

2. Specifications

2.1 Electrical Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units	Comments
Supply Voltage	V_{DD}		2.7		5.5	V	
Power-up/down level	V_{POR}		2.3	2.5	2.7	V	
Supply current	I_{DD}	Measuring		3.8	5.5	mA	
		Idle state			1.1	mA	
		Sleep mode			1	uA	

2.2 Timing Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units	Comments
Power-up time	t_{PU}				25	ms	Time to sensor ready
Soft reset time	t_{SR}				2	ms	Time between soft reset command or exit sleep mode and sensor ready
I2C SCL frequency	f_{I2C}			400	1000	kHz	
Update rate differential pressure value		Continuous mode	1800	2000	2200	Hz	
Update rate temperature value		Continuous mode	112.5			Hz	Temperature value is updated at least every 16 pressure values
Measurement time		Triggered mode	40	45	50	ms	

2.3 Mechanical Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units	Comments
Allowable overpressure	P_{max}				1	bar	
Rated burst pressure	P_{burst}		5			bar	
Weight	W				6	g	

2.4 Materials

Parameter	
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	REACH and RoHS compliant

2.5 Absolute Minimum and Maximum Ratings

Parameter	Rating	Units
Supply Voltage V_{DD}	-0.3 to 5.5	V
Max Voltage on pins (SDA, SCL)	-0.3 to $V_{DD}+0.3$	V
Input current on any pin	± 70	mA
Operating temperature range ¹	-40 to +85	°C
Storage temperature range	-40 to +85	°C
Max. humidity for long term exposure	40°C dew point	
ESD HBM (human body model)	2	kV

¹ For Air and N₂. Long term exposure to (high concentrations of) O₂ at high temperatures can reduce the product lifetime

3. Pin Assignment

The pin assignments of the SDP8xx-Digital can be found in Table 1

Pin no.	Name	Description
1	SCL	Serial Clock (I ² C Interface)
2	VDD	VDD Supply
3	GND	Connect to ground
4	SDA	Bidirectional Serial Data (I ² C Interface)

Table 1: SDP8xx-Digital pin assignment (bottom view).