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FMC-5000 Series
Coriolis Mass Flowmeters

MQS-5773/1016

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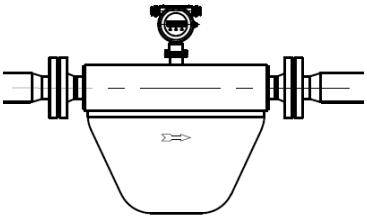
Step 1: Installation

1.1 Basic requirement:

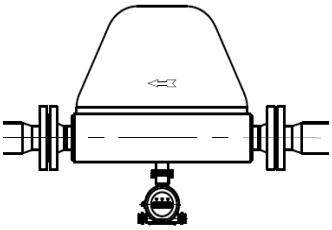
The FMC-5000 Series Coriolis Flowmeters should be installed in the orientation that can ensure the measuring tube is filled.

For the horizontal installation, the measuring tube should be installed under the pipeline when the process medium is liquid or slurry (shown on Drawing 9) and above the pipeline when the process medium is gas (shown on Drawing 10). For the vertical installation, the measuring tube could be installed besides the pipeline when the process medium is liquid or slurry or gas (shown on Drawing 11)



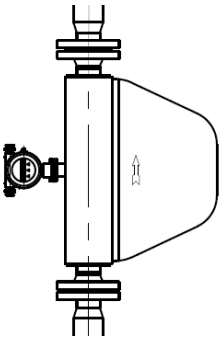
Drawing 9

(For Liquid or Slurry)



Drawing 10

(For Gas)



Drawing 11

(For liquid or slurry or gas)

1.2 Flow direction:

There is **flow direction arrow** that indicates the proper flow direction on the front of the sensor, so please install the FMC-5000 Series Coriolis Flowmeters accordingly. For vertical installation, if the process medium is liquid or slurry, the flow direction should be from down-to-up; if the process medium is gas, the flow direction can be either down-to-up or up-to-down. The transmitter can be mounted with 90° revolutions according to the requirement of installation.

*It is better to support the sensor of FMC-5000 Series Flowmeter by rubber connector as the buffer.

Step 2: Wiring

CUT OFF POWER BEFORE CONNECTING CABLES !!!

The power voltage must match that indicated in the junction box of the transmitter and the ground wire must be well grounding to ensure its intrinsic safety performance.

2.1 Grounding

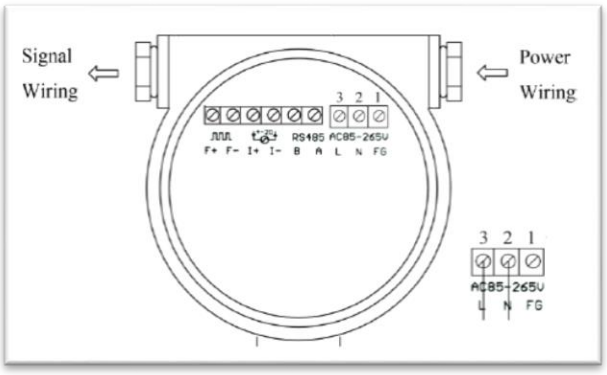
Both sensor and the transmitter must be grounded correctly, otherwise a measurement error will occur and the FMC−5000 Series Coriolis Flowmeters may not work. If the pipeline is grounded, the transmitter can be grounded through the pipeline; if the pipeline is not grounded, the transmitter should be grounded independently.

2.2 Power line wiring

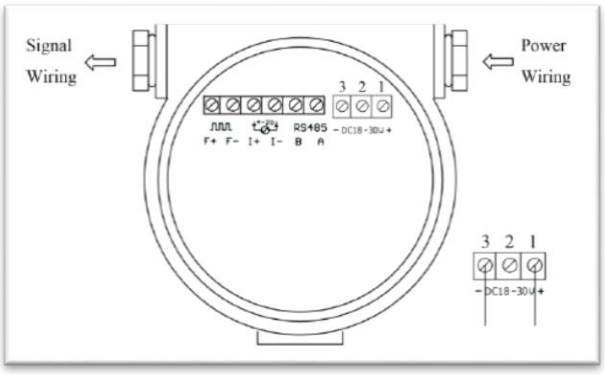
The transmitter can be supplied with AC220V (-AC Option) or DC24V(Standard). The power line more than 0.8mm^2 is recommended and the maximum length of power line should be 300m. For transmitters of FMC-5000 Series Coriolis Meter 6” and larger, a single Driver amplifier is required to be supplied with extra power (AC or DC, depends on transmitter).

AC (85 to 265) V	Power Consume: Normal 10 W, MAX 15W
DC (18 to 30) V	Power Consume: Normal 10 W, MAX 15W

*The power cable should choose 2-core cable and the area of each core >0.8 square millimeter.
*The maximum length of the power cable is 300m.



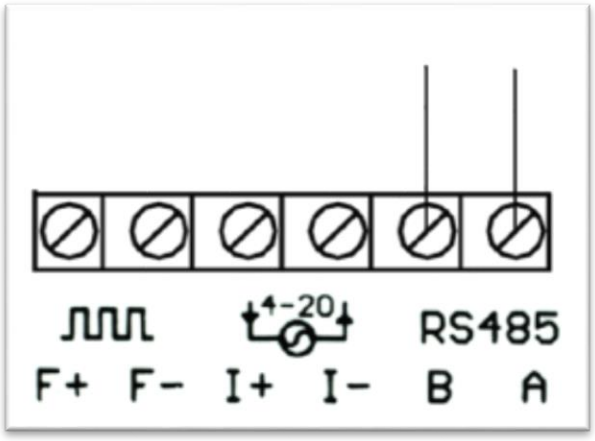
AC Power Wiring (-AC Option)



DC Power Wiring (Standard)

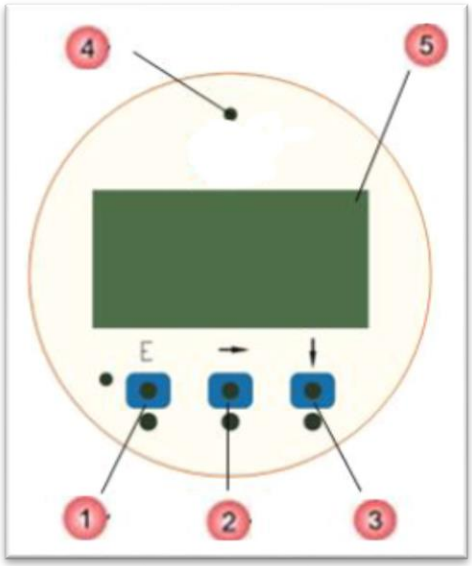
2.3 RS485 Output Wiring

RS485 output is compatible to RTU mode of MODBUS protocol. The maximum length of output line is ≤300m.



2.4 Configuration Parameter

Please use the operation panel of transmitter to set the configuration, such as basic configuration parameters, zero calibration, cutoff value of low flow and output range of current frequency, etc.



No.	Notes
1	E key: enter
2	→ key: move curse or return
3	↓ key: page down
4	OLED light for working status
5	Two-line LCD

(Note: Default Password: "000000")

Step 3: Calibration

Generally, the FMC−5000 Series Coriolis Flowmeter does not need field calibration because it has been calibrated before delivery.

Each FMC−5000 Series Coriolis Flowmeter has its own instrumental coefficient, including one flow coefficient and four density coefficients (high density D1, high period K1, low density D2 and low period K2), which will be shown in Nameplate of Sensor or Calibration certificate.

3.1 Zero Calibration

After installation, ***the FMC-5000 Series Coriolis Flowmeter should be powered at least 30 minutes for warm-up and then make the liquid pass through the flow meter until the temperature of FMC-5000 Series Coriolis Meter is same as working temperature of liquid***. Afterward, close the downstream valve, make sure the liquid in the flow meter remains at normal temperature, density and pressure and then close the upstream valve to assure the sensor is full of liquid during the process of zero calibration.

Finally, press ↓ → Configuration → Zero-Cal → Flow configuration → Zero Correction → E Input password to start zero calibration.

Notice: Each zero calibration lasts 30s and must repeat at least *10* times.

Then all installation and configuration is done.

Thanks for choosing FMC-5000 Serious Mass Flowmeter

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