Instructions for use
Connectivity Converter CC300

WARNING
To properly use this medical device, read and comply with these instructions for use.

Protocol converter
Software 1.n
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# Contents

1 Information about this document ................................................................. 5  
   1.1 Typographical conventions ................................................................. 5  
   1.2 Use of terms .................................................................................. 5  
   1.3 Trademarks .................................................................................. 5  

2 Functions in the integrated system ........................................................... 6  
   2.1 Examples of shared system functions ................................................ 6  

3 Safety-related information ...................................................................... 8  
   3.1 Intended use ................................................................................ 8  
   3.2 Environments of use ...................................................................... 8  
   3.3 Requirements of user groups .......................................................... 8  
   3.4 Information on safety instructions and precautionary statements... 9  
   3.5 Basic safety instructions ................................................................. 10  
   3.6 Safety during cleaning and servicing .............................................. 12  

4 Overview .................................................................................................. 13  

5 Assembly and preparation ...................................................................... 15  
   5.1 Fitting the CC300 ......................................................................... 15  
   5.2 Assembly ..................................................................................... 15  

6 Information on operation ........................................................................ 23  
   6.1 Certificates .................................................................................. 23  

7 Troubleshooting ...................................................................................... 24  

8 Reprocessing ............................................................................................ 25  
   8.1 Information on reprocessing ......................................................... 25  
   8.2 Classifications for reprocessing ..................................................... 25  
   8.3 Reprocessing list .......................................................................... 25  
   8.4 Reprocessing procedures ............................................................... 25  

9 Service ..................................................................................................... 27  
   9.1 Definition of service terminology .................................................. 27  
   9.2 Inspection .................................................................................... 27  
   9.3 Maintenance ................................................................................ 28  

10 Disposal .................................................................................................. 29  
    10.1 Disposing of the device ................................................................. 29  

11 Technical data ........................................................................................ 30  
   11.1 General information ................................................................... 30  
   11.2 Ambient conditions .................................................................... 30  
   11.3 Operating characteristics ............................................................ 30
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.4</td>
<td>Device interfaces</td>
<td>32</td>
</tr>
<tr>
<td>11.5</td>
<td>Relevant standards</td>
<td>33</td>
</tr>
<tr>
<td>11.6</td>
<td>EMC declaration</td>
<td>33</td>
</tr>
<tr>
<td>11.7</td>
<td>Connections to IT networks</td>
<td>35</td>
</tr>
<tr>
<td>11.8</td>
<td>Open-source software</td>
<td>38</td>
</tr>
<tr>
<td>12</td>
<td>Order list</td>
<td>39</td>
</tr>
<tr>
<td>13</td>
<td>Annex</td>
<td>40</td>
</tr>
<tr>
<td>13.1</td>
<td>Abbreviations</td>
<td>40</td>
</tr>
<tr>
<td>13.2</td>
<td>Symbols</td>
<td>40</td>
</tr>
</tbody>
</table>
1 Information about this document

1.1 Typographical conventions

1. Consecutive numbers indicate steps of action, with the numbering restarting with "1" for each new sequence of actions.
   – Dashes indicate the listing of data, options, or objects.
   (A) Letters in parentheses refer to elements in the related illustration.
   A Numbers in illustrations indicate elements referred to in the text.
   Bold, italicized text indicates labels on the device.
   ▶ In precautionary statements, this triangle indicates options for avoiding the hazard.

1.2 Use of terms

Dräger uses the term "accessory" not only for accessories in the sense of IEC 60601-1, but also for consumable parts, removable parts and attached parts.

1.3 Trademarks

1.3.1 Trademarks owned by Dräger

<table>
<thead>
<tr>
<th>Trademark</th>
<th>Trademark owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDIBUS®</td>
<td></td>
</tr>
<tr>
<td>MEDIBUS.X®</td>
<td></td>
</tr>
<tr>
<td>Perseus®</td>
<td></td>
</tr>
<tr>
<td>Primus®</td>
<td></td>
</tr>
<tr>
<td>Evita®</td>
<td></td>
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<tr>
<td>Babylóg®</td>
<td></td>
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<tr>
<td>Atlán®</td>
<td></td>
</tr>
<tr>
<td>Zeus®</td>
<td></td>
</tr>
<tr>
<td>Savina®</td>
<td></td>
</tr>
</tbody>
</table>

The following web page provides a list of the countries in which the trademarks are registered: www.draeger.com/trademarks

1.3.2 Trademarks owned by third-party manufacturers

<table>
<thead>
<tr>
<th>Trademark</th>
<th>Trademark owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismozon®</td>
<td>BODE Chemie</td>
</tr>
<tr>
<td>Oxycide®</td>
<td>Ecolab USA</td>
</tr>
</tbody>
</table>
Functions in the integrated system

2 Functions in the integrated system

Integrated System begins with an integrated system that combines different devices at a workplace. The integrated system enables the exchange of information and the sharing of functions between the devices of this workstation. Data from one device can be displayed on other devices at the same workstation. A single user interaction at one device can trigger shared functions affecting several devices at the workplace. The resulting effects on the patient from all devices must be considered by the user. Some shared functions only work in one direction. Others work in both directions. With bidirectional system functions, devices affect each other mutually. Shared system functions that affect the operation of a device must be configured by service personnel. Consequently functions working in both directions must be configured on all involved devices. Awareness of potential patient risks require the users to understand the relevance of the correct integrated system ID, which must correspond to the unique name of the workplace. Each hospital should have a naming scheme in place that specifies a proper integrated system ID for each workplace in the hospital. Shared functions are not necessarily realized by a point-to-point cable connection, but by the network connection. Here, the integrated system ID is of particular importance, because devices with the same integrated system ID are assigned to the same workplace and will share data and functions.

2.1 Examples of shared system functions

2.1.1 Synchronize alarm silence

The various devices of the workplace each have their own alarm silence key to temporarily mute the acoustic device alarms. In the integrated system, the alarm silence is synchronized across all devices of the workplace. In situations where multiple devices may cause an alarm, this reduces the number of required user interactions to silence the workplace.

2.1.2 Patient data import

On the patient monitor, admission, discharge and transfer patient data can be taken over the network (button Get HIS) or entered by manual input in the patient dialog (e.g., size, age, weight, patient category). This information is relayed to the therapy device at the common workplace to support proper and consistent device settings for therapy and alarms of the various devices configured for the same workplace. This action is supported only in this direction, not in both directions.

2.1.3 Display of shared data

On the patient monitor, waveforms and parameter values from the connected ventilator or anesthesia machine of the same workplace can be displayed.

2.1.4 Time synchronization

The various devices synchronize their device time with a central time server on the network (NTP). This achieves a consistent time setting across all devices of the workstation and supports consistent and correct documentation.
2.1.5 Data export

The data (settings, physiological values, alarms) from devices, such as patient monitors, ventilators, or anesthesia machines, is made available on the network for use by other devices or applications (e.g. HIS, HL7, PDMS and others).
3 Safety-related information

3.1 Intended use

CC300 enables communication between listed Dräger MEDIBUS.X devices and Service-oriented Device Connectivity devices (SDC) certified by Dräger in a medical device or medical IT system. The protocol converter supports information exchange, the control of specific functions and the synchronization of specific procedures. Other SDC devices can use this information to support diagnoses and therapeutic decisions.

3.2 Environments of use

Dräger Connectivity Converter CC300 is a protocol converter which is intended for use in a hospital environment.

The device is designed for use with medical devices. Do not use the device in the following environments:

– Outside buildings
– During patient transport
– In vehicles, aircraft or helicopters

3.3 Requirements of user groups

The term "User group" describes the personnel appointed by the operating organization to be responsible for performing the respective task on the product.

3.3.1 Duties of the operating organization

The operating organization must ensure the following:

– Each user group has the required qualifications (e.g., has undergone specialist training or acquired specialist knowledge through experience).
– Each user group has been trained to perform the task.
– Each user group has read and understood the required chapters in this document.

3.3.2 User groups

Clinical users
This user group uses the product in accordance with the intended use.

<table>
<thead>
<tr>
<th>Task</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of the product in accordance with the intended use</td>
<td>Specialist medical knowledge in the use of the product</td>
</tr>
</tbody>
</table>

Reprocessing personnel
This user group performs the measures required to reprocess the product.

<table>
<thead>
<tr>
<th>Task</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reprocessing</td>
<td>Specialist knowledge in the reprocessing of medical devices</td>
</tr>
</tbody>
</table>
Service personnel
This user group installs the product and carries out service activities.

If product-specific knowledge or tools are required, the activities must be carried out by specialized service personnel. The specialized service personnel have been trained by Dräger for these activities on this product.

<table>
<thead>
<tr>
<th>Task</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>Specialist knowledge in electrical engineering and mechanics</td>
</tr>
<tr>
<td></td>
<td>Experience in the servicing of medical devices</td>
</tr>
<tr>
<td>Basic service work (inspection, maintenance according to the &quot;Maintenance&quot; chapter)</td>
<td>Experience in complex service work on this product</td>
</tr>
<tr>
<td>Basic and complex service work (inspection, maintenance, repair)</td>
<td>Experience in complex service work on this product</td>
</tr>
<tr>
<td>Configuration of start-up settings</td>
<td>Knowledge of system integration in accordance with the IEC 80001 family of standards</td>
</tr>
</tbody>
</table>

A service contract with Dräger is recommended.

3.4 Information on safety instructions and precautionary statements
Safety instructions and precautionary statements warn of risks and give instructions for the safe use of the product. Failure to observe them may lead to personal injury or property damage.

3.4.1 Safety instructions
This document contains sections with safety instructions which warn of risks. The type of risk and the consequences of non-compliance are described in each safety instruction.

3.4.2 Precautionary statements
Precautionary statements relate to action steps and warn of risks that may arise when performing the action steps. Precautionary statements precede the action steps.

The following warning signs and signal words indicate precautionary statements and differentiate the possible consequences of non-compliance.

<table>
<thead>
<tr>
<th>Warning sign</th>
<th>Signal word</th>
<th>Consequences of non-compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>☢️</td>
<td>WARNING</td>
<td>May result in death or serious injury.</td>
</tr>
<tr>
<td>☢️</td>
<td>CAUTION</td>
<td>May result in moderate or minor injury.</td>
</tr>
<tr>
<td>☢️</td>
<td>NOTICE</td>
<td>May result in property damage.</td>
</tr>
</tbody>
</table>
3.5 Basic safety instructions

3.5.1 Instructions for use

Personal injury and property damage may occur if the product is used contrary to the information in these instructions for use.

► Follow these instructions for use. Only use this product in accordance with its intended use. Keep these instructions for use in an accessible place. Observe the instructions for use of all products that are used with this product.

The instructions for use do not contain any information on the following points:
– Risks that are obvious to users
– Consequences of obvious improper use of the product
– Possible negative effects on patients with one or more illnesses

3.5.2 Symbols and product labels

Personal injury and property damage may occur if the symbols and product labels are not heeded.

► Observe the symbols and product labels.

3.5.3 Modifications to the product

Modifications to the product may lead to malfunctions and subsequently to personal injury and property damage.

► Do not modify this product.

3.5.4 Electric shock

There are live electrical components in the housing.

► Do not open the housing underneath the plastic hood.

► Maintenance measures must be performed by the personnel responsible. Dräger recommends DrägerService to perform these tasks.

3.5.5 Accessories

The use of incompatible accessories may adversely affect the functional integrity of the product. Personal injury and property damage may occur as a consequence.

► Use only compatible accessories. The accessories that are compatible with this product are listed in the order list supplied with the product.

► Use only intact accessories. The use of defective accessories may adversely affect the functional integrity of the product. Personal injury and property damage may occur as a consequence.

► Incorrect operation, incorrect use, or incorrect reprocessing may result if accessories or connected products are used contrary to the information in the associated instructions for use. Personal injury and property damage may occur as a consequence.

► Only use the power supply unit from the order list.
3.5.6 Magnetic resonance imaging
Magnetic fields may adversely affect the functional integrity of the medical device and consequently put the patient or the user at risk.
► Do not use the medical device in rooms with magnetic field applications (e.g., magnetic resonance imaging).

3.5.7 Overheating
The functional integrity of the medical device may be impaired in the event of overheating.
► Do not operate the medical device in the vicinity of radiant warmers or other heat sources.
► Do not expose the medical device to direct sunlight.
► Do not cover the ventilation slots on the housing.

3.5.8 Flammable gases
If oxygen concentrations above 25 Vol% or combustible or explosive gas mixtures occur, there is an increased risk of explosion or fire which may result in personal injury and damage to property.
► Do not operate the device in areas where oxygen concentrations above 25 Vol% or combustible or explosive gas mixtures may occur.

3.5.9 Electromagnetic disturbances
Wireless communication devices (e.g., cellular phones) and medical electrical equipment (e.g., defibrillators, electrosurgical devices) emit electromagnetic radiation. When such devices are operated too close to this device or its cables, the functional integrity of this device may be compromised by electromagnetic disturbances. Personal injury and property damage may occur as a consequence.
► To ensure that the full functional integrity of this device is not compromised, there must be a safety distance of at least 1.0 m (3.3 ft) between this device and radio communications devices or other medical electrical devices.

3.5.10 Damage to the device
The device may become damaged as a result of reprocessing, wear, or incorrect storage. The functional integrity of the device can no longer be ensured in the event of damage to the device. The patient may be put at risk.
► Maintain the ambient conditions for operation and storage of the device.
► Replace any device that does not behave as expected or is obviously functioning incorrectly with a device that is functioning correctly.

3.5.11 Integrated system
CC300 may be used in the immediate vicinity of the other devices in Dräger-approved integrated systems.
3.5.12 Data transfer

Danger from incompletely transferred data.

The transmitted alarm status information may be incomplete.
► Do not use this data for patient monitoring or device monitoring.
► The data can be used to set up a distributed alarm system with unconfirmed alarm transmission in accordance with IEC 60601-1-8:2014.
► Remain within hearing range of the alarms issued by the device connected via MEDIBUS.X.

3.5.13 Unauthorized SDC devices

Danger from unauthorized SDC devices.

Other SDC devices in the same IT network can communicate with the device. Access by means of unauthorized devices must be prevented.
► Prevent unauthorized devices from accessing the hospital network.
► Keep the whitelist up-to-date, so that it contains only those devices that may be used with the CC300 (only possible through specialized service personnel).
► Establish alternative options (e.g., set up MAC address filters).

3.6 Safety during cleaning and servicing

3.6.1 Risk of infection

The device must be reprocessed, otherwise there is an increased risk of infection.
► Clean and disinfect the device before using it for the first time.
► Follow the infection prevention policies and reprocessing regulations of the healthcare facility.
► Use validated procedures for reprocessing.
► Follow the manufacturer's instructions for cleaning agents, disinfectants, and reprocessing devices.
► Before performing servicing and before sending back the product for repair, reprocess the product in accordance with the chapter "Reprocessing".

3.6.2 Wear and material fatigue

Wear and material fatigue of the components may lead to device failure and malfunctions.
► Check products for signs of wear (e.g., cracks, deformation, discoloration, or peeling) and replace if necessary.

3.6.3 Service

This product must be serviced properly and regularly. Personal injury and property damage may occur if service is not performed correctly.
► Perform the service in accordance with the chapter "Service".
► Service must be performed by those persons who are assigned to the particular measure.
► Only perform service work when the device is not being operated.
4 Overview

Front view

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Labeling area for the integrated system ID</td>
</tr>
</tbody>
</table>

Cable connections

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Serial port</td>
</tr>
<tr>
<td>B</td>
<td>Network port, PoE-compatible (Power over Ethernet)</td>
</tr>
<tr>
<td>C</td>
<td>Power inlet</td>
</tr>
</tbody>
</table>
Overview

With the plastic hood opened

<table>
<thead>
<tr>
<th>No.</th>
<th>LED</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Status LED</td>
<td></td>
</tr>
</tbody>
</table>
|     | Flashes green | Data transfer  
Wait until the end of the data transfer. The device then switches over to the operation mode. |
|     | Lights up green | CC300 in operation  |
|     | Lights up red | Device malfunction  |
|     | Flashes red | Internal error  |
| B   | Power LED  |                                                   |
|     | Lights up green | CC300 in operation  |
|     | Not lit | No power supply |

Rear view

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Right-hand attachment to a vertical GCX rail</td>
</tr>
<tr>
<td>B</td>
<td>Left-hand attachment to a vertical GCX rail</td>
</tr>
<tr>
<td>C</td>
<td>Attachment to a horizontal rail</td>
</tr>
</tbody>
</table>

No. 34904  
LED No. 34905  
LED
5 Assembly and preparation

5.1 Fitting the CC300

CC300 can be attached in an upright position to a vertical GCX rail or to a horizontal rail (Dräger or Fairfield). Only operate CC300 with the hood closed.

The fitting and configuration of CC300 are carried out by specialized service personnel.

The CC300 can be mounted to a wall, a supply unit, or device trolleys.

5.2 Assembly

1. Remove the plastic hood by lifting the hood by the lower edge.
2. To fit the cables, clip the plastic hood to the upper side of the CC300.
3. Connect the cable for the power supply unit. The voltage LED lights up green. (The CC300 can also be powered from the network port (PoE). However, as soon as the power supply unit is connected, the power is supplied by the power supply unit.)
4. Connect the provided cable to the serial port on the MEDIBUS.X device. Use the provided adapters if necessary. Connect the other end of the cable to the CC300.
5. Connect the CC300 to the hospital network via the network port.
6. When all the cables have been connected, replace the plastic hood. Do this by first attaching the hood to the upper side of the device. Then press the lower part of the hood on to the cable connections. The plastic hood acts as a strain relief for all the connected cables.

CC300 is ready for operation. CC300 does not have a dedicated user interface. CC300 is configured from the Perseus A500 or Atlan A3xx screen or the DrägerService software application.
Assembly and preparation

⚠️ WARNING
Risk of electric shock
► Only devices with a maximum nominal voltage of 24 V DC should be connected to the serial port.
► Only devices with a maximum nominal voltage of 57 V DC should be connected to the network port.

5.2.1 Integrated system

Device coupling (e.g., the use of system functions of Perseus A500 with a Dräger-certified SDC monitor) takes place via a unique integrated system ID which is identical for all participating devices. Make sure the integrated system ID is configured correctly.

Depending on the selected integrated system, specialized service personnel will have to make default settings to the CC300 which will have an effect on the validation and configuration of the integrated system ID.

If the integrated system is changed, the corresponding default setting will have to be changed by specialized service personnel.

The valid characters for the integrated system ID are the 94 printable characters of the ASCII character set on an English keyboard, excluding the period and the space character:

"!"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~

⚠️ WARNING
Danger due to incorrect integrated system ID
Changing the operating location of a device will require changing of the integrated system ID.
► Have any changes to the operating location carried out by specialized service personnel.
► Make sure that the integrated system IDs for the devices that are to communicate with one another as a workplace are identical.
► The integrated system ID must correspond to the operating location or the integrated system.

5.2.1.1 Integrated system ID

The integrated system ID comprises 3 data fields. These data fields must uniquely designate the operating location of the device or the integrated system (device configuration 1, 2, 3, or 4).

- Hospital ID
- Department ID
- Workstation ID

Example 1: CC300 fitted in a fixed operating location (e.g., on a wall rail or on a supply unit)
Assembly and preparation

Example 2: CC300 mounted on a Perseus A500 trolley

<table>
<thead>
<tr>
<th>CC300</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Hospital ID</em></td>
</tr>
<tr>
<td><em>Department ID</em></td>
</tr>
<tr>
<td><em>Workstation ID</em></td>
</tr>
</tbody>
</table>

Dräger recommends selecting the integrated system IDs to be short enough for the department ID and the workstation ID to be fully displayed in the header bar of the Perseus A500.

Since the hospital ID will not be displayed on the device screens, the hospital ID for a particular hospital must be identical for all devices. Otherwise the user will not be able to recognize from the visible part of the integrated system ID that two devices are correctly coupled with each another. Each hospital should have a naming scheme in place that specifies a proper integrated system ID for each workplace in the hospital.

5.2.1.2 Possible device configurations

The CC300 can be used in the following device configurations.

The illustrations of the device configurations 1 to 4 in the following chapter show Perseus A500 as an example.

5.2.1.2.1 Device configuration 1

The CC300 and the Dräger-certified SDC monitor are mounted on the same trolley as the MEDIBUS.X device. For further information see: "Supported devices", page 22.
Assembly and preparation

With this device configuration the CC300 always uses the integrated system ID that was configured for this integrated system. Even after power supply failures or after moving the entire device configuration 1 to a different operating location, the CC300 will continue to use this integrated system ID.

The configuration of the CC300 integrated system ID must be carried out by specialized service personnel.

The CC300 must be visibly labeled with the assigned integrated system ID. In this case the integrated system ID designates an equipment configuration (e.g., HOSP1/COMBI/CART1) and not an operating location (e.g., Operating Room 1). The integrated system ID must be identical with the integrated system ID on the associated Dräger-certified SDC monitor.

It is not possible to inherit an integrated system ID from a switch in a fixed location with this device configuration.

5.2.1.2.2 Device configuration 2

The CC300 and the Dräger-certified SDC monitor are mounted in a fixed location; authorized Dräger MEDIBUS-X devices are connected to the CC300.

With this device configuration the CC300 always uses the integrated system ID that was configured for this operating location. No user interaction is required, not even after a power supply failure or after connecting a different MEDIBUS-X device. The configuration of the CC300 integrated system ID can only be carried out by specialized service personnel. The configured integrated system ID must be visibly labeled on the outside of the CC300. In this case the integrated system ID designates an operating location (e.g., HOSP1/CARDIO/OR22) and not an equipment configuration. The integrated system ID must be identical to the integrated system ID of the associated Dräger-certified SDC monitor.

It is not possible to inherit an integrated system ID from a switch in a fixed location with this device configuration.
5.2.1.2.3 Device configuration 3

This device configuration only applies for therapy devices that can validate the integrated system ID of the CC300 via their user interface (e.g., Perseus A500 and Atlan A3xx).

The CC300 is mounted on the trolley, the Dräger-certified SDC monitor is mounted in a fixed location, e.g., on a wall.

After a power supply failure of more than 60 seconds or after the therapy device is moved to a different operating location, the CC300 starts with a non-validated integrated system ID in this device configuration.

The data from the connected therapy device is transmitted to the network (e.g., to the Dräger Infinity Gateway network) despite a non-validated integrated system ID.

Only after the same integrated system ID has been configured and validated by the service personnel for the CC300 and the Dräger-certified SDC monitor, an interaction with the associated SDC monitor is possible.

This configuration and validation is only possible if specialized service personnel have set up the CC300 appropriately. This can be recognized from the labeling on the CC300, which in this case indicates the association with the Perseus A500 to which it is mounted (e.g., CC300 for Perseus A500, serial number XYZ).

If the CC300 power supply is interrupted for more than 60 seconds, the integrated system ID must be validated again in the system configuration of the therapy device. The integrated system ID must be adapted during initial operation and after the device has been moved to a different operating location. In this case the integrated system ID designates the operating location of the permanently located Dräger-certified SDC monitor (e.g., HOSP1/CARDIO/OR22) and not an equipment configuration.

If a switch with LLDP technology in a fixed location is used, this integrated system ID will be automatically inherited from the switch and is thereby automatically validated. The new integrated system ID does not have to be entered and validated by service personnel.
Assembly and preparation

If the CC300 is disconnected from the Dräger-specified LLDP switch, CC300 will continue to use the integrated system ID from the LLDP switch. It will automatically be set to non-validated.

**WARNING**

**Cautions regarding an integrated device configuration**

Incorrect or unsuitable integrated system IDs can lead to the wrong devices being connected to one another. This may result in unintended device behavior.

- Assign the integrated system ID according to the current location of the device.
- After intrahospital transport, check the integrated system ID on the screen of the connected therapy device.
- Use unambiguous designations.
- Avoid characters that can be easily confused (e.g., 0 and O).
- Avoid long designations.
- Before establishing the connection, check that the integrated system ID has been entered correctly on the therapy device.

5.2.1.2.4 Device configuration 4

The CC300 is mounted on a MEDIBUS.X device trolley. The Dräger-specified LLDP switch is permanently mounted by the bed. For further information see: "Supported devices", page 22.

After a power supply failure or after the MEDIBUS.X device is moved to a different operating location, in this device configuration the CC300 starts with the non-validated integrated system ID configured for the CC300. The configured integrated system ID must indicate the association with the MEDIBUS.X device to which the CC300 is mounted (e.g., HOSP1/COMBI/V500CART1), and not an operating location (e.g., Operating Room 1).
Assembly and preparation

When the CC300 is connected to the Dräger-specified LLDP switch, the CC300 adopts the integrated system ID configured for the LLDP switch as the new, validated integrated system ID by means of the LLDP protocol. If this agrees with the integrated system ID of the associated Dräger-certified SDC monitor, data can be exchanged between the devices.

The configuration of the CC300 integrated system ID can only be carried out by specialized service personnel. The specialized service personnel will label the CC300 accordingly.

In this case the labeling of the CC300 designates an equipment configuration and the possibility of connecting to a Dräger-specified LLDP switch (e.g., for device XYZ or an LLDP bed).

If the CC300 is disconnected from the Dräger-specified LLDP switch, the integrated system ID configured for the CC300 becomes effective again. It will automatically be set to non-validated.

**WARNING**

Cautions regarding incorrect integrated system ID

Incorrect or unsuitable integrated system IDs can lead to the wrong devices being connected to one another. This may result in unintended device behavior.

- The LLDP switch must be configured by specialized service personnel.
- The LLDP switch must be explicitly assigned to one bed.
- Only connect devices for the same patient to the same LLDP switch.

### 5.2.1.2.5 Checklist for adjusting the integrated system ID when using the Perseus A500 as the input device

Prerequisite:
- Device is in the **Standby** mode.
- Device is not part of integrated system.

1. Open the **System setup** dialog.
2. Touch the **System** tab.
3. Touch the **System integration** vertical tab.
4. Enter the configuration password.
5. Enter the inputs for **Hospital ID**, **Department ID**, and **Workstation ID** one after another.
   - Touch the pencil symbol
   - Change the names using the virtual keyboard
   - Confirm with the Enter key

   **Pay attention to upper and lower case spelling when creating the integrated system ID.**

6. When all 3 parts of the integrated system ID have been entered, confirm with **Connect**. The network symbol in the header bar shows the status of the connection to the Dräger-certified SDC monitor.
7. If necessary, make additional settings for the workplace at **Shared system functions** with **On** or **None**.
8. Close the **System setup** dialog.
Alarms

CC300 periodically sends requests to the connected MEDIBUS.X device. If an alarm occurs between 2 requests and immediately disappears again, it cannot be detected and forwarded in the network. The alarm delay time to be expected is typically less than 2 seconds.

The alarm from a MEDIBUS.X device connected to CC300 takes priority and is relevant.

Note that a measurement and an alarm in the HL7-ACM profile of a connected gateway possibly may not match. An alarm will be generated even though the measurement has not yet reached the limit. This is because the values will be given the same time stamp, even though they have been detected with a (slight) time offset.

Supported devices

The following devices are supported by CC300. The transferred data may be used for clinical purposes.

- Perseus A500 starting with SW 2.01, MEDIBUS protocol version 06.00[1][2]
- Atlan A3xx SW 1.01 or higher, MEDIBUS protocol version 06.00[1][2]
- Primus, Primus IE SW 4.53, MEDIBUS protocol version 06.00[2]
- Evita V300 SW 02.51, MEDIBUS protocol version 04.03[2]
- Evita Infinity V500 SW 02.51, MEDIBUS protocol version 04.03[2]
- Evita V600 SW 01.05, MEDIBUS protocol version 04.03[2]
- Evita V800 SW 01.05, MEDIBUS protocol version 04.03[2]
- Babylog VN500 SW 02.51, MEDIBUS protocol version 04.03[2]
- Babylog VN600 SW 01.05, MEDIBUS protocol version 04.03[2]
- Babylog VN800 SW 01.05, MEDIBUS protocol version 04.03[2]
- Zeus IE SW 2.02, MEDIBUS protocol version 06.00[2]
- Savina 300 SW 5.02, MEDIBUS protocol version 04.00[2]

1) Synchronization of device states between the MEDIBUS.X device and the Dräger IACS monitor
2) Data conversion from MEDIBUS.X to SDC to forward data to IACS monitor and Infinity Gateway. Only the IACS monitor can display the data. The Infinity Gateway forwards the data to other systems via HL7 and the API interface.
6 Information on operation

No operation is necessary at the CC300.

The Dräger-authorized MEDIBUS.X device is operated in an integrated system by means of the CC300. These connected MEDIBUS.X devices provide information to the integrated system or use information provided by it.

The functions are described in the instructions for use for the particular devices.

6.1 Certificates

The Connectivity Converter CC300 is delivered with a valid TLS safety certificate. Communication in the integrated system is only possible with a valid certificate.

When this certificate expires, it must be renewed by specialized service personnel.
# Troubleshooting

<table>
<thead>
<tr>
<th>LED</th>
<th>Meaning</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status LED flashing red</td>
<td>Internal error</td>
<td>Interrupt the power supply and restart the CC300.</td>
</tr>
<tr>
<td></td>
<td>Network connection interrupted.</td>
<td>Check the network connection.</td>
</tr>
<tr>
<td></td>
<td>Certificate expires in less than 3 months.</td>
<td>Renew the certificate for the CC300; inform DrägerService.</td>
</tr>
<tr>
<td></td>
<td>Certificate has expired.</td>
<td>Renew the certificate for the CC300; inform DrägerService.</td>
</tr>
<tr>
<td></td>
<td>Certificate is not yet valid</td>
<td>Inform DrägerService; set the system time.</td>
</tr>
<tr>
<td></td>
<td>Integrated system ID is not correctly configured</td>
<td>Correct and validate the integrated system ID from the connected Dräger MEDIBUS.X device. Inform DrägerService.</td>
</tr>
<tr>
<td></td>
<td>No other SDC device found in the same subnet or with the same integrated system ID.</td>
<td>Check the integrated system ID of the associated devices.</td>
</tr>
<tr>
<td></td>
<td>Error during time synchronization with the NTP server.</td>
<td>Check that the network and the NTP server are available.</td>
</tr>
<tr>
<td></td>
<td>There is already another device of the same type with the same integrated system ID in the network.</td>
<td>Change the integrated system ID of one of the affected devices.</td>
</tr>
<tr>
<td></td>
<td>General software error</td>
<td>Inform DrägerService.</td>
</tr>
<tr>
<td>Status LED lights red</td>
<td>Device malfunction</td>
<td>Inform DrägerService.</td>
</tr>
<tr>
<td>Voltage LED not lit</td>
<td>No power supply</td>
<td>Check the PoE connection or the power supply unit; change the source of the supply if necessary. Inform DrägerService.</td>
</tr>
</tbody>
</table>
8 Reprocessing

8.1 Information on reprocessing

Instructions for reprocessing are based on internationally accepted guidelines, e.g., standard ISO 17664.

8.2 Classifications for reprocessing

8.2.1 Classification of medical devices

Medical devices and their components are classified according to the way they are used and the resulting risk.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-critical</td>
<td>Components that come only into contact with skin that is intact</td>
</tr>
<tr>
<td>Semi-critical</td>
<td>Components that carry breathing gas or come into contact with mucous membranes or pathologically altered skin</td>
</tr>
<tr>
<td>Critical</td>
<td>Components that penetrate skin or mucous membranes or come into contact with blood</td>
</tr>
</tbody>
</table>

8.2.2 Classification of device-specific components

Observe the instructions for use for the components.

The following classification is a recommendation from Dräger.

Non-critical

- Device surface

8.3 Reprocessing list

<table>
<thead>
<tr>
<th>Components</th>
<th>Surface disinfection with cleaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device surface</td>
<td>x</td>
</tr>
</tbody>
</table>

8.4 Reprocessing procedures

8.4.1 Validated reprocessing procedures

At the time of product-specific validation, the following reprocessing procedures showed good material compatibility and effectiveness:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Agent</th>
<th>Manufacturer</th>
<th>Concentration</th>
<th>Contact time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface disinfection with cleaning</td>
<td>Dismozon Plus</td>
<td>BODE Chemie</td>
<td>1.6 %</td>
<td>15 min</td>
</tr>
<tr>
<td></td>
<td>Oxycide</td>
<td>Ecolab USA</td>
<td>2.34 %</td>
<td>5 min</td>
</tr>
</tbody>
</table>
8.4.2 Disinfectants

Use disinfectants that are nationally approved and are suitable for the particular reprocessing procedure.

Dräger states that oxygen-releasing agents and chlorine-releasing agents may cause color change in some materials. Color change does not indicate that the product is not functioning correctly.

8.4.2.1 Surface disinfectant

In addition to the surface disinfectants mentioned in the "Validated reprocessing procedures" section, other surface disinfectants are listed on the following web page:

www.draeger.com/disinfectants

At the time of the test, the surface disinfectants listed showed good material compatibility. The manufacturers of the surface disinfectants have verified at least the following spectra of activity:

– Bactericidal
– Yeasticidal
– Virucidal or virucidal against enveloped viruses

Observe the specifications of the surface disinfectant manufacturers. Other surface disinfectants are used at one's own risk.

8.4.3 Surface disinfection with cleaning

⚠️ WARNING
Risk due to penetrating liquid
Penetrating liquid may cause the following:

– Damage to the device
– Electric shock
– Device malfunctions

► Ensure that no liquid penetrates the device.

1. Remove soiling immediately. Use a cloth dampened with disinfectant to remove soiling.
2. Perform surface disinfection.
3. After the product has been exposed to the disinfectant for the specified contact time, remove residual disinfectant.
4. Wipe with a cloth dampened with water (at least drinking-water quality). Allow the product to dry.
5. Check the product for visible soiling. Repeat steps 1 to 5 if necessary.
6. Check the product for visible damage and replace if necessary.
9 Service

Further information on the CC300 is provided in the technical documentation, which is available upon request.

9.1 Definition of service terminology

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>All measures (inspection, maintenance, repair) intended to maintain or restore the functional integrity of a product</td>
</tr>
<tr>
<td>Inspection</td>
<td>Measures intended to determine and assess the current state of a product</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Regular specified measures intended to maintain the functional integrity of a product</td>
</tr>
<tr>
<td>Repair</td>
<td>Measures intended to restore the functional integrity of a product after a failure</td>
</tr>
</tbody>
</table>

9.2 Inspection

<table>
<thead>
<tr>
<th>Measure</th>
<th>Interval</th>
<th>Target group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection and safety check</td>
<td>Every 2 years</td>
<td>Service personnel</td>
</tr>
</tbody>
</table>

The designation "Inspection and safety check" applies only in the Federal Republic of Germany and corresponds to the "Recurring safety inspection" in Austria.

9.2.1 Service

The device supports the following service functionalities:
- Remote Software Maintenance via ServiceConnect
- Certificate updating via ServiceConnect
- Maintenance of a whitelist via Dräger HIT software

Contact DrägerService for further information on the service.

9.2.2 Safety checks

Safety checks are not a substitute for the maintenance specified by the manufacturer.

9.2.2.1 Performing the safety checks

1. Check that the respective instructions for use are present.
2. Check of electrical safety according to the standard:
   - Check the electrical safety in accordance with the IEC 62353 standard.
## 9.3 Maintenance

<table>
<thead>
<tr>
<th>Component</th>
<th>Interval</th>
<th>Measure</th>
<th>Target group</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLS certificate for secure network communication</td>
<td>Every 2 years</td>
<td>Updating of TLS certificate (liable to charges, depending on existing service contract)</td>
<td>Specialized service personnel</td>
</tr>
</tbody>
</table>
10 Disposal

10.1 Disposing of the device

The disposal of electrical and electronic devices is subject to special guidelines. This device must be disposed of in accordance with national regulations. In countries of the European Union, Dräger will organize the return of the device. Additional information is available at www.draeger.com (search term: WEEE).
11 Technical data

11.1 General information
All specified tolerances apply at 20 °C (68 °F), 60 % relative humidity, and 1013 hPa (760 mmHg).

11.2 Ambient conditions
In operation
Temperature
0 to 40 °C
(32 to 104 °F)
Ambient pressure
620 to 1100 hPa
(9.0 to 15.9 psi)
Relative humidity
10 to 95 %, non-condensing
Height
up to 4000 m (13123 ft)

During storage and transport
Temperature
–20 to 70 °C
(–4 to 158 °F)
Ambient pressure
500 to 1100 hPa
(7.3 to 15.9 psi)
Relative humidity
5 to 95 %, non-condensing
To prevent the formation of condensate and the consequent failure of electronic components, do not switch on the device for 1/2 to 1 hour after abrupt temperature changes (e.g., after storage in unheated rooms).

The Connectivity Converter remains secure and behaves according to the specification.

11.3 Operating characteristics
Power supply
Power inlet
Voltage
24 V ±5%
Current
250 mA
Input
100-240 V
50-60 Hz
250-110 mA

Medical device with protection class II
### 11.3 Operating characteristics (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
<td>24 V 250 mA</td>
</tr>
<tr>
<td>Medical device with protection class II</td>
<td></td>
</tr>
<tr>
<td><strong>PoE supply</strong></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>48 V nominal voltage (37 to 57 V)</td>
</tr>
<tr>
<td>Current</td>
<td>125 mA nominal current (105 to 162 mA)</td>
</tr>
<tr>
<td>Performance level</td>
<td>3 according to IEEE 802.3af</td>
</tr>
<tr>
<td>Compatible with</td>
<td>IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standby</strong></td>
<td></td>
</tr>
<tr>
<td>Typically</td>
<td>225 mA 5.5 W</td>
</tr>
<tr>
<td>Maximum</td>
<td>350 mA 10 W</td>
</tr>
<tr>
<td>Inrush current</td>
<td></td>
</tr>
<tr>
<td>Power supply unit input</td>
<td>350 mA</td>
</tr>
<tr>
<td>PoE supply</td>
<td>350 mA</td>
</tr>
<tr>
<td><strong>Physical dimensions</strong></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>240 mm (9.5 in)</td>
</tr>
<tr>
<td>Width</td>
<td>110 mm (4.3 in)</td>
</tr>
<tr>
<td>Depth</td>
<td>48.5 mm (1.9 in)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
</tr>
<tr>
<td>Without power supply unit</td>
<td>1.1 kg (2.43 lbs)</td>
</tr>
<tr>
<td>Power supply unit</td>
<td>0.1 kg (0.22 lbs)</td>
</tr>
<tr>
<td><strong>Protection classes</strong></td>
<td></td>
</tr>
<tr>
<td>Penetration of liquids and objects</td>
<td>IP21 according to IEC 60529</td>
</tr>
<tr>
<td>In ready to operate state – with plastic hood closed</td>
<td></td>
</tr>
<tr>
<td>Use of latex</td>
<td>The product is not made with natural rubber latex</td>
</tr>
</tbody>
</table>
### 11.3 Operating characteristics (continued)

**GTIN**: 04048675543527

**Classification**

- Class IIb
- GMDN Code 16902 (computer interface)

### 11.4 Device interfaces

#### Serial interfaces

- **COM 1**: Only connect devices that meet the requirements of IEC 62368-1 for ungrounded SELV circuits or the requirements of IEC 60601-1 (from 2nd edition onwards) for touchable secondary circuits with a maximum nominal voltage of 24 V

  - **Protocol**: MEDIBUS.X
  - **Protocol version**: ≥6.0
  - **Alarm delay time**: Typically <2 s
  - **Connector**: RJ45 socket
  - **Baud rate**: 9600, 19200, 38400, 57600, 115200
  - **Data bits**: 8
  - **Parity**: Even, odd, none
  - **Stop bits**: 1 or 2

  **Pin assignment of COM1**
  - Pin 6: RxD
  - Pin 4: TxD
  - Pin 3: GND
  - Pin 1, 2, 5, 7 and 8: n.c.

#### LAN interface

- Only connect devices and/or networks that meet the requirements of IEC 62368-1 for ungrounded SELV circuits or the requirements of IEC 60601-1 (from 2nd edition onwards) for touchable secondary circuits with a maximum nominal voltage of 57 V

  - **Connector**: RJ45 socket
  - **Transmission speed**: 10, 100 Base-T, IEEE 802.3 Clause 14. Requires at least a CAT5 cable.
  - **Protocol**: SDC via HTTPS, TCP/IP, SNMP
11.4 Device interfaces (continued)

Power supply unit input

<table>
<thead>
<tr>
<th>Connector</th>
<th>Barrel plug 5.5 / 2.1 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarity</td>
<td>+ inner, - outer</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>24 V</td>
</tr>
</tbody>
</table>

11.5 Relevant standards

In addition to the standards listed here, this product also meets various other standards, e.g., standards concerning special national requirements.

- **IEC 60601-1 3rd ed.**
  - Medical electrical equipment
  - Part 1: General requirements for safety and essential performance

- **IEC 60601-1-2 3rd ed.**
  - Medical electrical equipment
  - Part 1-2: General requirements for safety - Collateral standard: Electromagnetic compatibility - Requirements and tests

- **IEC 60601-1-2 4th ed.**
  - Medical electrical equipment
  - Part 1-2: General requirements for safety - Collateral standard: Electromagnetic compatibility - Requirements and tests

11.6 EMC declaration

11.6.1 General information

This device was tested for electromagnetic compatibility using all the components from the order list. Other components may only be used if the electromagnetic compatibility is not compromised. The use of non-compliant components may result in increased electromagnetic emissions or decreased electromagnetic immunity of the device.

This device may be used in the direct vicinity of other devices only if Dräger has approved this device configuration. If no approval has been given by Dräger, it must be ensured that this device functions correctly in the desired configuration before use. The instructions for use for the other devices must be followed.
11.6.2 **Electromagnetic environment**

The emissions from this device were tested in the following frequency ranges:

<table>
<thead>
<tr>
<th>Emissions</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiated emissions</td>
<td>Class A, group 1 (150 kHz to 30 MHz)</td>
</tr>
<tr>
<td>Conducted emissions</td>
<td>Class A, group 1 (30 MHz to 1 GHz)</td>
</tr>
</tbody>
</table>

**NOTICE**

► The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required), this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

11.6.3 **Electromagnetic immunity**

This device may only be used in environments specified in the "Environments of use" section.

<table>
<thead>
<tr>
<th>Immunity against</th>
<th>Test level and required electromagnetic environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharge (ESD)</td>
<td>Contact discharge: ±8 kV</td>
</tr>
<tr>
<td>(IEC 61000-4-2)</td>
<td>Air discharge: ±15 kV</td>
</tr>
<tr>
<td>Fast transient electrical disturbances</td>
<td>Power cable: ±2 kV</td>
</tr>
<tr>
<td>(bursts) (IEC 61000-4-4)</td>
<td>Longer signal input lines/output lines: ±1 kV</td>
</tr>
<tr>
<td>Impulse voltages (surges)</td>
<td>Voltage, external conductor – external conductor: ±1 kV</td>
</tr>
<tr>
<td>(IEC 61000-4-5)</td>
<td></td>
</tr>
<tr>
<td>Magnetic fields at mains frequency</td>
<td>50 Hz: 30 A/m</td>
</tr>
<tr>
<td>(IEC 61000-4-8)</td>
<td></td>
</tr>
<tr>
<td>Voltage dips and short interruptions in</td>
<td>Voltage dips of 30 % to 100 %, 8.3 ms to 5 s, different phase angles</td>
</tr>
<tr>
<td>the supply voltage (IEC 61000-4-11)</td>
<td></td>
</tr>
<tr>
<td>Radiated high-frequency disturbances</td>
<td>80 MHz to 2.7 GHz: 3 V/m</td>
</tr>
<tr>
<td>(IEC 61000-4-3)</td>
<td></td>
</tr>
<tr>
<td>Conducted high-frequency disturbances</td>
<td>150 kHz to 80 MHz: 3 V, ISM bands: 6 V</td>
</tr>
<tr>
<td>(IEC 61000-4-6)</td>
<td></td>
</tr>
<tr>
<td>Electromagnetic fields in the vicinity</td>
<td>Various frequencies from 385 MHz to 5785 MHz: 9 V/m to 28 V/m</td>
</tr>
<tr>
<td>of wireless high frequency communication devices</td>
<td></td>
</tr>
</tbody>
</table>
11.7  Connections to IT networks

11.7.1  Data interfaces

In an IT network, data can be exchanged by means of wired or wireless technologies. An IT network can include any data interface (e.g., RS232, LAN, USB, printer interface) that is described in standards and conventions.Connecting this device to a network that incorporates other devices or making subsequent changes to that network can lead to new risks for patients, users, and third parties. Before the device is connected to the network or the network is changed, these risks must be identified, analyzed, and assessed by the IT representative for the hospital, e.g., in accordance with the IEC 80001-1 standard (Risk Management for Medical IT networks). Based on the results, appropriate measures must be taken.

Examples of subsequent changes to the network:

– Changing the network configuration
– Removing devices from the network
– Adding new devices to the network
– Performing upgrades or updates on devices that are connected to the network

11.7.2  LAN interface of the Connectivity Converter CC300

The Connectivity Converter CC300 can be connected to an RS-232 port on Dräger-authorized MEDIBUS.X devices and thus provide an additional network interface for these devices.

11.7.2.1  Service-oriented Device Connectivity (SDC)

In combination with Dräger-certified SDC devices, the Connectivity Converter CC300 enables the following functions:

– Sending measured values, waveforms, and set values to other devices
– Sending of alarm status information to other devices
– Synchronization of device states with other devices in the integrated system:
  – Color scheme ¹)
– Executing commands sent from other devices in the same workplace:
  – Alarm silence ¹)
– Sending commands to other devices in the same workplace:
  – Alarm silence ¹)
  – Automatic opening of dialogs (e.g., for maneuvers) ¹)
– Providing suggested values for demographic data that are sent by other devices at the same workplace ¹)
– Synchronizing the time on the device with a time source in the integrated system ¹)

¹) Only possible with Perseus A500 and Atlan A3xx
Technical data

All information, except for the integrated system ID, is encrypted before transmission between the SDC devices. The Connectivity Converter CC300 contains a whitelist of certified devices that can be activated and managed by the operating organization. The device comes with a whitelist that allows connection to all other SDC devices certified by Dräger. If a restriction to certain devices is desired, the whitelist must be adapted by specialized service personnel. For further information see: "Unauthorized SDC devices", page 12.

11.7.2.2 Service

In conjunction with the Dräger ServiceConnect Gateway (SCG) or a DrägerService computer, the Connectivity Converter CC300 supports the following functions:

- Using the SNMP protocol:
  Monitoring the service status of the device, requesting the service status, support during the installation of device software and during software download, configuration support, updating of certificates, of the whitelist, and of the list of permissible devices

- Using the FTP protocol (as a client):
  Support during installation of device software and software download

11.7.2.3 Required properties

To prevent unauthorized access and the spread of malware and computer viruses in the network, the LAN must provide effective risk control measures.

These characteristics can be achieved by means of the following measures, for example:

- Restriction of physical access to active network ports
- Only permit network access for devices which have the same trust level or higher
- Secure isolation/segmentation of the network (physical or virtual)
- Only allow communication with other networks through secured gateways
- Use a network firewall
- Introduction of patch management for devices in the network
- Implementation of ISO/IEC 27033

The IT network enables communication between the Connectivity Converter CC300 and other devices:

<table>
<thead>
<tr>
<th>Application protocol</th>
<th>Transport protocol</th>
<th>CC300 port</th>
<th>Communication direction</th>
<th>Communications destination port</th>
<th>Expected user system</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNMP V3</td>
<td>UDP</td>
<td>161</td>
<td>← / →</td>
<td>&gt;1023</td>
<td>SCG</td>
</tr>
<tr>
<td>TCP SNMP V3 (trap)</td>
<td>UDP</td>
<td>&gt;1023</td>
<td>←</td>
<td>162</td>
<td>SCG</td>
</tr>
<tr>
<td>DHCP</td>
<td>UDP</td>
<td>68</td>
<td>←</td>
<td>67</td>
<td>DHCP server</td>
</tr>
<tr>
<td>LLDP</td>
<td>Layer 2 protocol</td>
<td>68</td>
<td>←</td>
<td>Network switch</td>
<td></td>
</tr>
<tr>
<td>FTP (command)</td>
<td>TCP</td>
<td>&gt;1023</td>
<td>←</td>
<td>21</td>
<td>SCG</td>
</tr>
</tbody>
</table>
The network must support UDP multicast.

Typical data volume:
- Update of device firmware: typically 20 MB
- Renewal of certificates: typically 100 KB
- Communication setup: typically 3 MB
- Transfer of therapy-related data (e.g., measurements, settings, waveforms): typically 2 Mbit/s for each connected device

When using service functions, the device can generate a network load up to the maximum transmission speed of its LAN interface. The bandwidth required depends on the number and type of connected SDC devices and their connection status. The prioritization of the network traffic for the various services must take account of their clinical importance.

### 11.7.2.4 LLDP protocol

The fields of the integrated system ID are transmitted to the CC300 via the LLDP protocol.

Assignment of the fields of the integrated system ID to the LLDP protocol fields:
- Hospital ID ↔ Civic Address type 25 (building (structure))
- Department ID ↔ Civic Address type 26 (unit (apartment, suite))
- Workstation ID ↔ Civic Address type 29 (type of place)
11.7.2.5 Dangerous situations

The following dangerous situations can arise if the network does not meet the required properties:

– Overloading of the device due to high network loads (e.g., caused by denial-of-service attacks) can lead to delays in the system functions.

– In extreme cases (e.g., if there is a large number of data packets), the CC300 shuts the network adapter down for safety reasons and restarts automatically. The restart takes less than a minute. If the cause persists, the shut-down procedure is repeated.

If more than one medical device in the IT network is affected by the same problem, the operating organization must consider the cumulative effect.

11.8 Open-source software

Dräger devices that use software may use open-source software, depending on their setup. Open-source software may be subject to different terms of license. Additional information regarding the open-source software used in this device is available at the following web page:

www.draeger.com/opensource
## Order list

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity Converter CC300</td>
<td>MK10101</td>
</tr>
<tr>
<td>Plastic hood</td>
<td>MK10129</td>
</tr>
<tr>
<td>SoundEar plug-in power supply unit</td>
<td>G24926</td>
</tr>
<tr>
<td>Adapter D-Sub9 f to RJ-45</td>
<td>MK10139</td>
</tr>
<tr>
<td>Network cable CAT6 2.4 m</td>
<td>MS32947</td>
</tr>
<tr>
<td>Gender Changer (m/m)</td>
<td>7911372</td>
</tr>
<tr>
<td>LLDP switch</td>
<td>MK10203</td>
</tr>
</tbody>
</table>
13 Annex

13.1 Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACM</td>
<td>Alarm Communication Management</td>
</tr>
<tr>
<td>CISPR</td>
<td>Comité International Spécial des Perturbations Radioélectriques</td>
</tr>
<tr>
<td></td>
<td>International special committee on radio interference</td>
</tr>
<tr>
<td>DHCP</td>
<td>Dynamic Host Configuration Protocol; communication protocol for assigning the network configuration to clients by a server</td>
</tr>
<tr>
<td>EMC</td>
<td>Electromagnetic compatibility</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>HTTPS</td>
<td>Hypertext Transfer Protocol Secure</td>
</tr>
<tr>
<td>ID</td>
<td>Identification</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network</td>
</tr>
<tr>
<td>LED</td>
<td>Light-emitting diode</td>
</tr>
<tr>
<td>LLDP MED</td>
<td>Link Layer Discovery Protocol for Media Endpoint Devices</td>
</tr>
<tr>
<td>MEDIBUS.X</td>
<td>Communication protocol for medical devices with uniform data definition for all devices</td>
</tr>
<tr>
<td>NTP</td>
<td>Network Time Protocol</td>
</tr>
<tr>
<td>PoE</td>
<td>Power over Ethernet</td>
</tr>
<tr>
<td>SCG</td>
<td>ServiceConnect Gateway</td>
</tr>
<tr>
<td>SDC</td>
<td>Service-oriented Device Connectivity</td>
</tr>
<tr>
<td>SNMP</td>
<td>Simple Network Management Protocol</td>
</tr>
<tr>
<td>SNTP</td>
<td>Simple Network Time Protocol</td>
</tr>
<tr>
<td>TLS</td>
<td>Transport Layer Security</td>
</tr>
<tr>
<td>UDP</td>
<td>User Datagram Protocol</td>
</tr>
</tbody>
</table>

13.2 Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄</td>
<td>Status LED</td>
</tr>
<tr>
<td>🔄</td>
<td>DC voltage</td>
</tr>
<tr>
<td>🔄</td>
<td>COM</td>
</tr>
<tr>
<td>🔄</td>
<td>Polarity of power supply</td>
</tr>
<tr>
<td>🔄</td>
<td>Manufacturer</td>
</tr>
<tr>
<td>🔄</td>
<td>Date of manufacture</td>
</tr>
</tbody>
</table>
### Symbol | Explanation
--- | ---
.largeWarning | WEEE marking
.largeBook | Observe the instructions for use
.largeExclamation | Caution! Follow the accompanying documentation (Symbol)
.largeText | Serial number
.largePart | Part number
.largeConnection | LAN connection
.largeCheckmark | IEC 60601-1 compatible
.largeRoundArrow | LAN PoE
.largeBox | Protection class II (Medical electrical equipment)
.largePerson | Usable until (indicates the date after which the medical device can no longer be used because the TLS certificate for secure network communication expires)
These instructions for use are provided for customer information only and are only updated or exchanged upon customer request.

Manufacturer

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