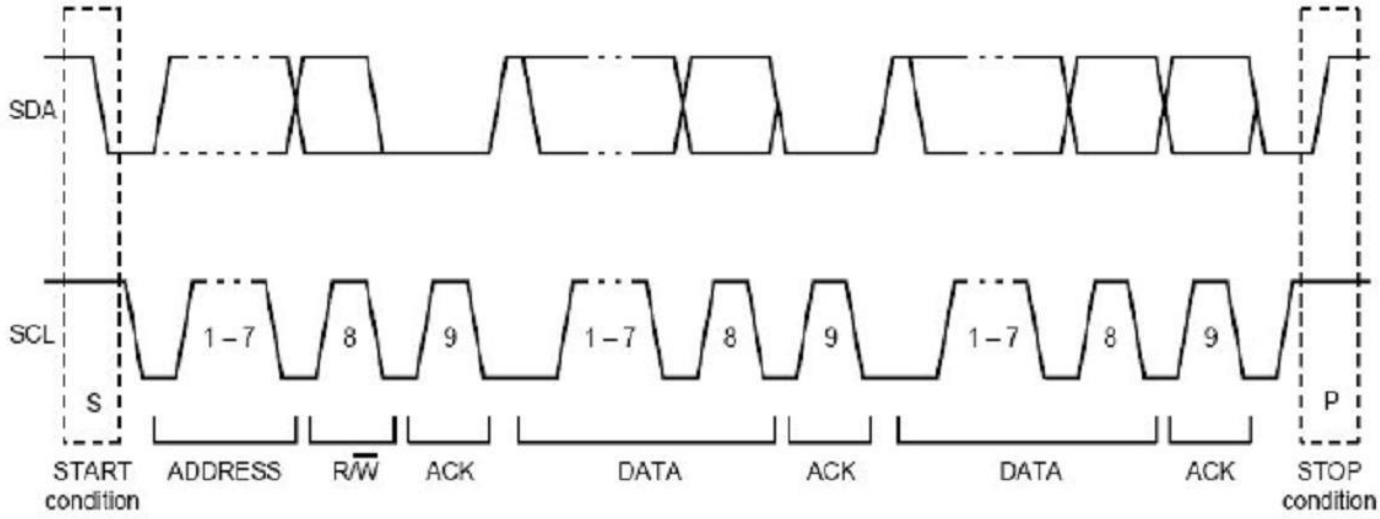
I2C INTERFACE

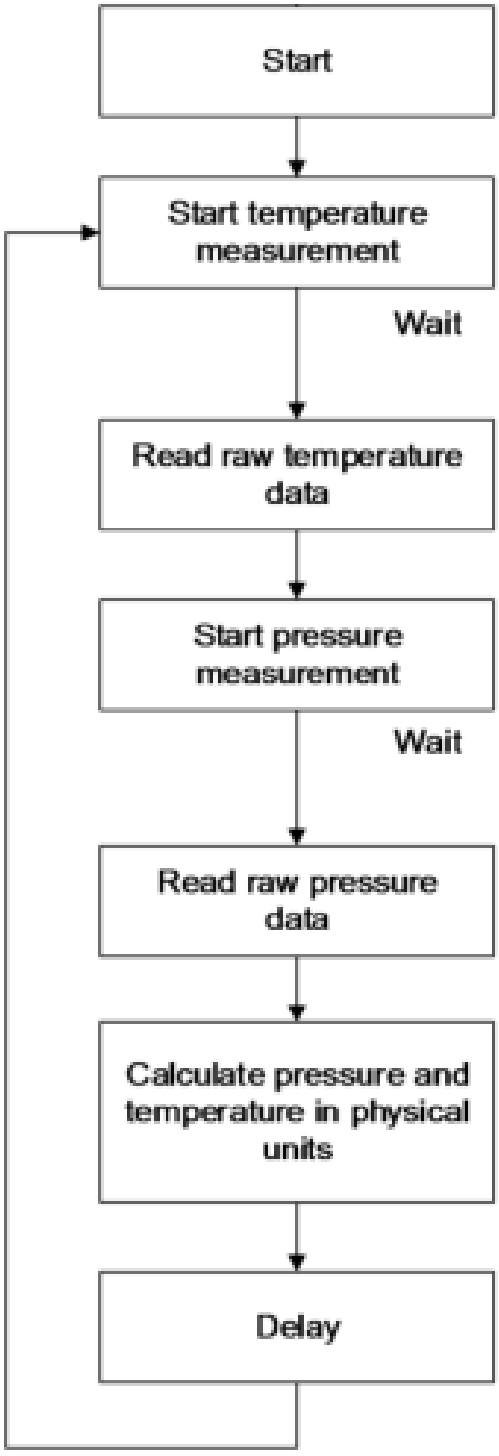
- **IIC Device Address**

	Device Address							IIC W/R
	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Default	1	1	0	1	1	0	**1**	0/1

- **IIC Protocol**



PRESSURE AND TEMPERATURE ORDER



Start

TMIN=-40℃ TMAX=85℃ TREF=25℃

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Read digital pressure and temperature data

Reg	Description		R/W	Default
0x30	CMD	0x0A，进行一次输出 0x0B，持续输出 0x1B, 62.5ms 间隔输出 0x2B, 125ms 间隔输出 0xFB, 1s 间隔输出	W	0x00
0x06	PRESSURE_MSB	Press out<23:16>	R	0x00
0x07	PRESSURE _CSB	Press out<15:8>	R	0x00
0x08	PRESSURE _LSB	Press out<7:0>	R	0x00
0x09	TEMP_MSB	Temp out<15:8>	R	0x00
0x0A	TEMP_LSB	Temp out<7:0>	R	0x00
0x02	STATUS	发送完 CMD 后，轮询 STATUS 的 bit0 值判断转换是否完成，注意该数据被读取后会自动清零	R	0x00

*Reg0x06-Reg0x08: 24 bits ADC output data with an LSB

⇩

Calculate

	Size [bit]	Zero Condition	Below Zero	Above Zero

PRESSURE	24	8388608	long ad = PRESSURE_MSB;
			ad << 8; ad |= PRESSURE_CSB;
			ad << 8; ad |= PRESSURE_LSB;
			float v = ad / 8388608;
				long ad = PRESSURE_MSB;
				ad << 8; ad |= PRESSURE_CSB;
				ad << 8; ad |= PRESSURE_LSB;
				float v = (ad – 16777216)/ 8388608;

TEMP	16	32768	long ad = TEMP _MSB;
			ad << 8; ad |= PRESSURE_LSB;
			float v = ad / 256;
				long ad = TEMP _MSB;
				ad << 8; ad |= PRESSURE_LSB;
				float v = (ad -65536)/ 256;

* PRESSURE: It also needs to be converted according to the pressure range, Using the driver C code is strongly recommended. Please contact with WFH for details.

- **IIC timing diagram**

	From master to slave	S	Start	A	Acknowledge
	From slave to master	P	Stop	N	Not Acknowledge

Write Data (IIC Write)

(a) conversion command

S	DeviceAddress	W	A	0x30	A	0x0A	A	P

Read Data (IIC Read)

(a) After sending the temperature conversion command, read 16bit data from the output buffer

S	DeviceAddress	W	A	0x09	A			
S	DeviceAddress	R	A	TEMP_MSB	A	TEMP_LSB	N	P

(b) After sending the pressure conversion command, read 24bit data from the output buffer

S	DeviceAddress	W	A	0x06	A					
S	DeviceAddress	R	A	PRESSURE_MSB	A	PRESSURE_CSB	A	PRESSURE_LSB	N	P