CARDIOVIT AT-102 SCM-SP

The redesigned two-in-one EKG

PERFECT 12-LEADS EKG SOLUTION

THE REDESIGNED TWO-IN-ONE EKG DEVICE ENSURES HIGH-QUALITY PERFORMANCE THAT MEETS THE HIGHEST DEMANDS.

The **CARDIOVIT AT-102 SCM SP** is a versatile EKG that offers speed, simplicity, and options that adapt to your practice needs and help you provide the best patient care at an affordable price.

The user interface and intuitive operation increase productivity and efficiency while offering great value for money.

The **CARDIOVIT AT-102 SCM SP** is a **resting EKG** system suitable for routine use in practice, clinic, or emergency medicine due to its intuitive and easy operation with direct function keys.

Built-in with a **A4 thermal printer** for full size print-out EKGs.

All **12 EKG leads** can be displayed in freely selectable sequences of 3, 6, or 12 on its brilliant graphic display. EKG and Spirometry Interpretation including measurements with the printout of the recording.

Take fast EKG readings with the touch of a button and ensure accuracy by following simple on-screen instructions.

The **CARDIOVIT AT-102 SCM SP** is the best choice for primary care, cardiology practices, clinics, schools, and universities due to its excellent quality and reliability.

RESTING EKG & ULTRASONIC SPIROMETER

Upgrade your **CARDIOVIT AT-102 SCM SP EKG** with Ultrasound Spirometry measurements. In the **CARDIOVIT AT-102 SCM**, we have implemented your requests for more flexibility and more efficient work processes in your daily routine. By connecting a **SpiroScout SP** sensor, the **CARDIOVIT AT-102 SCM** transforms into a pulmonary function test device that records and measures airflow into and out of the patient's lungs. This accurate ultrasound technology is **calibration-free**, requires **no warm-up time**, and is **maintenance-free**.

FEATURES

- Intuitive, easy operation with direct function keys.
- 12-leads resting EKG.
- Interpretation.
- Internal memory for up to 40 records.
- Integral full-size thermal quality printer with various user-defined print format options.
- Full-size keyboard and dedicated soft key interface for easy, user-friendly operation.
- Internal SCHILLER Communications module (SCM) is available to transmit resting EKG data in the XML format to a PC or information system.
- Ethernet data transfer to PC for storage of both resting EKG and spirometry recordings in PDF format.

ADVANTAGES OF ULTRASOUND TECHNOLOGY

- The sensor is not in contact with the sample.
- Not influenced by humidity or barometric pressure contamination and calibration-free.
- Maintenance-free.
- Simple and economical consumables.
- Extremely high accuracy for low flows.
- No downtime is needed.

THE FOLLOWING PROGRAMS ARE AVAILABLE:

- Forced Vital Capacity spirometry (**FVC**).
- Slow Vital Capacity spirometry (**SVC**).
- Maximum Voluntary Ventilation (**MVV**).
- Flow-volume and volume-time curves.
- Interpretation programs following **ATS** or **ERS** .

PN 9.070000SCMSP

TECHNICAL DATA

SYSTEM

Dimensions	400 x 330 x 101 mm, approx. 5 kg.
On-screen status indicators	Battery status, date, time, power source.
Control panel and keyboard	User-friendly, alphanumeric keyboard, LED indicator and LCD screen.
Power supply requirements	220–240 V (nominal), 50/60 Hz; 110–115 V (nominal), 50/60 Hz; standalone operation with built-in rechargeable battery; LED indicator for mains operation; integrated power supply unit.
Battery capacity	4 hours of normal use (approx. 300 automatic EKG printouts or 100 spirometry records).
Power consumption	Max. 30 VA.
Line frequency filter	Distortion-free suppression of superimposed 50 or 60 Hz sinusoidal interferences using adaptive digital filtering (SCHILLER Powerline Filter SPF).
Frequency range of digital recording system	0 Hz – 150 Hz (IEC/AHA).
Chart paper	Thermo-reactive, Z-folded, 210 mm wide (A4, 8.5 x 11 inches).
Printing process	High-resolution thermal head printer, 8 dots/mm (amplitude axis), 40 dots/mm (time axis) @ 25 mm/s.
Communications	RS-232 interface to connect spirometry sensor and USB to power it.
Communications	Ethernet (PN 9.070000SCMSP).
Memory	Possibility to save up to 40 Resting EKG or Spirometry measurements.
Environmental conditions	Temperature, operating: 10° to 40°C Temperature, storage: -10° to 50°C Relative humidity: 25 to 95% (no condensation) Pressure during operation: 700 to 1060 hPa.

TECHNICAL DATA FOR EKG

Patient input circuit	Fully floating and isolated, defibrillation-protected (only with original SCHILLER patient cable).
Monitor display	• 3- 6 or 12-channel display of the selected leads. • 25, 50 mm/s. • 5, 10, 20 mm/mV. • Filter status (on/off). • Insufficient electrode contact Heart Frequency, HF mm/ mV, mm /s.
Leads	12 simultaneous leads: Standard / Cabrera.
Chart printout speed	5/10/25/50 mm/s (manual print)
Sensitivities	5/10/20 mm/mV, either automatically adjusted or manually selected.
Automatic lead programs	6/12-channel presentations of 12 simultaneously recorded standard leads on one or more A4 (8.5 x 11 inches) pages. Numerous printout formats can be selected.
Data record	• Patient data (name, age, height, weight, BP), user ID. • Listing of all EKG recording conditions (date, time, filter). • Measurement program (M): EKG measurements results (intervals, amplitudes, electrical axes), average complexes with measurement reference markings. • Interpretation (C) with adult and pediatric guidance.
Recording track	6/12-channel presentation, optimal positioning on a width of 200 mm, automatic baseline adjustment.
Filter	Myogram filter (muscle tremor filter): 25 Hz or 35 Hz, can be switched on/off (SCHILLER Baseline Stabilizer SBS, SCHILLER Smoothing Filter SSF).
EKG amplifier	• Simultaneous recording of all 9 active electrode signals (=12 leads). • Pacemaker detection: 2 mV/ 0,1 ms.

TECHNICAL DATA

TECHNICAL DATA FOR SPIROMETRY

Measured values	• **FVC:** FVC, FEV0.5, FEV1.0, FEV3.0, FEV0.5/FVC, FEV1,0/FVC, FEV3.0/FVC, FEF0.2-1.2, FEF25-75%, FEF75-85%, PEF, FEF25%, FEF50%, FEF75%, FIVC, FIV1.0, FIV1.0/FIVC, FIV1.0/FVC, PIF, FIF50%, FMFT • **SVC:** SVC, ERV, IRV, TV • **MVV:** MVV, RR, TV.
Presentation possibilities (printout and screen)	Flow/volume graph, Volume/time graph, Table of measured values Real-time flow curve.
Data record	• Patient data (name, age, height, weight), user ID. • Registration conditions (date, time, date of the last calibration) Flow/volume graph and/or volume/time graph. • Table of measured values with PREDICTED/ACTUAL / DIFFERENTIAL values. • Diagnosis guidance.
Prediction equation	• **Adults:** ECCS, Nhanes III, Austria, Crapo, Morris, Knudson, Knudson76, Polgar, Berglund, Finland, India, Composite. • **Children:** Quanjer & Tammeling, Austria, India, Knudson, Knudson76, Polgar.

SAFETY STANDARDS

Safety Standards	IEC/EN 60601-1; UL 60601-1; C22.2 No. 601.1-M90; IEC/EN 60601-2-25; IEC/EN 60601-1-2 (EMC)
Protection Class I	According to IEC/EN 60601-1 (with internal power supply).
Applied Part	CF According to IEC/EN 60601-1.
Conformity	According to Directive 93/42/EEC (Medical Devices).
Classification II	According to Directive 93/92/EEC.

EXTRAPOLATED PREDICTED VALUES

Comparison of PRE/POST medication is possible

Standards Compliance	ATS, OSHA, NIOSH

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