

Dräger PSS® Merlin® System Control Boards

The Dräger PSS® Merlin® Telemetry System offers a precise overview of the status of respiratory equipment wearers. The vital status information is communicated directly between the entry control point and the wearer. Technology, which supports the incident, significantly increases safety and protects the lives of your breathing apparatus wearers.



Benefits

Telemetry – For precise monitoring of breathing apparatus wearers

The PSS Merlin System offers the choice of using two versatile versions. Firstly, you can use the PSS Merlin Entry Control Board, the Dräger Bodyguard 7000 or Bodyguard II electronic monitoring unit and the ATEX-approved PSS Merlin Modem.

Secondly, the system can be used with the Dräger PSS Merlin Software as opposed to the Entry Control Board. The Software, when used with the PSS Merlin PC Modem, offers additional benefits.

By using the PSS Merlin Modem, the latest information will be sent from the Bodyguard 7000 or Bodyguard II to the PSS Merlin Software or Entry Control Board, meaning that the incident commander is given real time information of the breathing apparatus wearer, enabling a prompt response in case of emergency situation.

Life critical information in real time

There is a two way communication between the wearer and the incident commander. Transmitted from the breathing apparatus wearer is the following data:

- Manual distress signal
- Automatic distress signal
- Cylinder pressure
- Time to whistle
- Elapsed time
- Withdrawal and evacuation signal
- Acknowledgment of global or individual evacuation signal

Via the Software or Entry Control Board, the incident commander is able to

- send individual or team evacuation
- acknowledge breathing apparatus wearer's distress signals, automatic distress signals and withdrawal signals

Automatic activation and logging in

For enhanced usability: When opening the cylinder valve, the system switches on both the Bodyguard 7000 and the PSS Merlin Modem. The PSS Merlin Entry Control Board is activated by the insertion of a tally key. The identity of the PSS Merlin Modem is read and a unique connection is established between radio and board. The system continuously monitors the status of the connection. When used with the Dräger PSS Merlin Software and the PSS Merlin PC Modem, it is even possible to log on the breathing apparatus automatically – without the need for insertion of a tally key.

It is however still possible to establish the connection by a tally, if required. Personalization of the breathing apparatus can also be undertaken, enabling for easy documentation and transparency for tracking its usage.

Benefits

Securely controlling the incident - Intuitive Merlin Software

When using the PSS Merlin Software, the PSS Merlin Entry Control Board is not required. The PSS Merlin PC Modem communicates directly with the wearers' PSS Merlin Modems. Even non-telemetry users can be displayed by entering a time to whistle countdown in the Software. Thanks to a weatherproof USB port, the robust and IP 65 rated PSS Merlin PC Modem does not require an additional power supply. In order to avoid loss of data, the system offers a three-way back-up: The PC Modem, the Software and an optional, external memory always save the latest status of the persons being logged on – no data will be lost. When using the overview mode, an incident commander can gather the information from several, independent entry control points. Analysis of this data gives a comprehensive picture to aid further decision making. A training mode gives users the ability to train in the operation of the software and carry out realistic incident simulations. Post incident, the data collected can be documented in a report which it is then also possible to load into the fire brigade administration software Drägerware.ZMS/fire.

All information at one glance

The Dräger Bodyguard 7000 combines life critical status updates: Displaying cylinder pressure, time to whistle, acoustic and optical warning signals, automatic distress signals, manual distress signals. When used with the PSS Merlin Telemetry System, Bodyguard 7000 displays radio signal status. All data is stored on the device and can be documented or easily retrieved to optimize training.

Increased wearer comfort, maximum freedom of movement

The PSS Merlin Modem is designed to fit perfectly onto the backplate of Dräger PSS 5000 and PSS 7000 series breathing apparatus. It is located centrally between the backplate and the cylinder resulting in a seamless integration with the ergonomic carrying system. The compact design decreases snagging risks; the clear waist belt allows more freedom of movement. As the PSS Merlin Modem is directly connected to the central electronics of the Bodyguard 7000, there is only need for a single recharge-able battery to supply power to both the Bodyguard 7000 and PSS Merlin Modem. This simplifies the battery logistics and charging process.

Increased charging efficiency – even in trucks

In order to save valuable time with battery logistics, in-cab chargers are available for both the PSS Merlin Modem and the PSS Merlin Entry Control Board. The batteries are re-charged easily and effectively, whilst inside the fire truck.

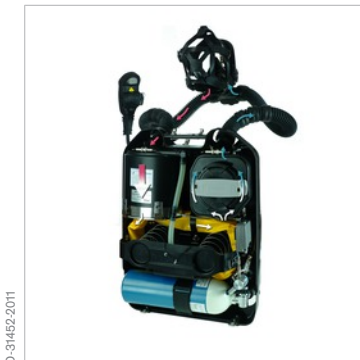
For users who wish to maintain battery packs off the breathing apparatus, Dräger has developed a bench system which allows up to 4 battery packs to be charged simultaneously. Uniquely, this charger can also perform a health check on each pack. Simply insert the battery into the charger – the rest is automatically carried out by the charging station.

Benefits

Increased safety during the incident

- Vital information at one glance outside of danger zone
- Sending distress signals
- Acknowledgement of distress signals
- Integrated incident reporting
- Simple accountability with Dräger PSS Merlin Software

System components



D-31482-2011

Dräger PSS® BG 4 plus

Designed especially for tough missions: The Dräger PSS® BG 4 plus closed circuit breathing apparatus combines uncompromising safety with the highest level of breathing and carrying comfort. The unit supplies the wearer with up to 4 hours of breathing air, even in toxic atmospheres.



ST-6147-2007

Dräger PSS® 7000

Developed by professionals for professionals, the Dräger PSS® 7000 breathing apparatus is a major milestone in our continuing development of breathing devices for the professional fire fighter.

System components



D-4266-2010

Dräger PSS® 5000

The Dräger PSS® 5000 SCBA is a high performance breathing apparatus for the professional firefighter. Combining advanced ergonomics with a wide range of configurable options the Dräger PSS® 5000 provides the user with the comfort and versatility to meet the demands of first responders whenever breathing protection is required.



ST-6168-2007

Dräger Bodyguard® 7000

The Dräger Bodyguard® 7000 is an electronic monitoring unit which provides continuous monitoring of personal information and operational status of the Dräger PSS® 7000 and PSS® 5000 self contained breathing apparatus.



ST-357-2001

Dräger Bodyguard® II

The Dräger Bodyguard® II is a fully electronic signal and warning unit for use with compressed air breathing apparatus and closedcircuit breathing apparatus. Combining a host of previously separate warning and monitoring devices into a single and simple to use instrument, the Bodyguard II is an ideal monitoring and safety solution for any first responder.

Accessories



D-2504-2010

Dräger PSS® Merlin® Modem

Available in three frequencies 869.5 MHz, 862 MHz and 450-470 MHz, the portable radio unit is fitted to the SCBA and is connected digitally to Bodyguard. Information from the Bodyguard is transmitted at regular intervals of 20 seconds to the Entry Control Board, and distress alarms are transmitted instantaneously.



D-53729-2012

Dräger PSS® Merlin® PC Modem

The transmitting and receiving station is used in conjunction with the PSS Merlin Software system. Using a standard USB port, the device can be connected to the computer. It also incorporates the ability to attach an external antenna.



D-52715-2012

Dräger PSS® Merlin® PC Modem Tablet Adaptor

This adaptor enables the mounting of the PSS Merlin PC Modem to an Xplore® Tablet PC.

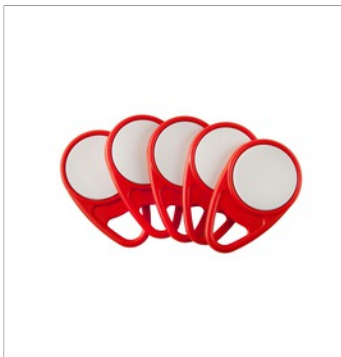


Carrying_Harness_D-52794-20

Carrying Harness for Tablet PC with PSS® Merlin® PC Modem

This harness provides comfortable wearing of the used tablet PC with the attached PSS Merlin PC Modem and protects both units against weather influences.

Accessories



D-52721-2012

Dräger PSS® Merlin® RFID Tallies

For usage of the PSS Merlin Software system, these universal RFID Tallies can be used for logging users on or for personalising the Breathing Apparatus with Bodyguard 7000.



D-2501-2010

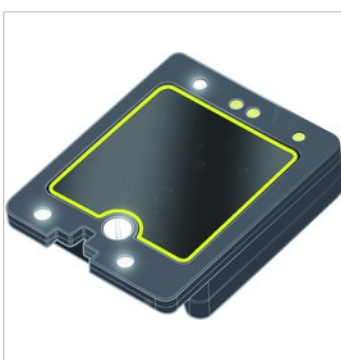
Battery Charger (for Repeaters)



D-2514-2010

Battery Chargers for the PSS® Merlin® System

Entry Control Boards and Portable Radio Units can be charged in both the Fire Appliance and the workshop. The full range of battery charging hardware is available. Dräger also offers installation kits to allow PSS Merlin system batteries to be charged from the Fire Appliance's integrated power supply.



D-2513-2010

NiMH Battery Dräger PSS Merlin Modem

Accessories



D-2511-2010

In-Cab Charger PSS Merlin



D-2509-2010

ECB Charging Adaptor Kit



D-2512-2010

ECB Vehicle Charger Quick Release



D-2502-2010

Repeaters

Repeater kits can be deployed to relay the telemetric signal in areas where propagation is difficult. These kits, which feature on-line signal indication and low battery alarms, are portable and rechargeable.

Accessories



D-25603-2010

Portable Leaky Feeders

Available in reels of 100 meters, this accessory can improve propagation in buildings and structures where radio reception is difficult because of walls, barriers, etc.

Technical Data

Dräger PSS® Merlin® System	Size	Weight	Volts
Dräger PSS PC Modem	135 x 120 x 40 mm	0.5 kg	5 V
Dräger PSS Merlin Entry Control Board	450 x 780 x 70 mm	9 kg	7.2 V
Dräger PSS Merlin Modem (only for Dräger PSS 5000/7000)	170 x 130 x 30 mm	0.44 kg	6.5 V
Dräger Bodyguard 7000	150 x 74 x 41 mm	0.35 kg	7.5 V
Dräger PSS Merlin Repeater	450 x 210 x 100 mm	2 kg	6.5 V
Range:	3 km (line of sight)		
Transmission Power:	500 mW		

Recommended minimal system requirements Dräger PSS

Merlin Software

Operating System:	Microsoft Windows XP
Processor:	2.33 GHz (1.6 GHz for Netbook or Tablet PC)
RAM:	128 MB (1 GB for Netbook or Tablet PC)
Graphic Board:	128 MB
Ports:	USB 2.0

APPROVALS

Dräger PSS® Merlin® System:

EN 137: Type 2 (Modem and Dräger Bodyguard 7000)	R&TTE (EMC) 1999/5/EC (Telemetry Components)
ATEX 94/9/EC (Modem and Dräger Bodyguard 7000)	EN 300 220-2 (Telemetry Components)
EN 50303 (Modem and Dräger Bodyguard 7000)	EN 300 330-2 (Telemetry Components)
EN 60079-0 (Modem and Dräger Bodyguard 7000)	EN 301 489-3 (Telemetry Components)
EN 60079-11 (Modem and Dräger Bodyguard 7000)	EN 60950 (Telemetry Components)
EN 60079-26 (Modem and Dräger Bodyguard 7000)	
Emark 2004/104/ec (Vehicle Charger)	

Ordering Information

Dräger PSS® Merlin® System	Freq (MHz)	Order Number
Dräger PSS Merlin PC Modem (incl. Software)	450-470	33 60 895
Dräger PSS Merlin Entry Control Board	450-470	33 54 270
Dräger PSS Merlin PC Modem (incl. Software)	869.5	33 59 792
Dräger PSS Merlin Entry Control Board	869.5	33 51 145
Accessories Dräger PSS Merlin PC Modem		
PSS Merlin PC Modem Tablet Adaptor		33 60 295
RFID Tallies (5 pcs.)		33 60 838

Ordering Information

Accessories Entry Control Board

Universal Power Supply		33 51 804
Power Cord UK		33 51 805
Power Cord EU (220 V)		33 51 806
NiMH Battery PSS Merlin Entry Control Board		33 51 223
Tripod		33 51 802
Tripod Mounting Kit		33 51 803
Tripod Adaptor for DIN Tripods		33 54 125
Charging adaptor kit PSS Merlin Entry Control Board		33 51 819
In-Cab Charger PSS Merlin Entry Control Board		33 51 810
Protective Cover		33 51 812

Dräger PSS® Merlin® System	Freq (MHz)	Order Number
Dräger PSS Merlin Modem (Dräger Bodyguard 7000)	450-470	33 58 410
Dräger PSS Merlin Modem (Dräger Bodyguard 7000)	869.5	33 57 982

Accessories Dräger PSS Merlin Modem

Repeater 1	869.5	33 54 306
Repeater 2	869.5	33 54 562
4-Way Battery Charger Repeater		33 51 815
4-Way Battery Charger PSS Merlin Modem (for SCBAs with Dräger Bodyguard 7000)		33 57 885
Additional Battery PSS Merlin Modem (for SCBAs with Dräger Bodyguard 7000)		33 58 121
Entry Control Board Vehicle Charger Quick Release (QR)		33 54 349
In-Cab Charger QR PSS Merlin Modem (for SCBAs with Dräger Bodyguard 7000)		33 58 063
Portable Leaky Feeder (100 m)		33 54 787

Dräger Bodyguard 7000

Dräger Bodyguard 7000 Button Upgrade Kit		33 57 101
Dräger Bodyguard 7000 Tally Upgrade Kit		33 57 098

Notes

CORPORATE HEADQUARTERS

Drägerwerk AG & Co. KGaA
Moislinger Allee 53–55
23558 Lübeck, Germany
www.draeger.com

Manufacturer:

Dräger Safety AG & Co. KGaA
Revalstraße 1
23560 Lübeck, Germany

REGION EUROPE CENTRAL AND EUROPE NORTH

Dräger Safety AG & Co. KGaA
Revalstraße 1
23560 Lübeck, Germany
Tel +49 451 882 0
Fax +49 451 882 2080
info@draeger.com

REGION EUROPE SOUTH

Dräger Safety France SAS
25, rue Georges Besse
92182 Antony Cedex
Tel +33 1 46 11 56 00
Fax +33 1 40 96 97 20
europa.south@draeger.com

REGION MIDDLE EAST, AFRICA

Dräger Safety AG & Co. KGaA
Branch Office
P.O. Box 505108
Dubai, United Arab Emirates
Tel +971 4 4294 600
Fax +971 4 4294 699
contactuae@draeger.com

REGION ASIA PACIFIC

Draeger Safety Asia Pte Ltd
25 International Business Park
#04-20/21 German Centre
Singapore 609916
Tel +65 6308 9400
Fax +65 6308 9401
asia.pacific@draeger.com

REGION CENTRAL AND SOUTH AMERICA

Dräger Panama S. de R.L.
Complejo Business Park,
V tower, 10th floor
Panama City
Tel +507 377 9100
Fax +507 377 9130
contactcsa@draeger.com

Locate your Regional
Sales Representative at:
www.draeger.com/contact

