



預先設定的產品，可搭配 ModBus/FLOW-BUS 或 EtherNet 進行通訊

## 測量與控制

|                                     |                                                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------------------------|
| Type of media                       | 氣體                                                                                                    |
| 流量範圍                                | 0...2 l <sub>n</sub> /min                                                                             |
| 準確性                                 | ±0.8% Rd plus ±0.2% FS (N <sub>2</sub> /Air/O <sub>2</sub> )                                          |
| 再現性                                 | < ±0.2% Rd                                                                                            |
| Turndown ratio                      | 1:500                                                                                                 |
| 多種流體功能                              | 內建 22 種獨特氣體以及這些氣體的任何混合物的氣體資料                                                                          |
| Pre-installed gases                 | C2H2 Ar C3H4 #1 Ar CO2 CO C3H6 #1 D2 #1 C2H6 C2H4 He H2 Kr CH4 Ne N2 N2O O2 C3F8 C3H6 #2 C3H8 C3H4 #2 |
| Settling time (in control, typical) | <150 ms                                                                                               |
| 反應時間 (感測器)                          | <30 ms                                                                                                |
| 操作溫度                                | 0...+50 °C (32°F - 122°F)                                                                             |
| 溫度敏感性                               | 流量感測器: 零點 0.015% FS/°C; 跨度 0.05% Rd/°C; 壓力感測器: 零點 0.16 mbar/°C; 跨度 0.05% Rd/°C                        |
| Leak integrity, outboard            | 已測試 < 2 x 10 <sup>-9</sup> mbar l/s He                                                                |
| 長期穩定                                | <0.5% FS over period of 3 years, then <0.2% FS per year                                               |
| 壓力敏感度                               | standard: < 0.15% Rd/bar typical N2; with pressure correction: typical factor 5 improved              |
| 壓力範圍感測器                             | 0...17 bar(a)                                                                                         |
| Leak-by through closed valve        | 典型 < 1·10 <sup>-4</sup> mbar·l/s He                                                                   |
| 安裝                                  | 任何位置, 姿態敏感度可忽略不計                                                                                      |
| 熱機時間                                | 30分鐘                                                                                                  |
| 儲存/運輸條件                             | 0...+50°C, max.95% RH (非冷凝)                                                                           |

審批

## 機械規格

|                                |                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------|
| 壓力等級 (PN)                      | 16                                                                                 |
| Ingress protection             | IP40                                                                               |
| Surface roughness wetted parts | <1.6 微米 Ra (不鏽鋼本體為 <0.8 微米 Ra)                                                     |
| Material wetted parts          | 鋁、不銹鋼、氮化矽、環氧樹脂、氧化鋁、玻璃、FKM                                                          |
| 密封材質                           | FKM 51415                                                                          |
| Plunger material               | 帶 PI (polyimide) 箔的 FFKM                                                           |
| Process connections            | 1/8 "BSP 內螺紋 (ISO1179-1): compression type, push-in or face seal (VCR/VCO) 接頭需另行訂購 |
| Max. ΔP                        | 16 bar(d)                                                                          |
| 重量                             | 0.2 kg                                                                             |

## 電氣特性

|      |                                                                                      |
|------|--------------------------------------------------------------------------------------|
| 電源供應 | +24 Vdc ± 10%                                                                        |
| 耗電量  | 2.5 Watt (typical, in control); add 0.9 Watt for EtherNet communication              |
| 數位通訊 | Modbus-RTU、Modbus-ASCII、FLOW-BUS、EtherCAT®、EtherNet/IP、Modbus-TCP、POWERLINK、PROFINET |

## 電氣介面

|                                                               |                    |
|---------------------------------------------------------------|--------------------|
| Service interface                                             | USB-C, Bluetooth   |
| 電源(儀表接口)                                                      | 9-pin D-sub (male) |
| 通訊(儀表接口)                                                      | RS485              |
| Modbus RTU/ASCII/FLOW-BUS                                     | 9-pin D-sub (male) |
| Modbus TCP / EtherNet/IP / EtherCAT®/<br>PROFINET / POWERLINK | 2x RJ45            |