MULTIPARAMETER PATIENT MONITOR

EMCO 4870Z MPM

12.1”

Standard Parameters:
3/5-lead ECG, RESP, SpO2, NIBP,TEMP

Optional Parameters

Key Features

Large Number Display

Dynamic Trend Mode

OxyCRG View

- 12.1” Color TFT Display with maximum 11 waveforms
- **Standard Configuration - 5 Parameters - ECG, SpO_2, NIBP, Respiration, Temperature**
- Upgradeable to $etCO_2$, Dual IBP, Thermal Recorder
- Display of 7-Lead ECG Waveforms in one screen
- Arrhythmia and ST Segment Analysis
- 60 seconds full disclosure waveforms review
- Selectable Layout - Standard Display, Large Number, Dynamice Trend & OxyCRG View
- Offline Trends available - 168 hours, 1500 sets NIBP, 100 Alarm events
- Trends - Graphical/Tabular, Arrhythmia Events & Technical Alarms Review
- Drug Dose Calculation
- Suitable for Adult, Pediatric and Neonate
- Central Monitoring/Network capability through LAN Ethernet
- USB port for saving Offline Memory
- VGA Port for External Display
- Can be used with Electrosurgical Unit (ESU), Defibrillator & Pacemaker simultaneously

Emco Meditek, an ISO9001 & ISO13485 certified company, was formed in the year 1989 with the main objective of manufacturing and marketing of Electronic Medical Equipment.
The equipment are designed and manufactured indigenously with the assistance of technology obtained from leading Medical Equipment manufacturing companies around the world especially USA and UK.

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EMCO MEDITEK® PVT. LTD.

An ISO9001 & ISO13485 Certified Company

EMCO 4870Z MPM

PORTABLE MULTIPARAMETER PATIENT MONITOR

Technical Specifications

Classification
Anti-Electroshock type : Class I / Internal Powered Equip
EMC Type : Class A
Anti-Elecctrock degree : ECG/TEMP/IBP - Type CF
SpO_2 /NIBP/CO_2 - Type BF
Ingress Protection : IPX1
Safety : IEC 60601-1+A1+A2; IEC 60601-1-2+A1

Physical Specification
Device dimension : 304(W) x 279(H) x 150(D) mm
Weight : Standard Configuration 4kg (with Battery)

Display
Type : Color TFT LCD 12.1"
Resolution : 800 x 600 pixels
Traces Displayed : up to 8
Indicators : Power LED, Alarm LED, Charge LED

Working Environment
Ambient Temperature : 0 to +40 °C
Humidity : 15% - 80% Non-Condensing

Storage Environment
Ambient Temperature : -20 to +55°C
Humidity : 10% - 93% Non-Condensing

Power Supply
Input : 100 - 250V AC, 50/60HZ, Pmax=140VA
Battery Backup : > 2 hours
Battery Type : Rechargeable Li-ion 11.1VDC, 4800mAh
Recharging time : 8 hours (90% capacity)

Data Output Ports
USB Port, RJ-45 Ethernet (LAN) Port, SD Card
WLAN Access Point & VGA Output (optional)

SpO_2 & Pulse Rate (ISO9919)
Measurement & Alarm Range : 0 - 100%
Resolution : 1%
Accuracy : ± 2% (70-100%)
PR Measurement & Alarm Range : 20-254 bpm
Resolution : 1 bpm
Accuracy : ± 2 bpm (70-100%)

Respiration
Method : Trans-thoracic impedance (user selectable leads)
RR Measurement range : Adult : 0-120 rpm
Neo/Ped : 0-150 rpm
Resolution : 1 rpm
Accuracy : ± 2 rpm or ± 2% (greater)
Apnea Alarm Threshold : 10 - 40s
Alarm : Yes, audible and Visual Alarm
Sweep Speed : 6.25, 12.5, 25 mm/s

ECG
Lead Type : 5-lead /3-lead selectable
3 leadwire cable : RA; LA; LL or R; L; F
5 leadwire Cable : RA; LA; RL; LL; V or R; L; N; F; C
Lead Selection : 3-lead: I; II; III;
5-lead; I; II; III; aVR; aVL; aVF; V
Gains Selection : x0.25; x0.5; x1; x2; x4; auto
Sweep Speed : 12.5, 25, 50mm/s
ECG HR Range : Adult / Pediatric : 15-300bpm
Neonate : 15-350bpm
Resolution & Accuracy : ± 1bpm or 1% (greater)
Bandwidth : Diagnostic mode : 0.05 -100 Hz
Monitor mode : 0.5 - 40 Hz
Operation mode : 1.0 - 25 Hz
CMRR : > 90 dB
Protection : Withstand 8000VAC/50Hz voltage in isolation against Defibrillation and Electrosurgical interference
ST Segment Detection : Measurement range : -2.0 to +2.0mV
ST Alarm range : -2.0 to +2.0mV
ST Segment Arrhythmia analysis and catergorization
ARR Alarm : Audible and Visual Alarm, Alarm events Recallable
Pacemaker detection and 13 types abnormal status detectable
IEC 60601-2-25; AAMI EC 11/EC 13; IEC 60601-2-27

NIBP (IEC 60601-2-30)
Method : Automatic Oscillometric
Operation modes : Manual/Auto/Stat
Auto measurement time interval : Adjustable
1-5/10/15/30/60/90/120/240/480 Minutes
Measurement types : Systolic, Diastolic, Mean
Measurement Pressure range

Adult	Systolic	40 - 270 mmHg
	Diastolic	10 - 210 mmHg
	Mean	20 - 230 mmHg
Pediatric	Systolic	40 - 200 mmHg
	Diastolic	10 - 150 mmHg
	Mean	20 - 165 mmHg
Neonate	Systolic	40 - 135 mmHg
	Diastolic	10 - 100 mmHg
	Mean	20 - 110 mmHg

Cuff Pressure Range : 0-300 (Adult), 0-150 (Neonate) mmHg
Over-Pressure Protection : Dual Safety Protection
Resolution : 1mmHg
Accuracy : ± 5mmHg (Mean Error)
Alarm : Systolic, Diastolic, Mean
Typical Measuring Period : 25-40 sec

Temperature (2 Channels, 1 Probe by Default)
Measurement & Alarm Range : 0~50 ºC
Resolution : 0.1 ºC
Accuracy : ± 0.1 ºC
Refresh Time : Approx 1 sec
IEC 12470-4

IBP (2 Channels) (IEC 60601-2-34) (Optional)
Labels : ART, PA, CVP, RAP, LAP, ICP
Measurement Rrange : -50 to 400 mmHg
Resolution : 1 mmHg
Accuracy : ± 2% or ±1 mmHg (greater)
Sensitivity : 5 µV/V/mmHg
Impedance range : 300-3000 Ω

Meas. range :	ART	0 ~ 300 mmHg
	PA	-6 ~ 120 mmHg
	CVP/RAP/LAP/ICP	-10 ~ 40 mmHg

$etCO_2$ (Respironics LoFlo Sidestream) (Optional)
Principle of Operation : Non-dispersive Infrared (NDIR), Single Beam, Dual wavelength, no moving parts
Sampling Rate : 50 ± 10 ml/min
Range : 0 to 150 mmHg (0 to 19.7 %Vol, 0 to 20 KPa)

Accuracy :	±2 mmHg	0 to 40mmHg
	±5% of reading	41 to 70 mmHg
	±8% of reading	71 to 100 mmHg
	±10% of reading	101 to 150 mmHg
	±12% of reading	Above 80bpm Respiration

Respiration Range : 2 ~ 150 breaths per minute (bpm)
Resp. Accuracy : ±1 breath
Resp. Resolution : 1 bpm
Calibration : No routine user calibration required

$etCO_2$ (Respironics CapnoStat Mainstream) (Optional)
Principle of Operation : Non-dispersive Infrared (NDIR), Single Beam, Dual wavelength, no moving parts
Range : 0 to 150 mmHg (0 to 19.7 %Vol, 0 to 20 KPa)

Accuracy :	±2 mmHg	0 to 40mmHg
	±5% of reading	41 to 70 mmHg
	±8% of reading	71 to 100 mmHg
	±10% of reading	101 to 150 mmHg

Respiration Range : 2 ~ 150 breaths per minute (bpm)
Resp. Accuracy : ±1 breath
Resp. Resolution : 1 bpm
Calibration : No routine user calibration required. An airway adapter zero is required when changing to a different style of airway adapter.

Recorder (Optional)
Built-in, direct thermal pixel array recorder
Up to 7 channels printing
Print Speed : 25mm/s
Paper width : 112 mm

Specifications subject to change without prior notice.

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