

# HealthLab Satellite SAT-07.40



## Technical Data

### Designation

HealthLab Measuring Satellite SAT-07.40,  
3D acceleration sensor,  
voice and foot sensor

### Voltage Supply

### / Current Consumption

3,3 V DC via Master / 35 mA

### Data Capturing

measuring range see Channel Index

**Actogram** ( internal sensor )

number of channels: 3

**Vocal Fundamental Frequency F0 /**

**Voice Intensity**

recorded via throat microphone

### Step Measuring

determined with step- / foot-sensor,

meas.-principle: resistive sensor

maximum resilience: 100 kg

### Climatic Conditions

acc. to DIN EN 60204-1 ( 10-2014 )

### Ambient Temperature

operation: -20 ... +55 °C

transport / storage: -25 ... +60 °C

### Humidity / Altitude

20 ... 90 % RH (without condensing)

up to 8.000 m

### Dimensions

W / H / D : 46 x 85 x16 mm

weight : 46 g

The HealthLab Measuring Satellite SAT-07.40 is a measurement module of the psycho-physiological monitoring system HealthLab. In the context of measurements with HealthLab the satellite SAT-07.40 acquires measuring data on the voice intensity and the vocal fundamentally frequency by means of a throat microphone. Using a step- / foot-sensor, the step- and tread-duration, as well as the 3-D acceleration of a proband is determined.

### Ordering Information:

### Part No

SAT-07.40 Voice-Satellite:

E1531

(voice frequency /  
acceleration / step)

### Accessories:

MKF-02 Throat Microphone: E1385

Step- / Foot Sensor: AD0068

VSS-03 Candy-Cable: E1816

(SAT-SAT connection cable)

VSMS-10 Connection E1276

Cable Master / Satellite



The measuring satellites of the HealthLab system can be operated at one Heally Master ( e.g. HFM-01 ) simultaneously with up to six ( note the current requirement! ) additional satellites via the serial system bus ( HealthLab Serial Slave Bus ). Using this bus, the Master provides the Satellites with energy and controls the data exchange. An unique address ( 0 ... 26 ) is assigned to each satellite. By default for the SAT-07.40, the Address is '7'. This slave address is factory preset but can be modified by the manufacturer in case of need. The HealthLab system is designed as a mobile, autarkic measurement system, but may as well stationary be used, with a permanent connection to the host computer.

For the usage of the HealthLab system, the software package 'HealthLab' is available. It includes the module 'Heally Control', which enables the user to configure the system as well as to display data and to perform measurements. For complex psycho-physiological experiments further software modules are available.

### Channel Index

Channel-Designation	Channel No. ( Identifier )	Signal	Unit	Measuring Range	Resolution	Sample Rate ( Hz )	Gain ( default )	Offset
ACC_X	139	acceleration sensor - x-axis	g	±2 g	0.0015	4 ... 500	666,5	2048
ACC_Y	140	acceleration sensor - y-axis	g	±2 g	0.0015	4 ... 500	666,5	2048
ACC_Z	141	acceleration sensor - z-axis	g	±2 g	0.0015	4 ... 500	666,5	2048
F0	57	voice fundamental frequency	Hz	68 ... 400 Hz	1	33	1	0
SPINT	58	voice intensity	mV	0 ... 127 mV	1	33	1	0
SPIVAL	127	voice data	mV	-128 ... 127 mV	1	32 ... 4000	50 dB	128
SFDN	59	on-ground time	ms	0 ... 32.000 ms	1	-	1	0
STEP	60	step duration	ms	0 ... 32.000 ms	1	-	1	0



*Note:* The psycho-physiological monitoring system HealthLab is manufactured and delivered in configurations according to customer's request. The HealthLab components are not certified for use in the medical field. Therefore they shall be used solely for research purposes in scientific area.

### Links on further documents:

- Hardware: Master HFM-01 → <https://secure.turboj.de/documents/HFM-01.pdf>
- Software: Heally Control → [https://secure.turboj.de/documents/Heally5\\_en.pdf](https://secure.turboj.de/documents/Heally5_en.pdf)

