

## FMU822 Explosion Proof Inline Ultrasonic Flowmeter (Heat Meter)

### MAIN FEATURES

- Easy installation, no maintenance is needed.
- High accuracy within  $\pm 0.5\%$
- Multiple signal output of 4-20mA, OCT pulse and Relay output.
- Coming with RS485 interface, support MODBUS, can be easily accessible to industrial systems.
- Can be applicable to inflammable and explosive occasions.
- Achieve heat measurement by connecting 3-wired heat transducers PT100.

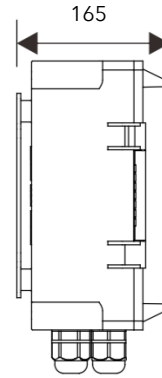
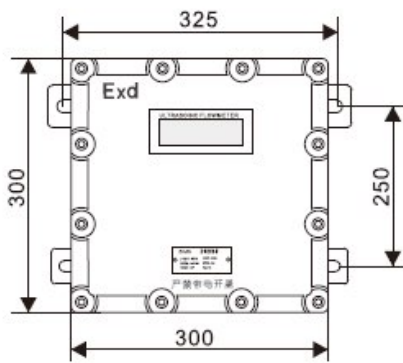


### SPECIFICATION

|                        |  |
|------------------------|--|
| Principle              | Transit-time   |
| Precision              | Flowmeter: $\pm 0.5\%$ ; Heat meter: $\pm 2\%$   |
| Display                | Can connect 2 × 10 backlit Chinese characters or 2 × 20 character LCD, support Chinese, English, Italian three languages   |
| Signal output          | 1 4 ~ 20mA current output, impedance 0-1K, accuracy 0.1%<br>1 OCT pulse output (pulse width 6-1000ms, default 200ms)<br>1 relay output   |
| Signal input           | 3 channels 4 ~ 20mA current input, accuracy 0.1%, can collect temperature, pressure, liquid level etc.<br>Can be connected to a three-wire PT100 platinum resistor for heat measurement. |
| Data interface         | Isolated RS485 serial interface, the flowmeter can be upgraded through a PC, supporting protocols such as MODBUS   |
| Pipe material          | Steel, stainless steel, cast iron, cement pipes, copper, PVC, aluminum, fiberglass and other dense pipes are allowed to be lined   |
| Inner diameter of tube | 15-1000mm  |
| Straight pipe section  | Sensor installation point 0 is good: 10D upstream, 5D downstream, 30D from the pump outlet (D refers to the pipe diameter)   |
| Medium                 | Single, uniform liquid that can transmit ultrasonic waves, such as water(-30 °C ~ 160 °C)  |
| Temperature            | Standard probe: -30 ~ 90 °C, high temperature probe: -30 ~ 160 °C  |
| Turbidity              | 10000 ppm with low bubble content  |
| Velocity               | -12m/s ~ 12m / s   |
| Temperature            | Host: -20 ~ 60 °C, flow sensor: -30 °C ~ 160 °C  |
| Special cable          | Shielded twisted-pair cable  |
| Protection class       | Main unit: IP65; sensor: IP68;   |
| Explosion proof        | DIIBT5   |
| Power supply           | DC24V, AC85~264V;50Hz  |
| Power consumption      | 1.5W   |

**DIMENSION**

Unit: mm



**SENSOR OPTIONS**

| Flow sensor            | Picture | Model            | Measuring range | Temperature |
|------------------------|---------|------------------|-----------------|-------------|
| Clamp on               |         | TS-2 (small)     | DN25-100        | -30 ~ 90°C  |
|                        |         | TM-1 (medium)    | DN50-700        |             |
|                        |         | TL-1 (large)     | DN300-6000      |             |
| High temp.<br>Clamp on |         | TS-2-HT (small)  | DN25-100        | -30 ~ 160°C |
|                        |         | TM-1-HT (medium) | DN50-700        |             |
|                        |         | TL-1-HT (large)  | DN300-6000      |             |
| Insertion              |         | TC-1 (standard)  | DN50-6000       | -30 ~ 160°C |
|                        |         | TC-2 (extended)  |                 |             |
| Inline                 |         | TP-1 (parallel)  | DN80-6000       | -30 ~ 160°C |
|                        |         | Standard         | DN15-1000       |             |

**OPTIONAL PT100 SENSORS FOR HEAT MEASUREMENT**

| Temperature sensor          | Picture | Model | Measuring range | Temperature | Cut off water |
|-----------------------------|---------|-------|-----------------|-------------|---------------|
| Clamp on                    |         | CT-1  | DN50-6000       | -40 ~ 160°C | No need       |
| Insertion                   |         | TCT-1 | DN50-6000       | -40 ~ 160°C | Need          |
| Insertion<br>under pressure |         | PCT-1 | DN50-6000       | -40 ~ 160°C | No need       |
| Insertion<br>small sizes    |         | SCT-1 | < DN50          | -40 ~ 160°C | Need          |

**ORDER CODE**

|        |   |  |   |   |    |    |               |
|--------|---|--|---|---|----|----|---------------|
| FMU822 | Explosion Proof Inline Ultrasonic Flowmeter |  |   |   |    |    |               |
|        | <b>CODE</b>                                 | Sensor type                              |   |   |    |    |               |
|        | <b>A</b>                                    | Standard clamp on sensor                 |   |   |    |    |               |
|        | <b>B</b>                                    | High temperature clamp on sensor         |   |   |    |    |               |
|        | <b>C</b>                                    | Mounting bracket sensor                  |   |   |    |    |               |
|        | <b>D</b>                                    | High temperature mounting bracket sensor |   |   |    |    |               |
|        | <b>E</b>                                    | Insertion type                           |   |   |    |    |               |
|        | <b>CODE</b>                                 | Nominal diameter                         |   |   |    |    |               |
|        | <b>D15</b>                                  | DN15mm                                   |   |   |    |    |               |
|        | <b>D20</b>                                  | DN20mm                                   |   |   |    |    |               |
|        | ...   | ...                                      |   |   |    |    |               |
|        | <b>D6000</b>                                | DN6000                                   |   |   |    |    |               |
|        | <b>CODE</b>                                 | Voltage                                  |   |   |    |    |               |
|        | <b>D</b>                                    | DC8~36V (DC 24V)                         |   |   |    |    |               |
|        | <b>A</b>                                    | AC85~264V                                |   |   |    |    |               |
|        | <b>CODE</b>                                 | Working temperature                      |   |   |    |    |               |
|        | <b>1</b>                                    | -30 °C -90 °C                            |   |   |    |    |               |
|        | <b>2</b>                                    | -30 °C -160 °C                           |   |   |    |    |               |
|        | <b>3</b>                                    | Other customized                         |   |   |    |    |               |
|        | <b>CODE</b>                                 | Signal output                            |   |   |    |    |               |
|        | <b>S1</b>                                   | 1 channel 4-20mA current output          |   |   |    |    |               |
|        | <b>S2</b>                                   | 1 way OCT pulse output                   |   |   |    |    |               |
|        | <b>S3</b>                                   | 1 relay output                           |   |   |    |    |               |
|        | <b>S4</b>                                   | RS485                                    |   |   |    |    |               |
|        | <b>C</b>                                    | Other customization                      |   |   |    |    |               |
|        | <b>CODE</b>                                 | Other parameters                         |   |   |    |    |               |
|        | <b>A</b>                                    | Flange range_                            |   |   |    |    |               |
|        | <b>B</b>                                    | Normal pressure_Kpa                      |   |   |    |    |               |
|        | <b>C</b>                                    | Protection level_                        |   |   |    |    |               |
|        | <b>D</b>                                    | Explosion type_                          |   |   |    |    |               |
|        | <b>E</b>                                    | Signal input_                            |   |   |    |    |               |
|        | <b>F</b>                                    | Other requirements                       |   |   |    |    |               |
| FMU822 | A   | D15                                      | D | 1 | S1 | BC | Order example |