

# 氣體質量流量計

## KMF1000



KMF1000 系列數位氣體質量流量計採用微機電系統流量感測晶片，適用於各種用途的清潔、相對乾燥的小流量氣體測量和製程控制，特別的封裝技術使得此產品滿足不同範圍的流量測量，能夠保證高靈敏度、高可靠性、高穩定性和低成本。

它的原理是基於 MEMS 流量感測單元和高精度數位處理和校準電路。整合  $\Delta-\Sigma$  A/D 轉換器以及內部具有校準功能的組合邏輯電路和 MCU 處理器共同確保感測訊號的即時有效擷取，獲得準確的流量訊號，並在內部進行相應的補償演算法處理，因此無需進行任何外部校準和補償即可確保高精度的流量輸出。

KMF1000 series digital gas mass flow meter is made of micro- electromechanical system (MEMS) flow sensing chip, suitable for a variety of purposes of clean, relatively dry nature of the small flow gas measurement and process control, unique packaging technology makes the product to meet the different ranges of flow measurement, to ensure high sensitivity, high reliability, high stability and low cost. It is based on a MEMS flow sensing unit and a high precision digital processing and calibration circuit (MCU). The integrated  $\Delta-\Sigma$  A/D converter and the logic circuit with internal calibration function and MCU processor together ensure the real-time effective acquisition of the sensing signal, to obtain the accurate flow signal, and the corresponding compensation algorithm processing in the internal, so there is no need to do any external calibration and compensation to ensure high-precision

### 產品規格 Specifications

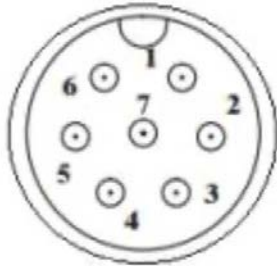
| Series 1000            |                                     |          |            |
|------------------------|-------------------------------------|----------|------------|
| 型號 Type                | KMF1005                             | KMF1008  | KMF1019    |
| 通孔徑 DN(mm)             | 5                                   | 8        | 19         |
| 流量範圍 Flow Range(SLPM)  | 0-25   0-50                         | 0-250    | 0-1000     |
| 工作電源 Supply Power(VDc) | 7-24 VDc, 50 mA                     |          |            |
| 精度 Accuracy            | ±1.5% F.S                           |          |            |
| 重複精度 Repeatability     | 0.25%                               |          |            |
| 量程比 Turndown Ratio     | 1:100                               |          |            |
| 響應時間 Response          | 67 msec                             |          |            |
| 最大耐壓 Max Pressure      | 0.5 Mpa                             |          |            |
| 數位信號輸出 Serial Com      | RS485(modbus)                       |          |            |
| 輸出訊號 Output            | 1-5 VDc                             |          |            |
|                        | 4-20 mA                             |          |            |
| 顯示單位 Display           | SLPM(Instant Flow) / SL(Accum Flow) |          |            |
| 工作溫度 Temp.             | 10~65°C (Fluid)                     |          |            |
|                        | -25~85 °C (Ambient)                 |          |            |
| 空氣濕度 Humidity          | <100%RH                             |          |            |
| 重量 Weight              | 0.245 kg                            | 0.215 kg | 0.396 kg   |
| 口徑 Port                | NPT1/4"內螺紋                          | G3/8"內螺紋 | NPT3/4"外螺紋 |
| 輸出流量標準 Calibration     | Air, 20°C, 101.325kPa               |          |            |

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### 接線方式 Wiring Description



| 編號 No. | 顏色 Color  | 功能 Function |
|--------|-----------|-------------|
| 1      | 紅色 Red    | 電源 (+)      |
| 2      | 黑色 Black  | 電源 (-)      |
| 3      | 藍色 Blue   | RS485(A)    |
| 4      | 綠色 Green  | RS485(B)    |
| 5      | 黃色 Yellow | V out       |
| 6      | 棕色 Brown  | 4 - 20 mA   |

### 外觀尺寸 Dimension

