AS/3™ Compact Anesthesia Monitor upgraded with U-LIFE2

User’s Guide
Part I: For Monitor Setup and Reference

Datex-Ohmeda
Devoted to caring for life
About this guide

This User's Guide describes the most common features and functions offered by the Datex-Ohmeda AS/3 Compact Anesthesia Monitor. Descriptions refer to S/5 software licenses L-ANE03 and L-ANE03A.

If you are a new user of the monitor, we suggest you begin with sections “Safety precautions,” “System introduction,” and “Monitoring basics.” Also read Part II of this User’s Guide.

The following conventions are used:

- Names of the hard keys on the Command Board, Remote Controller and modules are written in the following way: ECG.
- Menu items are written in bold italic typeface: ECG Setup.
- Menu access is described from top to bottom. For example, the selection of the Screen Setup menu item and the Waveform Fields menu item would be shown as Screen Setup - Waveform Fields.
- Messages (alarm messages, informative messages) displayed on the screen are written inside single quotes: ‘Learning’.
- When referring to different sections in this manual, section names are enclosed in double quotes: “Cleaning and care.”
- In this manual, the word “select” means choosing and confirming.

Related documentation

Clinical aspects, basic methods of measurement and technical background:

Instructions for daily use: AS/3 Compact Anesthesia Monitor upgraded with U-LIFE2, User’s Guide Part II

Installation, technical solutions and servicing: AS/3 and CS/3 Compact Monitors upgraded with U-LIFE2 and S/5 Modules, Technical Reference Manuals

Options and selections of the software: Default Configuration Worksheet

Other devices closely related to the AS/3 Compact Anesthesia Monitor:
S/5 Central and S/5 Arrhythmia Workstation User’s Reference Manuals

Intended purpose (Indications for use)

The Datex-Ohmeda AS/3 Compact Anesthesia Monitor upgraded with L-ANE03 or L-ANE03A software is intended for multiparameter patient monitoring with optional patient care documentation.

The AS/3 Compact Anesthesia Monitor upgraded with L-ANE03 or L-ANE03A software is indicated for monitoring of hemodynamic (including arrhythmia and ST-segment analysis), respiratory, ventilatory, gastrointestinal/regional perfusion, Bispectral index (BIS), Entropy (State Entropy and Response Entropy) and neurophysiological status of all hospital patients.

The AS/3 Compact Anesthesia Monitor upgraded with L-ANE03 and L-ANE03A software when using BIS is for monitoring the state of the brain by data acquisition and processing of electroencephalograph signals and may be used as an aid in monitoring the effects of certain anesthetic agents.

The AS/3 Compact Anesthesia Monitor upgraded with L-ANE03 or L-ANE03A software is also indicated for documenting patient care related information.

In accordance with EU Medical Device Directive: IIb

Responsibility of the manufacturer

Datex-Ohmeda Division, Instrumentarium Corp. is responsible for the safety, reliability and performance of the equipment only if:

- assembly, extensions, readjustments, modifications, service and repairs are carried out by personnel authorized by Datex-Ohmeda.
- electrical installation complies with appropriate requirements.
- the equipment is used in accordance with this User’s Guide.
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A portion of the entropy software is derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm.
Safety precautions

These precautions refer to the entire system. Warnings and cautions specific to parts of the system can be found in the relevant section.

**Warnings**

A WARNING indicates a situation in which the user or the patient may be in danger of injury or death.

- Connect only one patient to the monitor at a time.
- Use only hospital-grade grounded power outlets and power cord.
- Some equipment malfunctions may not generate a monitor alarm. Always keep the patient under close surveillance.
- To avoid explosion hazard, do not use the monitor in presence of flammable anesthetics. The monitor measures only non-flammable anesthetics.
- Do not use the monitor in high electromagnetic fields (for example, during MRI).
- Do not touch battery operated monitor during defibrillation procedure.
- If the integrity of the external protective earth conductor arrangement is in doubt, use the monitor with battery operation.
- Do not connect any external devices to the system other than those specified by Datex-Ohmeda.
- Keep the monitor horizontal when the Compact Airway Module is used. Tilting the monitor may cause erroneous results in the Compact Airway Module’s readings and damage the module.
- Do not touch the patient, table, instruments or the monitor during defibrillation.
- If the integrity of the external protective earth conductor arrangement is in doubt, use the monitor with battery operation.

- Use only accessories and defibrillator-proof cables and invasive pressure transducers approved by Datex-Ohmeda. Other cables, transducers and accessories may cause a safety hazard, damage the system, result in increased emissions or decreased immunity of the system or interfere with the measurement. Protection against cardiac defibrillator discharge is due in part to the accessories for pulse oximetry (SpO2), temperature (T) and invasive pressure (P) measurement. Single-use accessories are not designed to be re-used. Re-use may cause a risk of contamination and affect the measurement accuracy.
- The monitor or its components should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the monitor and its components should be observed to verify normal operation in the configuration in which it will be used.
- Pins of connectors identified with the ESD warning symbol should not be touched. Connections should not be made to these connectors unless ESD precautionary procedures are used. See "Safety precautions: ESD precautionary procedures" in the "User’s Reference Manual" for details.
- If liquid has accidentally entered the equipment, disconnect the power cord from the power supply and have the equipment serviced by authorized service personnel.
- If the unit fails to respond as described, do not use the monitor until tested and repaired by authorized service personnel.
Cautions

A CAUTION indicates a situation in which the unit or devices connected to it may be damaged.

- Before connecting the power cord to the power supply, check that the local voltage and frequency correspond with the rating stated on the device plate on the rear panel of the monitor.
- Turn off the power before making any rear panel connections.
- Vibrations during transport may disturb SpO₂, ECG, impedance respiration and NIBP measurements.
- Leave space for circulation of air to prevent the monitor from overheating.
- Do not store or use the monitor outside the temperature and humidity ranges specified in the "Performance" section of this manual.
- Refresh the batteries completely once a month (see section "Cleaning and care").
- Do not subject memory cards to excessive heat, bending or magnetic fields.

Disposal

Dispose of the whole device or parts of it in accordance with local environmental and waste disposal regulations.

Points to note

- Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the "Technical Reference Manual" by qualified Datex-Ohmeda trained personnel.
- Portable and mobile RF communications equipment can affect the medical electrical equipment.
- The allowed Datex-Ohmeda cables, transducers and accessories for the system are listed in the "Supplies and accessories" section of this manual.
- The equipment is suitable for use in the presence of electrosurgery. Please notice the possible limitations in the parameter sections and in the "Performance" section.
- Service and reparations are allowed for authorized service personnel only.
Symbols

Attention, consult accompanying documents.

- When displayed next to the O₂ value, indicates that the FiO₂ low alarm limit is set below 21%.
- When displayed next to the HR value, indicates that the pacer is set on R or a wide QRS is selected.
- BIS: On the Aspect DSC indicates that the converter must not be opened for any reason, or autoclaved.
- On the interface module, M-INT, indicates that it is for connecting external devices. Do not connect patient cables to the module.
- On the M-PRESTN, M-PRETN and M-RESTN module indicates that protection against cardiac defibrillator discharge is due in part to the accessories for pulse oximetry (SpO₂), temperature (T) and invasive pressure (P) measurement.
- On the M-TONO module indicates that the module should be used only with Tonometrics catheters.
- On the rear panel this symbol indicates the following warnings and cautions:
  - Electric shock hazard. Do not open the cover or the back. Refer servicing to qualified personnel.
  - For continued protection against fire hazard, replace the fuse only with one of the same type and rating.
  - Disconnect from the power supply before servicing.
  - Do not touch battery operated monitor during defibrillation.
  - Lithium battery on CPU board: follow the local regulations for disposal.

Type BF (IEC 60601-1) protection against electric shock

Type BF (IEC 60601-1) defibrillator-proof protection against electric shock

Type CF (IEC 60601-1) protection against electric shock

Type CF (IEC 60601-1) defibrillator-proof protection against electric shock

When displayed in the upper left corner of the screen, indicates that the alarms are silenced. When displayed in the menu or digit fields, indicates that the alarm source has been turned off or alarm does not meet the alarm-specific activation criteria.

Equipotentiality. Monitor can be connected to potential equalization conductor.

Alternating current

Fuse. Replace the fuse only with one of the same type and rating.

Battery operation and remaining capacity (green bar)

Battery charging (white bar)
The monitor is connected to the Datex-Ohmeda Network.

Data Card (green) and/or the Menu Card (white) is inserted.

ESD warning symbol for electrostatic sensitive devices. Pins of connectors identified with the ESD warning symbol should not be touched. Connections should not be made to these connectors unless ESD precautionary procedures are used. See "Safety precautions: ESD precautionary procedures" in the "User’s Reference Manual" for details.

Symbol for non-ionizing electromagnetic radiation. Interference may occur in the vicinity of equipment marked with this symbol.

Serial number

Submenu. Selecting a menu item with this symbol opens a new menu.

A blinking heart next to the heart rate or pulse rate value indicates the beats detected.

A lung next to the respiration rate value indicates that respiration rate is calculated from the impedance respiration measurement.
System introduction

(1) AS/3 Compact Anesthesia Monitor with modules inside
(2) Remote Controller, K-REMCO
(3) Printer
(4) Datex-Ohmeda Network

NOTE: Your system may not include all these components.
NOTE: Connect only one patient to the Compact Anesthesia Monitor at a time.

NOTE: After transferring or reinstalling the monitor, always check that it is properly connected and securely attached.

NOTE: The monitor display is fragile. Ensure that it is not placed near a heat source or exposed to mechanical shocks, pressure, moisture, or direct sunlight.

WARNING: Before starting to use the system, ensure that the entire combination complies with the international standard IEC 60601-1-1 and with the requirements of the local authorities. Do not connect any external devices to the system other than those specified by Datex-Ohmeda.

WARNING: A printer must be supplied from an additional transformer providing at least basic isolation (isolating or separating transformer).

WARNING: Never install the monitor so that it is above the patient.
AS/3 Compact Anesthesia Monitor connections

System possibilities
The Datex-Ohmeda AS/3 Compact Anesthesia Monitor provides places for up to four single-width or two double-width modules. You can use the same modules and patient accessories in the Compact Anesthesia Monitor, Compact Critical Care Monitor, Anesthesia Monitor, and Critical Care Monitor.

Optional components for the AS/3 Compact Anesthesia Monitor are:
- built-in recorder in the F-CMREC frame or the recorder module, M-REC
- network functionality with B-UPINET board or B-CMNET board
- Data card and MemCard functionality with memory board, B-CMMEM, or the memory module, M-MEM

Communication between monitors
You can use the AS/3 Compact Anesthesia Monitor as a stand-alone monitor or for
- viewing and receiving data (alarms, vital signs) from other patient monitors
- gathering and storing data during transportation.

To view other patient monitors, the monitor needs to be connected to the Datex-Ohmeda Network. To gather, store, and transfer data between different Datex-Ohmeda monitors, use memory cards.

The green Data Card is for storage and transfer of patient data. The white Menu Card is used for storing the anesthesia record keeping menus and configurations, and for loading patient data and user modes from the Data Card.

1. Air filter
2. Built-in recorder (optional)
3. Connector for anesthesia record keeping keyboard and Remote Controller
4. Potential equalization
5. Receptacle for power cord
6. Place for network connector B-NET
7. Device plate
8. Place for network connector B-UPINET or B-UPI
9. Insertion slots for memory cards (optional)
Monitoring basics

You can control monitoring through the keys on the monitor’s Command Board and side panels, modules, anesthesia record keeping keyboard and Remote Controller. The commands introduced in this User’s Guide mainly focus on the Command Board hard keys and module keys.

Command Board - functions of some hard keys

- **Silence Alarms**
  - Silence active alarms or pre-silence all alarms

- **Freeze**
  - Freeze waveforms for 60 sec.

- **Take Snapshot**
  - Take up to 400 snapshots

- **Review alarm limits**
  - Review alarm limits

- **Start recording and printing**
  - Enter measurement menus

- **Close menus, return to basic screen**

Side panel keys

There are keys on the monitor’s side panel for ON/Standby, NIBP, Invasive Pressures and Recorder functions. With these keys, you can start or end a function immediately.

NOTE: Recorder functions are available with the optional internal recorder or recorder module only.

Remote Controller

The Remote Controller allows access to the same menus as the Command Board. It also has some direct function keys that start or end a function immediately. To enter functions that do not have their own key, press the **Menu** key.
Navigating in menus
A menu is a list of functions or commands. To display a menu, press one of the hard keys. Selections in the menus are made with the ComWheel. For example, to change the ECG display:
1. **Press the key** to open the function menu.
2. **Turn the ComWheel** to select the desired function in the menu.
3. **Push the ComWheel** to open a submenu or an adjustment window.
4. **Push the ComWheel** to confirm the selection.

Common parts for modules

(1) Insertion guide slot
(2) Module keys
(3) Patient cable connectors
(4) Module release latch

Inserting a module
1. Align the module with the insertion guide.
2. Push the module into the Compact Monitor frame until it clicks.

Removing a module
1. Press the release latch.
2. Pull out the module.
You can connect and disconnect modules during monitoring.

Identical modules
Some modules are identical and cannot be used in the same system. See the following table when choosing modules for different parameters.

<table>
<thead>
<tr>
<th>To monitor:</th>
<th>Select only one of these identical modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG (E), NIBP (N), SpO₂ (S), Temp (T), Pressure (P) or Resp (R)</td>
<td>M-PRESTN, M-PRETN, M-RESTN, M-NE(12)STPR, M-NE(12)TPR, M-NE(12)STR, M-ESTPR, M-ETPR, M-ESTR, M-ESTP, M-EST or M-ETP. NOTE: M-ESTP rev. 01, M-EST rev. 00 and M-ETP rev. 00 work only with S-STD93, S-STD94, S-ARK94, S-STD95, S-ARK95, S-STD96 and S-ARK96 software. NOTE: M-PRESTN, M-PRETN and M-RESTN work only with L-ANE01(A) and with rev. 10.9 of S-00A01, S-00A02, L-00A03 and L-00A04 software, or later versions.</td>
</tr>
<tr>
<td>NIBP (N)</td>
<td>M-NIBP, M-PRESTN, M-PRETN, M-RESTN, M-NE(12)STPR, M-NE(12)TPR, M-NE(12)STR</td>
</tr>
<tr>
<td>Pressure (P)</td>
<td>M-P, M-PP or M-PT</td>
</tr>
<tr>
<td>C.O. (CO), Pressure (P) or SvO₂ (Sv)</td>
<td>M-COP or M-COPsv</td>
</tr>
<tr>
<td>CO₂ (O₂, O₂ (O), Spirometry (V), anesthetic agents(A), agent identification (i), gas exchange (X)</td>
<td>M-CO, M-COV, M-CAiOV, M-CAiO, M-CAiOvX, M-miniC</td>
</tr>
<tr>
<td>Separate SpO₂ measurement</td>
<td>M-NSAT or M-OSAT NOTE: M-NSAT and M-OSAT can be used with M-PRESTN, M-PRETN, M-RESTN, M-NE(12)STPR, M-NE(12)TPR, M-NE(12)STR, M-ESTPR, M-ESTP, M-ESTR, M-EST and M-EST. The SpO₂ measurement in M-NSAT and M-OSAT automatically overrides the SpO₂ measurement in these modules.</td>
</tr>
<tr>
<td>The following parameters have no identical modules:</td>
<td></td>
</tr>
<tr>
<td>NMT</td>
<td>M-NMT</td>
</tr>
<tr>
<td>EEG and AEP</td>
<td>M-EEG</td>
</tr>
<tr>
<td>Tonometry (PigCO₂)</td>
<td>M-TONO</td>
</tr>
<tr>
<td>BIS</td>
<td>M-BIS</td>
</tr>
<tr>
<td>Entropy</td>
<td>M-ENTROPY</td>
</tr>
</tbody>
</table>
Setting up the monitor before use

Before starting to use the monitor, check the monitor installation settings and what is configured in different user modes, and make the necessary changes. The user modes are hospital-specific. The default modes are CPB Mode, General, Invasive, Regional, Neuro, Pediatric and Recovery. If you wish to make permanent changes, we recommend that you contact the person responsible for the configuration of the system. For more information about the default user modes, see the "Default Configuration Worksheet" delivered with the monitor. For more information about the installation settings and user modes, see the "User’s Reference Manual."

Passwords
The default password for entering the Install/Service menu is 16 4 34.
The default password for entering the Save Modes menu is 13 20 31.

Interfacing
1. Press Monitor Setup and select Interfacing.
2. Select desired interfaced internal modules or external monitors.

Setting time and date
NOTE: If the monitor is connected to the S/5 Central, it follows the Central’s time settings and the Time and Date menu is not available.

NOTE: You cannot change the monitor’s time settings after the case has been started.
1. Press Monitor Setup and select Time and Date.
2. Turn and push the ComWheel to set the time and date.
Changing the monitor installation settings

The monitor installation settings are the same in all user modes. The changes are preserved until changed again.
Press Monitor Setup and select Install/Service, enter the password and select Installation:

### Printer

- **ECG Printout Type:** Select 25 mm, 50 mm or USA.
- **Snapshot Printout:** Select 12.5 or 25 mm/s.
- **Printer Connection:** Select printer connection (default: None).
- **Paper Size:** Select A4 or Letter (default A4).

### Alarm options

- **Show limits:** Select YES to show alarm limits in digit fields.
- **Audio OFF:** Select NO to disable alarm silencing. This hides the silencing options in the Audio ON/OFF menu in Alarms Setup.
- **Latching Alarms:** Select YES to keep alarm messages on screen until Silence Alarms key is pressed.
- **Reminder Volume:** Adjust volume of audible alarm reminder tone.
- **Alarm Tones:** Select alarm tones.

### Display setup

Change the number of colors on the display (the result depends on the LCD display type.)

### Monitor settings

- **Monitor Type:** Monitor type defines the text on the start screen.
- **ARRWS Network:** Select YES if Arrhythmia Workstation is in the network.
- **ARK Settings:** Set Record Keeping ON/OFF and change settings.
- **Parameter Settings:** Set tidal volume calculation conditions, CO₂ humidity compensation and inspired flow drawing direction.

### Units

- Change units for height, weight, parameters, energy expenditure, laboratory values and calculations.
- You can change temperature units in the Temp Setup menu (Others - Resp&Temp Setup - Temp Setup) and CO₂ units in the CO₂ Setup menu (Airway Gas - CO₂ Setup). The changes are permanent.
Changing the user modes

NOTE: If you want to make changes in user modes, we recommend you contact the person responsible for the configuration. When new settings are saved, they should be marked in the "Default Configuration Worksheets." See below for instructions on how to change the modes permanently.

Select the user mode you wish to change by pressing Monitor Setup and selecting Select Mode.

1. To make changes in:
   - sweep speed, parameter colors, screen setup, Normal Screen layout, pages layout, trends, snapshots, press Monitor Setup. If necessary, select Install/Service. For instructions, see below.
   - parameter setup, press a parameter key and go to the setup menu. For instructions, see parameter sections in User’s Guide Part II.
   - alarm limits and volume, press Alarms Setup. For instructions, see section "Alarms" in User’s Guide Part II.

3. Confirm changes through Monitor Setup - Install/Service - Save Modes - Save. You can save the changes also in other modes. If you do not save the changes in the modes, they are temporary and valid only until you reset the case or change the mode or until more than 15 minutes has elapsed from the turn-off of the monitor. Entering Save Modes requires a password, see “Passwords.”

Changing the startup mode
1. Select Monitor Setup - Install/Service - Save Modes.
2. Select Startup Mode - 1, 2, 3, 4, 5 or 6.

Renaming a mode
1. Select Monitor Setup - Install/Service - Save Modes.
2. Select the mode, select Name and give a new name.

Loading modes
1. Select Monitor Setup - Install/Service - Save Modes.
2. Select Load Modes and load from/to card or from/to network.

Changing the waveform sweep speeds
1. Select Monitor Setup - Sweep Speeds.
2. Select the parameters and adjust the values. Slow waveforms show the amplitude changes better.

Changing the parameter colors
To change the colors for parameter waveforms, digits and trends, select Monitor Setup - Install/Service - Colors.

Changing the recorder settings
1. Press Record/Print.
2. Select Record Waveforms and select the recorded waveforms, delay, paper speed and length, and select if you wish to record waveforms on alarms.
3. Select Record Trends and set the numerical trend resolution and trend type, default trend type, and select the graphical trend recorded in upper and lower field.

Changing the printer settings
Select Record/Print - Print Graphical and select the pages to print and how many hours to print on one page.
Setting the Normal Screen format
Press Monitor Setup and select Screen Setup.
- Waveform Fields: Select the displayed waveforms.
- Digit Fields: Change the contents of a field or turn it off.
- Split Screen: Select what you wish to display with the waveforms (minitrends, spirometry, EEG, EP, ST or None).
- Minitrend Length: Select the length of the minitrend.

Changing the layout of other pages
You can check the contents of the pages by pushing the ComWheel in Normal Screen. To change the layout of the pages:
1. Press Monitor Setup and select Install/Service - Pages Setup.
2. Select the page and make the changes.

Setting the default trend
You can select graphical or numerical trends to be displayed by default.
2. Select Default Trends and Graph or Num.

Configuring trends
To set the parameters displayed on the graphical trend pages:
2. Select the graphical trend page you want to change.
3. Select parameters for fields.

Setting trend length and time scale
Press Trends.
- Select Time Scale and the value.
- Select Trend Scales and adjust the scales.

Configuring snapshots
To change the snapshot setting, press Monitor Setup and select Install/Service - Trends & Snapshots - Snapshot:
- Field x: Select to display waveform, graphical trend or numerical trend.
- Create on Alarms: Select Yes (default) to create automatic snapshots for Tachy, Brady, Art high, Art low alarms. You can select other arrhythmia alarms to create snapshots through the Arrhythmia Alarms menu.
- Automatic Print: Select All to print all the snapshots immediately after creation, Alarms to print snapshots created on alarms or No to print only on request.
- Print Loops: Select Yes to print Patient Spirometry loops when snapshots are taken.
## Cleaning and care

<table>
<thead>
<tr>
<th>Daily and between patients</th>
<th>Once a month</th>
<th>Every six months</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Wipe the monitor surface.</td>
<td>- Perform gas calibration for gas exchange monitoring, see below.</td>
<td>- Perform gas calibration for tonometry and airway gas monitoring, see below.</td>
</tr>
<tr>
<td>- Wipe the ECG trunk cable, NIBP cuff and cables and SpO2 sensors.</td>
<td>- Refresh the batteries, see below.</td>
<td></td>
</tr>
<tr>
<td>- Change or sterilize all airway and invasive patient accessories.</td>
<td>- Check the fan filter on the monitor’s side panel, on the gas module’s front panel and under the display unit. Clean if necessary:</td>
<td></td>
</tr>
<tr>
<td>- Clean, disinfect or sterilize reusable temperature probes.</td>
<td>1. Pull out the filter.</td>
<td></td>
</tr>
<tr>
<td>- Change the Tonometrics catheter between patients.</td>
<td>2. Wash it in detergent solution and allow to dry before reinserting.</td>
<td></td>
</tr>
<tr>
<td>- Empty the D-fend water trap, see below.</td>
<td>Do not use pressurized air.</td>
<td></td>
</tr>
<tr>
<td>- Change the BIS sensor between patients.</td>
<td>Replace the filter if it is damaged.</td>
<td></td>
</tr>
<tr>
<td>- Change the entropy sensor between patients.</td>
<td>- Change the D-fend water trap every two months and when ‘Replace D-fend’ appears.</td>
<td></td>
</tr>
<tr>
<td>- Check that the accessories, cables and monitor parts are clean and intact.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Permitted detergents
- Datex-Ohmeda Cleaning Fluid
- Other mild detergents

### Permitted disinfectants
- Ethanol
- Isopro pyl alcohol
- Chlorite compounds
- Glutaraldehyde

### DO NOT!
- Do not use hypochlorite, acetone-, phenol- or ammonia based cleaners.
- Do not autoclave the device or its parts.
- Do not immerse any part of the device in liquids, or allow liquid to enter the interior.
- Do not apply pressurized air to any outlet or tubing connected to the monitor.

**NOTE:** For details about cleaning, disinfecting and sterilizing the accessories, see the instructions for use in the accessory package.

### Before cleaning
1. Turn off the monitor from the power switch.
2. Disconnect the power cord.

### After cleaning
1. Let dry completely.
2. Reconnect the power cord and turn on the monitor.

### More comprehensive checking
See the “Technical Reference Manual.”

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**WARNING:** After cleaning or if liquid has accidentally entered the monitor, ensure that every part of the monitor is dry before reconnecting it to the power supply.
D-fend water trap
- Empty the container whenever half full.
- Change the D-fend or Mini D-fend water trap every two months and when ‘Replace D-fend’ appears.
- The water trap cartridge is disposable. Do not wash or reuse the cartridge.
- Change the green D-fend+ water trap every 24 hours and when ‘Replace D-fend’ appears.

Reusable D-lite sensor
The reusable D-lite sensor can be washed in a washing machine and steam autoclaved. Make sure that the sensor is dry and connectors are not damaged. A tight connection is essential for correct measurement.

Other accessories
For information on how to clean and check reusable accessories, see the accessory package. Do not reuse single-use disposable accessories.

Refreshing the batteries
1. Turn on the monitor.
2. Connect the monitor power cord to power supply for at least 10 hours.
3. Remove the power cord and wait until the monitor turns off. Then wait for another 15 minutes.
4. Reconnect the power cord to power supply and charge the battery for at least 10 hours.

Changing fuses
1. Remove the power cord.
2. Remove the fuse holder by pushing the locking pin and pulling the holder gently out.
3. If a fuse is blown, ensure that you replace it with a fuse of the correct type and rating.
Calibrating
1. Turn on the power. Let the monitor warm up for 30 minutes.
2. Attach a regulator to the calibration gas container.

NOTE: % is used for CO₂ regardless of selected units.
NOTE: See section "Supplies and accessories" for correct regulator and gas.
NOTE: Ensure that the calibration gas and regulator are functioning properly before calibration. Perform annual maintenance on the regulator as required.

Calibrating airway gases
Follow the recommended calibration intervals (every six months in normal use and every two months in continuous use) to ensure that the measurement accuracy remains within specifications.
1. Attach a new sampling line to the water trap. Connect the other end of the sampling line to the regulator on the gas container.
2. Press the Airway Gas key.
4. Wait until the texts ‘Zero OK’ and then ‘Feed Gas’ appear on the screen, open the regulator and start feeding gas. Push the ComWheel and continue feeding gas until the text ‘Adjust’ is displayed.
5. Check that the displayed gas values match the values on the calibration gas container. Adjust with the ComWheel, if necessary.

NOTE: Calibrate M-miniC module with calibration gas 755580 only and set the O₂ concentration to 20%.

Calibrating Patient Spirometry
Perform flow calibration once a year or when the difference between the inspiratory and expiratory volumes is permanent. See the "Technical Reference Manual" for more information.

Calibrating gas exchange
To ensure gas exchange accuracy, perform the airway gas calibration once a month and patient spirometry calibration once a year. Use 2-m (7-ft) airway gas sampling line.

Calibrating tonometry
1. Connect the calibration gas sampling line to the D-gate regulator and to the module’s catheter connector.
2. Press the Others key and select Tonometry - PgCO₂ Calibration.
3. Wait until the text ‘Feed gas’ appears. Open the regulator and start feeding gas until the text ‘Adjust’ appears.
4. Close the regulator.
5. Check that the displayed values match the values on the calibration gas container. Adjust with the ComWheel, if necessary, and confirm.
6. If airway gases are monitored, calibrate the gas module at the same time.

NOTE: Use only Datex-Ohmeda Calibration gas sampling line; wrong line length or diameter can cause incorrect calibration.
NOTE: Do not wash or disinfect calibration gas sampling lines.

Calibration check of temperature, NIBP and invasive blood pressures
Calibration check of temperature, NIBP and invasive blood pressures should be performed at least once a year by qualified service personnel as a part of the Planned Maintenance, see the "Technical Reference Manual."
Alarm basics

Enabling the alarms
To enable the alarms, connect the patient cables. If the alarm source is selected, the alarms are operative also when the measurement is not displayed (except the respiration measurement alarms).

Alarm indications
When an alarm becomes active, messages appear in the order of priority. The alarming measurement value flashes and its background color indicates the alarm category (see the table below). In some cases, there may be a message on the display giving more detailed information. An audible alarm is also triggered.

For details about alarms, see section "Alarms" in User’s Guide Part II.

NOTE: If the monitor is connected to the network, the alarms can be heard and seen on the S/5 Central as well. Please consult the "Datex-Ohmeda S/5 Central User’s Reference Manual: Alarms" for details.

Alarm categories
The priority depends primarily on the cause and alarm duration.

<table>
<thead>
<tr>
<th>Visual</th>
<th>Meaning</th>
<th>Tone pattern (selected when the system is configured)</th>
<th>Front panel LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>For life threatening situations</td>
<td>Triple + double beep every 5 seconds or continuous beep</td>
<td>red LED lit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--- -- 5 --- / -----</td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>For serious but not life threatening problems</td>
<td>Triple beep every 19 seconds or double beep every 5 seconds</td>
<td>yellow LED blinking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--- 19 / 5 -- 5 --</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>Advisory</td>
<td>Single beep</td>
<td>yellow LED lit</td>
</tr>
</tbody>
</table>
WARNING: Operation of the monitor outside the specified values may cause inaccurate results.

Datex-Ohmeda Compact Anesthesia Monitor

**Power supply**
- Rated voltages and frequencies: 100 to 240 V 50/60 Hz
- Allowed voltage fluctuations: ±10%
- Max. power consumption: 140 VA

**Battery operation**
- Batteries: NiCd
- Charging time: 5 hours
- Operation time: up to 1 hour

**Environmental conditions**
- Operating temperature: +10 to +35°C (50 to 95°F)
- Storage and transport temperature: -10 to +50°C (14 to 122°F)
- Relative humidity in airway: 10 to 90% noncondensing
- Atmospheric pressure: 660 to 1060 mbar (500 to 800 mmHg)

**Alarm behavior**
The maximum alarm delay of the alarm at the monitor signal output to network: 1.1 seconds
If the alarm mode is latched, the technical alarms are latched as well. This does not comply with the NIBP (IEC 60601-2-30) and invasive pressure (IEC 60601-2-34) standard requirements. Silencing alarms for 5 minutes does not comply with the SpO2 (ISO 9919) standard requirements.

**Hemodynamic Modules M-NE(12)STPR, M-NE(12)TPR, M-NE(12)STR, M-ESTPR, M-ETPR, M-ESTR; M-P, M-PP, M-PT; M-NIBP**
Letters in the module name stand for:
- N= NIBP, E= ECG, 12 = up to 12 ECG leads,
- S= Pulse oximetry, T= Temperature, P= Invasive blood pressure, R= Impedance respiration

**ECG**
- Filter modes:
  - monitoring filter: 0.5 to 30 Hz
  - ST filter: 0.05 to 30 Hz
  - diagnostic filter: 0.05 to 100 Hz
  - 12-lead ECG: 0.05 to 150 Hz
- With 60 Hz power supply frequency:
  - monitoring filter: 0.5 to 40 Hz
  - ST filter: 0.05 to 40 Hz
- Defibrillation protection: 5000V, 360J
- Recovery time: 2 seconds
- Heart rate:
  - Measurement range: 30 to 250 bpm
  - Measurement accuracy: ±5% or ±5 bpm

**Display averaging time:** 5 seconds
**Display update time:** 5 seconds
**Pacemaker pulse detection:**
  - detection level: 2 to 500 mV
  - pulse duration: 0.5 to 2 ms

**Impedance respiration**
- Respiration range: 4 to 120 resp/min
- Accuracy: ±5% or ±5 resp/min

**Temperature**
- Measurement range: 10 to 45°C (50 to 113°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

**Invasive blood pressure**
- Measurement range: -40 to 320 mmHg
- Measurement accuracy: ±5% or ±2 mmHg

**Pulse rate:**
- Measurement range: 30 to 250 bpm
- Accuracy: ±5% or ±5 bpm
- Transducer sensitivity: 5µV/V/mmHg
NIBP
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
Typical measuring time: adult 23 s, infant 20 s

NOTE: NIBP measurement is intended for patients
weighing over 5 kg (11 lb.)

Pulse oximetry
Proportional scaling of plethysmographic waveform.

SpO2
Measurement and display range: 40 to 100%
Calibration range: 50 to 100%
Calibrated against functional oxygen saturation.
Measurement accuracy (% SpO2 ±1SD) 1):
100 to 80%, ±2 digits;
80 to 50%, ±3 digits;
50 to 40%, unspecified
Display update time: 5 seconds
Display averaging time: adjustable; 10 sec,
20 sec or beat-to-beat
Display resolution: 1 digit = 1% of SpO2

Pulse rate:
Measurement and display range: 30 to 250 bpm
Measurement accuracy: ±5% or ±5 bpm

Default alarm limits
SpO2 high Off, low 90%; PR high 160, low 40

NOTE: Pulse oximetry measurement is intended for
patients weighing over 3 kg (6.6 lb.).

Hemodynamic modules M-PRESTN,
M-PRETN and M-RESTN

Letters in the module name stand for:
P= Invasive blood pressure; R= Impedance
respiration; E= ECG; S= Pulse oximetry;
T= Temperature; N= NIBP

ECG 3)
Filter modes:
monitoring filter 0.5 to 30 Hz
ST filter 0.05 to 30 Hz
diagnostic filter 0.05 to 150 Hz
With 60 Hz power supply frequency:
monitoring filter 0.5 to 40 Hz
ST filter 0.05 to 40 Hz
Defibrillation protection: 5000 V, 360 J
Recovery time: 5 seconds
Heart rate:
Measurement range: 30 to 250 bpm
Measurement accuracy: ±5 % or ±5 bpm
Display averaging time: 5 seconds
Display update time: 5 seconds
Average heart rate response time and time range of
response time:
Response time 80 to 120 bpm: 7.9s (6.4 to 9.1 s)
Response time 80 to 40 bpm: 9.9 s (8.3 to 11.4 s)
Maximum Tall T wave amplitude that does not
disturb the heart rate calculation: 2.2 mV
The heart rate calculation operates with irregular
rhythms of ANSI/AAMI EC13 3.1.2.1 as follows:
a): 75bpm
b): 61bpm
c): 115bpm
d): 97bpm

Pacemaker pulse detection:
detection level: 2 to 700 mV
pulse duration: 0.5 to 2 ms
The monitor is specified for both of the methods A
and B required in EC13 section 4.1.4.2.
Offset voltage range: <800 mV
CMRR: >95 dB
Pacer pulse rejection of fast ECG signals:
1.29 V/s according to the test defined in
EC13 section 4.1.4.3.
Pacemaker detector may not operate correctly
during the use of high-frequency (HF) surgical
equipment. The disturbances of HF surgical
equipment typically cause false positive pacer
detection.

1) Accuracy is based on deep hypoxia studies using
Datex-Ohmeda FingerSat Sensors on volunteered
subjects. Arterial blood samples have been
analyzed by a Radiometer OSM Co-oximeter. 1
standard deviation = 68 % of all readings in the
specified range in stable conditions.

2) Limits are adjustable: OFF to 51% for SpO2 high
50 to 100% for SpO2 low
250 to 35 bpm for PR high
30 to 245 bpm for PR low

3) The isolation barrier capacitance in the module
has been minimized to reduce the hazard of burns
in the event of a defect in the ESU return electrode
connection.
Direct current for leads-off detection through an active patient electrode: 25 nA
Direct current for leads-off detection through a reference electrode: 225 nA
The normalized respiration sensing current between RA (R) and LL (L) or RA (R) and LA (L) and LL (L): 3.2 µA
Frequency of respiration sensing current: 31.25 kHz
Minimizing the effects of the line isolation monitor transients:
Crystal controlled oscillator used as the operating frequency source of the patient isolation power supply.
The average time and time range ( ) to alarm for tachycardia are as follows (ANSI/AAMI EC13 3.1.2.1.g):
Figure 4a halved amplitude: 6.5 s (6.1 to 7.1 s)
Figure 4a normal amplitude: 5.3 s (4.9 to 5.7 s)
Figure 4a doubled amplitude: 5.8 s (5.5 to 6.2 s)
Figure 4b halved amplitude: 5.0 s (4.5 to 6.0 s)
Figure 4b normal amplitude: 5.4 s (4.6 to 6.0 s)
Figure 4b doubled amplitude: 5.3 s (4.6 to 5.8 s)
The ECG measurement fulfills the requirements of the ANSI/AAMI EC11 3.2.7.2/4.2.7.2 by using the test methods a, b, c and e.

Direct cardiac application:
The display area reserved for the ECG measurement in the monitoring system screen may not be adequate for displaying the complete ECG amplitude when measuring ECG direct from the surface of the heart. Clipping of the signal can be reduced by adjusting the size of the signal on the display (for example, from the default 1.0 to 0.2) in the ECG menu.

Auxiliary output, ECG:
Bandwidth of auxiliary output: 0.5 to 30Hz
Gain: 1mV ECG signal is 1V at the auxiliary output.
Propagation delay: < 15ms.
The pacemaker pulses have been replaced with 2ms fixed digital pulses at the ECG output for IABP or defibrillator equipment.
An auxiliary device that fulfills the requirements of the IEC 60601-1 standard can be connected to the auxiliary output. There are no other limitations, because the auxiliary output of the monitor is galvanically isolated from patient applied part of the ECG measurement.

Impedance respiration
Respiration range: 4 to 120 resp/min
Accuracy: ± 5% or ± 5 resp/min
The EMC immunity of the respiration measurement has been tested with 1 Vrms and 1 V/m. This level has been used for optimizing the immunity of the respiration measurement to damp the operating frequency of the electrosurgery equipment.
NOTE: Impedance respiration measurement is intended for patients over three years old.

Invasive blood pressure
Measurement range: -40 to 320 mmHg
Measurement accuracy: ±5 % or ±2 mmHg
Pulse rate:
Measurement range: 30 to 250 bpm
Accuracy: ±5 % or ±5 bpm
Transducer sensitivity: 5 µV/V/mmHg

Temperature
Measurement range: 10 to 45°C (50 to 113°F)
Measurement accuracy:
±0.1 °C (25 to 45.0°C)
±0.2° C (10 to 24.9°C)
Measurement accuracy with single-use sensors:
±0.2 °C (25 to 45.0°C)
±0.3 °C (10 to 24.9 °C)
Probe type: Use only Datex-Ohmeda temperature probes or defibrillator-proof YSI 400 series probes.

Time constant of temperature probes:
Reusable skin temperature probe: 3 s
Reusable adult central temperature probe: 6 s
Reusable pediatric central temperature probe: 4 s
Disposable skin temperature probe: 3 to 6s
Disposable central temperature probe, 12F: 5 to 8 s
Disposable central temperature probe, 9F: 5 to 8 s
Esophageal stethoscope with temperature probe, 9F: 15 s
Esophageal stethoscope with temperature probe, 12F: 16 s
Esophageal stethoscope with temperature probe, 18F: 23 s
Esophageal stethoscope with temperature probe, 24F: 32 s
4) The isolation barrier capacitance in the module has been minimized to reduce the hazard of burns in the event of a defect in the ESU return electrode connection.
5) Response time of the probe exceeds 150 s.
NIBP
Measurement range: adult 25 to 260 mmHg
child 25 to 195 mmHg
infant 15 to 145 mmHg
Pulse rate range accepted: 20 to 250 bpm
Typical measuring time: adult 23 s, infant 20 s
Overall system accuracy:
Meets or exceeds SP10-2002 AAMI standards
The ESU does not cause a burn hazard through the
NIBP cuff, because there is no electrical connection
between the cuff and the NIBP measuring
electronics.
NOTE: NIBP measurement is intended for patients
weighing over 5 kg (11 lb.)

SpO₂ 6
Measurement and display range: 40 to 100 %
Calibration range: 70 to 100 %
Calibrated against functional oxygen saturation.
Measurement accuracy 7 (% SpO₂ ±1SD):
100 to 70 %, ±2 digits,
±3 digits during clinical patient motion;
69 to 40 %, unspecified
Display update time:
5 seconds continuous, defined by the main
software of the monitor
Display resolution: 1 digit (1% of SpO₂)

Wavelength of SpO₂ probe LEDs:
Infrared LED 900 nm
Red LED 660 nm

Maximum energy of SpO₂ probe LEDs:
Infrared LED 42 µJ/pulse
Red LED 62 µJ/pulse

Pulse rate:
Measurement and display range: 30 to 250 bpm
Measurement accuracy: ±5 % or ±5 bpm

Default alarm limits 8):
SpO₂ high Off, low 90%
PR high 160, low 40

Cardiac Output Modules,
M-COP and M-COPSv
Pressure performance as above.
Cardiac output
Measurement range: 0.1 to 20 l/min
Repeatability: ±2 % or 0.02 l/min
Catheters: Edwards Lifesciences Corp. compatible
SvO₂
Measurement range: 1 to 98%
Measurement accuracy:
±2% SvO₂ equals 1 standard deviation for range of
30% to 95% SvO₂ and
6.7 to 16.7 g/dl Hb when using in vivo calibration.
Catheters: Edwards Lifesciences Corp. SvO₂ catheter

REF
Measurement range: 1 to 85%
Repeatability: ±2% as measured by
electronically generated pulsatile curves for range
10 to 60%. For other ranges accuracy is unspecified.
Catheters: Edwards Lifesciences Corp. REF catheter

6) The isolation barrier capacitance in the module
has been minimized to reduce the hazard of burns
in the event of a defect in the ESU return electrode
connection.
7) Accuracy is based on deep hypoxia studies with
volunteered subjects during motion and non-
motion conditions over a wide range of arterial
blood oxygen saturations as compared to arterial
blood CO-Oximetry.
8) Limits are adjustable: OFF to 51% for SpO₂ high
50 to 100% for SpO₂ low
250 to 35 bpm for PR high
30 to 245 bpm for PR low
Datex-Ohmeda Compatible Saturation Module, M-OSAT

Automatic scaling of plethysmographic waveform.

**SpO₂**
Measurement and display range: 20 to 100%
Calibration range: 70 to 100%
Accuracy 70 to 100% (1 standard deviation):
±2 digits
±3 digits during clinical patient motion
Display resolution: 1 digit = 1% SpO₂
Display averaging time: 12 seconds
Display update time: 5 seconds
Calibrated against functional saturation.

**Pulse rate**
Measurement and display range: 30 to 250 bpm
Measurement accuracy: ±2 % or ±2 bpm (whichever is greater)
Resolution: 1 bpm
Display averaging time: 12 seconds
Display update time: 5 seconds

Default alarm limits
SpO₂ high Off, low 90%
PR high 160, low 40

Nellcor Compatible Saturation Module, M-NSAT

Automatic scaling of plethysmographic waveform.

**SpO₂**
Measurement and display range: 20 to 100%
Calibration range: 70 to 100%
Calibrated against functional oxygen saturation.

Measurement accuracy:
100 to 70%: ±2 to ±3.5 digits
69 to 20%: unspecified
Display update time: 5 seconds
Display resolution: 1 digit = 1% SpO₂

**Pulse rate**
Measurement and display range: 30 to 250 bpm
Measurement accuracy: ±3 bpm

Default alarm limits
SpO₂ high Off, low 90%
PR high 160, low 40

Tonometry Module, M-TONO

Gastrointestinal PCO₂ (PgCO₂)
Measurement range: 0 to 30 kPa (0 to 228 mmHg)
Accuracy:
0 to 15 kPa ±(0.5 kPa + 5% of reading)
0 to 113 mmHg ±(4 mmHg + 5% of reading)
15 to 30 kPa 1.5 kPa ± 15% of reading
113 to 228 mmHg 12 mmHg ± 15% of reading
Measurement interval: 10 minutes

Default alarm limits
SpO₂ high Off, low 90%
PR high 160, low 40

The accuracy value depends on the sensor used. Accuracy is based on Nellcor protocol #081400-N, Non-invasive Controlled Hypoxia Study Rev. B.

:Typical value.
Compact Airway Modules, M-CO, M-COV, M-CAiO, M-CAiOV, M-CAiOVX

Letters in the name stand for: C = CO₂ and N₂O, O = Patient O₂, A = Anesthetic agents, i = Agent identification, V = Patient Spirometry, X = Gas exchange

- **Sampling rate**: 200 ml/min ± 20 ml/min
- **Sampling delay**: 2.5 s typical with a 3-m sampling line
- **Total system response time**: 2.9 seconds typical with a 3-m sampling line, including sampling delay and rise time
- **Warm-up time**: 2 to 5 min, 30 min for full spec.

**Default alarm limits**

- **EtCO₂**: high 8%, low 3%
- **FiEnf**: high 5.1%, low Off
- **FiCO₂**: high 3%, low Off
- **EtEnf**: high 3.4%, low Off
- **EtCO₂**: high Off, low 10%
- **EtO₂**: high 3.4%, low Off
- **FiO₂**: high 2.3%, low Off
- **FiN₂O**: high 82%
- **FiDes**: high 18%, low Off
- **FiHal**: high 2.2%, low Off
- **EtDes**: high 12%, low Off
- **EtHal**: high 1.5%, low Off
- **FiSev**: high 5.1%, low Off
- **EtSev**: high 3.4%, low Off

Non-disturbing gases, maximum effect on readings:
- CO₂ < 0.2 vol%, N₂O, O₂ < 2 vol%, anesth. agents: < 0.15 vol%:
  - Ethanol C₂H₅OH < 0.3%
  - Acetone < 0.1%
  - Methane CH₄ < 0.2%
  - Nitrogen N₂
  - Carbon monoxide CO
  - Nitric oxide NO < 200 ppm
  - Water vapor

Effect of Helium: decreases CO₂ readings < 0.6 vol% typically

**Carbon dioxide (CO₂)**

- **Measurement range**: 0 to 15 vol% (0 to 15 kPa, 0 to 113 mmHg)
- **Measurement rise time**: < 400 ms typical
- **Accuracy**: ≤ 0.2 vol% of reading
- **Gas cross effects**: < 20% of reading

**Oxygen (O₂)**

- **Measurement range**: 0 to 100 vol%
- **Measurement rise time**: < 400 ms typical
- **Accuracy**: ± 2 vol%
- **Gas cross effects**: < 1 vol% anesthetic agents, < 2 vol% N₂O

**Nitrous oxide (N₂O)**

- **Measurement range**: 0 to 100%
- **Measurement rise time**: < 450 ms typical
- **Accuracy**: ± 3 vol%
- **Gas cross effects**: < 2 vol% anesthetic agents

**Respiration rate (RR)**

- **Measurement range**: 4 to 60 breaths/min
- **Detection criteria**: 1 % variation in CO₂

**Anesthetic agent (AA)**

- **Measurement rise time**: < 400 ms typical
- **Gas cross effects**: < 0.15 vol% N₂O
- **Halothane, Isoflurane, Enflurane**
  - **Measurement range**: 0 to 6%
  - **Accuracy**: ± 0.2 vol%
  - **Sevoflurane**
    - **Measurement range**: 0 to 8%
    - **Accuracy**: ± 0.2 vol%
  - **Desflurane**
    - **Measurement range**: 0 to 20%
    - **Accuracy**: 0 to 5% ± 0.2 vol%, 5 to 10% ± 0.5 vol%, 10 to 20% ± 1.0 vol%

**Agent identification**

- **Identification threshold**: 0.15 vol%

- Typical value.

- Alarm limits and their adjustment range may vary depending on the mode used.
Patient Spirometry
Using D-lite (+) or Pedi-lite (+) flow sensor and gas sampler:

<table>
<thead>
<tr>
<th>Sensor specifications:</th>
<th>D-lite(+)</th>
<th>Pedi-lite(+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead space:</td>
<td>9.5 ml</td>
<td>2.5 ml</td>
</tr>
<tr>
<td>Resistance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 30 l/min</td>
<td>0.5 cmH2O</td>
<td>1.0 cmH2O</td>
</tr>
<tr>
<td>at 10 l/min</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gas Exchange
VO2 and VCO2:
Measurement range: 20 to 1000 ml/min

RQ, Respiratory Quotient ($=\frac{VCO2}{VO2}$)
Measurement range: 0.6 to 1.2

Non-disturbing gases are those with a maximum effect on the CO2 reading < 0.2 vol%. The effect is valid for specific concentrations shown in parentheses of the non-disturbing gas:
- Ethanol C2H5OH (<0.3%)
- Acetone (<0.1%)
- Methane CH4 (<0.2%)
- Nitrogen N2
- Water vapor
- Trichloromonofluoromethane (<1%)
- Dichlorotetrafluoroethane (<1%)
- Dichlorofluoromethane (<1%)

Typical value
Single-width Airway Module, M-miniC (cont.)

Disturbing gases and their effect on the CO₂ reading at 5.0 vol-% CO₂ are shown below. Errors listed reflect the effect of specific concentrations (shown in parentheses) of an individual disturbing gas and should be combined when estimating the effect of gas mixtures:

- Halothane (4%) increases < 0.3 vol%
- Isoflurane (5%) increases < 0.4 vol%
- Enflurane (5%) increases < 0.4 vol%
- Desflurane (24%) increases < 1.2 vol%
- Sevoflurane (8%) increases < 0.4 vol%
- Helium (50%) decreases < 0.3 vol%

If O₂ compensation is not activated:
- O₂ (40 to 95%) decreases < 0.3 vol%

If O₂ compensation is activated:
- O₂ (40 to 95%) error < 0.15 vol%

If N₂O compensation is not activated:
- N₂O (40 to 80%) increases < 0.8 vol%

If N₂O compensation is activated:
- N₂O (40 to 80%) error < 0.3 vol%

Default alarm limits

EtCO₂ high 8%, low 3%
FiCO₂ high 3%, low Off

Carbon dioxide (CO₂)
Measurement range: 0 to 20 vol %
Resolution: 0.01%
Measurement rise time: < 300 ms with nominal flow
Accuracy:
- 0 to 15 vol% ± (0.2 vol % + 2% of reading)
- 15 to 20 vol% ± (0.7 vol % + 2% of reading)

Valid for respiration rate < 40 l/min at I:E ratio of 1:1. (Relative error is typically 10% for respiration rate 80 l/min at I:E ratio of 1:1.) The accuracy is specified in simulated ventilation. With higher respiration rates and with varying ventilation methods the specifications may not be met.

Respiration rate
Breath detection: 1% change in CO₂ level
Measurement range: 4 to 80 breaths/min
Accuracy:
- ±1/min in the range 4 to 20 l/min
- ±5% in the range 20 to 80 l/min
Resolution: 1/min

NOTE: M-miniC is intended for patients weighing over 5 kg (11 lb).

Neuromuscular Transmission Module, M-NMT

NMT
Stimulation modes:
- Train of four, TOF
- Double burst (3.3), DBS; Single twitch, ST
- 50 Hz tetanic & post tetanic count, PTC
Stimulus current range:
- supramax 10 to 70mA
- manual 10 to 70 mA with 5 mA steps
Stimulus current accuracy: 10% or ±3 mA

Regional block mode (plexus)
Stimulation mode:
- Single twitch
Stimulus current range:
- 0 to 5.0 mA with 0.1 mA steps
Stimulus current accuracy: 20% or ±0.3 mA

15) Alarm limits and their adjustment range may vary depending on the mode used.
EEG Module, M-EEG

EEG
Sampling frequency: 100 Hz per channel
Range: ±400 µV
Frequency range: 0.5 to 30 Hz
Resolution: 60 nV
Input impedance: >8 MΩ at 10 Hz
Noise level: <0.5 µV rms from 0.5 Hz to 30 Hz
CMRR: >100 dB at 50 Hz
Parameters from power spectrum:
SEF, MF, relative power in frequency bands
Burst suppression ratio (BSR)

EMG
Frequency range: 60 to 300 Hz
Parameter displayed: Amplitude (RMS)

BIS Module, M-BIS

EEG
Epoch duration: 2 seconds
Artifact rejection: automatic
EEG scales: 25 to 400 µV
EEG sweep speeds: 12.5, 25, 50 mm/sec
Bispectral index: 0 to 100
Signal quality index: 0 to 100
EMG: 30 to 80 dB (70 to 110 Hz)
Suppression Ratio: 0 to 100%
Update rate: 1 second for BIS index
Filters: ON (2 to 70 Hz with notch), OFF (0.25 to 100 Hz)
Smoothing rate: 15 seconds (default) or 30 seconds
Mode: sensor automatically selects mode

DSC (Digital signal converter)
Analog to digital converter:
Sampling rate: 16 384 samples/second
Resolution: 16 bits at 256 samples/second
Input impedance: 50 Mohms minimum
Noise: <0.3 µV RMS (2.0 µV peak-to-peak)
0.25 Hz to 50 Hz

Common mode rejection (Isolation mode):
110 dB at 50/60 Hz to earth ground
Bandwidth: 0.16 to 450 Hz

Entropy Module, M-ENTROPY

Entropy parameters:
Response Entropy (RE): range 0 to 100
State Entropy (SE): range 0 to 91
Burst Suppression Ratio (BSR): range 0 to 100%
Display resolution: 1 digit

Entropy EEG
Scales: +25, 50, 100, 250, 400 µV
Sweep speed: 12.5, 25, 50 mm/s
Resolution: 60 nV

Amplifier and A/D conversion
Amplification: 10000
Sampling frequency: 1600 Hz
Frequency range: 0.5 to 118 Hz
Resolution: 60 nV

CAUTION: The entropy measurement is to be used as an adjunct to other physiological parameters in assessing the effects of certain anesthetic agents.
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/min</td>
<td>beats per minute, breaths per minute</td>
</tr>
<tr>
<td>°C</td>
<td>Celsius degree</td>
</tr>
<tr>
<td>°F</td>
<td>Fahrenheit degree</td>
</tr>
<tr>
<td>µg</td>
<td>microgram</td>
</tr>
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HME heat and moisture exchanger
HMEF heat and moisture exchanger with filter
hPa hectopascal
HR heart rate
HRdiff heart rate difference
ht height
HW hardware
Hz hertz
IEC International Electrotechnical Commission
I:E inspiratory-expiratory ratio
IABP intra-aortic balloon pump
IC inspiratory capacity
ICU intensive care unit
ID identification
Imped. impedance; impedance respiration
in inch
Inf inferior
Infl. inflation (limit)
Insp inspiratory
Inv. invasive
Inv. BP invasive blood pressure
Irreg. irregular
Iso isoflurane
ISO International Standards Organisation
IVR idioventricular rhythm
J joule
MAC minimum alveolar concentration
Max maximum
mbar millibar
mcg microgram
Mean mean blood pressure
mEq milliequivalent
MetHb methemoglobin
MF median frequency
mg milligram
min minute
Min minimum
ml milliliter
MLAEP middle-latency auditory evoked potential
mmHg millimeters of mercury
mol mole
Monit monitoring (ECG filter)
MRI magnetic resonance imaging
Mult. multiple
Multif. PVCs multifocal PVCs
MV minute volume
MVexp expired minute volume (l/min)
MVexp(BTPS) expired minute volume in BTPS conditions
MVexp(STPD) expired minute volume in STPD conditions
MVinsp inspired minute volume (l/min)
MVspont spontaneous minute volume
Myo myocardial temperature
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* with Fick equation
Supplies and accessories

The accessories below are approved and specified for the Datex-Ohmeda AS/3 Compact Anesthesia Monitor. For more information, see the corresponding Datex-Ohmeda catalogs. Patient accessories designed for use with this device are made of biocompatible materials conforming to requirements of the standard EN 30993 Biological Evaluation of Medical Devices and therefore do not contain toxic ingredients or primary skin irritants. The conformity is based either on laboratory testing or material knowledge and the long history of the materials used. Please note that some products are not available worldwide. You can check the availability with your local Datex-Ohmeda office or distributor. Please, also refer to our catalog: [http://supplies.datex-ohmeda.com/DO](http://supplies.datex-ohmeda.com/DO)

### ECG

**Trunk cables, IEC color coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>545300</td>
<td>3 leadwire trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
<tr>
<td>545301</td>
<td>5 leadwire trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
<tr>
<td>545200</td>
<td>Multiparameter cable (3- and 5-wire sets)</td>
<td></td>
</tr>
<tr>
<td>545323</td>
<td>10 leadwire trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
</tbody>
</table>

**FOR M-PRESTN, M-PRETN and M-RESTN only:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8003600</td>
<td>3 leadwire ECG trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
<tr>
<td>8003602</td>
<td>5/10 leadwire ECG trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
<tr>
<td>8003606</td>
<td>3 leadwire ECG DIN trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
<tr>
<td>8003610</td>
<td>5 leadwire ECG DIN trunk cable, 3 m/10 ft</td>
<td></td>
</tr>
</tbody>
</table>

### Leadwire sets, IEC color coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>545315</td>
<td>3 leadwire set, clip, 0.75 m/2.5 ft</td>
<td></td>
</tr>
<tr>
<td>545316</td>
<td>5 leadwire set, clip, 1.25 m/4.1 ft</td>
<td></td>
</tr>
<tr>
<td>545325</td>
<td>C2-C6 leadwire set, clip, 1.25 m/4.1 ft</td>
<td></td>
</tr>
<tr>
<td>8001960</td>
<td>3 leadwire set, clip, 1.5 m/4.9 ft</td>
<td></td>
</tr>
<tr>
<td>8001961</td>
<td>5 leadwire set, clip, 1.5 m/4.9 ft</td>
<td></td>
</tr>
</tbody>
</table>

**FOR M-PRESTN, M-PRETN and M-RESTN only:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8003610</td>
<td>3 leadwire set, clip, 0.75 m/2.5 ft</td>
<td></td>
</tr>
<tr>
<td>8003613</td>
<td>3 leadwire set, clip, 1.5 m/4.9 ft</td>
<td></td>
</tr>
<tr>
<td>8003620</td>
<td>5 leadwire set, clip, 0.75 m/2.5 ft or 1.25 m/4.1 ft</td>
<td></td>
</tr>
<tr>
<td>8003623</td>
<td>10 leadwire set, clip, 1.5 m/4.9 ft</td>
<td></td>
</tr>
<tr>
<td>8003630</td>
<td>10 leadwire set, clip, 0.75 m/2.5 ft or 1.25 m/4.1 ft</td>
<td></td>
</tr>
</tbody>
</table>

### One-piece ECG cables, IEC

**FOR M-PRESTN, M-PRETN and M-RESTN only:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>8003634</td>
<td>3 leadwire one-piece ECG cable, clip, 3.5 m/11.5 ft</td>
<td></td>
</tr>
<tr>
<td>8003636</td>
<td>5 leadwire one-piece ECG cable, clip, 3.5 m/11.5 ft</td>
<td></td>
</tr>
</tbody>
</table>

### Telemetry ECG leadwires, IEC

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>8003100</td>
<td>5 leadwire, snap</td>
<td></td>
</tr>
<tr>
<td>8003102</td>
<td>10 leadwire, snap</td>
<td></td>
</tr>
</tbody>
</table>
Trunk cables, AAMI color coding
545302 3 leadwire trunk cable, 3 m/10 ft
545303 5 leadwire trunk cable, 3 m/10 ft
545201 Multiparameter cable
(3 and 5 leadwire sets)
545324 10 leadwire trunk cable, 3 m/10 ft
FOR M-PRESTN, M-PRETN and M-RESTN only:
8003601 3 leadwire ECG trunk cable, 3 m/10 ft
8003603 5/10 leadwire ECG trunk cable, 3 m/10 ft
8003606 3 leadwire ECG DIN trunk cable, 3 m/10 ft
8003610 5 leadwire ECG DIN trunk cable, 3 m/10 ft

Leadwire sets, AAMI color coding
545317 3 leadwire set, clip, 0.75 m/2.5 ft
545318 5 leadwire set, clip, 1.25 m/4.1 ft
545327 3 leadwire set, snap, 0.75 m/2.5 ft
545328 5 leadwire set, snap, 1.25 m/4.1 ft
545326 V2-V6 leadwire set, clip, 1.25 m/4.1 ft
8001958 3 leadwire set, clip, 1.5 m/4.9 ft
8001959 5 leadwire set, clip, 1.5 m/4.9 ft
FOR M-PRESTN, M-PRETN and M-RESTN only:
8003611 3 leadwire set, clip, 0.75 m/2.5 ft
8003612 3 leadwire set, snap, 0.75 m/2.5 ft
8003614 3 leadwire set, clip, 1.5 m/4.9 ft
8003621 5 leadwire set, clip, 0.75 m/2.5 ft or 1.25 m/4.1 ft
8003622 5 leadwire set, snap, 0.75 m/2.5 ft or 1.25 m/4.1 ft
8003624 5 leadwire set, clip, 1.5 m/4.9 ft
8003631 10 leadwire set, clip, 0.75 m/2.5 ft or 1.25 m/4.1 ft

One-piece ECG cables, AAMI
FOR M-PRESTN, M-PRETN and M-RESTN only:
8003635 3 leadwire one-piece ECG cable, clip, 3.5 m/11.5 ft
8003637 5 leadwire one-piece ECG cable, clip, 3.5 m/11.5 ft

Telemetry ECG leadwires, AAMI
8003101 5 leadwire, snap
8003103 10 leadwire, snap

Electrodes
572683 Solid gel, Ag/AgCl, pkg of 50 pcs
572684 For infants, safety pin 60 cm, 15 pcs
Pulse oximetry

**OxyTip+ Reusable Finger Sensors**
- OXY-F4-N Integrated finger sensor, 4 m/13 ft
- OXY-F-UN* Interconnect finger sensor, 1 m/3.3 ft
- OXY-F-DB Interconnect sensor, 2 m/7 ft

**OxyTip+ Adhesive Sensors**
- OXY-AP-25* Adult and pediatric, pkg of 25 pcs
- OXY-AP-10* Adult and pediatric, pkg of 10 pcs
- OXY-AF-10* AllFit, pkg of 10 pcs
- OXY-DSP* Adhesive sensor sample kit
  *Requires the use of an OxyTip+ Interconnect Cable (OXY-OL3)

**OxyTip+ Cables**
- OXY-OL3 Interconnect cable, 3 m/10 ft
- OXY-SL3 Interconnect cable, 3 m/10 ft
- OXY-SLA Adapter cable, 0.5 m/1.5 ft
- OXY-SLC Adapter cable, 2 m/7 ft
- OXY-C1 Interconnect cable, 1.5 m/4.9 ft
- OXY-C3 Interconnect cable, 3 m/10 ft
- OXY-C7 Interconnect cable, 7 m/23 ft

**Temperature**

**Reusable probes**
- 16560 Skin temp probe, 3.5 m/11.5 ft
- 165602 Skin temp probe, 1.5 m/4.9 ft
- 16561 Central temp probe, adult, 2.8 m/9 ft
- 165622 Central temp probe, adult, 1.5 m/4.9 ft
- 165611 Central temp probe, pedi, 2.8 m/9 ft
- 165612 Central temp probe, pedi, 1.5 m/4.9 ft

**Disposable probes**
- 8001642 Skin temperature probe
- 8001643 Central temperature probe 12F
- 8001644 Central temperature probe 9F

**Extension cables for disposable probes**
- 165640 Extension cable 1.3 m/4.3 ft, used with multiparameter cables
- 165641 Extension cable 2.8 m/9.2 ft, used with Datex-Ohmeda monitor or module

**Multiparameter cables (ECG, SpO2, Temp)**
- 545200 Multiparameter cable, IEC
- 545201 Multiparameter cable, AAMI

**Esophageal stethoscopes**
- 8002910 Esophageal stethoscope with temperature probe, 9F
- 8002911 Esophageal stethoscope with temperature probe, 12F
- 8002908 Esophageal stethoscope with temperature probe, 18F
- 8002909 Esophageal stethoscope with temperature probe, 24F
**Invasive blood pressure**

**Reusable transducers and cables**
- 78000: SensoNor 844, 3 m/10 ft
- 165700: Spectramed P10EZ-1, 0.45 m/1.5 ft
- 54586: Adapter cable for DTX disposable pressure transducers, 3.8 m/12 ft
- 875408: Cable for HP 1290C-type pressure transducers, 0.3 m/1 ft

**Disposable flushing kits and domes**
- 16577: Flushing kit for SensoNor 840, sterile, pkg of 10 kits
- 16578: Dome for SensoNor 840, sterile, pkg of 50 pcs
- 78001: Flushing kit for SensoNor 844
- 78002: Dome for SensoNor 844

**NIBP**

**Reusable color coded latex-free cuffs**
- 572429: Large adult cuff, red
- 572428: Standard adult cuff, blue
- 572427: Small adult cuff, gray
- 572426: Child cuff, green
- 572425: Infant cuff, tan
- 8002248: Long large adult cuff, red
- 8001997: Thigh NIBP cuff (for M-PRESTN, M-PRETN and M-RESTN only)

**Disposable cuffs**
- 8001991: Long large adult cuff
- 8001992: Large adult cuff
- 8002562: Long standard adult cuff
- 8001993: Standard adult cuff
- 8001994: Small adult cuff
- 8001995: Child cuff
- 572403: Infant cuff #3, pkg of 10 pcs
- 572404: Infant cuff #4, pkg of 10 pcs
- 572405: Infant cuff #5, pkg of 10 pcs

**Cuff hoses**
- 877235: Adult hose, black, 3 m/10 ft
- 895732: Adult hose, black, 1.8 m/6 ft
- 879739: Adult hose, black, 6 m/20 ft
- 877514: Infant hose, white, 3 m/10 ft
- 890639: Infant hose, white, 6 m/20 ft

**Cardiac output**
- 16573: Thermodil. cath. Edwards Lifesciences Corp. 93A-131-7F
- 16590: Catheter connecting cable
- 16591: Injectate bath temp probe
- 16592: Flow-through injectate temp probe
- 16593: Spectramed CO-set temp probe
- 16574: CO-set for room temp inject., 10 pcs

**Patient Spirometry**

**Reusable sensors**
- 733910: D-lite sensor
- 73393: Pedi-lite sensor

**Single use sensors**
- 733950: D-lite sensor, pkg of 50 pcs
- 896952: D-lite+ sensor
- 8002718: Pedi-lite+ sensor, pkg of 50 pcs

**Disposable spirometry tubes**
- 890031: 2 m/7 ft, yellow, pkg of 5 pcs
- 884101: 3 m/10 ft, yellow, pkg of 5 pcs

**Disposable spirometry accessory kit**
- 889560: pkg of 50 kits
- 8002718: pediatric spirometry kit, pkg of 50 pcs
### Airway gases

#### Anesthesia gas sampling lines
- 73318 Disposable, 2 m/7 ft, pkg of 10 pcs
- 73319 Disposable, 3 m/10 ft, pkg of 10 pcs

#### Disposable airway adapters
- 73385 Straight T-adapter, pkg of 10 pcs
- 73386 Elbow adapter, pkg of 10 pcs

The following adapters are for low dead space pediatric endotracheal tubes:
- 877583 ID 2.5 mm, pkg of 5 pcs
- 877584 ID 3.0 mm, pkg of 5 pcs
- 877585 ID 3.5 mm, pkg of 5 pcs
- 877586 ID 4.0 mm, pkg of 5 pcs

### Reusable airway adapters
- 84995 Steel adapter, 15F-15M

### D-fend water traps
- 876446 D-fend, black, pkg of 10 pcs
- 881319 D-fend+, green, pkg of 10 pcs
- 8002174 Mini D-fend, pkg of 10 pcs, for M-miniC
- 876107 Container, pkg of 5 pcs

### Filtration
- **Machine side filter**
  - 557021200 Uni-Filter, pkg of 45 pcs
- **Patient machine side filter**
  - 557022500 Uni-Filter/S, pkg of 60 pcs

### Humidification/Filtration
- Heat and moisture exchangers with integrated bacterial/viral filters (HMEF)
  - 557070100 HMEF 1000, pkg of 50 pcs
  - 557070500 HMEF 500, pkg of 75 pcs

### Dust filters
- 886236 For all M-Cxx modules

### Calibration gases
- 755534 Regulator for calibration gases
  - 755580, 755581, 755583
- 755580 Quick Cal calibration gas for M-miniC, applicable for M-TONO
- 755581 Quick Cal calibration gas for M-CO, M-COV, M-COVX
- 755583 Quick Cal calibration gas for M-CAiO, M-CAiOV, M-CAiOVX

### Tonometry

#### Catheters
- TONO-8F pkg of 5 pcs
- TONO-14F pkg of 5 pcs
- TONO-16F pkg of 5 pcs
- TONO-18F pkg of 5 pcs

### Calibration gas for tonometry
- 755580 Quick Cal calibration gas (balance air)
- 755534 Regulator
- 733251 Calibration gas sampling line
### NMT

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>888418</td>
<td>MechanoSensor, 0.3 m/1 ft</td>
</tr>
<tr>
<td>888416</td>
<td>ElectroSensor, 0.3 m/1 ft</td>
</tr>
<tr>
<td>888419</td>
<td>Pediatric MechanoSensor, 0.3 m/1 ft</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>888414</td>
<td>3.3 m/11 ft</td>
</tr>
<tr>
<td>888415</td>
<td>1.5 m/5 ft</td>
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</table>

### N-MNT sensors cables

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>888417</td>
<td>Regional Block Adapter, cable</td>
</tr>
<tr>
<td>888418</td>
<td>0.5 m/1.5 ft</td>
</tr>
</tbody>
</table>

### Miscellaneous for Datex-Ohmeda

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>57268</td>
<td>NMT electrodes, solid gel, Ag/AgCl, pkg of 30 pcs</td>
</tr>
<tr>
<td>888417</td>
<td>Regional Block Adapter, cable</td>
</tr>
<tr>
<td>572238</td>
<td>Portable monitor wall mount</td>
</tr>
<tr>
<td>887053</td>
<td>CM universal mounting plate</td>
</tr>
<tr>
<td>886172</td>
<td>CM bed mount</td>
</tr>
<tr>
<td>572235</td>
<td>Portable monitor roll stand</td>
</tr>
<tr>
<td>800065</td>
<td>Remote Controller holder</td>
</tr>
</tbody>
</table>

### EEG and AEP

#### Lead sets

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>898050</td>
<td>Basic EEG lead set, clip</td>
</tr>
<tr>
<td>898051</td>
<td>General EEG lead set, clip</td>
</tr>
<tr>
<td>898052</td>
<td>AEP lead set, clip</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>888417</td>
<td>3.5 m/11.5 ft</td>
</tr>
</tbody>
</table>

#### Electrodes

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>572685</td>
<td>EEG stick-on electrodes, 15 bags</td>
</tr>
<tr>
<td></td>
<td>containing 5 electrodes each</td>
</tr>
<tr>
<td>572686</td>
<td>EEG cup electrodes, pkg of 500 pcs</td>
</tr>
<tr>
<td>75349</td>
<td>Conductive paste</td>
</tr>
</tbody>
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### BIS

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>900507</td>
<td>Converter set: DSC and PIC Plus cable</td>
</tr>
<tr>
<td>545780</td>
<td>PIC Plus cable</td>
</tr>
<tr>
<td>545781</td>
<td>BIS Sensor Plus</td>
</tr>
<tr>
<td>545782</td>
<td>BIS Sensor Pediatric</td>
</tr>
<tr>
<td>545783</td>
<td>BIS Sensor Quatro</td>
</tr>
</tbody>
</table>

### Entropy

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>8002858</td>
<td>Entropy sensor (pkg of 25 pcs)</td>
</tr>
<tr>
<td>8002964</td>
<td>Entropy sensor cable, 3.5 m/11.5 ft</td>
</tr>
</tbody>
</table>

### Interface cables

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>881167</td>
<td>UPI-PC serial, 3 m/10 ft</td>
</tr>
<tr>
<td>889352</td>
<td>M-PT Universal ECG/P3 output, 6m/20 ft</td>
</tr>
<tr>
<td>884988</td>
<td>M-PT Kontron IABP cable, 6 m/20 ft</td>
</tr>
<tr>
<td>884989</td>
<td>M-PT Datoscope IABP cable 6 m/20 ft</td>
</tr>
<tr>
<td>892385</td>
<td>INT Baxter Vigilance cable, 2 m/7 ft</td>
</tr>
</tbody>
</table>

### Mounting elements

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>572238</td>
<td>Portable monitor wall mount</td>
</tr>
<tr>
<td>887053</td>
<td>CM universal mounting plate</td>
</tr>
<tr>
<td>886172</td>
<td>CM bed mount</td>
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<tr>
<td>572235</td>
<td>Portable monitor roll stand</td>
</tr>
<tr>
<td>800065</td>
<td>Remote Controller holder</td>
</tr>
</tbody>
</table>

### Other monitor supplies

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>74205</td>
<td>Thermal recorder paper, 20 rolls</td>
</tr>
<tr>
<td>85969</td>
<td>Cleaning fluid</td>
</tr>
<tr>
<td>883387</td>
<td>Dust filter for Compact Monitor</td>
</tr>
<tr>
<td>886236</td>
<td>Dust filter for Compact Airway Modules</td>
</tr>
</tbody>
</table>

### Fuses

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>51119</td>
<td>250 V, T3.15 A, 5*20 mm</td>
</tr>
<tr>
<td>511382</td>
<td>125 V, 5 A slow, 5*20 mm (UL/CSA)</td>
</tr>
</tbody>
</table>