

| | SDP8xx with Digital Output x = 0, 1 | SDP3x x = 1, 2, 3 | SDP6x0 x = 0, 1 | SDP8x6 with Analog Output x = 0, 1 | SDP36 SDP37 |
|--|---|---|--|--|---|
| Status | Recommended for New Designs | | Not Recommended for New Designs | Recommended for New Designs | |
| Pneumatic Connection | SDP80x: Manifold SDP81x: Tube | Manifold | SDP60x: Manifold SDP61x: Tube | SDP806: Manifold SDP816: Tube | Manifold |
| Pressure range (Pa) | SDP8xx-500Pa: ±500 SDP8xx-125Pa: ±125 | SDP31: ±500 SDP32: ±125 SDP33: ±1500 | SDP6x0-500Pa: ±500 SDP601, 611: ±500 SDP6xx-125Pa: ±125 SDP6x0-25Pa: ±25 SDP5xx: 0 to 500 | SDP8x6-500Pa OCS=L, Linear: -50 to 500 OCS=H, Square Root ±500 SDP8x6-125Pa OCS=L, Linear: -12.5 to 125 OCS=H, Square Root ±125 | SDP36 OCS=L, Linear: -50 to 500, OCS=H, Square Root ±500 SDP37 OCS=L, Linear: -12.5 to 125 OCS=H, Square Root ±125 |
| Allowable overpressure (bar) | 1 | 1 | - | 1 | 1 |
| Rated burst pressure | 5 | 3 | - | 5 | 3 |
| Accuracy (%) | 3 | 3 SDP33: 3 for ±500Pa, 6 for ±1500Pa | SDP6xx: 3 SDP5xx: 4.5 | 3 | 3 |
| Flow step response time τ63% (ms) | <3 | | - | <5 | BWS=H, Slow: <9 BWS=L, Fast: <3 |
| Resolution (bit) | 16 | | 12 (adjustable from 9 to 16) | 16 | 16 |
| Calibrated for | Air, N ₂ | | | | |
| Gas compatibility | Air, inert gases | | | | |
| Temperature compensation range (°C) | -20 to 85 | -40 to 85 | -20 to 80 | -20 to 85 | -40 to 85 |
| Interface | I ² C, up to 1MHz | | I ² C, up to 400kHz | Voltage, 10 to 90% Vdd | Voltage, 10 to 90% Vdd |
| I2C Address | SDP8x0: 0x25 SDP8x1: 0x26 | 0x21, ADDR=GND 0x22, ADDR-1.2K resistor-GND 0x22, ADDR-2.7K resistor-GND | 0x40 | - | - |
| CRC checksum for measured values | CRC8 | | CRC8 | - | - |
| Measurement mode | Continuous Continuous Mode and 'Average till Read' Triggered | | Triggered | Continuous | |
| Method to determine measured data availability | Polling – continuous mode Polling, clock stretching – triggered mode | Polling – continuous mode Polling, clock stretching – triggered mode IRQn pin | Polling Sensor pulls down the SCL line while measuring | - | - |
| Output | Differential pressure | | | | |
| Temperature compensation for | Mass flow Differential pressure | | SDP6x0: differential pressure SDP5x0: differential pressure SDP6x1: mass flow SDP5x1: mass flow | Mass flow | TCS=L, mass flow TCS=H, differential pressure |
| Measurement duration (ms) | 0.5 – continuous 45 - triggerd | | 4.6 at 12bit resolution 69.3 at 16bit resolution | - | - |
| Power supply Vdd (V) | 2.7 to 5.5 | 2.7 to 5.5 | 3 to 3.6 | 2.7 to 5.5 | 2.7 to 5.5 |
| Supply current, measuring (mA) | 3.8 | 3.8 | <6 | 3.8 | 3.8 |