

S/5™

NESTPR Module, M-NESTPR

NETPR Module, M-NETPR

NESTR Module, M-NESTR

ESTPR Module, M-ESTPR

ETPR Module, M-ETPR

ESTR Module, M-ESTR

Integrated multiparameter module with simultaneous measurement of up to 7 ECG leads with ST segment analysis, pulse oximetry, 2 temperatures, 2 invasive blood pressures, respiration and non-invasive blood pressure



Features

- Cost-effective integrated multiparameter module saves module slots
- Up to 7 lead ECG measurement
- Continuous ST segment analysis of all measured leads
- Special ST segment analysis display view
- Automatic or manual ST segment measurement points
- Diagnostic, monitoring and ST filters for ECG
- Grid for accurate ECG waveform analysis
- Respiration artifact rejection in ECG and invasive pressures
- Respiration measurement based on transthoracic impedance method
- PCWP measurement display
- Selectable labels for invasive blood pressures
- Overlapping invasive blood pressure waveforms mode
- Adjustable pressure scales with 10 mmHg increments
- Adjustable invasive blood pressure filters

- Varying pitch of pulse beep with SpO₂
- Diagnostic plethysmogram
- Adjustable pulse beep volume
- Autotest for temperature measurement channels
- Easy insertion/removal of module without interrupting other monitoring

NIBP features (only in M-NESTPR, M-NETPR, M-NESTR)

- Oscillometric method used to derive pressures
- Direct keys on the module for common functions
- Automatic measurement at user-selectable intervals
- Displays systolic, diastolic and mean pressures
- User-adjustable alarms on systolic, diastolic and mean pressure values
- Automatic safety and alarm limits based on the cuff hose type (adult/infant)
- 5 minute continuous STAT mode
- Venous stasis for easy venous cannulation
- Audible and visible 'measurement ready' prompt
- NIBP double check measurement if pressure alarm limit is exceeded
- Visual elapsed time indicator from previous measurement
- NIBP measurement triggered data collection to numerical trends and recorder printing
- Automatic zeroing to ambient pressure

Technical specifications

Direct function keys

| | |
|----------------------------|-----------------------------------|
| Auto On/Off (with NIBP): | Starts/stops NIBP cycle |
| Start/Cancel (with NIBP): | Starts/stops single NIBP |
| ECG/Lead (without NIBP): | Selects lead for ECG1 |
| PCWP/Start (without NIBP): | Starts wedge pressure measurement |
| Zero P1: | Zeros invasive blood pressure P1 |
| Zero P2: | Zeros invasive blood pressure P2 |

Dimensions and weight

| | |
|--------------------------|---|
| Module size (W x D x H): | 75 x 180 x 112 mm/ 3.0 x 7.1 x 4.4 in |
| Weight: | 0.6 kg/1 lbs (without NIBP) 1.0 kg/2 lbs (with NIBP) |

Parameter specifications

ECG

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|------------------------------------|---|
| Measurement method: | 3 or 5 wire ECG |
| Lead selection: | I, II, III, aVL, aVF, aVR, V simultaneous measurement of all monitored ECG leads |
| Waveform display: | Monitoring filter: 0.5 to 30 Hz ST filter: 0.05 to 30 Hz Diagnostic filter: 0.05 to 100 Hz |
| With 60 Hz power supply frequency: | Monitoring filter: 0.5 to 40 Hz ST filter: 0.05 to 40 Hz |
| Sweep speed: | 12.5, 25 or 50 mm/sec (15 inch screen) |
| Heart rate: | |
| Measurement range: | 30 to 250 bpm |
| Measurement accuracy: | ±5% or ±5 bpm |
| Display resolution: | 1 bpm |
| Averaging time: | 10 sec |
| Display update interval: | 5 sec |
| Alarms: | Asystole, leads-off detection, adjustable high and low alarm limits for heart rate, V Fib, V Tach, (optional: V Run, V Couplet, V Bigeminy, V Trigeminy, R on T PVC, Missing Beat, Multifocal PVCs, PVC rate alarm) |
| Gain range: | 0.2 to 5.0 cm/mV |
| Allowable offset: | ±300 mVd.c. |
| Pacemaker pulse detection: | Detection level: 2 to 500 mV Pulse duration: 0.5 to 2 ms |

ST segment analysis

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|---|---------------------------------|
| Measured and displayed simultaneously for up to 7 ECG leads | |
| ST level range: | -9 to +9 mm (-0.9 to +0.9 mV) |
| Display resolution: | 0.1 mm (0.01mV) |
| Averaging: | Calculated from 8 QRS complexes |
| Display update interval: | 5 sec |

Patented CombiResp respiration measurement principle

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|----------------------|---|
| Measuring range: | Impedance, 0.2 to 6 ohm |
| Max base impedance: | 5 kohm |
| Respiration range: | 4 to 120 resp/min |
| Accuracy: | ±5% or ±5 bpm |
| Averaging: | 30 sec |
| Update: | 10 sec |
| Display resolution: | 1 breath/min |
| Sweep speed (trace): | Slow: 0.62 mm/sec Fast: 6.25 mm/sec |
| Alarms: | Apnea, adjustable high and low alarm limits for respiration rate |
| Gain range: | 0.1 to 5 cm/ohm |

Note: The respiration measurement is intended for patients over three years old.

Pulse Oximetry (SpO₂)/pleth

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|-------------------------------------|--|
| Measurement method: | Red and infrared light absorption SpO ₂ |
| Measurement range: | 40 to 100% |
| Calibration range: | 50 to 100%; calibrated against functional oxygen saturation |
| Display resolution: | 1 digit (1% of SpO ₂) |
| Measurement accuracy*: | (% SpO ₂ ±1SD): 100 to 80%, ±2 digits; 80 to 50%, ±3 digits; 40 to 50%, unspecified |
| Display averaging time: | Adjustable 10 sec, 20 sec or beat-to-beat |
| Alarms: | Probe off, no probe, adjustable high and low alarm limits for SpO ₂ |
| Pulse rate: | |
| Measurement range: | 30 to 250 bpm |
| Display resolution: | 1 digit (1 bpm) |
| Measurement accuracy: | ±5% or ±5 bpm |
| Alarms: | Adjustable high and low alarm limits for pulse rate |
| Plethysmographic pulse waveform: | Scales: 2, 5, 10, 20, 50 mod% or automatic scaling |

* Accuracy is based on deep hypoxia studies using Datex-Ohmeda Finger Sensors on volunteered subjects. Arterial blood samples have been analyzed by a Radiometer OSM Co-oximeter. Refer to Datex-Ohmeda SatSensor directions for specific SpO₂ accuracy.

Technical specifications, continued**Invasive blood pressure**

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|-------------------------|---|
| Measurement range: | -40 to 320 mmHg |
| Measurement accuracy: | ±5% or ±2 mmHg |
| Numeric display: | |
| Range: | -40 to 320 mmHg |
| Resolution: | 1 mmHg |
| Averaging: | Over 5 sec, updated every 5 sec, or end-expiratory filtering |
| Alarms: | Adjustable high and low alarm limits for systolic, diastolic and mean pressures, or off |
| Waveform display: | |
| Range: | -30 to 300 mmHg |
| Scales: | Adjustable in 10 mmHg increments |
| Pulse rate: | |
| Measurement range: | 30 to 250 bpm |
| Resolution: | 1 bpm |
| Accuracy: | ±5% or ±5 bpm |
| Transducer sensitivity: | 5 µV/V/mmHg, 5 Vdc, max. 20 mA |
| Pressure filter: | 0 to 22 Hz (-3 dB) Adjustable upper limit 4 to 22 Hz |

Temperature

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|------------------------------------|--|
| 2 temperature measurement channels | |
| Numeric display: | 2 temperatures, differential T2-T1 |
| Temperature units: | °C or °F |
| Measurement range: | 10° to 45°C/50° to 113°F |
| Display resolution: | 0.1°C/0.1°F |
| Measurement accuracy: | +0.1°C/25° to 45.0°C ±0.2°C/10° to 24.9°C |
| Probe type: | Compatible with YSI 400 series |

NIBP

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|----------------------------|--|
| Measurement principle: | Oscillometric with linear deflation |
| Deflation speed: | Heart rate dependent, 5 to 13 mmHg/sec |
| Measurement range: | Adult: 25 to 260 mmHg Child: 25 to 195 mmHg Infant: 15 to 145 mmHg |
| Pulse rate range accepted: | 30 to 250 bpm |
| Measurement intervals: | Manual and selectable intervals 1, 2.5, 3, 5, 10, 15, 30 min, 1 h, 2 h, 4 h or continuous STAT mode |
| Numerical display: | Systolic, diastolic and mean arterial pressure |
| Alarms: | Cuff loose, cuff occlusion, adjustable high and low alarm limits for systolic, diastolic, mean or off |
| Typical measurement time: | Adult: 23 sec Infant: 20 sec |

Safety features

| | Adult | Child | Infant |
|--|-------|-------|--------|
| Initial inflation pressure (mmHg) | 185 | 150 | 120 |
| Max. inflation pressure (mmHg) | 280 | 200 | 150 |
| Overpressure limit (max. 2 sec; mmHg) | 320 | 220 | 165 |
| Max. inflation time (>5 mmHg, min) | 2 | 2 | 1 |
| Safety valve (mmHg) | 320 | 320 | 165 |

Note: Non-invasive blood pressure measurement is intended for patients weighing over 5 kg/11 lbs.

Ordering information

| Order code | Non-invasive blood pressure | ECG | ST segment analysis and SpO ₂ | Two temperatures | Two invasive blood pressures | Respiration |
|-------------|--------------------------------|-----|---|---------------------|---------------------------------|-------------|
| M-NESTPR-S5 | ■ | ■ | ■ | ■ | ■ | ■ |
| M-NETPR-S5 | ■ | ■ | | ■ | ■ | ■ |
| M-NESTR-S5 | ■ | ■ | ■ | ■ | | ■ |
| M-ESTPR-S5 | | ■ | ■ | ■ | ■ | ■ |
| M-ETPR-S5 | | ■ | | ■ | ■ | ■ |
| M-ESTR-S5 | | ■ | ■ | ■ | | ■ |

For accessories, please refer to the Datex-Ohmeda Patient Monitor Supplies and Accessories catalog.



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