

DRE Spectra AG5

Vital Signs Monitor

Equipment for the way *you* operate.



► A Quick Look

- Large, electroluminescent, high-definition, flat panel display
- Up to 10-channel selectable waveform display
- Easy-to-follow menu
- Programmable audible and visual alarm limits
- Built-in recorder
- Up to 96 hours of trend information
- 5 minutes of real-time waveform history for onscreen review
- Memory/Recall: digital readouts of up to 250 patient readings
- Adult to neonate usage
- AC/DC operation
- 2-hour battery backup
- Lifetime software updates
- Warranty: 2 years parts and labor
- Impedence respiration
- Standard with ECG, EtCO₂, N₂O, oxygen saturation, NIBP, temperature, respiration, and anesthetic agents.
- Optional FIO₂ and two invasive pressures

The DRE Spectra AG5. Two monitors in one.

DRE introduces the multi-purpose Spectra AG5. It combines all the features of a multiparameter patient monitor with the added benefits of an anesthetic agent monitor. It has a large, high definition (12.2" diagonally) color flat panel display, and is available with the following configurations:

- Base unit
- Strip-chart recorder
- ECG
- SpO₂
- NIBP
- CO₂
- Temp standard
- IP 2/Temp

Mechanical Description

- Size 12" (H) x 7" (D) x 14" (W)
(25.4 cm x 13.3 cm x 31.7 cm)
- Weight 16 lbs/18lbs with full options

Power Requirements

- Operation AC/DC
- Internal Battery 2x6 V 3.3 AH sealed lead-acid
- Battery 2 hours
- Battery Charge Time 16-20 hours
- AC Mains Input Universal switching power supply hospital grade plug, 100-250 V /50-60Hz, 16 VDC / 2.8 A output, UL, CSA, GS

General Features

- Freeze Buffer 5 minutes
- Trends 6 minutes to 96 hours
- Alarms Audio & Visual, User adjustable upper and lower alarm limits
- Alarm Frequency Low alarm - 2.0-2.4 KHz
High alarm - 3.0-3.4 KHz

ECG

- CMRR 100 dB @ 60 Hz
- Heart Rate Range 30-240 bpm
- Heart Rate Averaging 4 beat average
- Heart Rate Accuracy ± 5 bpm or 10% whichever is greater
- Response Time of Heart Rate Meter for a Step 80-40 bpm less than 7 sec
- Change in Heart Rate 80-120 bpm less than 11 sec
- Pacemaker Pulse Amp: ± 2 mV to ± 700 mV
- Rejection Duration: 0.1 ms to 2.0 ms
- Input 5-lead ECG/respiration patient cable with no series resistance I, II, III (standard configuration)
- Lead Selection 1 mV software generated
- ECG Reference Signal 5000 VRMS 60 seconds 60 Hz
- Patient Isolation
- Leakage Current
 - a) Internal to Ground < 0.01 mA (< 10 mA)
 - b) Enclosure < 0.01 mA (< 10 mA)
 - c) Leads-Off Sensing Current AC current < 0.01 mA (< 100 mA)
DC current < 0.01 mA (< 10 mA)
- Frequency Response/Band Width 0.5-40 Hz (\pm dB)
- Patient Drive Current < 10 mA
- Maximum T Wave Rejection Capability 120% of QRS segment
- Defibrillator & ESIS Protected Tested with 5 kV
- Recovery Time Following Defib. Within 8 seconds
- Lead Fault Alarm Audible, visual
- QRS Indicator Audible: user volume control
Asystole: audible and visual
- Gain Selection 0.2 mV, 0.5 mV, 1 mV, 2 mV, 5 mV
- Aspect Ratio 0.24, 0.4, 0.6, ± 0.8 sec/mV
- ECG Input Impedance > 2.5 M Ohm

ETCO₂

- Type Side stream, non dispersive infrared
- Method CO₂ sample line with nasal cannula or endotracheal tube connector

Invasive Pressure

- Channels Two
- Measurement Range -30 to +300 mmHg
(-4.0 to +40.0 kPa)
- Gain Accuracy $\pm 1\%$ or ± 2 mmHg, whichever is greater (± 0.27 kPa)

- Analysis Values Max., min., and mean pressure
Pulse rate from arterial waveforms
- Heart Rate Range 10-250 bpm
- Heart Rate Accuracy $\pm 1\%$ or ± 5 bpm
- Transducer Sensitivity 5mV/V/mmHg
- Transducer Excitation 5V DC
- Transducer Zero Adjust ± 150 mmHg (± 19.99 kPa)
- Display Digital waveform display with semiautomatic and manual pressure range scaling, trend display of pressure waveforms Under Selectable Pressure Channel Label IPI (2), ART1 (2), AO1 (2), RA1 (2), FA1 (2), CVP1 (2), PA (2)

Non-Invasive Blood Pressure

- Method Automatic oscillometric
- Parameters Measured Systolic, diastolic, mean arterial pressure, pulse mmHg or kPa
- Scale Manual, Automatic, Stat
- Operating Modes 10-50 sec., 1-99 minutes
- Repeat Cycles 1-4 minutes (STAT mode)
- Rapid Cycle Update

Measurement Range

- Systolic: Adult/pediatric 30-250 mmHg (4.0-33.3kPa)
Neonate 20-160 mmHg (2.7-21.3kPa)
- Diastolic: Adult/pediatric 10-180 mmHg (1.3-24.0kPa)
Neonate 10-140 mmHg (1.3-18.7kPa)
- Measurement Time Typical 50 sec. Max. 120 sec.
Typical Stat 30 sec.

- Cuff Inflation Rate Not greater than 40-50 mmHg/sec (5.33-6.66 kPa/sec)

- Cuff Inflation Pressure 30 mmHg above last systolic (4.0kPa)

Cuff Pressure Range

- Adult/pediatric 0-250 mmHg (0-33.3 kPa)
- Neonate 0-140 mmHg (0-18.7 kPa)

Initial Cuff Inflation

- Adult/pediatric 170 \pm 10 mmHg (22.7 \pm 1.3 kPa)
- Neonate 120 \pm 10 mmHg (16 \pm 1.3 kPa)

Auto Deflate Pressure

- Adult/pediatric 280 \pm 5 mmHg (36.7-38 kPa)
- Neonate 235 \pm 5mmHg (30.7-32.0 kPa)

NIBP Display Accuracy

NIBP Alarm Limits

- Systolic: Upper 0-255 mmHg (0-34.0 kPa)
Lower 0-254 mmHg (0-33.9 kPa)
- Diastolic: Upper 0-255 mmHg (0-34.0 kPa)
Lower 0-254 mmHg (0-33.9 kPa)
- Mean: Upper 0-255 mmHg (0-34.0 kPa)
Lower 0-254 mmHg (0-33.9 kPa)

Temperature

- Temp Scale °F or °C
- Temp Range 82.4-109.8°F (28.0-43.2°C)
- Temp Accuracy $\pm 0.2^\circ$ F ($\pm 0.1^\circ$ C)
- DTemp Range 0-27°F (0-15°C)
- Temp Alarm Limits Upper 83.0-110.0°F (28.3-43.3°C)
Lower 83.0-109.9°F (28.3-43.2°C)

Recorder

- Type Built-in multi-channel thermal array recorder
- Dot Density 203 DPI
- Paper Width 58 mm
- Printing Width 48 mm
- Speed 25 mm/sec