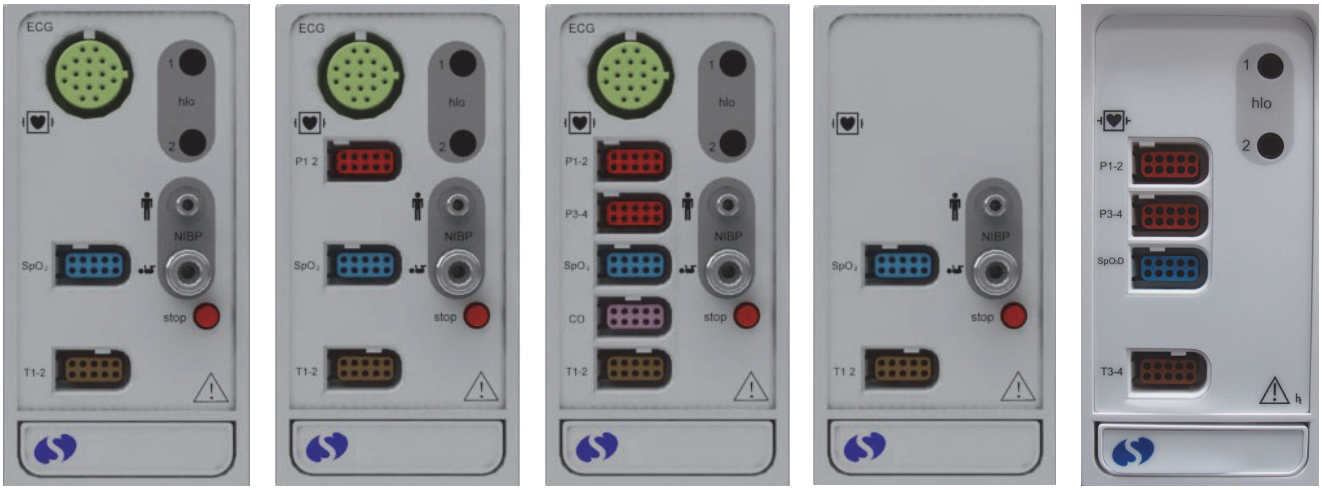

91496-A | 91496-B | 91496-C | 91496-I | 91496-L

Summary

The Ultraview SL™ Command Module is a multiparameter module used with Spacelabs Healthcare patient monitors. Five different parameter configurations provide vital sign monitoring for any range of acuity. Configurable settings assure customized care for neonatal, pediatric, and adult patients.

Features

Module Configurations	*Note:* *Module use is restricted to one patient at a time.*
91496-A	Noninvasive Parameter Set Provides multi-lead ECG, respiration, noninvasive blood pressure, pulse oximetry, and two temperature channels
91496-B	Invasive Parameter Set Provides multi-lead ECG, respiration, noninvasive blood pressure, pulse oximetry, and two temperature channels, plus two invasive pressure channels
91496-C	Invasive Parameter Set with Cardiac Output Provides multi-lead ECG, respiration, noninvasive blood pressure, pulse oximetry, and two temperature channels, plus four invasive pressure channels and thermodilution cardiac output
91496-I	Noninvasive Parameter Set Provides noninvasive blood pressure, pulse oximetry, and two temperature channels
91496-L	Invasive Parameter Set Provides four invasive blood pressure channels, pulse oximetry, and two temperature channels *Note:* *91496-L is intended for use in conjunction with another module to provide additional parameter monitoring, such as dual SpO_2 (SpO_2D).*

Alarm Limit Review	Provides a snapshot view of bedside alarm limits for all active parameters *Note:* *This feature only functions with specific monitors.*
Data Shuttle®	Provides data transfer features for up to 24 hours of data in the monitor's database, including continuous and episodic events, and trend information for all parameters monitored, including modules and Flexport® system interfaces (requires monitor option Q); module will retain data for up to 10 minutes. 91496-I and 91496-L configuration do not support Data Shuttle.
Module Configuration Manager	This feature provides the ability to define all the module's user-configurable settings. Once a module has been configured, these settings control its operation whenever the module is first powered ON.
Module Parameter Count	When computing parameter capacity for monitors, each configuration counts as follows:
91496-A	Minimum of 5, maximum of 7
91496-B	Minimum of 7, maximum of 9
91496-C	Minimum of 10, maximum of 12
91496-I	3 parameters
91496-L	6 parameters
Dimensions	
Height	11.3 cm (4.45 in)
Width	5.66 cm (2.23 in)
Depth	18.0 cm (7.1 in)
Weight	0.8 kg (1.75 lb)

Options

D	Diagnostic 12-lead reports with measurements and interpretation*
E	Diagnostic 12-lead reports without measurements or interpretation*
F	Basic arrhythmia, provides alarms for high and low heart rate, asystole, and ventricular fibrillation*
G	Standard Multiview™ I Arrhythmia (MVI); provides alarms for high and low heart rate, asystole, ventricular fibrillation, ventricular runs, ventricular couplets, ventricular beats per minute, atrial fibrillation, pauses, and supraventricular tachycardia*
H	Advanced Multiview II Arrhythmia (MVII); enables users to review the dominant morphology, as well as episodes or classes of ventricular fibrillation, ventricular runs, ventricular couplets, isolated ventricular beats, supraventricular tachycardia, pauses, atrial fibrillation, ventricular and atrio-ventricular pacing; provides alarms for high and low heart rate, asystole, ventricular fibrillation, ventricular runs, ventricular couplets, ventricular beats per minute, atrial fibrillation, pauses, and supraventricular tachycardia*
M	Masimo SET SpO_2 technology

N	Nellcor OxiMax SpO_2 technology
P	Pearl white color option**
R	Respiration*
S	ST segment analysis; review, and trends*
U	Spacelabs Healthcare SpO_2 technology
V	Varitrend® 4; define, trend, and document critical physiological events containing data from up to four parameters, including heart rate, SpO_2 (pre- and post-ductal sites), respiration rate, $EtCO_2$, $TcpCO_2$, and $TcpO_2$*
W	Arctic white color option

* *Not available with 91496-I and 91496-L configuration.*
** *Not available with 91496-L configuration.*

Product Specifications

Refer to the specific parameter section for the appropriate specifications.

Electrocardiogram (ECG)

Input	10-lead, 5-lead, or 3-lead ECG cable (cables use 1 kΩ ±10% resistors in series with each electrode)
Maximum Input	±5 mV (±10%)
DC Offset	Up to ±300 mV with no more than 2% signal amplitude degradation
Overdrive Recovery Time	<2 seconds with defibrillator discharge of 360 joules or voltage step-up to ±300 mV
Noise	<30 µV peak-to-peak referred to input (rti)
CMRR	>110 dB at line frequency (monitor mode) with patient cable and maximum 50 kΩ imbalance (referenced to chassis [earth] ground)
Pacer Rejection	Baseline shift <0.2 mV, rti (measured at ECG × 1,000 output)
Pacer Detection	Detects pacer pulses of ±2 mV to ±200 mV with pulse widths of 0.25 to 2 msec and rise times 10% of width not to exceed 100 µsec
Signal Bandwidth (-3 dB)	0.05 to 150 Hz ±10%
Display Bandwidth (-3 dB)	2 settings: 0.5 to 40 Hz ±10% in monitor mode, and 0.05 to 150 Hz ±25% in extended mode
Sample Rate	896 samples per second (sps)
QRS Detection	Performed on up to 2 leads simultaneously; detects QRS complexes with durations of 40 to 120 ms and amplitudes of 0 .2 to 5 mV (adult/pediatric) or 0.15 to 5 mV (neonate)
Defibrillator Protection	Meets IEC 60601-2-27, AAMI EC-13
Resolution	2.5 µV per LSB, rti
Input Impedance	>10 MΩ minimum differential at 10 Hz

Gain Accuracy	±5%
Ventricular Beats Per Minute Counter	Displays counts up to 99 beats per minute
Heart Rate Range	15 to 300 bpm; heart rates >300 bpm are displayed as "+++"
Heart Rate Resolution	1 bpm
Heart Rate Alarm Limits	• High — 5 to 300 bpm • Low — 0 to 200 bpm
Accuracy	±1% or 3 beats per minute (whichever is greater)
Numeric Update Rate	Every 3 seconds or immediately at the onset of an alarm
Test Signal	1 mV peak-to-valley (displayed via touch key)
Display Size	Adjustable from 0.5 to 10 cm/mV; direct selection of a 1 cm/mV size
Bedside Display	Up to 12 leads; number of leads depends on host monitor configuration • Standard (1- or 2-lead display) • Split-view (6-lead display) • Full-view (12-lead display)
Waveform Sweep Speeds	50, 25, or 12.5 mm/sec
High Level Analog Output	
Connector (Front Panel)	0.174 in (4.42 mm) diameter, three conductor TT-phone plug
Dynamic Range	±5 mV (±10%) rti
Gain	ECG × 1,000 (±5%)
Output Impedance	400 Ω maximum
Defibrillator Sync Input	
Input Level	±1 V minimum upper HLO, ring connection
Input Impedance	2,000 Ω minimum

ST Segment Analysis

Resolution	0.08 mm
Range	±9 mm (1 mV = 10 mm)
Leads	ST segment analysis continuously performed on up to 12 leads
Alarms	Single lead or multiple leads; individual leads can be deselected
Displays	12-lead waveforms and numerics
Snapshot Storage	Up to nine 12-lead ST segment waveform sets can be saved in memory; data may be acquired automatically at pre-selected intervals or in the event of an alarm
Trends	Up to 24 hours of trend data may be displayed in 1.5-, 3-, 6-, 12-, or 24-hour time bases

Diagnostic ECG Analysis

Instrument Type	12-lead interpretive electrocardiograph
Standard Leads	I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
Input Channels	Simultaneous acquisition of all standard leads
Sample Rate	500 sps
Algorithm Features	Arm lead reversal detection, lead-off detection, artifact detection, baseline correction, line voltage rejection
Printer Speed	25 mm/sec
Sensitivity	10 mm/mV

Respiration

Input	10-lead, 5-lead, or 3-lead ECG cable (cables use 1 kΩ resistors (±10%) in series with each electrode)
Measurement Technique	Impedance pneumography through ECG leads RA/LA (R/L), RL/LL (N/F), RL/LA (N/L), or RA/LL (R/F)
Patient Source Impedance	0 to 1,500 Ω
Excitation Frequency	62.5 kHz (±2%)
Excitation Amplitude	120 µAmp (±20%) rms, 330 µAmp (±20%) peak-to-valley
Noise	<0.05 Ω peak-to-valley at 500 Ω patient source impedance
Signal Bandwidth	• Adult/Pediatric — 0.12 to 3 Hz (±10%) • Neonate — 0.15 to 3.5 Hz (±10%)
Recovery Time	<3 seconds after overload
Sample Rate	112 sps
Detection Sensitivity	2 settings: 0.1 Ω (shallow) and 0.25 Ω (normal) at 500 Ω input source impedance
HR Artifact Rejection	Selectable inspiration detector improves respiratory rate and alarm accuracy by ignoring most cardiovascular artifact
Respiration Rate Range	0 to 200 breaths per minute; respiration rates >200 breaths per minute are displayed as "+++"
Respiration Resolution	1 breath per minute
Respiration Rate Alarm	• High — 1 to 200 breaths per minute • Low — 0 to 195 breaths per minute Alarms automatically enabled in neonate patient type.
Apnea Alarm	Selectable between 5 and 40 seconds in 5-second increments; in neonate patient type, alarms automatically enable
Accuracy	±5% or 1 breath per minute (whichever is greater)
Numeric Update Rate	Every 3 seconds or immediately at the onset of an apnea alarm
Display Size	Adjustable from 0.5 to 10.0 cm/Ω

Waveform Sweep Speeds	25, 12.5, 6.25, or 1.56 mm/sec
High Level Analog Input/ Output	
Connector (Front Panel)	4.42 mm (0.174 in) diameter, three conductor TT-phone plug
Dynamic Range	±4 V minimum
Gain	0.6 V/Ω ±20%

Invasive Blood Pressure (IBP)

Transducer Type	Strain-gauge, standardized to 5 µV/V/mmHg ±1%
Transducer Excitation Voltage	4 VDC ±1%
Dynamic Waveform	-50 to +500 mmHg (-6.7 to +66.7 kPa)
Signal Bandwidth	0 to 40 Hz
Sample Rate	112 sps
Measurement Units	mmHg or kPa
Measurement Range	-50 to +300 mmHg (-6.7 to +40 kPa); displays "+++" for pressures >+300 mmHg (+40 kPa) and "---" for pressures <-50 mmHg (-6.7 kPa)
Accuracy	±2 mmHg (0.27 kPa) or 2% of reading (whichever is greater)
Zero Drift	(exclusive of transducer) <0.1 mmHg/° C (<0.01 kPa/° C) after a 5-minute warm-up
Zero Adjust	±200 mmHg (±26.7 kPa)
Filter Frequency	Adjustable from 3 to 40 Hz
Labels	Arterial (ART), Central Venous (CVP), Intracranial (ICP), Left Atrial (LAP), Pulmonary Artery (PA), Right Atrial (RAP), Umbilical Artery (UA), Umbilical Venous (UV), and Generic Pressure (PRS)
Display Parameters	Systolic, diastolic, and mean pressures displayed for arterial, pulmonary artery, umbilical artery, umbilical venous, and generic pressure; mean pressures displayed for all others; cerebral perfusion pressure (CPP) displayed automatically with intracranial pressure monitoring (when ART pressure available)
IBP Alarms	High and low alarms for all measured parameters (e.g., systolic, diastolic, mean, cerebral perfusion pressure)
IBP Alarm Limits	• High — -45 to +300 mmHg (-6 to +40 kPa) • Low — -50 to +295 mmHg (-6.7 to +39.3 kPa)
Waveform Sweep Speeds	50, 25, 12.5, or 6.25 mm/sec
Numeric Update Rate	Every 3 seconds

High Level Analog Input/ Output	
Connector (Front Panel)	4.42 mm (0.174 in) diameter, three conductor TT-phone plug
Dynamic Range	-0.5 to +3.5 V
Gain	ART, PRS, UV, UA 10 mV/mmHg (75 mV/kPa) ±5%; other pressure labels: 25 mV/mmHg (187.5 mV kPa) ±5%

Noninvasive Blood Pressure (NIBP)

Measurement Method	Oscillometry
Measurement Units	mmHg or kPa
Measurement Ranges	• Neonate/Pediatric 1 — 15 to 140 mmHg (2.0 to 18.7 kPa) • Pediatric 2/3 — 30 to 190 mmHg (4 to 25.4Pa) • Pediatric 4/Adult— 30 to 260 mmHg (4 to 34.7 kPa)
Measurement Range	30 to 250 bpm (Pulse Rate)
Measurement Start/Stop	Automatic or user demand
Automatic Measurement Intervals	Adjustable intervals of 1 to 5 minutes in one-minute increments, 10, 15, 20 and 30 minutes; 1, 2, 4, 6 and 8 hours
Measurement Reading Time	Typically less than 45 seconds
Cuff Deflation Rate	Rapid Exhaust Mode • Neonate/Pediatric 1 — <5 seconds from150 mmHg (20 kPa) to 5 mmHg (0.7 kPa) • Pediatric 2, Pediatric 3, Pediatric 4 and Adult — <10 seconds from 260 mmHg (34.7 kPa) to 15 mmHg (2 kPa)
Air Leakage	Maximum 1 mmHg/min (0.13 kPa/sec) at 260 mmHg (34.7 kPa) on 500-ml vessel
Autozero	Automatically zeroes prior to each reading
Artifact Rejection	Software discriminates between pressure signals and extraneous signals, such as patient movement.
Accuracy and Resolution	Satisfies ANSI/AAMI SP10: 2002; and EN 1060:1996
Accuracy of Pressure Measurement	Meets or exceeds ANSI/AAMI standard SP-10 [mean error ±4.5 mmHg (0.6 kPa), standard deviation ±7.3 mmHg (1 kPa)]
Display Parameters	Systolic, diastolic, and mean
NIBP Alarms	High and low alarms for all measured parameters

NIBP Alarm Limit Ranges	
Neonate/Pediatric 1	• High — 20 to 140 mmHg (2.6 to 18.7 kPa) • Low — 15 to 135 mmHg (2 to 18 kPa)
Pediatric 2/3	• High — 35 to 190 mmHg (4.7 to 25.4 kPa) • Low — 30 to 185 mmHg (4 to 24.7 kPa)
Pediatric 4/Adult	• High — 35 to 260 mmHg (4.7 to 34.7 kPa) • Low — 30 to 255 mmHg (4 to 34 kPa)

Spacelabs Healthcare SpO_2 (Option U)

Measurement Method	Functional saturation (oxygen saturation of functional hemoglobins)
Measurement Range	
O_2 Saturation	30% to 100%
Pulse Rate	30 to 249 bpm
Measurement Accuracy (A_{rms})	Established accuracy is the root-mean-square of the error between measured values and reference values obtained from a laboratory hemoximeter during adult human blood studies. Assuming a normal distribution, A_{rms} encompasses 68% of the data population.
Adult	• 70% to 100% ±3% • 0% to 69% unspecified
Neonate	• 70% to 100% ±3% • 0% to 69% unspecified
Saturation Resolution	1%
Pulse Rate Resolution	1 bpm
Averaging Time	Selectable to 4, 8, or 16 seconds
Saturation Alarm Limits	• High — 51% to 100% • Low — 50% to 99% • Desat — 50% to 98%
Numeric Update	Every 3 seconds
TruLink® Sensors	Operate at or near 660 nm and 940 nm; total radiated optical power from 500 to 1,000 nm does not exceed 60 mW

Masimo SET SpO_2 (Option M)

Measurement Method	Functional saturation (oxygen saturation of functional hemoglobins)
Measurement Range	
O_2 Saturation	1% to 100%
Pulse Rate	25 to 240 bpm
Masimo SET SpO_2 Measurement Accuracy (A_{rms})	These sensors have been clinically validated by Masimo using the Masimo MS-11 oximetry board.

Masimo Sensor Models	Weight Range	Saturation Accuracy 70 to 100%	
		No Motion	Low Perfusion†
LNCS Reusable Sensors			
LNCS DC-I	>30 kg	±2%	±2%
LNCS DC-IP	10 to 50 kg	±2%	±2%
LNCS TC-I	>30 kg	±3.5%	±3.5%
LNCS TF-I	>30 kg	±2%	±2%
LNCS Adhesive Sensors			
LNCS Adtx	>30 kg	±2%	±2%
LNCS Pdtx	10 to 50 kg	±2%	±2%
LNCS Inf-L	3 to 20 kg	±2%	±2%
LNCS Neo-L	<3 kg	±3%	±3%
	>40 kg	±2%	±2%
LNCS NeoPt-L	<1 kg	±3%	±3%
LNOP Reusable Sensors			
LNOP DC-I*	>30 kg	±2%	±2%
LNOP DC-IP*	10 to 50 kg	±2%	±2%
LNOP Y-I*	>1 kg	±2%	N/A
LNOP TC-I**	>30 kg	±3.5%	±3.5%
LNOP DC-195*	>30 kg	±2%	±2%
LNOP TF-I**	>30 kg	±2%	±2%
LNOP Adhesive Sensors			
LNOP Adt*	>30 kg	±2%	±2%
LNOP Pdt*	10 to 50 kg	±2%	±2%
LNOP Neo*	<10 kg	±3%	±3%
LNOP NeoPt*	<1 kg	±3%	±3%
LNOP Neo-L*	<3 kg	±3%	±3%
	>40 kg	±2%	±2%
LNOP NeoPt-L*	<1 kg	±3%	±3%

Masimo Sensor Models	Weight Range	Saturation Accuracy 70 to 100%	
		No Motion	Low Perfusion†
LNOP Inf-L*	3 to 20 kg	±2%	±2%
LNOPv In*	3 to 20 kg	±2%	±2%
LNOPv Ne*	<3 kg	±3%	±3%
LNOPv Ad*	>30 kg	±2%	±2%
LNOP Hi-Fi Neo/Adult	<3 kg	±3%	±3%
	>30 kg	±2%	±2%
LNOP Hi-Fi Inf/Ped	3 to 10 kg	±3%	±3%
	10 to 30 kg	±2%	±2%
LNOP Blue**	2.5 to 30 kg	±3%††	±3%
		±4%††	±3%
		±3.3%††	±3%
LNOP Adtx	>30 kg	±2%	±2%
LNOP Pdtx	10 to 50 kg	±2%	±2%

* *The accuracy specification under motion conditions is ±3%. Motion is defined as continuous rubbing and tapping motions at 2 to 4 Hz, at an amplitude of 1 to 2 cm, and continuous random frequency motion between 1 to 5 Hz, at an amplitude of 2 to 3 cm.*

** *These sensors were not validated under motion conditions.*

† *Pulse amplitude >0.2%; % transmission >5% (LNOP Y-I sensor was not validated for low perfusion).*

†† *Saturation accuracy under no motion for neonatal, infant, or pediatric patients with congenital cyanotic cardiac lesions ±3% for 80 to 100%, ±4% for 60 to 80%, and ±3.3% for 70 to 100%.*

Pulse Rate Accuracy	• No Motion — ±3 bpm • Motion — ±5 bpm • Low Perfusion — ±3 bpm
Saturation Resolution	1%
Pulse Rate Resolution	1 bpm
Saturation Alarm Limits	• High — 51% to 100% • Low — 50% to 99% • Desat — 50% to 98%
Numeric Update	Every 3 seconds
Masimo Sensors	Operate at or near 660 nm and 905 nm; total radiated power from 500 nm to 1000 nm does not exceed 0.79 mW
No Implied License	Possession or purchase of this device does not convey any express or implied license to use the device with unauthorized sensors or cables that would alone, or in combination with this device, fall within the scope of the Masimo patent rights.

Nellcor OxiMax SpO_2 (Option N)

Measurement Method	Functional saturation (oxygen saturation of functional hemoglobins)
Measurement Range	
O_2 Saturation	1% to 100%
Pulse Rate	25 to 300 bpm
Nellcor OxiMax Measurement Accuracy (A_{rms})	These sensors have been clinically validated by Nellcor using the Nellcor NELL-1 oximetry board.

Nellcor Sensor Models	Saturation Accuracy 70% to 100%
OxiMax Sensors, Single Patient Use	
MAX-A* MAX-AL*	±2%
MAX-N* † (Adult)	±2%
MAX-N* † (Neonate)	±3%
MAX-P*	±2%
MAX-I*	±2%
MAX-FAST	±2%
MAX-R**	±3.5%
OxiCliq Sensors, Single Patient Use	
OxiCliq A	±2.5%
OxiCliq P	±2.5%
OxiCliq N † (Adult)	±2.5%
OxiCliq N † (Neonate)	±3.5%
OxiCliq I	±2.5%
Reusable Sensors	
D-YS (Infant to Adult)	±3%
D-YS (Neonate)	±4%
D-YS and D-YSE	±3.5%
DS-100A	±3%
OXI-AN (Adult)	±3%
OXI-A/N (Neonate)	±4%
OXI-P/I	±3%

* *The accuracy specification under motion conditions is ±3%.*

** *The accuracy specification has been determined between saturations of 80% and 100%.*

† *The MAX-N and the OxiCliq N were tested on patients >40 kg.*

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.
Saturation Resolution	1%
Pulse Rate Resolution	1 bpm
Saturation Alarm Limits	• High — 51% to 100% • Low — 50% to 99% • SatSeconds — OFF, 10, 25, 50, 100
Numeric Update	Every 3 seconds
Nellcor Sensors	Operate at or near 660 nm and 880 nm; total radiated optical power from 500 to 1,000 nm does not exceed 15 mW

Temperature

Probe Type	YSI 400 or YSI 700; automatically identifies series number and processes both
Sample Rate	14 sps
Measurement Range	0° to 50° C; displays “--.-” for temperatures <0° C and “++.+” for temperatures >50° C
Display Parameters	TEMP (single probe attached); T1, T2, and delta temperature (DT) (two probes attached)
Accuracy	±0.2° C (0° to 25° C); ±0.1° C (25° to 41° C); ±0.2° C (41° to 50° C)
Resolution	0.1° C
Numeric Update Rate	Every 3 seconds
Alarms	High and low for all displayed temperature values
Alarm Limits	• High — 0.1° to 50° C • Low — 0° to 49.9° C

Cardiac Output (CO)

Calculation Method	Thermodilution technique
Sample Rate	112 sps
Measurement Units	CO in L/min, Temperature in degrees Celsius
CO Measurement Range and Accuracy	0.1 to 18 L/min ±10%
Resolution of CO Numeric	0.1 L/min
Temperature Measurement	Monitored via thermistor, injectate 0° to 28° C, blood 17.2° to 43° C
Temperature Measurement Accuracy	±0.2° C

Calculated Values

	Body Surface Area (BSA), Cardiac Index (CI), Stroke Volume (SV), Stroke Volume Index (SVI), Systemic Vascular Resistance (SVR), Pulmonary Vascular Resistance (PVR), Left Ventricular Stroke Work (LVSW), Right Ventricular Stroke Work (RVSW), Systemic Vascular Resistance Index (SVRI), Pulmonary Vascular Resistance Index (PVRI), Left Ventricular Stroke Work Index (LVSWI), and Right Ventricular Stroke Work Index (RVSWI)
Entered Values and Ranges	
Patient Height	20 to 215 cm (8 to 84 in)
Patient Weight	1 to 250 kg (2 to 551 lb)
Heart Rate	0 to 300 bpm
Mean Arterial Pressure	0 to 300 mmHg (0 to 40 kPa)
Central Venous Pressure	0 to 99 mmHg (0 to 13.2 kPa)
Mean Pulmonary Artery Pressure	0 to 99 mmHg (0 to 13.2 kPa)
Pulmonary Wedge Pressure	0 to 99 mmHg (0 to 13.2 kPa)

High Level Outputs

Quantity	2 Ports
User Configurable	• ECG1 and ECG2 • ECG1 and RESP • ECG1 and PRES1 • PRES1 and PRES2 *Note:* *High level outputs on the 91496-L module only support PRES1 and PRES2.*

Volatile Memory

Data is preserved for 10 minutes. Module ceases data collection when power is removed.

Classification

MDD	Class IIb
EN 60601-1	Type CF defibrillator proof Rated for continuous operation

Environmental Requirements

Operating	
Temperature	0° to 50° C (32° to 122° F)
Humidity	95% (noncondensing) up to 30° C (86° F), 10% to 75% up to 40° C (104° F), 10% to 45% up to 50° C (122° F)
Altitude	0 to 3,000 meters (0 to 9,843 feet)
Transport and Storage	
Temperature	-40° to 75° C (-40° to 167° F)
Humidity	95% (noncondensing) up to 50° C (122° F), 10% to 50% up to 75° C (167° F)
Altitude	0 to 12,192 meters (0 to 40,000 feet)

Accessories

Refer to the *Spacelabs Healthcare Supplies and Accessories Catalog* for availability of ECG cables, lead wires, and electrodes, pressure transducers, temperature probes, cardiac output cables, delivery system, injectate temperature probes, injectate housings, blood pressure cuffs, and SpO_2 sensors.

Documentation

CD-ROM Part Numbers	*Bedside, Central, and Telemetry Operations Documents CD-ROM* (P/N 084-1101-xx) *Spacelabs Healthcare Service Documents CD-ROM* (P/N 084-0700-xx)
Supplies and Accessories	*Spacelabs Healthcare Supplies and Accessories Catalog* (sa.spacelabshealthcare.com)

Regulatory Approvals

C SA US	CSA certified. Meets CSA C22.2 No. 601.1 and UL 60601-1 for electrical safety. IEC 60601-1: electrical safety; IEC 60601-2-27: ECG; IEC 60601-2-30: NIBP; IEC 60601-2-34: IBP; IEC 60601-2-49: multiparameter monitors.
CE 0123	CE marked in accordance with the Medical Device Directive 93/42/EEC. EN 1060-1: NIBP. EN 1060-3: NIBP; EN 60601-1: electrical safety; EN 60601-1-2, EMC; EN 60601-2-27: ECG; EN 60601-2-30: NIBP; EN 60601-2-34:IBP; EN 60601-2-49: multiparameter monitors.
RoHS2 2011/65/EU	Does not contain hazardous substances — Europe
	Does not contain hazardous substances — China

35301 SE Center Street, Snoqualmie, WA 98065 | T +1 425 396 3300 | +1 800 287 7108