

Air Flow Controller

Applicable fluid **Dry air, N₂**

Automatic flow rate adjustment is possible.

| Series | Rated control flow rate range [L/min] | | | |
|----------|---------------------------------------|-----|------------|------|
| | 50 | 100 | 500 | 1000 |
| IN502-44 | 50 to 500 | | | |
| IN502-45 | | | 50 to 1000 | |

Control Accuracy ±5% F.S.

Responsiveness 0.5 s or less

3-Screen Display

Current control flow rate value (Main screen)

Label (Sub screen/ Left side) Value (Sub screen/ Right side)

Visualization of Settings

Flow rate command value: 5.0

Outlet pressure value: 5.07 MPa

Flow rate bottom value: 4.1

Flow rate peak value: 4.4

Mode display: Mode 5.0



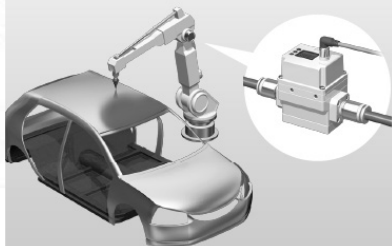
Reduced effects of load fluctuations

Changes in connected load conditions

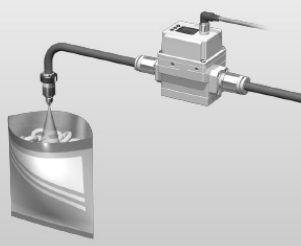
Control target changes | Pipe length and pipe bore size changes | Changes in components etc.

- The outlet pressure and fluid temperature can be measured simultaneously.
- Notifies when the control flow rate command value has been reached.

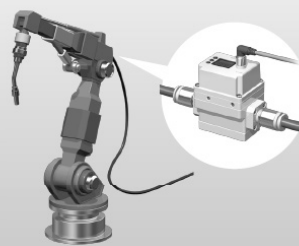
Applications



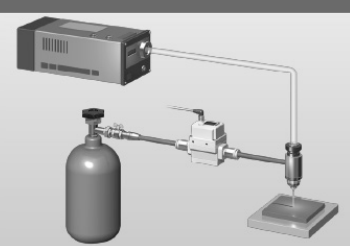
For painting
(Control of shaping air/bell rotation control air)



For food packaging
(Control of charge gases)



For arc welding
(Control of purge air)



For laser welding
(Control of assist gases)

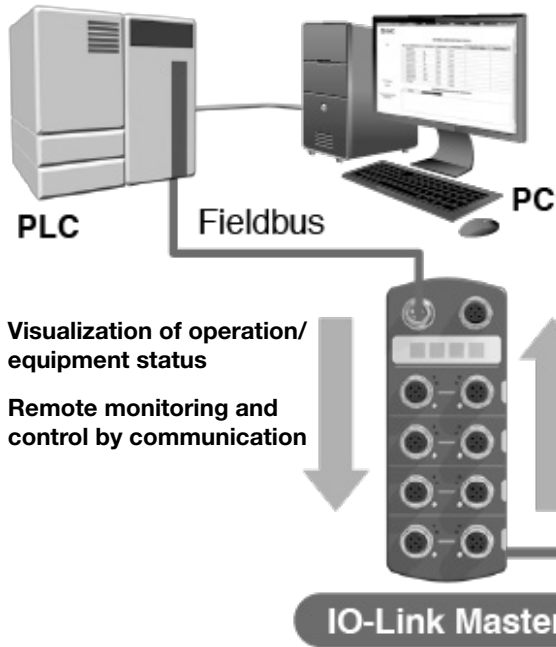
IN502-44/45 Series

Various types of grease can be selected.

| | |
|---------------------------------------|---|
| Grease compatible with low dew points | Compatible with low dew point air |
| White vaseline | Compatible with paint and other coatings |
| Grease for food | Compatible with NSF H1 grade food grade greases |

Various control diagnostics.

| | |
|-------------------------------|--|
| Control flow rate unreachable | The control flow rate does not reach the flow rate command value. |
| Load error | The load pressure exceeds the specification range due to the connected load. |
| Control error | Abnormalities in the product (operation, sensor, etc.) |



How to Order

IN502-44-1A

Rated control flow rate range

| Symbol | Description |
|-----------|-------------------|
| 44 | 50 to 500 L/min |
| 45 | 100 to 1000 L/min |

Grease

| Symbol | Description |
|------------|---------------------------------------|
| Nil | Grease compatible with low dew points |
| A | White vaseline |
| B | Grease for food |

Specifications

| Symbol | Input/Output specification*1 | Unit specification | Operation at power-off*5 |
|-----------|---|------------------------------|--------------------------|
| 1 | Analog voltage input/output*2, *3 + Switch output | SI units only | Flow rate zero |
| 2 | | With unit selection function | |
| 3 | | SI units only | |
| 4 | Analog current input/output + Switch output | With unit selection function | |
| 5 | | SI units only | |
| 6 | | With unit selection function | |
| 7 | Analog voltage input/output*2, *3 + IO-Link*4/ Switch output | SI units only | Flow rate retention |
| 8 | | With unit selection function | |
| 9 | | SI units only | |
| 10 | Analog current input/output + Switch output | With unit selection function | |
| 11 | | SI units only | |
| 12 | | With unit selection function | |
| 13 | Analog voltage input/output*2, *3 + IO-Link*4/ Switch output | SI units only | Flow rate retention |
| 14 | | With unit selection function | |
| 15 | | SI units only | |
| 16 | Analog current input/output + IO-Link*4/ Switch output | With unit selection function | |
| | | SI units only | |
| | | With unit selection function | |

*1 Analog I/O and switch output are I/O for the control flow rate.

*2 The analog voltage input can be selected from 0 to 5 or 0 to 10 V. The factory setting is 0 to 5 V.

*3 Either the 1 to 5 or 0 to 10 V button can be pressed to select the analog voltage output. The factory setting is 1 to 5 V.

*4 The analog input cannot be used in IO-Link mode.

*5 The operation at power-off, or the operation that is activated when the power supply turns OFF during flow rate control, can be selected via the part number.

Note that when flow rate zero is selected, it is not guaranteed to function as a shut valve. When flow rate retention is selected, it does not guarantee flow rate retention.

