



## Nellcor™ N-85 Hand-Held Capnograph/Pulse Oximeter with OxiMax™ Technology

### FOR PATIENT CARE ANYWHERE

The Nellcor N-85 hand-held monitor is convenient for spot checks and continuous monitoring in a variety of settings, including EMS/ED, transport, critical care, operating room, sleep lab and for procedural sedation.

### MICROSTREAM®\* CAPNOGRAPHY TEAMS UP WITH NELLCOR™ PULSE OXIMETRY WITH OXIMAX TECHNOLOGY

The Nellcor N-85 hand-held capnograph/pulse oximeter with OxiMax technology combines two highly advanced technologies in a convenient, portable device. Microstream®\* capnography helps ensure accurate end-tidal CO<sub>2</sub> measurements and crisp waveforms, giving you a clear picture of your patient's respiratory status.<sup>1</sup> The extensive selection of Microstream breath-sampling accessories allows you to monitor intubated and nonintubated patients—including those receiving supplemental oxygen.

- **Nellcor Oximetry Advantage.** The Nellcor N-85 monitor delivers exceptional pulse oximetry performance even during low perfusion and signal interference.<sup>2</sup> Nellcor™ specialty sensors—including the forehead SpO<sub>2</sub> sensor and nonadhesive SpO<sub>2</sub> sensors—expand your patient care options.



## MICROSTREAM®\* CAPNOGRAPHY

The Nellcor N-85 hand-held monitor with OxiMax technology provides full-featured capnography with crisp waveform display and trend data.

- For mechanically ventilated and nonintubated patients.
- Low sample flow rate of 50 mL/min allows monitoring on the widest range of patients, from neonates to adults.<sup>2</sup>
- Reliable CO<sub>2</sub> monitoring, even in high humidity environments.<sup>2</sup>
- Innovative optical bench enhances stable, accurate measurements from a small sample.<sup>2</sup>
- Wide selection of CO<sub>2</sub> sampling accessories available.

## Nellcor™ Pulse Oximetry

Equipped with Nellcor pulse oximetry advanced digital signal processing technology, the Nellcor N-85 hand-held monitor with OxiMax technology stands up to difficult monitoring conditions, offering reliable SpO<sub>2</sub> and pulse rate measurements.

- Accurate monitoring even with weak pulse signals.<sup>2</sup>
- A hand-held monitoring alternative for use with the family of Nellcor sensors.
- Provides graphical trends and plethysmographic waveform.
- Interfaces with the Nellcor™ OxiNet III remote monitoring system.

## THE HAND-HELD CHOICE

Nellcor™ N-85 monitor with OxiMax™ technology: EtCO<sub>2</sub> and SpO<sub>2</sub> (capnography/pulse oximetry) EtCO<sub>2</sub> (capnography only)

- AC and battery operation
- User-adjustable alarms
- Data output/printing
- Four-language menu

## FEATURES AND SPECIFICATIONS

### PERFORMANCE

#### Capnograph

Display Range: 0 to 99 mm Hg (0-13.2 kPa and 0-13.0 vol% at sea level)

Sampling Rate: 50 ± 7.5 mL/min

Warm-Up Time: 30 seconds typical, reaches steady-state accuracy 20 minutes after power up

Accuracy: 0 to 38 mm Hg ± 2 mm Hg  
39 to 99 mm Hg ± 5% of reading

Respiration Rate: 0 to 150 breaths/minute

#### Pulse Oximeter

Display Range: SpO<sub>2</sub>: 0% to 100%

Pulse Rate: 20 to 250 beats/minute

#### Accuracy:

Saturation (% SpO<sub>2</sub>, ± 1 SD):

Adults: 70% to 100% ± 2 digits

Neonates: 70% to 100% ± 3 digits

Low perfusion: 70% to 100% ± 2 digits

Pulse Rate: 20 to 250 bpm ± 3 digits

Low perfusion: 20 to 250 bpm ± 3 digits

#### Communication Interface

RS-232 interface @ 9600 baud; full duplex serial interface via RJ-45 connector

### ELECTRICAL

**Instrument** Power requirements: AC input of 100 to 230 VAC @ 60/50 Hz

#### Battery

Type: Rechargeable NiMH

Battery Capacity: Supplies power for 4 to 7 hours (depending on power management)  
Fully recharges in approximately 4.5 hours

### ENVIRONMENTAL

**Operating temperature** 32°F to 113°F (0°C to 45°C)

**Storage temperature** -31°F to 158°F (-35°C to 70°C)

#### Operating and Storage

Pressure: 430 mm Hg to 795 mm Hg

Altitude: -1,250 ft to 15,000 ft (-381 m to 4,572 m)

Humidity: 10% to 95% noncondensing

Shock test IEC 68-2-27

Sinusoidal vibration test IEC 68-2-6

Random vibration wide band test IEC 68-2-34

Drop test MIL-STD-810E, method 516.4-II

### Standards

IEC 60601-1/EN 60601-1, EN60601-1-2 second edition, EN 864, EN 865, UL 2601-1, EN 475, EN 55011-Class, B-Group 1, CSA C22.2 No.601.1-M90

### PHYSICAL CHARACTERISTICS

**Weight** N-85: 1.87 lb (850 g) NPB-70: 1.66 lb (750 g)

**Size** 8.11 in H x 3.46 in W x 2.06 in D (206 mm x 88 mm x 53 mm)

#### Displayed Parameters

N-85: CO<sub>2</sub> and plethysmographic waveforms, EtCO<sub>2</sub>, SpO<sub>2</sub>, pulse rate, respiration rate, trend data.

#### Display

Graphic LCD display (128 x 64 dots) with LED backlight (contrast and backlight control); two numeric fields, three digits each, using 7-segment LED; two-color LED alarm bar

#### Alarms

Adjustable alarm limits for all parameters; audio level as defined in ISO 9703-2 standard

### CO<sub>2</sub> Accessories

#### Nonintubated Applications:

Smart CapnoLine®\* and Smart CapnoLine®\* O<sub>2</sub> oral/nasal circuits

CapnoLine®\* H<sup>1</sup> and CapnoLine®\* H<sup>1</sup> O<sub>2</sub> nasal circuits

NIV Line nasal circuit

#### Intubated Applications:

FilterLine®\* Set and FilterLine®\* H<sup>1</sup> Set, combination

EtCO<sub>2</sub> circuit and airway adapter

<sup>1</sup>H indicates for humidified applications; up to 72-hour duration

### Other Accessories

Carrying case

Protective boot

Polemount clamp

Digital to analog converter

Communication adapter kits

Calibration gas kit

External battery charger

Extra rechargeable battery pack

Battery pack carrying pouch

Nurse call and remote monitoring interface kits

#### References

1. Maddox RR, Williams CK, Oglesby H, Butler B, Colclasure B. Clinical experience with patient-controlled analgesia using continuous respiratory monitoring and a smart infusion system. *Am J Health Syst Pharm.* 2006;63(2):157-164.
2. FDA 510(k)



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