Philips M1032A VueLink

# External Device Service Booklet

PHILIPS

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## Notice

Philips makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Philips shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.



## Important

United States federal law restricts these devices to sale by or on the order of a physician.

# Intended Use

## Description

The Philips M1032A VueLink module is a plug-in module for use with a Philips IntelliVue, V24 or V26 Patient Monitor or a Philips CMS Patient Monitoring System.

The Philips M1032A VueLink module is powered via the patient monitor.

## Purpose

The Philips M1032A VueLink module transmits information from a connected external device to a Philips IntelliVue, V24 or V26 Patient Monitor or a Philips CMS Patient Monitoring System. The Philips M1032A VueLink module is not a therapeutic device.

## Environment

The Philips M1032A VueLink module is intended to be used in a clinical environment by trained healthcare professionals. It is not intended for home use.

## Indications for Use

| | |
|---|---|
| **Condition** | The use of a Philips M1032A VueLink module is generally indicated when the clinician decides there is a need to include the physiological and device parameters and waves and alarms generated by external devices into the Philips IntelliVue, V24 or V26 Patient Monitor or a Philips CMS Patient Monitoring System. |
| **Part of Body or Type of Tissue with Which the Device Interacts** | The Philips M1032A VueLink module does not contact the body or tissue of the patient. Signals are obtained from external devices. |
| **Frequency of Use** | The Philips M1032A VueLink module is indicated for use when prescribed by a clinician. |
| **Physiological Purpose** | The Philips M1032A VueLink module is indicated when the purpose is to gain information for treatment, to assess adequacy of treatment, or to rule out causes of symptoms. The Philips M1032A VueLink module is well suited for patient monitoring. |
| **Patient Population** | Please refer to the documentation describing the external device. |
| **Prescription Versus Over-the-Counter** | The Philips M1032A VueLink module is a prescription device. |

## Warnings, Cautions and Notes

In this guide:

| | |
|---|---|
| ***Warning*** | • ***A warning alerts you to a potential serious outcome, adverse event or safety hazard.***<br>***Failure to observe a warning may result in death or serious injury to the user or patient.*** |
| **Caution** | **A caution alerts you where special care is necessary for the safe and effective use of the product.**<br>**Failure to observe a caution may result in minor or moderate personal injury or damage to the product or other property, and possibly in a remote risk of more serious injury.** |
| **Note** | A note gives special instructions to highlight an operating procedure or practice. Notes may precede or follow the applicable text. |

## Responsibility of the Manufacturer

Philips Medical Systems only considers itself responsible for any effects on safety, reliability and performance of the equipment if:

- assembly operations, extensions, re-adjustments, modifications or repairs are carried out by persons authorized by Philips, and
- the electrical installation of the relevant room complies with national standards, and
- the Philips M1032A VueLink module is used in accordance with the instructions for use contained in this document, and in the relevant chapter of the user documentation for the patient monitor into which the module is plugged (Philips IntelliVue, V24 or V26 Patient Monitor or a Philips CMS Patient Monitoring System).

**Warning**

- ***Failure on the part of the responsible individual hospital or institution employing the this equipment to implement a satisfactory maintenance schedule may cause undue equipment failure and possible health hazards.***

  ***The maintenance schedule is defined in the Testing and Maintenance chapter of the IntelliVue Patient Monitor Service Guide, the Philips CMS Patient Monitoring System Service Guide, or the Philips V24/V26 Component Monitoring System Service Guide, corresponding to your monitor.***

**Note**

Not all the device drivers are available in all countries.

The Instructions for Use for all drivers are translated into the following languages: Czech, Danish, Dutch, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Russian, Simplified Chinese (China), Slovak, Spanish, Swedish, Traditional Chinese (Taiwan), Turkish. The driver software may not be available in all of these languages. Please refer to the CMS-PM softserver (http://pww.softserver.anr.ms.philips.com/navigation.asp,

subfolder Vuelink, subfolder Additional Information) for a list of the translated drivers that are available.

Please also check your local regulatory and business requirements for permission to sell.

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Philips authorized technical personnel are responsible for the setup, configuration and repair of the VueLink module and all related Philips equipment. The configuration, setup and repair of external devices furnished by manufacturers other than Philips Medical Systems must be carried out by local site personnel, or by representatives of the external device manufacturer.

Philips Medical Systems is not responsible for any problems arising from inaccurate or erroneous data displayed on the Philips patient monitor that is received from external devices furnished by manufacturers other than Philips Medical Systems.

Philips Medical Systems makes every effort to ensure that signal names are maintained between the Philips patient monitor and any interfaced external devices. However, signal names within the Philips patient monitor also need to remain consistent. This means that in some cases the wave and numeric labels used on the Philips monitor may be different from those used on the interfaced external device.

Philips Medical Systems will not be held responsible for any errors in the configuration of the VueLink module for connection to free-analog devices.

If manufacturers other than Philips Medical Systems make changes to any VueLink supported device, Philips Medical Systems will try to ensure that interfacing to that device remains possible. However, Philips Medical Systems reserves the right to discontinue interfacing to any device.

# Introduction

This Service Guide contains technical details for the connection of external devices to the VueLink module. It is not a comprehensive, in-depth explanation of the product architecture or technical implementation.

## Who Should Use This Guide

This guide is for biomedical engineers or technicians responsible for connecting external devices to Philips patient monitoring systems using the VueLink module.

## How to Use This Booklet

This booklet provides information on the worldwide external devices that can be connected to the VueLink module. It should be printed and inserted into Appendix A of the VueLink Module Handbook, completely replacing the existing worldwide driver information.

The information contained in this document is subject to change without notice.

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Germany

# Connecting your Device to VueLink

There are two different ways to connect your Device to VueLink:

- Connection via a Supported Device driver.
  This uses one of the following device outputs:
  - Analog
  - RS-232 Digital
  - Analog/Digital combination
- Connection via a Free Analog Device driver.
  This only uses device analog outputs.

## Supported Device Drivers

Supported Device Drivers are preconfigured in the VueLink module. A dedicated ready-prepared VueLink cable is available for connecting the external device to the module. (Please refer to page A-4 for cable part numbers).

## Free Analog Device Drivers

Free Analog Device Drivers must be manually configured into the module at installation. A Free Analog VueLink cable is available for connecting the Free Analog external device to the VueLink module. One end of the cable is unterminated and must be prepared for connection to the external device on-site. (Please refer to page B-4 for cable option part numbers).

# Contents

# A I
# Supported Device Information

This appendix contains information about the supported devices that can be connected to the VueLink module. The following information is provided for each supported device:

- The part number of the corresponding device driver.
- The configuration settings required on the external device.
- The placement of the output connectors on the external device.

A cable matrix has also been compiled, detailing the cable part numbers for each supported device.

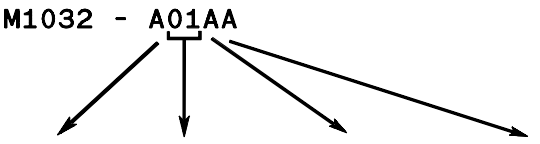
**Caution** **Only use cables specified by Philips Medical Systems when connecting supported devices to the VueLink module. Use of unauthorized or incorrect cables may result in damage to supported devices and may cause incorrect data to be displayed on the Philips patient monitor.**

The configuration settings required on the external devices are detailed on the following pages. Procedures on how to configure the external devices are not provided. Configuration procedures can be found in the documentation supplied with the external devices. Philips personnel are only responsible for configuring Philips manufactured external devices.

**Note** The signal labels used on the Philips patient monitor may be different from those given on the external device. The labels used on the Philips patient monitor are listed in the Philips M1032A VueLink External Device Instructions for Use.

# Driver Part Numbers for Supported Devices

Each driver is allocated a part number, using the driver key detailed below:




| Module Type | Driver Number | Revision | Language |
|---|---|---|---|
| A or B | 01–99 | A–Z | A = English<br>D = Danish<br>E = Spanish<br>F = French<br>G = German<br>H = Dutch<br>J = Japanese (Kanji)<br>N = Norwegian<br>P = Simpl. Chinese (PRC)<br>R = Trad. Chinese (Taiwan)<br>S = Swedish<br>X = Finnish<br>Z = Italian |

# VueLink Cable Overview

3 Separate part numbers are assigned to each VueLink Cable:

| | |
|---|---|
| **M1032A KXX option** | To order a cable with a new module. |
| **M1182A KXX option** | To order a cable for an existing module or for upgrades (Sales). |
| **M1032-XXXXX option** | To order a cable for an existing module from SMO/SLI. (Support or Immediate Requirement) |

The Supported Device cable options are detailed in the matrix opposite:

### VueLink Cable Overview

| Device | New Module Option (M1032A #) | | Patient Monitor Cable Option (M1182A #) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| Auxiliary Devices | | | | | | |
| Abbott Oximetrix 3 | K73 | - | K73 | - | 61619 | 61620 |
| Critikon 1846/1846 SX | K72 | - | K72 | - | 61613 | 61614 |
| Danmeter AAI/AEP Monitor | K56 | - | K56 | - | 61693 | - |
| Nellcor N-200 | K71 | - | K71 | - | 61617 | 61618 |
| Nellcor N-100C | K70 | - | K70 | - | 61615 | 61616 |
| Ventilators | | | | | | |
| Dräger Babylog 8000 | - | K2H | - | K2H | - | 61644 |
| Dräger Evita | K24 | K2E | K24 | K2E | 61629 | 61630 |
| Dräger Evita 2 | - | K2G | - | K2G | - | 61643 |

## VueLink Cable Overview

| Device | New Module Option (M1032A #) | | Patient Monitor Cable Option (M1182A #) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| Dräger Evita 2 dura<br>Dräger Evita 4<br>Dräger Evita XL Ventilator | - | K2M | - | K2M | - | 61680 |
| Dräger Graphic Screen for Babylog 8000 | - | K29 | - | K29 | - | 61604 |
| Dräger Graphic Screen for Savina | - | K28 | - | K28 | - | 61604 |
| Dräger Savina | - | K27 | - | K27 | - | 61644 |
| GE Engström Carestation | - | K2N | - | K2N | - | 61607 |
| Hamilton Amadeus | - | 271 | - | 271 | - | 61673 |
| Hamilton Veolar | - | 271 | - | 271 | - | 61673 |
| Maquet Servo 300 | - | K2F | - | K2F | - | 61642 |
| Maquet SERVO-i | - | K23 | - | K23 | - | 61696 |
| Maquet SERVO-s | - | K26 | - | K26 | - | 61696 |
| Nellcor Puritan Bennett 740 | - | K25 | - | K25 | - | 61665 |
| Nellcor Puritan Bennett 760 | - | K25 | - | K25 | - | 61665 |
| Nellcor Puritan Bennett 840 | - | K25 | - | K25 | - | 61665 |
| Puritan-Bennett 7200a/ae | K20 | K2A | K20 | K2A | 61621 | 61622 |
| Siemens 900 C/D/E | K21 | K2B | K21 | K2B | 61623 | 61624 |
| Siemens SCM 990 | K22 | K2C | K22 | K2C | 61625 | 61626 |
| BEAR 1000 | - | K2K | - | K2K | - | 61657 |

## VueLink Cable Overview

| Device | New Module Option (M1032A #) | | Patient Monitor Cable Option (M1182A #) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| Infrasonics Infant Star / ISV | - | K2J | - | K2J | - | 61645 |
| Gas Analyzers | | | | | | |
| Datex Capnomac (II & Ultima) | K41 | - | K41 | - | 61633 | - |
| Dräger Vamos | K4A | - | K4A | - | 61695 | - |
| Philips M1025A/B | K40 | - | K40 | - | 61631 | - |
| Ohmeda RGM 5250 (old)[1] | - | - | - | - | 61635 | - |
| Ohmeda RGM 5250 (new) | K43 | - | K43 | - | 61636 | - |
| Ohmeda Rascal II | K45 | - | K45 | - | 61664 | - |
| Anesthesia Machines | | | | | | |
| Dräger Cato | K02 | - | K02 | - | 61602 | - |
| Dräger Cicero | K01 | - | K01 | - | 61601 | - |
| Dräger Cicero EM mono | K10 | - | K10 | - | 61675 | - |
| Dräger Cicero EM color | - | K12 | | K12 | - | 61685 |
| Dräger Fabius GS/Tiro | K49 | - | K49 | - | 61700 | - |
| Dräger Julian | K11 | - | K11 | - | 61681 | - |
| Dräger Pallas | K4C | - | K4C | - | 61694 | - |
| Dräger PM 8050 | 270 | - | 270 | - | 61676 | - |
| Dräger Primus/Apollo | K48 | - | K48 | - | 61694 | - |
| Dräger Zeus | - | K4B | - | K4B | - | 61666 |

## VueLink Cable Overview

| Device | New Module Option (M1032A #) | | Patient Monitor Cable Option (M1182A #) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| GE Aestiva | K15 | - | K15 | - | 61684 | - |
| GE Aisys | K16 | - | K16 | - | 61684 | - |
| GE Avance | K15 | - | K15 | - | 61684 | - |
| NAD[2] Narkomed 2B/2C | K05 | - | K05 | - | 61605 | - |
| NAD[2] Narkomed 4 | K06 | - | K06 | - | 61605 | - |
| NAD[2] Narkomed GS | K47 | - | K47 | - | 61605 | - |
| NAD[2] Narkomed 6000 | K46 | - | K46 | - | 61605 | - |
| Ohmeda Modulus CD | K03 | - | K03 | - | 61603 | - |
| Ohmeda 7800 | K07 | - | K07 | - | 61658 | - |
| Ohmeda 7810 | K08 | - | K08 | - | 61659 | - |
| Ohmeda 7900 | K09 | - | K09 | - | 61678 | - |
| Taema Alys | 274 | - | 274 | - | 61674 | - |
| Auxiliary Plus Devices | | | | | | |
| Aspect Medical Systems A-2000 BIS Monitor | - | K52 | - | K52 | - | 61687 |
| Baxter Explorer | K74 | - | K74 | - | 61651 | - |
| Baxter Vigilance | - | - | - | - | 61652 | - |
| B\|Braun SpaceCom | - | K59 | - | K59 | - | 61649 |
| Braun FM | - | 275 | - | 275 | - | 61691 |

## VueLink Cable Overview

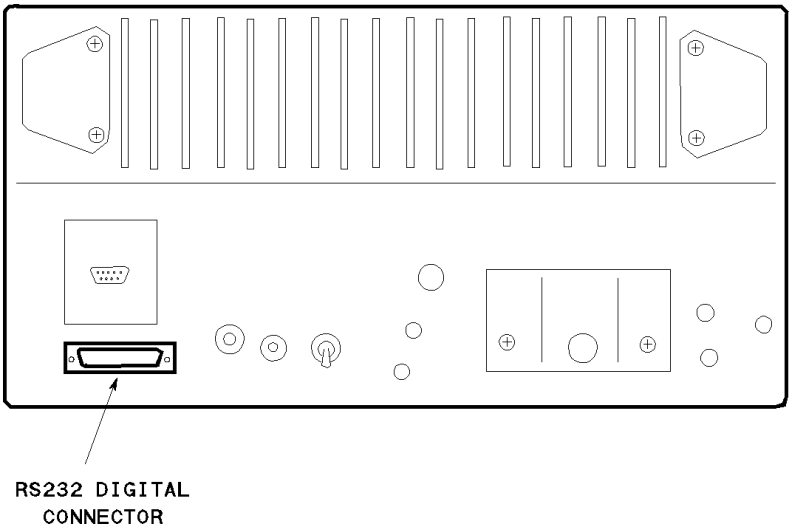
| Device | New Module Option (M1032A #) | | Patient Monitor Cable Option (M1182A #) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| Braun FM software revision < 3.0 | - | - | - | - | - | 61648 |
| Diametrics Medical IRMA SL Series 2000 | - | K54 | - | K54 | - | 61688 |
| Diametrics Medical Trendcare monitor | - | K55 | - | K55 | - | 61689 |
| Edwards CardiacOutput-Oximetry Monitor Family | K75 | - | K75 | - | 61692 | - |
| Fresenius Vial Base A/DPS/ MVP | - | 277 | - | 277 | - | 61682 |
| GE DINAMAP ProCare 100 Series Patient Monitor | - | K78 | - | K78 | - | 61606 |
| i-STAT® 1 Analyzer | - | K58 | - | K58 | | 61667 |
| Mortara ELI 100/STM | - | K76 | - | K76 | - | 61653 |
| Organon Teknika TOF-Watch SX | K53 | - | K53 | - | 61686 | - |
| Free Analog Devices | | | | | | |
| Free Analog | K60 | K6A | K60 | K6A | 61611 | 61612 |
| Open Interface Cable (25-pin digital/analog) | - | K6B | - | K6B | - | 61654 |
| Open Interface Cable (9-pin digital) | - | K6C | - | K6C | - | 61699 |

1. Old cable only available for support in case an existing cable fails.
2. NAD = North American Dräger

# A2
# Auxiliary Devices

## Abbott Oximetrix 3 - $SO_2$ Monitor

| | |
|---|---|
| **Device Driver Name:** | Abbott Oximetrix 3 |
| **Device Driver P/N:** | M1032-A07rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Oximetrix (R)3 $SO_2$ Monitor (version 104 and 105) |
| **Connection:** | RS-232 Digital (Fixed configuration)<br>Baud Rate: 1200<br>Word Length: 8 bits<br>Stop Bits: 1<br>Start Bits: 1<br>Parity: None |
| **Switch Settings:** | Factory default |




**Abbott Oximetrix 3 - $SO_2$ Monitor Rear Panel**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

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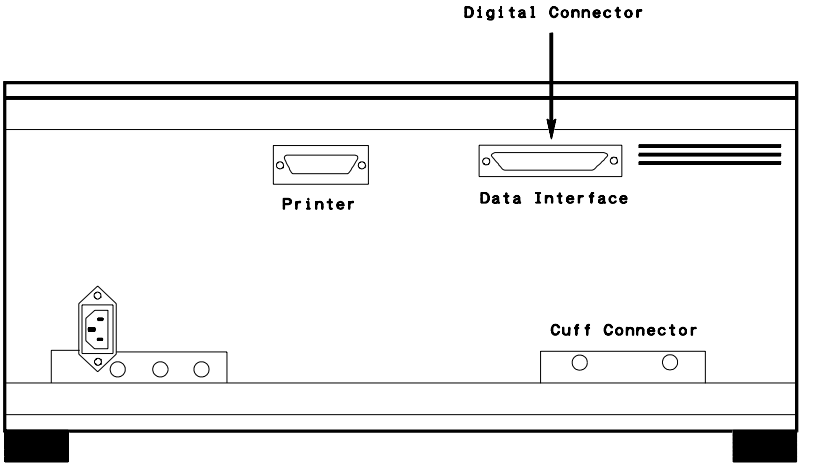
# Critikon Dinamap 1846 / 1846 SX - NBP Monitor

| | |
|---|---|
| **Device Driver Name:** | Critikon 1846 / 1846 SX |
| **Device Driver P/N:** | M1032-A06rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Critikon 1846 (with software revision 1846RCM and 1846PRBG)<br>Critikon 1846 SX (with software revision SXRCH and SXPRDH) |
| **Connection:** | RS-232 Digital (Fixed configuration)<br>Baud Rate: 600<br>Word Length: 8 bits<br>Stop Bits: 1<br>Parity: None. |
| **Switch Settings:** | Factory default |




**Critikon Dinamap 1846 / 1846 SX - NBP Monitor Rear Panel**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

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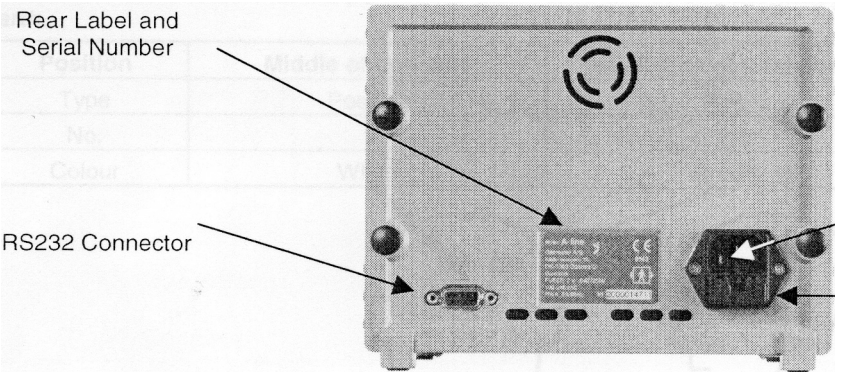
# Danmeter AAI/AEP Monitor

| | |
|---|---|
| **Device Driver Name:** | AAI/AEP Monitor |
| **Device Driver P/N:** | M1032-A08rl<br>where:<br>r = revision.<br>l = language. |
| **Supported Devices:** | Danmeter AAI/AEP Monitor (SBC(software) Version 1.5) |
| **Connection:** | RS-232 Digital (at the rear of the device) |

| | |
|---|---|
| Baud Rate: | 9600 (Low[1]) |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Start Bits: | 1 |
| Parity: | None |
| Protocol: | Device Link (ON[1]) |




**Danmeter AAI/AEP Monitor Rear Panel**

1. Must be set and verified according to the document "AAI/AEP Monitor Directions for Use".

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Nellcor® N-200 - $SpO_2$ Monitor

**Device Driver Name:** Nellcor® N-200

**Device Driver P/N:** M1032-A05rl

where:
r = revision
l = language

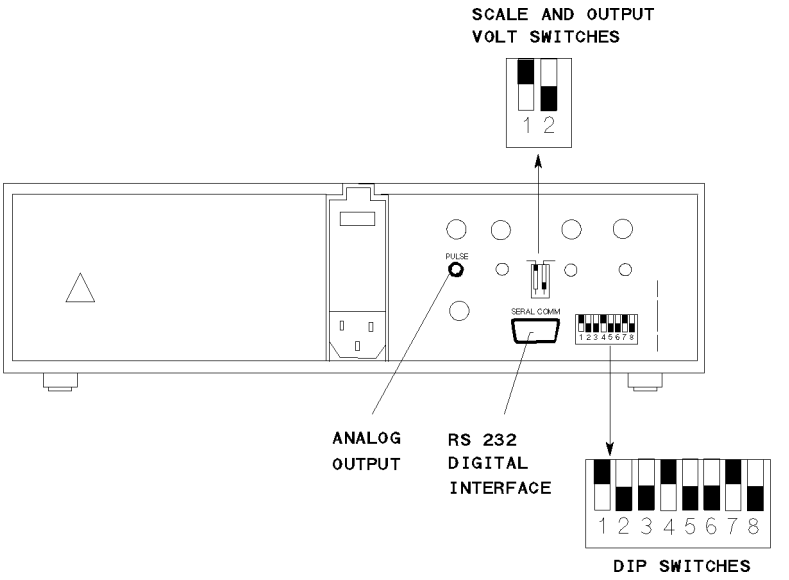
**Supported Devices:** Nellcor® N-200

**Connection:** Analog / RS-232 Digital combination

| | |
|---|---|
| Baud Rate: | 9600 |
| Word Length: | 8 bits |
| Stop Bits: | 2 |
| Parity: | None |
| Analog: | 1 alarm, 1 wave. |

**Switch Settings:** See table below:

| Name | Number | Position |
|---|---|---|
| SCALE and OUTPUT VOLT Switches | 1 | UP |
| | 2 | DOWN |
| DIP Switches | 1 | Either |
| | 2 | DOWN |
| | 3 | DOWN |
| | 4 | UP |
| | 5 | DOWN |
| | 6 | Either |
| | 7 | UP |
| | 8 | DOWN |

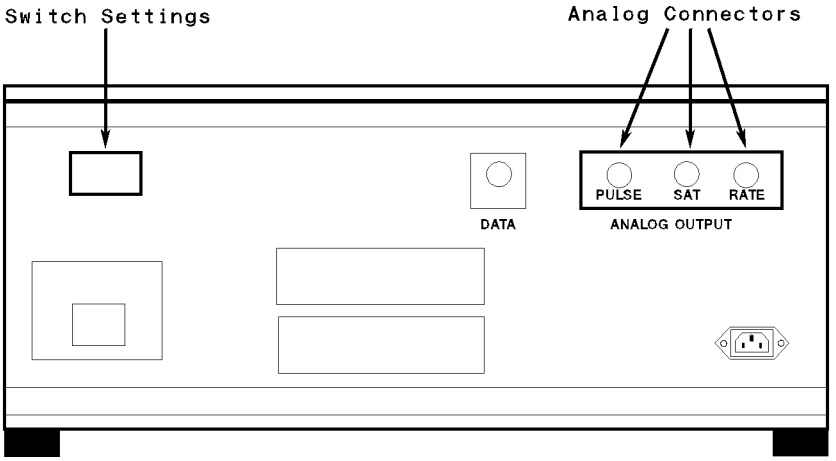



**Nellcor® N-200 - $SpO_2$ Monitor Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Nellcor® N-100C - $SpO_2$ Monitor

| | |
|---|---|
| **Device Driver Name:** | Nellcor® N-100 |
| **Device Driver P/N:** | M1032-A04rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Nellcor® N-100 |
| **Connection:** | Analog: 1 wave, 2 numerics, no alarms |
| **Switch Settings:** | Set range switch to 0-10 V. |




**Nellcor® N-100C - $SpO_2$ Monitor Rear Panel**

**Note** The VueLink cable can get stuck in the outer cabinet without providing proper contact to the connectors. Apply moderate force to overcome this problem.

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

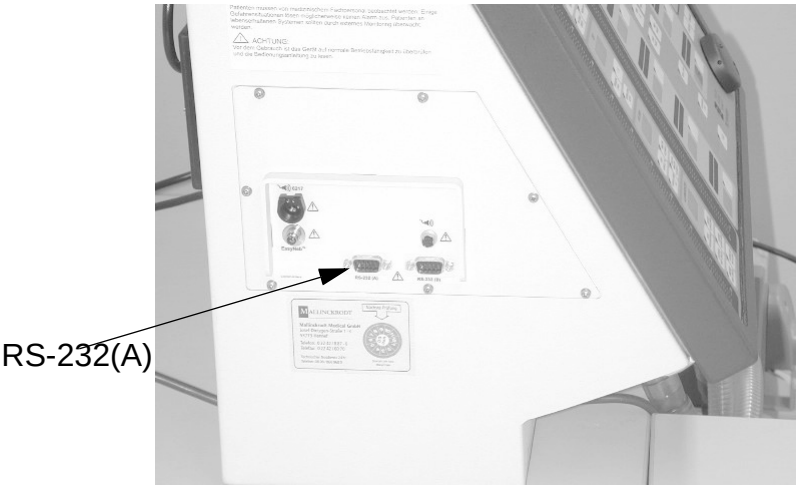
# A3
# Ventilators

## Nellcor Puritan-Bennett 740 / 760 / 840 Ventilators

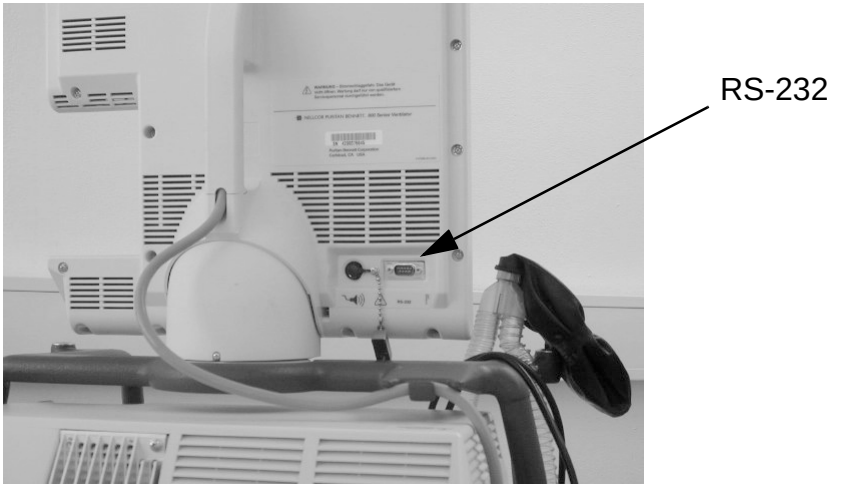
| | |
|---|---|
| **Device Driver Name:** | NPB740/760/840 |
| **Device Driver P/N:** | M1032-B48rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | NPB 740 (sw rev. J).<br>NPB 760 (sw rev. J).<br>NPB 840 (sw rev. J). |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 9600 |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Start Bits: | 1 |
| Parity: | None |

**Note** RS-232 parameters must be set and verified according to the Nellcor Puritan-Bennett Service Manual




**NPB 740 / 760 Ventilator Side Panel**

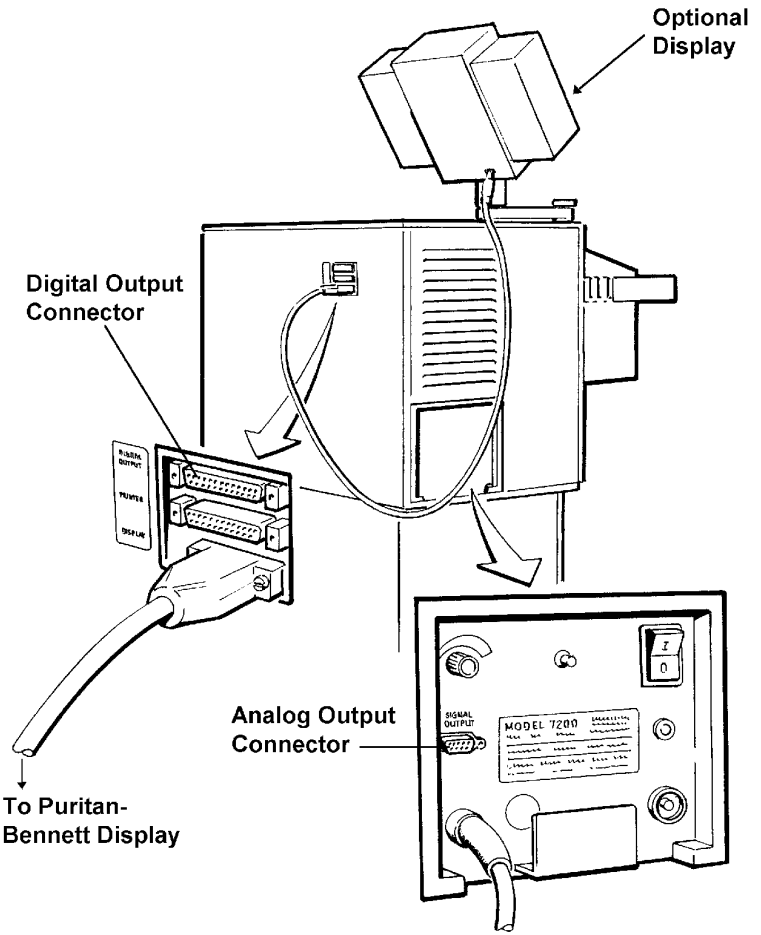



**NPB 840 Ventilator Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Puritan-Bennett 7200a / 7200ae Ventilator

| | |
|---|---|
| **Device Driver Name:** | Bennett 7200a/ae |
| **Device Driver P/N:** | M1032-B02rl<br><br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Puritan-Bennett 7200a (sw rev. V English only).<br><br>Puritan-Bennett 7200ae (sw rev. D for Eng, Sp, Fr, Ger and Ital). |
| **Connection:** | Analog / RS-232 Digital combination<br><br>Baud Rate: 9600<br>Word Length: 7 bits<br>Stop Bits: 1<br>Parity: Even<br>Analog: 2 waves |
| **Switch Setting:** | Internal; must be set by customer (see Puritan-Bennett User Guide). |




**Puritan-Bennett 7200a / 7200ae Ventilator Rear Panel**

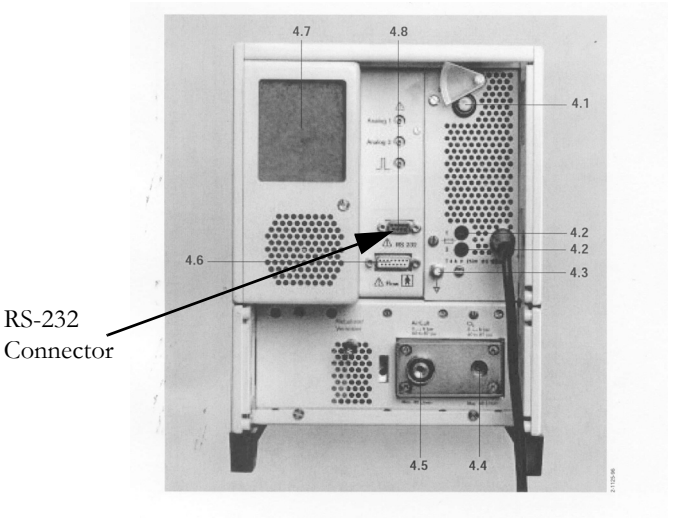
**Note**

Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Babylog 8000 Ventilator

| | |
|---|---|
| **Device Driver Name:** | Dräger Babylog 8000 Ventilator |
| **Device Driver P/N:** | M1032-B24rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Babylog 8000 with:<br>• SW Revision: 5.01<br>• Digital Interface (optional): Babylink on MEDIBUS protocol 3.00. |
| **Supported Device Options:** | None |
| **Connection:** | RS-232 Digital<br>Baud Rate: 9600[1]<br>Word Length: 8 bits (fixed)<br>Stop Bits: 1 (fixed)<br>Parity: None[1]<br>Handshake: Software (fixed)<br>Protocol: MEDIBUS[1] (BabyLink) |
| **Switch Settings:** | Factory default |

1. Must be set and verified in accordance with Dräger Babylog 8000 User's Manual.




**Dräger Babylog 8000 Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Evita Ventilator

**Device Driver Name:** Dräger Evita Ventilator

**Device Driver P/N:** M1032-B11rl

where:
r = revision
l = language

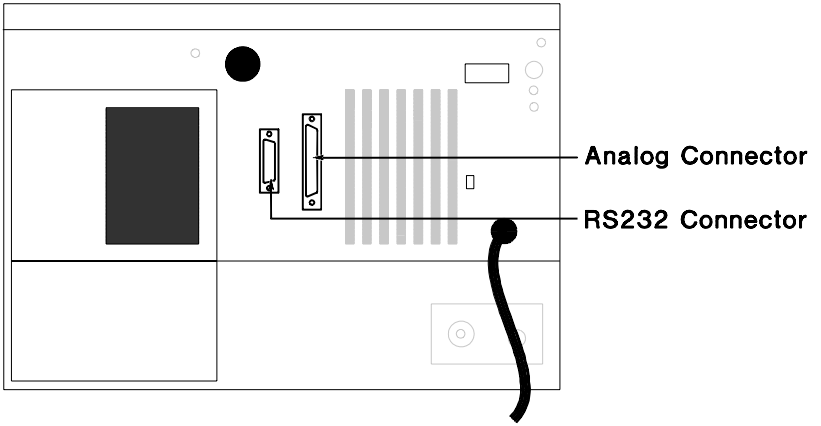
**Supported Devices:** Dräger Evita Typ 8410614 with

- DW-Bus analog interface option number 8303940.
- digital interface option number 8305327
- SW Revision 11.01, 13.01 and 14.01, 13.02 or 14.02 for the digital interface and the Dräger Evita Ventilator.

**Connection:** Analog / RS-232 Digital combination exchange

| | |
|---|---|
| Baud Rate: | 9600 |
| Word Length | 7 bits (fixed) |
| Stop Bits: | 2 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | Software (fixed) |
| Analog: | 2 waves |

**Switch Settings:** Factory default




Dräger Evita Ventilator Rear Panel

**Note** Please ensure that the first two digits of the software version number shown on the Dräger Evita display after switching on the device are the same as the first two digits of the version number on the Evita's interface cards.

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Evita 2 Ventilator

**Device Driver Name:** Dräger Evita 2 Ventilator

**Device Driver P/N:** M1032-B23rl

where:
r = revision
l = language

**Supported Devices:** Dräger Evita 2 with:

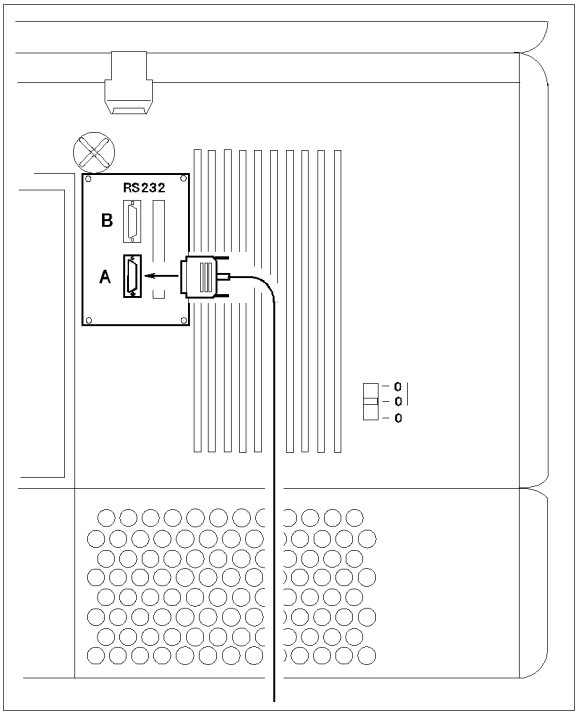
- SW Revision 2.00.
- Digital interface (optional): EvitaLink 2.00 on MEDIBUS protocol 3.00.

**Supported Device Options:** None

**Connection:** RS-232 Digital Channel A. (Channel B can also be used as an alternative when set up as follows.)

| | |
|---|---|
| Baud Rate: | 19200[1] |
| Word Length: | 8 bits (fixed) |
| Stop Bits: | 1[1] |
| Parity: | Even[1] |
| Handshake: | Software (fixed) |
| Protocol: | MEDIBUS[1] |

1. These settings are fixed for digital channel A. If channel B is used, they must be set and verified according to the Dräger Evita 2 User's Manual.




**Dräger Evita 2 Ventilator Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Evita 2 Dura, Dräger Evita 4 & Dräger Evita XL Ventilators

**Device Driver Name:**
Dräger Evita 2 DuraVentilator
Dräger Evita 4
Dräger Evita XL

**Device Driver P/N:**
M1032-B41rl

where:
r = revision
l = language

**Supported Devices:**
Dräger Evita 2 Dura with:

- SW Revision 4.10.
- MEDIBUS protocol 4.00.

Dräger Evita 4 with:

- SW Revision 4.10.
- MEDIBUS protocol 4.00.

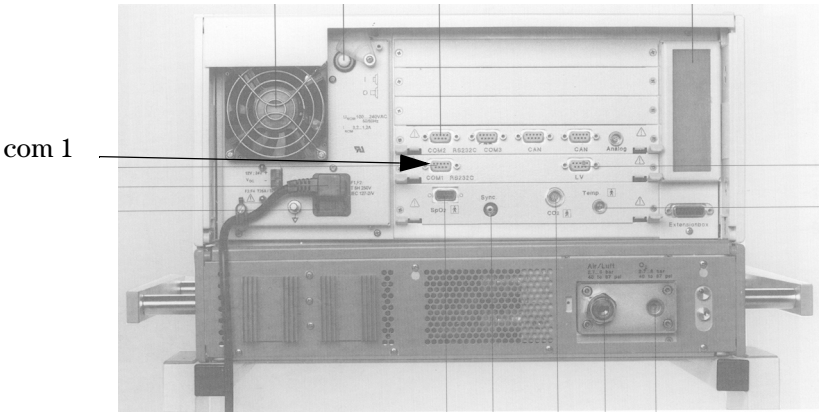
Dräger Evita XL with:

- SW Revision 6.00.
- MEDIBUS protocol 4.00.

**Supported Device Options:**
None

**Connection:**
RS-232 C

| | |
|---|---|
| Baud Rate: | 19200 |
| Word Length: | 8 bits (fixed) |
| Stop Bits: | 1 |
| Parity: | Even |
| Handshake: | None |




**Dräger Evita 2 Dura, Evita 4 and Evita XL Ventilator Rear Panel**

---

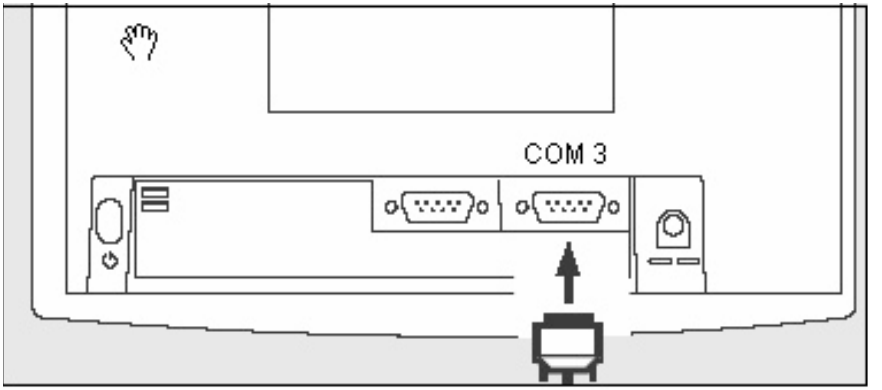
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

---

# Dräger Graphic Screen for Babylog 8000

| | |
|---|---|
| **Device Driver Name:** | Dräger Graphic Screen for Babylog 8000 |
| **Device Driver P/N:** | M1032-B64rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Babylog 8000 Software 5.01<br>MEDIBUS Version 3.00.<br>Dräger Graphic Screen version 2.n<br>MEDIBUS Version 4.00. |
| **Supported Device Options:** | None |
| **Connection:** | RS-232 port COM3 on rear side of the Graphic Screen<br>Baud Rate: 9600<br>Word Length: 8<br>Sart Bits: 1<br>Stop Bits: 1<br>Parity: None<br>Protocol: MEDIBUS |

**Note** All RS 232 port settings are fixed.




**Dräger Graphic Screen Rear Panel**

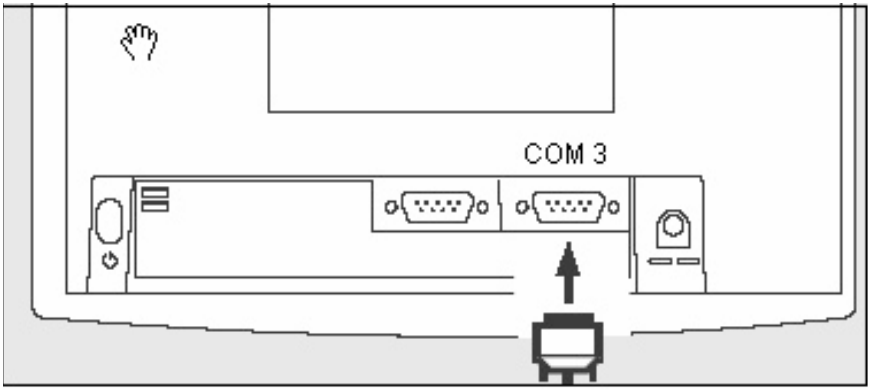
**Note**

Please refer to the Philips M1032A VueLink External Device User's Information for Dräger for Graphic Screen for Babylog 8000 for exact details of numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Dräger Graphic Screen for Savina

| | |
|---|---|
| **Device Driver Name:** | Dräger Graphic Screen for Savina |
| **Device Driver P/N:** | M1032-B63rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Savina Software 3.01<br>MEDIBUS Version 4.00<br>Dräger Graphic Screen version 2.n<br>MEDIBUS Version 4.00. |
| **Connection:** | RS-232 port on rear side<br>Baud Rate: 19200<br>Data Bits: 8<br>Start Bits: 1<br>Stop Bits: 1<br>Parity: None<br>Protocol: MEDIBUS |

**Note** All RS 232 port settings are fixed.

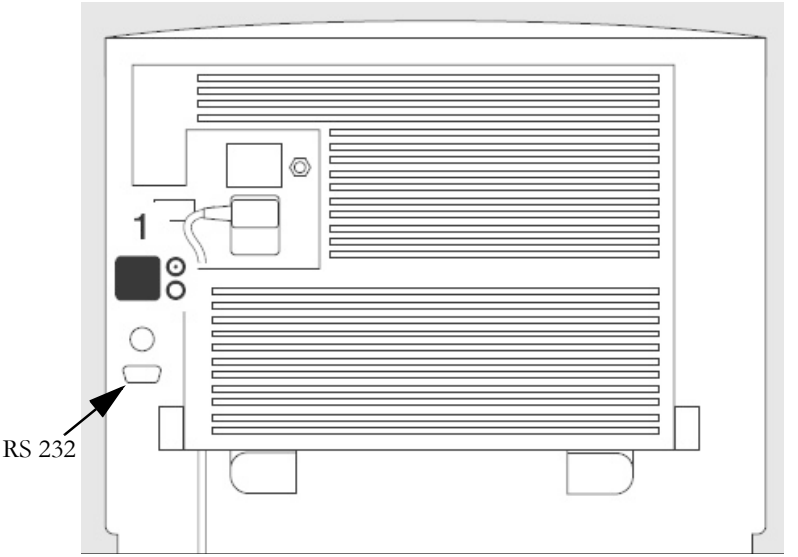



**Dräger Graphic Screen Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device User's Information for Dräger for Graphic Screen for Savina for exact details of numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Dräger Savina

| | |
|---|---|
| **Device Driver Name:** | Dräger Savina |
| **Device Driver P/N:** | M1032-B66rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Savina Software 3.01<br>MEDIBUS Version 4.00 |
| **Connection:** | RS-232 port on rear side<br>Baud Rate: 19200<br>Data Bits: 8<br>Start Bits: 1<br>Stop Bits: 1<br>Parity: None<br>Protocol: MEDIBUS |

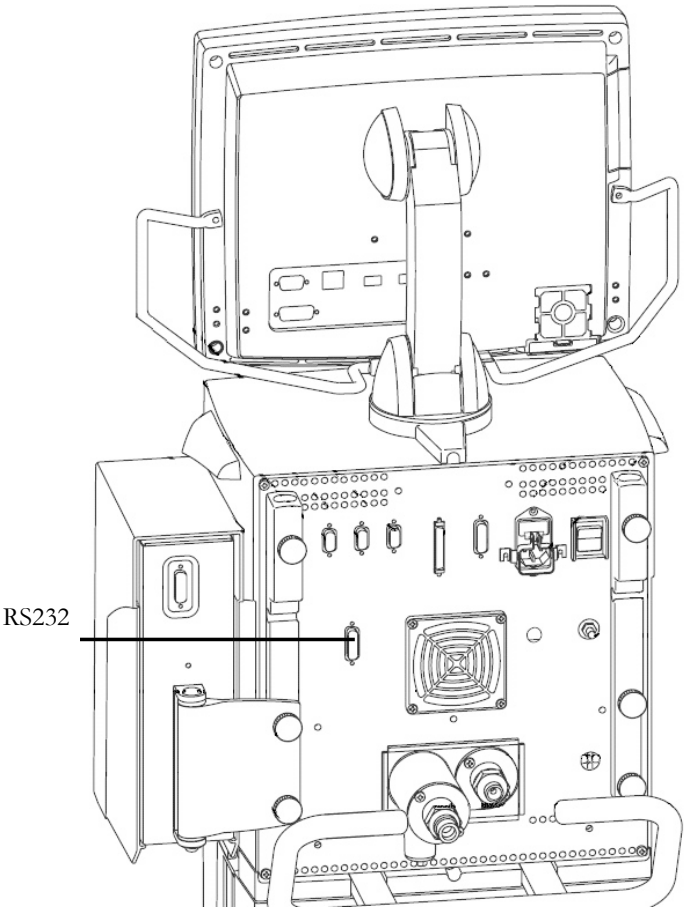



**Dräger Savina Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device User's Information for Dräger for Savina for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# GE Engström Carestation Ventilator

| | |
|---|---|
| **Device Driver Name:** | GE Engström |
| **Device Driver P/N:** | M1032-B67rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | GE Engström Software 3.x<br>Ohmeda Com 1.3 Serial Protocol |
| **Connection:** | RS-232 port on rear side (Port 4) |
| | Baud Rate: 19200<br>Data Bits: 7<br>Start Bits: 1<br>Stop Bits: 1<br>Parity: Odd |




**GE Engström Carestation Ventilator Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs, and alarms available from the external device, and via Philips patient monitoring network.

# Hamilton Veolar, Veolar FT, and Amadeus Ventilators

**Device Driver Name:** Veolar[1]
Amadeus

**Device Driver P/N:** M1032-B19rl
where:
r = revision
l = language

**Supported Devices:**

- Veolar and Veolar FT Ventilators

  Control Processor and Front Panel
  sw rev: V30 and V33
  Interface sw rev: NIK01

- Amadeus Ventilator

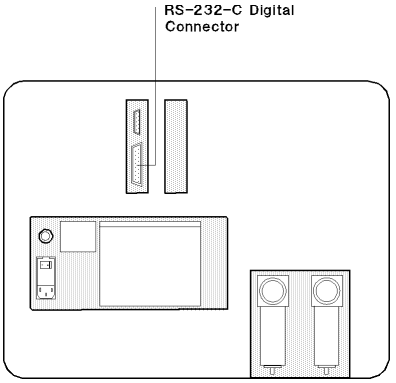
  Control Processor and Front Panel
  sw rev: A31
  Interface sw rev: NIK01

**Connection:** RS-232 Digital

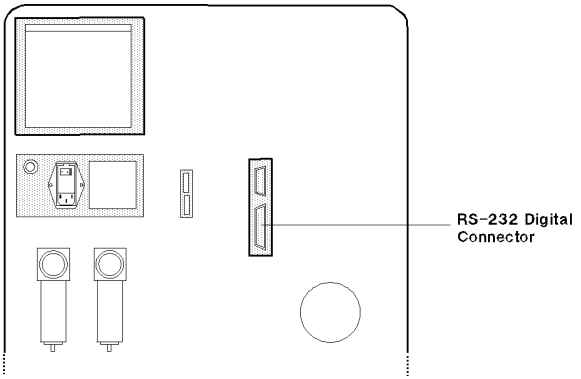
Baud Rate:9600[2]

| | |
|---|---|
| Word Length: | 7 bits (fixed) |
| Stop Bits: | 2 bits (fixed) |
| Parity: | EVEN (fixed) |
| Handshake: | Flag control[2] |
| Program Selector: | Position 9[2] |

1. The product name Veolar is used throughout to describe both the Hamilton Veolar Ventilator, and the Hamilton Veolar FT Ventilator.
2. Must be set by Hamilton Service Engineer before connecting to VueLink.




**Hamilton Veolar Ventilator Rear Panel**




**Hamilton Amadeus Ventilator Rear Panel**

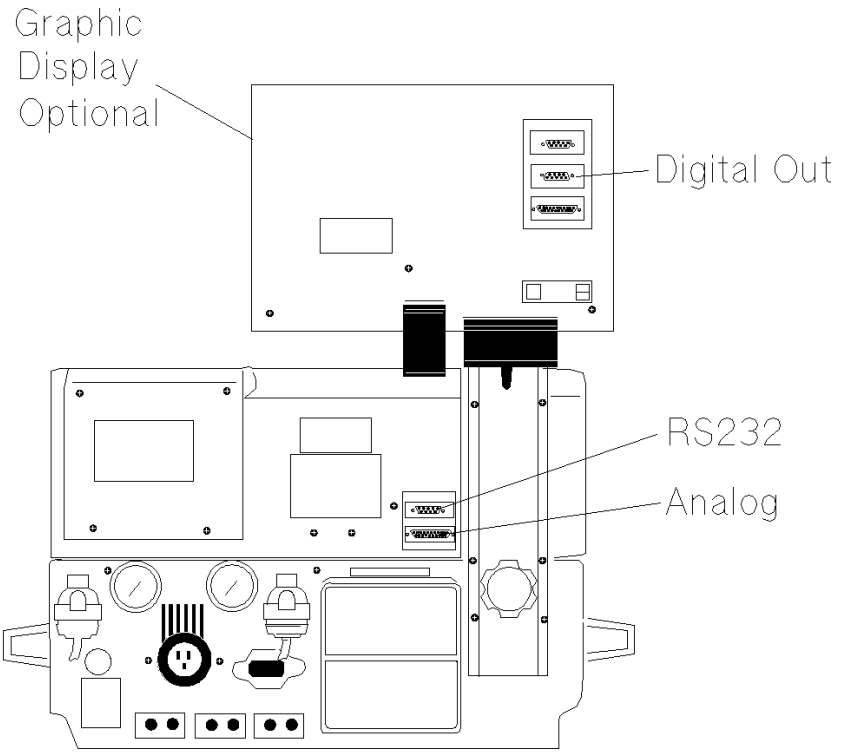
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs, and alarms available from the external device, and via Philips patient monitoring network.

# BEAR 1000 Ventilator

| | |
|---|---|
| **Device Driver Name:** | BEAR 1000 |
| **Device Driver P/N:** | M1032-B28rl<br><br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Bear 1000 (Basic and Comprehensive) SW Release 9.7<br><br>Bear GD 1000 Graphics Display (optional) Software P/N 51001-02007 |
| **Connection:** | Analog (2 waves) / RS-232 Digital combination.<br><br>No graphics display:<br>Baud Rate: 9600 (Bear 1000 ventilator)<br><br>Graphics display:<br>Baud Rate: 19200 (Bear 1000 ventilator)<br>9600 (graphics display)<br><br>Word Length: 8-bits (fixed)<br>Stop Bits: 1 (fixed)<br>Parity: None (fixed) |

The 15-pin connector should be connected to the analog port on the ventilator. The 9-pin connector should either be connected to the RS-232 port on the ventilator, if

no Graphics Display is present, or to the Digital Out port on the Graphics Display. In the latter case, the RS-232 gender adapter must also be used.




**BEAR 1000 Ventilator Rear Panel**

**Note**

Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Infrasonics® Infant Star / ISV Ventilator

**Device Driver Name:** Infrasonics® Infant Star / ISV

**Device Driver P/N:** M1032-B30rl

where:
r = revision
l = language

Supported Devices:

- Original Infant Star Ventilator (yellow casing):
  - Standard Model TÜV Approved (software version 49, 51)
  - High Frequency Model TÜV Approved (software version 46, 50, 52)
  - Enh. High Frequency Model TÜV Approved (software version 82, 83)
- New Infant Star ISV Ventilator (grey casing):
  - Standard Model ISV 500 TÜV Approved (software version 105, 107)
  - High Frequency Model ISV 950 (software version 107)

**Connection:**

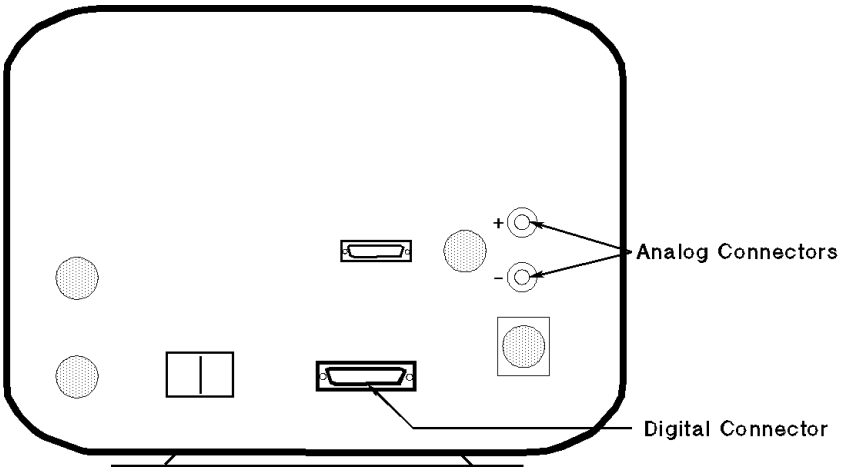
The device driver supports the following configuration for the serial communications port:

| | |
|---|---|
| Baud Rate: | 1200 |
| Word Length: | 8 bits |
| Stop Bits: | 2 |
| Parity: | None |
| Analog: | 1 wave |

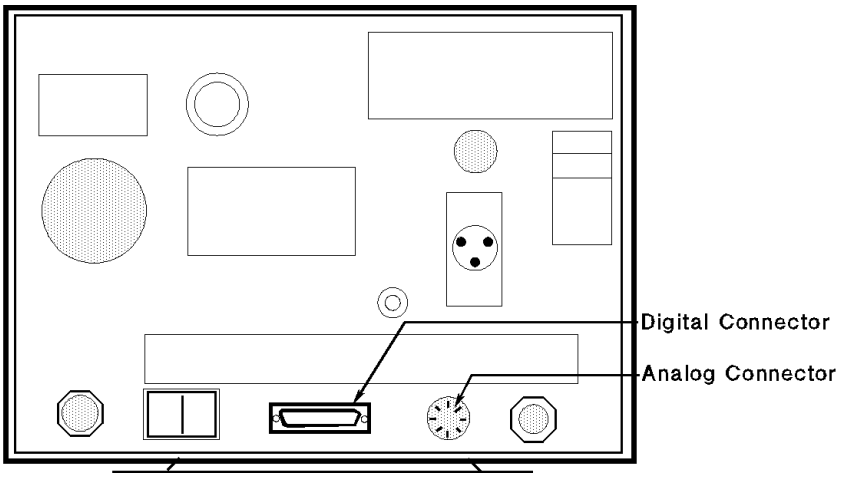
These settings are fixed and cannot be changed.

**Switch Settings:**

None




**Original Infrasonics Infant Star Ventilator Rear Panel**




**New Infrasonics Infant Star Ventilator Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Siemens SCM 990 Ventilator

**Device Driver Name:** Siemens SCM 990 AD (Adult)

Siemens SCM 990 NEO (Neonatal)

**Device Driver P/N:** M1032-B08rl (Adult)

M1032-B14rl (Neonatal)

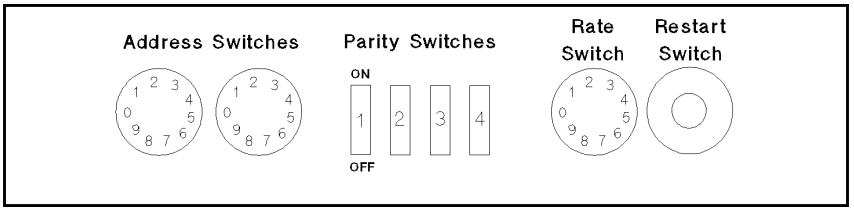
where:
r = revision
l = language

**Supported Devices:** Siemens 900 C/D/E with Servo Computer Module 990 (serial number 713 or greater, sw rev 2.0).

**Connection:** Analog / RS-232 Digital combination

| | |
|---|---|
| Baud Rate: | 9600 |
| Word length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | Even. |
| Analog: | 2 waves, 1 alarm, 1 numeric. |

**Switch Settings:** See following table.



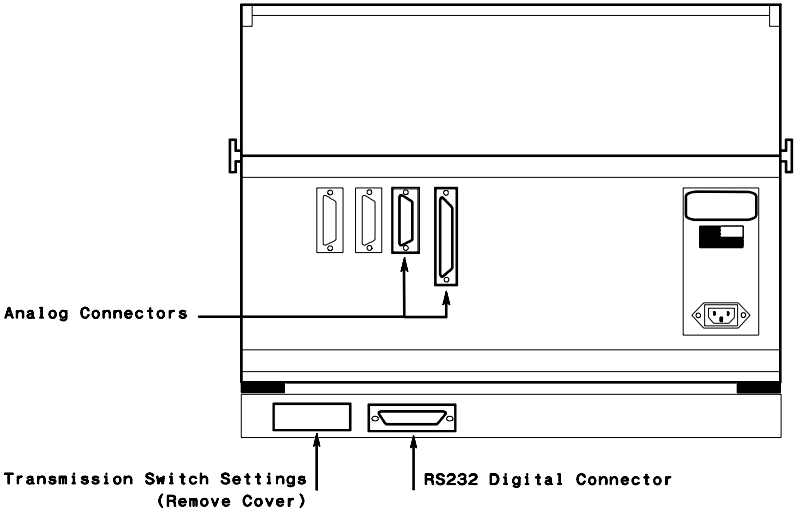

**Transmission Switch Settings**

### Transmission Switch Settings

| Name | Switch Number | Position |
|---|---|---|
| ADDRESS Code Switches | 1 | 0-9 (ANY) |
| | 2 | 0-9 (ANY) |
| PARITY Switches (for RS-232 configuration) | 1 | ON |
| | 2 | ON |
| | 3 | OFF |
| | 4 | OFF |
| BAUD RATE switch | 1 | 5 |

**Note**

The **restart** switch is to the right of the BAUD RATE switch. If any of the above switches are changed during power-on; the device power must be switched off and on.



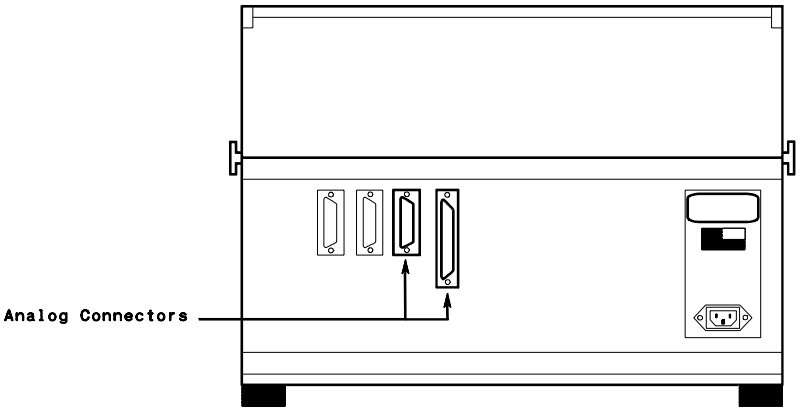

**Siemens SCM990 Ventilator Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Siemens 900 C/D/E Ventilator

| | |
|---|---|
| **Device Driver Name:** | Siemens 900 C/D/E AD (Adult)<br>Siemens 900 C/D/E NEO (Neonatal) |
| **Device Driver P/N:** | M1032-B03rl (Adult)<br>M1032-B07rl (Neonatal)<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Siemens 900 C/D/E |
| **Connection:** | Analog: 2 waves, 5 numerics, 1 alarm. |
| **Switch Settings:** | Factory default |

**Note** Please ensure that the infant / adult switch on the Siemens Ventilator is in the correct position.




Siemens 900 C/D/E Ventilator Rear Panel

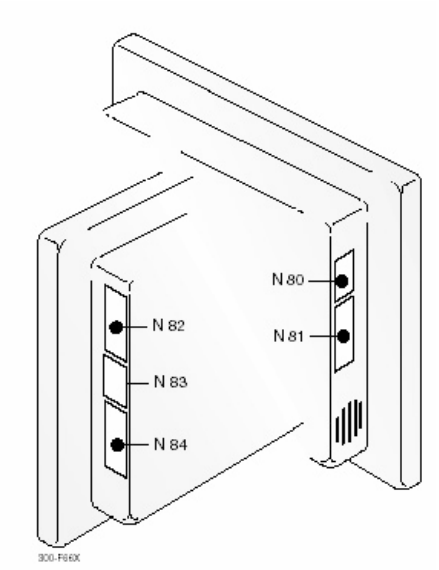
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Maquet Servo 300/300A Ventilator

| | |
|---|---|
| **Device Driver Name:** | Maquet Servo 300/300A |
| **Device Driver P/N:** | M1032-B20rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Maquet Servo 300/300A<br>Software revision 2.01 |
| **Connection:** | Port N82 on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | Even. |
| Protocol: | SV300CI EXTENDED |

1. Must be set and verified according to the Maquet Servo 300/300A User Manual




**Maquet Servo 300 Ventilator Rear Panel**

**Note**

The analog cable previously connecting the VueLink module to port N81 is no longer supported.

All waves and numerics are now transferred to the VueLink module using the digital cable connected to port N82.

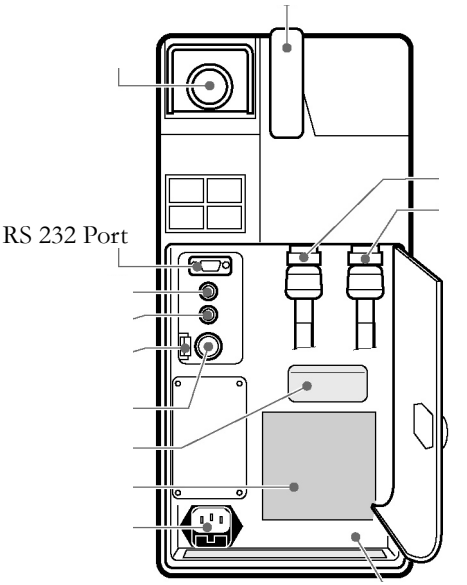
**Note**

Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Maquet SERVO-i Ventilator

| | |
|---|---|
| **Device Driver Name:** | Maquet SERVO-i |
| **Device Driver P/N:** | M1032-B55rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | SERVO-i<br>System version 2.0, 3.0 |
| **Connection:** | Computer Interface Emulator |

| | |
|---|---|
| Baud Rate: | 9600 |
| Word length: | 8 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | Even |



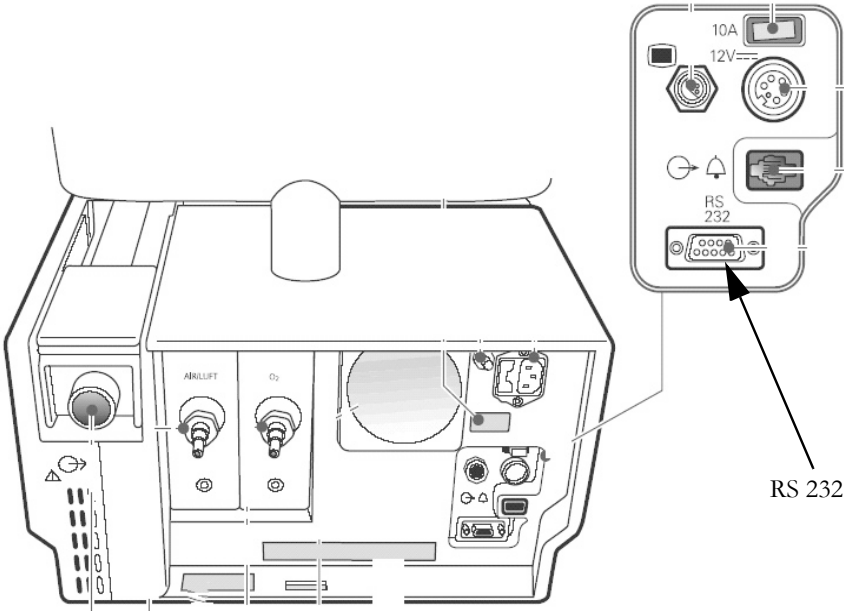

**Maquet SERVO-i Ventilator Right Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Maquet SERVO-s Ventilator

| | |
|---|---|
| **Device Driver Name:** | Maquet SERVO-s |
| **Device Driver P/N:** | M1032-B65rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | SERVO-s<br>System version 3.0 |
| **Connection:** | Computer Interface Emulator |

| | |
|---|---|
| Baud Rate: | 9600 |
| Word length: | 8 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | Even |




**Maquet SERVO-s Ventilator Back Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

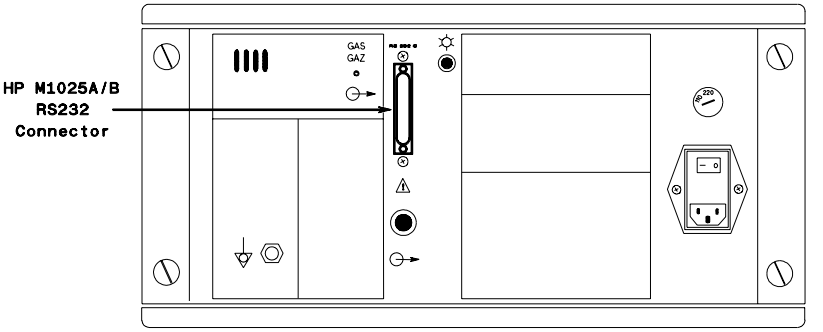
# A4
# Gas Analyzers

## HP M1025A/B Gas Analyzer

| | |
|---|---|
| **Device Driver Name:** | Philips M1025A/B |
| **Device Driver P/N:** | M1032-B06rl<br><br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Philips M1025A (Protocol Rev. A, serial Number 31xx and lower) and Philips M1025B. |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 9600 |
| Parity: | Even |
| Stop Bit: | 1 |
| Data Bit: | 8 |
| Handshake: | Hardwired |
| Hardwire Mode: | Switched Lines |
| Text Line: | Ignore |
| Monitor Message: | Ignore |

| | |
|---|---|
| **Switch Settings:** | Use Philips M1025A/B screen configurations. |




**Philips M1025A/B Gas Analyser Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Datex Capnomac (II and Ultima) Gas Analyzer

## Start Up Procedure

The driver automatically identifies the connected device at start-up. For this reason, the following start-up procedure must be followed whenever the user changes the Datex Device, even if it is the same model:

1. Turn off the Datex Device.
2. Plug in and Set up the VueLink Module and connect the cable.
3. Turn on the Datex Device.

**Note**

To ensure proper operation of the VueLink module and accurate data, the start up procedure described above must be carried out:-

- If the Datex device is turned off.
- If the VueLink module or cable is unplugged.
- Whenever the Datex device is selected.
- After re-entering monitoring mode.

***Warning***

- ***In order to avoid damaging the Datex device, the VueLink cable should only be connected to, or disconnected from, the Datex device when it is switched off.***

| | |
|---|---|
| **Device Driver Name:** | DATEX |
| **Device Driver P/N:** | M1032-B13rl<br>where:<br>r = revision |

l = language

**Supported Devices:**

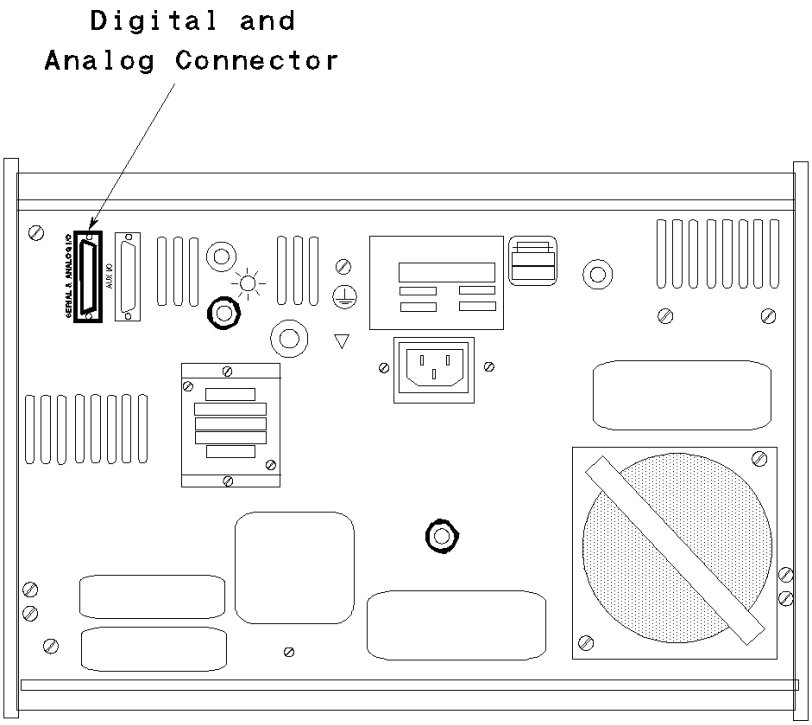
- Datex Capnomac II
- Datex Capnomac II four channel analog output option
- Datex Ultima

All units shipped after Feb 21st 1994

**Connection:** Analog / RS-232 Digital combination

| | |
|---|---|
| Baud Rate: | 1200 |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | None |
| Analog: | 1 wave on Capnomac II |
| | 3 waves on Capnomac II four channel analog output option |
| | 4 waves on Capnomac Ultima |

**Switch Settings:** Factory default



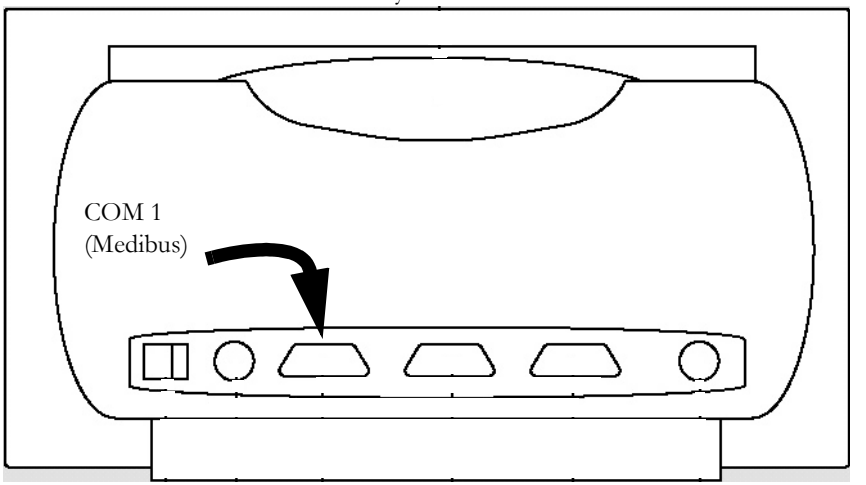

**Datex Capnomac (II and Ultima) Gas Analyzer rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Vamos Variable Anaesthetic Gas Monitor

| | |
|---|---|
| **Device Driver Name:** | Dräger Vamos |
| **Device Driver P/N:** | M1032-B54*rl*<br>where:<br>*r* = revision<br>*l* = language |
| **Supported Devices:** | Dräger Vamos Software 2.0<br>MEDIBUS Version 4.03 |
| **Connection:** | MEDIBUS RS-232 port on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Data Bits: | 8 |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | even |




**Dräger Vamos Rear Panel**

1. Must be set and verified according to the Dräger Vamos User's Manual.

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Ohmeda RGM 5250 Respiratory Gas Monitor

**Device Driver Name:** Ohmeda RGM 5250 Respiratory Gas Monitor

**Device Driver P/N:** M1032-B22Bl

where:
r = revision
l = language

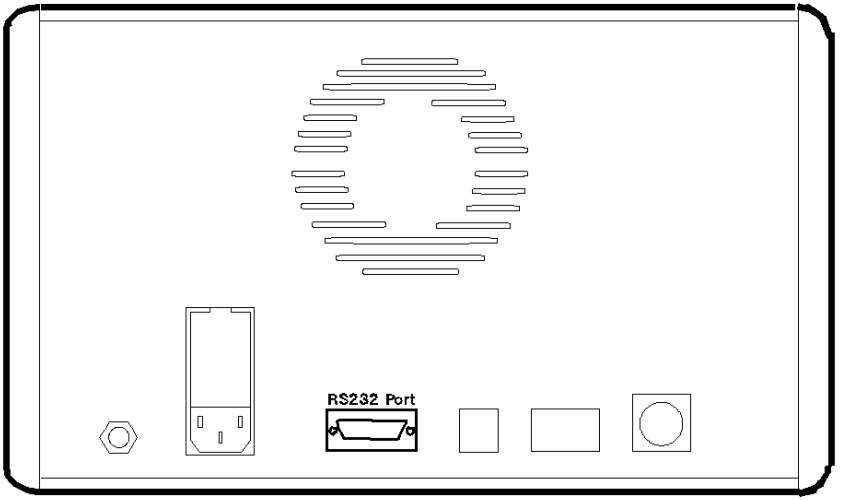
**Supported Devices:** Ohmeda RGM 5250 with SW Revision 6.0

**Supported Device Options:**

- Anesthetic Agent
- $SpO_2$

**Connection:** Analog / RS-232 Digital

| | |
|---|---|
| Baud Rate: | 1200 |
| Word Length: | 7 bits |
| Stop Bits: | 1 |
| Parity: | Odd |
| Handshake: | None |
| Hardwire mode: | Uni-directional |
| Print Period: | 10 sec |




**Ohmeda RGM 5250 Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Ohmeda Rascal II Anesthetic Gas Monitor

**Device Driver Name:** Ohmeda Rascal II

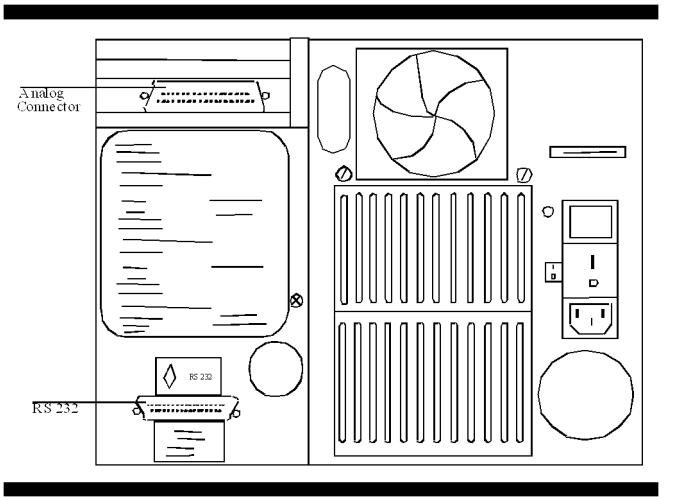
**Device Driver P/N:** M1032-B44rl

where:
r = revision
l = language

**Supported Devices:** Ohmeda Rascal II Anesthetic Gas Monitor with SW Revision 1.12

**Connection:** RS-232 Digital and Analog

| | |
|---|---|
| Baud Rate: | 9600 (fixed) |
| Word Length: | 8 bits (fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | None (fixed) |




**Ohmeda Rascal II Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

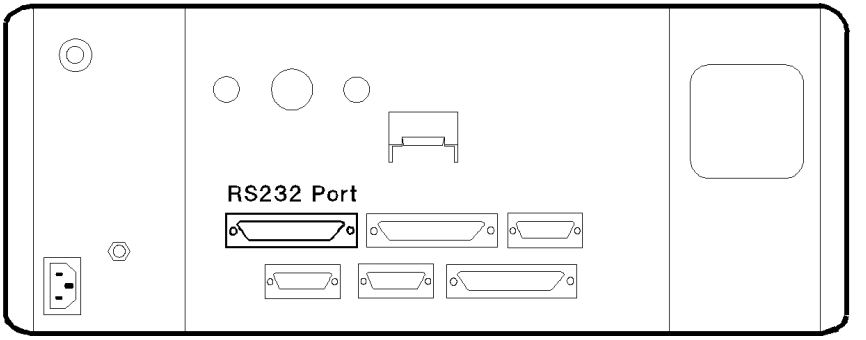
# A5
# Anesthesia Machines

## Dräger Cato Anesthesia Device

| | |
|---|---|
| **Device Driver Name:** | Dräger Cato Anesthesia Device |
| **Device Driver P/N:** | M1032-B25rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Cato - Screen Type PM 8050 CD with<br>• SW Revision 2.01, 2.02<br>• Digital interface: MEDIBUS protocol 3.00 |
| **Supported Device Options:** | None |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8 bits fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | Software (fixed) |
| Protocol: | MEDIBUS[1] |

1. Must be set and verified according to the Dräger Cato User's Manual.




**Dräger Cato Rear Panel**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

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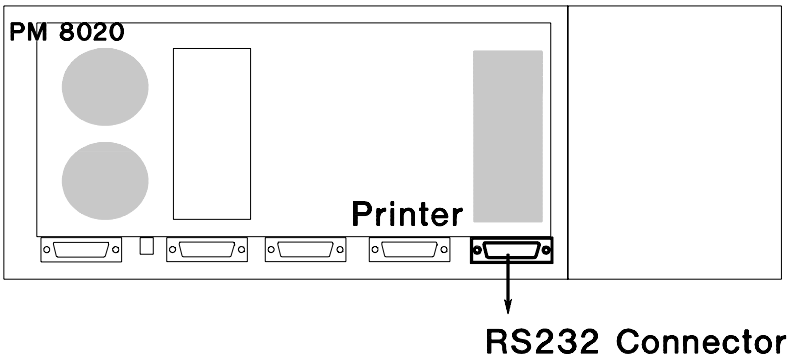
# Dräger Cicero Anesthesia Machine

| | |
|---|---|
| **Device Driver Name:** | Dräger Cicero Anesthesia Machine |
| **Device Driver P/N:** | M1032-B12rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | PM8020 datamanager<br>Software revision 4.6 only |
| **Connection:** | RS-232 Digital<br>Baud Rate: 9600 (fixed)<br>Word Length: 8 bits fixed)<br>Stop Bits: 1 (fixed)<br>Parity: Even (fixed) |
| **Switch Settings:** | A jumper must be set inside the Cicero in order to get wave output. This must be done by your local Dräger Representative. |




**Dräger Cicero Anesthesia Machine Rear Panel**

**Note** VueLink supports Isoflurane, Enflurane and Halothane gases only. If the Cicero is configured with any other unsupported gas, Philips cannot accept any responsibility for information displayed on the Philips patient monitor via VueLink.

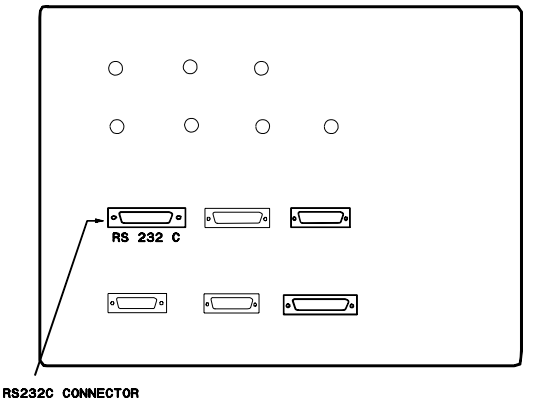
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Cicero EM Anesthesia Machine

| | |
|---|---|
| **Device Driver Name:** | Dräger Cicero EM Anesthesia Machine |
| **Device Driver P/N:** | M1032-B36rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | PM 8060 datamanager Software revision 2.01 only. |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8 bits fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | Software (fixed) |
| Protocol: | MEDIBUS[1] |

1. Must be set and verified according to the Dräger Cicero EM User's Manual.




**Dräger Cicero EM Rear Panel**

**Note** To access the connectors, open the Cicero EM housing.

**Note** VueLink supports Isoflurane, Enflurane, Halothane, Sevoflurane, and Desflurane gases only. If the Cicero EM is configured with any other unsupported gas, Philips cannot accept any responsibility for information displayed on the Philips patient monitor via VueLink.

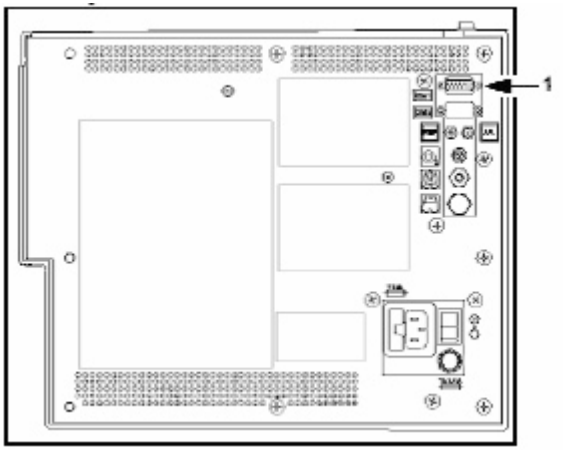
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Fabius GS/Tiro Anesthesia Machine

| | |
|---|---|
| **Device Driver Name:** | Dräger Fabius GS/Tiro |
| **Device Driver P/N:** | M1032-B53rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Fabius GS/Tiro Software 3.01 |
| **Connection:** | RS-232 port COM1 |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8[1.] |
| Start Bits: | 1 |
| Stop Bits: | 1[1.] |
| Parity: | Odd[1.] |
| Protocol: | Medibus[1.] |

1. Must be set and verified according to the Dräger Fabius GS/Tiro Technical Service Manual.




**Dräger Fabius GS/Tiro Rear Panel showing the location of COM1**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

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# Dräger Julian Anesthesia Workstation

**Device Driver Name:** Dräger Julian

**Device Driver P/N:** M1032-B42rl

where:
r = revision
l = language

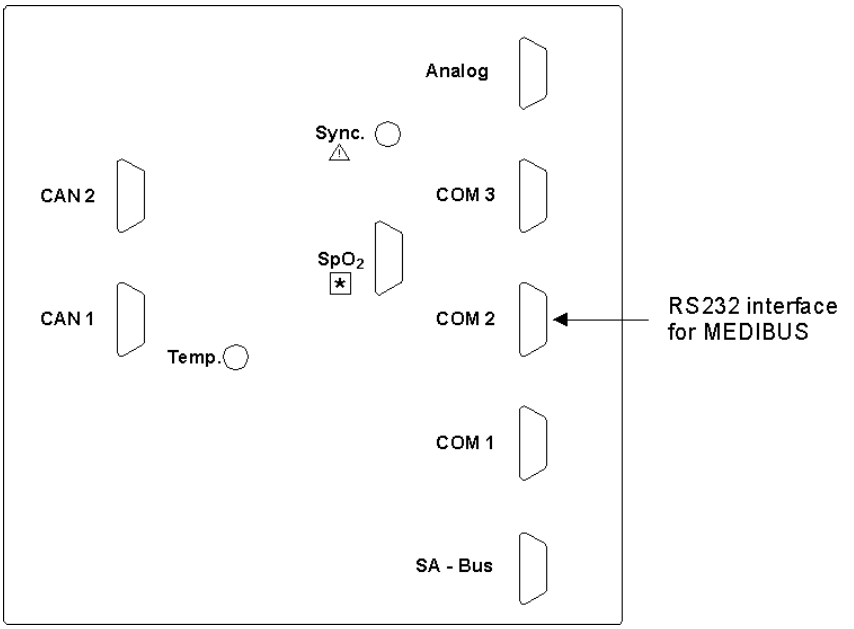
**Supported Devices:** PM 8055 datamanager

- Software Revision 3.02.
- Digital Interface: MEDIBUS Protocol 3.00.

**Connection:** RS-232 Digital

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8 bits (fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | Software (fixed) |
| Protocol: | MEDIBUS[1] |

1. Must be set and verified according to the Dräger Julian Anesthetic Workstation User's Manual.




**Dräger Julian Rear Panel**

**Note** VueLink supports Isoflurane, Enflurane, Halothane, Sevoflurane and Desflurane gases only. If the Dräger Julian is configured with any other unsupported gas, Philips cannot accept any responsibility for information displayed on the Philips patient monitor via VueLink.

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Pallas Anesthesia Workstation

| | |
|---|---|
| **Device Driver Name:** | Dräger Pallas |
| **Device Driver P/N:** | M1032-B62*rl*<br>where:<br>*r* = revision<br>*l* = language |
| **Supported Devices:** | Dräger Pallas Software 3.01<br>MEDIBUS Version 4.03 |
| **Connection:** | RS-232 port COM1 on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Data Bits: | 8 |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | even |
| Protocol: | MEDIBUS |

COM 1
(Medibus)


**Dräger Pallas Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

1. Must be set and verified according to the Dräger Pallas User's Manual.

# Dräger PM 8050 Anesthesia Machine

**Device Driver Name:** Dräger PM 8050

**Device Driver P/N:** M1032-B32rl

where:
r = revision
l = language

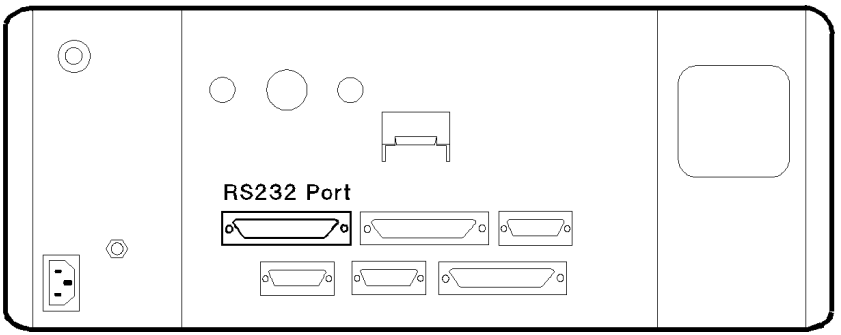
**Supported Devices:** Dräger PM 8050 with:

- Software Revision 2.02, 2.03.
- Digital Interface: MEDIBUS Protocol 3.00.

**Connection:** RS-232 Digital

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8 bits (fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | Software (fixed) |
| Protocol: | MEDIBUS[1] |

1. Must be set and verified according to the Dräger PM 8050 User's Manual.




**Dräger PM 8050 Rear Panel**

**Note** VueLink supports Isoflurane, Enflurane, Halothane, Sevoflurane and Desflurane gases only. If the Dräger PM 8050 is configured with any other unsupported gas, Philips cannot accept any responsibility for information displayed on the Philips patient monitor via VueLink.

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Primus/Apollo Anesthesia Workstation

| | |
|---|---|
| **Device Driver Name:** | Dräger Primus/Apollo |
| **Device Driver P/N:** | M1032-B52*rl*<br>where:<br>*r* = revision<br>*l* = language |
| **Supported Devices:** | Dräger Primus Software 2.02<br>MEDIBUS Version 4.03<br><br>Dräger Apollo Software 3.0<br>MEDIBUS Version 4.03 |
| **Connection:** | RS-232 port COM1 on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Data Bits: | 8 |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | even |
| Protocol: | MEDIBUS |

1. Must be set and verified according to the Dräger Primus/Apollo User's Manual.


**Dräger Primus/Apollo Rear Panel**

**Note**

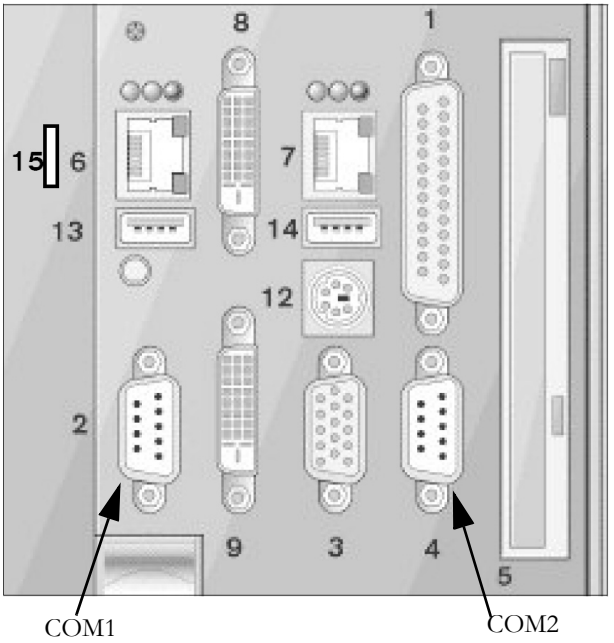
Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Dräger Zeus Anesthesia Device

| | |
|---|---|
| **Device Driver Name:** | Dräger Zeus |
| **Device Driver P/N:** | M1032-B58rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Dräger Zeus Software 3.n<br>• MEDIBUS Version 4.03 |
| **Connection:** | RS-232 port COM1 or COM2 on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Word Length: | 8 |
| Stop Bits: | 1 |
| Parity: | Even |
| Protocol: | MEDIBUS |

1. Must be set and verified according to the Dräger Zeus User's Manual.



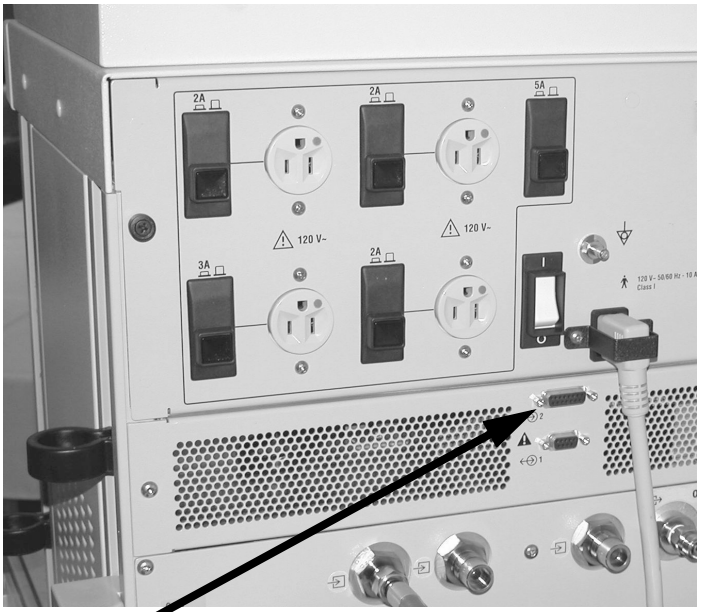

**Dräger Zeus Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for Dräger Zeus for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# GE Aestiva and Avance

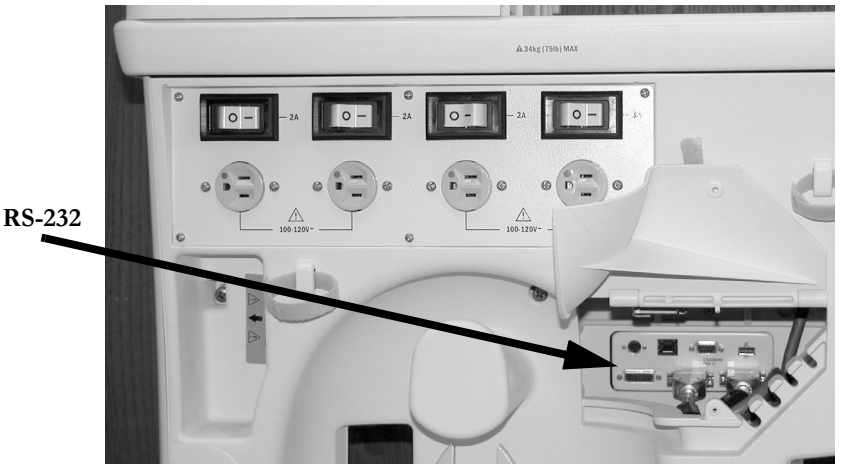
| | |
|---|---|
| **Device Driver Name:** | GE Avance and Aestiva |
| **Device Driver P/N:** | M1032-B39rl<br><br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | GE Avance Software 3.0<br>Ohmeda Com 1.2 Serial Protocol<br><br>GE Aestiva Software 4.5<br>Ohmeda Com 1.0 Serial Protocol |
| **Connection:** | RS-232 Digital<br><br>Baud Rate: 19200<br>Word Length: 7 bits<br>Stop Bits: 1<br>Parity: Odd |

.




**Rear of GE Aestiva**

.




**Rear of GE Avance**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use Information for GE Avance and Aestiva for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

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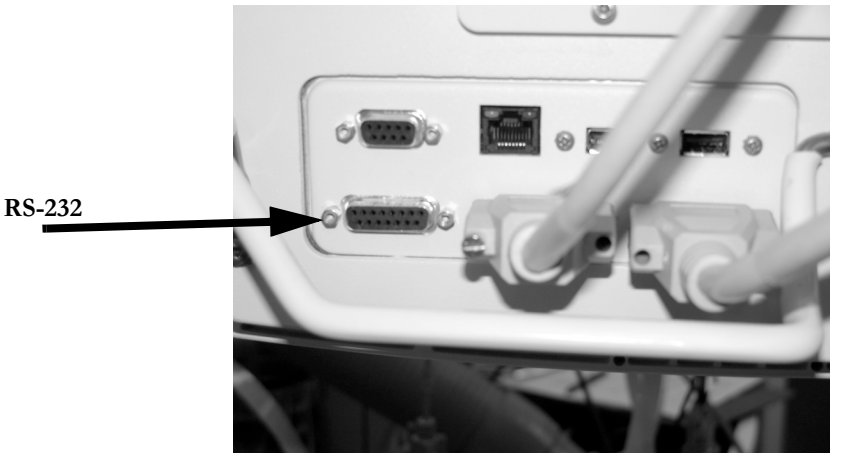
# GE Aisys

| | |
|---|---|
| **Device Driver Name:** | GE Aisys |
| **Device Driver P/N:** | M1032-B60rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | GE Aisys Software 1.x<br>Ohmeda Com 1.2 Serial Protocol |
| **Connection:** | RS-232 port on rear |

| | |
|---|---|
| Baud Rate: | 19200 |
| Word Length: | 7 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | Odd |

.




**Rear of GE Aisys**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# North American Dräger Narkomed 2B and Narkomed 2C Anesthesia Systems

**Device Driver Name:** NARKOMED 2B/2C/3200

**Device Driver P/N:** M1032-B31rl

where:
r = revision
l = language

**Supported Devices:** Narkomed 2B Anesthesia System Software Revision 2.05

Narkomed 2C Anesthesia System Software Revision 1.11

Vitalert 3200 Monitor Software Revision 1.08

NAD Communications HubSoftware Revision 1.07

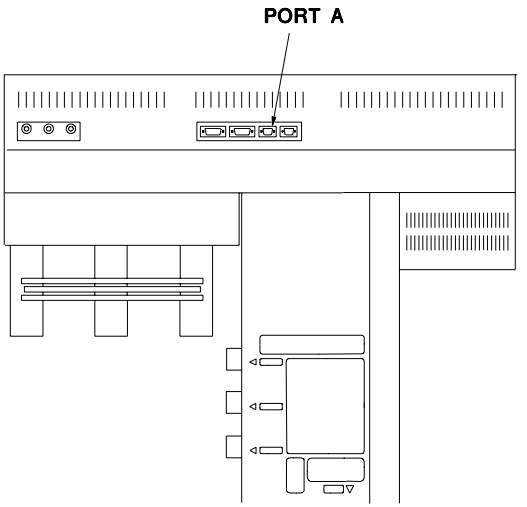
**Connection:** RS-232 Digital

| | |
|---|---|
| Protocol: | Vitalink |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | |
| Narkomed 2B | 1200 |
| Narkomed 2C | 19200 |
| Vitalert 3200 | 19200 |
| Communications Hub | 19200 |

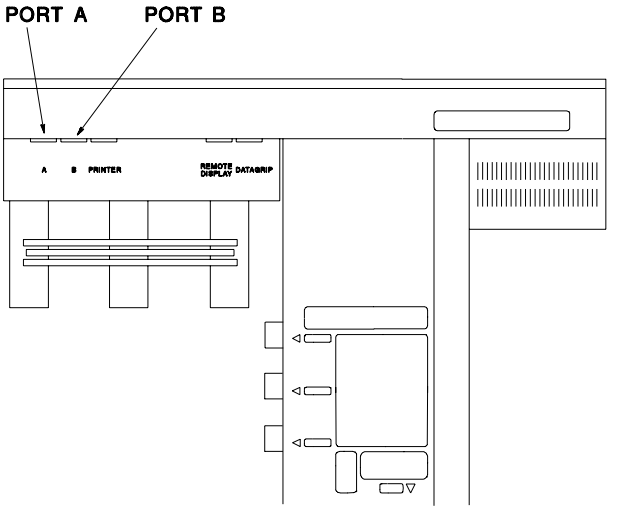
**Note**

- Connect VueLink to Port A only (Narkomed 2B, 2C and Vitalert 3200). Otherwise, incorrect data may be displayed.

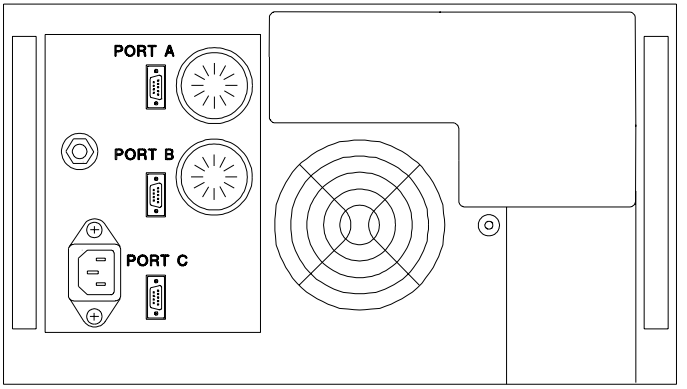
- Waves are only available directly from the device (Narkomed 2C or Vitalert 3200); therefore, connect VueLink to the device whose waves are desired. (The Communications Hub does not provide waves.)
- If the patient monitor RS-232 MECIF interface is being used, then configure MECIF only for the highest (in letter, e.g., C is higher than B) used port on the Communications Hub or Vitalert 3200, or only to Port B on the Narkomed 2C. Otherwise, incorrect data may be displayed.
- If all of the following conditions are true:
- The patient monitor RS-232 MECIF interface is connected to the Narkomed 2C or Communications Hub.
- Another Type B VueLink module (Ventilator, Gas Analyzer, Anesthesia Machine or Auxiliary Plus) is being used.
- The above VueLink module is measuring one or more numerics which are also output by the Narkomed VueLink interface. (For example, the Philips M1025A/B Anesthetic Gas Analyzer numerics include !imCO2, !etCO2, !inN2O, etN2O, !FIO2, !inAGT, !etAGT, !PULSE, !SpO2 and !AWRR. These correspond to the Narkomed VueLink interface numerics: IMCO2, ETCO2, inN2O, etN2O, FIO2, inAGT, etAGT, PULSE, SpO2 and AWRR.)
- Then the following must be performed to avoid the display of incorrect data: Each duplicate numeric (from condition (c)) should NOT be selected on the Narkomed VueLink interface. For example, if the Philips M1025A/B Anesthetic Gas Analyzer VueLink interface is also being used, then the IMCO2, ETCO2, inN2O, etN2O, FIO2, inAGT, etAGT, PULSE, SpO2 and AWRR numerics must not be selected on the Narkomed VueLink interface.



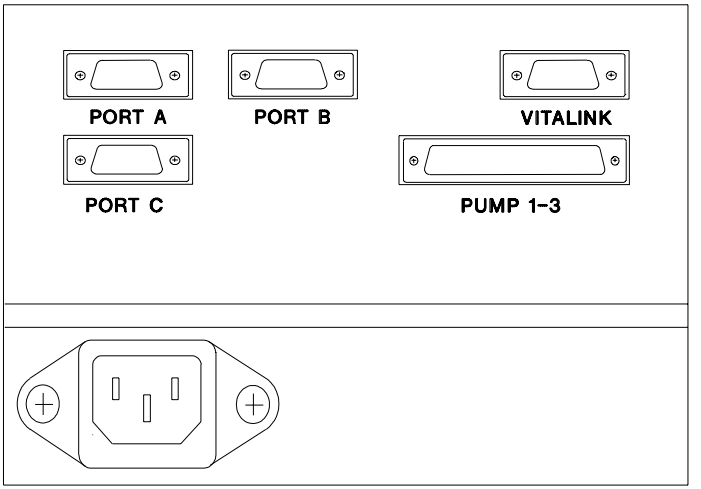

**Narkomed 2B: Rear View**




**Narkomed 2C: Rear View**




**Vitalert 3200: Rear View**




**Communications Hub: Rear View**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# North American Dräger Narkomed 4 Anesthesia System

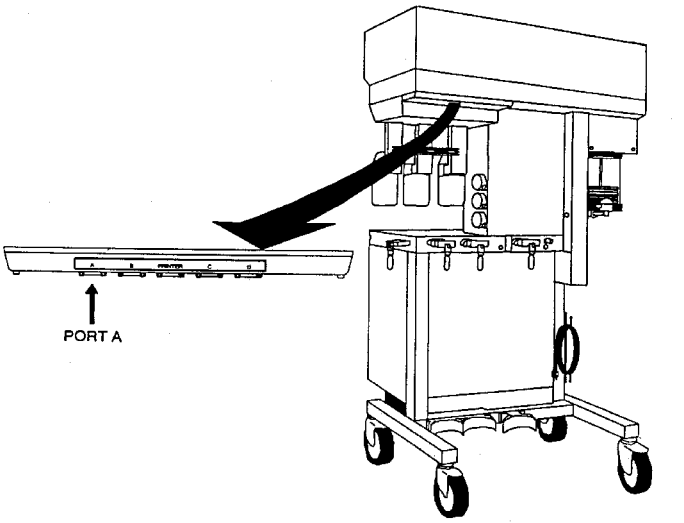
| | |
|---|---|
| **Device Driver Name:** | NAD NARKOMED 4 |
| **Device Driver P/N:** | M1032-B38rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Narkomed 4 Anesthesia System Software Revision 1.30 |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Protocol: | Vitalink |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | 19200 |

**Note**

- Connect VueLink to Port A only on Narkomed 4. Otherwise, incorrect data may be displayed.
- If the patient monitor RS-232 MECIF interface is being used, then configure MECIF only for the highest (in letter, e.g., C is higher than B) used port on the Narkomed 4. Otherwise, incorrect data may be displayed.
- If all of the following conditions are true:
- The patient monitor RS-232 MECIF interface is connected to the Narkomed 4.
- Another Type B VueLink module (Ventilator, Gas Analyzer, Anesthesia Machine or Auxiliary Plus) is being used.
- The above VueLink module is measuring one or more numerics which are also output by the Narkomed VueLink interface. (For example, the Philips M1025A/B Anesthetic Gas Analyzer numerics include !imCO2, !etCO2, !inN2O, etN2O, !FIO2, !inAGT, !etAGT, !PULSE, !SpO2 and !AWRR. These correspond to the Narkomed VueLink interface numerics: IMCO2, ETCO2, inN2O, etN2O, FIO2, inAGT, etAGT, PULSE, SpO2 and AWRR.)
- Then the following must be performed to avoid the display of incorrect data: Each duplicate numeric (from the third condition) should NOT be selected on

the Narkomed VueLink interface. For example, if the Philips M1025A/B Anesthetic Gas Analyzer VueLink interface is also being used, then the IMCO2, ETCO2, inN2O, etN2O, FIO2, inAGT, etAGT, PULSE, SpO2 and AWRR numerics must not be selected on the Narkomed VueLink interface.




**Narkomed 4: Rear View**

**Note**

Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

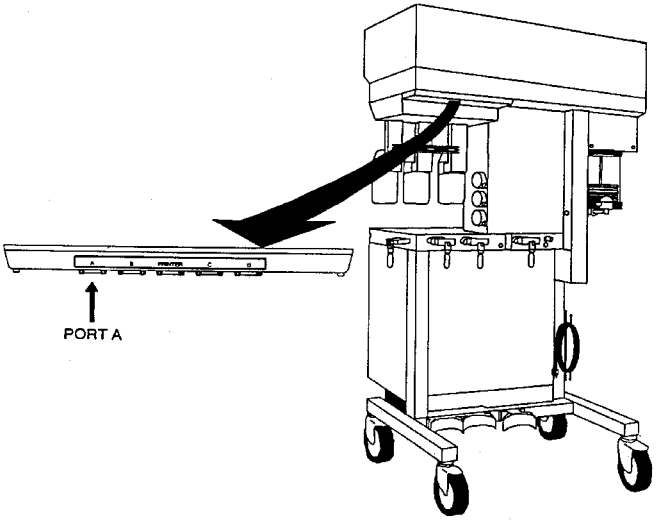
# North American Dräger Narkomed GS Anesthesia System

| | |
|---|---|
| **Device Driver Name:** | NAD NARKOMED GS |
| **Device Driver P/N:** | M1032-B45rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Narkomed GS Anesthesia System Software Revision 1.10 |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Protocol: | Vitalink |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | 19200 |

**Note**

- Connect VueLink to Port A only on Narkomed GS. Otherwise, incorrect data may be displayed.
- If the patient monitor RS-232 MECIF interface is being used, then connect VueLink to Port B only on Narkomed GS.




**Narkomed GS: Rear View**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

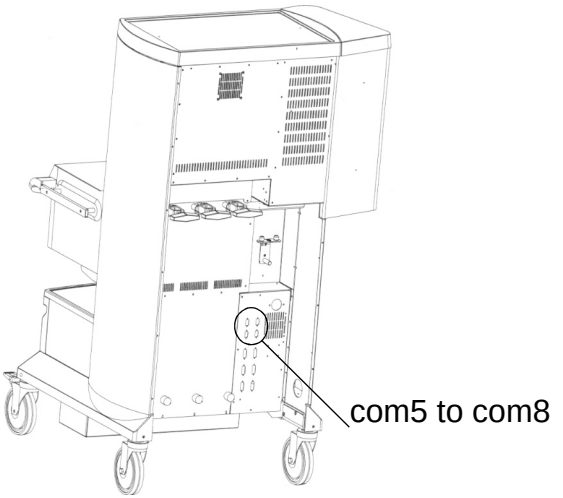
# North American Dräger Narkomed 6000 Anesthesia System

| | |
|---|---|
| **Device Driver Name:** | NAD NARKOMED 6000 |
| **Device Driver P/N:** | M1032-B49rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | North American Dräger Narkomed 6000 Anesthesia System<br>Software Revision 1.06 |
| **Connection:** | RS-232 Digital (use one of the ports: com5 - com8) |

| | |
|---|---|
| Protocol: | Vitalink (fixed) |
| Word Length: | 8 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | 19200 |

The word length, start and stop bits, parity and baud rate must be set and verified according to the NAD Narkomed 6000 Technical Service Manual

1. Connect VueLink to the one of the RS-232 ports COM5 to COM8 on Narkomed 6000.

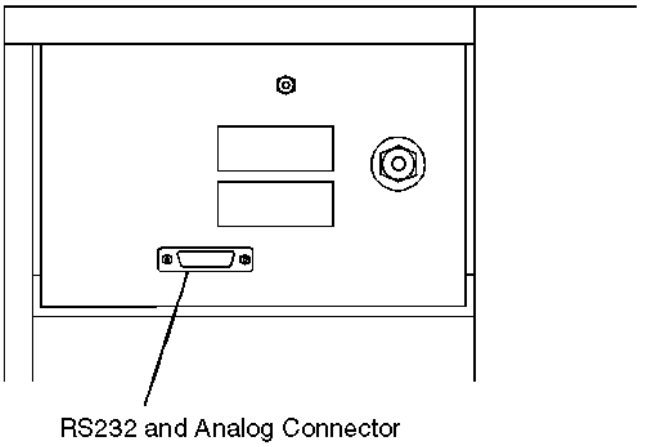



**NAD Narkomed 6000: Rear View**

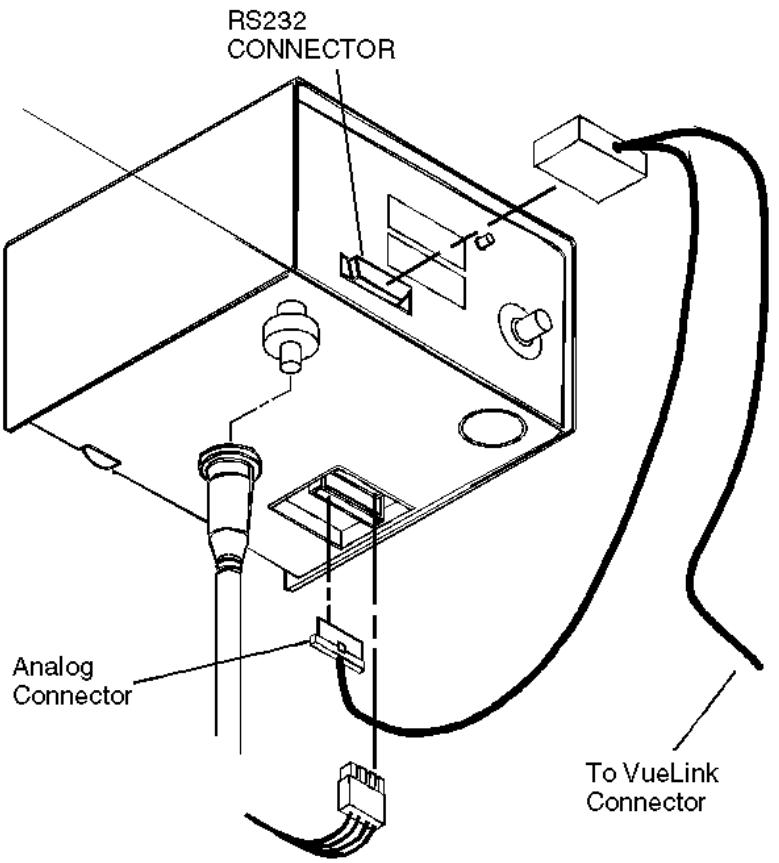
**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Ohmeda 7800/7810

| | |
|---|---|
| **Device Driver Name:** | OHMEDA 7800/7810 |
| **Device Driver P/N:** | M1032-B37rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Ohmeda 7800 in Excel Anesthesia Machine Software Revision 4.22<br>Ohmeda 7810 in Modulus II Anesthesia Machine Software Revision 4.22 |
| **Connection:** | Baud Rate: 1200<br>Word Length: 7 bits<br>Stop Bits: 1<br>Parity: Odd |




**Rear Panel of Ohmeda 7800**




**Rear Panel of Ohmeda 7810**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Ohmeda 7900

| | |
|---|---|
| **Device Driver Name:** | OHMEDA 7900 |
| **Device Driver P/N:** | M1032-B39rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Software Revision 3.5 |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 19200 |
| Word Length: | 7 bits |
| Stop Bits: | 1 |
| Parity: | Odd |


**Underside of Ohmeda 7900**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Ohmeda Modulus CD Anesthesia Machine

**Device Driver Name:** Ohmeda Modulus CD

**Device Driver P/N:** M1032-B27rl

where:
r = revision
l = language

**Supported Devices:** Ohmeda Modulus CD (Base Type) Software versions 3.50 and 4.00 are supported.

**Connection:** Connect the interface cable to the A1 serial port of the *Ohmeda Modulus CD*, which is located on the back panel. The device driver supports the following configuration for the serial communication port.

| | |
|---|---|
| Baud Rate: | 1200 |
| Word Length: | 7 bits |
| Stop Bits: | 1 |
| Parity: | Odd |

These settings are fixed and cannot be changed.

**Switch Settings:** None

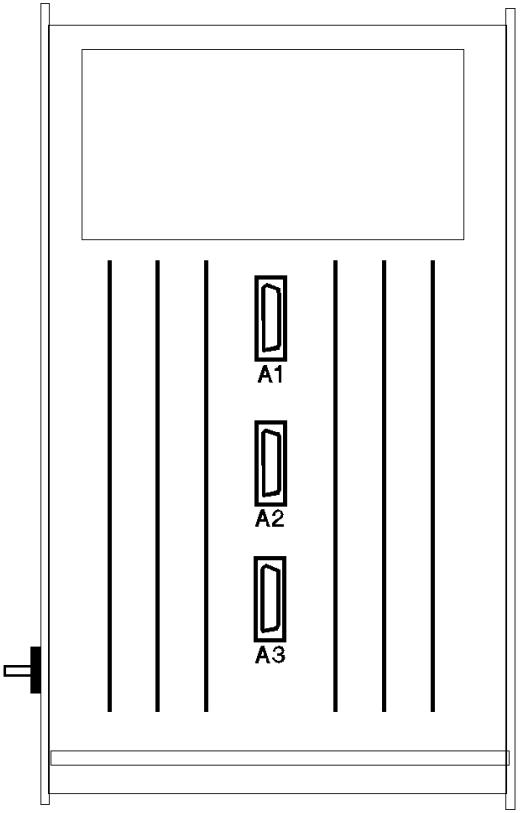
Set up the Ohmeda Modulus CD as follows:

- **For software version 3.50:**

  1. Press MANUAL key twice on display pod.
  2. Select EXTERNAL PORT DEVICE and change it to ARKIVE.
  3. Change the Printer Logging Interval to 20 seconds.

- **For software version 4.00:**

  1. Press MANUAL key on display pod.
  2. Select EXTERNAL PORT DEVICE and change it to COMPUTER LOGIN.




**Rear Panel of the Ohmeda Modulus CD Anesthesia Machine**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Taema Alys Anesthesia Machine

**Device Driver Name:** Taema Alys

**Device Driver P/N:** M1032-B29rl

where:
r = revision
l = language

**Supported Devices:** Taema Alys, all versions with software driver version V02.40 and upwards.

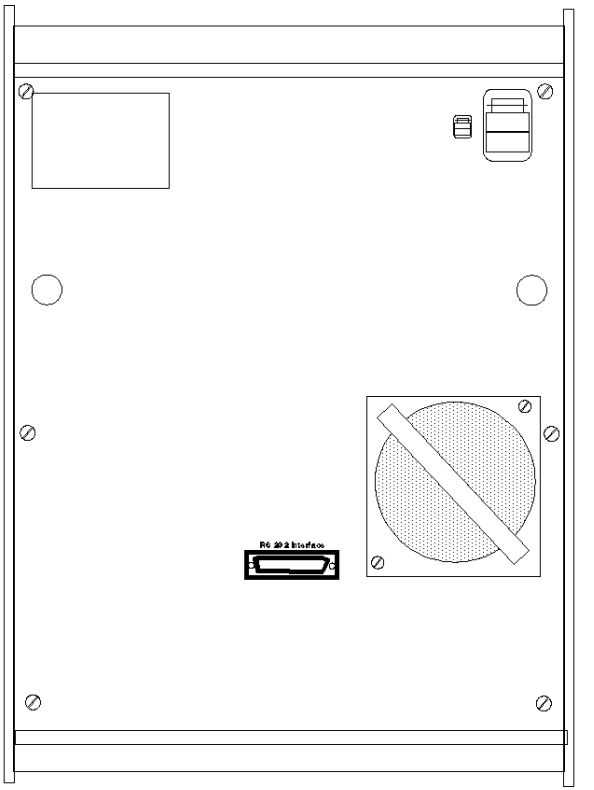
**Connection:** Connect the device driver to the serial port of the Taema Alys. The device driver supports the following RS-232 configuration for the serial communication port.

| | |
|---|---|
| Baud Rate: | 19200 |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | Even |
| Handshake: | Software. |

These settings are fixed and cannot be changed.

**Switch Settings:** None

The Taema Alys is an anesthetic device that is intended for use on adult and pediatric patients (not neonates). The Taema Alys is equipped with a standard RS 232 interface, through which data such as waves, vital parameters, machine settings, alarms, and inops can be retrieved.



**Rear Panel of the Taema Alys Ventilator**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# A6
# Auxiliary Plus Devices

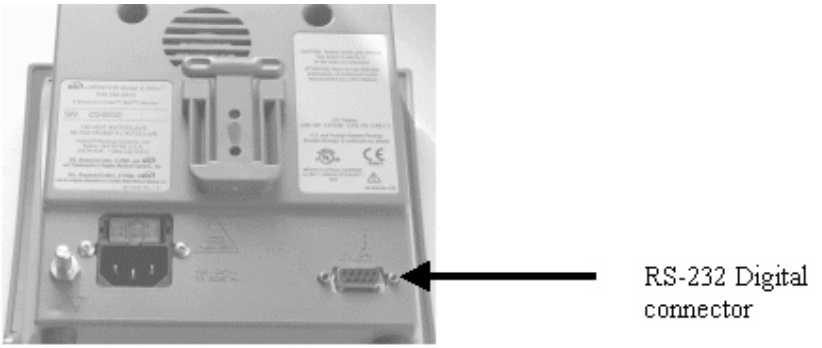
## Aspect Medical Systems A-2000™ BIS™ Monitor

| | |
|---|---|
| **Device Driver Name:** | Aspect A-2000 BIS |
| **Device Driver P/N:** | M1032-B47rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Aspect Medical Systems A-2000 BIS Serial Protocol Revision 1.07 |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Protocol: | ASCII |
| Word Length: | 8 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | 9600 |

**Note**

- Connect VueLink to the RS-232 port on A-2000 BIS Monitor.
- Make sure that the serial port protocol is set to ASCII on the A-2000 BIS Monitor (see the documentation supplied with the BIS monitor for information on how to do this).




**A-2000 BIS Rear Panel**

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**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

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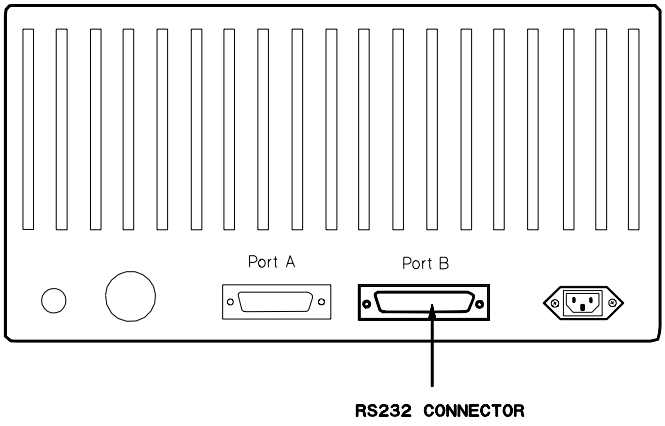
# Baxter Explorer Cardiopulmonary Monitor

| | |
|---|---|
| **Device Driver Name:** | Baxter Explorer |
| **Device Driver P/N:** | M1032-B15rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Baxter Explorer (sw rev. 06.37) |
| **Connection:** | RS-232 Digital (Fixed configuration)<br>Baud Rate: 9600<br>Word Length: 8 bits<br>Stop Bits: 1<br>Parity: None. |
| **Switch Settings:** | Factory default |




**Baxter Explorer Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# B|Braun SpaceCom

| | |
|---|---|
| **Device Driver Name:** | B\|Braun SpaceCom |
| **Device Driver P/N:** | M1032-B61*r*/*l*<br>where:<br>*r* = revision<br>*l* = language |
| **Supported Devices:** | B\|Braun SpaceCom with Protocol Version V3.25<br>Infusomat Space Version 686<br>Infusomat Space P Version 687<br>Perfusor Space Version 688 |
| **Connection:** | RS232 port on rear side |

| | |
|---|---|
| Baud Rate: | 9600[1] |
| Data Bits: | 8 |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | None |
| Protocol: | BCC V3.25 |

**Note** The B|Braun SpaceCom VueLink driver supports 24 pumps. A maximum of 12 pumps can be placed in each of the first two columns. The pumps must be placed in the first three segments of each pillar.

**Note** If the VueLink Cable is disconnected during normal operation, the communication between the BBraun SpaceCom (Communication SW for the BBraun Space System)

1. Must be set and verified according to the B|Braun SpaceCom User Manual.

and the VueLink module is lost. You have to restart the BBraun SpaceCom to reestablish the communication.

**Caution**

**Please upgrade the IntelliVue Software to Rev. C.00.90 (patch) or higher or IntelliVue Rev. D.0 to avoid any loss of VueLink data from the resting display.**
**Please refer to the respective IntelliVue FCO and Service Bulletin.**

**Explanation: If you change the VueLink labels on the main screen, labels and values get mixed up. The values appear with the wrong label.**
**The values in the VueLink task window are correct.**


**The location of the communication ports of the B|Braun SpaceCom.**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Braun FM Device Information

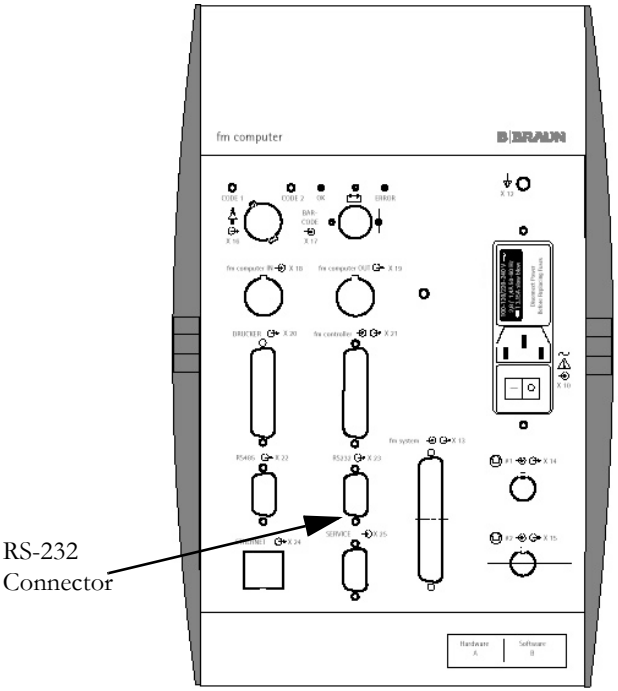
| | |
|---|---|
| **Device Driver Name:** | Braun fm-system |
| **Device Driver P/N:** | M1032-B33rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Braun fm system with fm computer<br>Software Revision 3.10 |
| **Connection:** | RS-232 |

| | |
|---|---|
| Baud Rate: | 9600 |
| Word Length: | 8 bits |
| Stop Bits: | 1 |
| Parity: | None |

**Caution**

**Please upgrade the IntelliVue Software to Rev. C.00.90 (patch) or higher or IntelliVue Rev. D.0 to avoid any loss of VueLink data from the resting display.**
**Please refer to the respective IntelliVue FCO and Service Bulletin.**

**Explanation: If you change the VueLink labels on the main screen, labels and values get mixed up. The values appear with the wrong label.**
**The values in the VueLink task window are correct.**

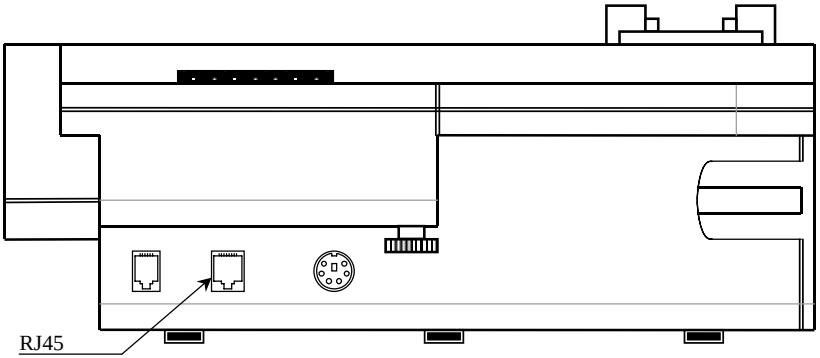



**Braun FM Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Diametrics Medical IRMA SL Series 2000

| | |
|---|---|
| **Device Driver Name:** | IRMA SL Series 2000 |
| **Device Driver P/N:** | M1032-B50rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Diametrics Medical IRMA SL Series 2000<br>Software version 5.1.*x* |
| **Connection:** | RS-232 Digital |
| | Baud Rate: 9600<br>Stop Bits: 1<br>Data Bits: 8<br>Parity: None.<br>Handshake: None |
| **Switch Settings:** | None |

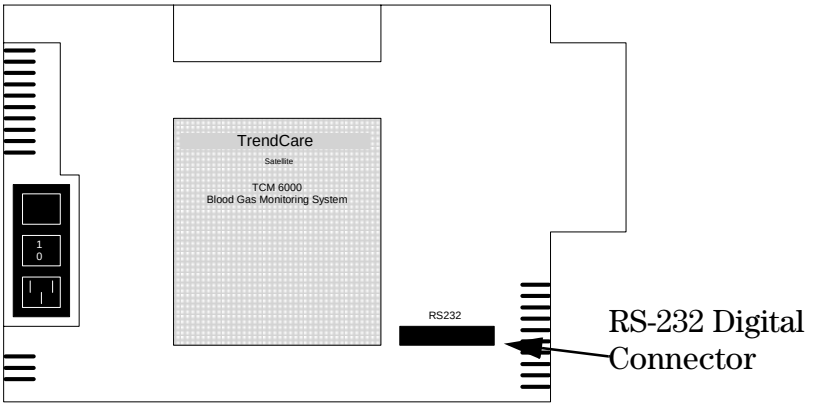



Diametrics Medical IRMA SL Series 2000: Rear View

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

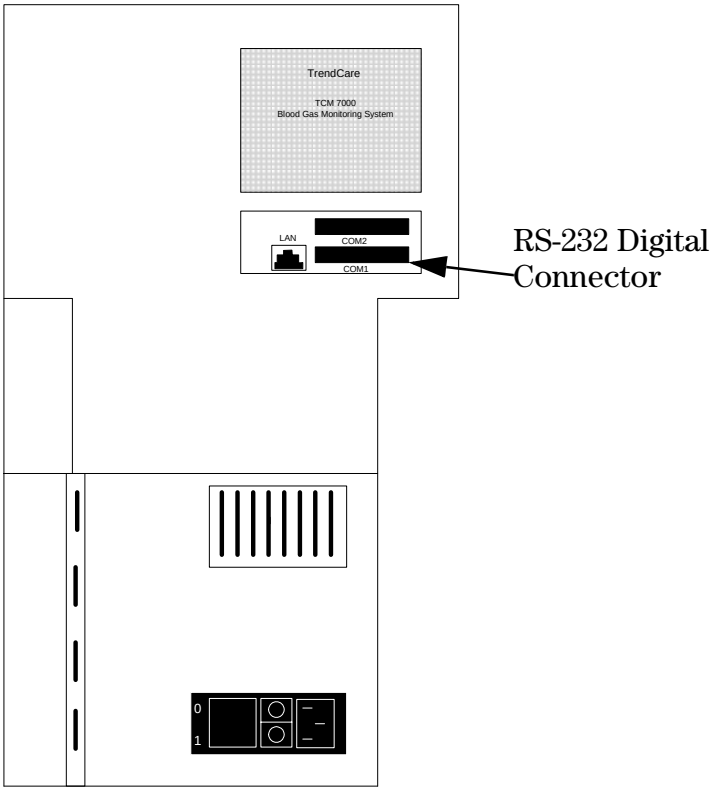
# Diametrics Medical Trendcare Monitor

| | |
|---|---|
| **Device Driver Name:** | Trendcare Monitor |
| **Device Driver P/N:** | M1032-B51rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Diametrics Medical Trendcare Monitor<br>Software version 2.70.01 |
| **Connection:** | RS-232 Digital (Fixed configuration)<br>Baud Rate: 9600, 19200[1]<br>Data Bits: 8<br>Start Bits: 1<br>Stop Bits: 1<br>Parity: None. |
| **Switch Settings:** | The data types 1 to 4 (DT1, DT2, DT3, DT4) and all numeric values (PH, PCO2, PO2, ETC) must be selected for output at the external device. |




1. The baud rate is set in the VueLink configuration (config mode) on the monitor.

Satellite Monitor




Senior Monitor

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Edwards CardiacOutput-Oximetry Monitor Family

| | |
|---|---|
| **Device Driver Name:** | Edwards CardiacOutput-Oximetry Monitor Family |
| **Device Driver P/N:** | M1032-B16rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Edwards Vigilance<br>Edwards Vigilance II<br>Edwards Vigileo |
| **Connection:** | RS-232 Digital |

| | |
|---|---|
| Baud Rate: | 19200[1] |
| Parity: | None |
| Stop Bits: | 1 |
| Data Bits: | 8 |
| Flow Control: | 2 seconds. |

1. Must be set and verified according to the Edwards CardiacOutput-Oximetry Monitor Family User's Manual

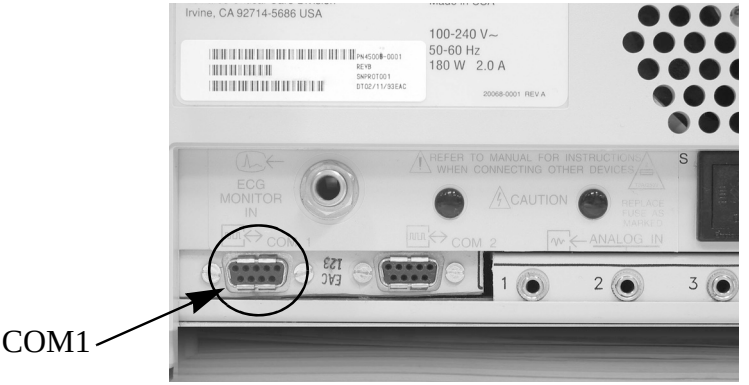
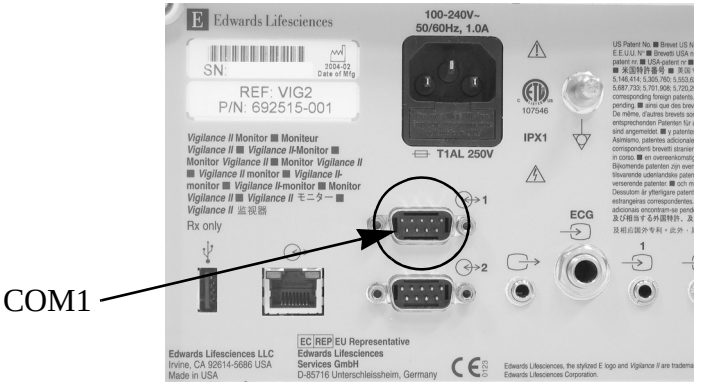
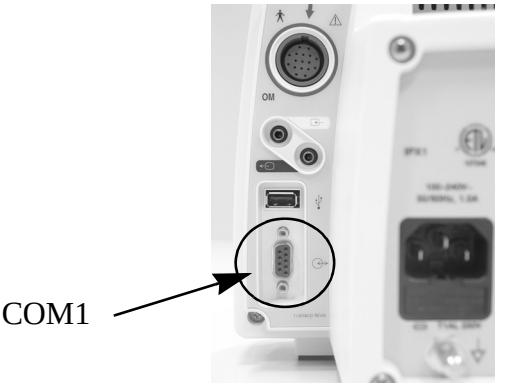



*Fig. 1:COM1 position on Vigilance (backside)*

**Edwards Vigilance Rear Panel**




**Edwards Vigilance II Rear Panel**

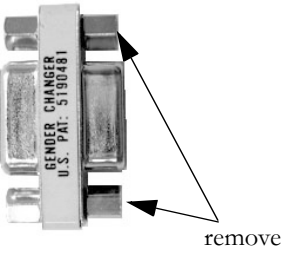



**Edwards Vigileo Rear Panel**

## Connecting to devices with male connectors

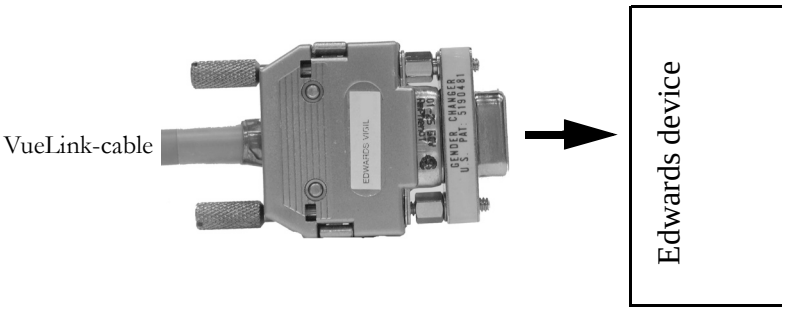
Some releases of the *Edwards CardiacOutput-Oximetry Monitor Family* devices have a male COM-Port socket. The Philips cable provides a "gender-changer" to connect these devices to the *VueLink* module. The following instructions describe, how to assemble the "gender-changer" with the *VueLink* cable.

**1.** Unscrew the nuts on the female side of the gender-changer..



**2.** Screw the *VueLink* cable to the gender-changer


**3.** Connect the assembled *VueLink*-cable and gender-changer to COM1 of the *Edwards CardiacOutput-Oximetry Monitor Family* device.



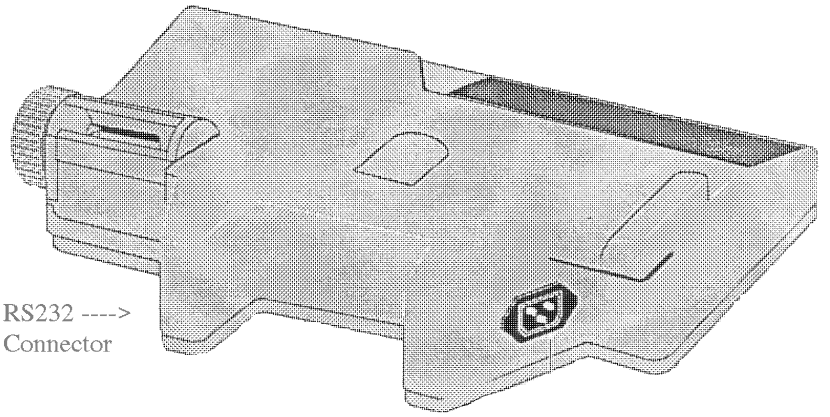

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device via Philips patient monitoring network.

# Fresenius Vial Base A/DPS/MVP

***Warning*** ***The Fresenius Vial Base A can be configured to support either six or eight DPS or MVP modules.***
***If the base is configured to support six modules, and more than six modules are connected, VueLink provides only numerics, alarms, and inops from the first six modules.***

| | |
|---|---|
| **Device Driver Name:** | F-V Base A/DPS/MVP |
| **Device Driver P/N:** | M1032-B43rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Fresenius-Vial Base A with Software Revision 2.2<br>Fresenius Vial DPS Module with Software Revision from 2.2 to 6.6<br>Fresenius Vial MVP Module with Software Revision 3.1 |
| **Connection:** | RS-232 C |

| | |
|---|---|
| Baud Rate: | 19200 |
| Word Length: | 7 bits (fixed) |
| Stop Bits: | 1 (fixed) |
| Parity: | Even (fixed) |
| Handshake: | None (fixed) |




**Fresenius Vial Base A Module Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for Fresenius Vial Base A/DPS/MVP for exact details of numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# GE DINAMAP ProCare 100 Series

| | |
|---|---|
| **Device Driver Name:** | GE DINAMAP ProCare 100 Series |
| **Device Driver P/N:** | M1032-B72rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | GE DINAMAP ProCare 100 Series |
| **Connection:** | RS-232 port on rear side<br><br>Baud Rate: 9600<br>Data Bits: 8<br>Start Bits: 1<br>Stop Bits: 1<br>Parity: None |


**The location of the RS 232 port on rear side of the GE DINAMAP ProCare 100 Series**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of numerics and INOPs available from the external device.

# i-STAT® I Analyzer

**Device Driver Name:** i-STAT® 1 Analyzer

**Device Driver P/N:** M1032-B59*rl*
where:
*r* = revision
*l* = language

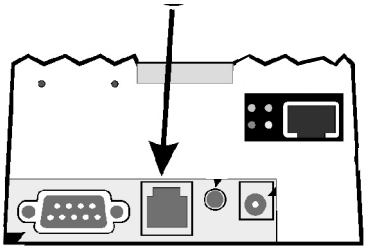
**Supported Devices:** i-STAT® 1 Analyzer with
i-STAT® 1 RIBS Downloader/Recharger

Cartridge Types:

| | | |
|---|---|---|
| 6+ | CG4+ | CG8+ |
| Chem8+ | CK-MB | Crea |
| cTnI | E3+ | EC4+ |
| EC8+ | EG6+ | EG7+ |
| G | G3+ | PT/INR |
| $^{Celite}$ACT | $^{Kaolin}$ACT | |

**Connection:** RJ-12 port on rear side of the i-STAT® 1 RIBS Downloader/Recharger

| | |
|---|---|
| Baud Rate: | 9600 |
| Data Bits: | 8 |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | none |

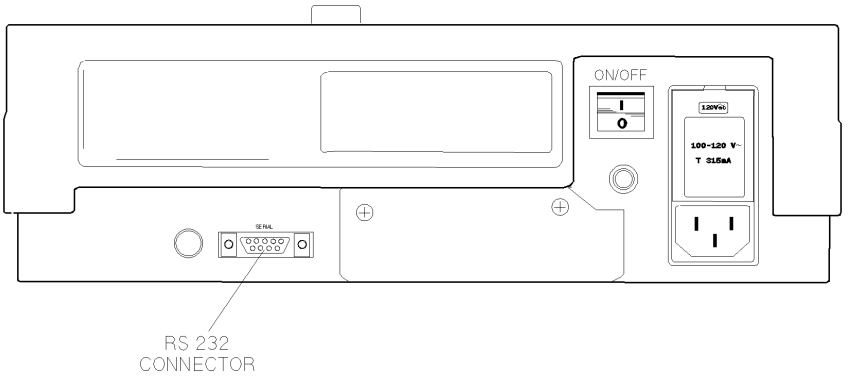


**The location of the RJ-12 port on rear side of the i-STAT® 1 RIBS Downloader/Recharger.**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of numerics and INOPs available from the external device.

# Mortara ELI 100/STM 12-Lead Monitor

| | |
|---|---|
| **Device Driver Name:** | Mortara ELI 100/STM |
| **Device Driver P/N:** | M1032-B26rl<br>where:<br>r = revision<br>l = language |
| **Supported Devices:** | Mortara ELI 100/STM with:<br>• Software part no: 11001-001-20<br>• Software revision: 1.95, 11.95 |
| **Connection:** | RS-232 Digital (fixed configuration)<br>Baud Rate: 19200<br>Word Length: 8 bits<br>Stop Bits: 1<br>Parity: None<br>Handshake: Software |
| **Switch Settings:** | None |




**Mortara ELI 100/STM Rear Panel**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Organon Teknika TOF-Watch SX

**Note** This information only applies to the special Philips version of the TOF-Watch SX.

**Device Driver Name:** TOF-Watch SX

**Device Driver P/N:** M1032-B46rl

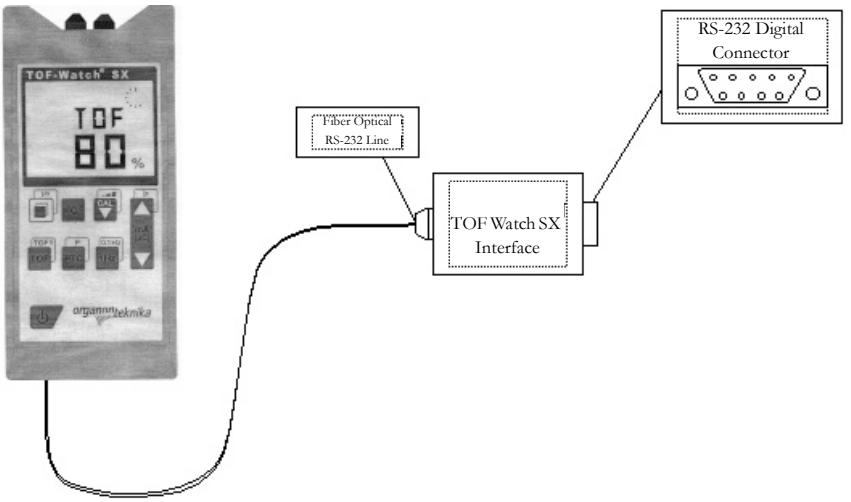
where:
r = revision
l = language

**Supported Devices:** Organon Teknika TOF-Watch SX (Philips version) Software Revision 1.2

**Connection:** RS-232 Digital

| | |
|---|---|
| Word Length: | 8 bits |
| Start Bits: | 1 |
| Stop Bits: | 1 |
| Parity: | None |
| Baud Rate: | 19200 |

Connect VueLink to the TOF-Watch SX via the TOF-Watch SX Interface.




**TOF-Watch SX: Connecting**

**Note** Please refer to the Philips M1032A VueLink External Device Instructions for Use for exact details of waves, numerics, INOPs and alarms available from the external device and via Philips patient monitoring network.

# Free Analog Device Information

## Free Analog Device Information

This appendix contains information about Free Analog Devices that can be connected to the VueLink module. The following information is provided:

- General configuration and cable information about Free Analog Devices.
- Step by step instructions on how to configure the following Free Analog Device into the VueLink module.
  - Dräger Evita Ventilator
  - Engström EAS/ELSA Anesthesia System
  - Nellcor N1000 and N2500 Multi-Function Monitor
  - Radiometer Transcutaneous $pO_2/pCO_2$ Monitor

# Configuring the Free Analog Device

If an external device name does not appear in the Preselection Task Window on the Philips patient monitor, but has an analog interface, it can be connected to the VueLink Module using the *Free Analog Device driver*. The device information must however be manually configured into the module using the Task Windows in the System's Configuration Mode. The following must be specified for every signal produced by the device:

- signal labels
- units
- voltage range
- value range
- grid settings.

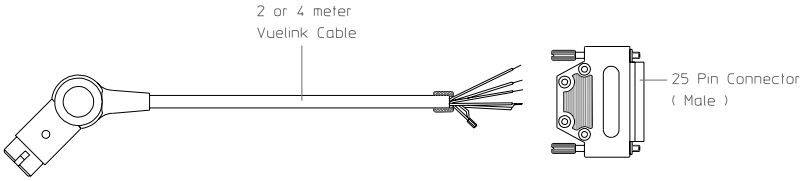
These settings are then stored permanently within the VueLink module, in a *Free Analog Device Driver*. A name can also be assigned to the device driver using the handheld keypad.

***Warning***

- ***Voltages greater than ±12V must not be applied across any two pins of the VueLink module front connector.***
- ***Only one external device must be connected to a single VueLink module at any one time.***
- ***Patient safety checks must always be performed after repair and installation of the module, as detailed in the patient monitor Service Manual.***

## Preparing the Free Analog Cable

A 2m and 4m moulded cable with an unconnected 25-pin (male) connector is available for connecting the Free Analog Device. If the external device has a 25-pin female plug, the connector should be soldered onto the VueLink cable. If a different connector is required, this must be provided by local technical personnel or by representatives of external device manufacturers. This must then be soldered onto the unterminated VueLink cable as before.

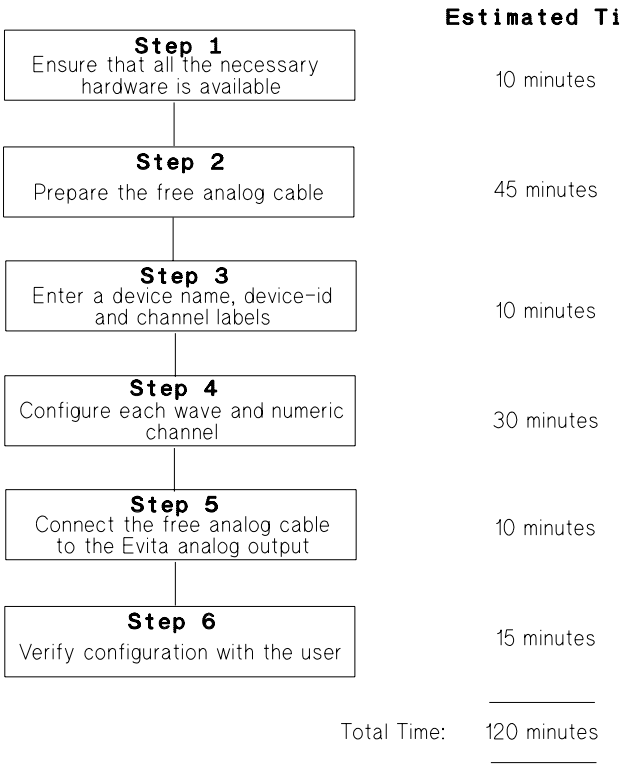



The Free Analog cable options are detailed in the matrix below:

| Devicecol | New Module Option (M1032A-) | | Patient Monitor Cable Option (M1182A-) | | SMO/SLI Option (M1032-) | |
|---|---|---|---|---|---|---|
| | 2m | 4m | 2m | 4m | 2m | 4m |
| Free Analog Devices | K60 | K6A | K60 | K6A | 61611 | 61612 |

# Dräger Evita Ventilator

This note provides information on configuring the Evita Free Analog Device into the VueLink module. This procedure should take approximately 2 hours and consists of 6 steps:-




General information on configuring the free analog devices has not been included in this technical note. Please refer to Chapter 3 of the VueLink Handbook, if you are not familiar with this procedure.

## Step 1: Ensure that all the necessary hardware is available

(10 Minutes)

You will need:-

- An M1032A #A02 VueLink Module
- 4m Free Analog (open end) cable M1032A #K6A or M1182A #K6A

  or

  2m Free Analog cable M1032A #K60 or M1182A #K60.
- A connector to fit the Evita Analog Interface connector:

  Standard 37 PIN DSUB connector (male)

  Standard hood with snap adapter

---

**Note** This connector is provided locally by the hospital or by the manufacturer; it will not be set up at SMO/SLI.

---

- The Evita Analog Interface - This is an optional feature. If the Evita is not equipped with this interface it needs to be ordered by the customer.

## Step 2: Prepare the free analog cable

(45 Minutes)

1. Connect the black and white wires that are twisted together to the Evita Analog ground (Evita pin 1). Do NOT separate these wires.
2. Connect the thick black wire, or the copper shield, to the case resp. ground on the device (Evita pin 32).

---

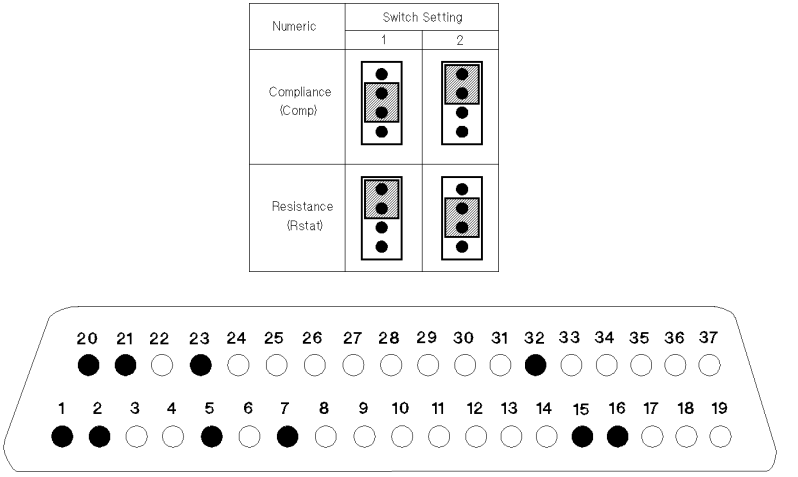
**Note** If there is a conductive connection from the copper shield, via the connector, to the case resp. ground, then the black wire does not need to be connected.

---

3. Connect the colored wires to the analog output connector on the external device. The respective channels for each wire color are given in the following table.

| Free Analog Cable | | Designation | EVITA PIN |
|---|---|---|---|
| **Channel** | **Wire Colours** | | |
| --- | Black and White (twisted) | Analog ground | 1 |
| --- | Black (thick) | Shield | 32 |
| Wave 1 | Brown | Airway Pressure | 7 |
| Wave 2 | Red | Expiratory Flow | 23 |
| Numeric 1 | Orange | Minute Volume | 2 |
| Numeric 2 | Yellow | Airway Resp. Rate | 5 |
| Numeric 3 | Green | Tidal Volume | 20 |
| Numeric 4 | Blue | Inspired $O_2$ Conc. | 21 |
| Numeric 5[1] | Purple | Compliance | 15 |
| | | Resistance | 16 |

1. Only one available at a time, depending on how the jumpers are set, as shown in the diagram below.




**Pins used for the Evita free analog interface**

## Step 3: Enter a device name, device-id and channel labels

(10 Minutes)

Only the Expiratory Flow Label (EXPFL) needs to be entered with the handheld keypad. All the other Evita waves and numerics are offered in the configuration Task Window of the Ventilator Free Analog Device Driver. The Evita Analog Interface provides the following waves and numerics:

| Name | Recommended Label |
|---|---|
| **Waves** | |
| Airway Pressure Paw | AWP |
| Expiratory Flow | !EXPFL |
| **Numerics** | |
| Minute Volume V | !MIVOL |
| Ventilation frequency f[1] | !AWRR |

| Name | Recommended Label |
|---|---|
| Expired Tidal Volume $V_T$ | !TV |
| Inspired $O_2$ Concentration | !FIO2 |

1. Referred to as Airway Respiration Rate in patient monitor

### Alarms

No alarms are activated for the Evita Free Analog Device Driver.

## Step 4: Configure each wave and numeric channels

(30 Minutes)

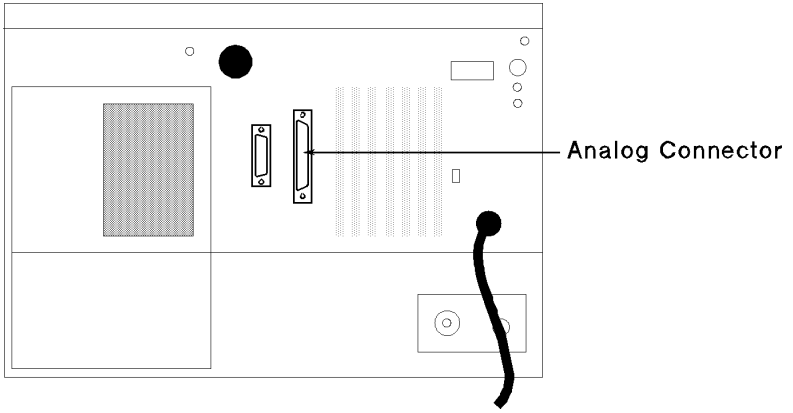
The configurations for each wave and numeric channel are provided in the following table.

| Channel | Label | Unit | Value Range = Voltage Range | Decimal[1] Represent. |
|---|---|---|---|---|
| Wave 1 | AWP | mbar | -100 to 0 mbar-10 to 0 V<br>0 to 100 mbar0 to 10 V | x |
| Wave 2 | !expFl[2] | l/min | 0 to 150 l/min0 to 10 V | x |
| Numeric 1 | !MIVOL | l/min | 0 to 35 l/min0 to 10 V | x.x |
| Numeric 2 | !AWRR | 1/min | 0 to 60 1/min0 to 10 V | x |
| Numeric 3 | !TV | l | 0 to 2 l0 to 10 V | x.xx |
| Numeric 4 | !$FIO_2$ | none | 0.00 to 1.000 to 10 V | x.xx |
| Numeric 5[3] | !COMP | ml/mbar | 0 to 255 ml/mbar0 to 10V | x |
| | !Rstat | mbar/L/s | 0 to 100 mbar/L/s0 to 10V | x |

1. You can configure the number of decimal places by moving the decimal point on the input value range, using the left/right arrow keys. The decimal representation in the table above refers to the Value Range. Please ensure that they are configured as shown.
2. Evita only provides positive voltages for expFl (Expiratory Flow).
3. Only 1 available at a time, depending on configuration.

## Step 5: Connect the free analog cable to the Evita analog output

(10 Minutes)



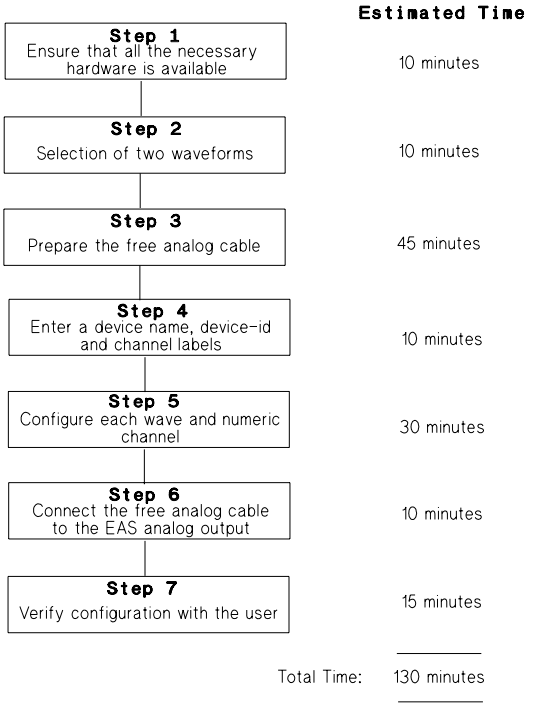

## Step 6: Verify configuration with the user

(15 Minutes)

Ensure that the correct waves and numerics are being interfaced from the Evita.

# Engström ELSA/EAS Anesthesia System

(This device can be connected in Germany - SUV approval is available). This note provides information on configuring the ELSA/EAS Free Analog device into the VueLink module. This procedure should take approximately 130 minutes and consists of 7 steps:-




General information on configuring the free analog devices has not been included in this technical note. Please refer to Chapter 3 of the VueLink Handbook, if you are not familiar with this procedure.

## Step 1: Ensure that all the necessary hardware is available

(10 Minutes)

You will need:-

- An M1032A #A04 VueLink Module
- 4m Free Analog (open end) cable M1032A #K6A or M1182A #K6A

  or

  2m Free Analog cable M1032A #K60 or M1182A #K60.
- A connector to fit the ELSA/EAS Analog Interface connector:

  ITT Cannon 25-pole, female

  Standard hood with snap adapter

---

**Note** This connector is provided locally by the hospital or by the manufacturer; it will not be set up at SMO/SLI. (The connector provided with the free analog cable cannot be used).

---

## Step 2: Select two waveforms

(10 Minutes)

The following parameters are provided as a waveform at the Analog Output port of ELSA/EAS:

- Expiration Flow (ELSA/EAS pin 2)
- Airway Pressure (ELSA/EAS pin 15)
- $CO_2$ Concentration (ELSA/EAS pin 5)
- Inspiration Flow (ELSA/EAS pin 14)
- Anesthetic Agent (Elsa pin 16)

Let the customer decide which two of the provided waveforms should be interfaced to VueLink. The following configuration is described using a typical selection of two waveforms. These are:

- $CO_2$ Concentration
- Airway Pressure

## Step 3: Prepare the free analog cable

(45 Minutes)

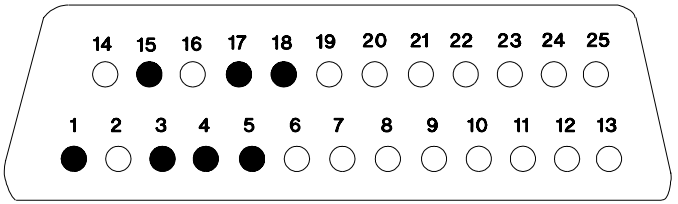
1. Connect the black and white wires that are twisted together to the ELSA/EAS Analog ground (pin 18). Do NOT separate these wires.
2. Connect the thick black wire, or the copper shield, to the case resp. ground on the device (ELSA/EAS pin 1).

**Note** If there is a conductive connection from the copper shield, via the connector, to the case resp. ground, then the black wire does not need to be connected.

3. Connect the colored wires to the analog output connector on the external device. The respective channels for each wire color are given in the following table.

| VueLink Free Analog Cable | | Designation | ELSA/ EAS PIN |
|---|---|---|---|
| Channel | Wire Colours | | |
| --- | Black and White (twisted) | Analog ground | 18 |
| --- | Black (thick) | Shield | 1 |
| Wave 1 | Brown | $CO_2$ Concentration[1] | 5 |
| Wave 2 | Red | Airway Pressure | 15 |
| Numeric 1 | Orange | $O_2$ Concentration | 3 |
| Numeric 2 | Yellow | Expired Minute Volume | 4 |
| Numeric 3 | Green | Total Fresh Gas Flow | 17 |
| Numeric 4 | Blue | - | - |

1. This wave is optional for ELSA. Please select another waveform, if $CO_2$ Concentration is not available on your device.




**Pins used for the ELSA/EAS free analog interface**

## Step 4: Enter a device name, device-id and channel labels

(10 Minutes)

Only the AWP and the MIVOL labels are offered in the configuration window of the Ventilator Free Analog Driver. All the other ELSA/EAS parameter labels need to be entered with the handheld keypad. The following parameter abbreviations are recommended as labels for these, but the customer can decide on his/her own abbreviations.

The ELSA/EAS Analog Interface provides the following waves and numerics (two of the waveforms were selected when the free analog cable was prepared in Step 3):

| Name | Label |
|---|---|
| **Waves** | |
| $CO_2$ Concentration[1] | !CO2CC |
| Airway Pressure | AWP |
| Expiration Flow | !EXPFL |
| Inspiration Flow | !INSFL |
| Anesthetic Agent | !AGT 2 |
| **Numerics** | |
| $O_2$ Concentration | !O2CC |
| Exp. Minute Volume | !MIVOL |
| Total Fresh Gas Flow | !FRESH |

1. Optional for ELSA.

**Alarms**

No alarms are activated for the ELSA/EAS Free Analog Device Driver.

## Step 5: Configure each wave and numeric channels2

(30 Minutes)

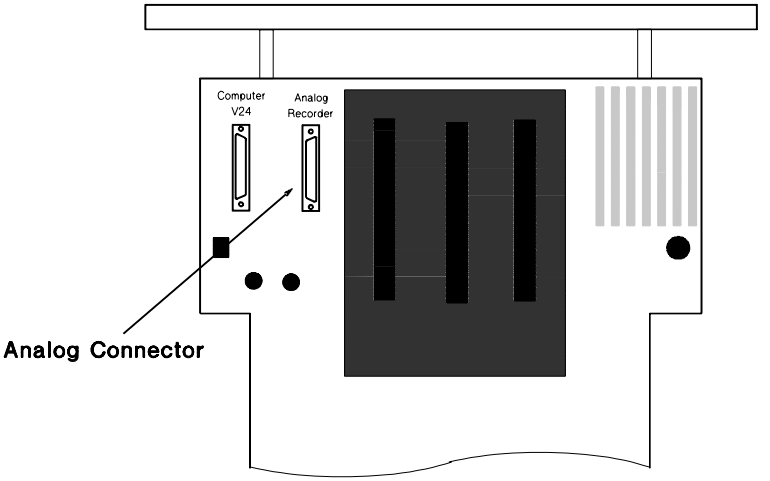
The configurations for each wave and numeric channel are provided in the following table.

| Channel | Label | Unit | Value Range = Voltage Range | Decimal[1] Represent. |
|---|---|---|---|---|
| Wave 1 | CO2CC | mmHg | 0 to 76 mmHg = 0 to 1 V | x |
| Wave 2 | AWP | $cmH_2O$ | 0 to 100 $cmH_2O$ = 0 to 1 V | x |
| Numeric 1 | O2CC | % | 0 to 100% = 0 to 1 V | x |
| Numeric 2 | MIVOL | l/min | 0 to 50 l/min = 0 to 1 V | x.x |
| Numeric 3 | FRESH | l/min | 0 to 50 l/min = 0 to 1 V | x.x |
| Numeric 4 | - | - | - | - |

1. You can configure the number of decimal places by moving the decimal point, using the left/right arrow keys. The decimal representation in the table above refers to the Value Range. Please ensure that they are configured as shown.

## Step 6: Connect the free analog cable to the ELSA/EAS analog output

(10 Minutes)



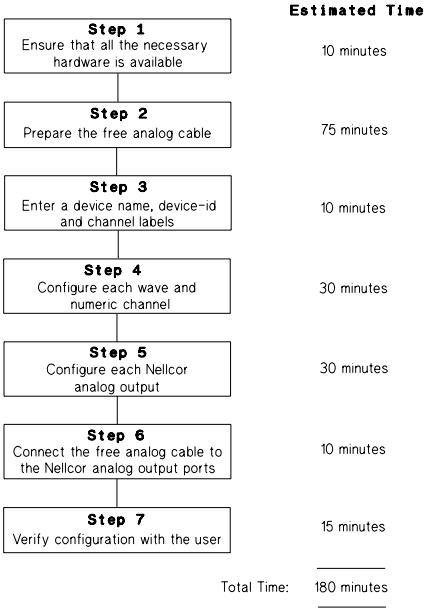

## Step 7: Verify configuration with the user

(15 Minutes)

Ensure that the correct waves and numerics are being interfaced from the ELSA/EAS.

# Nellcor N1000 and N2500 Multi-Function Monitor

This note provides information on configuring the Nellcor Free Analog Device into the VueLink module. This procedure should take approximately 3 hours and consists of 7 steps:-




**Note**

- Nellcor N1000/N2500 is a Class I, Type CF instrument and requires a SUV approval in Germany.
- Differences in the displayed numerics can occur between the Nellcor and the Philips patient monitor, if exceptionally unstable monitoring occurs (such as crying babies). This is due to the different numeric update rates between both devices.

General information on configuring the free analog devices has not been included in this technical note. Please refer to Chapter 3 of the VueLink Handbook, if you are not familiar with this procedure.

## Step 1: Ensure that all the necessary hardware is available

(10 Minutes)

You will need:-

- An M1032A #A05 VueLink Module
- 4m Free Analog (open end) cable M1032A #K6A or M1182A #K6A

  or

  2m Free Analog cable M1032A #K60 or M1182A #K60.
- Seven plugs to fit the Nellcor analog output ports:

  7 x 3/32 inch subminiature phone plugs (single tip-mono)
- Seven cables to connect the plugs to the open end of the Free Analog cable:

  7 x shielded cable (length: 10 - 15cm) (diameter: 2.5mm, RG145 or similar)

---

**Note** These cables and plugs are provided locally by the hospital or by the manufacturer; they will not be set up at SMO/SLI.

---

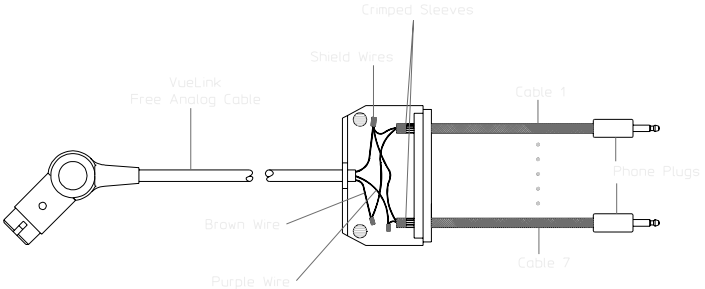
- The connector hood, the divider (5 holes) and five sleeves to connect the seven cables to the Free Analog cable are included with the free analog cable.

## Step 2: Prepare the free analog cable

(75 Minutes)

1. Connect each of the seven short cables (cable 1 to 7) to a phone plug.
2. Put all of the included sleeves through the holes of the divider ($A_1$ to $A_5$).

3. Put Cable 1 through the sleeve in $A_1$ and crimp the sleeve on the inside of the connector hood, so that the cable cannot be torn out. Repeat this procedure for all the other cables. (As there are only 5 holes, two cables must be fitted through single holes in two cases).
4. Connect the black and white wires that are twisted together to the shield wires of all the cables. Do NOT separate these wires.
5. Connect the brown wire of the Free Analog cable to the signal wire of Cable 1 for Numeric 1. Continue for all cables as shown in the table opposite.
6. Label each cable (1 to 7)




.

| VueLink Free Analog Cable | | Designation | Cable |
|---|---|---|---|
| **Channel** | **Wire Colours** | | |
| --- | Black and White (twisted) | Analog ground | 1-7 |
| --- | Black (thick) | Shield | Black & White |
| Wave 1 | Brown | Pleth | 1 |
| Wave 2 | Red | $CO_2$ | 2 |
| Numeric 1 | Orange | $SpO_2$ | 3 |

| VueLink Free Analog Cable | | Designation | Cable |
|---|---|---|---|
| **Channel** | **Wire Colours** | | |
| Numeric 2 | Yellow | $EtCO_2$ | 4 |
| Numeric 3 | Green | Resp | 5 |
| Numeric 4 | Blue | $EtN_2O$ | 6 |
| Numeric 5 | Purple | Pulse | 7 |

## Step 3: Enter a device name, device-id and channel labels

(10 Minutes)

Only the Pleth, Resp and Pulse labels need to be entered with the handheld keypad. All the other Nellcor waves and numerics are offered in the configuration window of the Nellcor Free Analog Device Driver. The Nellcor Analog Interface provides the following waves and numerics:

| Name | Label |
|---|---|
| **Waves** | |
| Plethysmogram | !PLETH |
| Carbon Dioxide | $CO_2$ |
| **Numerics** | |
| Oxygen Saturation | !$SpO_2$ |
| End-Tidal $CO_2$ | !$EtCO_2$ |
| Respiration Rate | !RESP |
| End-Tidal $N_2O$ | !$EtN_2O$ |
| Pulse Rate | PULSE |
| Inspired $CO_2$ | !$InCO_2$ |
| Inspired $N_2O$ | !$InN_2O$ |
| Pulse Amplitude | - |

**Alarms**

No alarms are activated for the Nellcor Free Analog Device Driver.

## Step 4: Configure each wave and numeric channel

(30 Minutes)

The configurations for each numeric are provided in the following table.

| Channel | Label | Unit | Value Range = Voltage Range | Decimal Represent. |
|---|---|---|---|---|
| Wave 1 | Pleth | - | 0 to 100 = 0 to 10 V | x |
| Wave 2 | CO2 | mmHg | 0 to 76 mmHg = 0 to 10 V | x |
| Numeric 1 | SpO2 | % | 0 to 100% = 0 to 10 V | x |
| Numeric 2 | EtCO2 | mmHg | 0 to 76 mmHg = 0 to 10 V | x |
| Numeric 3 | Resp | rpm | 0 to 75 rpm = 0 to 10 V | x |
| Numeric 4 | EtN2O | mmHg | 0 to 760 mmHg = 0 to 10 V | x |
| Numeric 5 | Pulse | rpm | 0 to 250 bpm = 0 to 10 V | |

**Note** The low and high grid values have to meet the restrictions outlined in the VueLink Handbook.

## Step 5: Configure each Nellcor analog output

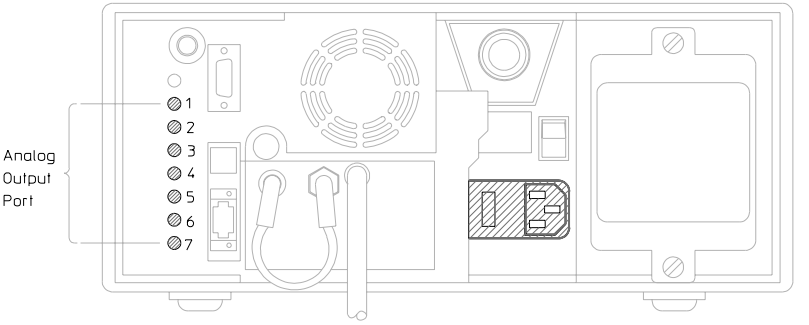
(30 Minutes)

The following settings should be stored in slot 10 (defaults) of the Nellcor device:

| Analog Output Port | Signal | Full scale output voltage |
|---|---|---|
| 1 | Pulse wave | 10.00V |
| 2 | $CO_2$ wave | 10.00V =76 mmHg |
| 3 | $SaO_2$% | 10.00V = 100% |
| 4 | End-Tidal $CO_2$ | 10.00V = 76 mmHg |
| 5 | Resp. Rate | 10.00V = 75/min |
| 6 | End-Tidal $N_2O$ | 10.00V = 760 mmHg |
| 7 | Pulse Rate | 10.00V = 250/min |

## Step 6: Connect the free analog cable to the Nellcor analog output

(10 Minutes)



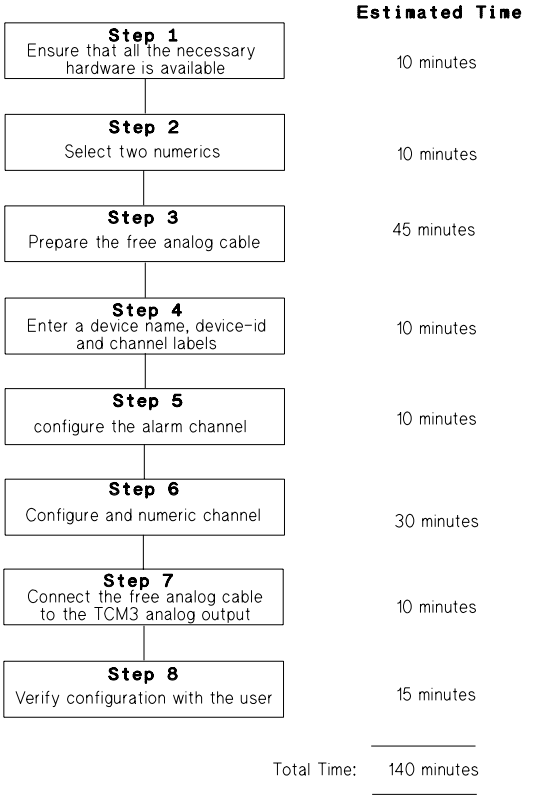

## Step 7: Verify configuration with the user

(15 Minutes)

Ensure that the correct waves and numerics are being interfaced from the Nellcor monitor.

# Radiometer Transcutaneous $pO_2/pCO_2$ Monitor

This note provides information on configuring the TCM3 Free Analog device into the VueLink module. This procedure should take approximately 140 minutes and consists of 8 steps:-




General information on configuring the free analog devices has not been included in this technical note. Please refer to Chapter 3 of the VueLink Handbook, if you are not familiar with this procedure.

## Step 1: Ensure that all the necessary hardware is available

(10 Minutes)

You will need:-

- An M1032A #A01 VueLink Module
- 4m Free Analog (open end) cable M1032A #K6A or M1182A #K6A

  or

  2m Free Analog cable M1032A #K60 or M1182A #K60.
- A connector to fit the TCM3 Analog Interface connector:

  Connector D-sub 15 pole, female.

  Standard hood with M3 securing screws.

---

**Note** This connector is provided locally by the hospital or by the manufacturer; it will not be set up at SMO/SLI. (The connector provided with the free analog cable cannot be used).

---

## Step 2: Select two Numerics

(10 Minutes)

The following parameters are provided at the Analog Output port of TCM3:

- Alarm (TCM3 pin 5) *Transducer Temperature (TCM3 pin 8)
- Transcutaneous partial oxygen pressure (TCM3 pin 9)
- Transcutaneous partial $CO_2$ pressure (TCM3 pin 10)

In the following, the configuration is described using a typical selection of the two numerics and the alarm:

- Transcutaneous partial oxygen pressure
- Transcutaneous partial $CO_2$ pressure

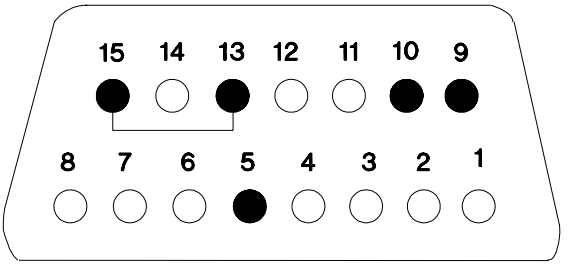
## Step 3: Prepare the free analog cable

(45 Minutes)

1. Connect the black and white wires that are twisted together and the thick black wire to the TCM3 Analog ground (pin 15). Do NOT separate these wires. Wire pin 13 and pin 15 together.
2. Connect the colored wires to the analog output connector on the external device. The respective channels for each wire color are given in the following table.

| VueLink Free Analog Cable | | Designation | TCM3 PIN |
|---|---|---|---|
| Channel | Wire Colours | | |
| --- | Black and White (twisted) | Analog ground | 15 |
| --- | Black (thick) | Shield | 153 |
| Bridge | | | 13 to 15 |

| VueLink Free Analog Cable | | Designation | TCM3 PIN |
|---|---|---|---|
| **Channel** | **Wire Colours** | | |
| Numeric 1 | Red | $TCPO_2$ | 9 |
| Numeric 2 | Orange | $CPCO_2$ | 10 |
| Alarm | Yellow | Alarm | 5 |




**Pins used for the TCM3 free analog interface**

## Step 4: Enter a device name, device-id and channel labels

(10 Minutes)

All the TCM3 parameter labels need to be entered with the handheld keypad. The following parameter abbreviations are recommended as labels for these, but the customer can decide on his/her own abbreviations.

The TCM3 Analog Interface provides the following 2 numerics:

| Name | Label |
|---|---|
| **Numerics** | |
| Partial Oxygen Pressure | !$TCPO_2$ |
| Partial $CO_2$ Pressure | !$CPCO_2$[1] |

1. Label restricted to 5 characters.

## Step 5: Configure the alarm channels

(10 Minutes)

The configurations for the alarm channel are provided below:

| | |
|---|---|
| **Input Voltage Range** | 0...1 V |
| **Active** | Highlablists |

## Step 6: Configure each numeric channels

(30 Minutes)

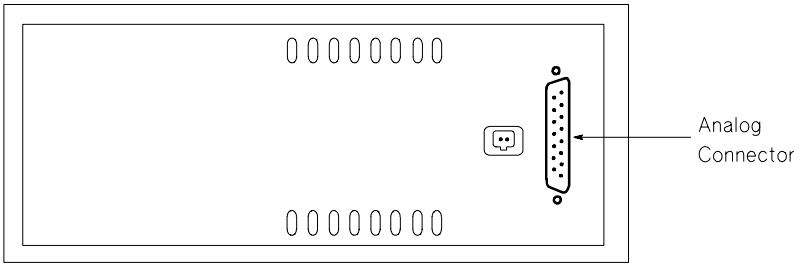
The configurations for each numeric channel are provided in the following table.

| Channel | Label | Unit | Value Range = Voltage Range | Decimal[1] Represent. |
|---|---|---|---|---|
| Numeric 1 | $TCPO_2$ | mmHg | 0 to 200 mmHg = 0 to 1 V | x |
| Numeric 2 | $CPCO_2$ | mmHg | 0 to 200 mmHg = 0 to 2 V | x |

1. You can configure the number of decimal places by moving the decimal point, using the left/right arrow keys. The decimal representation in the table above refers to the Value Range. Please ensure that they are configured as shown.

## Step 7: Connect the free analog cable to the TCM3 analog outputs

(10 Minutes)




## Step 8: Verify configuration with the users

(15 Minutes)

Ensure that the correct numerics are being interfaced from the TCM3. Simulate an alarm to ensure that the alarming capability functions correctly.

**Note** VueLink only provides a visual alarm, not an audible alarm.