Capacitance type electromagnetic flow sensor
WFC Series

Ultimate "easy operation"
There is no obstacle in the flow path.

Analog output
Switch output

Fluid corresponding to measurement water, water-soluble coolant, etc. (5μs/cm or more)

Repeatability
±0.3ℓ/min (3/8)
±1.2ℓ/min (1/2, 3/4)

Flow rate range
0.5 to 15ℓ/min (3/8)
2.0 to 60ℓ/min (1/2, 3/4)

Port size
3/8, 1/2, 3/4 (Rc, G, NPT)

Application example

Welded Spot welder
For cooling water management and detection of flow abnormality caused by tip removal of spot welding machine

Machining All sorts of machine tools
Flow management of the water-soluble coolant

Hardening High frequency hardening device
Quantitative management of cooling water

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Capacitance type electromagnetic flow sensor

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WFC Series
Capacitance type electromagnetic flow sensor
Flow sensor of through structure

No clogging of foreign matter

With the through structure adopted, it can be used without problems even in poor water quality.

No detection failure

Through adoption of electrostatic capacitance type, this structure, detection failure due to foreign matter accumulated on the electrode is reduced.

Easy installation

Repeatability guaranteed for elbow piping.

Remote zero adjust

Zero point adjustment can be carried out through the external input.

Parallel installation available

With various settings, parallel installation is available.

Through structure

Non-contact with fluid

Straight pipe section unnecessary

Conventional product

Easy installation

Noise resistant type

A stabilized power supply or ferrite core as a noise countermeasure is not necessary.

Display with 180-degree inversion function

Display with flexibility depending on the device.

Improved visibility

2 color indicator and flow direction arrow enables instant recognition.

Equipped with reverse flow detection function

Displays error of reverse flow of fluid and signal output is also available.

Simple setting

Settings can easily be changed with the shortcut operations.

* Refer to page 6 for the details.
## Capacitance type electromagnetic flow sensor

**WFC Series**

- Flow rate range: 0.5~15 • 2.0~60 L/min

### Specifications

<table>
<thead>
<tr>
<th>Descriptions</th>
<th>WFC-150</th>
<th>WFC-600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port size</td>
<td>Rc3/8, G3/8, 3/8NPT</td>
<td>Rc1/2, G1/2, 1/2NPT</td>
</tr>
<tr>
<td>Applicable fluid</td>
<td>Liquid (conductive liquid) that will not corrode the water or materials of wetted part</td>
<td></td>
</tr>
<tr>
<td>Allowable fluid conductivity</td>
<td>5μS/cm or more</td>
<td></td>
</tr>
<tr>
<td>Detection type</td>
<td>Capacitance type</td>
<td></td>
</tr>
<tr>
<td>Rated flow range</td>
<td>0.5~15 L/min</td>
<td>2.0~60 L/min</td>
</tr>
<tr>
<td>Low flow cut</td>
<td>Note 1 3% of maximum flow for measurement range</td>
<td></td>
</tr>
<tr>
<td>Working fluid temperature</td>
<td>0 to 85°C (no freezing)</td>
<td></td>
</tr>
<tr>
<td>Display unit</td>
<td>Instantaneous flow L/min Integrated flow L, kl, ML</td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>Note 2 ±2.0%F.S</td>
<td></td>
</tr>
<tr>
<td>Temperature Characteristics</td>
<td>Note 2 ±5.0%F.S (25°C Reference)</td>
<td></td>
</tr>
<tr>
<td>Liquid temperature characteristics</td>
<td>Note 2 ±5.0%F.S (25°C Reference)</td>
<td></td>
</tr>
<tr>
<td>Working pressure</td>
<td>0 to 1.0MPa</td>
<td></td>
</tr>
<tr>
<td>Proof pressure</td>
<td>2.0MPa</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>Note 3 0.25 s/0.5 s/1 s/2 s/5 s (default value 1s)</td>
<td></td>
</tr>
<tr>
<td>Integrated flow range</td>
<td>0.0 to 99999999.9L 0.1L increments</td>
<td></td>
</tr>
<tr>
<td>Pressure loss</td>
<td>0.02MPa or less (At the maximum rated flow)</td>
<td></td>
</tr>
<tr>
<td>Switch output</td>
<td>NPN or PNP transistor output</td>
<td></td>
</tr>
<tr>
<td>Maximum load current</td>
<td>50mA</td>
<td></td>
</tr>
<tr>
<td>Maximum applied voltage</td>
<td>30VDC</td>
<td></td>
</tr>
<tr>
<td>Internal voltage drop</td>
<td>NPN: 2.0V or less PNP: 2.4V or less</td>
<td></td>
</tr>
<tr>
<td>Output protection</td>
<td>Overcurrent abnormality alarm, overcurrent protection</td>
<td></td>
</tr>
<tr>
<td>Output mode</td>
<td>Selection from hysteresis mode, window comparator mode, integration output mode, integration pulse output mode and alarm output mode</td>
<td></td>
</tr>
<tr>
<td>Analog output</td>
<td>Voltage output: 1 to 5V load impedance 50kΩ or more</td>
<td></td>
</tr>
<tr>
<td>Current output</td>
<td>Current output: 4 to 20mA load impedance 500kΩ or less</td>
<td></td>
</tr>
<tr>
<td>Display method</td>
<td>2 screen display (main screen 2 color indicator with green/red, sub screen white) Display update cycle 5 times / s</td>
<td></td>
</tr>
<tr>
<td>Power voltage</td>
<td>24VDC±10% (ripple P-P 10% or less)</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>65mA or less</td>
<td></td>
</tr>
<tr>
<td>Environmental resistance</td>
<td>Degree of protection IP65 equivalent Note 5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operating ambient temperature 0 to 50°C (with no dew condensation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operating ambient humidity 35 to 85%RH (with no dew condensation)</td>
<td></td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Vertical or lateral as desired</td>
<td></td>
</tr>
<tr>
<td>Compatible standard</td>
<td>EC command (EMC command, RoHS command)</td>
<td></td>
</tr>
<tr>
<td>Materials of wetted part</td>
<td>PPS, FKM, CAC804</td>
<td></td>
</tr>
<tr>
<td>Weight (body)</td>
<td>Note 4 Approx. 460g</td>
<td>Approx. 490g</td>
</tr>
</tbody>
</table>

Note 1: Flow rate of less than the low flow cut displays 0L / min.
Note 2: Characteristics when response time is 1s.
Note 3: Response time is up to the stage when it reaches 63% of the value against step input.
Note 4: To use the options, please add the weight of option parts.
Note 5: Degree of protection when cable option: C3 is installed.
Note 6: Please contact us for parallel installation in an interval of 50 mm or less.
Note 7: Piping port and metal part in body are grounded to DC (-) / blue line. It cannot be used with the power of positive grounding.
# How to order

**WFC** - **150** - **10A** - **N** - **V** - **C3**

## Symbol Descriptions

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Flow rate range</td>
</tr>
<tr>
<td>150</td>
<td>0.5 to 15L/min</td>
</tr>
<tr>
<td>600</td>
<td>2.0 to 60L/min</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>Port size</td>
</tr>
<tr>
<td>10*</td>
<td>3/8</td>
</tr>
<tr>
<td>15*</td>
<td>1/2</td>
</tr>
<tr>
<td>20*</td>
<td>3/4</td>
</tr>
</tbody>
</table>

* Thread type

- A: Rc thread
- G: G thread
- N: NPT thread

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>c</td>
<td>Switch output</td>
</tr>
<tr>
<td>N</td>
<td>NPN transistor output</td>
</tr>
<tr>
<td>P</td>
<td>PNP transistor output</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>d</td>
<td>Analog output</td>
</tr>
<tr>
<td>V</td>
<td>Voltage output (1 to 5V)</td>
</tr>
<tr>
<td>A</td>
<td>Current output (4 to 20mA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>Optional (Attachment)</td>
</tr>
<tr>
<td>C3</td>
<td>Cable (M12 / 4 core / 3m attached)</td>
</tr>
<tr>
<td>B</td>
<td>Bracket attached</td>
</tr>
</tbody>
</table>

<Example of model no.>

**WFC-150-10A-NV-C3B**
- Flow rate range : 0.5 to 15L/min
- Port size : Rc3/8
- Switch output : NPN transistor output
- Analog output : Voltage output (1 to 5V)
- Option : Cable, bracket attached

**Optional (Cable, bracket) model No.**

WFC - **C3**

- Option

( Note ) The attachment’s symbols will not be described in the model number of the product body.

- In the case of WFC-150-10A-NV-C3B
  - Product body (display) : "WFC-150-10A-NV"
  - Cable: "WFC-C3"
  - Bracket: "WFC-B"

"WFC-150-10A-NV-C3B" for three sets of all above will be indicated on a packaging or box.
Internal structure and parts list

<table>
<thead>
<tr>
<th>No.</th>
<th>Parts name</th>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mouthpiece</td>
<td>CAC804 Brass</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Packing seal</td>
<td>FKM Fluro rubber</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>O ring</td>
<td>FKM Fluro rubber</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Measuring tube</td>
<td>PPS resin</td>
<td>1</td>
</tr>
</tbody>
</table>

* Represents the internal structure when the display screen is set to front.

Dimensions

<table>
<thead>
<tr>
<th>Model no.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFC-150-10A</td>
<td>90</td>
<td>Rc3/8</td>
</tr>
<tr>
<td>WFC-150-10G</td>
<td>90</td>
<td>G3/8</td>
</tr>
<tr>
<td>WFC-150-10N</td>
<td>90</td>
<td>3/8NPT</td>
</tr>
<tr>
<td>WFC-600-15A</td>
<td>95</td>
<td>Rc1/2</td>
</tr>
<tr>
<td>WFC-600-15G</td>
<td>95</td>
<td>G1/2</td>
</tr>
<tr>
<td>WFC-600-15N</td>
<td>95</td>
<td>1/2NPT</td>
</tr>
<tr>
<td>WFC-600-20A</td>
<td>95</td>
<td>Rc3/4</td>
</tr>
<tr>
<td>WFC-600-20G</td>
<td>95</td>
<td>G3/4</td>
</tr>
<tr>
<td>WFC-600-20N</td>
<td>95</td>
<td>3/4NPT</td>
</tr>
</tbody>
</table>

Optional dimensions

- **Cable option**
  Discrete option model no.: **WFC-C3**

- **Bracket option**
  Discrete option model no.: **WFC-B**
Wiring method

- Observe the following precautions when wiring.
- VA connector (model no.: TM-4DSX3HG4) of Correns Corporation is used for connector.
- Specifications: For DC, 4 core 0.5mm²

<table>
<thead>
<tr>
<th>Switch output type</th>
<th>Analog output</th>
</tr>
</thead>
<tbody>
<tr>
<td>-NV</td>
<td>NPN Transistor output 1-5[V]</td>
</tr>
<tr>
<td>-NA</td>
<td>4-20[mA]</td>
</tr>
<tr>
<td>-PV</td>
<td>PNP Transistor output 1-5[V]</td>
</tr>
<tr>
<td>-PA</td>
<td>4-20[mA]</td>
</tr>
</tbody>
</table>

1)-NV, -NA

- Connect to the DC power supply plus [+] : 24VDC±10%
- Analog output/switch input : Outputs a voltage or current that is proportional to the flow rate / remote zero adjustment, or integration reset
- Switch output (PNP) : MAX.30VDC 50mA
- Connect to the DC power supply minus [-] : 0VDC

2)-PV, -PA

- Connect to the DC power supply plus [+] : 24VDC±10%
- Analog output/switch input : Outputs a voltage or current that is proportional to the flow rate / remote zero adjustment, or integration reset
- Switch output (PNP) : MAX.50mA
- Connect to the DC power supply minus [-] : 0VDC
### Function explanation

- **Main screen**
  - Displays the instantaneous flow rate and integrating flow rate.

- **Output display**
  - Displays the output state.

- **Sub screen**
  - Displays the output mode and flow direction.

- **Unit display**
  - Displays the instantaneous flow rate when lighting.

### Output mode and output operation

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Hysteresis mode</strong></td>
<td>Hysteresis mode</td>
<td><img src="image1" alt="Hysteresis Mode Diagram" /></td>
</tr>
<tr>
<td><strong>2. Window comparator mode</strong></td>
<td>Window comparator mode</td>
<td><img src="image2" alt="Window Comparator Mode Diagram" /></td>
</tr>
<tr>
<td><strong>3. Integration output mode</strong></td>
<td>Integration output mode</td>
<td><img src="image3" alt="Integration Output Mode Diagram" /></td>
</tr>
<tr>
<td><strong>4. Integration pulse output</strong></td>
<td>Integration pulse output</td>
<td><img src="image4" alt="Integration Pulse Output Diagram" /></td>
</tr>
<tr>
<td><strong>5. Alarm output mode</strong></td>
<td>Alarm output mode</td>
<td><img src="image5" alt="Alarm Output Mode Diagram" /></td>
</tr>
<tr>
<td><strong>6. Analog output mode</strong></td>
<td>Analog output mode</td>
<td><img src="image6" alt="Analog Output Mode Diagram" /></td>
</tr>
</tbody>
</table>

#### Description of Output Modes:

1. **Hysteresis mode**
   - **Function:** Displays the instantaneous flow rate.
   - **Settings:**
     - ON: Hysteresis input (P1)
     - OFF: No input

2. **Window comparator mode**
   - **Function:** Displays the instantaneous flow rate.
   - **Settings:**
     - ON: Window comparator input (Lo1, Hi1)
     - OFF: No input

3. **Integration output mode**
   - **Increment mode:**
     - **Function:** Displays the integrating flow rate.
     - **Settings:**
       - ON: Increment input
       - OFF: No input
   - **Decrement mode:**
     - **Function:** Displays the integrating flow rate.
     - **Settings:**
       - ON: Decrement input
       - OFF: No input

4. **Integration pulse output**
   - **Function:** Displays the integrating flow rate.
   - **Settings:**
     - ON: 50msec pulse
     - OFF: No pulse

5. **Alarm output mode**
   - **Function:** Displays the output state.
   - **Settings:**
     - ON: Alarm input
     - OFF: No input

6. **Analog output mode**
   - **Function:** Displays the analog output.
   - **Settings:**
     - Voltage output [V]: Adjustable
     - Current output [mA]: Adjustable

### Important Notes:

- **Voltage output [V]:**
  - 15 [V/min] (For voltage(Current output))

- **Current output [mA]:**
  - 5.4 → 21.6

- **Adjustable settings:**
  - 1.5 → 15 → 16.5

---

*Image placeholders for diagrams.*
### Measuring mode

<table>
<thead>
<tr>
<th>Instantaneous flow rate display</th>
<th>Hysteresis mode</th>
<th>Window comparator mode</th>
<th>Integration output mode</th>
<th>Integration pulse output mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1.png" alt="Hysteresis mode" /></td>
<td><img src="image2.png" alt="Window comparator mode" /></td>
<td><img src="image3.png" alt="Integration output mode" /></td>
<td><img src="image4.png" alt="Integration pulse output mode" /></td>
</tr>
<tr>
<td>Analog output</td>
<td><img src="image5.png" alt="Analog output" /></td>
<td><img src="image6.png" alt="Digital input: Remote zero adjust" /></td>
<td><img src="image7.png" alt="Digital input: Integration reset" /></td>
<td><img src="image8.png" alt="Alarm output mode" /></td>
</tr>
<tr>
<td>Flow direction</td>
<td><img src="image9.png" alt="Flow direction" /></td>
<td><img src="image10.png" alt="Freely select the character" /></td>
<td><img src="image11.png" alt="No sub-screen display" /></td>
<td></td>
</tr>
</tbody>
</table>

#### Total integration flow rate display
Integration unit can be switched to "L", "KL", or "ML" with up key: ▲ and down key: ▼.

### Simple setting (short cut mode)

Using shortcuts, switching to the mode in which frequently used settings can be set from the usual screens.

#### Main screen

- **Normal screen**
  - Normal screen
  - (The current screen flashes) + ▼ or ▲
  - Select the "Instantaneous value display" or "total integrated value display", and confirm with ▼

#### Hysteresis mode

- ![Hysteresis mode](image1.png)
- ▼ or ▲
- Use ▼ or ▲ to set the determination value and confirm with ▼

#### Integration output mode

- ![Integration output mode](image2.png)
- ▼ or ▲
- Use ▼ to reset integrated value.

#### Analog output mode

- ![Analog output mode](image3.png)
- ▼ or ▲
- Use ▼ or ▲ to change F.S., and confirm with ▼

#### Flow direction

- ![Flow direction](image4.png)
- ▼ or ▲
- Change the flow direction with ▼ or ▲, and confirm with ▼

#### Total integrated value reset

- ![Total integrated value reset](image5.png)
- ▼ + ▲
- Use ▼ to reset. Can be cancelled with ▼ or ▲

#### Key lock setting

- ![Key lock setting](image6.png)
- ▼ + ▲
- (Press for more than 2 seconds)
- Use ▼ or ▲ to change, and confirm with ▼.
Safety precautions
Be sure to read the instructions before use

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.

Product selection, its usage and handling, as well as adequate maintenance management are important in order to safely use CKD products.

Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.

⚠️ Warning

1. This product is designed and manufactured as a general industrial machine part.
   It must be handled by an operator having sufficient knowledge and experience in handling.

2. Use this product in accordance with specifications.
   This product must be used within its stated specifications. Do not attempt to modify or additionally machine the product.
   In addition, since this product is intended for use in general industrial machine part, for use in outdoors (outdoor type excluded), or for use in the following environments and conditions are excluded.

   1. Use for special applications requiring safety including nuclear energy, railroad, aviation, ship, vehicle, medical equipment, equipment or applications coming into contact with beverage or food, amusement equipment, emergency shutoff circuits, press machine, brake circuits, or for safeguard.

   2. Use for applications where life or assets could be adversely affected, and special safety measures are required.

3. Observe corporate standards and regulations, etc., related to the safety of device design and control, etc.
   ISO4414, JIS B 8370 (Pneumatic system rules)
   JFPS 2008 (Principles for pneumatic cylinder selection and use)
   Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rules, body standards and regulations, etc.

4. Do not handle, pipe, or remove devices before confirming safety.
   1. Inspect and service the machine and devices after securing the safety of all the systems related to this product.
   2. Exercise caution as high temperature and charged parts can be present even when operation is stopped.
   3. When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Discharge any compressed air from the system, and pay attention to possible water leakage and leakage of electricity.
   4. When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.

5. Observe warnings and cautions on the pages below to prevent accidents.

   The safety cautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.

   **DANGER**: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, or when there is a high degree of emergency to a warning.

   **WARNING**: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.

   **CAUTION**: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

   Note that some items described as "CAUTION" may lead to serious results depending on the situation. In any case, important information that must be observed is explained.

Disclaimer

1. Warranty period
   Warranty Period of this product is one (1) year from the first delivery to the place you specified.

2. Scope of warranty
   In case any defect attributable to CKD is found during the Warranty Period, CKD shall, at its own discretion, repair the defect or replace the relevant product in whole or in part, according to its own judgement.
   Note that the following faults are excluded from the warranty:
   ① Product abuse/misuse contrary to conditions/environment recommended in its catalogs/specifications.
   ② Failure caused by other than the delivered product.
   ③ Use for other than original design purposes.
   ④ Third-party repair/modification.
   ⑤ Failure caused by reason that is unforeseeable with technology put into practical use at the time of delivery.
   ⑥ Failure attributable to force majeure.
   The warranty stated here is related to the delivered unit itself. Damages caused by problems with the delivered item are excluded.

3. Compatibility confirmation
   The customer is responsible for confirming the compatibility of CKD products with the customer’s systems, machines and equipment.
Pneumatic components

Safety precautions

Be sure to read the instructions before use.
Refer to "Pneumatic, Vacuum and Auxiliary Components CB-024SA".

Design & Selection

⚠️ CAUTION

- Do not exceed the specified range of the product.
- This product is for liquid that does not corrode water or materials of wetted part over 5μS / cm.
  Low conductivity liquid cannot be detected properly.
- Please do not use with a plus grounding.
- Please do not use in applications for which it is in direct contact with beverages, food, and medical fluids.
- Please do not use this product in flammable gas atmosphere.
- Please maintain fluid temperatures, and for usage in low temperatures, add such as antifreeze for freeze prevention measures.
- Please maintain the working pressure range during use.
- Please maintain the rated flow range during use.
- If considering lining up several units of this product in the flow capacity filling type device, please determine the use upon checking Patent No. 3916032.
- This product cannot be used as a business meter. This product does not conform to Measuring Laws, and thus cannot be used for commercial purposes. Please use this product as an industrial sensor.

Installation & Adjustment

- There is a risk of electric shock on contact with electrical wiring connections.
- Turn power off before starting wiring.
  Do not touch the live parts with wet hands.
- Please ensure gas is not mixed in the piping.
- To change the settings, stop the equipment and change.
- 10 seconds after the power is turned on, since it is warm-up period, please do not use the display or output during this time.
- Please do not press setting switch with pointed material.
- Please do not install in locations exposed to strong light, such as direct sunlight or in a place which receives the radiation from heat sources.
- While the mounting orientation can be set freely, because it is less susceptible to the effects of bubbles, for lateral piping, it is recommended to mount the display surface horizontal to the ground.
- Please ensure proper setting of the flow direction of the piping and the flow sensor.
- Do not drop or hit it, or give excessive shock to it.
  In addition, please hold the body when handling.
  (Please do not hold cables)
- Please do not install in places where it will be exposed to strong compressive force, tensile force, load, or vibration after installation.
- Do not step on the product, or place heavy objects on them.
- Please note that applying excessive load can cause breakage.
  Please also ensure load from piping is not applied.
- Please ensure that sealing tape or adhesive do not protrude from the pipe threaded portion.
- Ensure that the piping just before the sensor is as straight as possible, so that there is no part such as protrusion of the packing that disturbs the flow.
- Please ensure flow regulating valve is installed downstream of the sensor.
- Please ensure to attach the sensor after cleaning in case of the presence of foreign matter or oil in the pipe.
- Faulty wiring may cause a malfunction.
- It is recommended that power and receiving instruments are electrically isolated from each other.
- Do not place excessive tension on the cable.
- Please do not wire with power lines.
- Please keep the product at a distance from power devices such as high voltage devices and motors, etc.

During Use & Maintenance

- The product may be damaged by pressure rise due to temperature change in the liquid sealed circuit.
  Provide a relief valve so that a liquid ring circuit is not created.
- If no fluid is flowing, make sure to turn the power OFF. Keeping the power on while no fluid is flowing may cause a malfunction.
- Do not disassemble this product. The specifications are not satisfied if a disassembled product is reassembled.
Karman vortex type FLUEREX WFK Series

-Karman vortex detection method enables use in the environment with bad water quality
- A large effective sectional area realizes low pressure loss for energy saving of conveying pump
- Unique vortex frequency processing technology achieves a High response of 1.0 second
- Display of instantaneous flow and integrating flow rates is switched with a single touch
- 5-digit digital display (WFK5027/6027) is equipped to enable the integrating flow rate of the day to be viewed at a glance
- In addition to alarm output, an analog output useful for record control is equipped as standard

Water integrated unit WXU Series

- Space saving and pipeless
  Installation space significantly reduced by unitization with discrete piping connection.
  Footprint 80% reduced compared to CKD previous models (2-fluid control type)
- Improved quality
  Due to no screwed piping between components, the fear of external leak is eliminated.
  No entry of foreign matter when installing.
- Man-hours reduced
  Man-hours for troublesome piping design, piping work, material arrangement etc. are reduced significantly

* Flow sensor loaded in WXU Series is WFK Series (Karman vortex).
Consult with CKD regarding WFC Series

CKD Corporation
<Website> http://www.ckd.co.jp/

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Head Office: Pflan 2-250, Oji, Komaki, Aichi 485-8551
Sales Office: 2-250, Oji, Komaki, Aichi 485-8551
Overseas Sales Administration dept. 2-250, Oji, Komaki, Aichi 485-8551
Tokyo Branch Office 4F, Bankhaus Idec Plus, 1-31-1, Hamamatsu-cho,
Nagoya Branch Office 2-250, Oji, Komaki, Aichi 485-8551
Osaka Branch Office 1-3-20, Tosebori, Nishi-ku, Osaka 550-3001

TEL (0568) 77-1111 FAX (0568) 77-1123
TEL (0568) 77-1303 FAX (0568) 77-3410
TEL (0568) 77-1338 FAX (0568) 77-3461
TEL (03) 4402-3620 FAX (03) 8402-0120
TEL (0568) 74-1356 FAX (0568) 75-1692
TEL (06) 6459-5770 FAX (06) 6446-1945