

| |
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| F.R.L. |
| F.R. |
| F (Filtr) |
| R (Reg) |
| L (Lub) |
| Drain Separ |
| Mech Press SW |
| Res press exh valve |
| SlowStart |
| Anti-bac/Bac-remove Filt |
| Film Resist FR |
| Oil-ProhR |
| Med Press FR |
| No Cu/ PTFE FRL |
| Outdrs FRL |
| Adapter Joiner Press Gauge |
| CompFRL |
| LgFRL |
| PrecsR |
| VacF/R |
| Clean FR |
| ElecPneR |
| AirBoost |
| Speed Ctrl |
| Silncr |
| CheckV/ other |
| Fit/Tube |
| Nozzle |
| Air Unit |
| PrecsCompn |
| Electro Press SW |
| ContactSW |
| AirSens |
| PresSW Cool |
| Air Flo Sens/Ctrl |
| WaterRtSens |
| TotAirSys (Total Air) |
| TotAirSys (Gamma) |
| Gas generator |
| RefrDry |
| DesicDry |
| HiPolymDry |
| MainFiltr |
| Dischrg etc |
| Ending |

Contributing to the global environment with energy saving control.

Plan

Analyzing the current state

- Measurement of the current flow rate
- Review of actions

Action

Revision and continuance

- Standardization of consumption rate in systems and lines
- Horizontal development to other lines

Do

Implementing actions

- Stop air pressure supply when system is not operating
- Shorten blow time
- Use energy-saving nozzle
- Lower pressure

Check

Confirmation of effect

- Measure with flow rate sensor
- Calculate costs with integrating function

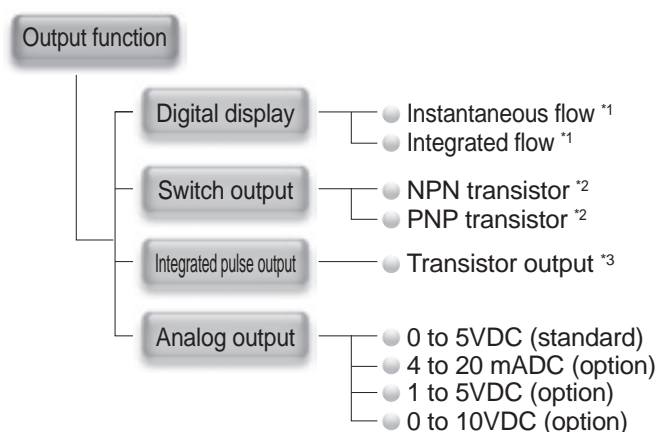
Flow rate sensor for compressed air

FLUEREX PFD Series

CKD

PFD Series FLUEREX flow rate sensor for compressed air assists in analyzing current energy consumption and confirming the effect.

Ample output variations



*1. Switch between the instantaneous flow and integrated flow with a single touch.

*2. Select NPN or PNP for the switch output.

Two output points are provided. (PFK Series has 1 point)

*3. Change one of the switch outputs to an integrated pulse output with easy operation.

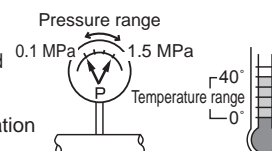
Optimum for ISO 14001 acquisition

The lineup includes a large flow which supports energy saving control in factory units. This device is essential for acquiring ISO14001, the International Standardization Standard for environment management systems.

Directly read digital displays with no need for calibration

Since bothersome pressure correction and temperature compensation are not required, the digital display value can be read and used.

- Pressure correction not required
Method of detecting weight flow adopted
- Temperature correction not required
Automatic temperature compensation function built in



High precision with general precision of ±4%F.S.

General precision of ±4%F.S. is realized in a temperature range of 10 to 30°C and pressure range of 0.2 to 0.7 MPa even without calibration.

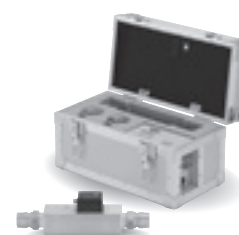
$$\text{Total precision} = \pm \sqrt{(\text{linearity})^2 + (\text{temperature characteristics})^2 + (\text{pressure characteristics})^2}$$

(Note) The general precision is the reference value including all errors including the errors from temperature or pressure variation and the linearity, etc.

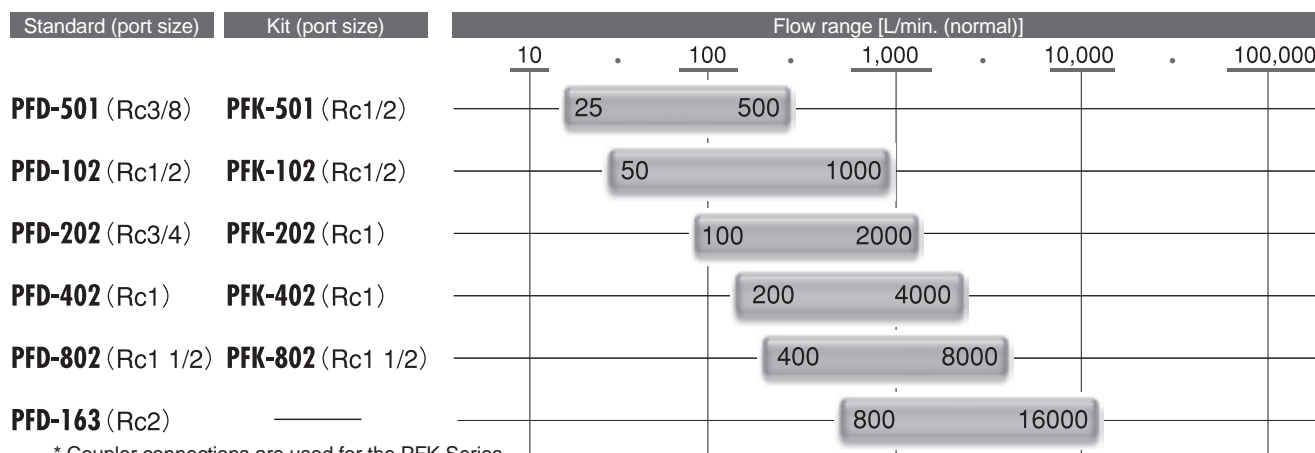
Convenient portable kit available

Five types of tester kits consisting of a sensor section, monitor section and piping, etc., in a trunk case are available.

- Piping and wiring can be changed with a single touch.



Covering a wide range of flow rates with 11 types



* Coupler connections are used for the PFK Series.

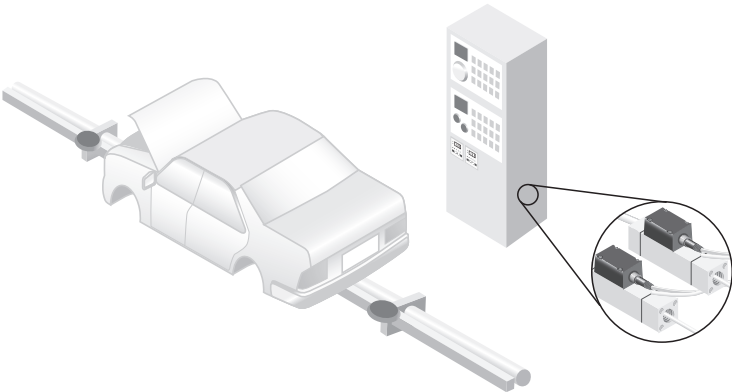
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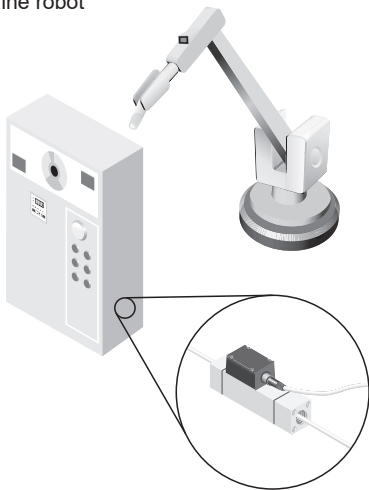
Applications of flow sensor for compressed air

For flow rate management of production line of an auto plant

Auto line control

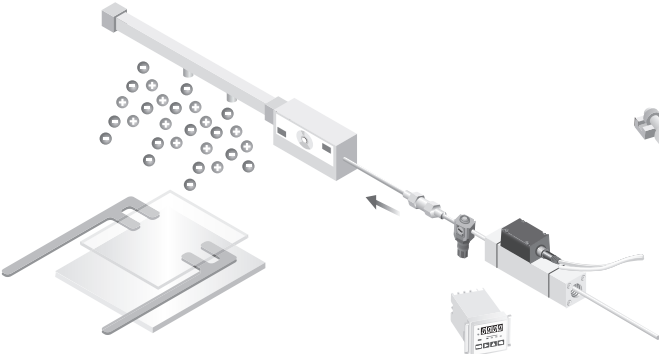


Paint line robot

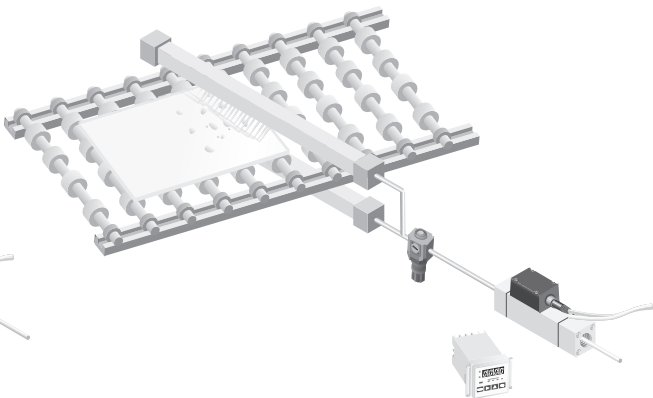


For flow rate management of FPD manufacturing equipment

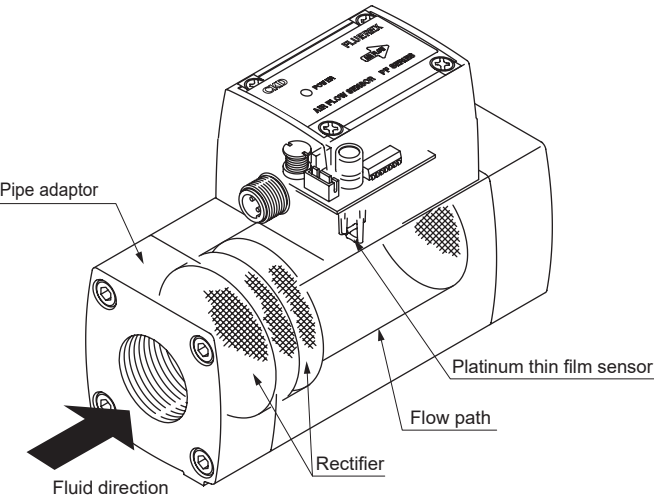
Ionizer



Air knife



Functions



The sensor of FLUEREX consists of a rectifier that converts the compressed air to a uniform flow and a platinum thin film resistor that detects the flow rate. The rectifier works to make the flow uniform when a bent pipe such as an elbow is installed immediately before the sensor. Through the use of multiple rectification plates, the pressure loss is suppressed and an adequate rectification effect is realized. When the compressed air does not flow, the platinum thin film sensor that detects the flow rate is heated from the fluid temperature to a certain constant temperature. When the compressed air flows, the amount of heat proportional to the weight of air is detracted and the current that intends to maintain the constant temperature flows in the circuit inside the platinum thin film sensor that detects the flow rate. By receiving this current as a flow rate signal, the display section displays a practical atmospheric pressure, instantaneous flow rate or integrating flow of the air converted to 0°C. In addition, by the platinum thin film sensor that detects the fluid temperature, the temperature of the compressed air is measured and the temperature correction is performed.