



# TECHNICAL GUIDANCE

Highly durable construction made of compact and light metal  
Flow indicator with alarm contact

## FA-3000 Series FLOW MONITOR

### OUTLINE

**FA-3000**, flow indicator with alarm contact is the standard model among a series of FLOW MONITORS which have been widely appreciated by customers.

In addition to the indicator, **FA-3000** outputs an alarm contact signal at preset value. The body constructed of metal frame offers high durability against the stress caused from the mounted piping.

### FEATURES

- ❑ COMPACT AND LIGHTWEIGHT  
**FA-3000** is suitable for assembling onto the packaged equipment and devices thanks to its compact and lightweight design.
- ❑ DURABLE CONSTRUCTION  
Rugged and armored construction endures stress from the piping.
- ❑ WATERPROOF CONSTRUCTION  
**FA-3000** can also be used under splashes of water.
- ❑ QUICK DELIVERY AND COMPETITIVE PRICE

### RECOMMENDED APPLICATIONS

- ❑ Monitoring of sealing liquid supply and its stoppage
- ❑ Monitoring of cooling water supply and its stoppage
- ❑ Liquid cultivating medium supply

### STANDARD SPECIFICATION

|                        |                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicable fluid       | Water or liquids equivalent to water                                                                                                                                          |
| Available scale range  | 0.3 to 3L/min (FA-31 □□-□)                                                                                                                                                    |
|                        | 0.5 to 5L/min (FA-32 □□-□)                                                                                                                                                    |
|                        | 1 to 10L/min (FA-33 □□-□)                                                                                                                                                     |
|                        | 2 to 20L/min (FA-34 □□-□)                                                                                                                                                     |
|                        | 3 to 30L/min (FA-35 □□-□)                                                                                                                                                     |
|                        | 5 to 50L/min (FA-36 □□-□)                                                                                                                                                     |
| Process connection     | Rc3/8, Rc1/2, Rc3/4, Rc1*<br>*Installation length for Rc1 is 160mm.<br>Select Rc1/2 or more for 20 and 30L/min,<br>Rc3/4 or more for 50L/min version to reduce pressure loss. |
| Flow direction         | Left to Right, Right to Left, Bottom to Top,<br>Top to Bottom                                                                                                                 |
| Max. OP. Temp.         | 60°C                                                                                                                                                                          |
| Max. OP. Press.        | 0.8MPa                                                                                                                                                                        |
| Indication accuracy    | ±5% of full scale                                                                                                                                                             |
| Alarm setting accuracy | ±5% of full scale                                                                                                                                                             |
| Alarm setting range    | 20~90% of full scale (adjustable on site)                                                                                                                                     |
| Alarm reset span       | Max. 15% of full scale (at 20~70% of full scale)                                                                                                                              |
| Alarm contact          | SPST Reed switch                                                                                                                                                              |
| Contact capacity       | AC10VA<br>(Max. Volt. 125V, Max. Curr. 0.5A)<br>DC10W<br>(Max. Volt. 100V, Max. Curr. 0.5A)                                                                                   |
| Alarm action           | Closed at or higher than set point<br>FA-3□□ 1-□                                                                                                                              |
|                        | Opened at or higher than set point<br>FA-3□□ 2-□                                                                                                                              |
|                        | Closed at or lower than set point<br>FA-3□□ 3-□                                                                                                                               |
|                        | Opened at or lower than set point<br>FA-3□□ 4-□                                                                                                                               |



Electric connection

Lead wire connection  
(Lead wire 30cm provided)

Mass (Approx.)

400g

Material

Refer to DIMENSION AND MATERIAL for details.

### MODEL CODE

| Model code            |            | Detail Model Code | Description                        |
|-----------------------|------------|-------------------|------------------------------------|
| FA - 3 □ □ □ □ - □    |            | - □ □ □ □ - □     |                                    |
| Scale range           | 1          |                   | 0.3 to 3L/min                      |
|                       | 2          |                   | 0.5 to 5L/min                      |
|                       | 3          |                   | 1 to 10L/min                       |
|                       | 4          |                   | 2 to 20L/min                       |
|                       | 5          |                   | 3 to 30L/min                       |
|                       | 6          |                   | 5 to 50L/min                       |
| Process connection    | 1          |                   | Rc3/8                              |
|                       | 2          |                   | Rc1/2                              |
|                       | 3          |                   | Rc3/4                              |
|                       | 4          |                   | Rc1                                |
|                       | 5          |                   | NPT3/8                             |
|                       | 6          |                   | NPT1/2                             |
|                       | 7          |                   | NPT3/4                             |
|                       | 8          |                   | NPT1                               |
| Alarms                | 1          |                   | Closed at or higher than set point |
|                       | 2          |                   | Opened at or higher than set point |
|                       | 3          |                   | Closed at or lower than set point  |
|                       | 4          |                   | Opened at or lower than set point  |
|                       | 0          |                   | No alarm                           |
| Flow direction        | - 1        |                   | Bottom to top                      |
|                       | - 6        |                   | Left to right                      |
|                       | - 7        |                   | Right to left                      |
|                       | - 8        |                   | Top to bottom                      |
| Wetted part materials | - 4        |                   | SUS304 (Standard)                  |
|                       | - 6        |                   | SUS316                             |
| Gasket materials      | 0          |                   | NBR (Standard)                     |
|                       | 1          |                   | Fluorocarbon rubber                |
|                       | 2          |                   | EPDM                               |
|                       | 3          |                   | CR                                 |
| Reed switch           | 0          |                   | Standard                           |
|                       | 1          |                   | Complying with CE or UL*           |
| Alarm set point       | - 0        |                   | Not specified *                    |
|                       | - Numerals |                   | set at designated scale            |

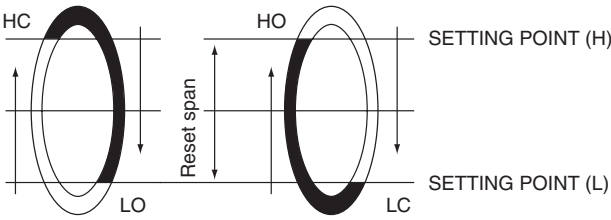
\* If alarm set point is not designated, set points will be set as 20% of full scale for low alarm and 80% of full scale for high alarm.

**ALARM ACTION**

FA-3□□1-□  
FA-3□□4-□

FA-3□□2-□  
FA-3□□3-□

■ : CLOSE  
□ : OPEN



**REFERENCE 1**

When the inductive load such as relays, solenoid valves or likes are connected, the capacity of them must be less than 1/10 of the maximum contact capacity. In such cases, provide the protective circuit.

**REFERENCE 2**

When cable length between the contacts and load is more than 5m, provide with a protective circuit such as the surge suppressor or resistance near this product within 20cm in series as shown at Fig.1.

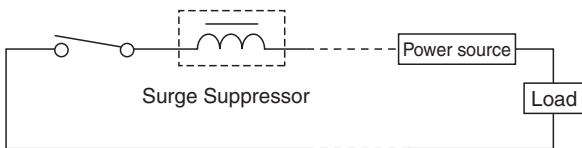


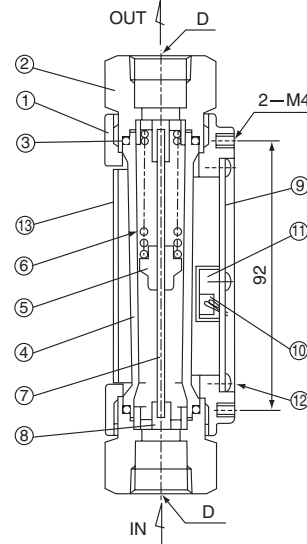
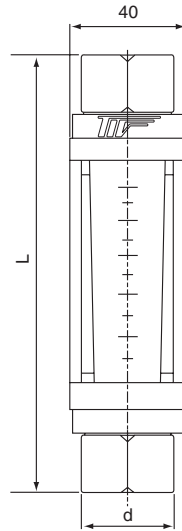
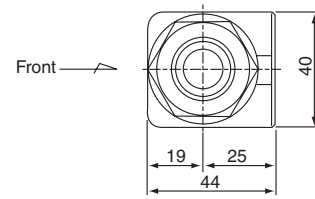
Fig. 1

**DIMENSION AND MATERIAL**

| No. | PARTS NAME    | MATERIAL              |
|-----|---------------|-----------------------|
| 1   | Body          | Aluminium Die-casting |
| 2   | Fittings      | SUS304                |
| 3   | O ring        | NBR                   |
| 4   | Tapered tube  | Acryl                 |
| 5   | Float         | PPS resin             |
| 6   | Spring        | SUS316                |
| 7   | Float rod     | SUS316                |
| 8   | Float stopper | POM                   |
| 9   | Rear cover    | ABS(White)            |
| 10  | Reed switch   | —                     |
| 11  | Switch holder | POM                   |
| 12  | Screw         | SUS304                |
| 13  | Scale plate   | Transparent resin     |

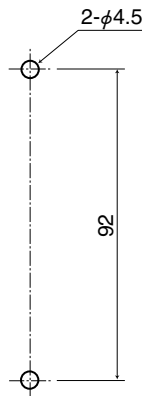
| Connection    | L (mm) | d (mm) |
|---------------|--------|--------|
| Rc3/8, NPT3/8 | 150    | 32     |
| Rc1/2, NPT1/2 | 150    | 32     |
| Rc3/4, NPT3/4 | 150    | 32     |
| Rc1, NPT1     | 160    | 41     |

- Parts made of SUS304 may be changed to SUS316 due to production circumstances.
- ASTM or AISI materials corresponding to JIS materials may be used due to production circumstances.

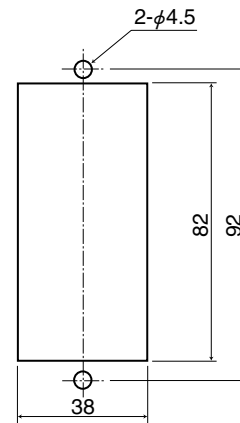


**PANEL CUT**

Model without alarm



Model with alarm



\* Specification is subject to change without notice.

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