

TRUSCOPE[®] elite - A5

12.1" Modulbaserad patientmonitor



Funktioner

- 12.1" pekskärm antireflexbehandlad TFT LCD
- 3/5/7 avledn EKG (option 12 avledad display)
- ST och Arytmianalyser
- Läkemedelsberäkning och OXY CRG mjukvara
- 168 timmars tabellformat, grafiktrender och datalagring
- Extern video (VGA) port
- DIGITALT SpO₂
- Datalagring: SD kort (option)

Option moduluppgraderingar

- ETCO₂ (Mainstream/Sidestream/Microstream)
- Multigas monitorering
- ICG (Cardiac port)
- 12 avledat EKG
- Dubbelt IBP
- Nellcor eller Masimo SpO₂
- Wi-fi modul för trådlös dataöverföring



TRUSCOPE® elite - A5 Technical Data

General

Size and Weight :
 - Size : 350 mm X 340 mm X 207 mm
 - Weight : ≤ 6.5 kg
 - Standard module slot : 4
 - Additional module rack slot : 1

Power supply :
 - Power voltage : AC 100-240V 50/60 Hz
 - Power input : ≤ 150 VA
 - Input current : 1.7~0.8 A
 - Safety class : Category I

Display :
 - 12.1" Color Anti-glare TFT LCD
 - Resolution : 800 X 600 pixels

System output & Extensible Interfaces :
 - Ethernet network : 1 Standard RJ45 socket
 - Defibrillation output : 1 RJ11 socket
 - Video output : 1 VGA port
 - USB1.1 port : 4
 - SD memory card : 2G (Option)
 - Analog output (ECG or IBP) : (Option)

Battery :
 - Type : Rechargeable lithium battery, 11.1V/4.0AH
 - Operating time under the normal use and full charge : ≥ 60 min.
 (2 batteries for 120 minutes.)

Recorder (Optional) :
 - Method : Thermal dot array
 - Paper width : 50 mm (1.97 in) x 15 mm
 - Paper speed : 12.5 / 25 / 50 (mm/sec)
 - Traces : Maximum 3 channels

Alarm :
 - Level : Low, medium and high
 - Indication : Auditory and visual

Trend and Reviewing :
 - Trend : 168 hours
 - NIBP measurement reviewing : 1000 groups
 - ARR event : 128 groups of ARR events and the associated waveform
 - Alarm event : 128 groups of parameter alarm events and the associated parameter

Environment :
 - Operating temperature : 0~40° C
 - Storage temperature : -20° to +50° C
 - Operating humidity : 15% to 93% (non condensing)

Safety :
 - IEC60601-1 Approved, CE marking according to MDD93/42/EEC

ECG

Lead mode : 3/5-leads ECG input, 12 leads ECG input (optional)
Lead selection : I, II, III
 I, II, III, aVR, aVL, aVF, V
 I, II, III, aVR, aVL, aVF, V1~V6 (Option)

Gain : AUTO, 0.25x, 0.5x, 1.0x, 2.0x, 4.0x
Input impedance : ≥ 5.0 MΩ

CMRR : MONITOR MODE ≥ 105 dB
 OPERATION MODE ≥ 105 dB
 DIAGNOSIS MODE ≥ 89 dB

Frequency response [-3dB] : MON 0.5~40 Hz
 OPS 1~25 Hz
 DIA 0.05~150 Hz

Leakage current : < 10 uA
ECG signal range : ± 10.0 mV
Baseline recovery : < 5 sec after defibrillation (MON or OPS mode)
Indication of electrode separation : Every electrode (exclusive of RL)

Sweep speed : 12.5 mm/s, 25 mm/s, 50 mm/s

Heart Rate

Range : Adult 10~300 bpm, Pediatric and Neonate 10~350 bpm
Refreshing time : ≤ 50 bpm Per 2 pulses
 50~120 bpm Per 4 pulses
 ≥ 120 bpm Per 6 pulses

Resolution : 1 bpm
Accuracy : ±1% or ±1 bpm

ST segment

Measurement range : -2.0 mV~2.0 mV
Accuracy : -0.8 mV~-0.8 mV, ±0.02 mV or ±10% whichever is greater
Resolution : 0.01 mV

Respiration

Method : Impedance variation between RA-LL or RA-LA
Measuring impedance range : 0.2~3 Ohms
Measurement range : 0~150 rpm
Resolution : 1 rpm
Accuracy : ± 2 rpm or 2% whichever is greater
Gain : x1, x2, x4
Sweep Speed : 6.25 mm/s, 12.5 mm/s, 25 mm/s
Apnea Alarm : 10 to 60 sec

NIBP

Measurement method : Oscillometric
Range of measurement :
Adult : SYS 30~270 mmHg, DIA 10~220 mmHg,
 MEAN 20~235 mmHg
Child : SYS 30~235 mmHg, DIA 10~220 mmHg,
 MEAN 20~225 mmHg
Neonate : SYS 30~135 mmHg, DIA 10~100 mmHg,
 MEAN 20~125 mmHg

Pressure accuracy : static : ± 2% or ± 3 mmHg whichever is greater
Unit : mmHg, kPa
Intervals for AUTO measurement time :
 1, 2, 3, 4, 5, 10, 15, 30, 60, 90 minutes; 2, 4, 8 hours

Overpressure protection : Yes
Pulse rate range : 40~240 bpm

Digital SpO2

Measurement range : 0~100%
Resolution : 1%
Accuracy : At 70~100%, ± 2 digits (Adult)
 At 70~100%, ± 3 digits (Neonate)
 At 70~100%, ± 2 digits (Low Perfusion)
 At 0~69%, unspecified

Masimo - SpO2 (Optional)
Pulse Rate
 - Measurement range : 20~250 bpm
 - Resolution : 1 bpm
 - Accuracy : ± 3 digits

Nellcor SpO2 (Option)

Measurement range : 0% to 100%
Resolution : 1%
Accuracy : 70% to 100% : ± 2% (Adult)
 70% to 100% : ± 3% (Neonate)
 70% to 100% : ± 2% (Low perfusion)
 0% to 69%, unspecified

Pulse Rate
 - Measurement range : 20 bpm to 300 bpm
 - Accuracy : 20 bpm to 250 bpm : ± 3 bpm
 251 bpm to 300 bpm unspecified
 - Resolution : 1 bpm

Temperature

Measurement range : 25.0~50.0° C
Accuracy : ± 0.1° C or 0.1° F (exclusive of probe)
Resolution : 0.1° C
Unit : Celsius (°C), Fahrenheit (°F)
Connecting cable : Compatible with YSI-400 serial

IBP (Dual Channel) module

Measurement range : -50~350 mmHg
Resolution : 0.1 mmHg
Unit : mmHg, kPa
Accuracy : ± 1 mmHg or ± 2%, whichever is greater (exclusive of transducer)
Sensitivity of transducer : 5 uV/mmHg, ± 2%
Impedance of transducer : 300~3000 Ohms
Transducer sites : Arterial Pressure (ART)
 Pulmonary Artery Pressure (PA)
 Left Atrium Pressure (LAP)
 Right Atrium Pressure (RAP)
 Central Venous Pressure (CVP)
 Intraocular Pressure (ICP)
 P1/P2

Selection of measurement range :
ART : 0~+350 mmHg
PA : -10~+120 mmHg
CVP/RAP/LAP/ICP : -10~+40 mmHg
P1/P2 : -50~+360 mmHg

ETCO2 (Sidestream) module

Measurement method : Infrared spectrum
Measurement range : 0.0~13.1% (0~99.6 mmHg)
Resolution : 1 mmHg
Unit : %, mmHg, kPa
Accuracy : At < 5% CO2 : ± 3% (± 2.0 mmHg)
 At < 5% CO2 : < ± 10% of reading
Range of respiration rate measurement : 3~150 rpm

ETCO2 (Mainstream / Microstream) module

Measurement method : Infrared spectrum
Warm up time : Capnogram displayed in less than 20 seconds
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

Respiration rate range : 0~150 bpm
Respiration rate accuracy : ± 1 rpm

Multigas (Mainstream) (IRMA) module

Measurement method : Infrared spectrum
Measurement mode : Mainstream
Fi and Et values : CO2, N2O, O2, agent (HAL, ISO, ENF, SEV, DES)
Resolution : 1 mmHg
Unit : %, mmHg

Measurement and alarm range of AG :

Gas	Range	Accuracy
CO2	0-10%	±(0.2% ABS + 2% REL)
O2	10-100%	±(2% ABS + 2% REL)
N2O	0-100%	±(2% ABS + 8% 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 + 5% REL)

Respiration rate range : 0~150 rpm

Non-invasive Cardiac Output (ICG) module

Method : Impedance Cardiography
Range :

CO	: 1.4 ~ 15 L / min
CI	: 0 ~ 35 L / min / m ²
SV	: 5 ~ 250 mL
SI	: 15 ~ 125 mL / m ²
SVR	: 1-3500 Dynes X Sec / cm ⁵
SVRI	: 1-11000 Dynes X Sec X m ² / cm ⁵
TFC	: 7-65 Ω
TRC	: 15~143 / KΩ
HR	: 40~250 bpm

Optional basic modules

EMS 3 (ECG; SpO2; NIBP; RR; Dual Temp.)
 EMS 1 (ECG; SpO2; NIBP; RR; Dual Temp.; Dual IBP)
 EMS 2 (12 lead ECG; SpO2; NIBP; RR; Dual Temp.; Dual IBP)
 EMS 4 (12 lead ECG; SpO2; NIBP; RR; Dual Temp.)

Certification



Standard accessories with basic unit and EMS 3 module

- Power cord - 1 no.
- ECG cable (5 lead) - 1 no.
- SpO2 probe - 1 no.
- Skin temperature probe - 1 no.
- NIBP cuff (Adult, Pediatric & Neonate) - 1 no. each
- Earth cable - 1 no.
- User manual - 1 no.
- Warranty card - 1 no.
- Picking list - 1 no.

Accessories shown are not part of standard configuration. All registered trademarks acknowledged.

Technical data are subject to change without notice.

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