Instructions for Use

GMS Gateway

WARNING
For a full understanding of the performance characteristics of this medical device, the user should carefully read these Instructions for Use before use of the medical device.

Data port

Trademarks

Used trademark	Owner of trademark
DrägerService®	Drägerwerk AG & Co KGaA, Lübeck
VoluCount™	Drägerwerk AG & Co KGaA, Lübeck
LonWorks®	Echelon Corp. San Diego, USA

Definition of Safety Notes

The safety notes in these Instructions for Use are designed and defined as follows:

WARNING

A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, could result in minor or moderate user or patient injury or in damage to the medical device or other property.

NOTE

A NOTE provides additional information intended to avoid inconvenience during operation.

Abbreviations and Symbols

Please refer to the sections "Abbreviations and Symbols" on page 9 for explanations.

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For Your Safety and that of Your Patients

Strictly follow the Instructions for Use

WARNING

Any use of the device requires full understanding and strict observation of all portions of these Instructions for Use. The device is only to be used for the purpose specified under "Intended Use" on page 6. Observe all WARNING and CAUTION statements throughout these Instructions for Use and all statements on device labels. Failing to observe these instructions constitutes a use of the device outside its intended use.

Maintenance

WARNING

The medical device must be inspected and serviced regularly by properly trained service personnel. Repair of the device may also only be carried out by properly trained personnel.

After each repair, a professional system check must be performed. Dräger recommends that a service contract be obtained with DrägerService and that all repairs also be carried out by them. Only authentic Dräger spare parts may be used for maintenance.

Otherwise, this may impair correct functioning of the device. Observe chapter "Maintenance".

Accessories

WARNING

Only the accessories indicated on the list of accessories have been tested and approved to be used with the device.

Accordingly, it is strongly recommended that only these accessories be used in conjunction with the specific device. Otherwise, this may impair correct functioning of the device.

Not for use in areas of explosion hazard

WARNING

The device is not approved for operation in potentially explosive environments.

General Safety Notes

The following WARNINGS and CAUTIONS apply to general operation of the device.

WARNINGS and CAUTIONS specific to subsystems or particular features appear with those topics in later sections of these Instructions for Use or in the Instructions for Use of any product being used with this device.

CAUTION

The operator of the medical supply unit is responsible for the development of an emergency plan in case of device failure (see ISO Standard 7396-1, Appendix F).

Application

Intended Use

GMS gateway, data interface of the Dräger Alarm Management System to external systems with a LonWorks interface for the transfer of alarm and operating signals from the central gas supply unit to a visualization system (e.g. building control systems).

Environment of Use

The GMS gateway can be used in non-medical areas.

The GMS gateway is not intended to be used in patient environment or medical environment. It is not approved to be used in the area control unit.

Description

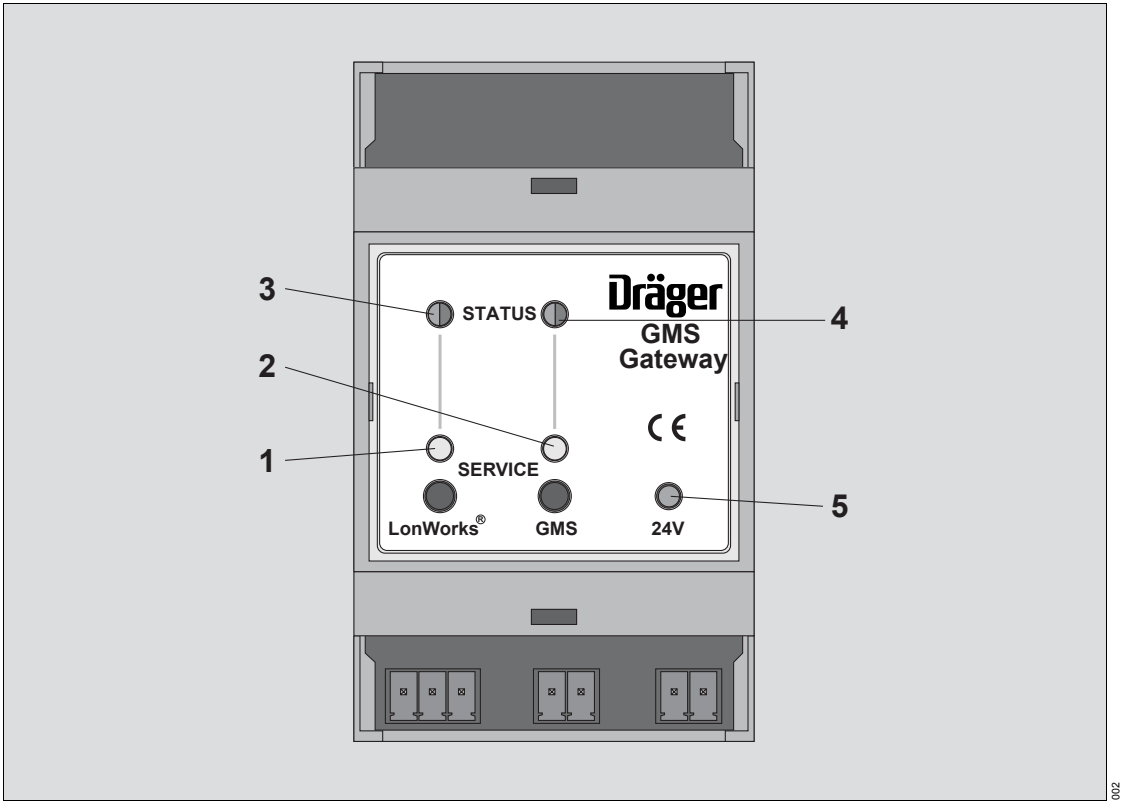
The GMS gateway is the data interface between the Dräger Alarm Management System and a LonWorks compatible external system.

The GMS gateway is part of the Dräger Alarm Management System.

The GMS gateway has a status indicator with 5 LEDs that indicate the status of the data network.

Overview

LED Status Indicator GMS Gateway



1 Service LED, LonWorks side

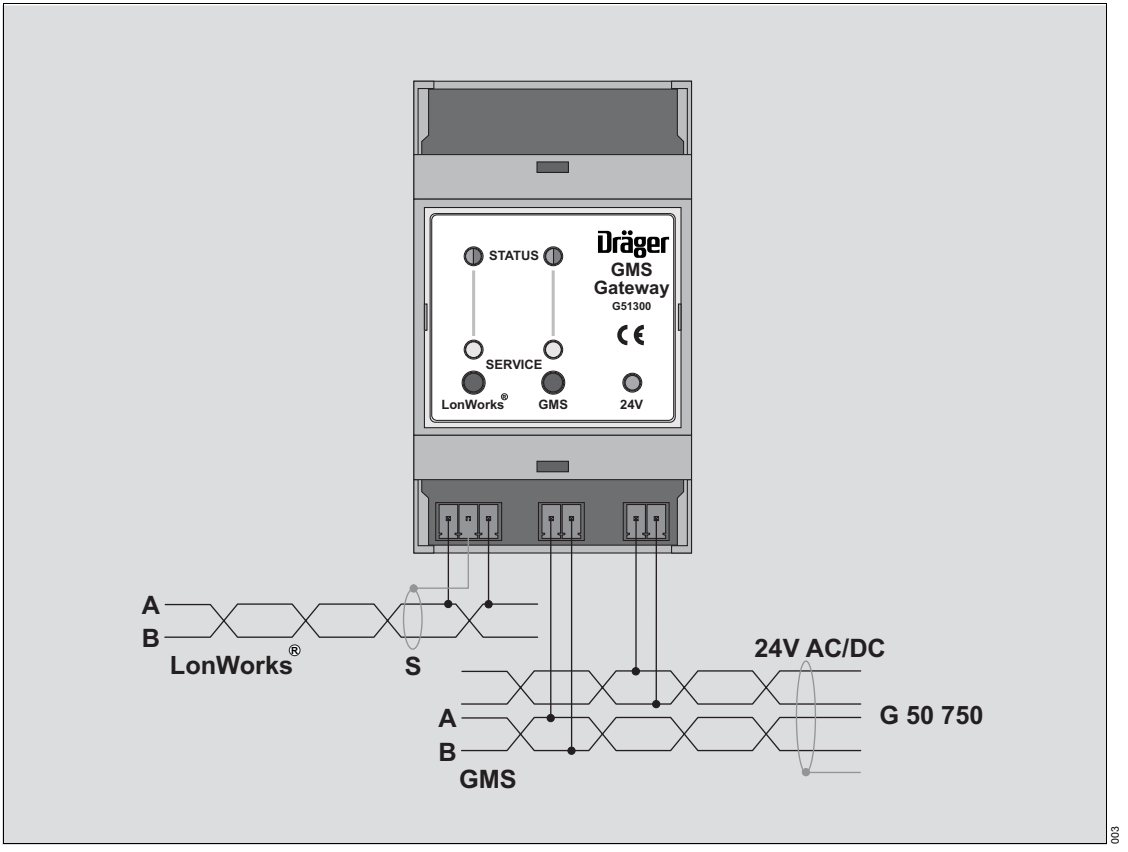
2 Service LED, GMS side

3 Status DUO-LED, LonWorks side

4 Status DUO-LED, GMS side

5 24 V LED

Connection Plan GMS Gateway

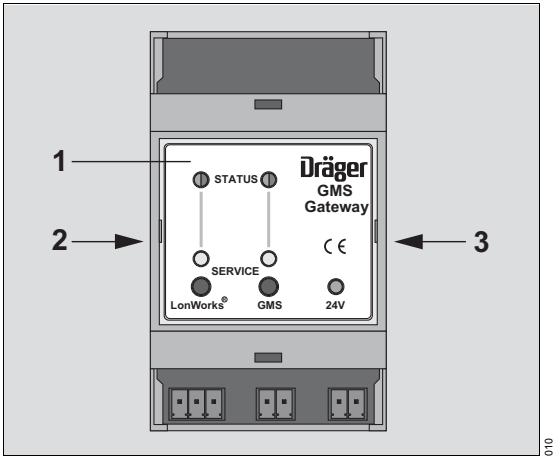


Abbreviations and Symbols

Abbreviations

Abbreviation	Explanation
LON	Local Operation Network
LED	Light Emitting Diode
GMS	Gas Management System

Symbols



1 Front label

2 Type plate (lateral, left)

3 Label with Neuron IDs (lateral, right)

Layout:

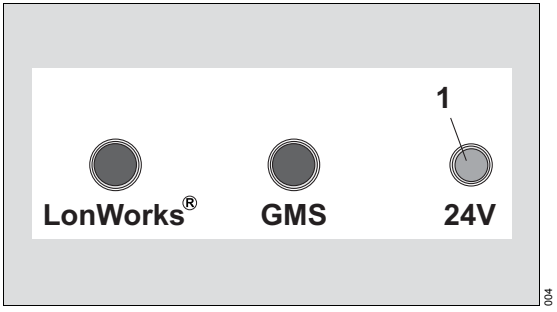
Neuron ID xx:xx:xx:xx:xx:xx (GMS side)

Neuron ID xx:xx:xx:xx:xx:xx (LonWorks side)

Operation

The GMS gateway has a status indicator with
5 LEDs that indicate the status of the data network.

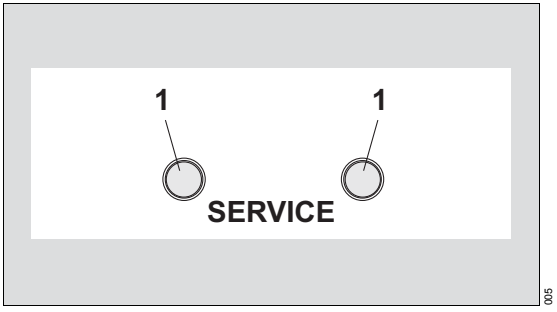
24 V LED



1 24 V LED lights up green:

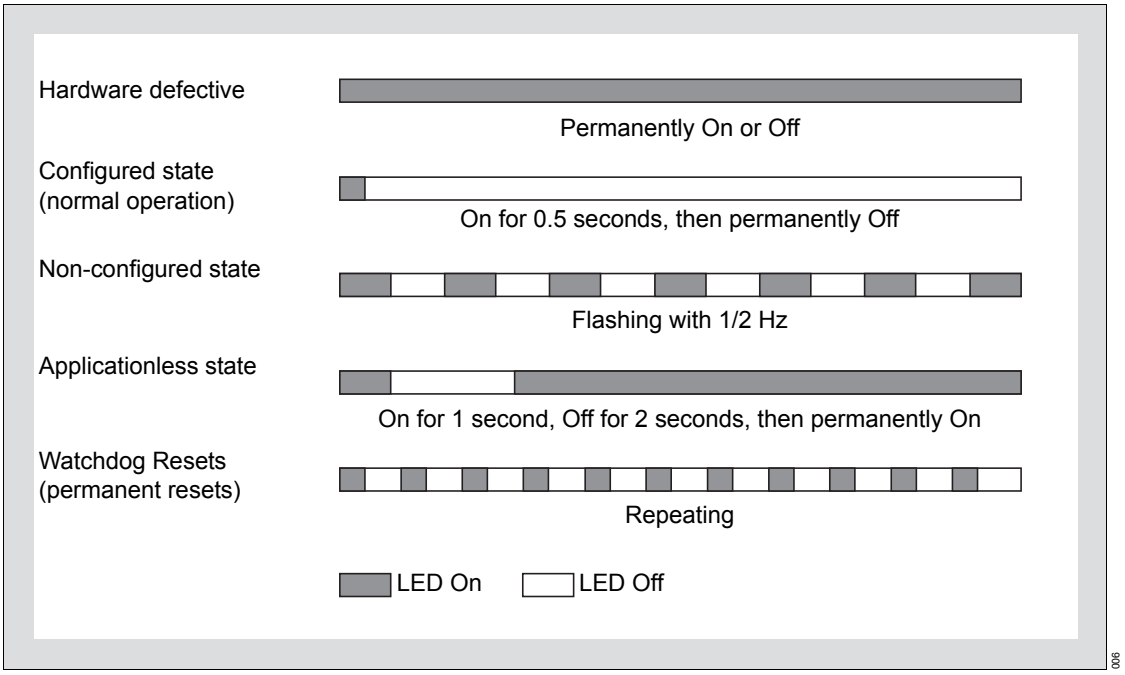
The device is operational.

Service LEDs

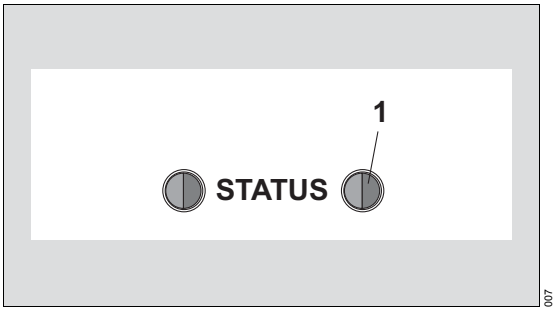


1 Both controller boards have a service LED that is controlled by Echelon firmware. After switch-on, normal state is ON for 0.5 s and, then, permanently OFF.

States of the Service LEDs



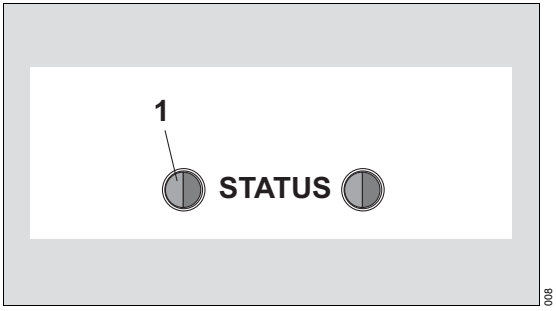
Status DUO-LED of GMS side



1 The status DUO-LED indicates the following operating states:

– Steady green:
Normal operating state. No errors, target state.
– Flashing green at 1 Hz:
At least one node in the GMS cannot be reached through communications.
– Flashing red at 1 Hz:
No communication possible with the LonWorks controller.
– Flashing yellow five times at 1 Hz:
Reaction to a LonWorks Wink.

Status DUO-LED of LonWorks side



1 The status DUO-LED indicates the following operating states:

– Steady green:
Normal operating state. No errors, target state.
– Flashing red:
No communication possible with the GMS controller.
– Flashing yellow five times at 1 Hz:
Reaction to "Identify GMS".

Problem Solving

Fault – Cause – Remedy

Fault	Cause	Remedy
24 V LED does not light up green.	Voltage supply interrupted.	Have the voltage supply repaired by trained service personnel.
Status LED on GMS side continuously lights up red or yellow.	Hardware defective.	Have the hardware repaired by trained service personnel.
Status LED on LonWork side continuously lights up red or yellow.	Hardware defective.	Have the hardware repaired by trained service personnel.
Status LED on LonWork side lights up green.	Hardware defective.	Have the hardware repaired by trained service personnel.

Maintenance

CAUTION

Repair only by Dräger trained personnel.

Only original Dräger spare parts may be used for maintenance.

After each repair, a professional system function check must be performed.

Interval	Part	Action
Daily	Alarm Management System	Visually check the entire Alarm Management System for operational state.
Regularly, every six month at the latest.	Alarm Management System	Function test and visual check of the Alarm Management System by trained service personnel. We recommend obtaining a service agreement with DrägerService.

Disposal

Safety Information

For countries subject to EU Directive 2002/96/EC

This device is subject to EU Directive 2002/96/EC (WEEE). In order to comply with its registration according to this directive, it may not be disposed of at municipal collection points for waste electrical and electronic equipment. Dräger has authorized a company to collect and dispose of this device. To initiate take-back or for further information, visit us on the Internet at www.draeger.com and go to the DrägerService area where you will find a link to "WEEE". If you have no access to our website, contact your local Dräger Medical Organization.

Disposal of the Medical Device

When disposing of the medical device:

- Consult the relevant waste disposal company for appropriate disposal.
- Observe the applicable local regulations.

Acceptance and Handover to the Operator

The GMS gateway is part of the Dräger Alarm Management System.

NOTE

The medical device may only be put into operation after acceptance by experienced personnel.

Observe the national regulations!

After performed installation or repair work:

- Have trained personnel perform the test and acceptance procedures.

This test is performed to ensure:

– that the safety requirements necessary to protect the patient and personnel and

– that the performance characteristics of the central supply unit and the Dräger Gas Managements System have been met.

- Test results are recorded in writing.

After acceptance, the operational device and the respective documents are handed over to the operator and the operating personnel is instructed.

- The documentation, Installation Instructions and respective XIF file resulting from programming the ASNetPro, must be handed over to the operator of the medical supply unit (for integration by the system immigrator).
- The handover is recorded in the acceptance protocol.

Technical Data

Ambient conditions

During operation:	
Temperature	+15 °C to +40 °C
Relative air humidity	<95 % (no condensation)
Atmospheric pressure	700 hPa to 1060 hPa
During storage:	
Temperature	–20 °C to +60 °C
Relative air humidity	<95 % (no condensation)
Atmospheric pressure	500 hPa to 1060 hPa

Operating data

Operating voltage	24 V (AC/DC)
Power consumption	60 mA

Data transfer LON

Communication rate	78 kBaud FT10
Line length	depending on line type
Electrical characteristics	acc. to Echelon FTT 10A Transceiver specifications

List of Accessories

Description	Order No.
Grounded conductor clamp	G41784
Power pack 30 Watt/DIN rail	G50728
System cable GMS network	G50750

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CE
Directive 93/42/EEC
concerning Medical Devices

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Dräger Medical GmbH
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