COVIDIEN
positive results for life™

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

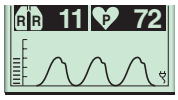
FOR PATIENT CARE ANYWHERE

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_2 measurements and crisp waveforms, giving you a clear picture of your patient's respiratory status.[1] 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.[2] Nellcor™ specialty sensors—including the forehead SpO_2 sensor and nonadhesive SpO_2 sensors—expand your patient care options.



THE HAND-HELD CHOICE

Nellcor™ N-85 monitor with OxiMax™ technology: $EtCO_2$ and SpO_2 (capnography/pulse oximetry) $EtCO_2$ (capnography only)

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

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.[2]
- Reliable CO_2 monitoring, even in high humidity environments.[2]
- Innovative optical bench enhances stable, accurate measurements from a small sample.[2]
- Wide selection of CO_2 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_2 and pulse rate measurements.

- Accurate monitoring even with weak pulse signals.[2]
- 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.

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_2: 0% to 100%
Pulse Rate:	20 to 250 beats/minute
Accuracy:	
Saturation (% SpO_2 ± 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_2 and plethysmographic waveforms, $EtCO_2$, SpO_2, 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_2 Accessories

Nonintubated Applications:

- Smart CapnoLine®* and Smart CapnoLine®* O_2 oral/nasal circuits
- CapnoLine®* H† and CapnoLine®* H† O_2 nasal circuits
- NIV Line nasal circuit

Intubated Applications:

- FilterLine®* Set and FilterLine®* H† Set, combination
- $EtCO_2$ circuit and airway adapter

†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)

COVIDIEN