



MB4003
MB5003
MB5003-24
MB6503
MB7503

- Generator Set for Motor Vehicles



Operating Manual



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Technical modifications subject to change

Important Safety Information

MobiE are high-performance power generating systems. Conditions that constitute a danger to life and limb may occur.

Hence, carefully read the following safety information, before you install or take into operation the system even a small part thereof:

- Read and obey carefully all warning signs, mounted on each of the systems components.
- The generator heats up during operation and can only be touched after an extensive cool-off period.
- Pay attention to correct equipotential bonding for all provided parts. Correct equipotential bonding ensures safe operation of the system and reduces the risk of high touch voltages.
- No component of the system, except the fan-belt, shall be serviced by the user.
- No component may be opened because of inspections, unless this is explicitly explained in this operating manual.

For special attention:

MobiE generate voltages, which are life-threatening.

MobiE are equipped with a VDE-approved protective measure [protective separation with several consumers and insulation monitoring] (DIN VDE 0100-410). Installation, servicing and operation of the systems may only be performed by qualified personnel.

About this operating manual:

This operating manual has been compiled with the greatest possible care. Nevertheless, it is not possible to exclude errors and faults completely. The manufacturer accepts no liability for any injury to persons or damage to property which may be sustained as a result of errors or faults in this operating manual.

Standards and Regulations

MobiE systems are developed and manufactured in compliance with all respective standards and regulations. In addition, the relevant application standards have been taken into consideration:

- ✓ DIN VDE 0100-410 (VDE 0100-410):2007-06
Errichten von Niederspannungsanlagen -Teil 4-41: Schutzmaßnahmen -Schutz gegen elektrischen Schlag (IEC 60364-4-41: 2005, modifiziert); German implementation HD 60364-4-41: 2007)
English title:
Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock (IEC 60364-4-41:2005)
- ✓ DIN VDE 0100-551 (VDE 0100-551):2011-06
Elektrische Anlagen von Gebäuden - Teil 5-55: Auswahl und Errichtung elektrischer Betriebsmittel – Andere Betriebsmittel
Abschnitt 551: Niederspannungsstromerzeugungseinrichtungen (IEC 60364-5-551:2001/A2:2008 ,(Abschnitt 551));
German implementation HD 60364-5-551:2010 + Cor.:2010
English title:
Low-voltage electrical installations - Part 5-55: Selection and erection of electrical equipment - Other equipment - Clause 551: Low-voltage generating sets
- ✓ DIN VDE 0100-717 (VDE 0100-717):2012-10
Errichten von Niederspannungsanlagen - Teil 7-717: Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art - Ortsveränderliche oder transportable Baueinheiten (IEC 60364-7-717:2009, modified); German implementation HD 60364-7-717:2010
English title:
Low-voltage electrical installations - Part 7-717: Requirements for special installations or locations - Mobile or transportable units
- ✓ DIN 14687:2007-02 Feuerwehrwesen -
Fest eingebaute Verbraucher (Generatorsätze) kleiner 12 kVA für den Einsatz in Feuerwehrfahrzeugen
English title:
Firefighting systems – Fixed consumers (generating sets) below 12 kVA used in fire brigade vehicles
- ✓ DIN EN 61557-8 (VDE 0413-8):2008-01
Elektrische Sicherheit in Niederspannungsnetzen bis AC 1000 V und DC 1500 V -Geräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen -Teil 8: Isolationsüberwachungsgeräte für IT-Systeme (IEC 61557-8: 2007 + Corrigendum 2007-05); German implementation EN 61557-8: 2007

English Title:

Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. -Equipment for testing, measuring or monitoring of protective measures - Part 8: Insulation monitoring devices for IT systems (IEC 61557-8:2014-12)

- ✓ Technische Regel: DVGW GW 308:2000-08

Mobile Ersatzstromerzeuger für Rohrleitungsbaustellen
Ausrüstung und Betrieb

English title:

Mobile auxiliary current generating sets for pipeline construction
– Equipment and operation

- ✓ Empfehlungen und Vorschriften der Berufsgenossenschaften
(BG Elektro Textil Feinmechanik)

English title:

Recommendations and regulations of the Trade Association
Electro Textile Precision Mechanics (BGETM)

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1 Hazards, Liability

1.1 Shipment Packaging

Inspect the shipment and equipment packaging for damages and compare the contents of the package to the delivery documentation.

Any transport damages have to be reported immediately to the supplier. **MobiE** shall only be stored in rooms where it is protected against dust, moisture, splashing and dripping water and where the designated storage temperature is observed.

1.2 Intended Use

MobiE is generating an alternating voltage of AC 230 V via a generator that is powered by a combustion engine. The conversion of the generator voltage to a stable 50 Hz alternating voltage occurs via power electronics that is fitted into a stable metal enclosure.

Any other use or any use beyond the intended use is not deemed to be the intended use.

The manufacturer does not accept any liability resulting from improper use.

The intended use also includes:

- Observing all information from the operating manual.
- Compliance with all inspection intervals.

Only appropriately qualified personnel shall be working with **MobiE**. Qualified in this sense is, that personnel is familiar with installation, commissioning and operation of the product and they have undergone appropriate professional training to obtain these skills. Personnel must have read and understood the information on safety and warnings in these operating manual.

A prerequisite for the safe handling and trouble-free operation of **MobiE** is the knowledge of the principle safety instructions and safety regulations.

This operating manual, especially the safety instructions, have to be observed by all persons, who work with **MobiE**. Over and above, the rules and regulations concerning accident prevention applicable for the operating location must be obeyed.

MobiE are manufactured according to the state-of-the-art and in compliance with recognised rules of sound safety engineering practices. Nevertheless, when applied, threats to the life and limb of the user or a third party or impairments on the **MobiE** or to other property may occur.

The power generating systems **MobiE** shall only be used

- for the purpose for which it is intended;
- when it is in a safe and sound technical condition.

Malfunctions that could impair the safety must be removed immediately.

Unauthorized modifications and the use of spare parts and accessories, that are not sold or recommended by the manufacturer of these systems, may cause fire, electric shock and injuries.

Relevant warning signs must always be clearly legible. Damaged or unreadable signs must be replaced immediately.

1.3 Warnings

The following designations and signs are used for hazards and warnings in this documentation:



This symbol indicates an imminent danger to life and health of persons. Failure to observe this warning means that death, serious physical injury or substantial damage to property may result, if the appropriate precautionary measures are not taken.



This symbol indicates dangerous situations. Failure to observe this warning means that physical injury or property damages may occur if the appropriate precautionary measures are not taken.



This symbol gives important information about the proper handling of the power generating systems. Failure to observe this information may result in damages on **MobiE** or its environment.

1.4 Warranty

The manufacturer provides a warranty period of 12 months from date of delivery for the power generating systems MobiE and all its components for fault-free execution and flawless material quality under normal storage and operating conditions. This warranty does not extend to maintenance or service work, no matter what nature. The warranty is only valid for the first purchaser and does not apply to products or components that have been inappropriately used or on which alterations have been carried out. Any warranty claim expires if the MobiE was not operated according to its intended purpose or under abnormal conditions, and when repairs or alterations have been carried out by persons unauthorised by the manufacturer.

The warranty liability is limited to repairs or the replacement of a product that has been sent to the manufacturer within the warranty period. It is a prerequisite that the manufacturer of the product accepts the device as faulty, and the fault was not a result from: improper use or alterations to the device, applications for which the device was not intended or from abnormal operating conditions.

The above warranty regulations are valid exclusively and instead of all other contractual or legal warranty obligations, including, but not limited to, the legal warranty regulations governing marketability, suitability and expediency for a particular application.

The manufacturer does not take any liability for any indirect or direct accompanying or subsequent damages whether or not they are a result of any legitimate, illegitimate or any other action.

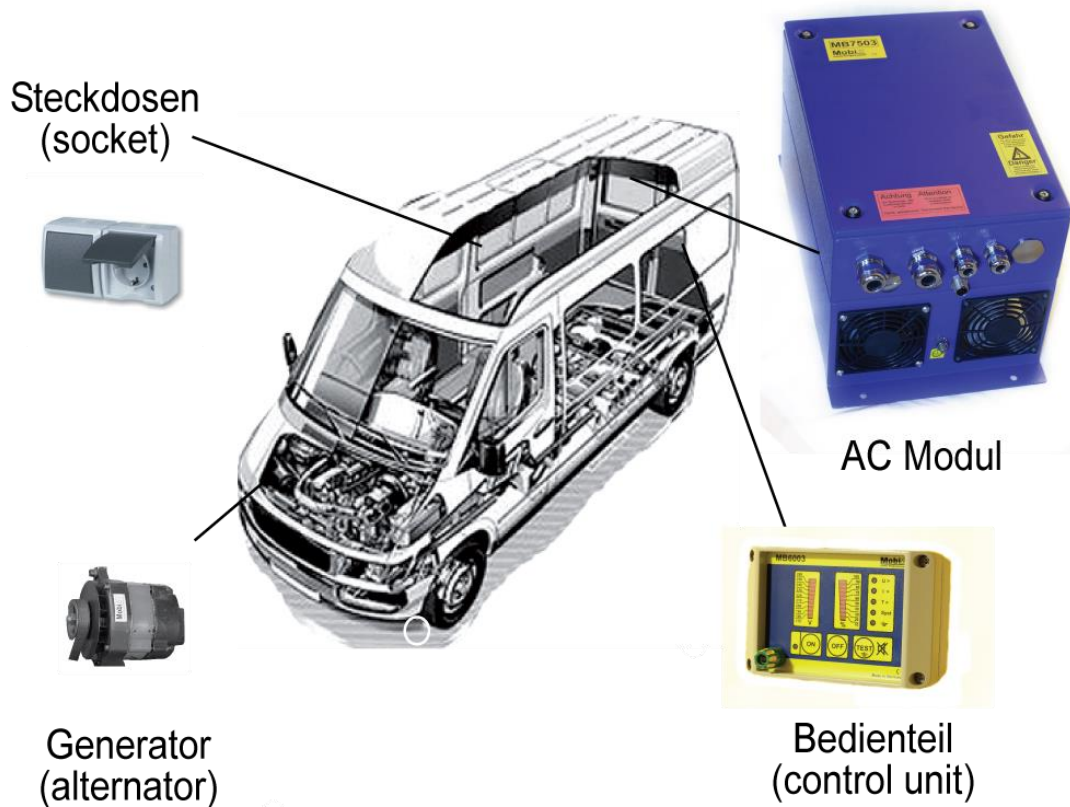
Warranty and liability claims in cases of damage to persons or property shall be excluded, if they are attributable to one or more of the following causes:

- Use of the **MobiE** other than for the intended use
- Incorrect assembly, installation, commissioning, operation and maintenance of the **MobiE**
- Operation of the **MobiE** if the installations for safety purposes are defective or if the safety and protective measures are not properly installed or are not operational
- Failure to observe the information from the operating manual regarding transport, storage, assembly, commissioning, operation and maintenance of the **MobiE**
- Unauthorised structural alterations to the **MobiE**
- Non-observance of the technical information
- Repairs that are carried out inappropriately and the use of replacement parts or accessories not authorized by the manufacturer
- Cases of catastrophe by the impact of foreign objects and force majeure

2 The Power Generating System MOBIE

2.1 Why using a MobiE System?

During a rescue operation, but also for repair and service work, electrical energy is required for welding, separating, drilling work and lighting. But what to do, if no socket is available and a mobile generator is not at ones disposal for lack of space?



MobiE is the solution. The systems comprise each a generator and an AC electronic-module, a control unit and sockets (optional). The AC module, the control unit and the sockets can be placed anywhere inside the vehicle. The generator is supplied by the engine of the vehicle. The AC module generates a 50 Hz alternating voltage of AC 230 V – with:

MobiE System	Peak power	Power rating
MB4003	4 kW	3,5 kW
MB5003	5 kW	4,5 kW
MB5003-24	5 kW	4,5 kW
MB6503	6,5 kW	5,5 kW
MB7503	7,5 kW	6,2 kW

Table 1

2.2 Product Description

The power generating systems **MobiE** generate a sinusoidal voltage of 230 V with a quartz-stable frequency of 50 Hz.

A full-load power of up to 6200 W can be extracted (see table 2, 2.2.1) .

Its preferred application is in road-vehicles and motor-boats.

The special feature of this **VSCF** system

-Variable Speed Constant Frequency-

The power supply unit consists of

- three-phase AC generator
- electronic module **MobiE**
- control unit **MB6003**.

The generator is powered by the engine via a V-belt or a flat belt.

The electronic module regulates the output voltage to 230 V and stabilises the output frequency to 50 Hz.

The electronic modules **MobiE** do not have control and display elements.

All operational messages and fault signals are indicated on the control unit **MB6003**.

2.2.1 Fuse Protection

The output cables are to be protected according to the cross-section employed.

The electronic modules **MobiE** have an integrated over current disconnection function.

If the current-flow is higher than (see table 2) per second, the system will be disconnected.

MobiE System	Peak powerg	Over current
MB4003	4 kW	> 20 A
MB5003	5 kW	> 25 A
MB5003-24	5 kW	> 25 A
MB6503	6,5 kW	> 30 A
MB7503	7,5 kW	> 35 A

Table 2

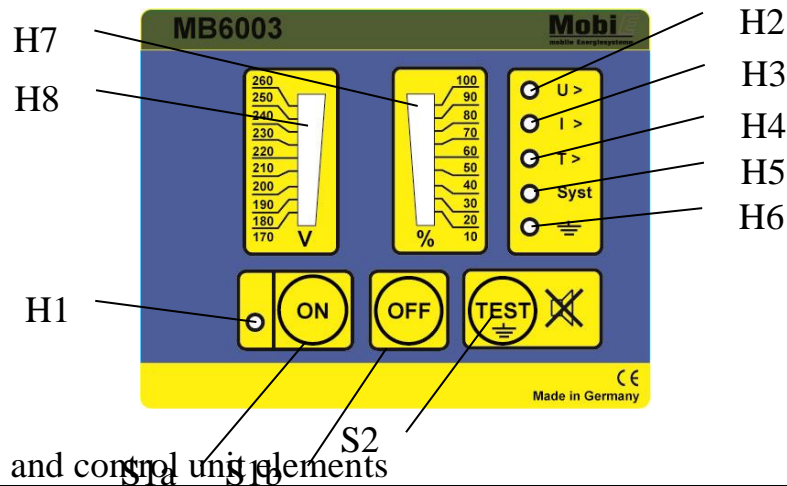
The LED **I** > lights up.

Is the over current higher than 200 A for 10 µs, the device will be disconnected.

The LED **system** lights up.

2.3 The Display Module MB6003

The display module **MB6003**, mounted in the vehicle in such a way, that it is clearly visible and easily accessible, indicates operational information and alarm signals, power-drain and the generated voltage. The power generating system is being turned on and off from here.



Display and control unit elements

H1	I/O	Operating message LED (green)	Lights up, when the device is ready for operation
H2	U >	Fault message LED (red)	Lights up if voltage is over > 270 V blinks if voltage is under < 180 V
H3	I >	Fault message LED (red)	Lights up if current is over <i>I</i> is (see table 2)
H4	T >	Fault message LED (red)	No function
H5	Syst	Fault message LED (red)	Lights up if there is a fault in the system, fault in the control electronics
H6	Earth fault	Fault message LED (red)	Lights up if there is an earth fault (see 2.4.1)
H7	%	Load indication	Displays the current load
H8	V	Voltage indication	Displays the output voltage
S1 a/b	ON OFF	On/Off switch	Master switch
S2	TEST	Test button	Button to test the insulation monitoring function. (Muting of the integrated buzzer)

S1 a/b Master switch

Pressing the „ON“ button starts the system.

The green "ON" LED (H1) signals that the system is ready for operation. The control unit is indicating the voltage and load.

Pressing the “OFF“ button switches off the system.

H2 Signal LED “U >“

This signal LED lights up if the generated voltage is higher than 270 V for longer than one second. The system will be switched off.

If this is the case, the device is defective.

The signal LED blinks, if the generated voltage falls below 180 V.

H3 Signal LED “I >“

This signal LED lights up if the load current extracted is exceeding (see table 2). In this case, the user has to reduce the load. As a precaution, the system will be disconnected after one second, to protect it from short-circuit or severe overload.

H4 Signal LED “T >“

This signal is without function.

H5 Signal LED “Syst“

This signal LED lights up:

- after a dead short-circuit (200 A)
- when the system is overheated, because of continuous overload
- when an internal fault has occurred in the control electronics

The electronics is locked.



Danger

It is recommended to switch-off the system for the duration of 10 minutes. If the signal LED H5 is still lighting up after the restart, it can be assumed that there is a fault in the system.

If this is the case, the power generator cannot be operated any more.

H6 Signal LED “Earth Fault“ (insulation fault)

The **MobiE** systems are equipped with a high-performance protective measure, “protective separation with several consumers, insulation monitoring with signalling and/or disconnection“.

This measure, in compliance with standard DIN VDE 0100-410 [indication] and DIN VDE 0100-717 [disconnection], guarantees the highest possible level of protection against the dangers of electrical current.

The core of this system is an integrated insulation monitoring function that permanently monitors the insulation resistance between the active phase conductors and PE (equipotential bonding). If an insulation fault occurs (for example through a defective device supplied by a socket), the signal LED “H6“ lights up and/or the system is going to be disconnected. The fault message is being stored.

Activating the master on/off-switch on the control unit **MB6003** will reset the fault signal.



If after the restart, the signal LED H6 “Earth Fault“ is lighting up again, an insulation system fault has occurred within the **MobiE** system. An electrically skilled person needs to inspect all cable connections and consumers.

S2 Test button “Earth Fault“

Pushing this button will test if the insulation monitoring function is working. To perform this function you need to keep this button pushed until the signal LED H6 “**Earth Fault**“ lights up.



It is recommended to conduct this test every time, before starting up the system!

H7 Signal LED “Load Current“ (LED-Band)

This indicator displays the current load in % of the maximum.

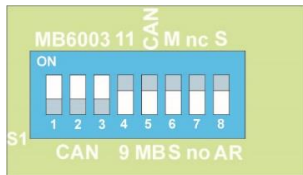


If the speed of the main engine is too low, the full power output might not be available. In this case, the output can be increased by increasing the motor speed.

H8 “Output Voltage“ (LED-Band)

This indicator displays the current output voltage.

2.4 Changeover switches MB6003 / Fire CAN

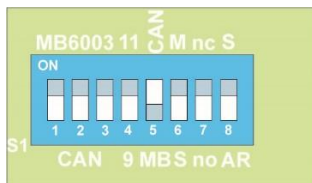


Operation with the control unit MB6003

In operation with the control unit **MB6003** all three slide switches 1,2 and 3 of the dip switch must be in position MB6003 (on).

The slide switch 4 must be in position 9 (off)

The slide switch 5 must be in position MB (off)



Operation with FireCAN from vehicle

In operation with FireCAN all three slide switches 1,2 and 3 of the dip switch must be in position CAN (off).

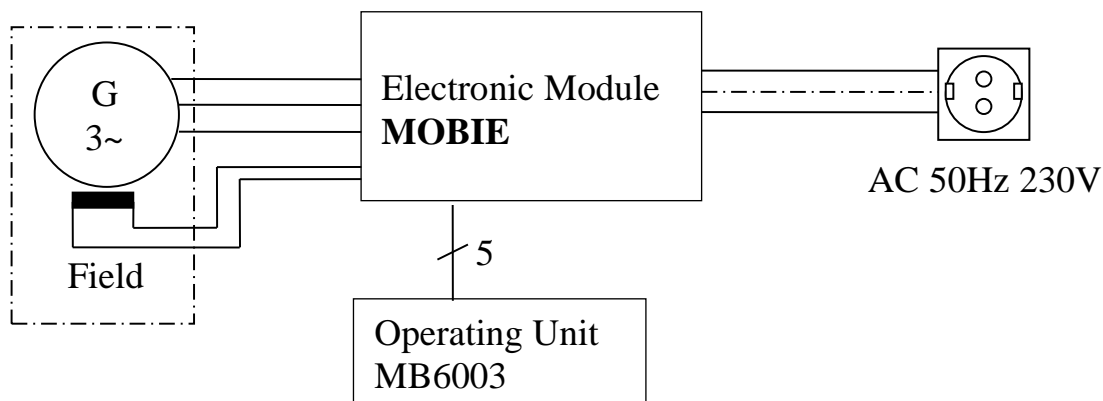
The slide switch 4 determine the node number 9 or 11 (Standart is 9 (off))

The slide switch 5 must be in position CAN (on)



The description of the slide switches 6,7,8 can be found in chapter 2.6.1 (insulation monitoring)

2.5 Description of the Funktion



The generator, which is powered by the motor of the vehicle, supplies a variable three-phase-voltage with a speed-dependant frequency. The electronic module adjusts a stable output voltage of the generator via the field winding.

In the electronic units **MobiE**, this three-phase alternating current is first rectified, and then, in an IGBT-module transformed into a one-phase alternating current of 230 V 50 Hz. At the output terminal of the electronic module the sinusoidal-filter and the EMC-filter ensure a sinusoidal voltage with low harmonic components.

The system is supplied with an auxiliary voltage by the 12/24V of the on-board supply system of the vehicle.

The 230 V power circuit has **no** low-resistance conductive connection to the 12/24 V on-board supply system of the vehicle (safe separation).

The control unit MB6003 is connected to the electronic module, via a 5-strand control cable.

The control unit indicates current and voltage.

Five signal LEDs supply information on irregularities or hazards.

The "ON" / "OFF" button turn the system on or off.

The green LED I/O signals that the system is operational.

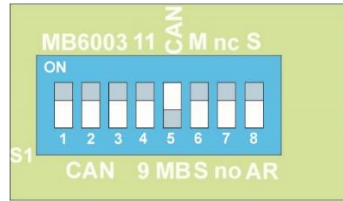
2.6 Insulation Monitoring

The power generating system **MobiE** is designed as a system with protective separation with several consumers (DIN VDE 0100-410 which is IEC 60364-4-41, modified). This means, that the neutral point of the generator is **unearthed**. No active electrical conductor of the system has a low-resistance conductive connection to the protective equipotential bonding (PE). The protective conductors of all consumers in and on the vehicle are inter-connected. Connection to earth is not

necessary (an earth spike is not needed). The control unit **MB6003** signals a fault, if the insulation level of the circuit falls below 23 kΩ. The LED ‘Earth fault’ (red) lights up. An inbuilt siren produces an acoustical alarm signal (Option MB6003H).

2.6.1 Settings of the Insulation Monitoring

The slide switch S1 (6,7,8) determines the functioning of the insulation monitoring.



Slide switch	Description	Off	On
6 M / S	Indication / Switching	Earth faults trigger the disconnection of the output voltage	Earth faults are indicated (output voltage is available)
7 NC/NO	working / closed circuit current	Output contact closed in case of an earth fault	Output contact opens in case of an earth fault
8 AR / S	Autoreset / Saving	After the earth fault is eliminated, the output relay automatically goes into its rest position	After the earth fault is eliminated, the output relay remains in its alarm setting



If the power generation system should work as a TN System (one line on the output side is earthed), the insulation monitoring has to be deactivated.

- The hock switch S2 must be open (In the entry area on the left side)

2.7 Operation

MobiE provide an output voltage of AC 230 V / 50 Hz. Only consumers that are suited for the specified voltage and the specified frequency may be plugged into the sockets.

Devices that require other voltages, for example 12/24 V direct voltages, could be irreversibly damaged or may even cause fires.



Before you start the engine of the vehicle, ensure that the vehicle is prevented from rolling off by activating the hand brake or something similar.

In closed rooms adequate ventilation is required. Do not leave your running vehicle or the **MobiE** system unattended at any time.

Turning on

Turn on the engine of the vehicle.

Adjust the speed via the speed control (accessory).

Press the “ON” button LED (green) *I/O* lights up

Operation

Voltmeter must indicate 230 to 240 V!

Power is available at the sockets.

The current or the load can be extracted.

The power output level is displayed on indicator “%”.

Turning off

Press the “OFF” button, LED (green) *I/O* goes out

Switch-off speed control.



If 80 % of the nominal load has been extracted over at least 5 minutes, the system must be kept in operation for at least another 3 minutes without any load.

Because of the high output, the generator heated itself up.

If the system is kept idle, the generator can cool down.

This will increase the life-time of the system.

Non-observance will result in forfeiting any warranty claims.

Turning off the vehicle engine



If the “ON” button is activated [LED (green) *I/O* lights up] without a running vehicle engine or if the motor speed is too low, the alarm signal LED (red) U > will be blinking.

2.8 Fault Elimination

The **MobiE** system is equipped with comprehensive protective equipment, in order to achieve the highest possible safety for persons and a high operational reliability. Naturally, the protective measures can only work correctly, if they are observed.

This applies especially to the fault messages.

If the listed instructions do not bring the desired success, you need to consult an electrically skilled person. Never endeavour to repair the **MobiE** system yourself! This will not only cancel your warranty, but improper repairs of live parts can endanger persons and damage the device or parts thereof.



Touching live parts is life threatening!

Wait at least 20 minutes after the system is turned off, before opening the device!

Technical Characteristics

2.9 Technical Data

AC-Module		MobiE
Output voltage	U_N	AC 230 V +/-10 % AC 207..253 V
Output frequency	f_{out}	50 Hz +/-0,1 %
Wave form		Sinus
Harmonic distortion	K	<5 %
Overtemperature protection	T >	Yes (MB4003/5003/5003-24)
Overvoltage protection	U >	>270 V
Insulation fault	R_{AN}	<23 k Ω
Operating range of U_s		0,8...1,2 x U_s
Weight	G	11 kg
Electronic module		
Operating temperature	T	-25 °C... +55 °C
Storage temperature	T	-25 °C... +70 °C
Mounting position		Discretionary
Protection class accoring DIN 40050		IP44
Enclosure		Steel plate
Dimensions		See wiring diagram
Colour		Blue (RAL5002)

MobiE-System	Peak power	Power rating	Overload protection	Supply voltage U_s .	Power consumption U_s
MB4003	4 kW	3,5 kW	> 20 A	12V	30 W
MB5003	5 kW	4,5 kW	> 25A	12V	30 W
MB5003-24	5 kW	4,5 kW	> 25 A	24V	30 W
MB6503	6,5 kW	5,5 kW	> 30 A	12-24V	2 W
MB7503	7,5 kW	6,2 kW	> 35 A	12-24V	3 W

Control Unit		MB6003
Operating temperature	T	25 °C...+55 °C
Storage temperature	T	25 °C...+70 °C
Mounting position		discretionary
Weight		0,6 kg
Protection class according to DIN 40050		IP65
Enclosure		Alu pressure die casting
Dimensions		125 x 80 x 57 mm
Colour		Light grey

Generator MB4000 – MB5000

Output voltage	U_{out}	3 x 250 V
Steady state	P_N	4500 VA
Peak performance	P_{max}	5000 VA
Speed	D	max. 12000 U/min
Frequency	f	300...1500 Hz
Operating temperature	T	-25 °C...+60 °C
Storage temperature	T	-25 °C...+70 °C
Weight		8 kg

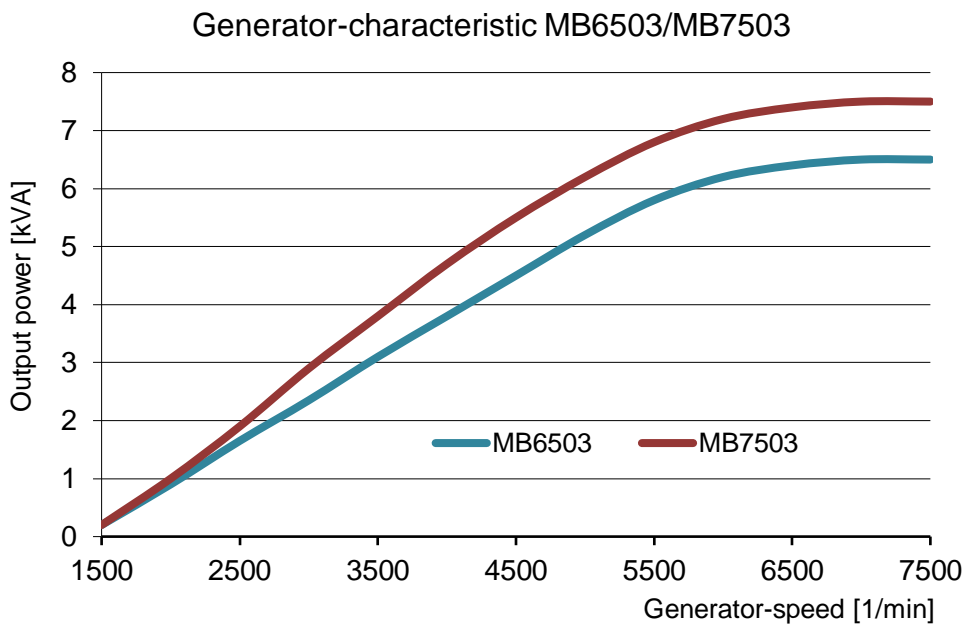
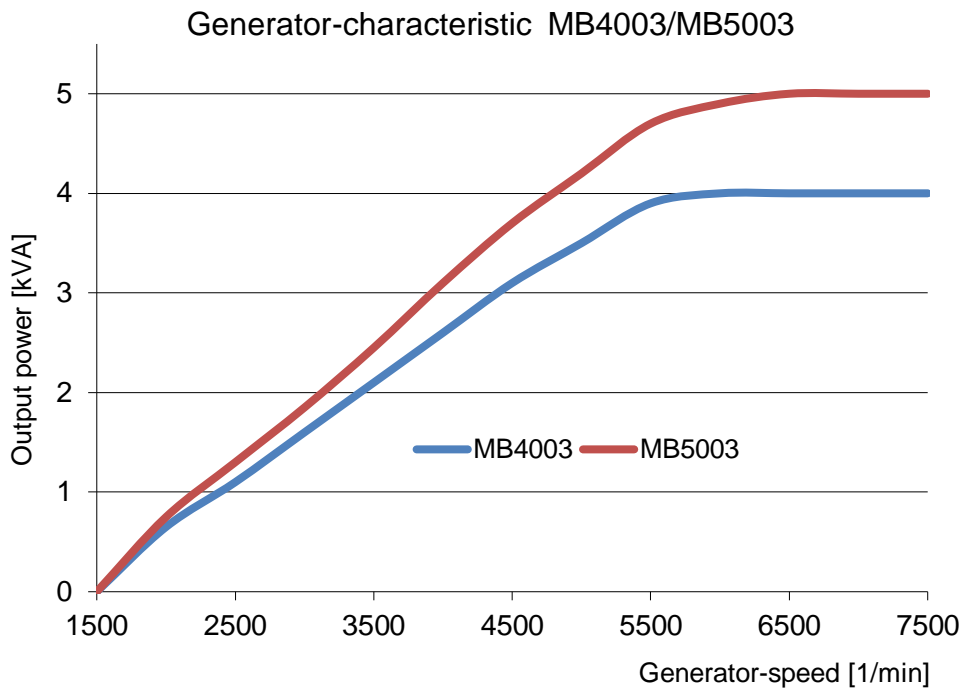
Generator MB6500 – MB7500

Output voltage	U_{out}	3 x 250 V
Steady state	P_N	6200 VA
Peak performance	P_{max}	7500 VA
Speed		max. 12000 U/min
Frequency	f	300...1500 Hz
Operating temperature	T	-25 °C...+60 °C
Storage temperature	T	-25 °C...+70 °C
Weight		17,9 kg
Storage temperature	T	-25 °C...+70 °C
Weight		17,9 kg

2.10 Type Tests

Testing the Electromagnetic Compatibility (EMC)	
Interference Immunity	EN 50082-2
Emitted Interference	EN 50081

2.11 Performance Curve



Since the generator is powered by the engine of the vehicle, the output power varies with the speed of the generator.

The engine of the vehicle and the generator are in a transformation ratio. The speed of the engine is not identical with the speed of the generator. As a rule, the speed of the engine is slower than the generator by factor 3 to 5.

2.12 Maintenance Information

The system requires no special maintenance.

Especially the control unit **MB6003** does not contain parts that have to be serviced.



The belts required to drive the generator, must be checked periodically, depending on wear and tear, but at least once a year.
It is important to pay attention to the belt tension.

As replacement only high-performance and industrial-quality belts must be used.



The carbon brushes and ball-bearings in the generator are also wear and tear parts.
If they are too worn down, the system will not be able to achieve the specified output performance.

Your **MobiE** agency will carry out the maintenance.

2.12.1 Voltage and Insulation Tests Spannungs- bzw. Isolationsprüfungen

Before any voltage or insulation tests are carried out on the device, the insulation monitoring function must be deactivated.



- Open the hook switch S2.
(left hand in the terminal box)
- The terminals U, V, W, L1 and L2 must be by-passed.
- Control unit connector X22, voltage supply X21 and field connection of the generator X11 must be disconnected.
- The test will be conducted between the links U, V, W, L1, L2 and the equipotential bonding PE.
Attention: DC Test voltage!
- After the conducted tests the hook switch S2 must be closed again (operating mode).
- Remove the links at the terminals.

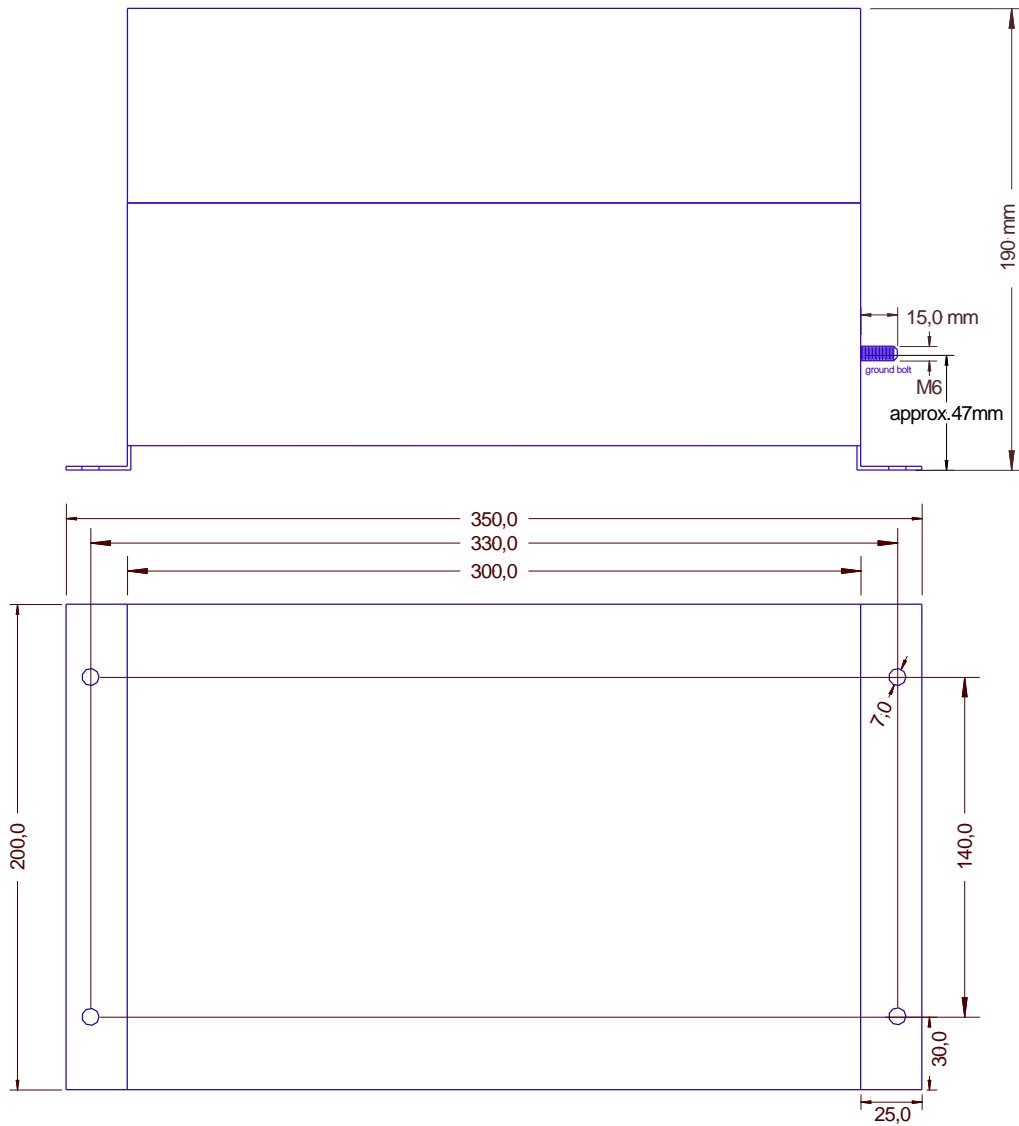
The device is reset to its intended operating mode.



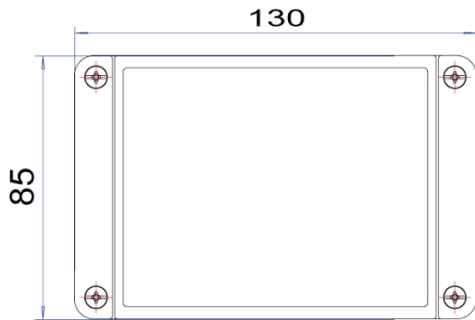
After switching-on the power supply, the insulation monitoring function must be tested via the inbuilt test button!

2.13 Wiring Diagrams

2.13.1 AC – Module MobiE

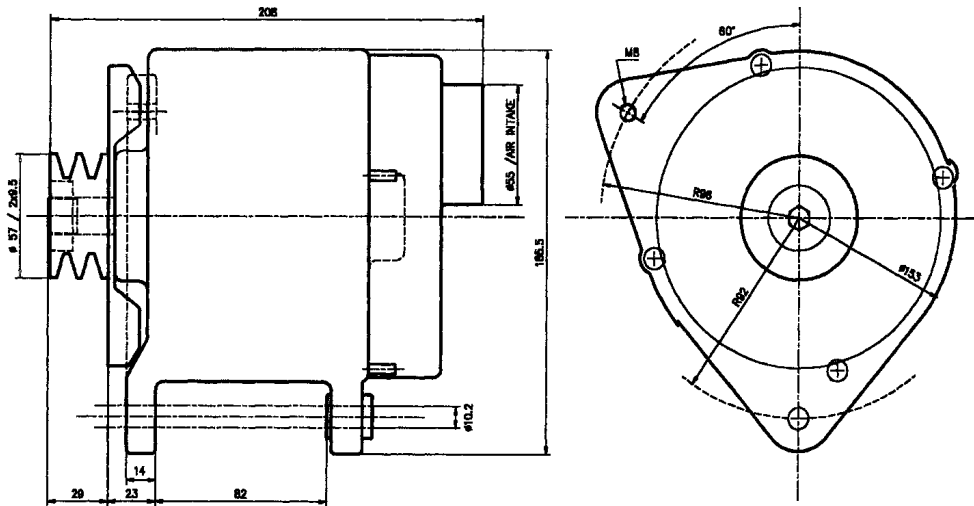


2.13.2 Control Unit MB6003

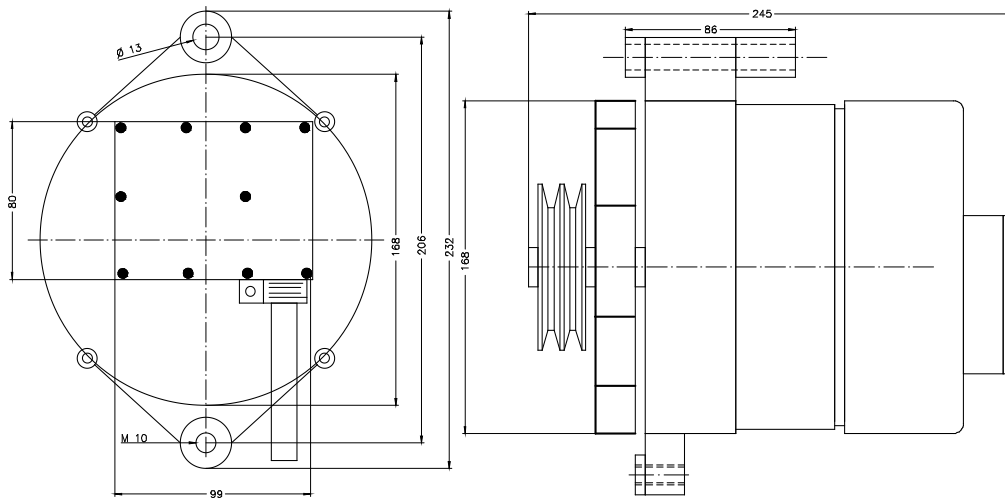


Depth 57 mm

2.13.3 Generators



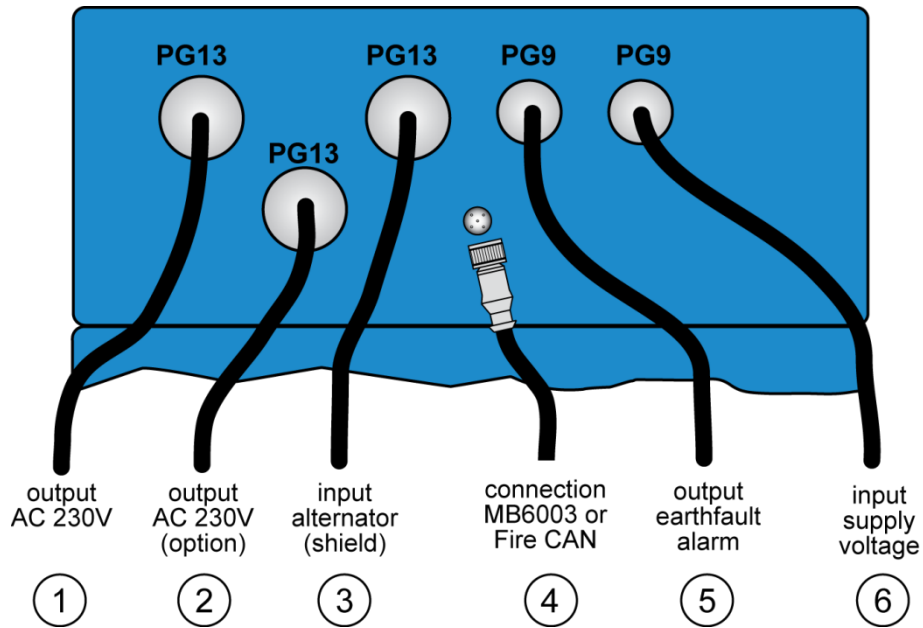
MB4000/5000 GEN



MB6500/7500GEN

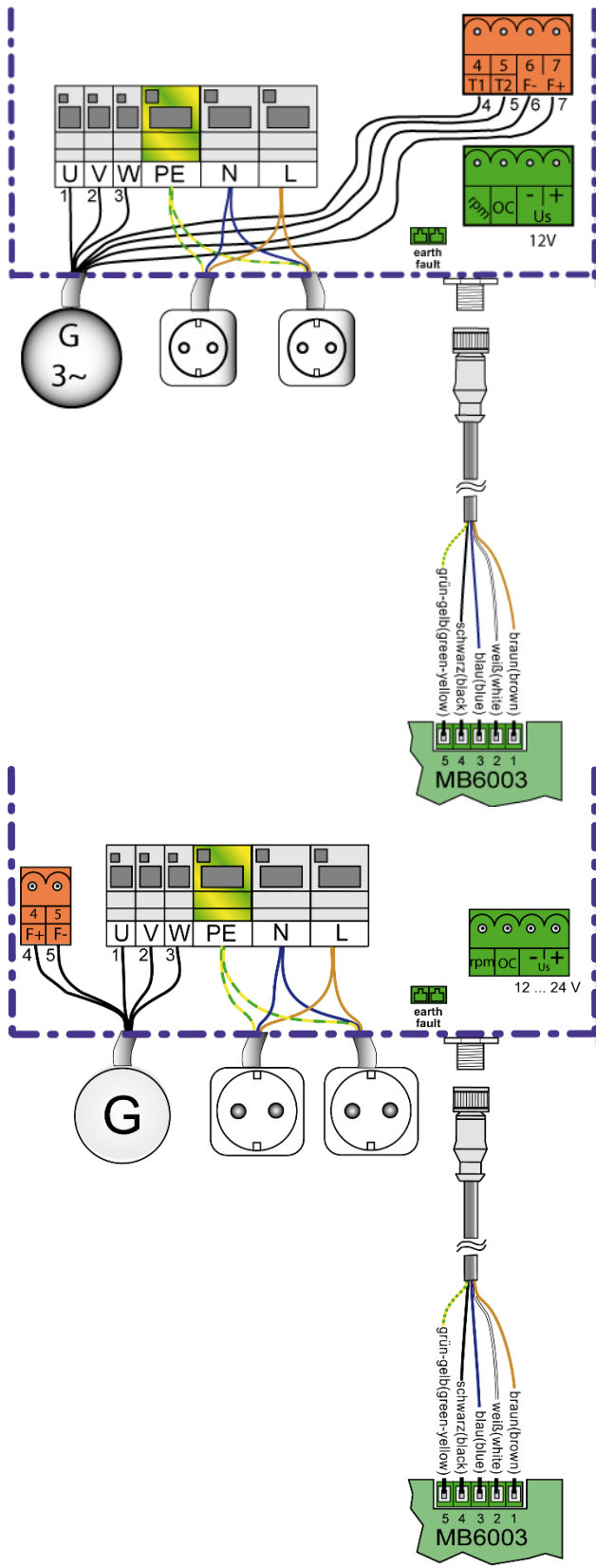
Dimensions in mm

2.13.4 Connection Cable Fittings



No	Function	Cable MB4003 MB5003	Cable MB6503 MB7503	Remarks
1	Outlet AC230V	3x1,5mm ²	3x 2,5mm ²	
2	Outlet AC230V (optional)	3x1,5mm ²	3x2,5mm ²	Outlet to build a second socket circuit
3	Input Generator : 3 Phasen + Feld+ (Temp. sens)	7x1,5mm ² screened	5x2,5mm ² screened	
4	Connection of control unit	5x	5x	Connector M12
5	Outlet Indication earth fault (optional)	2x1,5mm ²	2x1,5mm ²	May be used to control a contactor or a shunt release
6	Input supply voltage + controlling the speed increase	3x1,5mm ²	3x1,5mm ²	Connection of the 12/24 V vehicle voltage + speed increase

2.13.5 Connection Diagram



The connection to the control unit MB6003 must be carried out extremely carefully.



Warnung!

Faulty connections or mix-ups may result in damages that can entail the complete shut-down of the installation!

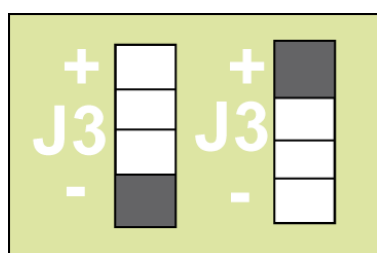
In such a case the repair at the manufacturer's premises is indispensable!



Information

For EMC reasons, the connection from the generator to the electronic module **MobiE** must be designed as screened cable. For extended protection against earth faults or short circuit, the cable must be installed in a conduit or a protective sleeve.

The OC output for the optional control of the engine speed are short-circuited here against ground [-] (low active) or respectively against the supply voltage U_s [+] (high active).



high aktiv low aktiv
(default setting)

After switching-on MobiE the position of this relay output is against ground [-] (low active) or respectively against the supply voltage U_s [+] (high active), depending on the position of the slide switch.

2.13.6 Relay Output OC (Slide switch J3)

3 Order Details

	Art. Nr.
MobiE AC-Modul MB4003 3,5/4 kVA 230V/50Hz	MB4003
MobiE AC-Modul MB5003 4,5/5 kVA 230V/50Hz	MB5003
MobiE AC-Modul MB5003-24 4,5/5 kVA 230V/50Hz (Fahrzeuge mit 24VBoardspannung)	MB5003-24
MobiE AC-Modul MB6503 5,5/6,5.kVA 230V/50Hz	MB6503
MobiE AC-Modul MB7503 6,2/7, 5kVA 230V/50Hz	MB7503
Control unit MB6003 IP65	B6003
Control unit MB6003H IP65 Summer (<u>disengageable</u>) see DIN 14687	B6003H
Generator 4000/5000	G5112
Generator 6500/7500	G7112
Generator 6500/7500 reinforced	G7115
Connection cable 2m straight plug	A200
Connection cable 5m straight plug	A500
Connection cable 10m straight plug	A1000

4 Contact

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