

4 WORKFLOW OF IP8001 POSITIONER SETUP

The workflow of IP8001 smart positioner from set-up to initial adjustment is shown below. Follow this flow when performing set-ups and adjustments of the positioner. Please refer to the manual for details.

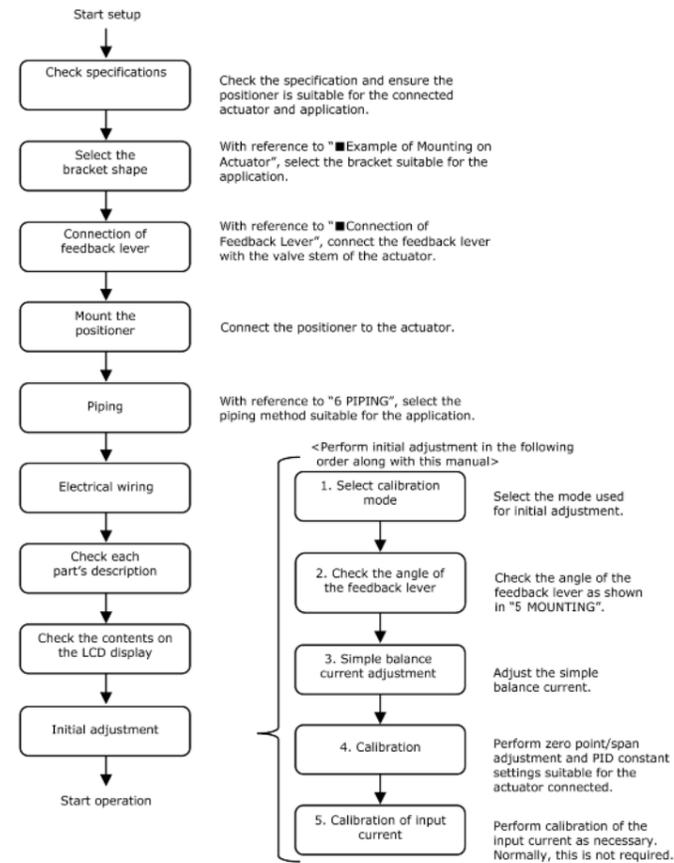


Fig. 2

5 MOUNTING

Example of Mounting on Actuator

The IP8001 Smart Positioner offers interchangeability in mounting pitch with the IP600, IP6000 and IP8000 Positioners. Therefore, it is possible to apply a bracket for IP600, IP6000 and IP8000 for mounting.*11

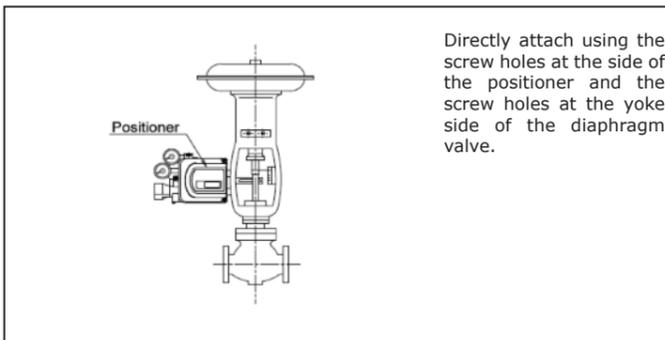


Fig. 3

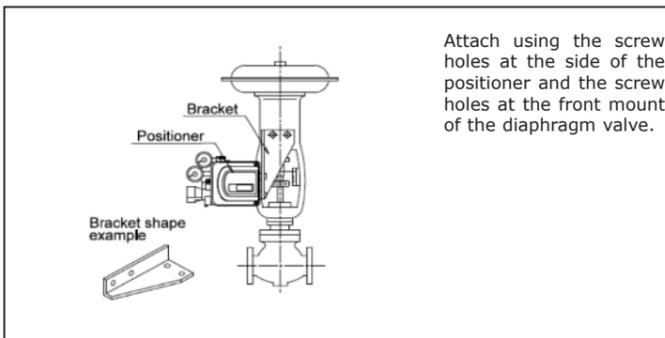


Fig. 4

5 MOUNTING (CONTINUED)

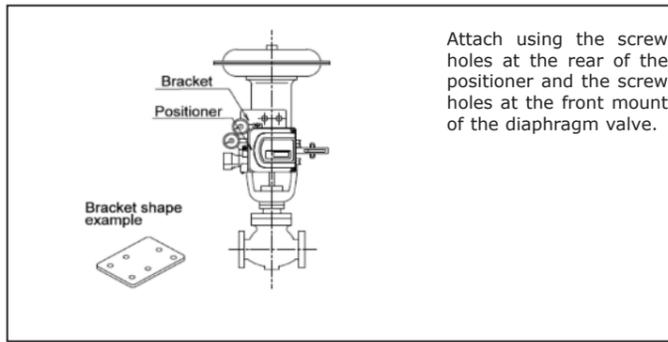


Fig. 5

Attach using the screw holes at the rear of the positioner and the screw holes at the front mount of the diaphragm valve.

*11: There is a possibility that the connection and the feedback lever interfere when the IP600 type is exchanged for the IP8001 type. Please machine the connection or interpose the spacer between the positioner and the bracket at that time.

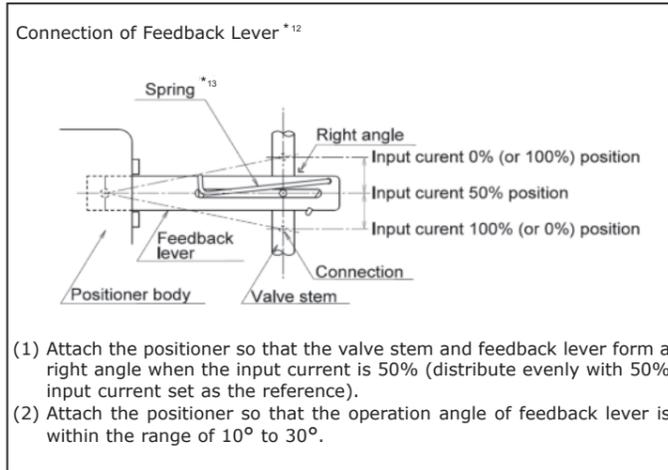


Fig. 6

*12: Do not impact on the feedback shaft of the positioner when the feedback lever connected with the valve stem or installed in the positioner.

*13: The installation direction of spring need not be changed by the difference of the direction of operation unlike the IP8000 type.

6 PIPING

		Table 3	
		Single action	Double action
Normal operation	Actuation: The stem moves in the arrow direction when the input current increases.		
	Actuation: The stem moves in the arrow direction when the input current increases. (Normal operation using the reverse actuation drive unit).		
Reverse operation	Actuation: The stem moves in the arrow direction when the input current increases. (Reverse operation using the normal actuation drive unit).		
	Actuation: The stem moves in the arrow direction when the input current increases.		

7 ELECTRICAL WIRING

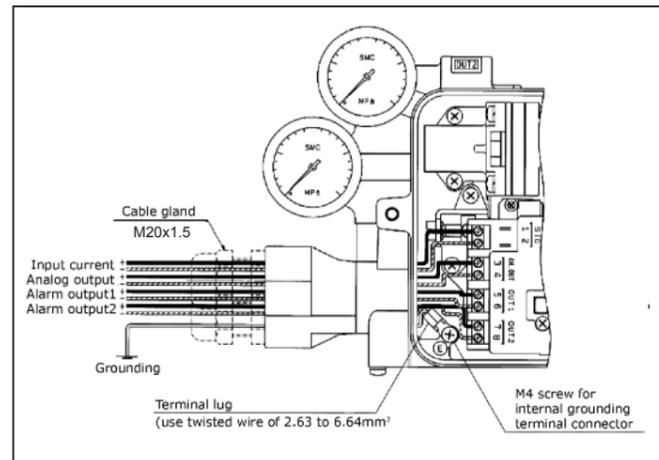


Fig. 7

- Remove the positioner body cover.
- Connect the input current wiring from an adjusting meter (controller) and connect each output wiring following Fig. 7. The input port of the electrical connection is equipped with a (blue) cable connector M20x1.5.

Note1: When the electrical connections are G1/2 or 1/2NPT option, the cable glands will not be provided.

Note2: Be sure to fit a plug when only one port of the W joint is used.

WARNING:

To use in an explosion protection specification the positioner may only be connected to a certified intrinsically safe electrical circuit with the following maximum values.

Parameters (current circuit)
 $U_i=28V$, $I_i=100mA$, $P_i=0.7W$, $C_i=12.5nF$, $L_i=1.5mH$

8 DESCRIPTION OF COMPONENTS

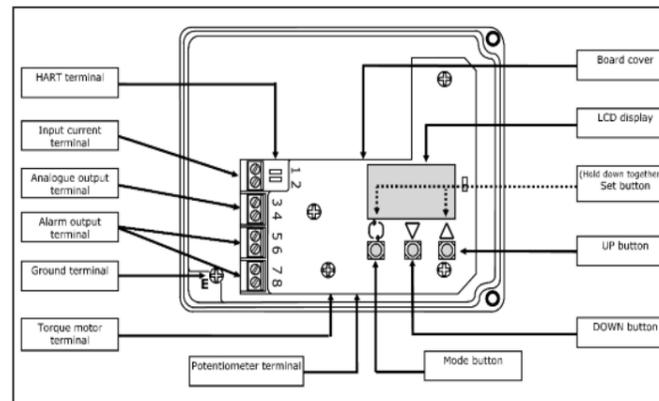


Fig. 8

9 MAINTENANCE

WARNING:

- Do not dis-assemble the product. A product which has been dis-assembled cannot be guaranteed. Consult with SMC if dis-assembly is necessary.
- After installation, repair and dis-assembly, connect compressed air and perform a proper functional test and leak test. If bleed noise is louder than the initial state or operation is abnormal, stop operation and check if installation is correct or not.
- Modification of the electrical construction is prohibited to maintain explosion proof certification.

CAUTION:

- Check if supply air is clean. Inspect compressed air cleaning system periodically so that dust, oil and humidity, which can cause malfunction and failure of the unit, do not enter the equipment.
- If handled improperly, compressed air can be dangerous. Maintenance and replacement of unit parts should only be performed by trained and experienced personnel for instrumentation equipment, as well as following the product specifications.

9 MAINTENANCE (CONTINUED)

- Check the positioner once a year. If excessively worn diaphragms, O-rings or seals are found, or any unit that has been damaged, replace with new units. Treatment at an early stage is especially important if the positioner is used in a place of severe environment like coastal area.
- Before removing the positioner for maintenance or replacing unit parts after installation, make sure the supply pressure is shut off and all residual air pressure is released from piping.
- When the fixed orifice is clogged with carbon particles or others, remove the pilot valve unit Auto/Manual switch screw (built-in fixed orifice) and clean it by inserting a $\phi 0.2$ wire into the aperture. If it must be replaced with a new one, stop the supply pressure and remove the stopper screw of the pilot valve unit.
- When disassembling the pilot valve, coat grease on the O-ring of the sliding section. (Use TORAY SILICONE SH45 grease)
- Check for air leaks from the compressed air piping. Air leaks could lower the performance characteristics of the positioner. Air is normally discharged from a bleed port, but this is necessary air consumption based on the construction of the positioner, and is not an abnormality if the air consumption is within the specified range.
- When replacing piping to change the operating direction, be sure to perform span adjustment (parameter code: C70).
- When removing the positioner from the actuator and mounting it onto another actuator, malfunctions may occur due to its retained initial constant. Therefore, when it is mounted onto other actuators, transmit the input current while cutting the air supply, and shift to parameter mode for adjustments.
- The balance current will change depending on the positioner orientation. Adjust the balance current (parameter code: C60) every time the orientation changes.
- Take care during normal conditions of use, maintenance and cleaning to avoid danger of ignition due to electrostatic charges. Do not clean with a soft dry cloth.

10 LIMITATIONS OF USE

WARNING:

- Do not exceed any of the specifications laid out in section 2 of this document or the specific product catalogue.
- Read thoroughly and understand the operation manual before operation of this product.

11 CONTACT LIST

AUSTRIA	(43) 2262 62 280	NETHERLANDS	(31) 20 531 8888
BELGIUM	(32) 3 355 1464	NORWAY	(47) 67 12 90 20
CZECH REP.	(420) 5 414 24611	POLAND	(48) 22 211 9600
DENMARK	(45) 70 25 29 00	PORTUGAL	(351) 21 471 1880
FINLAND	(358) 207 513513	SLOVAKIA	(421) 2 444 56725
FRANCE	(33) 1 64 76 1000	SLOVENIA	(386) 73 885 412
GERMANY	(49) 6103 4020	SPAIN	(34) 945 18 4100
GREECE	(30) 210 271 7265	SWEDEN	(46) 8 603 0700
HUNGARY	(36) 1 371 1343	SWITZERLAND	(41) 52 396 3131
IRELAND	(353) 1 403 9000	UNITED KINGDOM	(44) 1908 56 3888
ITALY	(39) 02 92711		

SMC Corporation

URL <http://www.smcworld.com> (Global) <http://www.smceu.com> (Europe)
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