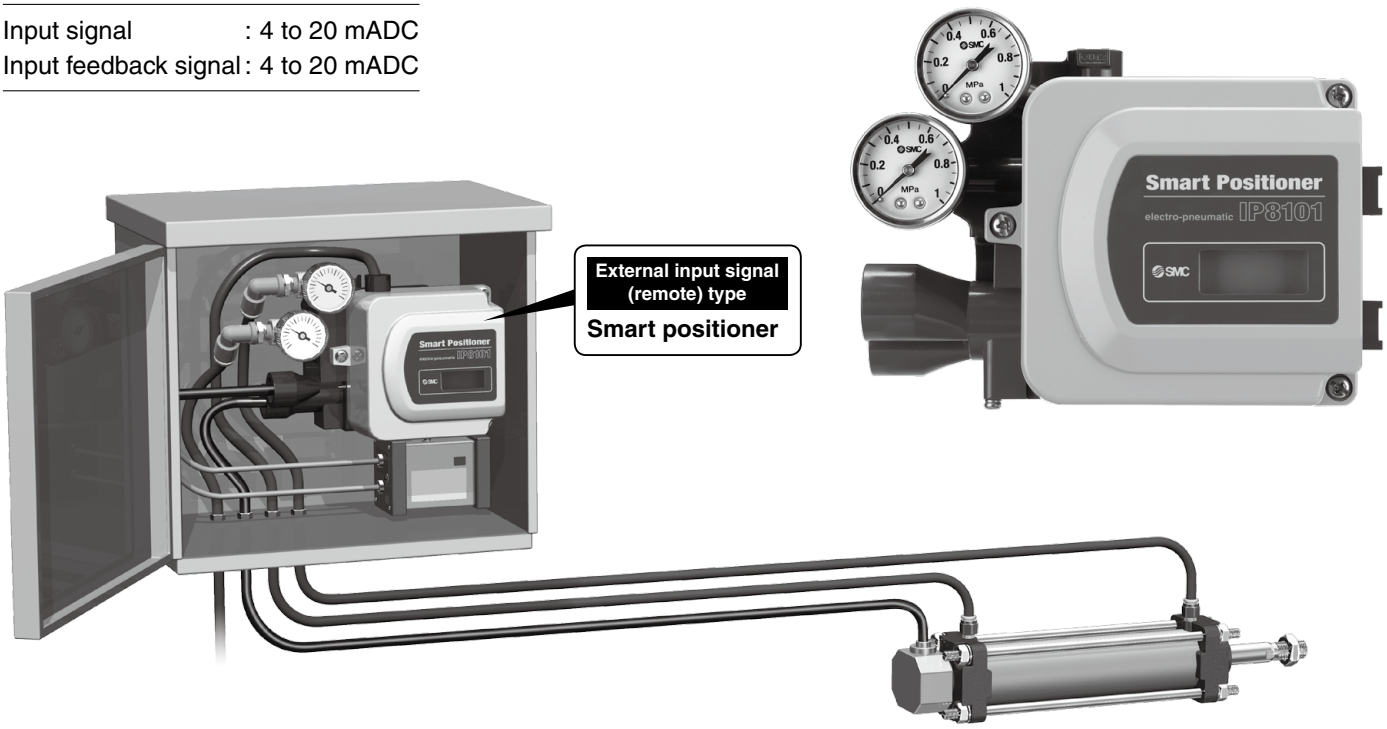
Smart Positioner

CE [Option]

Allows for the remote control of cylinders

Controls the cylinder by feedback signal

Input signal : 4 to 20 mADC
Input feedback signal : 4 to 20 mADC

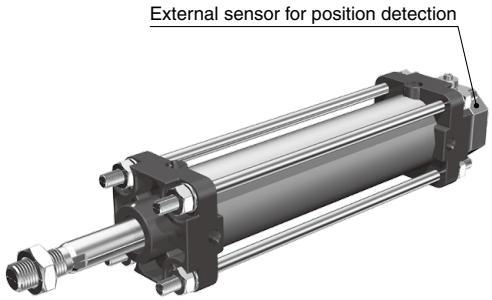


Cylinder with built-in position detection sensor

Related Product

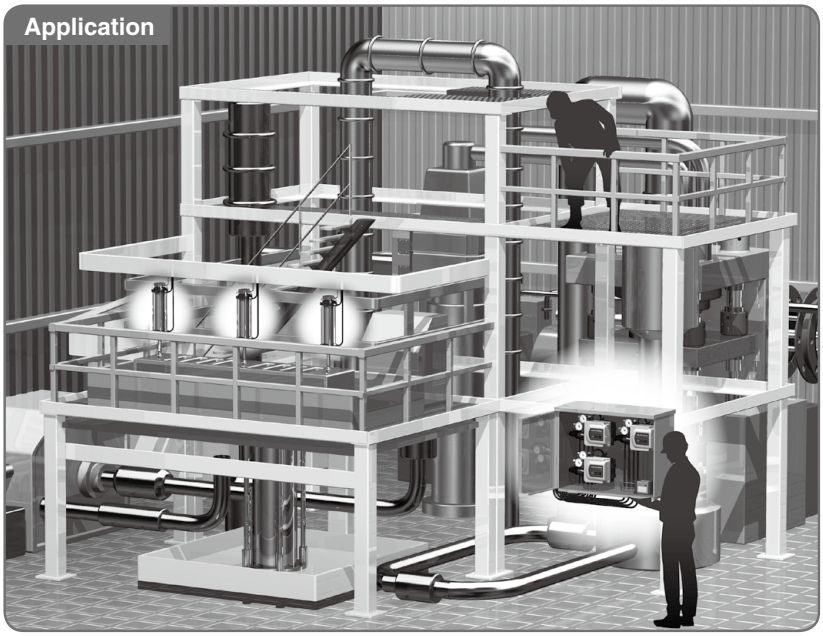
Cylinder with built-in external sensor (Available as a special order product)

A cylinder with a built-in external sensor for position detection that supports the external input signal (remote) type smart positioner



* For special order products and lead times, contact your SMC sales representative.

Application



IP8101-X419-□

SMC

IP8101-X419-□

How to Order

IP8101 – 0 3 2 – W – □ – X419 – □

Pressure gauge

3	1.0 MPa

Construction

2	With output function {Analog (4 to 20 mADC) output + Alarm output x 2}

Accessories

W	Body cover with LCD window

Connection

	Air	Electric
Nil	Rc1/4	G1/2
M	Rc1/4	M20 x 1.25
N	Rc1/4	1/2NPT
1	1/4NPT	G1/2
2	1/4NPT	M20 x 1.25
3	1/4NPT	1/2NPT
4	G1/4	G1/2
5	G1/4	M20 x 1.25
6	G1/4	1/2NPT

CE marking

Nil	—
Q	CE-marked product

Specifications

Positioner Specifications

Input current	4 to 20 mADC*1 (2-line, Separate power source unnecessary)
Input feedback signal	4 ±1 to 20 ±1 mADC
Piping length	10 m or less
Tubing size	O.D.: 8 mm, I.D.: 5 mm
Min. operating current	3.85 mADC or more
Voltage between terminals	12 VDC (Equivalent to 600 Ω input resistance, at 20 mADC)
Max. supply power	1 W*2 (Imax: 100 mADC, Vmax: 28 VDC)
Supply air pressure	0.3 to 0.7 MPa
Sensitivity	Within ±0.2% F.S.*3
Linearity*3	Within ±1% F.S. (Noise interference-free environment) Within ±8% F.S. (For "-Q"/use in an environment with noise interference)
Hysteresis	Within 0.5% F.S.*3
Repeatability	Within ±0.5% F.S.*3
Temperature coefficient	Within 0.05% F.S./°C*3
Max. output flow	200 L/min (ANR) or more (SUP = 0.4 MPa)*4
Air consumption	Within 11 L/min (ANR) (SUP = 0.4 MPa)*4
Ambient and fluid temperatures	–20°C to 80°C (Non-explosion proof)*5, *6
Enclosure	JIS F 8007 IP65 (Compliant with IEC 60529)
Air connection port*7	1/4 (Rc, NPT, G) female thread
Electrical connection port*7	1/2 (G, NPT) female thread, M20 x 1.5 female thread
Material	Body/Cover: Aluminum diecast (Coating: Baking finish with epoxy resin)
	Thread: Stainless steel
Weight	Approx. 2.6 kg

∗1 A 1/2 split range can be selected using the split range setting (Parameter code: 300).
∗2 <Example> If an input current of 80 mADC is input by mistake, damage will not occur as long as the input power supply voltage is below 12.5 VDC.
Max. supply power = 80 mADC x 12.5 V = 1 W
∗3 The linearity value was confirmed with no load using an SMC inspection device (the device with a built-in sensor shown in the table below).
The positioner cannot be used independently; it is meant for use as a part of a loop which includes actuating equipment such as valves, actuators, distributed control systems, etc. Therefore, the values in the table may vary depending on the loop conditions.
The temperature coefficient of the external sensor is not included in the temperature coefficient.
The linearity value of ±8% F.S. or less is based on measurement during EMC-testing under certain electrical noise conditions.
When using in an environment where noise interference is present, we recommend the "-Q" option, not the CE-compliant option "Nil."
∗4 (ANR) indicates JIS B 0120 standard air.
∗5 The LCD display may be difficult to see at low temperatures, but this does not affect positioner operation.
∗6 Be aware that temperature fluctuations may affect the voltage between terminals.
∗7 The connection port type can be selected during model selection.

External Sensor Specifications (Reference)

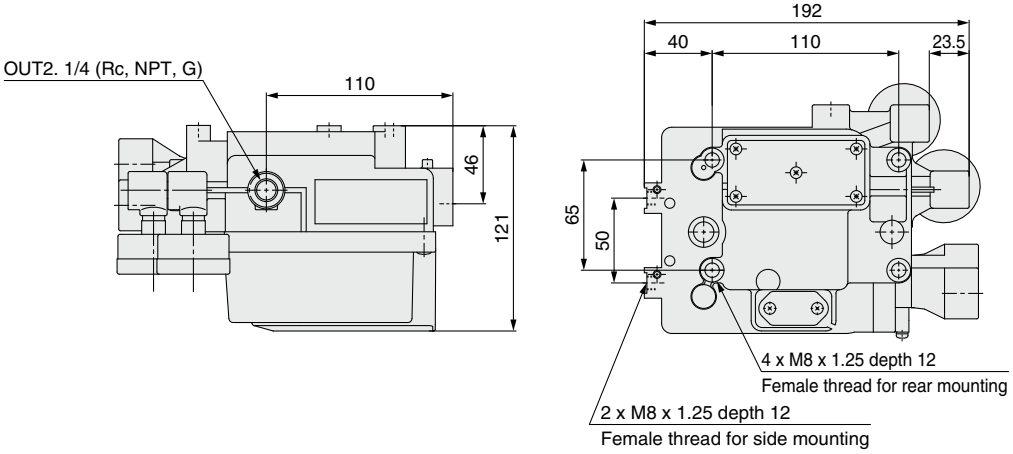
Linearity	±0.05% F.S. or less
Resolution	0.01% F.S. or less
Repeatability	±0.01% F.S. or less
Output signal	4 ±1 to 20 ±1 mADC

∗ Be sure to ground the product to prevent malfunction caused by noise or damage caused by static electricity.

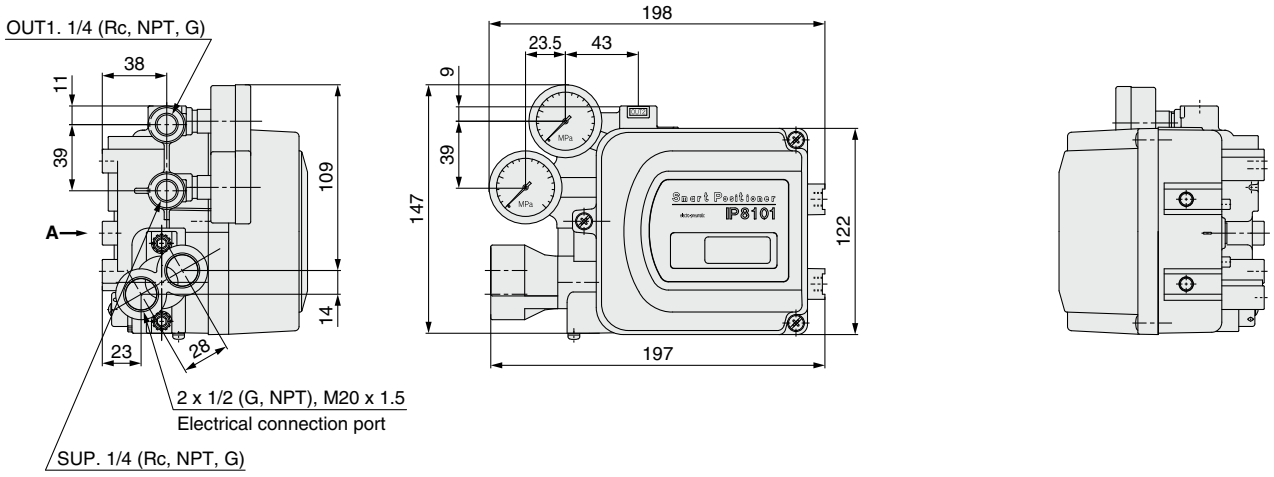
Dimensions

[mm]

IP8101-032-W-□-X419-□



View A



⚠ **Safety Instructions**	Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.