

Parameter	Value	Remarks
Optical Input/Output		
Number of Channels	12 (3 x 4 sensor channels x 3 optical fibers)	one transmitting + two receiving fibers per channel, 36 optical fibers in total
Input/Output Connector	MP012 x 3	Single mode optical fiber SMF-28a
Type of Laser	DBF single mode optically isolated	Senset OLD-32122PFAB
Output Power	10 μW	Per coil (total 240 μW)
Wavelength	1311 nm	@ 25°C
Signal Processing		
Main CPU (SP-12CH)	ARM 64-bit	Amlogic S905X3 (4-core Cortex-A55)
MCU (OE-4CH)	32-bit MIPS MCU	Microchip PIC32MX795F512L
A/D Resolution	16 bit	AD7761BSTZ Analog Devices
A/D Sampling rate	max 32 kSamples/s	per channel, simultaneous sampling
Programming	Firmware written in Python,	Under OS Ubuntu 20.04 on eMMC 64GB module
Setting parameters	Manually, via textual configuration file	WM.INI in /WALLMON2023
Sensitivity	20.4 μm/Hz	Shifting of axial natural frequency, third mode
Data Outputs		
Spectrogram files	USB on the front panel;	One data set per day per sensor
Original photodiode signals	NoMachine; FTP; SSH via ETH LAN	
Communication		
Interfaces	USB 3.0	host port, export on flash memory; to attach keyboard & mouse
	Fast Ethernet 10/100 Mb/s	RJ45 WAN, VPN Teltonika
	TEC 4-wire	Peltier 7A and thermistor 10kΩ
Power		
Input Voltage	230 V / 50 Hz	Only SP-12CH externally powered
Power Consumption	< 1 A	