

| CLASSIFICATION | |
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| Safety | Based on IEC 60601-1, Class I, Type CF for all modules (except multi-gas & NIBP module that are BF) |
| Usage | Continues Operation Equipment |
| Harmful Liquid Proof Degree | Ordinary Equipment, (without Liquid Proof) |
| DISPLAY | |
| Displaying | TFT COLOR 800 ´ 600, 12” |
| Waveforms | ECG,Spo2,RESP/GAS, IBP, EEG (All Freezable) |
| Sweep Speed | 12.5, 25, 50 mm/sec |
| Numeric Parameters | HR, PVCs, ST, SPO2, Pulse Rate, RR, T1, T2, DT, Co2 (EtCo2, FiCo2, AWRR), NIBP (SYS, DIA, MAP), IBP1 (SYS,DIA,MAP), IBP2 (SYS,DIA,MAP), IBP3 (SYS,DIA,MAP), IBP4 (SYS,DIA,MAP), Alarm Limits, GAS (EtO2, FiO2, EtN2O,FiN2O, EtAA, FiAA), CSM (CSI%, BS%, SQI%, EMG%) |
| Operation Method | Membrane and rotary knob |
| ECG | |
| Leads | 3/5/12 Leads |
| Dynamic Range | ± 5 mV |
| Leakage Current | < 10 µA |
| Lead Off Current | < 90 nA |
| Gain | 4, 2, 1, 1/2, 1/4, Auto |
| Calibration | 1mV, 0.5 sec |
| Filters | “MONITOR” (0.5 – 28 Hz) |
| | “NORMAL” (0.5 – 40 Hz) |
| | “EXTENDED” (0.05 – 100 Hz) |
| CMRR | > 98 dB |
| Internal Noise | < 30 µV RTI |
| Input Impedance | > 5 Mohm |
| QRS Detection | Duration: 40 to 120 msec |
| | Amplitude: 0.5 to 5 mV for Adult |

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| | 0.2 to 5 mV for Neonate |
| Heart Rate Range | 15 – 300 bpm for Adult 15 – 350 bpm for Neonate |
| Accuracy | ± 1% or 2 bmp |
| Tall T-Wave | Reject up to 1.2 mV Amp. |
| Pace Detection / Rejection | Duration: 0.1 – 2 msec |
| | Amp: ± 2 to ± 700 mV (Without over/undershoot) |
| | Reject From Heart Rate Counter |
| | Re-insert into ECG to display on screen |
| Protection | Defibrillator and Electro surgery |
| Standards | ANSI/AAMI EC-13 |
| Arrhythmia Analysis | |
| Type | ASYS, VFIB, VTAC, RUN, AIVR, COUPLET, BIGEMINY, TRIGEMINY, TACHY, BRADY, AFIB, PAUS, FREQUENT PVCs |
| Learning | Rapid Learning: only 20 Seconds Required for Recognition of Dominant Rhythm |
| Method | Real Time Arrhythmia Detection with Innovative Feature. |
| Memory | Capability of storing the latest 80 ARR event. (waveform and Parameters) |
| ST Analysis | |
| Display resolution: | 0.01 mV |
| Measurement Rang | -2mV to +2mV |
| Alarm Range: | -2mV to +2mV |
| Features: | User Adjustable Isoelectric and ST Point Trending of ST Values |
| Update period: | 5 Sec. |
| SPO2 (MASIMO Rainbow SET) | |
| Method | 2 Wave Length Pulse Wave Type |
| Range | Spo2 0 – 100% SpMet 0 – 99.9% SpCo 0 – 99% SpHb 0 – 25 g/dl SpOC 0 – 35 ml/dl PR 25 – 240 bmp |

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| | PI 0.02 – 20% PVI 0 – 100% |
| Accuracy | Oxygen saturation During no motion conditions: Adult: ±3% (SPO2 60 ~ 80%) ±2% (SPO2 70 ~ 100%) Neonate: 3% (SPO2 70 ~ 100%) During motion conditions: ±3% (SPO2 70 ~ 100%) During low perfusion conditions: ±2% (SPO2 70 ~ 100%) Pulse Rate During no motion conditions: ±3 bpm During motion conditions: ±5 bpm During low perfusion conditions: ±3 bpm Carboxyhemoglobin Saturation: Adult: 1% – 40% ±3% Methemoglobin Saturation 1% – 15% ±1% Total Hemoglobin Adult: 8 – 17 g/dL ±1g/dL |
| NIBP | |
| Measurement method | Oscillometric |
| Measurement mode | Manual/Automatic(intervals between 1min-24hour) / STAT |
| Measurement time | 20-25 sec (excluding cuff pressurization time) |
| Measurement Range | Adult: SYS 30 ~ 255 mmHg |
| | DIA 15 ~ 220 mmHg |
| | MAP 20 ~ 235 mmHg |
| | Neonate: SYS 30 ~ 135 mmHg |
| | DIA 15 ~ 110 mmHg |
| | MAP 20 ~ 125 mmHg |
| Pressure Transducer accuracy | ±3 mmHg full range |
| Initial Inflation Target | Adult 150 mmHg , Neonate 85 mmHg |
| Overall System Efficacy | ANSI/AAMI SP-10/2002 |
| Memory | 500 Records |
| IBP (optional) | |

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| Channel | 2 Channels (Up to 4) |
| Measurement Range | SYS -50 ~ 300 mmHg |
| | DIA -50 ~ 300 mmHg |
| | MAP -50 ~ 300 mmHg |
| Pressure sensor sensitivity | 5 μV / V / mmHg |
| Pressure sensor Impedance | 300-2500 ohm |
| Resolution | 1 mmHg |
| Accuracy | 1 % or 1mmHg (every one which is more)Excluded Transducer |
| Alarm Range | 20-300 mmHg |
| Filters | Adjustable 8, 16, 22 Hz |

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| CO2 Main Stream (Optional) | |
| Method | Infra-red absorption |
| Measuring Parameters | EtCo2, FiCo2, AWRR |
| Measuring range | Co2 0 – 15% AWRR 0-150 BrPM |
| Accuracy | Co2 \pm (0.2v% + 2% of reading) AWRR \pm 1BrPM |
| CO2 side- Stream (Optional) | |
| Method | Infra-red absorption |
| Measuring Parameters | EtCo2, FiCo2, AWRR |
| Measuring range | Co2 0 – 15% AWRR 0-150 BrPM |
| Accuracy | Co2 \pm(0.2 V% + 2% of reading) AWRR \pm 1BrPM |
| Multi gas Main Stream (Optional) | |
| Method | Infra-red absorption |

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| Oxygen sensor type | Ultrafast response time galvanic oxygen sensor. |
| Measuring Parameters | CO2,O2,N2O, 5 Anesthesia Agent(HAL,ISO,ENF,SEV,DES), AWRR |
| Measuring range, Accuracy | CO2 0–10% ±(0.2 V% + 2% of reading) 10–15% ±(0.3 V% + 2% of reading) NO2 0-100% ±(0.2 V% + 2% of reading) HAL, ISO, ENF 0-8% ±(0.15 V% + 5% of reading) SEV 0-10% ±(0.15 V% + 5% of reading) DES 0-22% ±(0.15 V% + 5% of reading) O2 0-100% ±(1 V% + 2% of reading) AWRR 0-150BrPM ±1BrPM |
| Multi gas side- Stream (Optional) | |
| Method | Infra-red absorption |
| Oxygen sensor type | Ultrafast response time galvanic oxygen sensor. |
| Measuring Parameters | CO2,O2,N2O, 5 Anesthesia Agent(HAL,ISO,ENF,SEV,DES), AWRR |
| Measuring range, Accuracy | CO2 0–15% ±(0.2 V% + 2% of reading) NO2 0-100% ±(0.2 V% + 2% of reading) HAL, ISO, ENF 0-8% ±(0.15 V% + 5% of reading) SEV 0-10% ±(0.15 V% + 5% of reading) DES 0-22% ±(0.15 V% + 5% of reading) O2 0-100% ±(1 V% + 2% of reading) AWRR 0-150BrPM ±1BrPM |
| Cerebral State Monitor (optional) | |
| Function | Measure the direct effect of anesthesia and sedative drugs on brain |
| Measuring parameters | CSI%, BS%, SQI%, EMG (Bar) |
| Waveform | EEG |
| connection | Wireless |
| RESPIRATION | |
| Method | Impedance |
| Base Resistance | 250 – 1250 Ohm |
| Dynamic Range | 0.2 – 2 Ohm |
| Breath Rate Range | 6 – 150 BrPM |

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| TEMPERATURE | |
| Probe Type | YSI 400 Compatible |
| Range | 0 – 50 °C |
| Accuracy | ± 0.2 °C |
| ALARM | |
| Sources | Error messages, all other Parameter Limits |
| Alarm On / Off | Selectable for All Parameters |
| Alert | Blinking on Display, |
| | Volume Selectable Audio Alarms, Light indicator |
| TREND | |
| Sources | HR,PVCs,ST,SPO2, RR, T1, T2, IBP1(SYS,DIA,MAP) , IBP2(SYS,DIA,MAP) , IBP3(SYS,DIA,MAP) , IBP4(SYS,DIA,MAP) , EtCo2,FiCo2,AWRR, EtO2, FiO2 , EtN20,FiN2O,,EtAA,FiAA(ISO, DES ,ENF , HAL ,SEV) |
| Trend Time | 15, 30, 45 Min, 1, 2, 4, 8, 12, 16, 24,36, 48, 72, 96 Hours |
| Resolution | 1 sec |
| INPUT/OUTPUT | |
| Network | Digital, Serial, RS422, Full Duplex |
| Connection | Up to16 BEDs to one CENTRAL |
| GENERAL | |
| Safety | Based on IEC 60601-1 |
| Protection | Against Electro surgery and Defibrillator |
| AC Power | 90 – 240 VAC, 50/60 Hz |
| Internal Battery | Sealed Lead Acid, Rechargeable, 12 V, 3.3 AH Charge Time: 16 Hours Usage: More than 1 Hour (Full charge) |
| DC Power Plug | 12 – 14V – 3A / (6A with recorder) |
| Dimension (cm) | 32 (W) ´ 30 (H) ´ 19 (D) |
| Weight | 6 Kg (approximately) |
| RECORDER (Optional) | |

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| Model | SAADAT Thermal Printer |
| Printing Speed | 6, 12.5, 25, 50 mm/sec |
| Paper | 58 mm by 100 foot roll |
| ENVIRONMENTAL | |
| Temperature | Operating : 5 to 40°C (For Gas Module: 10 to 35°C) Storage : -20 to 60°C (For Gas Module: -20 to 50°C) |
| Humidity | 20-90% (Non condensing) |
| Altitude | -200 to 3000m |