

1.2 Ambient conditions

Parameter	SDP5xx / SDP6xx Series
Calibrated for ⁸	Air, N ₂
Media compatibility	Air, N ₂ , O ₂
Calibrated temperature range ^{8,9}	-20 °C to +80 °C
Operating temperature	-20 °C to +80 °C
Storage temperature ⁸	-40 °C to +80 °C
Position sensitivity	Less than repeatability error

1.3 Materials

Parameter	SDP5xx / SDP6xx Series
Wetted materials	PBT (polybutylene terephthalate), glass (silicon nitride, silicon oxide), silicon, gold, FR4, silicone as static sealing, epoxy, copper alloy, lead-free solder
REACH, RoHS, WEEE	The SDP5xx/6xx series is REACH, RoHS and WEEE compliant

	59'780 (inch H ₂ O) ⁻¹
SDP6x0-25Pa	120'000 mbar ⁻¹ 8'273'719 psi ⁻¹ 298'900 (inch H ₂ O) ⁻¹

2.2 Electrical characteristics for SDP606 / SDP616 (low power version)

Parameter	SDP606 / SDP616
Operating voltage	2.7– 3.3 Vdc (A supply voltage of 3.0 V is recommended)
Current drain	< 400 µA
Current drain in sleep mode	< 1 µA
Interface	Digital 2-wire interface (I ² C)
Bus clock frequency	100 kHz typical, 400 kHz max.
Default I ² C address	64 (binary: 1000 000)
Scale factor ¹¹	60 Pa ⁻¹ (for all 500 Pa versions)

2. Electrical Specifications

2.1 Electrical characteristics

Parameter	SDP5xx / SDP6xx ¹⁰
Operating voltage	3.0– 3.6 Vdc (A supply voltage of 3.3 V is recommended)
Current drain	< 6 mA typical in operation
Interface	Digital 2-wire interface (I ² C)
Bus clock frequency	100 kHz typical, 400 kHz max.
Default I ² C address	64 (binary: 1000 000)
Scale factor¹¹	
SDP6xx-500Pa	60 Pa ⁻¹
SDP6x0-125Pa	240 Pa ⁻¹
SDP6x0-25Pa	1200 Pa ⁻¹
Scale factor to alternative units ¹²	For all 500 Pa versions: 6'000 mbar ⁻¹ 413'686 psi ⁻¹ 14'945 (inch H ₂ O) ⁻¹
SDP 6x0-125Pa	24'000 mbar ⁻¹ 1'654'744 psi ⁻¹

⁸ Contact Sensirion for information about other gases, wider calibrated temperature ranges and higher storage temperatures.

⁹ Valid for products with serial numbers starting with 1136 000 000. For older products, calibrated temperature range is 0°C to +50°C.

¹⁰ For all SDP6xx sensors except for SDP606/SDP616.

¹¹ See section 5.1. The scale factor may vary with other configurations.

¹² Instead of the standard scale factor (to get the physical value in Pa), the sensor output may be divided by alternative scale factors to receive the physical value in another unit.

