

PIN CONFIGURATION

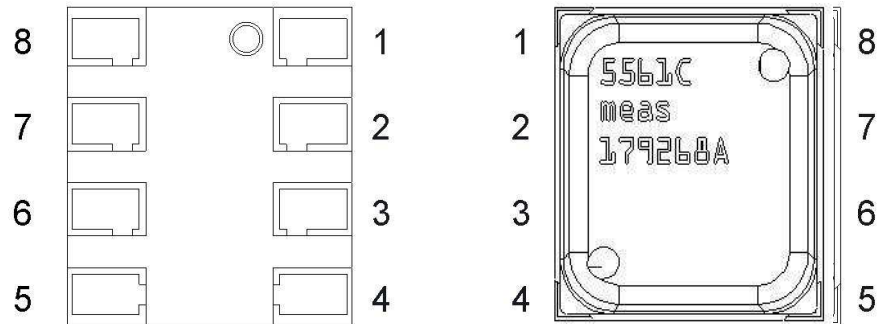


Fig. 2: Pin configuration of MS5561C

Pin Name	Pin	Type	Function
SCLK	1	I	Serial data clock
GND	2	G	Ground
PV (1)	3	N	Negative programming voltage
PEN (1)	4	I	Programming enable
VDD	5	P	Positive supply voltage
MCLK	6	I	Master clock (32.768 kHz)
DIN	7	I	Serial data input
DOUT	8	O	Serial data output

NOTE

- Pin 3 (PV) and Pin 4 (PEN) are only used by the manufacturer for calibration purposes and should not be connected.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Min	Max	Unit	Notes
Supply voltage	V _{DD}	T _a = 25 °C	-0.3	4	V	
Storage temperature	T _s		-40	+85	°C	1
Overpressure	P	T _a = 25 °C		5	bar	

NOTE

- Storage and operation in an environment of dry and non-corrosive gases.

RECOMMENDED OPERATING CONDITIONS

(Ta = 25 °C, V_{DD} = 3.0 V unless noted otherwise)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Operating pressure range	p		10		1100	mbar abs.
Supply voltage	V _{DD}		2.2	3.0	3.6	V
Supply current, average (1) during conversion (2) standby (no conversion)	I _{avg} I _{sc} I _{ss}	V _{DD} = 3.0 V		4 1	0.1	μA mA μA
Current consumption into MCLK (3)		MCLK = 32.768 kHz			0.5	μA
Operating temperature range	T		-40	+25	+85	°C
Conversion time	t _{conv}	MCLK = 32.768 kHz			35	ms
External clock signal (4)	MCLK		30.000	32.768	35.000	kHz
Duty cycle of MCLK			40/60	50/50	60/40	%
Serial data clock	SCLK				500	kHz

NOTES

- 1) Under the assumption of one conversion every second. Conversion means either a pressure or a temperature measurement started by a command to the serial interface of MS5561C.
- 2) During conversion the sensor will be switched on and off in order to reduce power consumption; the total on time within a conversion is about 2 ms.
- 3) This value can be reduced by switching off MCLK while MS5561C is in standby mode.
- 4) It is strongly recommended that a crystal oscillator be used because the device is sensitive to clock jitter. A square-wave form of the clock signal is a must.