
# Datasheet

# Battery Powered Electromagnetic Flowmeter

# SIN-FMC800

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# Battery Powered Electromagnetic Flowmeter
# SIN-FMC800

FMC800 battery powered electromagnetic flowmeter converters are battery powered, capable of being used together with common electromagnetic flow meters, with the flow rate measurement accuracy up to 0.5 level and 0.2 level. That is to say, a new type of products — electromagnetic water meter series will be developed simply by connecting a FMC800 convertor to a common electromagnetic flow meter.

FMC800 battery powered electromagnetic flowmeter converter is equipped with a lithium battery as its standard configuration, which can work over three consecutive years. If a high-capacity battery is equipped, the continuous working time will be much longer.

FMC800 battery powered electromagnetic flowmeter converter may use a base-station type radio communication network system, with the communication base station built in the central area, and coverage radius designed as 1000M. Electromagnetic water meters communicate with the base station within a closer distance (SRD mode), by use of an opened frequency range — 928MHZ （American standard）. The base station, via GPRS or CDMA mobile communication network, realizes data communication with the supervisory computer. In addition, the FMC800 battery powered electromagnetic flowmeter converter may, via GPRS or CDMA mobile communication network, directly realize data communication with the supervisory computer.

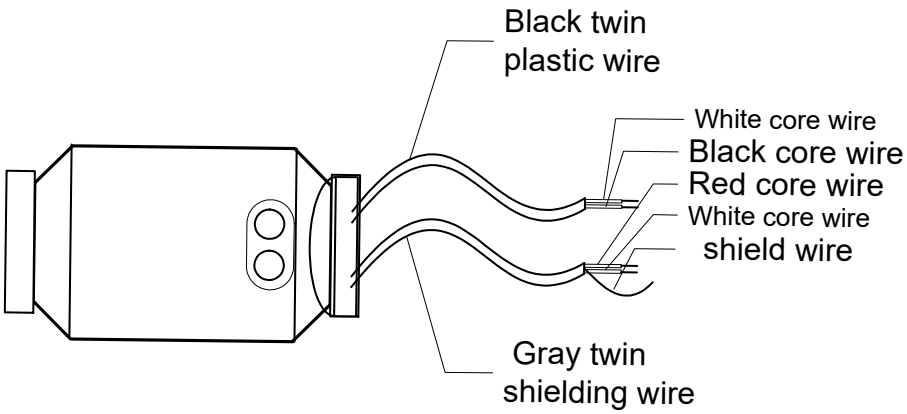
Designed with IP68-level seal protection for its die-cast aluminum case, the FMC800 battery powered electromagnetic flowmeter converter is particularly applicable for damp environment, for example, underground mine.

| Parameters | | | |
|---|---|---|---|
| **Parameter description** | **Setting mode** | **Parameter range** | **Code grade** |
| Language | Optional | Chinese, English | 1 |
| CommAddres | Optional | 0～99 | 1 |
| Snsr Size | Optional | 3～600 | 1 |
| Flow Unit | Optional | L/h、L/m、L/s、m3/h、m3/m、m3/s | 1 |
| Flow Direct | Optional | FORWARD/REVERSE | 1 |
| Flow Zero | Preset | 0～±9999 | 1 |
| Flow Cutoff | Preset | Set according to flow cut-off | 1 |
| Total Unit | Optional | 0.001～1 m3、0.001～1 L | 1 |
| Pulse Fact | Optional | 0.001～1 m3、0.001～1 L | 1 |
| Pulse Width | Optional | 1～99ms | 1 |
| MtsnsrTrip | Preset | 599.99 % | 1 |
| ClrSum Key | Preset | 0～59999 | 1 |
| Sensor Fact | Preset | 0.0000～2.9999 | 1 |
| Sensor Code | Set by users | 0～59999 | 1 |
| Line Crc Ena | Optional | ENABLE/DISABLE | 1 |
| Lineary CRC1 | Preset | Setting according to flow velocity | 1 |
| Lineary Fact1 | Preset | 0.0000～1.9999 | 1 |
| Lineary CRC2 | Preset | Setting according to flow velocity | 1 |
| Lineary Fact2 | Preset | 0.0000～1.9999 | 1 |
| Lineary CRC3 | Preset | Setting according to flow velocity | 1 |

## Wiring

### 1.Terminal wiring and signs for round integral meters

FMC800 battery powered electromagnetic flowmeter convertor connects with sensor via two group of wiring terminals respectively, signal line group and excitation line group. When connection work is doing, make sure every connection is correct and check them carefully, to avoid any possible damage to meters for reason of incorrect connection.




Schematic diagram of FMC800 signal lines

Signal lines are signed as follows

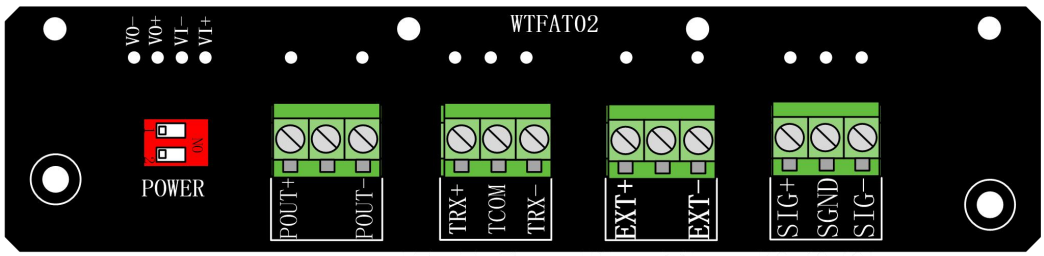
Black twin plastic wire: White core wire
Black core wire
} For exciting current use

Gray twin shielding wire：Connect the red core wire to “signal 1”

Connect the white core wire to “signal 2”

Connect the shield wire to “signal ground”

### 2.Terminal wiring and signs for square separate meters

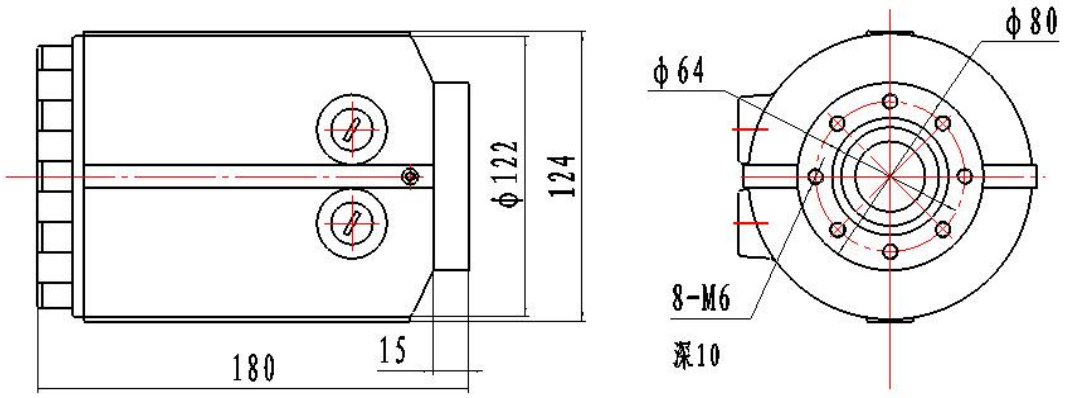


| | | |
|---|---|---|
| SIG1 | Signal 1 | |
| SGND | Signal ground | |
| SIG2 | Signal 2 | For separate sensor use |
| EXT+ | Exciting current+ | |
| EXT- | Exciting current- | |
| | | |
| POUT+ | Impulse current | Impulse output |
| POUT- | Impulse output ground | |

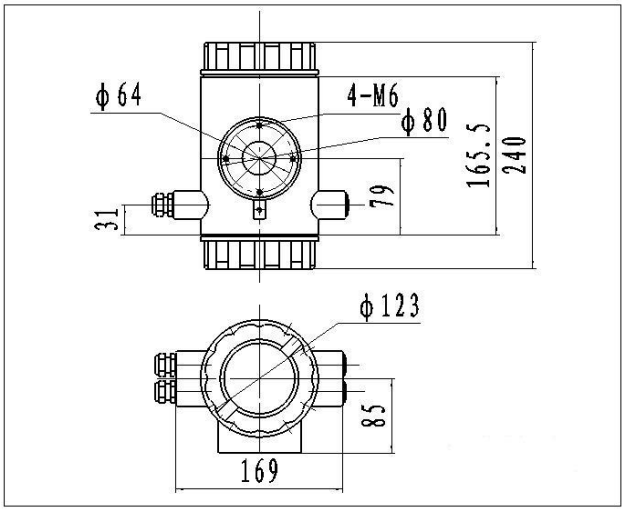
The separate electromagnetic water meter convertor is applicable for submersible electromagnetic water meters. In practical use, the electromagnetic water meter sensor is extended down to the underground, while the electromagnetic water meter convertor is mounted on the ground surface. The special design allows the cable connection between the sensor and the convertor as long as 10M, but no effect is exerted on the measurement accuracy of flow.

## Dimension

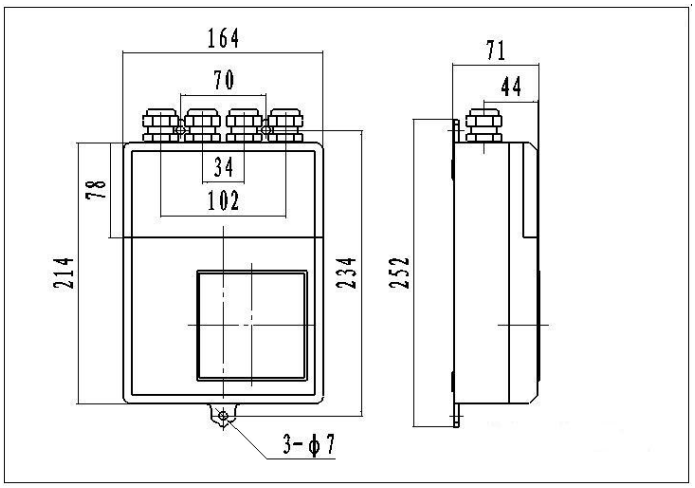
1.The Round and vertical type, integral structure




2.The round and horizontal type, integral structure




3.The square type, separate structure



## Ordering Code

| SIN-FMC800-15-J-B-MC-K-AY-M3-N6-0-WS-00 | | | | | | | | | | | | Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIN-FMC800 | - | - | - | - | - | - | - | - | - | - | - | |
| Nominal Diameter | 15 | | | | | | | | | | | DN15(1/2") |
| | 20 | | | | | | | | | | | DN20(3/4") |
| | 25 | | | | | | | | | | | DN25(1") |
| | 32 | | | | | | | | | | | DN32(1.25") |
| | 40 | | | | | | | | | | | DN40(1.5") |
| | 50 | | | | | | | | | | | DN50(2") |
| | 65 | | | | | | | | | | | DN65(2.5") |
| | 80 | | | | | | | | | | | DN80(3") |
| | 1C | | | | | | | | | | | DN100(4") |
| | 1E | | | | | | | | | | | DN125(5") |
| | 1G | | | | | | | | | | | DN150(6") |
| | 2C | | | | | | | | | | | DN200(8") |
| | 2G | | | | | | | | | | | DN250(10") |
| | 3C | | | | | | | | | | | DN300(12") |
| | 3G | | | | | | | | | | | DN350(14") |
| | 4C | | | | | | | | | | | DN400(16") |
| | 4G | | | | | | | | | | | DN450(18") |
| | 5C | | | | | | | | | | | DN500(20") |
| | 6C | | | | | | | | | | | DN600(24") |
| | 7C | | | | | | | | | | | DN700(28") |
| | 8C | | | | | | | | | | | DN800(32") |
| | 9C | | | | | | | | | | | DN900(36") |
| | A0 | | | | | | | | | | | DN1000(40") |
| Process Connection Standard | | J | | | | | | | | | | JB/T 81 Flange |
| | | I | | | | | | | | | | IS02852 Clamp |
| | | X | | | | | | | | | | Other |
| Nominal Pressure | | | B | | | | | | | | | PN10 |
| | | | C | | | | | | | | | PN16 |
| | | | D | | | | | | | | | PN25 |
| | | | E | | | | | | | | | PN40 |
| | | | F | | | | | | | | | PN63 |
| | | | X | | | | | | | | | Other |
| Process Connection Material and Body Material | | | | MC | | | | | | | | Carbon Steel |
| | | | | M1 | | | | | | | | 304SS |
| | | | | XX | | | | | | | | Other |
| Accuracy | | | | | K | | | | | | | Class 0.5 |
| Output and Power Supply | | | | | | AY | | | | | | 3.6V Lithium Battery |
| | | | | | | BA | | | | | | Dual Power Supply (3.6V Lithium Battery + 24VDC), 4G External Antenna |

| | | | | | | |
|---|---|---|---|---|---|---|
| | BC | | | | | 3.6V Lithium Battery, 4G External Antenna |
| | BE | | | | | Dual Power Supply (3.6V Lithium Battery + 12VDC), 4G External Antenna |
| | BF | | | | | Dual Power Supply (3.6V Lithium Battery + 24VDC), RS485 |
| | BG | | | | | Dual Power Supply (3.6V Lithium Battery + 12VDC), RS485 |
| | BH | | | | | 3.6V Lithium Battery, RS485 |
| | XX | | | | | Other |
| Electrode Material | | M3 | | | | 316LSS |
| | | MF | | | | Hastelloy B |
| | | MG | | | | Hastelloy C |
| | | T1 | | | | Titanium |
| | | T2 | | | | Tantalum |
| | | MH | | | | Platinum-Iridium Alloy |
| | | MJ | | | | Tungsten Carbide |
| Lining Material | | | N6 | | | Polytetrafluoroethylene |
| | | | N1 | | | Chloroprene Rubber |
| | | | N2 | | | Polyurethane |
| | | | N7 | | | luorinated Ethylene Propylene(F46) |
| | | | N8 | | | Perfluoroalkoxy |
| Pressure Measurement | | | | 0 | | Not Included |
| | | | | 1 | | Included |
| Electrical Interface, Housing Material, and Protection Rating | | | | | WS | Integrated Design, 304 Stainless Steel/ABS, IP68 |
| | | | | | WT | Split Design, 304 Stainless Steel/ABS, IP68 |
| Split Cable Length | | | | | | 00 0m |
| | | | | | | 10 10m |
| | | | | | | 15 15m |
| | | | | | | 20 20m |
| | | | | | | 25 25m |
| | | | | | | 30 30m |
| | | | | | | XX Other |