

URGENT - Notice corrective d'appareil médical

Moniteurs Philips SureSigns VS, VM et View Station (VSV) Maintenance des batteries lithium-ion par l'utilisateur

Madame, Monsieur,

Un problème susceptible de présenter un risque pour le patient ou l'utilisateur a été détecté sur les moniteurs Philips SureSigns (VS2/3/4, VM3/4/6/8 et VSV). Cette Notification de Sécurité produit est destinée à vous informer des points suivants:

- la nature du problème et les circonstances dans lesquelles il peut survenir;
- les actions que le client/l'utilisateur doit mettre en œuvre afin de prévenir tout risque pour les patients ou les utilisateurs;
- les actions prévues par Philips pour remédier à ce problème.

Ce document contient des informations importantes pour assurer le bon fonctionnement continu et en toute sécurité de votre matériel.

Veillez examiner les informations suivantes avec tous les membres de votre personnel qui doivent en avoir connaissance. Il est important d'en comprendre les conséquences.

Conservez un exemplaire de ce document avec le Manuel d'utilisation de votre matériel.

Philips a reçu plusieurs rapports signalant que des moniteurs SureSigns comportant des batteries lithium-ion ayant dépassé la période de remplacement spécifiée ont surchauffé ou se sont enflammés. Ces batteries doivent être remplacées tous les 3 ans ou au bout de 300 cycles de charge/décharge.

Bien que les moniteurs puissent afficher l'état de la batterie, la documentation existante pour ces appareils n'inclut pas d'instructions complètes relatives au moment où effectuer le remplacement des batteries ou aux risques potentiels qu'une absence de remplacement peut entraîner.

Philips diffuse donc un *addenda au Service Guide* (Manuel de maintenance, en anglais uniquement) pour les moniteurs SureSigns (VS2/3/4, VM3/4/6/8 et VSV). Celui-ci comprend des informations pour vous aider à gérer la batterie ainsi que son remplacement. Vous trouverez ci-joint l'*addenda au Service Guide* (Manuel de maintenance, en anglais uniquement).

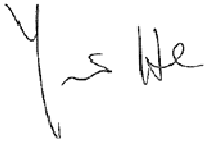
Reportez-vous aux pages suivantes pour plus d'informations sur l'identification des appareils concernés ainsi que sur les actions à mettre en œuvre. Veuillez suivre les instructions données dans la section "Action à mettre en œuvre par le client/utilisateur" de cette notification. Cette notification a été envoyée à l'organisme réglementaire compétent.

En outre, Philips met actuellement au point une mise à jour logicielle du système pour les moniteurs SureSigns. Elle facilitera la gestion de la batterie des moniteurs par l'utilisateur tout au long de sa durée de vie. Nous vous informerons dès que cette mise à jour sera disponible. En attendant, l'utilisation de votre moniteur ne présente aucun danger si vous suivez les instructions de cette notification, les *instructions d'utilisation* et l'*addenda au Service Guide* (Manuel de maintenance, en anglais uniquement).

Philips vous présente toutes ses excuses pour la gêne que cette situation pourrait occasionner. La satisfaction de nos clients est essentielle et nous espérons que vous apprécierez l'action menée par Philips pour résoudre ce problème. Si vous avez des questions ou des inquiétudes au sujet de ce programme correctif, veuillez contacter votre *ingénieur commercial Philips*:

0800 80 3001

Nous vous adressons, Madame, Monsieur, nos sincères salutations.

A handwritten signature in black ink, appearing to read 'Yini He'. The signature is written in a cursive style with a vertical line on the left side.

Yini He
Directeur du Département Qualité et Règlementation

**SYSTÈMES
CONCERNÉS**

Les systèmes concernés sont tous les moniteurs SureSigns et les stations de visualisation fabriqués jusqu'au 3 mai 2018 qui peuvent fonctionner sur batterie et qui disposent actuellement de batteries.

Sont concernés plus précisément les moniteurs de paramètres vitaux SureSigns suivants, équipés de la version logicielle A.07.24 ou d'une version antérieure.

Produit	Description
863069	Moniteur patient SureSigns VS3 avec Pression brassard
863070	Moniteur patient SureSigns VS3 avec Pression brassard et Température
863071	Moniteur patient SureSigns VS3 avec Pression brassard et SpO2
863072	Moniteur patient SureSigns VS3 avec Pression brassard, SpO2 et Enregistreur
863073	Moniteur patient SureSigns VS3 avec Pression brassard, SpO2 et Température
863074	Moniteur patient SureSigns VS3 avec Pression brassard, SpO2, Température et Enregistreur
863079	Moniteur patient SureSigns VS2 avec Pression brassard
863080	Moniteur patient SureSigns VS2 avec Pression brassard et SPO2
863081	Moniteur patient SureSigns VS2 avec Pression brassard, SpO2 et Température
863082	Moniteur patient SureSigns VS2 avec Pression brassard, SpO2, Température et Enregistreur
863283	Moniteur patient SureSigns VS4 avec Pression brassard et SPO2
863286	Progiciel gouvernemental SureSigns VS4


Sont également concernés les moniteurs patient SureSigns suivants, équipés de la version logicielle A.03.96 ou d'une version antérieure.

Produit	Description
863063	Moniteur patient SureSigns VM4
863064	Moniteur patient SureSigns VM6
863065	Moniteur patient SureSigns VM6
863066	Moniteur patient SureSigns VM8
863068	Moniteur patient SureSigns VM8
863077	Moniteur patient SureSigns VM3
863085	Moniteur patient SureSigns VM4
863086	Moniteur patient SureSigns VM6
863317	Moniteur patient SE SureSigns VM8
863287	Progiciel gouvernemental SureSigns VM4
863288	Progiciel gouvernemental SureSigns VM6
863289	Progiciel gouvernemental SureSigns VM8

Enfin, est concerné le moniteur SureSigns View Station (VSV) suivant, équipé de la version logicielle A.00.50 ou d'une version antérieure.

Produit	Description
863067	Moniteur de paramètres vitaux View Station (VSV)

Remarque: les moniteurs patient VSi (863275, 863276, 863277), VS2+ (863278, 863279) et VM1 (863264, 863265, 863266) ne sont pas concernés par cette notification de sécurité produit.

<p>DESCRIPTION DU PROBLÈME</p>	<p>Philips a reçu plusieurs rapports signalant que des moniteurs équipés de batteries lithium-ion ayant dépassé leur durée de vie ont surchauffé ou se sont enflammés. Ces batteries doivent être remplacées tous les 3 ans ou au bout de 300 cycles de charge/décharge.</p> <p>Bien que les moniteurs Philips SureSigns VS, VM et View Station (VSV) puissent afficher des informations précises sur l'âge de la batterie et/ou les cycles de charge/décharge, la documentation existante n'inclut pas d'instructions complètes relatives à la manière d'utiliser ces dernières afin de déterminer quand remplacer la batterie.</p>
<p>RISQUES LIÉS AU PROBLÈME</p>	<p>Une surchauffe de la batterie peut à son tour entraîner la surchauffe du boîtier et potentiellement sa fonte, ou provoquer l'inflammation de l'appareil. Ce problème présente des risques de blessures pour le patient ainsi que pour les utilisateurs à proximité, ou des risques de dommages matériels.</p>
<p>IDENTIFICATION DES SYSTÈMES CONCERNÉS</p>	<p>Vous pouvez déterminer si votre appareil est concerné en identifiant la révision logicielle. Ceci peut être effectué en:</p> <ul style="list-style-type: none"> a) Localisant et consultant le numéro de modèle de votre moniteur SureSigns, situé sur la page de garde des <i>instructions d'utilisation</i>. b) Localisant et consultant l'écran de révision du logiciel du moniteur (System Menu (Menu système) / Rotate Wheel (Bouton de navigation) / Software Version Revision (Révision de la version logicielle)) ou <p>Pour déterminer si votre appareil peut fonctionner sur batterie, vérifiez si un symbole de batterie est affiché dans le coin inférieur droit de l'écran du moniteur.</p> <div style="text-align: center;">  <p>The image shows six Philips SureSigns monitors arranged in two rows. The top row contains VS3 and VS4. The bottom row contains VM4, VM6, VM8, and VSV. Each monitor has its model name printed above it. The monitors are white with black screens and various buttons and ports.</p> </div>

<p>ACTION À METTRE EN ŒUVRE PAR LE CLIENT / UTILISATEUR</p>	<p>Lors de la réception de cette notification, lisez attentivement l'<i>addenda au Service Guide</i> (Manuel de maintenance, en anglais uniquement) SureSigns ci-joint. Assurez rapidement la maintenance de la batterie conformément aux instructions de l'<i>addenda</i> pour chacun des moniteurs Philips SureSigns VS, VM et View Station (VSV) concernés, en déterminant si l'<i>écran d'informations de la batterie</i> indique si le nombre de cycles de la batterie est supérieur à 300, ou si la batterie a plus de trois (3) ans. Dans l'affirmative, la batterie doit être remplacée. La batterie de remplacement peut être commandée en respectant les procédures de remplacement standard de Philips.</p> <p>Pour en savoir plus sur la manière dont remplacer la batterie, consultez le <i>Service Guide</i> (Manuel de maintenance, en anglais uniquement) des moniteurs Philips SureSigns VS, VM et View Station (VSV).</p> <p>Veillez consulter ces informations avec tous les membres de votre personnel chargés de la gestion des moniteurs Philips SureSigns VS, VM, et View Station (VSV).</p> <p>Veillez conserver l'<i>addenda au Service Guide</i> (Manuel de maintenance, en anglais uniquement) avec la documentation de maintenance des moniteurs Philips SureSigns VS, VM et View Station (VSV).</p> <p>Remplissez et retournez la carte-réponse fournie.</p>
<p>ACTIONS MENÉES PAR PHILIPS HEALTHCARE</p>	<p>En complément de l'<i>addenda au Service Guide</i> (Manuel de maintenance, en anglais uniquement) et de cette notification, Philips prévoit de déployer une mise à jour logicielle à installer par l'utilisateur pour les moniteurs SureSigns (VS2/3/4, VM3/4/6/8 et VSV). Elle indiquera des avertissements système pour aider les utilisateurs à gérer le cycle de remplacement de la batterie. Nous vous informerons dès que cette mise à jour logicielle sera disponible.</p> <p>En attendant, l'utilisation de votre moniteur ne présente aucun danger si vous suivez les instructions de cette notification, les <i>instructions d'utilisation</i> et l'<i>addenda au Service Guide</i> (Manuel de maintenance, en anglais uniquement).</p>
<p>INFORMATIONS COMPLÉMENTAIRES ET ASSISTANCE TECHNIQUE</p>	<p>Pour toute information complémentaire ou demande d'assistance concernant ce problème, veuillez contacter votre représentant Philips:</p> <p>0800 80 3001</p>

**URGENT - Notice corrective d'appareil médical
Moniteurs SureSigns VS, VM et VSV – Addenda au manuel de
maintenance**

**Réponse du client pour la FSN86000255B
Addenda au manuel de maintenance pour les moniteurs VS, VM et View Station (VSV)**

Veillez remplir ce formulaire et le renvoyer au customercare.ch@philips.com

Nom de la personne à contacter	
Numéro de téléphone	
E-mail	
Nom de l'établissement	
Adresse postale Ville, Code postal	

Renvoyez le formulaire dûment rempli par e-mail à l'adresse e-mail fournis ci-dessus.

ACCUSÉ DE RÉCEPTION CLIENT:

Cet addenda au manuel de maintenance pour les moniteurs VS, VM et VSV a été ajouté à la première page de la section Maintaining the Battery (Entretien de la batterie) de votre Manuel d'utilisation afin de faciliter toute consultation ultérieure.

Je confirme que toutes les batteries des moniteurs VS, VM et View Station (VSV) ont été commandées et/ou remplacées si l'écran d'informations de la batterie indique que la batterie a été utilisée pendant plus de 3 ans ou que les cycles de charge/décharge sont supérieurs à 300.

NOM DU CLIENT (en lettres d'imprimerie)

FONCTION

SIGNATURE DU CLIENT

DATE

Renvoyez le formulaire de réponse rempli par fax ou par e-mail au customercare.ch@philips.com. Si vous rencontrez des difficultés à appliquer les consignes qui vous ont été communiquées, contactez votre représentant Philips :

0800 80 3001

SureSigns VS2/VS3/VS4 Vital Signs Monitors Service Guide Addendum – Replacement for Battery Maintenance Information

This addendum replaces the “Maintaining the Battery” section in Chapter 2 of the SureSigns VS2, VS3 and VS4 Vital Signs Monitors Service Guide. Please store it with your monitor documentation. Models are listed in the table at the end of this document.

Maintaining the Battery

About the Battery

The rechargeable lithium ion battery used in the VS series vital signs monitors is a smart battery with built-in circuitry that communicates battery status information to the monitor. Battery power lasts a minimum of four (4) hours of continuous monitoring with no printing and one NBP measurement every 15 minutes.

To properly maintain the battery and prevent damage to the monitor, observe these guidelines:

- If a battery shows damage or signs of leakage, replace it **immediately**.
- **Never** use a faulty battery in a monitor.
- **Never** dispose of the battery in a normal waste container.
- **Never** leave a battery inside the monitor if the monitor is not being used for a long period of time.
- **Never** store a battery that is charged to more than 50% capacity.

NOTES:

- *Images shown are from a VS4 vital signs monitor. The VS2 and VS3 may appear slightly different.*
- *For information about the battery status indicator, please see the Instructions for Use provided with your monitor.*

Viewing Battery Information

As a battery ages, its capacity decreases, and the battery status indicator becomes increasingly less accurate as the total number of charges and discharges increase. You can view the **Battery Info** screen to display information about the battery. Ensure that the monitor is connected to AC power before attempting to review battery information.



NOTE: If a VS3 monitor with a **Hardware ID** (displayed on the **System Menu**) of 1-1-A1 is disconnected from AC power, the **Battery Info** window displays the following message: **No data from battery. Please see Service Guide.** To view the information about the battery, reconnect the monitor to AC power.

To view information about the battery:

1. On the main screen, touch **System**.

NOTE: The VS4 vital signs monitor utilizes a touch screen. On a VS2 or VS3 monitor, you must rotate the control wheel to highlight the desired menu option, then press the wheel to select it.

2. Touch **System Admin** and enter the administrator password (default is 215). The **System Admin Menu** appears.
3. Touch **Diagnostics** to open the **System Diagnostics** menu.

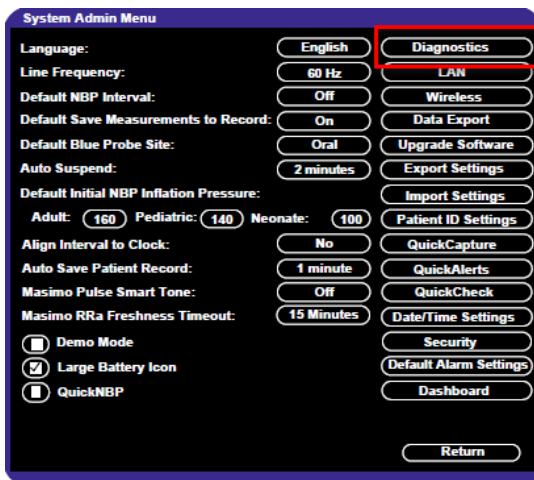


Figure 1 System Admin Menu

4. Touch **Battery Info** to open the **Battery Info** screen.

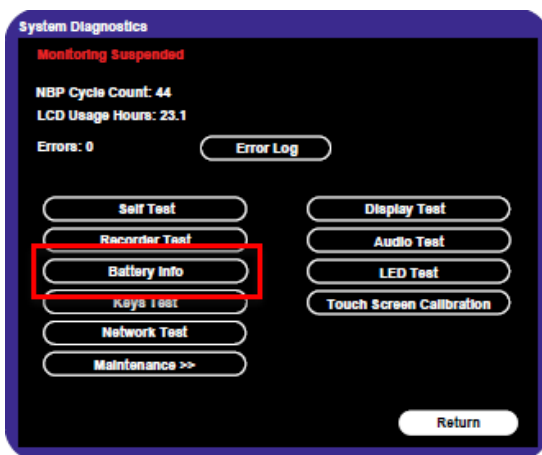


Figure 2 System Diagnostics

5. To view the list of results, select the list to activate scrolling.

The **Battery Info** screen provides detailed information about battery capacity and charging status, including:

- **Cycle Count:** The number of full charge and discharge cycles calculated by the battery.
- **Max Error:** The expected margin of error in the state of the charge calculation. The **Max Error** value is the difference between the **Relative Charge** value and the **Absolute Charge** value.
- **Relative Charge:** The predicted remaining battery capacity, expressed as a percentage of **Full Capacity**. The value in the **Relative Charge** decreases as the battery ages. The Battery Status icon is a graphic representation of the relative charge.
- **Absolute Charge:** The predicted remaining battery capacity, expressed as a percentage of **Design Capacity**.
- **Full Capacity:** The predicted capacity of the battery when it is fully charged. The value in the **Full Capacity** field decreases as the battery ages. The difference between the value in the **Full Capacity** field and the value in the **Design Capacity** field is an indication of battery condition.
- **Design Capacity:** The capacity of a new battery.

If the battery cycle count exceeds the recommended limit of **300 cycles**, or if the battery is older than **three (3) years**, the battery will need to be replaced (see Figure 3).

NOTE: On VS3 monitors, battery manufacture date will be displayed only on software version A.02 or higher. If your VS3 monitor is running an older version of software, please see **Determining Battery Age**.

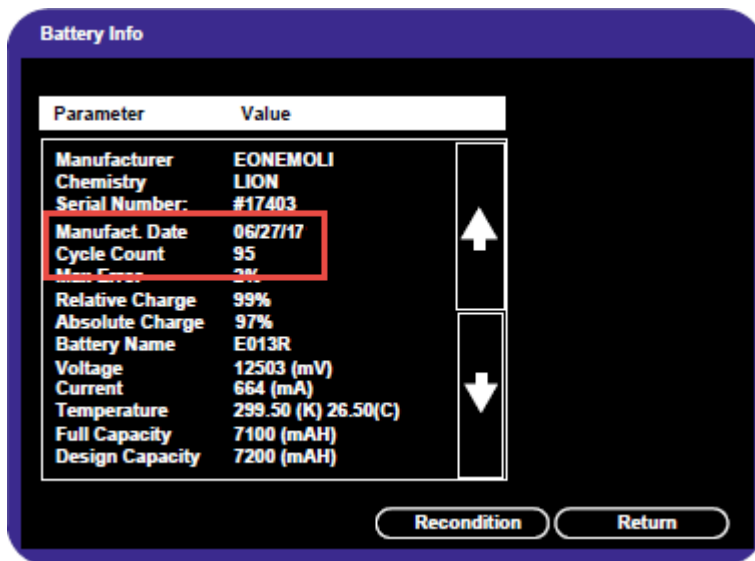


Figure 3 Battery Info Screen

NOTE: If the message, “No data from battery. Please see Service Guide.” appears, you must reset the battery. Refer to your VS series Service Guide for more information.

WARNING

The risk of battery failure increases with age, when a battery remains in use past 300 charge-discharge cycles or 3 years. Such failures can result in overheating that in rare cases can cause the battery to ignite.

Determining Battery Age

You can visually verify the battery manufacture date by checking the battery label. To determine the age of your battery, you will need to remove it from the monitor and check the battery label. See **Replacing the Battery** for instructions on safely removing the battery from your monitor. You should also check any spare batteries you may have on hand.

If the battery has a blue label as shown in Figure 4, the manufacturing date will be printed on the label.



Figure 4 Battery product label

If your label looks like one of the examples in Figure 5, or any other type of label other than the label in Figure 4, you will need to replace the battery.

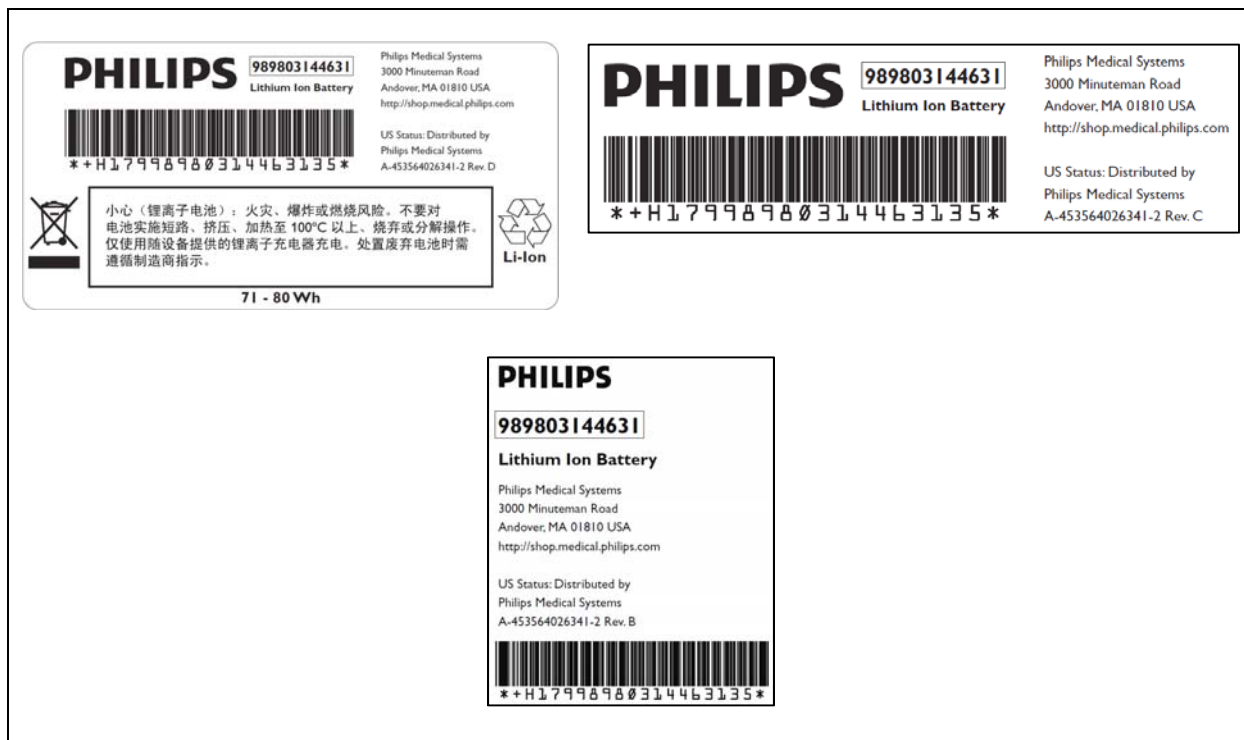


Figure 5 Battery product labels

Reconditioning the Battery

Reconditioning the battery reduces the **Max Error** value, in turn, increases the accuracy of the **Relative Charge**. Philips recommends that you condition the battery by fully discharging and recharging it when the **Max Error** is 10% or greater.

To recondition the battery:

1. Open the Battery Info window (see **Viewing Battery Information**).
2. Disconnect the monitor from AC power.
3. Rotate the wheel to select **Recondition**, then press the wheel. The **Relative Charge** percentage will decrease to 0%.
4. When the monitor shuts down, reconnect the monitor to AC power and allow the battery to recharge to 100%.
5. Repeat steps 1 - 4.

NOTE: If the battery does not recharge after four reconditioning cycles, replace it.

Replacing the Battery

Replace the battery if the following conditions occur:

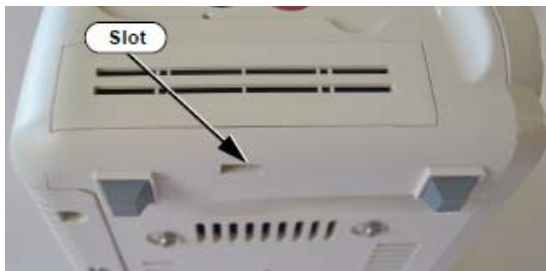
- After reconditioning, if the monitor operates for less than one hour on a fully charged battery before the low battery (Low Batt) alarm occurs, or
- The Max Error cannot be brought $\leq 8\%$ after several recondition cycles, or
- The Full Capacity is 50% or less of the Design Capacity.

WARNING

Dispose of aged batteries in an environmentally responsible manner. Do not dispose of the battery in normal waste containers. Consult your hospital administrator to find out about local arrangements.

To replace the battery:

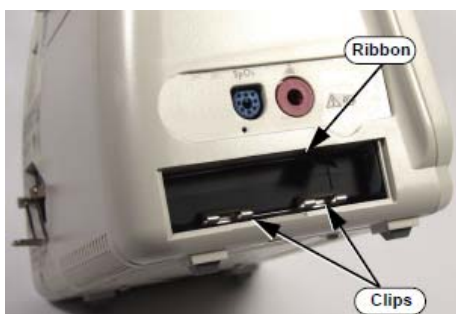
1. Shut down the monitor.
2. Disconnect the AC power cord from the rear of the monitor.
3. Tip the monitor and insert a flathead screwdriver into the slot in the bottom of the case under the battery cover.



CAUTION

Do not try to remove the battery cover by inserting the screwdriver into the vents in the cover. This can damage the battery case cover.

4. Twist the screwdriver slightly to pop the battery cover off of the case.
5. Press down on the battery retaining clips and pull the old battery out of the monitor using the ribbon.



6. Orient the replacement battery so that the contacts and ribbon are on the right.
7. Insert the replacement battery into the empty compartment, and push until the battery snaps into place behind the metal retaining clips.
8. Replace the battery cover by inserting it into the battery opening with the two tabs facing up.
9. Snap the cover into place by pressing it firmly against the monitor case.

Ordering a Replacement Battery

To order a replacement lithium ion battery, contact your Philips Customer Care center. For information on how to contact Philips Customer Care for your country, go to <http://www.healthcare.philips.com>. Select your country and language, then navigate to the Customer Care page.

Product	Description	Battery PN*	Battery PN**
863069	SureSigns VS3 NBP	989803194541 (11.1V 7800 mAh, ME202EK)	989803144631 (11.1V 7200 mAh, ME202CJ)
863070	SureSigns VS3 NBP/Temp		
863071	SureSigns VS3 NBP/SPO2		
863072	SureSigns VS3 NBP/SPO2/Rec		
863073	SureSigns VS3 NBP/SPO2/Temp		
863074	SureSigns VS3 NBP/SPO2/Temp/Rec		
863079	SureSigns VS2 NBP		
863080	SureSigns VS2 NBP/SPO2		
863081	SureSigns VS2 NBP/SPO2/Temp		
863082	SureSigns VS2 NBP/SPO2/Temp/Rec		
863283	SureSigns VS4 NBP/SPO2		
863286	SureSigns VS4 Government Bundle		

* World-wide, except China

** China only



Battery Messages and Alarms

The condition of the battery is reported by technical alarms and error codes.

Technical Alarms

The following battery technical alarms appear in the monitor's message area:

- **Low Batt:** remaining battery power is less than 30%.
- **Extreme Low Batt:** remaining battery power is less than 21%.

Error Codes

An error code (for example, **257 System Error**, indicating a battery charger power failure) appears in the Error Log. To view the Error Log, see “Viewing, Printing, and Exporting the Error Log, on page 4-38 of the Service Guide. For a complete list of error codes and the actions to take, see Chapter 4, “Troubleshooting,” in the Service Guide.

SureSigns VM Series Vital Signs Monitors Service Guide Addendum Replacement for Battery Maintenance Information

This addendum replaces the “Maintaining the Battery” section in Chapter 2 of the SureSigns VM3, VM4, VM6 and VM8 Vital Signs Monitors Service Guides Please store it with your monitor documentation.

Maintaining the Battery

About the Battery

The rechargeable lithium ion battery used in the VM series vital signs monitors is a smart battery with built-in circuitry that communicates battery status information to the monitor. Battery power lasts a minimum of three (3) hours of continuous monitoring with no printing and one NBP measurement every 15 minutes for a VM series monitor.

To properly maintain the battery and prevent damage to the monitor, observe these guidelines:

- If a battery shows damage or signs of leakage, replace it **immediately**.
- **Never** use a faulty battery in a monitor.
- **Never** dispose of the battery in a normal waste container.
- **Never** leave a battery inside the monitor if the monitor is not being used for a long period of time.
- **Never** store a battery that is charged to more than 50% capacity.

NOTE: *For information about the battery status indicator, please see the Instructions for Use provided with your monitor.*

Viewing Battery Information

As a battery ages, its capacity decreases, and the battery status indicator becomes increasingly less accurate as the total number of charges and discharges increase. You can view the **Battery Info** screen to display information about the battery. Ensure that the monitor is connected to AC power before attempting to review battery information.

To view information about the battery:

1. On the main screen of your monitor, rotate the wheel to highlight **System**, then press the wheel.
2. Rotate the wheel to highlight **System Admin** then press the wheel.



- In the window that appears, enter the administrator password (default is 215). Rotate the wheel to highlight **OK**, then press the wheel. The **System Admin Menu** appears.
- Rotate the wheel to highlight **Diagnostics**, then press the wheel.

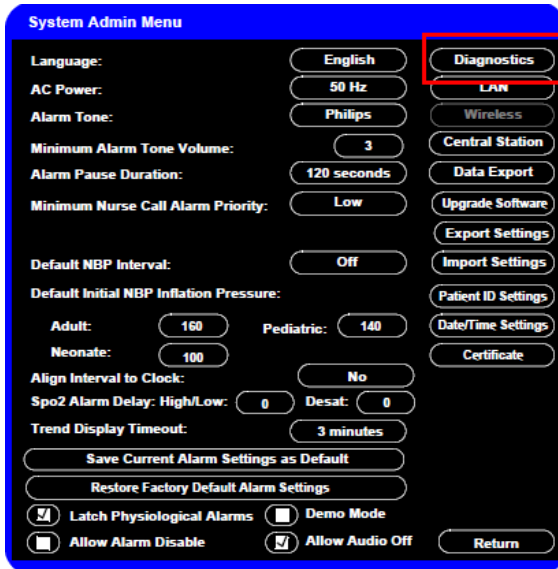


Figure 1 System Admin Menu

- On the **Diagnostics** screen, rotate the wheel to highlight **Battery Info**. Press the wheel to open the **Battery Info** screen.

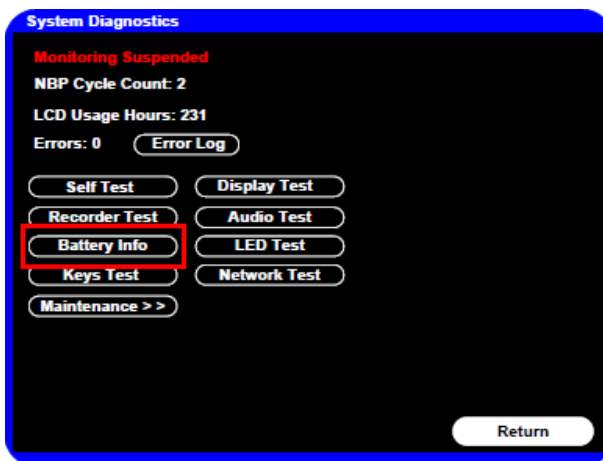


Figure 2 System Diagnostics

- To view the entire list of results, rotate the wheel to highlight the list, then press the wheel to activate scrolling.

The **Battery Info** screen provides detailed information about battery capacity and charging status, including:

- **Cycle Count:** The number of full charge and discharge cycles calculated by the battery.
- **Max Error:** The expected margin of error in the state of the charge calculation. The Max Error value is the difference between the **Relative Charge** value and the **Absolute Charge** value.
- **Relative Charge:** The predicted remaining battery capacity, expressed as a percentage of **Full Capacity**. The value in the **Relative Charge** decreases as the battery ages. The Battery Status icon is a graphic representation of the relative charge.
- **Absolute Charge:** The predicted remaining battery capacity, expressed as a percentage of **Design Capacity**.
- **Full Capacity:** The predicted capacity of the battery when it is fully charged. The value in the **Full Capacity** field decreases as the battery ages. The difference between the value in the **Full Capacity** field and the value in the **Design Capacity** field is an indication of battery condition.
- **Design Capacity:** The capacity of a new battery.

If the battery cycle count exceeds the recommended limit of **300 cycles**, or if the battery is older than **three (3) years**, the battery will need to be replaced (see Figure 3).

NOTE: Battery manufacture date will be displayed on software version A.02 or higher. If your monitor is running an older version of software, please see **Determining Battery Age**,

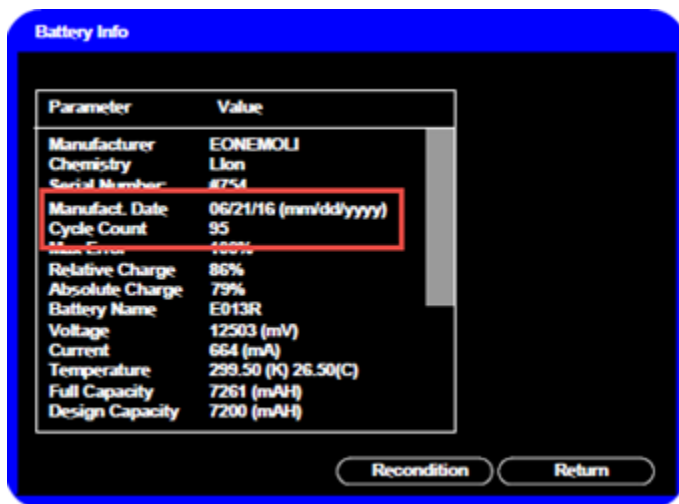


Figure 3 Battery Info Screen

NOTE: If the message “No data from battery. Please see Service Guide.” appears, you must reset the battery. Refer to your VM series Service Guide for more information.

WARNING

The risk of battery failure increases with age, when a battery remains in use past 300 charge-discharge cycles or 3 years. Such failures can result in overheating that in rare cases can cause the battery to ignite.

Determining Battery Age

If your monitor is running a software version lower than A.02, you will need to visually verify the battery manufacture date. To determine the age of your battery, you will need to remove it from the monitor and check the battery label. See **Replacing the Battery** for instructions on safely removing the battery from your monitor. You should also check any spare batteries you may have on hand.

If the battery has a blue label as shown in Figure 4, the manufacturing date will be printed on the label.



Figure 4 Battery product label

If your label looks like one of the examples in Figure 5, or any other type of label other than the label in Figure 4, you will need to replace the battery.

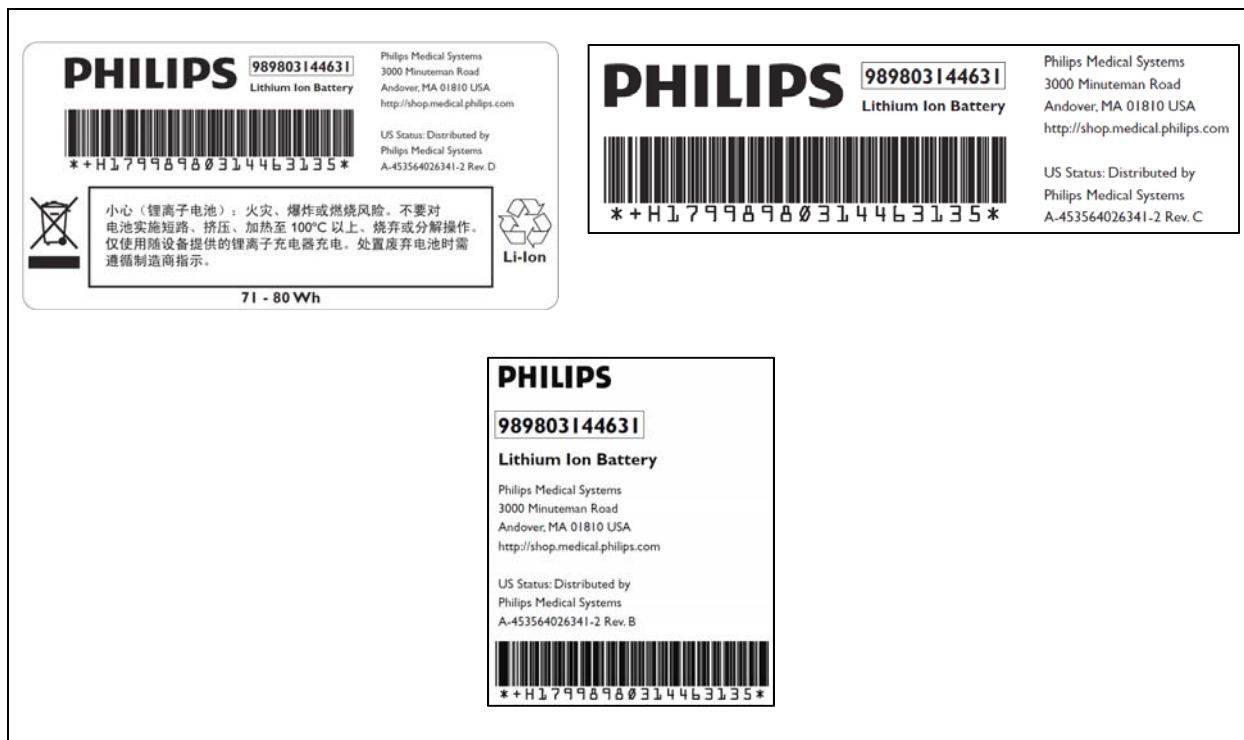


Figure 5 Battery product labels

Reconditioning the Battery

Reconditioning the battery reduces the **Max Error** value, in turn, increases the accuracy of the **Relative Charge**. Philips recommends that you condition the battery by fully discharging and recharging it when the **Max Error** is 10% or greater.

To recondition the battery:

1. Open the Battery Info window (see **Viewing Battery Information**).
2. Disconnect the monitor from AC power.
3. Rotate the wheel to select **Recondition**, then press the wheel. The **Relative Charge** percentage will decrease to 0%.
4. When the monitor shuts down, reconnect the monitor to AC power and allow the battery to recharge to 100%.
5. Repeat steps 1 - 4.

NOTE: If the battery does not recharge after four reconditioning cycles, replace it.

Replacing the Battery

Replace the battery if the following conditions occur:

- After reconditioning, if the monitor operates for less than one hour on a fully charged battery before the low battery (**Low Batt**) alarm occurs, or
- The **Max Error** cannot be brought $\leq 8\%$ after several recondition cycles, or
- The **Full Capacity** is 50% or less of the **Design Capacity**.

WARNING

Dispose of aged batteries in an environmentally responsible manner. Do not dispose of the battery in normal waste containers. Consult your hospital administrator to find out about local arrangements.

To replace the battery:

1. Shut down the monitor.
2. Disconnect the AC power cord from the rear of the monitor.
3. Tip the monitor and insert a flathead screwdriver into the slot in the bottom of the case under the battery cover.



CAUTION

Do not try to remove the battery cover by inserting the screwdriver into the vents in the cover. This can damage the battery case cover.

4. Twist the screwdriver slightly to pop the battery cover off of the case.
5. Press down on the battery retaining clips and pull the old battery out of the monitor using the ribbon.



6. Orient the replacement battery so that the contacts and ribbon are on the right.
7. Insert the replacement battery into the empty compartment, and push until the battery snaps into place behind the metal retaining clips.
8. Replace the battery cover by inserting it into the battery opening with the two tabs facing up.
9. Snap the cover into place by pressing it firmly against the monitor case.

Ordering a Replacement Battery

To order a replacement lithium ion battery, contact your Philips Customer Care center. For information on For more information on how to contact Philips Customer Care for your country, go to <http://www.healthcare.philips.com>. Select your country and language, then navigate to the Customer Care page.

Product	Description	Battery PN*	Battery PN**
863063	SureSigns VM 4 Patient Monitor	989803194541 (11.1V 7800 mAh, ME202EK)	989803144631 (11.1V 7200 mAh, ME202CJ)
863064	SureSigns VM 6 Patient Monitor		
863065	SureSigns VM 6 Patient Monitor		
863066	SureSigns VM 8 Patient Monitor		
863068	SureSigns VM 8 Patient Monitor		
863077	SureSigns VM 3 Patient Monitor		
863085	SureSigns VM 4 Patient Monitor		
863086	SureSigns VM 6 Patient Monitor		
863317	SureSigns VM 8 SE Patient Monitor		
863287	SureSigns VM 4 Government Bundle		
863288	SureSigns VM 6 Government Bundle		
863289	SureSigns VM 8 Government Bundle		

* World-wide, except China

** China only



Battery Messages and Alarms

The condition of the battery is reported by technical alarms and error codes.

Technical Alarms

The following battery technical alarms appear in the monitor's message area:

- **Low Batt:** remaining battery power is less than 30%.
- **Extreme Low Batt:** remaining battery power is less than 21%.

Error Codes

An error code (for example, **257 System Error**, indicating a battery charger power failure) appears in the Error Log. To view the Error Log, see “Viewing, Printing, and Exporting the Error Log, on page 4-33 of the Service Guide. For a complete list of error codes and the actions to take, see Chapter 4, “Troubleshooting,” in the Service Guide.

SureSigns Vital Signs ViewStation Service Guide Addendum Replacement for Battery Maintenance Information

This addendum replaces the “Battery Maintenance and Indicators” section in Chapter 4 of the SureSigns Vital Signs ViewStation (VSV) Service Guide. Please store it with your monitor documentation.

Battery Maintenance and Indicators

About the Battery

The rechargeable lithium ion battery used in the Vital Signs ViewStation is a smart battery with built-in circuitry that communicates battery status information to the monitor. Battery power lasts a minimum of four (4) hours of continuous monitoring with no printing.

To properly maintain the battery and prevent damage to the monitor, observe these guidelines:

- If a battery shows damage or signs of leakage, replace it **immediately**.
- **Never** use a faulty battery in a monitor.
- **Never** dispose of the battery in a normal waste container.
- **Never** leave a battery inside the monitor if the monitor is not being used for a long period of time.
- **Never** store a battery that is charged to more than 50% capacity.

Battery Charge Indicators

You can check the level of charge in a battery by any of the following:

- The battery charging LED;
- The battery status pane;
- Battery messages and alarms.

For information on the battery charging LED and battery status pane, see “Charging the Battery” on page 2-2 of the Service Guide.



Viewing Battery Information

As a battery ages, its capacity decreases, and the battery status indicator becomes increasingly less accurate as the total number of charges and discharges increase. You can view the **Battery Test** screen to display information about the battery. Ensure that the monitor is connected to AC power before attempting to review battery information.

To view information about the battery:

1. On the main screen of your VSV, rotate the wheel to highlight **System**, then press the wheel.
2. Rotate the wheel to highlight **System Admin** then press the wheel.
3. In the window that appears, enter the administrator password (default is 215). Rotate the wheel to highlight **OK**, then press the wheel. The **System Admin Menu** appears.
4. Rotate the wheel to highlight **Diagnostics**, then press the wheel.

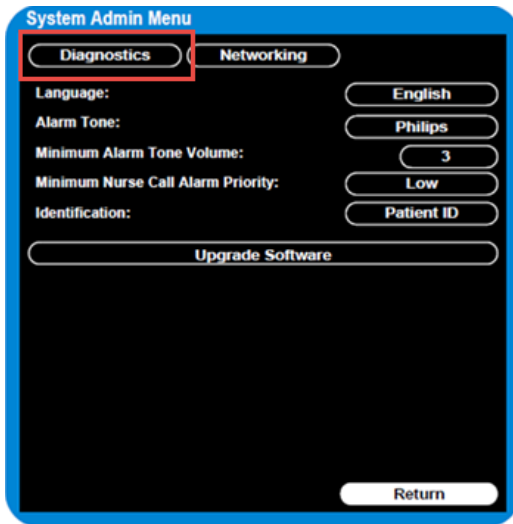


Figure 1 System Admin Menu

5. On the **Diagnostics** screen, rotate the wheel to highlight **Battery Test**. Press the wheel to open the **Battery Test** screen.



Figure 2 System Diagnostics

The **Battery Test** screen provides detailed information about battery capacity and charging status. If the charging cycle count exceeds the recommended limit of **300 cycles** or is older than **three (3) years**, the battery will need to be replaced (see cycle count in Figure 3).

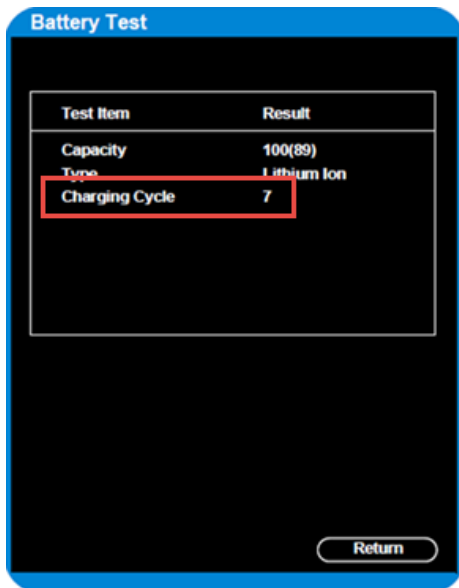


Figure 3 Battery Test Screen

NOTE: *If the message “No data from battery. Please see Service Guide.” appears, you must reset the battery. Refer to your VSV Service Manual for more information.*

WARNING

The risk of battery failure increases with age, when a battery remains in use past 300 charge-discharge cycles or 3 years. Such failures can result in overheating that in rare cases can cause the battery to ignite.

Determining Battery Age

To determine the age of your battery, you will need to remove it from the VSV and check the battery label. See **Replacing the Battery** for instructions on safely removing the battery from your VSV. You should also check any spare batteries you may have on hand.

If the battery has a blue label as shown in Figure 4, the manufacturing date will be printed on the label.



Figure 4 Battery product label

If your label looks like one of the examples in Figure 5, or any other type of label other than the label in Figure 4, you will need to replace the battery.

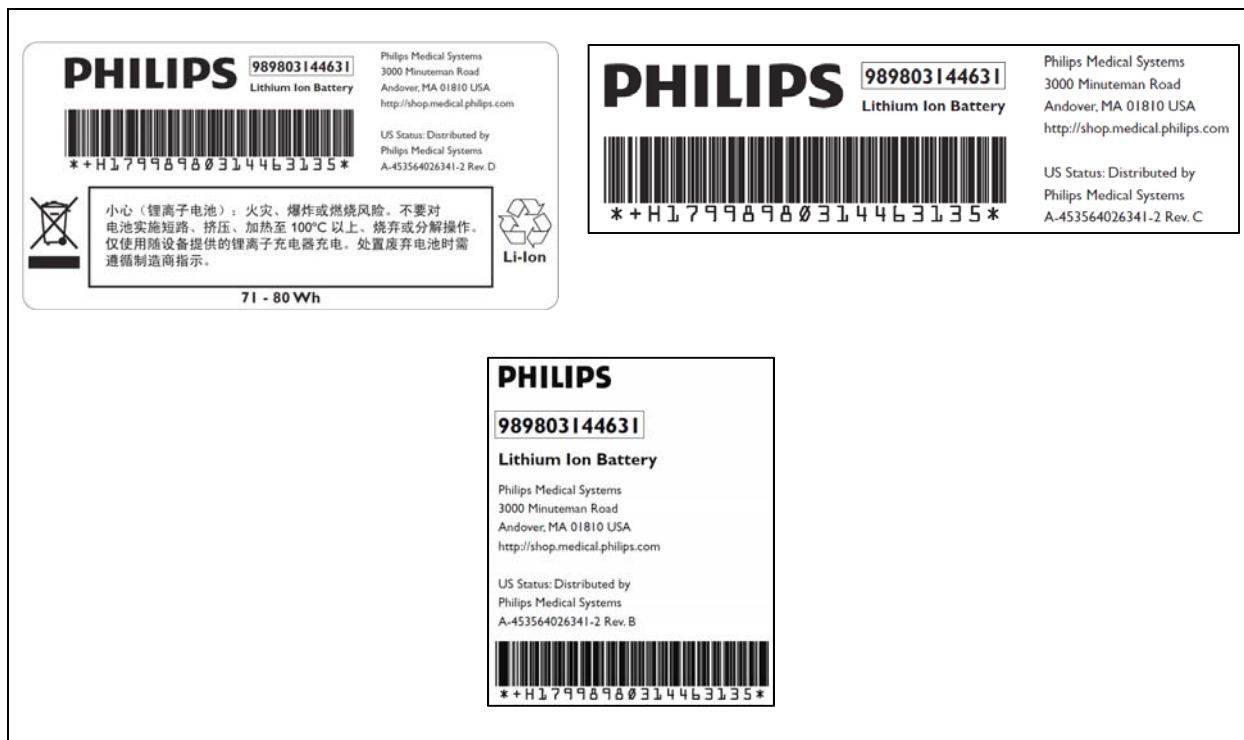


Figure 5 Battery product labels

Replacing the Battery

To replace the battery:

1. Shut down the VSV.
2. Disconnect the AC power cord from the rear of the monitor.
3. Tip the VSV and insert a flathead screwdriver into the slot in the bottom of the case under the battery cover.



CAUTION

Do not try to remove the battery cover by inserting the screwdriver into the vents in the cover. This can damage the battery case cover.

4. Twist the screwdriver slightly to pop the battery cover off of the case.
5. Press down on the battery retaining clips and pull the old battery out of the monitor using the ribbon.



6. Orient the replacement battery so that the contacts and ribbon are on the right.
7. Insert the replacement battery into the empty compartment, and push until the battery snaps into place behind the metal retaining clips.
8. Replace the battery cover by inserting it into the battery opening with the two tabs facing up.
9. Snap the cover into place by pressing it firmly against the monitor case.

Ordering a Replacement Battery

To order a replacement lithium ion battery, contact your Philips Customer Care center. For information on how to contact Philips Customer Care for your country, go to <http://www.healthcare.philips.com>. Select your country and language, then navigate to the Customer Care page.

Product	Description	Battery PN*	Battery PN**
863067	Vital Signs ViewStation	989803194541 (11.1V 7800 mAh, ME202EK)	989803144631 (11.1V 7200 mAh, ME202CJ)

* World-wide, except China

** China only



Battery Messages and Alarms

A technical alarm could indicate a low and/or improperly functioning battery. For a complete list of battery-related technical alarms, refer to the *SureSigns Vital Signs ViewStation Instructions for Use*.

In addition, a service error code could indicate a problem with the battery. Service error codes are written to the Error Log. For a complete list of error codes and actions to take, see “Error Codes” on page 5-13 of the Service Guide.