



TS18

Patient Monitor

INTRODUCTION

The monitor is applicable for clinical monitoring in operating room, postoperative observation room, ICU/CCU ward, emergency room, etc., of adult, pediatric and neonate. The patient's vital parameters (ECG (including ST-segment measurement and arrhythmia analysis), RESP, SpO2, PR, NIBP, TEMP, IBP, ICP and CO2, etc.) can be monitored information can be displayed, reviewed, printed and stored.

Function

- 17.3" high-definition touch screen design, easy and convenient to operate, elegant and concise in appearance.
- Independent physiological and technical alarm function, convenient for medical staff to quickly know patient's condition.
- Luminous "ON/OFF" button design, convenient to operate at night.
- Modular design: the modules can be configured and combined flexibly and conveniently, expanded and upgraded at any time, meets the monitoring requirements of different departments on different parameters.
- Support dynamic hot-plugging parameter module: no need to restart the device, plug-and-play, change the monitoring parameters at any time as clinical requirements.
- Adopt high-performance processor, stable, reliable and fast to process information.
- Patient information can be rapidly entered, patient type (adult, neonate, pediatric) can be quickly switched, meets the requirements of different departments.
- Abundant analysis functions: 23 arrhythmia, full-lead ST-segment and pacing analysis; multiple calculation functions (such as calculation of drug concentration, titration table, hemodynamics, ventilation, oxygenation, renal function, etc.).
- With the functions of waveform freezing, holographic waveform storage and review.
- Automatic data storage in case of power failure, optional built-in memory card, achieves large-capacity data storage.
- With HDMI expansion interface, the display screen can be connected according to clinical requirements.
- Built-in large-capacity detachable lithium battery, ensures uninterrupted monitoring.
- Fanless design, ensures no noise and low power consumption during working.
- 3 channel built in recorder used to print real time waveform is optional.
- Connect to Central Monitoring System developed by our company by WiFi / Wired, convenient to transmit patient's real-time data.
- Standby mode, be applied to ICU, avoids affecting patient's rest, one button switching, reduces the workload of medical staff.

Performance

ECG

- Lead type:
 - 3-lead: I, II, III (Option)
 - 5-lead: I, II, III, aVR, aVL, aVF, V (Standard)
 - 12-lead: I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6 (Option)
- Gain: 2.5 mm/mV, 5.0 mm/mV, 10 mm/mV, 20 mm/mV

- Measurement and alarm range: -2.0 mV - 2.0 mV
- Accuracy: -0.8 - +0.8 mV: ± 0.04 mV or $\pm 10\%$, whichever is greater; Other range: unspecified

Arrhythmia analysis: 23 kinds

Pacemaker: yes

RESP

- Measurement mode: R-F (RA-LL) impedance
- Respiration rate:
 - Measurement range:
 - Adult: 0 rpm - 120 rpm
 - Pediatric/neonate: 0 rpm - 150 rpm
 - Resolution: 1 rpm
 - Accuracy: 7-150 rpm, ± 2 rpm or $\pm 2\%$, whichever is greater; 0-6 rpm, unspecified
- Apnea alarm: 10-120 s, not alarm
- Scan speed: 6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s

NIBP

- Measurement mode: Oscillometry
- Working mode: Manual/AUTO/Continuous
- Measurement interval in AUTO mode: 1 min, 2 min, 2.5 min, 3 min, 5 min, 10 min, 15 min, 20 min, 30 min, 1 h, 1.5 h, 2 h, 3 h, 4 h, 8 h
- Measurement period in Continuous mode: 5 minutes
- Measurement and alarm range: 10-270 mmHg
- Resolution: 1 mmHg
- Cuff pressure accuracy: ± 3 mmHg
- Measurement accuracy:
 - Maximal mean deviation: ± 5 mmHg
 - Maximal standard deviation: 8 mmHg
- Over pressure protection:
 - Adult mode: 297 ± 3 mmHg
 - Pediatric mode: 240 ± 3 mmHg
 - Neonatal mode: 147 ± 3 mmHg

- Upper limit of alarm: upper limit 2-240 bpm; Lower limit of alarm: 25 bpm - lower limit +2 bpm

CO2

- Measurement mode: sidestream (Standard), mainstream (Option)
- CO2 measurement range: 0-150 mmHg
- CO2 resolution: 0.1 mmHg: 0-69 mmHg; 0.25 mmHg: 70-150 mmHg
- Accuracy:
 - 0-40 mmHg: ± 2 mmHg
 - 41-70 mmHg: $\pm 5\%$
 - 71-100 mmHg: $\pm 8\%$
 - 101-150 mmHg: $\pm 10\%$

- Scan speed: 12.5 mm/s, 25 mm/s, 50 mm/s

HR

- Measurement and alarm range:
 - Adult: 15-300 bpm
 - Pediatric/neonate: 15-350 bpm
- Resolution: 1 bpm
- Accuracy: $\pm 1\%$ or 1 bpm, whichever is greater

ST-segment detection

TEMP

- Channel: single channel (Standard), dual-channel (Option)
- Measurement range: 0-50 °C
- Resolution: 0.1 °C
- Accuracy: ± 0.2 °C

CONTEC SpO2

- Measurement range: 0%-100%
- Resolution: 1%
- Accuracy: 70%-100%: $\pm 2\%$; 0%-69%: unspecified
- PR:
 - Measurement and alarm range: 25-250 bpm
 - Accuracy: ± 2 bpm or $\pm 2\%$, whichever is greater

Nellcor SpO2 (Option)

- Measurement range: 1%-100%
- Measurement accuracy: 70%-100%: $\pm 2\%$ (adult/pediatric); 70%-100%: $\pm 3\%$ (neonate); 0%-50%: unspecified
- Nellcor PR:
 - Measurement range: 20-300 bpm;
 - Measurement accuracy: 20-250 bpm, ± 3 bpm; 251-300 bpm: unspecified
 - Upper limit of alarm: upper limit 2-300 bpm; Lower limit of alarm: 20 bpm - lower limit +2 bpm

Masimo SpO2 (Option)

- Measurement range: 1%-100%
- Measurement accuracy:
 - 70%-100%: $\pm 2\%$ (adult/pediatric, under conditions of no motion); $\pm 3\%$ (under conditions of motion)
 - 70%-100%: $\pm 3\%$ (neonate, under conditions of no motion)
 - 1%-69%: unspecified
- Masimo PR:
 - Measurement range: 25-240 bpm
 - Measurement accuracy: ± 3 bpm (under conditions of no motion); ± 5 bpm (under conditions of motion)

- AWRR measurement range: Sidestream: 2-120 rpm; Mainstream: 2-150 rpm

- AWRR accuracy: ± 2 rpm

- Apnea alarm: yes

IBP

- Channel: 2 channel (Standard), 4 channel (Option)
- Label: ART, PA, CVP, RAP, LAP, ICP, P1, P2
- Measurement and alarm range: -50-300 mmHg
- Resolution: 1 mmHg
- Accuracy: $\pm 2\%$ or 1 mmHg, whichever is greater

Power supply: 100-240 V~ 50/60 Hz

Safety class: class I, defibrillation-proof type CF applied part

Waterproof degree: IPX2