

Assembly Instructions

Retrofit - ISOBUS front socket

Version: V6.20160503



30322559-02-EN

Read and follow these operating instructions.

Keep these operating instructions in a safe place for later reference.

Company details

Document

Assembly Instructions

Product: Retrofit - ISOBUS front socket

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1 For your safety

1.1 Basic safety instructions



Read through these safety instructions carefully before upgrading the ISOBUS rear socket.

- Only install the product if you are specially trained in the field of electronics. Otherwise, ask an expert.
- Use only components provided by Müller-Elektronik during retrofitting.
- Install the product as described in these instructions.

1.2 Intended use

The product is intended exclusively for use in agriculture. The manufacturer shall not be held responsible for any other use of the system.



The manufacturer cannot be held liable for any personal injury or property damage resulting from such non-compliance. All risk arising from improper use lies with the user.



The operating instructions form part of the product. The product may only be used in accordance with these operating instructions.

All applicable accident prevention regulations and all other generally recognized safety, industrial, and medical standards as well as all road traffic laws must be observed. Any unauthorized modifications made to the equipment will void the manufacturer's warranty.

1.3 Layout and meaning of warnings

All safety instructions found in these Operating Instructions are composed in accordance with the following pattern:

	 WARNING
	<p>This signal word identifies medium-risk hazards, which could potentially cause death or serious physical injury, if not avoided.</p>

	 CAUTION
	<p>This signal word identifies hazards that could potentially cause minor or moderate physical injury or damage to property, if not avoided.</p>

NOTICE

This signal word identifies hazards that could potentially cause damage to property, if not avoided.

There are some actions that need to be performed in several steps. If there is a risk involved in carrying out any of these steps, a safety warning will appear in the instructions themselves.

Safety instructions always directly precede the step involving risk and can be identified by their bold font type and a signal word.

Example

- 1. NOTICE! This is a notice. It warns that there is a risk involved in the next step.**
2. Step involving risk.

1.4**Disposal**

When it has reached the end of its service life, please dispose of this product as electronic scrap in accordance with all applicable waste management laws.

2 Product description

Retrofitting the Müller-Elektronik basic vehicle harness allows you to use an additional ISOBUS socket on the front of your vehicle, for example to work with a plant protection sensor.

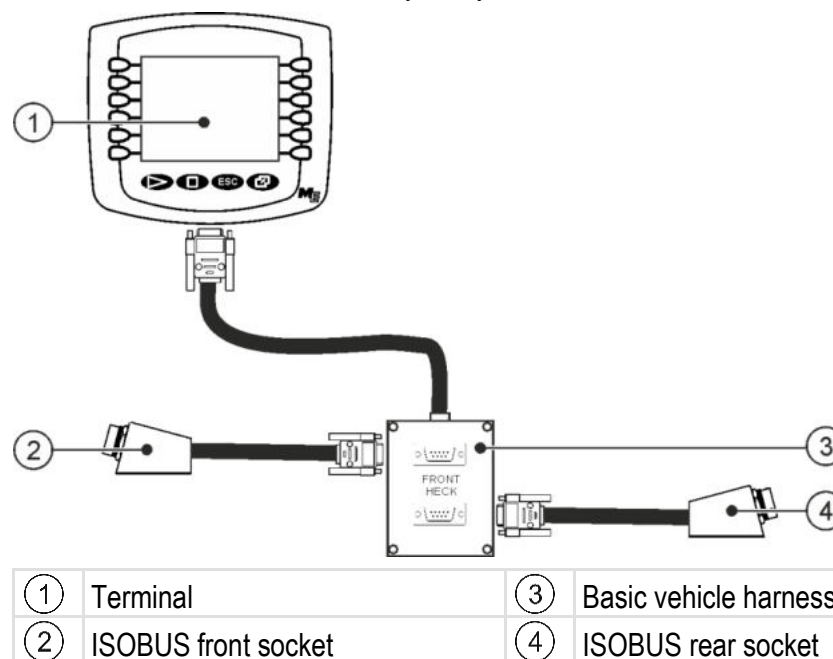
2.1 Scope of delivery

The set for retrofitting your vehicle with an ISOBUS front socket consists of the following components:

- ISOBUS front socket
- Basic vehicle harness box for connecting two ISOBUS sockets
- Battery cable with fuse holder for connection to the vehicle battery
- Cable with crimp contact for upgrading the ISOBUS rear socket
- Insulation-displacement connector
- Enclosures pack with parts for installing the components

2.2 System overview

The illustration below shows how your system will look like after installation:



3 Assembly instructions

3.1 Installing the ISOBUS front socket

Before you can use the ISOBUS front socket, the socket must first be installed.

Procedure

1. Install the ISOBUS front socket in an easily accessible area in the front of your vehicle.

3.2 Installing the basic vehicle harness box

If you have fitted the vehicle with two ISOBUS sockets, you will need the basic vehicle harness box. The basic vehicle harness box connects the ISOBUS sockets with the terminal.

Procedure

1. Install the basic vehicle harness box in the vehicle cab. Choose a location which is protected from moisture.

3.3 Upgrading the ISOBUS rear socket

If you retrofit your vehicle with a front ISOBUS socket, you may also have to convert the existing rear ISOBUS socket of your vehicle.

You do not have to convert your existing rear ISOBUS socket if you are using the following basic vehicle harness:

- 3032255702

If a conversion is necessary, there are two possible conversion variations. The proper conversion variation depends on the item number and date of manufacture of the existing basic vehicle harness:

- Connecting the unused cable core for the rear socket to a cable with crimp contact. [→ 8]

Applies for the following basic vehicle harnesses:

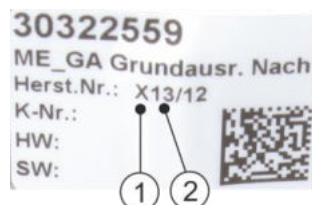
- 30322550
- 30322551
- 30322552
- 30322553
- 30322555
- 30322557
- 30322554 up to date of manufacture CW10/2016
- 3032255701 up to date of manufacture CW10/2016

- Connecting the cable with an insulation-displacement connector. [→ 11]

Applies for the following basic vehicle harnesses:

- 30322554 as of date of manufacture CW11/2016
- 3032255701 as of date of manufacture CW11/2016

You can see the date of manufacture on the rating plate.



①	"X" = consecutive year number; "X" is for 2016, "Y" = 2017 etc.	②	"13" = consecutive calendar week
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3.3.1

Connecting the cable core for the rear socket to a cable with crimp contact

NOTICE

Risk of short-circuit

Damage to the equipment caused by short circuit

- Before installation, disconnect the power supply from the vehicle battery.

Procedure

Proceed as follows to upgrade the ISOBUS rear socket:

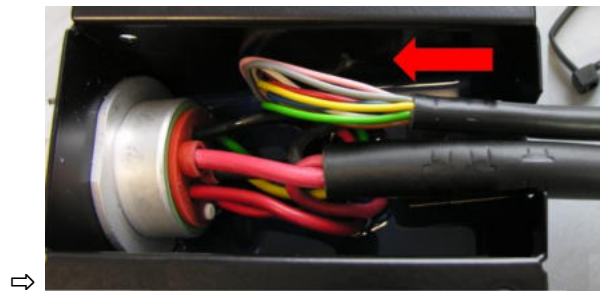
1. Loosen the ISOBUS rear socket.



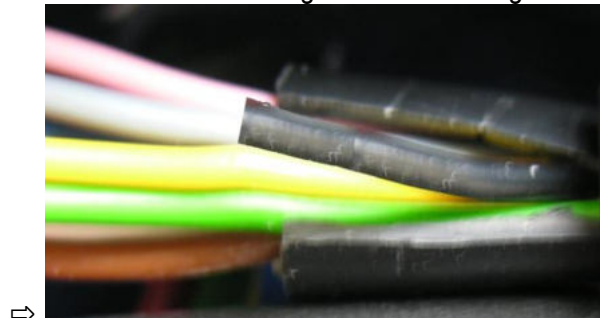
2. Remove the cable connector.



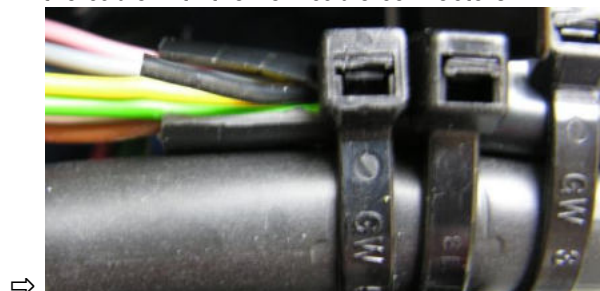
3. Slide in the thin black cable.



4. Carefully cut away approx. 2cm of the sheath until you can see the black cable line. Be careful when doing this not to damage the cable line inside.



5. Fix the cable with the new cable connectors.



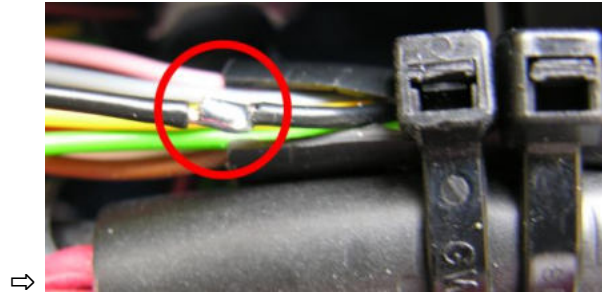
6. Carefully remove the insulation from the black cable line.



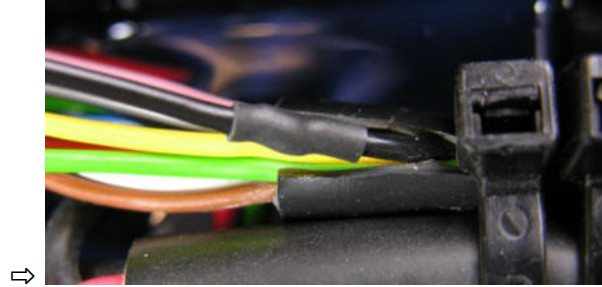
7. Anodize the wire.



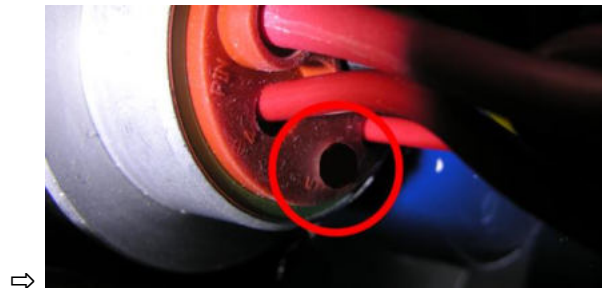
8. Solder the cable with crimp contact to the exposed wire. Under no circumstances use a clamp block, as the connection will not be air-tight.



9. Insulate the soldered cable with the heat-shrink tubing.



10. Remove the blind plug from pin 5 of the ISOBUS rear socket. If the blind plug is not visible, it may have slid in. Use for example a wire to push the blind plug from the front towards the rear.



11. Insert the cable with crimp contact from the rear into the exposed opening. Continue to slide this in until the contact snaps into place.



- ⇒ You have now upgraded the ISOBUS rear socket for use with an additional ISOBUS front socket.

3.3.2 Connecting the cable core with an insulation-displacement connector

NOTICE

Risk of short-circuit

Damage to the equipment caused by short circuit

- Before installation, disconnect the power supply from the vehicle battery.

Procedure

To convert the rear ISOBUS socket, proceed as follows:

1. Open the rear ISOBUS socket.



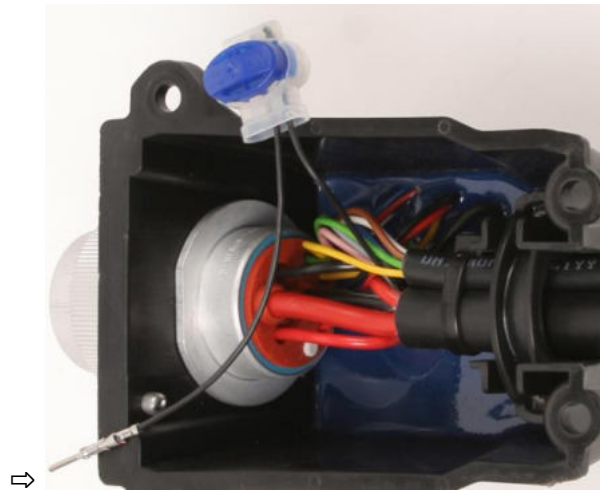
2. Remove the black cable from the casting compound.



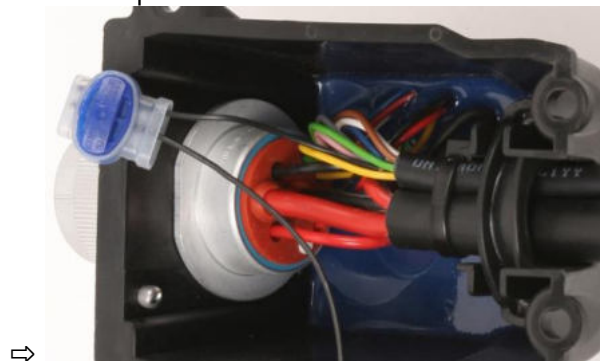
3. Insert the black cable that was removed from the casting compound into the insulation-displacement connector up to the stop.



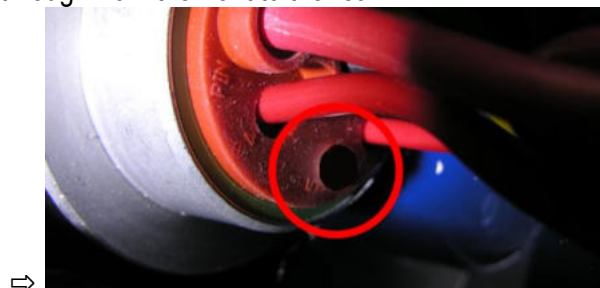
4. Insert the supplied "black cable with crimp contact" into the insulation-displacement connector up to the stop.



5. Connect the two cables in the insulation-displacement connector by pressing it closed with pliers.



6. Remove the blind plug from Pin 5 of the rear ISOBUS socket. If the blind plug is not visible, it might have slipped in. Use e.g. a wire to push the blind plug through from the front to the rear.



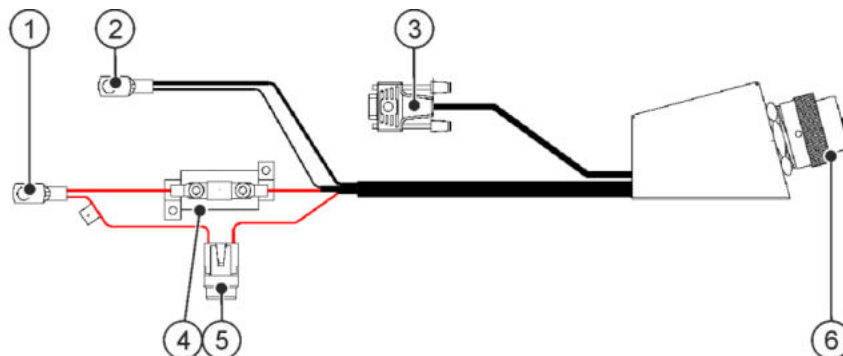
7. Insert the cable with the crimp contact from the rear into the opened hole. Push it in until the contact engages.



⇒ You have converted the rear ISOBUS socket for use with an additional front ISOBUS socket.

3.4

Connect the battery cable



①	Ring tongue for connection to the positive terminal of the vehicle battery	④	Prepared fuse holder with 50A fuse
②	Ring tongue for connection to the negative terminal of the vehicle battery	⑤	Prepared fuse holder with 15A fuse
③	Terminal connection cable	⑥	ISOBUS socket



WARNING

Risk of injury caused by short circuit

Connecting the positive terminal and the vehicle mass when working on the battery terminals can cause a short circuit. This can cause burn injuries to persons.

- When working on the battery terminals, ensure that no connection is created between the vehicle battery and the vehicle mass.
- Remove metallic items such as watches and rings before starting work.
- When disconnecting the terminals, always begin with the negative terminal.
- Always begin reconnecting the terminals with the positive terminal.



WARNING

Danger of injury from explosion of the vehicle battery

If the battery terminals are loose fitting, starting the vehicle can cause the vehicle battery to overheat. The vehicle battery may then explode.

- Always tighten the battery terminals firmly after assembly.

NOTICE**Damage to the vehicle's electrical system**

Switching the polarity of the cables can cause damage to the vehicle's electrical system.

- Pay attention to the polarity of the cable cores and the terminals!

Procedure

To connect the battery cable:

- ☒ The vehicle is switched off.

1. Connect the ring tongue to the battery terminal of the vehicle battery. Pay attention to the polarity, start with the positive terminal.
2. Fasten the battery cable with the cable ties. You may not shorten the cable. When fastening, pay attention to sufficient distance from moving parts and parts that get very hot.

3.5**Connecting ISOBUS sockets with the basic vehicle harness box**

After installing all of the components, you must connect the ISOBUS sockets with the basic vehicle harness box.

Procedure

1. Connect the components exactly as shown in System overview [→ 6]. Note that the power supply will only function when an ISOBUS rear socket is connected.

4 Retrofittable basic vehicle harness

You can perform the retrofit on the following basic vehicle harness:

Item number	Designation
30322550	ISOBUS terminal basic vehicle harness, with 2m cable without a tractor job computer
30322551	ISOBUS terminal basic vehicle harness, with 2m cable and 50A fuse without a tractor job computer
30322552	ISOBUS terminal basic vehicle harness, with 2.90m cable and 50A fuse without a tractor job computer
30322553	ISOBUS terminal basic vehicle harness, with 4m cable and 50A fuse without a tractor job computer
30322555	ISOBUS terminal basic vehicle harness, with 6m cable without a tractor job computer
30322557	ISOBUS terminal basic vehicle harness, with 8m cable and 50A fuse without a tractor job computer
30322554	ISOBUS terminal basic vehicle harness, with 3m cable and 50A fuse without a tractor job computer
3032255701	ISOBUS terminal basic vehicle harness, with 8m cable and 50A fuse without a tractor job computer
3032255702	ISOBUS terminal basic vehicle harness, with 8m cable and 50A fuse without a tractor job computer

5 Technical specifications

Operating voltage	9-16 V
Operating temperature	-20 - +70°C

