

Mechanical Pressure Switches

General Purpose Pressure Switch/Snap Switch Type ISG



- For general fluids
- Equivalent to IP44
- With neon light

| Series | Type | Set pressure range |
|-------------|-------------------|--------------------|
| ISG11□, 21□ | Positive pressure | 0.02 to 0.3 MPa |
| ISG12□, 22□ | Positive pressure | 0.05 to 0.7 MPa |
| ISG13□, 23□ | Positive pressure | 0.1 to 1.0 MPa |
| IS2761 | Positive pressure | 0.1 to 1.0 MPa |
| ISG19□, 29□ | Vacuum pressure | -10 to -100 kPa |

Vacuum Switch/Reed Switch Type ZSM1



- Can be integrated with a ZM ejector system

| Series | Type | Set pressure range |
|--------|-----------------|--------------------|
| ZSM1 | Vacuum pressure | -27 to -80 kPa |

Pressure Gauge with Switch GP46



- A pressure switch function has been added to the gauge.

| Series | Size (O.D.) | Connection thread |
|--------|-------------|-------------------|
| GP46 | ø42.5 | R1/8, 1/4 |

Electronic Flow Switches/Sensors

2-Color Display Digital Flow Switch PFM



- Air, N₂, Ar, CO₂
- Grease-free
- Integrated flow adjustment valve
- Compact, Lightweight, Space saving

| Series | Rated flow range [L/min] |
|--------|---------------------------|
| PFM | 0.2 to 10 (0.2 to 5) |
| | 0.5 to 25 (0.5 to 12.5) |
| | 1 to 50 (1 to 25) |
| | 2 to 100 (2 to 50) |
| | () : For CO ₂ |

2-Color Display Digital Flow Switch PFMB



- Air, N₂
- Grease-free
- Integrated flow adjustment valve
- Compact, Space saving

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PFMB | 2 to 200 |
| | 5 to 500 |
| | 10 to 1000 |
| | 20 to 2000 |

Electronic Flow Switches/Sensors

3-Color Display Digital Flow Switch **PFMC**



- Dry air, N₂
- 3-color/2-screen display
- Expanded flow range: Wide range of flow measurement with one product
- Compact, Space saving

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PFMC | 5 to 500 |
| | 10 to 1000 |
| | 20 to 2000 |

Flow Sensor **PFMV**



- Suction verification of very small workpieces
- Repeatability: $\pm 2\%$ F.S.
- Response speed: 5 ms or less, Withstand pressure: 500 kPa
- Grease-free, RoHS compliant
- Only 1 voltage monitor is required to cover the complete range.
- Related equipment: Suction filter ZFC050 series

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PFMV | 0 to 0.5 |
| | 0 to 1 |
| | 0 to 3 |
| | -0.5 to 0.5 |
| | -1 to 1 |
| | -3 to 3 |

Digital Flow Switch for Air **PF2A**



- An integrated type and a separate monitor type are available.
- Switch output, Accumulated pulse output, Analog output
- Capable of switching back and forth between cumulative and instantaneous flow
- IP65

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PF2A | 1 to 10 |
| | 5 to 50 |
| | 10 to 100 |
| | 20 to 200 |
| | 50 to 500 |
| | 150 to 3000 |
| | 300 to 6000 |
| | 600 to 12000 |

3-Color Display Digital Flow Switch for Water **PF3W**



- 3-color/2-screen display
- Integrated temperature sensor
- 40% smaller than the current product
- IP65 compliant, Non-grease type
- Fluid temperature: 0 to 90°C
- PVC piping type: Applicable to deionized water, chemical liquids, etc.

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PF3W | 0.5 to 4 |
| | 2 to 16 |
| | 5 to 40 |
| | 10 to 100 |
| | 50 to 250 |

Electronic Flow Switches/Sensors

3-Color Display Electromagnetic Type Digital Flow Switch LFE□



- Applicable fluids: Water, Water-soluble coolant
- Compact, Lightweight
56 mm x 40 mm x 90 mm (H x W x D)
Weight: 340 g (LFE1□3)
- Reverse flow can be detected.
- Operating fluid temperature: 0 to 85°C
- Current consumption: 45 mA

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| LFE□ | 0.5 to 20 |
| | 2.5 to 100 |
| | 5 to 200 |

Digital Flow Switch for Water PF2W

Integrated type



Separate type



Monitor



Sensor

- An integrated type and a separate monitor type are available.
- Switch output, Accumulated pulse output, Analog output
- Capable of switching back and forth between cumulative and instantaneous flow
- Compatible with high temperatures up to 90°C
- IP65

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PF2W | 0.5 to 4 |
| | 2 to 16 |
| | 5 to 40 |
| | 10 to 100 |

Digital Flow Switch for Deionized Water and Chemical Liquids PF2D



- Body sensor: New PFA, Tube: Super PFA
- Low particle generation, Excellent flow-through characteristics

| Series | Rated flow range [L/min] |
|--------|--------------------------|
| PF2D | 0.4 to 4 |
| | 1.8 to 20 |
| | 4.0 to 40 |

4-Channel Flow Monitor PF2□200



- 1 controller can handle 4 units' worth of flow volume maintenance.
- 4 different flow ranges can be connected to 1 controller.

| Series | Applicable sensor | Set flow range [L/min] |
|-------------|--|------------------------|
| PF2A200/201 | For air PF2A5 | 0.5 to 10.5 |
| | | 2.5 to 52.5 |
| | | 5 to 105 |
| | | 10 to 210 |
| | | 25 to 525 |
| PF2D200/201 | For pure water/chemical liquids PF2D5 | 0.25 to 4.50 |
| | | 1.3 to 21.0 |
| | | 2.5 to 45.0 |