

The Spacelabs DM4 is a lightweight and compact dual-mode patient monitor with a 17.78 cm (7 inch) touchscreen display. Designed for bedside and portable usage, the DM4 monitors pulse oximetry (SpO₂), pulse rate, noninvasive blood pressure (NIBP), and temperature.

In spot-check mode, the DM4 monitor functions as an adjunct to the clinical staff for collection and documentation of physiological data for multiple patients. In continuous mode, the DM4 monitor provides real-time patient monitoring and alarm notification.



Physical Specifications

Dimensions (H x W x D) (with FILAC temperature option)	19.4 x 27.9 x 14.6 cm (7.6 x 11.0 x 5.7 in)
Weight	1.9 kg (4.3 lbs)
Display	Touchscreen LCD
Size	17.8 cm (7.0 in) diagonal
Resolution	800 x 480 pixels
Controls	Power On/Off (front panel) Touchscreen user interface
Indicators	
Alarms	Audible tones, visual on display
Alarm levels	Medium, Low
Power	External power/battery charging indicator
Connections	
Measurement connections	MAXNIBP Masimo SET or Nellcor OxiMax SpO ₂ RJ45 serial port for EtCO ₂ device (for future use)
USB port	USB port for flash drive, optional bar code reader, and optional Exergen Temporal Artery Thermometer
Network	LAN: Ethernet WLAN: 802.11 a/b/g/n (optional)

Nurse Call interface	3.5 mm stereo jack for Nurse Call system (Alarm Out Relay)
Printer/communications device interface	RJ45 serial port for optional external printer or communications device
Mounting interface	VESA
Recorder (Optional)	
Type	RJ45 serial connection
Paper width	50 mm (2 in)

Parameter Specifications

Noninvasive Blood Pressure (NIBP)

Measurement method	Oscillometric
Measurement operation	Automatic interval, STAT, manual, protocol
Interval times	User selectable: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90 minutes
Measurement read time	<30 seconds, typical
Pulse measurement range	Adult: 30 to 240 bpm Pediatric: 30 to 240 bpm Neonate: 40 to 240 bpm
Measurement range	
Systolic	Adult: 35 to 260 mmHg; Pediatric: 35 to 260 mmHg; Neonate: 35 to 135 mmHg
Diastolic	Adult: 15 to 215 mmHg; Pediatric: 15 to 215 mmHg; Neonate: 15 to 105 mmHg
Mean	Adult: 20 to 235 mmHg; Pediatric: 20 to 235 mmHg; Neonate: 20 to 115 mmHg
Resolution	1 mmHg
Accuracy	±5 mmHg with a standard deviation no greater than 8 mmHg
Initial cuff inflation	Adult: 160 mmHg Pediatric: 120 mmHg Neonate: 80 mmHg
Maximum cuff inflation	Adult: 290 mmHg Pediatric: 290 mmHg Neonate: 145 mmHg
Connector	MAXNIBP quick connect fitting

Masimo SET Pulse Oximetry (SpO₂) Option

Measurement method	Functional saturation (oxygen saturation of functional hemoglobins)
Display parameters	%SpO ₂ , pulse rate

Measurement range	SpO ₂ : 1% to 100% Pulse rate: 25 to 240 bpm
Resolution	SpO ₂ : 1% Pulse rate: 1 bpm
Numeric update rate	Every 1 second
Pulse accuracy	No motion: ±3% Motion: ±5% Low perfusion: ±3%
SpO ₂ accuracy (70% to 100%) of Masimo sensors	
LNCS DC-I, LNCS DC-IP, LNCS TF-I, LNCS Adtx, LNCS Pdtx, LNCS Inf	No motion: ±2% Low perfusion: ±2%
LNCS TC-I	No motion: ±3.5% Low perfusion: ±3.5%
LNCS Neo	No motion: <3 kg ±3%, >40 kg ±2% Low perfusion: <3 kg ±3%, >40 kg ±2%
RD SET Adt, RD SET Pdt, RD SET Inf, RD SET DCI, RD SET DCI-P	No motion: ±2% Low perfusion: ±2%
RD SET TC-I	No motion: ±3.5% Low perfusion: ±3.5%
RD SET Neo	No motion: <3 kg ±3%, >40 kg ±2% Low perfusion: <3 kg ±3%, >40 kg ±2%
RD SET NeoPt	No motion: ±3% Low perfusion: ±3%

Nellcor OxiMax Pulse Oximetry (SpO₂) Option

Measurement method	Functional saturation (oxygen saturation of functional hemoglobins)
Display parameters	%SpO ₂ , pulse rate
Measurement range	SpO ₂ : 1% to 100% Pulse rate: 20 to 240 bpm
Resolution	SpO ₂ : 1% Pulse rate: 1 bpm
Numeric update rate	Every 1 second
SpO ₂ accuracy (70% to 100%) of Nellcor sensors	
DS-100A, OXI-P/I	±3%
D-YS (Neonate), OXI-A/N	±4%



Neonatal accuracy	When sensors are used on neonatal subjects as recommended, the specified accuracy range is increased by ± 1 digit as compared to adult usage, to account for the theoretical effect on oximeter measurements of fetal hemoglobin in neonatal blood. For example, MAX-N accuracy on neonates is ± 3 digits, rather than ± 2 digits.
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FILAC 3000 Temperature Option

Measurement range	30° to 43° C
Accuracy	$\pm 0.1^\circ$ C (35.5° to 42° C); $\pm 0.2^\circ$ C (<35.5° or >42° C)
Operating mode	Predictive monitoring
Measurement time	Standard mode: 6 to 10 seconds, oral; 10 to 15 seconds, axillary Quick mode: 3 to 4 seconds, oral; 10 to 15 seconds, axillary Cold mode: 12 to 15 seconds, oral; 15 to 20 seconds, axillary

Exergen Temperature Option

For product specifications of the Exergen Temporal Artery Thermometer, model TAT-5000S-USB-GN, refer to the documentation for that product.

Electrical Specifications

Power Supply

Power source	Internal battery or external AC power supply, P/N 010-2177-00
AC input	100 to 240 VAC, 50 to 60 HZ, 1.2 to 0.5 A
Safety classification	Class II

Battery

Type	Rechargeable lithium-ion, P/N 010-2178-00
Voltage	10.8 V
Battery operation	Approximately 12 hours
Charge time	Approximately 8 hours (fully depleted battery)

Environmental Specifications

Ambient temperature	Operating: 0° to 40° C (32° to 104° F) Storage and transport: -20° to 60° C (-4° to 140° F)
Relative humidity	Operating: 15 to 90% (non-condensing) Storage and transport: 15 to 95% (non-condensing)
Altitude	Operating: 0 to 4,572 meters (0 to 15,000 feet) Storage and transport: 0 to 12,192 meters (0 to 40,000 feet)
Water ingress	IPX1

Ordering Information

Configurations

91331-M	NIBP, Masimo pulse oximetry, Exergen Temporal Artery Thermometer or no temperature
91331-N	NIBP, Nellcor pulse oximetry, Exergen Temporal Artery Thermometer or no temperature
91331-MF	NIBP, Masimo pulse oximetry, FILAC 3000 predictive temperature
91331-NF	NIBP, Nellcor pulse oximetry, FILAC 3000 predictive temperature
91331-MW	NIBP, Masimo pulse oximetry, Exergen Temporal Artery Thermometer or no temperature, WiFi
91331-NW	NIBP, Nellcor pulse oximetry, Exergen Temporal Artery Thermometer or no temperature, WiFi
91331-MFW	NIBP, Masimo pulse oximetry, FILAC 3000 predictive temperature, WiFi
91331-NFW	NIBP, Nellcor pulse oximetry, FILAC 3000 predictive temperature, WiFi

Accessories

Exergen Temporal Artery Thermometer (P/N 010-2157-00)
 External printer (P/N 010-1852-00)
 Bar code scanner (P/N 010-2179-00)
 Roll stand (P/N 016-0823-00)
 Nurse call cable (P/N 010-2184-00, 010-2185-00, or 010-2186-00)

For further ordering information and details on compatible accessories, please contact your Spacelabs Healthcare representative or refer to the product documentation.

This product may not be approved for market release in all countries.

Documentation

The operations and service manuals are available in PDF format on a CD-ROM that ships with the product.

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