

Modul-Connect

QUICK START INSTALLATION GUIDE

Modul-Connect is an innovative wiring and control system, which enables you to control all of the vehicle's auxiliary electrical items. It is extremely versatile and can handle large loads.

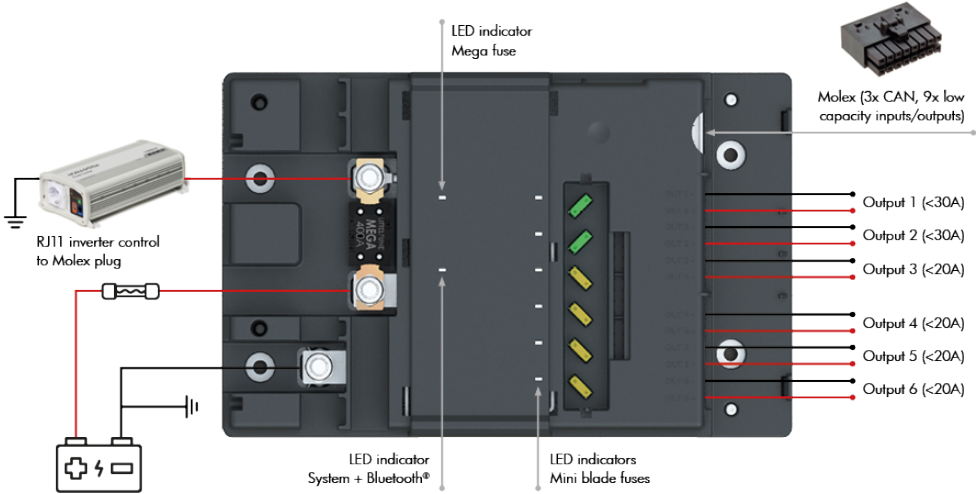
The system is developed for the light commercial vehicle industry, by Modul-System in collaboration with specialists within automotive electronics and software. The product is developed and produced in Sweden, using high-quality components. Therefore, we can with confidence offer a 3-year warranty.

Modul-Connect is completely independent of the OEM's electrical system and any other vehicle electrics. The system has undergone rigorous testing and holds both the E and CE mark.

Full operational instructions and installation instructions can be downloaded from www.modul-system.com.



MAIN BOX FEATURES



STEP 1. Fix the box to the vehicle

A good mounting location is on the bulkhead or over the side door.

It is recommended to install the box as close to the supplying battery as possible to avoid voltage drop.

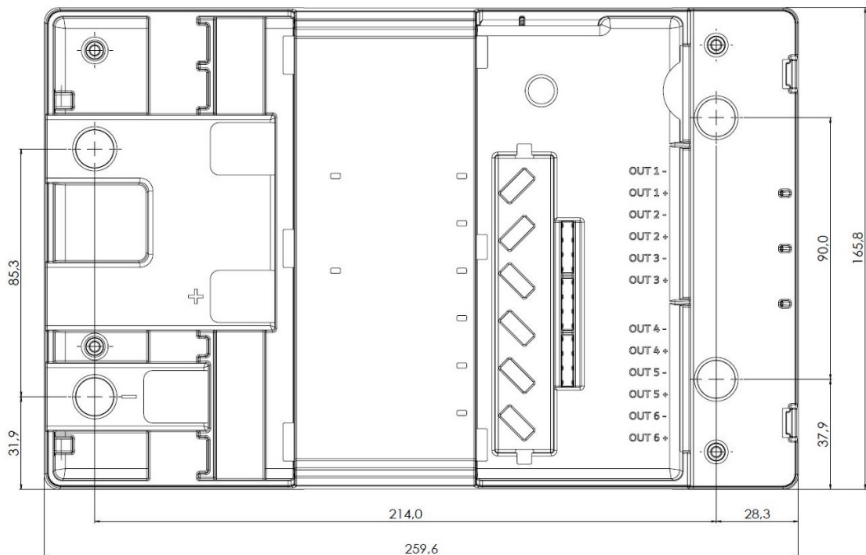
The box is mounted utilizing the four screw holes.

Where possible, mount directly to a metal surface for any heat dissipation.

Recommended installation accessories:

21008-03 Mounting Plate Modul-Connect 2.0 324x243

4x M5 bolts or similar



STEP 2. Wire cables to the box

Wire cables from the supplying battery / customer connection point to the Modul-Connect box.

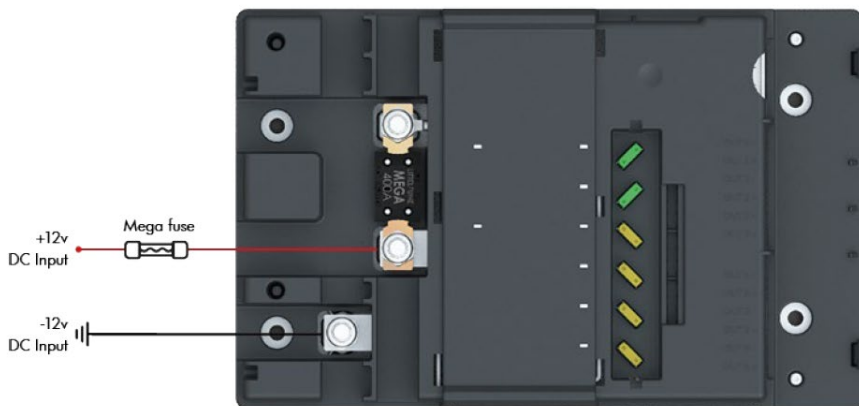
Make sure to use cables with a sufficient dimension for the load and fuse the live cable with the correct size fuse.

The earth cable from the Modul-Connect box can be wired back to the supplying battery or grounded using an OEM earth point. The cable size must be the same as the selected positive cable size.

Recommended documents:

Modul-Connect Wiring Table

IMPORTANT: M8 DC terminals tightening torque 12-13 Nm.



CAUTION: Reversing the polarity of the DC Input terminals will not damage the box but may damage accessories connected to it (i.e. Inverter). Damage caused by reverse polarity connection is not covered by the warranty.

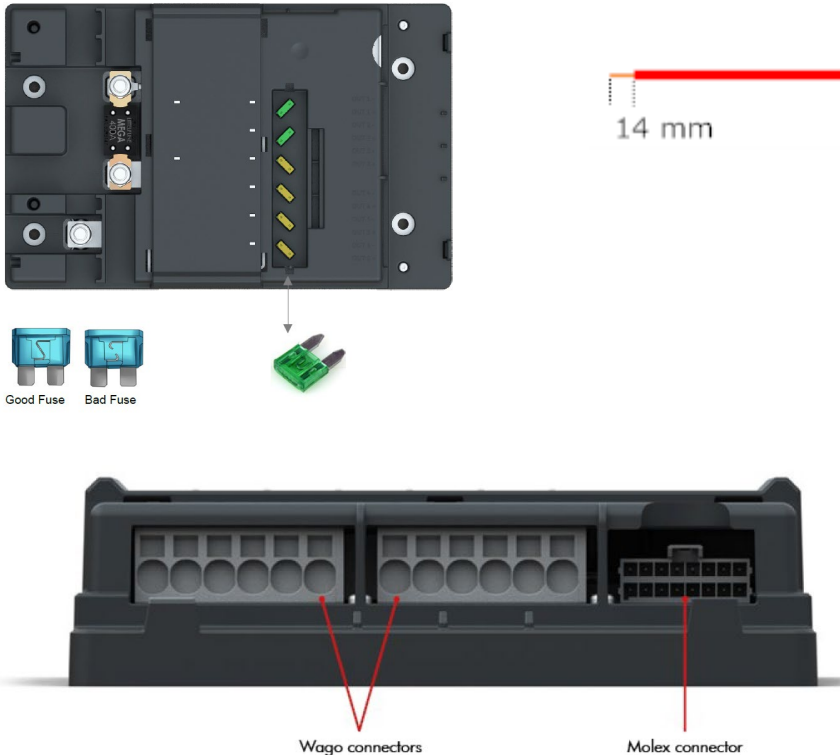
STEP 3. Wire cables from the electrical accessories to the Modul-Connect box

The box has two banks of WAGO connectors for the 2x 30A and 4x 20A outputs. Strip the insulation from the end of the cable to be inserted approximately 14mm.

To open the WAGO connector, use a small flat blade screwdriver to push in the release button on the top of each connector. Ensure that the total size of the cables does not exceed 6mm² in each Wago connector terminal.

All earth connections need to be wired back to the Modul-Connect box.

As all outputs are fused in the box, no additional inline fusing is required. Insert correct size mini blade fuses for each output on the right hand side of the Modul-Connect box. **Inserting the fuses is the last step of the installation!**



STEP 4. Installing an inverter (optional)

Any Modul-System Inverter can be powered and controlled by the Modul-Connect main box.

Fix the inverter as close to the Modul-Connect box as possible to avoid voltage drop.

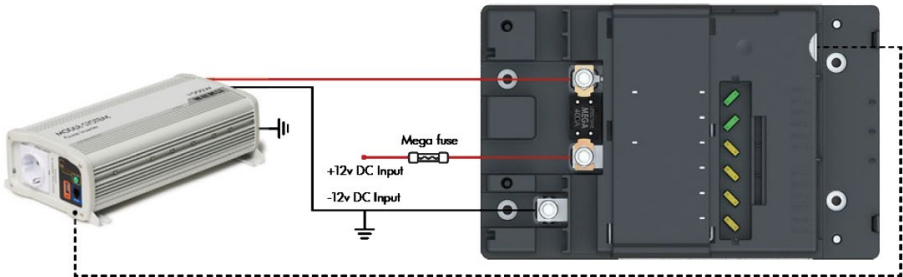
Wire a live cable of a correct size from the Modul-Connect high power output, and an earth cable to a vehicle OEM earth point.

Install a correct size mega fuse in the Modul-Connect box.

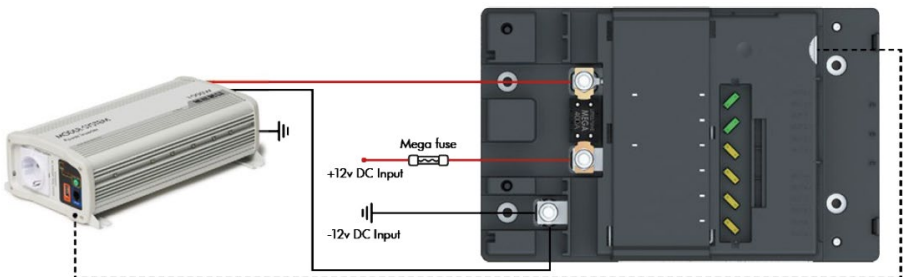
If you want the inverter to be operated from a Modul-Connect switch or the phone app, install the RJ11 cable (P/N 24100-03 / 24110-03). The RJ11 plug connects to the inverter and the Molex pin terminals locate into the 24200-03 Molex connector housing in positions 11 and 12.

PIN 11	Inverter ON/OFF	+12v Pulse	RJ11 Red cable
PIN 12	Inverter status input	Inverter status input	RJ11 Black cable

(fig 1)



(fig 2)



STEP 5. Prepare the Molex connector (optional)

Wire any required signal cables from the vehicle fuse box, and any CAN connections to the Molex connector (P/N 24200-03).

Please refer to the Owner's manual for more detailed information regarding the correct Molex connector terminal housing terminal position.

Plug into the Modul-Connect box.

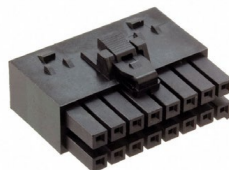
Recommended installation accessories:

24200-03 Molex terminal housing

24210-03 Molex terminal 0.75-1 mm²

24290-03 Molex crimping tool 0.75-1 mm²

24295-03 Molex terminal extraction tool



Molex connector as seen from outside Modul-Connect main box

Pin 1 External IN/OUT *500mA max	Pin 2 External IN/OUT *500mA max	Pin 3 External IN/OUT *500mA max	Pin 4 External IN/OUT *500mA max	Pin 5 External IN/OUT *1A max	Pin 6 CAN 3 H	Pin 7 CAN 2 H	Pin 8 CAN 1 H
Pin 9 External IN/OUT *500mA max	Pin 10 External IN/OUT *500mA max	Pin 11 External IN/OUT *500mA max	Pin 12 External IN/OUT *500mA max	Pin 13 GND	Pin 14 CAN 3 L	Pin 15 CAN 2 L	Pin 16 CAN 1 L

The pins are referred to as Pin 1 top left, Pin 8 top right, Pin 9 bottom left and pin 16 bottom right.

Molex Pin #	Pin Name	Connection Value	M-S Accessory Default Connection	Cable Color
1	External IN/OUT	*500mA max	Light bar - Dimming	White
2	External IN/OUT	*500mA max	Light bar - Pattern Select	Blue
3	External IN/OUT	*500mA max	Light bar - Left to Right Traffic Advisor	Yellow
4	External IN/OUT	*500mA max	Light bar - Right to Left Traffic Advisor	Orange
5	External IN/OUT high capacity	1a max	Weighing System - Power	Brown (in Yellow Multicore)
6	CAN 3 High	CAN 3 ONLY	Weighing System	White (in Yellow Multicore)
7	CAN 2 High	CAN 2 ONLY		
8	CAN 1 High	CAN 1 ONLY		
9	External IN/OUT	*500mA max	Ignition input +12v	Brown
10	External IN/OUT	*500mA max	Interior light feed input	Red / Red/White
11	External IN/OUT	*500mA max	Inverter On/Off	Red
12	External IN/OUT	*500mA max	Inverter Status	Black
13	Chassis Ground	Chassis Ground output	Weighing System	Blue (in Yellow Multicore)
14	CAN 3 Low	CAN 3 ONLY	Weighing System	Black (in Yellow Multicore)
15	CAN 2 Low	CAN 2 ONLY		
16	CAN 1 Low	CAN 1 ONLY		

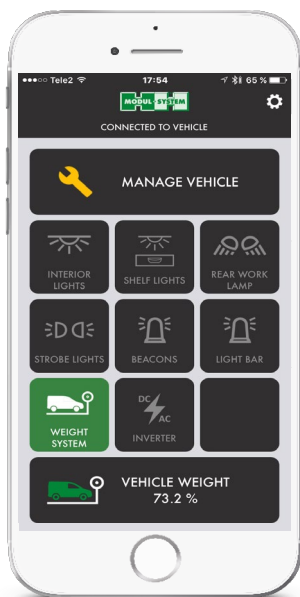
STEP 6. Configure the system in the app

Configure the box using the Modul-Connect phone application. The application is available on AppStore / Google Play.

Click on the settings icon and log in to access configuration mode.

Search for the main box (available under settings) or scan the Data Matrix Code supplied with the box.

Click 'Manage vehicle' to configure the box. Connect the selected accessory, and make the required settings, for each output.



No login?

If you require login details, please contact us. You will find contact details on the last page in this guide.

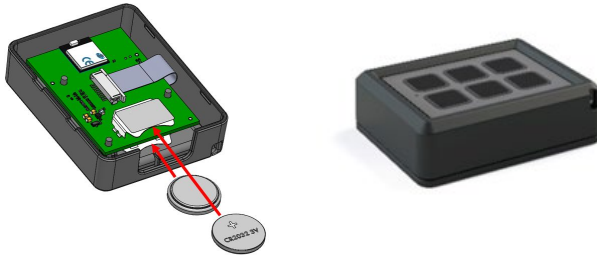
Please note that only certified users will be issued logins. To get certified, you need to undergo training by a member of the Modul-System staff.

STEP 7. Configure the switch panels

Insert the batteries to the battery slots to make the switch panel detectable.

Search for the switch panel in the APP, alternatively scan the data matrix code supplied with the switch.

Configure the switch panel/panels using the Modul-Connect phone application.



STEP 8. Make Data Matrix Codes accessible

Stick the additional supplied data matrix code for the Main box on the interior side of the driver's sun visor, to be easily accessible by new drivers and operators and not visible from outside the vehicle.

Apply the additional supplied data matrix code for the switch panel to the inside face of the corresponding back plate.



TECHNICAL SUPPORT

For in-service issues, contact your regional Modul-System Service Centre.

Global: modul-connect@modul-system.com

Belgium: modul-connect@modul-system.be

Denmark: modul-connect@modul-system.dk

Finland: modul-connect@modul-system.fi

France: modul-connect@modul-system.fr

Germany: modul-connect@modul-system.de

Netherlands: modul-connect@modul-system.nl

Norway: modul-connect@modul-system.no

Poland: modul-connect@modul-system.pl

Sweden: modul-connect@modul-system.se

United Kingdom: modul-connect@modul-system.co.uk