

MIR spirotel datasheet

code 9107000 (spiro) – code 9107100 (spiro-BT) – code 9107010 (spiro-GSM)-code 9107110 (spiro-BT-GSM)
code 9107001 (spiro-oxy) – code 9107101 (spiro-BT-oxy) – code 9107011 (spiro-GSM-oxy)-code 9107111 (spiro-BT-GSM-oxy)



Technical specification

Width	74 mm
Length	88 mm
Thickness	38 mm
Weight	151 g (battery pack included)

Turbine



Reusable turbine (code 910006)

Accelerometer	tri axial accelerometer
Power supply	Rechargeable Lithium-Ion 3.7V, 1100 mAh

Current capacity	1100 mAh
Consumption	~20-30 mA (during test)

Backup battery voltage	none
Batteries charger	voltage=5 V DC, current=minimum 500 mA, Connector : micro USB type B compliant with EN 60601-1

Autonomy	50 hours
Connectivity	USB, Bluetooth and GSM
Display	LCD monochrome, 160 × 80 pixel
Keyboard	touchscreen
Mouthpieces	Ø 30 mm (1.18 inch)
Type of electrical protection	Class II device

Safety level for shock hazard Type BF Apparatus

Protection against water penetration IPX1

Conditions of use	Apparatus for continuous use
Conditions of storage	Temperature: MIN -20 °C, MAX + 60 °C Humidity: MIN 10% RH; MAX 95%RH

Operating Conditions	Temperature: MIN + 10 °C, MAX + 40 °C Humidity: MIN 10% RH, MAX 95%RH
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Applied norms	Electrical Safety Standard EN 60601-1 Electro Magnetic Compatibility EN 60601-1-2
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Bluetooth function (on request)

Operating frequency range	2402 – 2480 MHz
Number of antennas	1
Channel spacing	1 MHz
Antenna type	Integrated ceramic chip antenna
Antenna gain	0 dBi

GSM function (on request)

Band	Quad-Band 850/900/1800/1900 MHz
Internal antenna gain	2.42 dBi
Internet protocols	TCP/IP, SSMTP, FTP, HTTP, POP3
Secure connection protocol	SSL

Spirometry

Flow sensor	bi-directional digital turbine
Flow range	±16L/s - Volume accuracy: ±3% or 50mL
Flow accuracy	±5% or 200mL/s
Dynamic resistance	<0.5 cmH ₂ O/L/s
Temperature sensor	semiconductor (0-45°C)
Measured parameters	FVC, FEV1, PEF, FEF 2575
Memory capacity	Up to 10000 tests

Oximetry (on request)

Measurement method	Red and infrared absorption
SpO ₂ range	0-99%
SpO ₂ accuracy	± 2% between 70-99% SpO ₂
Average number of heart beats for the %SpO ₂ calculation	8 beats
Pulse Rate range	30-300 BPM
Pulse Rate resolution	1 BPM
Pulse Rate accuracy	± 2BPM or 2%
Average interval for the calculation of cardiac pulse	8 seconds
Signal quality indication	0 - 8 segments on display
Measured parameters	%SpO ₂ median, BPM median, time analysis, T<89%, steps, ODI, walking distance
Memory capacity	up to 300 hours oximetry

Certificates & Registrations

CE 0476	MED 9826
FDA 510 (k)	K130784
Health Canada	71191 (class II), 75535 (class III)
CND code	Z12150102
GMDN code	46906
Ministry of Health	1128598/R (9107000), 1128603/R (9107001), 1128605/R (9107010), 1128607/R (9107011), 1128610/R (9107100), 1128614/R (9107101), 1128616/R (9107110), 1128619/R (9107111)