



## Installation & Maintenance Manual

### Digital Flow Sensor

#### Series PFMV5



### Safety Instructions

This manual contains essential information for the protection of users and others from possible injury and/or equipment damage.

- Read this manual before using the product, to ensure correct handling, and read the manuals of related apparatus before use.
- Keep this manual in a safe place for future reference.
- These instructions indicate the level of potential hazard by label of "Caution", "Warning" or "Danger", followed by important safety information which must be carefully followed.
- To ensure safety of personnel and equipment the safety instructions in this manual and the product catalogue must be observed, along with other relevant safety practices.

<b>Caution</b>	CAUTION indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
<b>Warning</b>	WARNING indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
<b>Danger</b>	DANGER indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

This product is class A equipment that is intended for use in an industrial environment.

There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbances.

### Warning

- Do not disassemble, modify (including changing the printed circuit board) or repair.**  
An injury or failure can result.
- Do not operate the product outside of the specifications.**  
Do not use for flammable or harmful fluids.  
Fire, malfunction, or damage to the product can result.  
Verify the specifications before use.
- Do not operate in an atmosphere containing flammable or explosive gases.**  
Fire or an explosion can result.  
This product is not designed to be explosion proof.
- Do not use the product in a place where static electricity is a problem.**  
Otherwise it can cause failure or malfunction of the system.
- If using the product in an interlocking circuit:**
  - Provide a double interlocking system, for example a mechanical system
  - Check the product regularly for proper operation  
Otherwise malfunction can result, causing an accident.
- The following instructions must be followed during maintenance:**
  - Turn off the power supply
  - Stop the air supply, exhaust the residual pressure and verify that the air is released before performing maintenance.  
Otherwise an injury can be caused.

### Safety Instructions (Continued)

#### Caution

- Do not touch the terminals and connectors while the power is on.**  
Otherwise electric shock, malfunction or damage to the product can result.
- After maintenance is complete, perform appropriate functional inspections and leak tests.**  
Stop operation if the equipment does not function properly or there is a leakage of fluid.  
When leakage occurs from parts other than the piping, the product is faulty.  
Disconnect the power supply and stop the fluid supply.  
Do not apply fluid under leaking conditions.  
Safety cannot be assured in the case of unexpected malfunction.

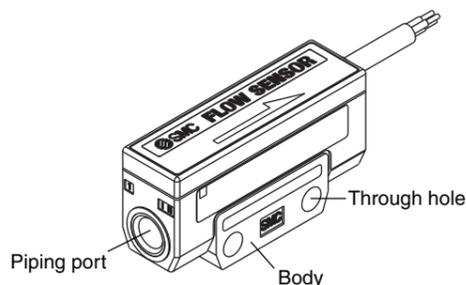
#### NOTE

- The direct current power supply to be used should be UL approved as follows:  
Circuit (of class 2) which is of maximum 30 Vrms (42.4 V peak), with UL 1310 class 2 power supply unit or UL 1585 class 2 transformer.
- The Flow sensor is a approved product only if it has a mark on the body.

### Model Indication and How to Order

Refer to the operation manual and the product catalogue for more detailed information.

### Names and Functions of Individual Parts



Piping port: Connection port for piping.

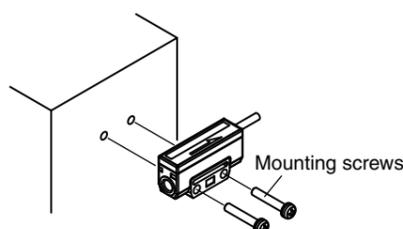
Body: Flow switch itself.

Through hole: Used to mount the flow switch on a DIN rail or a panel directly.

### Installation

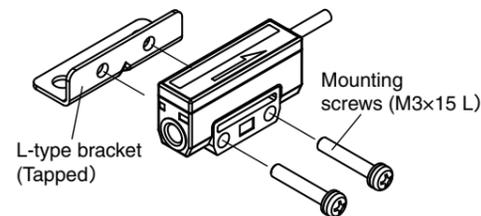
#### Installation

##### Direct mounting

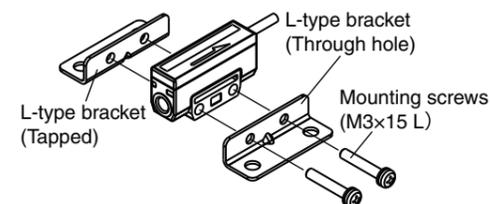


### Installation (Continued)

#### Mounting on one side

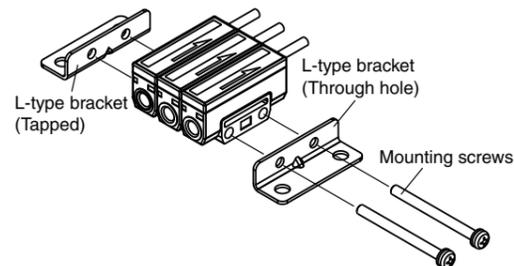


#### Mounting on both sides



- Mount with the set screws M3 (2 pcs.) for direct installation.
- Thread tightening torque is 0.32±0.02 Nm

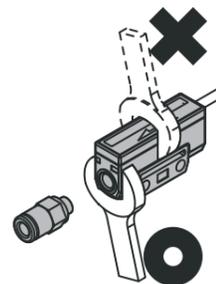
#### Manifold mounting (using ZS-36-A□)



- Thread tightening torque is 0.32±0.02 Nm
- Mounting in series using the mounting brackets is not suitable for all models, depending on which fitting type is used.

#### Piping

During installation of the product to the pipe, hold the body with specified spanner.



- Tightening torque to mount the fitting is 1 to 1.5 Nm.

### Installation (Continued)

#### PFMV5 series recommended fitting list

##### One-Touch fitting

- Male Connector (One-Touch Male Connector)/KQ2H04-M5
- Hexagon Socket head Male Connector/KQ2S04-M5
- Male Elbow/KQ2L04-M5

##### One-Touch mini fittings

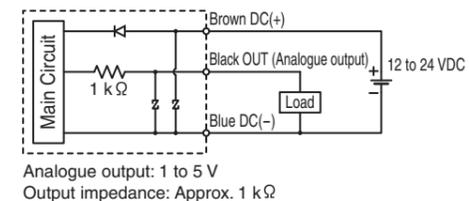
- Male Connector/KJH04-M5
- Hexagon Socket head Male Connector/KJS04-M5
- Male Elbow/KJL04-M5

##### Miniature fitting

- Barb fittings for nylon tubing/M-5AN-4/M-5AN-6

#### Wiring

##### Internal circuit



### Maintenance

#### How to reset the product after power cut or de-energizing

The setting of the product will be retained as it was before a power cut or de-energizing.

The output condition is also basically recovered to that before a power cut or de-energizing, but may change depending on the operating environment. Therefore, check the safety of the whole facility before operating the product.

### Troubleshooting

Refer to the operation manual for this product.

### Specification

Refer to the operation manual and the product catalogue for more detailed information.

### Outline with Dimensions (in mm)

Refer to the operation manual and the product catalogue for more detailed information.

### Contact

AUSTRIA	(43) 2262 62280	NETHERLANDS	(31) 20 531 8888
BELGIUM	(32) 3 355 1464	NORWAY	(47) 67 12 90 20
CZECH REP.	(420) 541 424 611	POLAND	(48) 22 211 9600
DENMARK	(45) 7025 2900	PORTUGAL	(351) 21 471 1880
FINLAND	(358) 207 513513	SLOVAKIA	(421) 2 444 56725
FRANCE	(33) 1 6476 1000	SLOVENIA	(386) 73 885 412
GERMANY	(49) 6103 4020	SPAIN	(34) 945 184 100
GREECE	(30) 210 271 7265	SWEDEN	(46) 8 603 1200
HUNGARY	(36) 23 511 390	SWITZERLAND	(41) 52 396 3131
IRELAND	(353) 1 403 9000	UNITED KINGDOM	(44) 1908 563888
ITALY	(39) 02 92711		

## SMC Corporation

URL <http://www.smcworld.com> (Global) <http://www.smceu.com> (Europe)

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