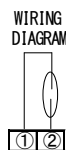
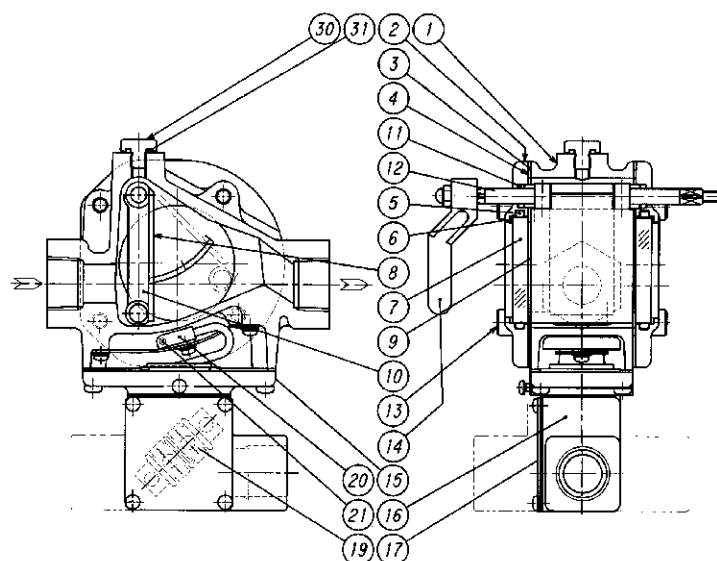


-SHRT

FLOWGAUGE

OPERATION MANUAL



PARTS LIST			
MARK	PARTICULAR	Q	REMARK
1	BODY	1	
2	COVER	2	
3	GASKET	2	
4	O-RING	2	
5	O-RING	2	
6	CUSHION GASKET	2	
7	SIGHT GLASS	2	REINFORCED
8	FLAPPER	1	
9	BRUSH	2	
10	BRUSH HOLDER	2	
11	O-RING	2	
12	SPINDLE	1	
13	CAP BOLT	8	
14	HANDLE	1	
15	T. BOX SEAT	1	
16	TERMINAL BOX	1	
17	T. BOX COVER	1	
18	---		
19	TERMINAL	1	2P-M3
20	R. SW. CASE	1	
21	REED SWITCH	1	10VA/W
30	PLUG	1	
31	O-RING	1	

① Specification and performance

FLUID : WATER, OIL (viscosity fixed)
 PRESSURE : MAX 1.0MPa TEST 1.5MPa
 TEMPERATURE : MAX 60°C
 CONTACTS : 1a (Normal flow-OFF, Decreased flow -ON)
 1b (Normal flow-ON, Decreased flow -OFF)
 CAPACITY : AC/DC220V 10VA/W MAX
 FLOW : Provided with an appropriate flapper type ,
 according to normal flow and signal flow.
 (To be fixed upon order)

- If the cleaning operation is carried out while operating, no influence will be exerted over the signal. If ③ the flapper is located at intermittent or decreased current state, the flapper will be pushed up, resulting in giving signal of normal flow. If it is an obstacle, turn off the power and control it.
- After finishing the cleaning operation, turn ⑭ brush handle clockwise until it stops. It must be housed at scale 0 or below so that the ⑨ brush does not hinder the movement of ⑧ flapper.
- In addition to sight glass cleaning, ⑨ brush removes dust between ⑫ flapper and ⑫ spindle and it can be utilized for maintenance of normal movement of flapper, adjustment on signal position and confirmation.

② Confirmation

1. Inspection shall be made on whether or not the specification are correct, referring to nameplate and inspection slip.
2. Inspection shall be made on whether or not the sight glass is damaged.
3. Check the dimensions of diameter of connecting pipes.
4. Check whether or not the lead switch and lead are damaged by means of a tester etc.
5. Check whether or not the switch is operated connecting a tester therewith. Placing a wiper brush at 0 point, the flapper must be pushed up by means of a rod and carry out the ON-OFF operation at a specified position.
6. The specified position herein means that where the working flow is accord with the flow table scale.

③ Connection of piping

- Install it to the piping, by indicate flow direction.
- Install it in such a way that the sight glass surface becomes vertical.
- If there is any difference in jointing part of pipes, do not connect them forcibly.
- Be sure to provide supports there to so that no weight of pipeline is given to the flow gage.

④ Caution for connection of wires at switch section

- Do not connect them with power on.
- Do not connect power more than contact capacity.

⑤ Maintenance

A) Internal cleaning of sight glass

- When the inside of ⑦ sight glass is stained, resulting in being head to be soon. Turn ⑭ brush handle clockwise or counter clockwise and repeat it several times. Then clean it.

B) Disassembly and cleaning of the body

- Disassembly and cleaning of body are almost not required, if a large particle of foreign matter mixes into fluid and removed by brushing or disassembly is required, discharge fluid.
- Loosen 4pcs of ⑬ clamp bolt of ② cover (only ⑭ brush handle side) and remove it.
- Disassemble ② cover from ① body.
- Pressing the head of ⑫ spindle in such a way that it remains at ① body-side, remove ② cover from ① body.
- ⑦ sight glass attached ② cover. Carry out the operation with utmost care in such a way that gasket is not damaged.
- Thus, the inside of ① body can be see completely.
- Pulling out ⑫ spindle with ⑩ brush holder, ③ flapper, ⑪ O-ring, washer and spring assembled, clean it.
- With the abovementioned, disassembly and cleaning operations finish.
- Carry out the reassembly operation in the order contrary to that for disassembly.

C) Adjustment on switch (Signal flow)

- If the signal flow is required to change, or the switches are exchanged for the reasons of burning damage or others, carry out the operation as follows.
- ※ (If there is a possibility of touching charged parts, do so after turning off the power switch.)
- Disconnect ⑮ TB seat. (Remove it with utmost care with wires connected)
- Loosening the fitting screws of switch case, move the ⑳ switch case and carry out the operations.
- As for movement directions, direct it to 0 scale direction for decreasing signal flow. For increasing, direct it to 10th scale division direction. For movement to 10th scale division direction, it must be up to 5th one.
- Stopping flowing, return ③ flapper to 0 position. By utilizing ⑨ brush, move the flapper and check the signal position at present.
- Move the flapper to the position for new adjustment and stop it. (Refer to FLOW CHART)
- Moving ⑳ switch case, the operating position of the tester is a new adjusting signal position. Operate the flapper by a brush several times and confirm that signal is correct.
- Tightening the switch case fitting screws, fit ⑮ TB seat and finish the operation.

