Increased flow rate and functions all in the same size

Flow sensor for water
WFK3000 Series

FLOW SENSOR FOR WATER WFK3000 SERIES

CKD Corporation
CC-911A
Increased flow rate and functions all in the same size

New compact, lightweight medium flow (4 to 32 L/min) sensor for the WFK3000 Series water flow sensor is ideal for device assembly. Optional water temperature measurement is also available.

Examples of major control applications
- Cooling water for laser oscillators
- Flow rate in temperature controller
- Cooling water for dry vacuum pump
- Flow rate and temperature for mold cooling water

Highly reliable sensor using Karman’s vortex

WFK3000 Series
Flow sensor for water
**Compact and lightweight**
Compact L70 x W35 x H50 size weighs just 380 g. Ideal size for incorporating into devices.

**Built-in water temperature measurement**
Water temperature measurement can be incorporated into the sensor. Water temperature is easily measured without preparing extra devices or ensuring space -- optional.

**Medium flow rate even with the same size**
Medium flow rate -- 4 to 32 L/min -- uses the same size. Space saving is equivalent to one-third of the conventional model.

**Protective structure equivalent to IP65**
This sensor can be safely installed even where waterproofing is required, such as in food equipment.

**Simple operation**
The sensor needs only to be wired for immediate use. Installation of the switch is completed by turning the rotary switch.

**Highly reliable Karman’s vortex**
Karman’s vortex has no moving parts, unlike impellers, eliminating problems with dirt and rust in pipes. This sensor can be used safely even with poor water quality, such as industrial water.

**Many model variations**
A model suitable for your application is available from two output types -- analog and switch -- and three flow rate -- 0.3 to 4.0 L/min, 1.5 to 12 L/min, and 4.0 to 32 L/min.

### Diverse range of variations for the 3000 Series

<table>
<thead>
<tr>
<th>Model variation</th>
<th>Port size</th>
<th>Flow rate range (L/min)</th>
<th>Option</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFK3000S Series</td>
<td>Analog output</td>
<td>WFK3004S -- WFK3012S -- WFK3032S --</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td>WFK3000M Series</td>
<td>Switch output</td>
<td>WFK3004M -- WFK3012M -- WFK3032M --</td>
<td>0.5</td>
<td>3</td>
</tr>
</tbody>
</table>

Refer to safety precautions on "Pneumatic, Vacuum and Auxiliary Components" catalog (No. CB-024SA).
### Specifications

<table>
<thead>
<tr>
<th>Model no.</th>
<th>WFK3004S-10</th>
<th>WFK3004S-15</th>
<th>WFK3012S-10</th>
<th>WFK3012S-15</th>
<th>WFK3032S-10</th>
<th>WFK3032S-15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow rate range</strong></td>
<td>0.5 to 4.0 L/min.</td>
<td>1.5 to 12 L/min.</td>
<td>4.0 to 32 L/min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Port size</strong></td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
</tr>
<tr>
<td><strong>Connection section material</strong></td>
<td>Stainless steel: SCS13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Working fluid</strong></td>
<td>Clean water and industrial water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max. working pressure</strong></td>
<td>1.0MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Withstanding pressure</strong></td>
<td>1.5MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ambient temperature</strong></td>
<td>0 to 50°C (85%RH or less)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fluid temperature</strong></td>
<td>1 to 70°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Precision</strong></td>
<td>±2.5%F.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Temperature characteristics</strong></td>
<td>±5%F.S. (10 to 50°C, 20°C reference)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pressure loss</strong></td>
<td>0.06MPa (at 4.0L/min.)</td>
<td>0.05MPa (at 12L/min.)</td>
<td>0.06MPa (at 32L/min.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Response time</strong></td>
<td>1 sec. (Note)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Indicator</strong></td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Analog output</strong></td>
<td>Standard: 0 to 5 VDC / Option: 4 to 20 mA DC, 1 to 5 or 0 to 10 VDC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supply voltage</strong></td>
<td>12 to 24 VDC ±10% (Max. 80mA) 15 to 24 VDC for option A3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cable</strong></td>
<td>3m, 4-conductor, finish size 4.8mm, conductor 0.2mm², isolator O.D. 1.3mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Installation attitude</strong></td>
<td>Horizontal or vertical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strait piping section</strong></td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Protective structure</strong></td>
<td>IP65 or equivalent (excluding optional water temperature measuring)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>380g</td>
<td>410g</td>
<td>380g</td>
<td>410g</td>
<td>380g</td>
<td>410g</td>
</tr>
</tbody>
</table>

Note: Time to reach 70% of the original output when flow rate is instantly set to zero from the normal (usage) flow rate.

### Analog output

<table>
<thead>
<tr>
<th>Output</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-A0 (load 50kΩ and over)</td>
<td>-A1 (load 500kΩ or less)</td>
<td>-A2 (load 50kΩ and over)</td>
<td>-A3 (load 50kΩ and over)</td>
<td></td>
</tr>
<tr>
<td><img src="chart1.png" alt="" /></td>
<td><img src="chart2.png" alt="" /></td>
<td><img src="chart3.png" alt="" /></td>
<td><img src="chart4.png" alt="" /></td>
<td></td>
</tr>
</tbody>
</table>

* min. refers to the minimum flow rate range and max. to the maximum flow rate range.

### Water temperature measuring (option)

<table>
<thead>
<tr>
<th>Output (V)</th>
<th>Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>70</td>
</tr>
</tbody>
</table>

### Functional explanation

- **Water passage display**: Green
  - Lights when water is flowing within the specified range.
- **Power display**: Red
  - Lights when power is turned on.

### Descriptions

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Measured temperature range</th>
<th>10 to 70°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>Rc3/8 (Note 1)</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td>Temperature output (analog)</td>
<td>1-7VDC (linear output)</td>
</tr>
<tr>
<td>Precision</td>
<td>±2°C (less than 50°C)</td>
<td>±3°C (50°C and over) (Note2)</td>
</tr>
</tbody>
</table>

Note 1: Only the Rc3/8 port size is selectable.

Note 2: The difference between fluid and ambient temperature is within ±10°C. Note that if the fluid temperature is 50°C or more, the difference is within -20°C.
Specifications

<table>
<thead>
<tr>
<th>Model no.</th>
<th>WFK3004M-10</th>
<th>WFK3004M-15</th>
<th>WFK3012M-10</th>
<th>WFK3012M-15</th>
<th>WFK3032M-10</th>
<th>WFK3032M-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow rate range</td>
<td>0.5 to 4.0 L/min.</td>
<td>1.5 to 12 L/min.</td>
<td>4.0 to 32 L/min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
</tr>
<tr>
<td>Connection section material</td>
<td>Stainless steel: SCS13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working fluid</td>
<td>Clean water and industrial water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. working pressure</td>
<td>1.0MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withstanding pressure</td>
<td>1.5MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>0 to 50°C (85%RH or less)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluid temperature</td>
<td>1 to 70°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td>±2.5% F.S. ±1 digit (1 digit = 0.1L/min. (less than 10L/min.), 1L/min (10L/min. or more))</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature characteristics</td>
<td>±5°F.S. (10 to 50°C, 20°C reference)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure loss</td>
<td>0.06MPa (at 4.0L/min.)</td>
<td>0.05MPa (at 12L/min.)</td>
<td>0.06MPa (at 32L/min.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>1 sec. (Note)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator</td>
<td>Instantaneous flow 2 digit LED display</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switch output</td>
<td>2 points transistor output (selection NPN/PNP )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point</td>
<td>Rated</td>
<td>MAX. DC50mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal voltage drop</td>
<td>2.0V or less</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td>12 to 24 VDC ±10% (Max. 80mA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable</td>
<td>3m, 4-conductor, finish size 4.8mm, conductor 0.2mm², isolator O.D. 1.3mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation attitude</td>
<td>Horizontal or vertical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strait piping section</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective structure</td>
<td>IP65 or equivalent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>380g</td>
<td>410g</td>
<td>380g</td>
<td>410g</td>
<td>380g</td>
<td>410g</td>
</tr>
</tbody>
</table>

Note: When switch output is set to normal flow rate 70%, the time for switch output to be output when the flow rate is instantly set to zero.

Functional explanation

- 2 digit digital display
  - Instantaneous flow is displayed.
  - *Less than 10L/min.: Decimal display
  - 10L/min. or more: Integer display
  - *Rotary switch for output

Switch output is set in 10 steps.
(The drawing shows the WFK3012M.)

- *Switch output is set with the rotary switch on the top of the sensor.
- Set the rotary switch with a precision driver, etc.
- Do not apply excessive force to the rotating section or the contact could fail.
- *Flow rate settings are shown below.

<table>
<thead>
<tr>
<th>Model</th>
<th>WFK3004M</th>
<th>WFK3012M</th>
<th>WFK3032M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch output setting value (L/min.)</td>
<td>0.6</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>0.7</td>
<td>3.0</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>0.8</td>
<td>4.0</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>0.9</td>
<td>5.0</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>6.0</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>7.0</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>8.0</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>8.0</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>11</td>
<td>30</td>
</tr>
</tbody>
</table>

Hysteresis | 0.1 | 0.5 | 1.0 |
WFK3000 Series

How to order

Symbol Descriptions
A Shape
3 Compact device build-in
B Flow rate range
004 0.5 to 4.0 L/min.
012 1.5 to 12 L/min.
032 4.0 to 32 L/min.
C Port size
10 Rc3/8
15 Rc1/2 (Not available when "T" water temperature measuring is used.)
D Analog output
A0 0 to 5 VDC
A1 4 to 20 mA DC (Not available when "T" water temperature measuring is used.)
A2 1 to 5 VDC
A3 0 to 10 VDC
E Water temperature measuring
Blank None
T With water temperature measuring
F Bracket
Blank None
B Bracket attached

<Example of model number>
WFK3004S-10-A0
A Shape : Compact device build-in
B Flow rate range : 0.5 to 4 L/min.
C Port size : Rc3/8
D Analog output : 0 to 5 VDC
E Water temperature measuring : None
F Bracket : None

Switch type

Symbol Descriptions
A Shape
3 Compact device build-in
B Flow rate range
004 0.5 to 4.0 L/min.
012 1.5 to 12 L/min.
032 4.0 to 32 L/min.
C Port size
10 Rc3/8
15 Rc1/2
D Switch output type
N0 NPN transistor output 2 points (a contact)
N1 NPN transistor output 2 points (b contact)
P0 PNP transistor output 2 points (a contact)
P1 PNP transistor output 2 points (b contact)
E Bracket
Blank None
B Bracket attached

<Example of model number>
WFK3012M-15-N1B
A Shape : Compact device build-in
B Flow rate range : 1.5 to 12 L/min.
C Port size : Rc1/2
D Switch output type
N0 NPN transistor output 2 points (a contact)
N1 NPN transistor output 2 points (b contact)
P0 PNP transistor output 2 points (a contact)
P1 PNP transistor output 2 points (b contact)
E Bracket
Blank None
B Bracket attached

Pressure loss

<table>
<thead>
<tr>
<th>Flow (L/min.)</th>
<th>WFK3004</th>
<th>WFK3012</th>
<th>WFK3032</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>2</td>
<td>0.03</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td>3</td>
<td>0.05</td>
<td>0.06</td>
<td>0.07</td>
</tr>
<tr>
<td>4</td>
<td>0.06</td>
<td>0.07</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Flow (L/min.)
Pressure loss (kPa)
Internal structure drawing and parts list

<table>
<thead>
<tr>
<th>No.</th>
<th>Parts name</th>
<th>Material</th>
<th>Quantity</th>
<th>No.</th>
<th>Parts name</th>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guard packing</td>
<td>NBR : Nitrile rubber</td>
<td>1</td>
<td>8</td>
<td>Screw for guard</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Cable packing</td>
<td>NBR : Nitrile rubber</td>
<td>1</td>
<td>9</td>
<td>Electric component section</td>
<td>NBR : Nitrile rubber</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Cable gland</td>
<td>PPS resin GF40%</td>
<td>1</td>
<td>10</td>
<td>O ring</td>
<td>NBR : Nitrile rubber</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Temperature measurement sensor (option)</td>
<td>Thermistor (1)</td>
<td>11</td>
<td>O ring</td>
<td>NBR : Nitrile rubber</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Attachment</td>
<td>SCS13 : Stainless steel casting</td>
<td>2</td>
<td>12</td>
<td>Karman's vortex detection sensor</td>
<td>PPS resin : PPS resin (internal: piezo-electric ceramics)</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Body</td>
<td>PPS resin GF40%</td>
<td>1</td>
<td>13</td>
<td>Bracket (option)</td>
<td>SPCC</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Guard</td>
<td>PC resin</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The wetted parts are (5), (6), (10), (11) and (12).

Dimensions

Semitransparent section (Only the LED is visible from outside.)
(This drawing shows a switch with a 2-digit display.)

<table>
<thead>
<tr>
<th>Model no.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFK30**-10-**</td>
<td>70</td>
<td>Rc3/8</td>
</tr>
<tr>
<td>WFK30**-15-**</td>
<td>80</td>
<td>Rc1/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wiring</th>
<th>Option</th>
<th>Brown</th>
<th>Power supply DC +</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>NC/ temperature output (Option)</td>
<td>Output-</td>
<td>Switch output (OUT1)</td>
</tr>
<tr>
<td>Orange</td>
<td>Analog output</td>
<td>Output+</td>
<td>Switch output (OUT2)</td>
</tr>
<tr>
<td>Blue</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semitransparent section (Only the LED is visible from outside.)
(This drawing shows a switch with a 2-digit display.)
Related products

Karman's vortex type flow sensor for water

WFK5000, 6000, 7000 Series

Catalog No. CC-519A

<table>
<thead>
<tr>
<th>WFK series Flow variation</th>
<th>Model</th>
<th>Port size</th>
<th>Flow rate range (L/min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFK5008</td>
<td>RC3/8</td>
<td></td>
<td>1.0 to 8.0</td>
</tr>
<tr>
<td>WFK5027</td>
<td>RC1/2</td>
<td></td>
<td>3.0 to 27.0</td>
</tr>
<tr>
<td>WFK7050</td>
<td>RC3/4</td>
<td></td>
<td>10 to 50</td>
</tr>
<tr>
<td>WFK7100</td>
<td>RC1</td>
<td></td>
<td>20 to 100</td>
</tr>
<tr>
<td>WFK7200</td>
<td>RC1 1/4</td>
<td></td>
<td>40 to 200</td>
</tr>
</tbody>
</table>

How to order

WFK 027-15-P/A3B

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Shape</td>
</tr>
<tr>
<td>5</td>
<td>Standard</td>
</tr>
<tr>
<td>6</td>
<td>Modular design</td>
</tr>
<tr>
<td>7</td>
<td>Large flow rate</td>
</tr>
<tr>
<td>B</td>
<td>Flow rate range</td>
</tr>
<tr>
<td>5</td>
<td>1.0 to 8.0 L/min.</td>
</tr>
<tr>
<td>6</td>
<td>3.0 to 27.0 L/min.</td>
</tr>
<tr>
<td>7</td>
<td>10 to 50 L/min.</td>
</tr>
<tr>
<td>100</td>
<td>20 to 100 L/min.</td>
</tr>
<tr>
<td>200</td>
<td>40 to 200 L/min.</td>
</tr>
<tr>
<td>C</td>
<td>Port size</td>
</tr>
<tr>
<td>10</td>
<td>RC3/8</td>
</tr>
<tr>
<td>15</td>
<td>RC1/2</td>
</tr>
<tr>
<td>20</td>
<td>RC3/4</td>
</tr>
<tr>
<td>25</td>
<td>RC1</td>
</tr>
<tr>
<td>32</td>
<td>RC1 1/4</td>
</tr>
<tr>
<td>40</td>
<td>RC1 1/2</td>
</tr>
<tr>
<td>D</td>
<td>Switch output type</td>
</tr>
<tr>
<td>Blank</td>
<td>NPN transistor output</td>
</tr>
<tr>
<td>P</td>
<td>PNP transistor output</td>
</tr>
<tr>
<td>E</td>
<td>Analog output</td>
</tr>
<tr>
<td>Blank</td>
<td>0 to 5 VDC</td>
</tr>
<tr>
<td>A1</td>
<td>4 to 20 mA DC (Note 1)</td>
</tr>
<tr>
<td>A2</td>
<td>1 to 5 VDC</td>
</tr>
<tr>
<td>A3</td>
<td>0 to 10 VDC</td>
</tr>
<tr>
<td>A4</td>
<td>Without analog output</td>
</tr>
<tr>
<td>A5</td>
<td>Switch output 2 points (Note 2)</td>
</tr>
<tr>
<td>F</td>
<td>Bracket</td>
</tr>
<tr>
<td>Blank</td>
<td>None</td>
</tr>
<tr>
<td>B</td>
<td>Bracket attached</td>
</tr>
</tbody>
</table>

Note 1: Switch output cannot be used when analog output A1: 4 to 20 mA DC is selected.
Note 2: Analog output cannot be used when analog output A5: 2-point switch output is selected.

<Example of model number>

WFK5027-15-PA3B

- Shape: Standard
- Flow rate range: 3.0 to 27.0 L/min.
- Port size: RC1/2
- Switch output type: PNP
- Analog output: 0 to 10 VDC
- Bracket: Attached

If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter to make sure they will never be used for the development or the manufacture of weapons for mass destruction.

CKD Corporation

http://www_ckd_co.jp/