progetti
Medical Equipment Solutions

PG M80

Advanced Modular Patient Monitor

- 17" anti-glare TFT LCD display, high resolution
- Clinical information available from hospital network
- Fanless cooling – down system working quietly
- Various parameters modules assembled on demand for easy upgrade
- Touch screen (option)
- Standard touch button, supporting mouse and keyboard
- SD card for historical patient data

EMERGENCY MOBILE SERVER

- EMS module configurable with 8 kinds of options
- Multi-measurement server with compact design
- 3.5" color TFT LCD display
- Monitoring during patient transfer
- Patient's data transfer automatically when connected to PG M60 / PG M80 monitor
- Operating time ≥ 60 minutes

MONITOR

PG M80

TECHNICAL SPECIFICATIONS

Size and Weight
Size: 434mmx89mmx206mm
Weight: ≤11kg
Standard module slot: 4
Additional module rack slot: 1
Power supply
Power voltage: AC 100-240V 50/60Hz
Power input: ≤150VA
Input current: 1.7 ~ 0.8A
Safety class: cat. I
Display
17" Color Anti-glare TFT LCD
Resolution: 1280x1024 pixels
Battery (Option)
Type: rechargeable Lithium battery, 11.1V/4.0Ah
Operating time under the normal use and full charge:
≥60minutes (2 batteries for 120minutes)
Recorder (Option)
Method: thermal dot array
Paper width: 50mm (1.97 in)
Paper length: 15m
Paper speed: 12.5/25/50 (mm/sec)
Traces: maximum 3 tracks
Recording way: real-time recording, periodic recording, alarm recording
Alarm
Level: low, medium and high
Indication: auditory and visual
Patient physiological alarm light color: yellow & red
Equipment technical alarm light color: blue
Supports pitch tone and multi-level volume
Supports custom arrhythmia tone
Input device
Touch screen: option
Touch button: standard configuration
Knob: standard configuration
Mouse input: support by USB port
Keyboard: support by USB port
System output & extensible interfaces
Ethernet Network: 2 standard RJ45 socket
Defibrillation Output: 1 RJ11 socket
Nurse call: 1 BNC socket
Video output: 1 DVI port, 1 VGA port
USB 1.1 port: 6
Auxiliary module rack connector: 1
SD memory card: 2G (standard configuration)
Analog Output (ECG or IBP): option
Trend and reviewing:
Trend: 168 hours
NIBP measurement reviewing: 1000 groups
ARR event: 128 groups of ARR event and the associated waveform
Alarm events: 128 groups of parameter alarm evens and associated parameter waveform at the alarm moment
Holographic waveform: the storage time depends on the stored waveform and the quality of them
Environment
Operating temperature: 0 ~ +40°C
Storage temperature: -20°C to +50°C
Operating humidity: 15% to 85% (non condensing)
Storage humidity: 10% to 93% (non condensing)
Operating atmospheric pressure: 860hPa to 1060hPa
Storage atmospheric pressure: 500hPa to 1060hPa
Safety
IEC60601-1 approved, CE marking according to MDD93/42/EEC
EMS and Module Performance:
ECG (option)
Lead mode: 3-leads ECG input; 5-leads ECG input; 12-leads ECG input
Lead selection: I, II, III - I, II, III, aVR, aVL, aVF, V1 - I, II, III, aVR, aVL, aVF, V1~ V6 (option)
Gain: 2.5mm/mV(x0.25), 5mm/mV(x0.5), 10mm/mV(x1); 20mm/mV(x2), 40mm/mV(x4), Auto
CMRR: monitor mode ≥105dB; surgery mode ≥105dB; diagnostic mode ≥90dB
Frequency response (-3dB): monitor mode 0.5~40Hz; surgery mode 1~25Hz; diagnostic mode 0.05~150Hz
Input impedance: ≥5.0 MΩ
ECG signal range: ± 10.0 mV
Electrode offset potential: ±500 mV
Patient leakage current: <10 uA
Standardizing signal: 1 mV ± 5%
Baseline recovery: <5s after Defibrillation. (Mon or Surg mode)
Indication of electrode separation: every electrode (exclusive of RL)
Protection: breakdown voltage 4000VAC 50/60Hz, defibrillator proof
Sweep speed: 12.5mm/s, 25mm/s, 50mm/s
HR
Range: Adult 10~300 bpm; Pediatric & Neonate: 10~350 bpm
Refreshing time: ≤50 bpm per 2 pulses; 50~120 bpm per4 pulses; ≥120 bpm per 6 pulses
Resolution: 1 bpm
Accuracy: ±1% or ±1 bpm, whichever is greater
ST Segment
Measurement range: -2.0mV~2.0mV
Accuracy: -0.8mV~0.8mV; ±0.02mV or ±10% whichever is greater. Over ±0.mV unspecified
Resolution: 0.01mV
RESP
Method: thoracic impedance
Lead selected from: I (RA-LA) or II (RA-LL). Default I
Gain: x0.25, x1, x2, x4
Bandwidth: 0.25Hz to 2GHz (-3dB)
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s
Measurement range: 0~150 rpm
Resolution: 1rpm
Accuracy: ±2 rpm or 2% whichever is greater
Delay of apnea alarm: 10s,15s,25s,30s,35s, 40s,45s,50s,,55s,60s
NIBP
Way of measurement: automatic oscillometry
Range of measurement:
Adult: SYS 30~270 mmHg; DIA 10~220 mmHg; MAP 20~235 mmHg
Child: SYS 30~235 mmHg; DIA 10~220 mmHg; MAP 20~225 mmHg
Neonate: SYS 30~135 mmHg; DIA 10~100 mmHg; MAP 20~125 mmHg
Cuff pressure range: 0~300 mmHg
Resolution: 1 mmHg
Pressure accuracy: Static: ±2% or ±3% mmHg whichever is greater
Clinical: ±5% mmHg average error
standard deviation: ≤8 mmHg
Unit: mmHg, kPa
Measurement mode manual: Auto, STAT
Intervals for AUTO measurement time: 1,2,3,4,5,10,15,30,60,90 minutes; 2,4,8,12 hours
STAT mode cycle time: keep 5 minutes, at 5 seconds interval
Overpressure protection: hardware and software double protections
Pulse rate range: 40~240bpm
SpO2 Digital technic (option)
Measurement range: 0~100%
Resolution: 1%
Accuracy: at 70~100%, ±2%; at 0~69% unspecified
PR
Measurement range: 25~255 bpm
Resolution: 1 bpm
Accuracy: ±1% or ±1% bpm, whichever is grater
Nellcor SpO2 (option)
Measurement range: 0~100%
Resolution: 1%
Accuracy: at 70~100%, ±2% (Adult); at 70~100%, ±3% (Neonate); at 70~100%, ±2% (Low perfusion); at 0~69% unspecified
PR
Measurement range: 20~300 bpm
Resolution: 1 bpm
Accuracy: 20 bpm to 250 bpm, ±3 bpm; 251 bpm to 300 bpm unspecified
Masimo SpO2 (option)
Measurement range: 0~100%
Resolution: 1%
Accuracy: at 70~100%, ±2% (adult/pediatric, non motion condition); at 70~100%, ±3% (neonate, non motion condition); at 70~100%, ±2% (Low perfusion, non motion condition); at 0~69% unspecified
Average time: 2-4s, 4-6s, 8s, 10s, 12s, 14s, 16s
PR
Measurement range: 25~240 bpm
Resolution: 1 bpm
Accuracy: ±3 bpm (non-motion condition); ±5 bpm (motion condition)
TEMP
Max channel: 8
Measurement way: thermal resistance way
Measurement range: 0.0°C~50.0°C (32°F~122°F)
Accuracy: ±0.1°C or ±1°F (exclusive of probe)
Resolution: 0.1°C or 1°F
Unit: Celsius (°C), Fahrenheit (°F)
Connecting cable: compatible with YSI-400 serial
IBP (option)
Max channel: 8
Measurement way: directly invasive pressure
Sensitivity of transducer: 5uV/V/ mmHg
Impedance of transducer: 300 to 3000 Ω
Measurement range: -50~350 mmHg
Resolution: 1 mmHg
Unit: mmHg, kPa, cmH2O
Accuracy:
Static: ± 1mmHg or ±2%, whichever is greater (exclusive of transducer)
± 4mmHg or ±4%, whichever is greater (inclusive of transducer)
Dynamic: ± 4mmHg or 4% whichever is grater
Transducer sites: Arterial pressure (ART); Pulmonary artery pressure (PA); Left atrium pressure (LAP); Right atrium pressure (RAP); Central venous pressure (CVP); Intracranial pressure (ICP); P1/P2
Selection of measurement range:
ART: 0 ~ +350mmHg
PA: -10 ~ +120mmHg
CVP/RAP/LAP/ICP: -10 ~ +120mmHg
P1/P2: -50 ~ +350mmHg
EtCo2 Sidestream (option)
Measure method: infrared spectrum
Measurement range: 0.0~13.1% (0~99.6 mmHg)
Resolution: 1mmHg
Unit: %, mmHg, kPa
Accuracy: 0% to 4.9%, ±0.3% (±2.0mmHg)
5.0% to 13.1%, < ±10% of the reading
Measurement range of awRR: 3~150 rpm
Calibration: offset calibration: auto, manual, gain calibration
EtCo2 Mainstream (option)
Measure method: infrared spectrum
Warm up time: Capnogram displayed in less than 15 seconds. at an ambient temperature of 25°C, full specification within 2 minutes.
Measurement range: 0~19.7% (0~150 mmHg)
Resolution: 1 mmHg
Rise time: (10l/mm): ≤60 ms
Unit: %, mmHg, kPa
CO2 Accuracy: 0 – 40 mmHg, ±2 mmHg; 41 – 70 mmHg, ±5% of reading; 71 – 100 mmHg, ±8% of reading; 101 – 150 mmHg, ±10% of reading
(at 760mmHg, ambient temperature of 35°C)
awRR measurement range: 0~150 rpm
awRR measurement accuracy: ±1 rpm
EtCO2 Microstream (option)
Measure method: infrared spectrum
Warm up time: Capnogram displayed in less than 20 seconds. at an ambient temperature of 25°C, full specification within 2 minutes.
Measurement range: 0~19.7% (0~150 mmHg)
Resolution: 1 mmHg
Unit: %, mmHg, kPa
CO2 Accuracy: 0 – 40 mmHg, ±2 mmHg; 41 – 70 mmHg, ±5% of reading; 71 – 100 mmHg, ±8% of reading; 101 – 150 mmHg, ±10% of reading
(at 760mmHg, ambient temperature of 25°C)
(when RR>80 rpm, all the range is ±12% of reading)
CO2 response time: <3s
awRR measurement range: 2~150 rpm
awRR measurement accuracy: ±1 rpm
Sample flow rate: 50ml/min ± 10 ml/min
Anesthetic Gas (option)
Measure method: infrared spectrum
Measure mode: mainstream
Fi and Et values: CO2, N2O, O2, AG (HAL, ENF, SEV, DES)
Resolution: 1%
Unit: %
Calibration: room air calibration performed automatically when; charging airway adapter (<5 sec)
Warm-up time: <10s full accuracy within 1 min
Measurement and alarm range of AG

Gas	Range	Accuracy
CO2	0-10%	± (0.3% ABS+4% REL)
N2O	0-100%	± (2% ABS+8% REL)
O	10-100%	± (2% ABS+2% REL)
HAL,ISO,ENF	0-5%	± (0.15% ABS+10% REL)
SEV	0-8%	± (0.15% ABS+10% REL)
DES	0-18%	± (0.15% ABS+10% REL)

awRR measurement range: 0~150 rpm
awRR measurement accuracy: ±1 rpm
Rise time: (flowing speed 10l/min) CO2 ≤ 90ms; O2 ≤ 300ms; N2O ≤ 300ms; HAL, ISO, ENF SEV, DES ≤ 300ms
Total system response time: <1 seconds
Noninvasive Cardio Output (ICG) (option)
Method: measurement of thoracic electrical bio impedance
Measurement range: HR 40 ~ 250 bpm; SV 5 ~ 250 m/l; SI 2 ~ 125ml/m2; CO 1.4 ~ 15 l/min; TFC 15 ~ 143 KΩ
Accuracy: HR ±2bpm; SV unspecified; CO unspecified
Alarm range: CI 0.0l/min/m2 to 15.0l/min/m2 continuously adjustable TFC 10/KΩ to 150/KΩ continuously adjustable

STANDARD CONFIGURATION

Main unit: 17" anti glare TFT LCD display
4 standard module slot
1 additional module rack slot (for EMS all-in-one module)
13 touch buttons
2 RJ45 Ethernet socket
1 defibrillation output
1 nurse call socket
1 DVI port
1 VGA port
6 USB 1.1 port
1 auxiliary module rack connector
2G SD memory card

progetti
Medical Equipment Solutions

PROGETTI S.r.l.
Strada del Rondello, 5
10028 Trofarello (Torino) - Italy
Ph. +39 011 644 738
Fax +39 011 645 822
info@progettimedical.com
www.progettimedical.com

ISO 13485:2016 CERTIFICATION

ISO 9001 BUREAU VERITAS Certification

Quality system ISO certified

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