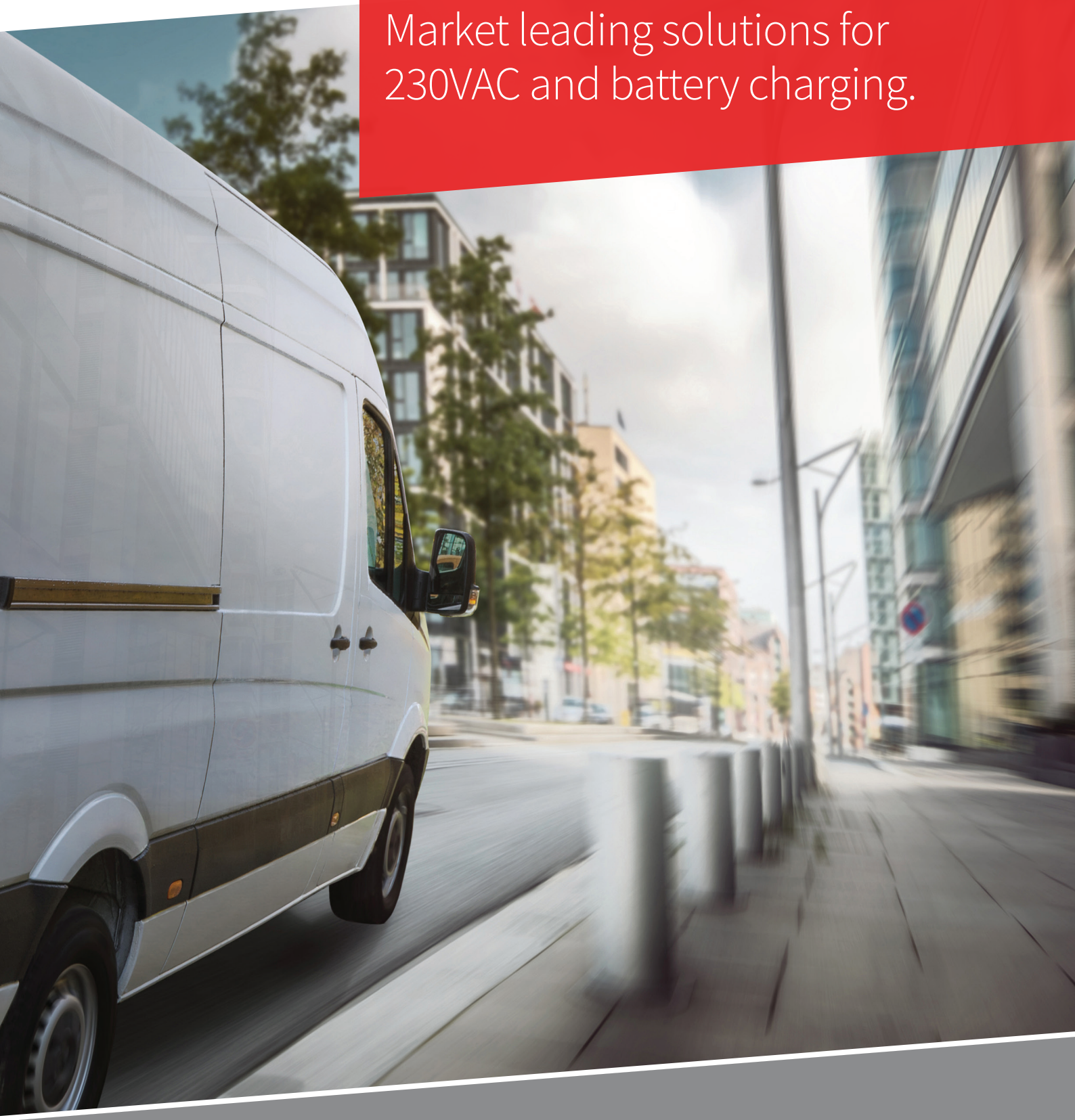
DEFA®

The best deserve the best!

Market leading solutions for 230VAC and battery charging.



www.defa.com

The DEFA PlugIn system

A complete solution for 230VAC power supply and battery charging

The vehicle is fast becoming the mobile office of the skilled tradesman. To charge and power tools, computers and electrical systems, there's a growing need for flexible and user-friendly 230VAC power supply solutions. An inverter has become a natural part of the installation in modern commercial vehicles, but many owners are not aware that using inverter quickly drains and degrades the battery. We recommend installing an onboard battery charger to maintain battery performance and longevity. The DEFA PlugIn cable and connector system ensures that our inverters and battery chargers can be easily integrated in your vehicle.

A unique cable system

The DEFA PlugIn system has the best 230V connector on the market, and is designed to facilitate the installation of a complete 230VAC system. Installing and connecting a PlugIn system is very easy, requires no tools and can be done by non-professionals.

All-inclusive kits

Our most popular products are available in kits that also include all the cables and accessories that you need to install the product in your vehicle. To provide added flexibility, the MiniPlug connection cable is ordered separately in the desired length.

Leading manufacturer

We have perfected our PlugIn system over many years and we are now the leading provider of power supply and charging systems for vehicles of all sizes and specifications.

Products of the highest quality

Research, quality control, and close cooperation are all central tenets of our product development philosophy. Research and development take place in our own factories, and our products undergo rigorous testing to ensure that they meet the most stringent requirements in the market. As a result, customers trust our products for the most demanding applications, such as in emergency vehicles.

“You shouldn’t have to plan how to charge your phone or battery packs for your tools, and you shouldn’t have to worry about draining the battery in your car.”

Jon Anders Walle,
Key Account Manager
Würth Norway

The mobile work space

If you are an installer or a skilled tradesman, access to 230VAC power and proper battery maintenance in your vehicle is essential to performing your job. Our solutions provide the reliability and efficiency that you need.

A complete solution:
Battery charging + preheating + 230VAC power supply

The DEFA PlugIn system is modular, and can be expanded with additional components when the need arises. . By adding cabin and engine heaters you can get into a warm car with windows free of ice and snow - every morning, all year round.

CONTROL SYSTEM
Pre-heat, charge and protect your vehicle via your phone

INVERTER
Access to 230VAC in the vehicle

OUTLETS
Multiple versions

CABIN HEATER
Compact and efficient

CONNECTION CABLE
Discreet inlet in the front of the vehicle

ENGINE HEATER
Visit defa.com for more information

BATTERY CHARGER
Maintains battery performance and longevity

DEFA Inverters

Permanent access to 230VAC power

An inverter provides access to 230VAC in the vehicle, making it possible to charge or operate most types of electrical equipment. Our inverters meet the highest standards of quality and safety. They are designed to withstand heavy use and provide the best possible voltage at all times. You can expand the system with additional outlets at any time.

All inverters can be controlled remotely via a control panel. This makes it easier to use inverter when it is placed in a hard-to-reach area..

LOW POWER CONSUMPTION
Eco function reduces power consumption when inverter not in use

QUIET
Fan with variable speed

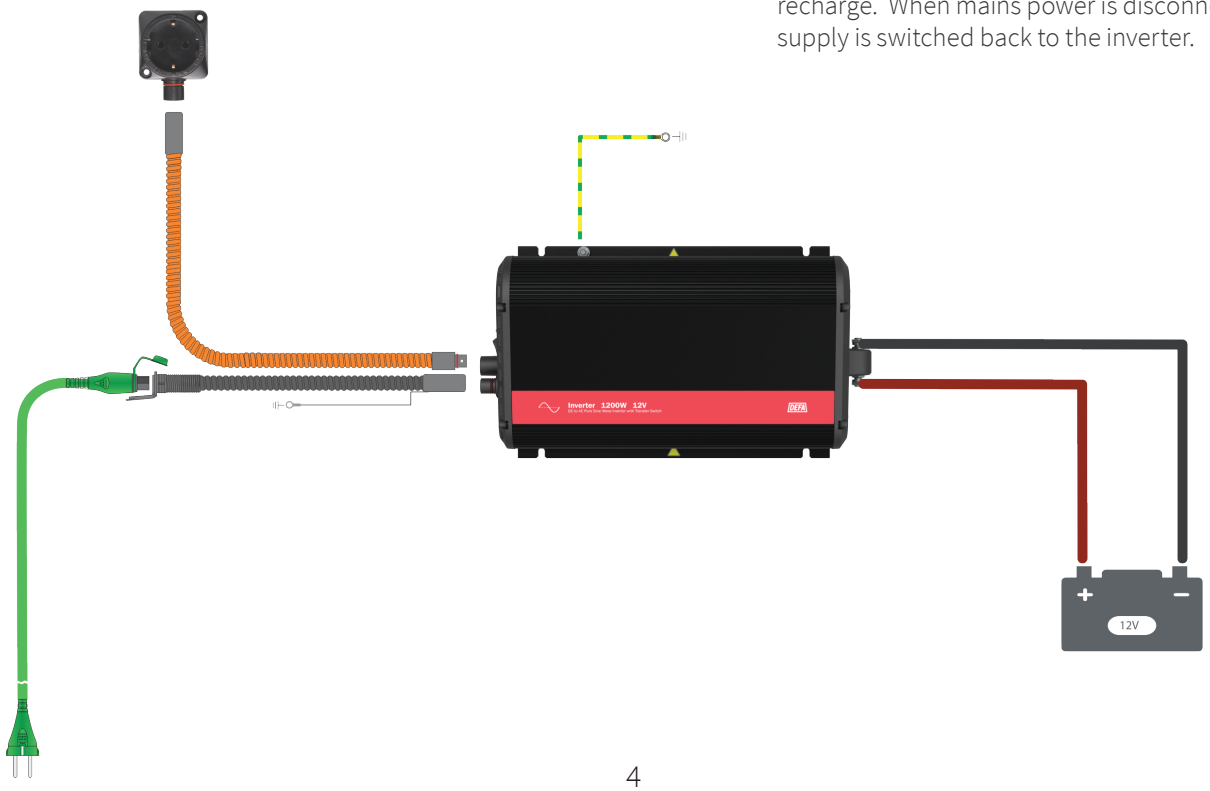
SIMPLE INSTALLATION
Built-in transfer switch (1200 W)
Takes little space

CAN BE INSTALLED IN HARD-TO-REACH AREAS
Remote panel for ON/OFF

FOR ALL MODERN GENERATORS
Voltage range 10.5V-16V

Integrated transfer switch automatically ensures that 230V power is supplied from a connected mains outlet when possible. This prevents the inverter from drawing power from the battery, allowing it to recharge. When mains power is disconnected power supply is switched back to the inverter.

Inverter kit wiring diagram



DEFA Inverter Kits

DEFA's inverter kits are designed to make ordering and installation as easy as possible. DEFA inverter kits include all the products and cables required for a complete installation. For specifications of the contents in each inverter kit, refer to page 9. All products can also be purchased separately.

Inverter Kit 300 W

Inverter 300 W 12 V is suitable for the power supply of TVs, computers, etc.

Inverter Kit 600W

Inverter 600 W 12 V is suitable for the power supply of TVs, computers, etc.

Inverter Kit 1200 W

DEFA's latest inverter, 1200 W, has a built-in power save mode, which means that power consumption from the battery is minimal if the inverter is connected, but without load. Two versions of Inverter 1200 W are available, one of which has a built-in transfer switch. We recommend using an additional battery when installing Inverter Kit 1200 W.

Inverter Kit 1500 W

Inverter 1500 W is suitable for powering products with high output such as tools, coffee makers, etc. We recommend using an additional battery when installing Inverter Kit 1500 W.

Inverter Kit 2000 W

Inverter 2000 W is suitable for powering products with high output such as tools, coffee makers, etc. We recommend using an additional battery when installing Inverter Kit 2000 W.

Choosing an inverter kit:

What inverter size do you need? The answer depends how much power your equipment needs. A good rule of thumb is to double the equipment output and then choose the nearest inverter above this amount. Refer to the example below.

Calculation example

Product	Output	Recommended inverter size
Tablet	~10 W	300 W
Computer	~90 W	300 W
Drill	~850 W	1200 W
Vacuum cleaner	~1000 W	1200 W

DEFA MultiChargers – Permanently-installed battery chargers

Get the most out of your battery

We develop and manufacture a wide range of intelligent battery chargers, that help your customers maintain battery performance and longevity. Our chargers are compact, highly efficient and analyzes each battery to create an optimized, temperature compensated charging curve. We have solutions for vehicles of all types and sizes.

Our battery chargers are designed for use with our proprietary waterproof cables (IP44) and plug-in connectors, providing straightforward installation and easy handling. The chargers can be easily integrated or extended with remote panels, inverters and the AutoSwitch priority selector to obtain a complete system. The chargers are suitable for all lead-acid batteries (AGM, GEL, EFB, start-stop).

The battery chargers are purchased separately or in pre-packaged **ChargerKits**, which contain everything you need for a complete installation.

NO FAN
No noise

WATERPROOF (IP44)
For extreme weather and temperature conditions

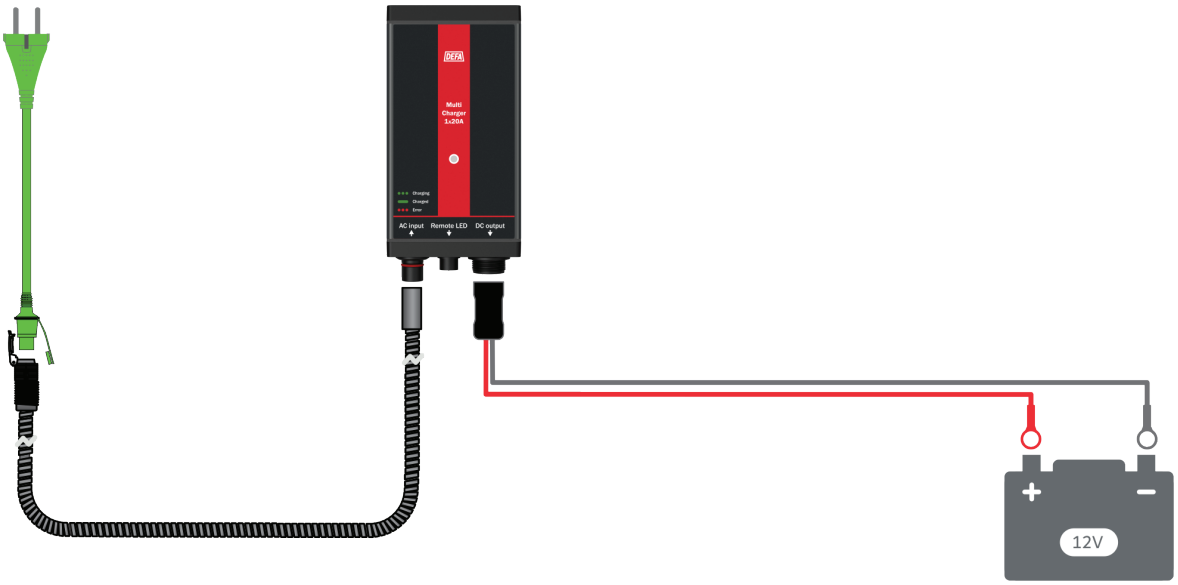
TEMPERATURE SENSORS AND INTELLIGENT CHARGING CURVES
Extends battery life

UNIQUE 12 V CABLE SYSTEM
Many possible configurations

EASY INSTALLATION
DEFA's PlugIn connectors

MULTIPORT
Immobilizer & remote control panel

ChargerKit wiring diagram



DEFA ChargerKits

DEFA's ChargerKits are designed to to make ordering and installation as easy as possible. DEFA ChargerKits include all the products and cables required for a complete installation. For specifications of the contents in each ChargerKit, refer to page 9. All products can also be purchased separately.

ChargerKit 1210 Flex | 10A

A complete kit for small vehicles with a compact battery charger and cabling. Flexible connectors allow for quick and easy installation.

ChargerKit 12A & 2x12A

For permanent installation in small vehicles. For batteries up to 2x150Ah. MultiCharger 2x12A must be used when both the starter and main battery need to be charged.

ChargerKit 20A & 2x20A

Powerful and compact battery charger with cabling. Can be easily installed in all types of vehicles. MultiCharger 2x20A must be used when both the starter and main battery need to be charged. For batteries up to 2x250Ah.

MultiCharger 35A & 2x35A (not available as ChargerKit)

Compact and powerful battery charger for use in heavy vehicles. Cables in desired lengths and remote panels are ordered separately, which results in a flexible system that can be adapted to any situation. MultiCharger 2x35A must be used when both the starter and main battery need to be charged. For batteries up to 2x600Ah.

"Professionals prefer trusted brands like DEFA; lower quality solutions only cause problems in the long run."

Jon Anders Walle,
Key Account Manager
Würth Norway

Accessories that increase value

There's a wide range of accessories available for the DEFA PlugIn system. Go to defa.com see more.
To view the full range, visit defa.com.

Inverter Control Panels

All inverters can be remotely controlled from a separate control panel, making it easier to use the equipment when the inverter is installed in a hard-to-reach area. Available in both externally-mounted and recessed versions.

Battery Charger Remote Panel

The remote panel can be placed in an easily accessible location for making it easier to monitor battery and charging status.

Battery separator

The battery separator connects two separate battery groups during charging. When charging is interrupted, the batteries are separated again. The battery separator measures voltage in both battery groups and activates automatically.

AutoSwitch

The AutoSwitch makes it possible to supply sockets in the vehicle both from the inverter and from a mains outlet. The transfer switch automatically switches between each power source and ensures that power is not being drawn from the battery when you connect the vehicle to mains. The AutoSwitch also has a safety function that ensures that there is no voltage in the input cable when only the inverter is in use.

Electrical socket

Electrical sockets for the DEFA PlugIn system are available in single and double versions for recessed and external mounting.

Manual summer/winter switch

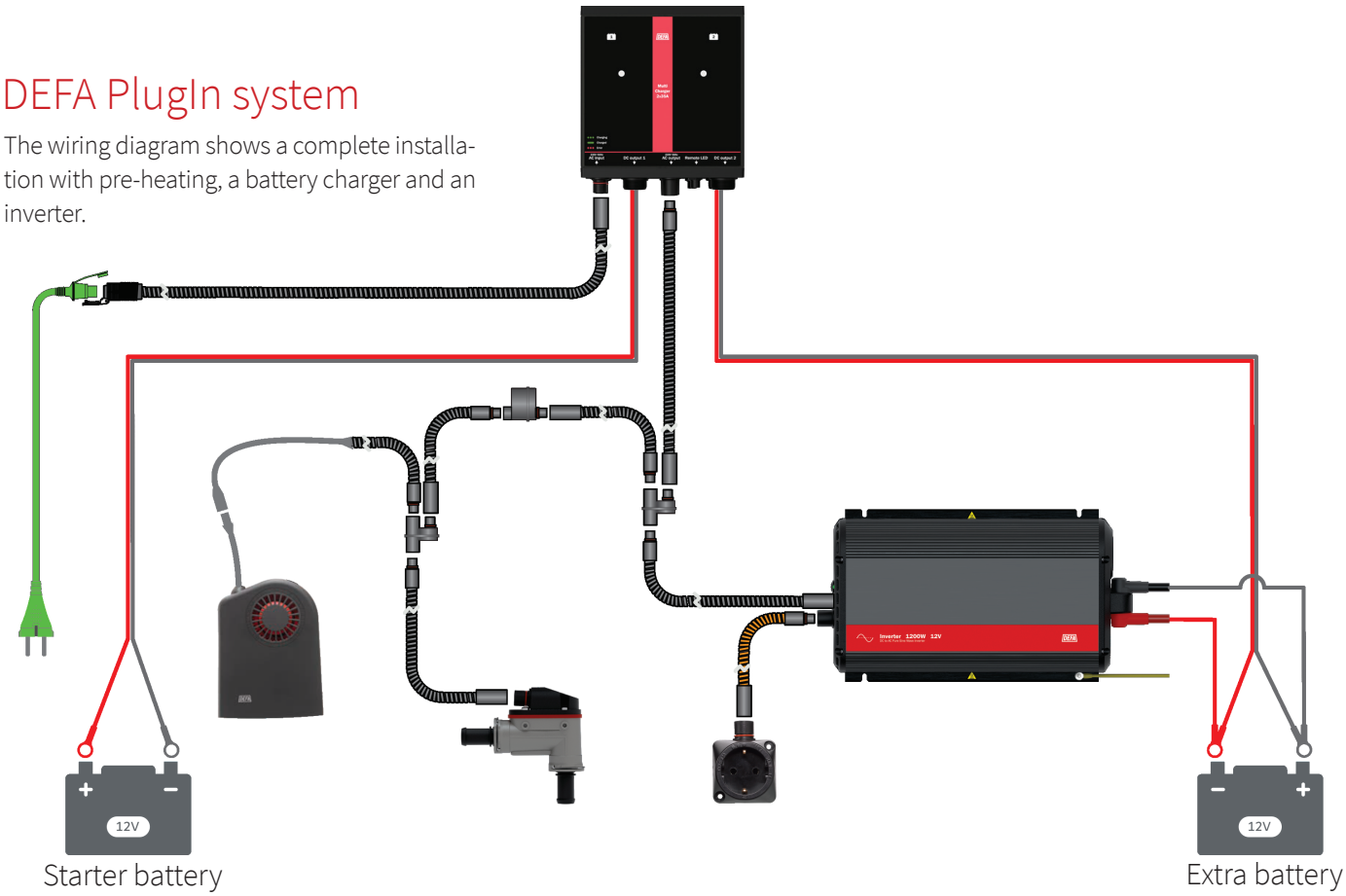
The summer/winter switch is a manual switch that allows engine and cabin heaters to be disconnected during the summer without affecting the charger.

MiniPlug & MiniPlug Xtreme connection cable & input cable

DEFA's MiniPlug cables allow for simple installation and first-rate safety and reliability. The MiniPlug Xtreme connection cable is designed to withstand extreme weather conditions such as very low temperatures.

DEFA PlugIn system

The wiring diagram shows a complete installation with pre-heating, a battery charger and an inverter.



Starter battery

Extra battery

Article number and technical specifications

ChargerKits – Battery charger kits

Art. no.	Name	Battery charger	Charge current	Input cable	Connection cable	Charging cable
450033	ChargerKit 1210 Flex	MultiCharger 1210 Flex	10 A	1.5 m	2.5 m	2 m, loose
706252	ChargerKit 1x12A	MultiCharger 1x12A	1x12A	2.0 m	5.0 m	2 m, permanently installed
706910	ChargerKit 1x12A	MultiCharger 1x12A	1x12A	1.5 m	2.5 m	2 m, permanently installed
706253	ChargerKit 2x12A	MultiCharger 2x12A	2x12A	2.0 m	5.0 m	2 m, permanently installed
706930	ChargerKit 1x20A	MultiCharger 1x20A	1x20A	2.0 m	5.0 m	2 m, loose
706931	ChargerKit 2x20A	MultiCharger 2x20A	2x20A	2.0 m	5.0 m	2 m, loose

Battery charger

Art. no.	Name	Charging voltage [VDC]	Maintenance [VDC]	Current [A]	Battery size max. [Ah]	Enclosure rating [IP]	Dimensions H/W/D [mm]	Weight [Kg]
450017	MultiCharger 1210 Flex	14.4	13.5	10		65	105x71x42	0.384
705200	MultiCharger 1x12A	14.4	13.6	12	150	44	138x98x53	1
705300	MultiCharger 2x12A	14.4	13.6	2x12	2x150		138x201x53	2
705800	MultiCharger 1x20A	14.4	13.6	20	250		183x98x53	1.5
705900	MultiCharger 2x20A	14.4	13.6	2x20	2x250		182x190x53	3
708501	MultiCharger 1x35A	14.4	13.6	35	600		200x98x53	1,6
708502	MultiCharger 2x35A	14.4	13.6	2x35	2x600		200x190x53	3,3

Inverter kits

Art. no.	Name	Inverter	Output	Input V DC	Cable	Electrical socket	Control panel, recessed
704070	Inverter kit 1	702935	300 W	12 V	2 m (704550)	Double external (700403)	6 m (702912)
704071	Inverter kit 2	702937	600 W				
704073	Inverter kit 4	702941	1500 W				6 m (702913)
704074	Inverter kit 5	702943	2000 W				
711997	Inverter kit 6	709191	1200 W				6 m (709340)

Inverters

Art. no.	Name	Input (V DC)	Output (V AC)	Continuous (W)	Weight (kg)	Dimensions (mm)
702935	Inverter 300 W	12 V	230 V	300	2.6	230x151x64
702937	Inverter 600 W			600	3.5	324x170x68
709191	Inverter 1200 W			1200	4.7	360x225x98
709090	Inverter 1200 W incl transfer switch			1200	4.7	360x225x98
702941	Inverter 1500 W			1500	6.2	420x223x101
702943	Inverter 2000 W			2000	6.5	420x289x100

Battery charger accessories

	Art. no.	Name	Cable length	Suitable for
	705294	Battery charger remote reader	5 m	1x20A/ 1x35A
	705162	Battery charger remote reader	5 m	2X20A/ 2X35A
	705295	Battery charger remote reader	10 m	1x20A/ 1x35A
	705163	Battery charger remote reader	10 m	2X20A/ 2X35A
	705296	Battery charger remote reader	20 m	1x20A/ 1x35A
	705164	Battery charger remote reader	20 m	2X20A/ 2X35A
	705297	Battery charger remote reader	25 m	1x20A/ 1x35A
	705165	Battery charger remote reader	25 m	2X20A/ 2X35A

Inverter accessories

	Art. no.	Name	Info	Suitable for Inverter
	702912	Control panel, recessed	Cable length 6 m	300 W/600 W
	702913	Control panel, recessed	Cable length 6 m	1000 W/1500 W/2000 W
	704030	Control panel, recessed	Cable length 10 m	1000 W/1500 W/2000 W
	705115	Control panel, external	Cable length 6 m	300 W/600 W
	705116	Control panel, external	Cable length 6 m	1000 W/1500 W/2000 W
	705117	Control panel, external	Cable length 10 m	1000 W/1500 W/2000 W
	709340	Control panel, recessed	Cable length 6 m	1200 W
	703697	AutoSwitch priority selector		
	700595	Battery separator	100 A, max. 400 A	
	700596	Battery separator	200 A, max. 1000 A	
	707680	Battery separator	150 A, max. 500 A	
	700399	Electrical socket, recessed	Stainless steel	
	700401	Electrical socket, external	Single	
	700403	Electrical socket, external	Double	
	702779	Electrical socket, external	Double with plugin	
	700405	Electrical socket, external	Main socket double 16 A	
	701317	Electrical socket, recessed	Single, white	
	701316	Electrical socket, recessed	Single, brown	
	701315	Electrical socket, recessed	Single, grey	
	701123	Summer/winter switch	Manual	

Connection cables

	Art. no.	Name	Length	Cable area per cord	Info
	460955	MIniPlug Xtreme	2.5 m	1.5 mm	
	460957	MiniPlug Xtreme	5.0 m	1.5 mm	
	460920	MiniPlug connection cable	2.5 m	1.5 mm	
	460933	MiniPlug connection cable	2.5 m	1.5 mm	Angled connector
	460938	MiniPlug connection cable	3.5 m	1.5 mm	
	460942	MiniPlug connection cable	3.5 m	1.5 mm	Angled connector
	460921	MiniPlug connection cable	5.0 m	1.5 mm	
	460924	MiniPlug connection cable	10.0 m	1.5 mm	
	460960	MiniPlug connection cable	2.5 m	2.5 mm	For connection to power
	460961	MiniPlug connection cable	5.0 m	2.5 mm	For connection to power
	460962	MiniPlug connection cable	10.0 m	2.5 mm	For connection to power

Input cables

	Art. no.	Name	Length	Info
	460901	MiniPlug input cable	1.0 m	
	460915	MiniPlug input cable	1.5 m	
	460939	MiniPlug input cable	2.0 m	
	704558	MiniPlug input cable	1.0 m	
	704559	MiniPlug input cable	1.5 m	
	704561	MiniPlug input cable	2.0 m	

Extension cables

	Art. no.	Name	Length	Info
	460804	MiniPlug extension cable	2.0 m	
	460809	MiniPlug extension cable	5.0 m	
	460851	MiniPlug extension cable	10.0 m	
	704550	MiniPlug extension cable	2.0 m	
	704553	MiniPlug extension cable	5.0 m	
	704555	MiniPlug extension cable	10.0 m	

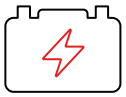
Need something else?
Visit defa.com to view the full range or feel free to contact us for assistance!

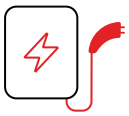
ABOUT DEFA

Our goal is to make people's lives easier, more efficient and more environmentally friendly. We provide products and services that improve the way people charge, preheat and secure their vehicles, light up their buildings and roads, control their cabins and vehicles. We are dedicated to creating great products and services through continuous improvement and innovation.

DEFA is a Norwegian company founded in 1946. We currently have more than 400 employees on 3 continents. Our products and services are distributed in more than 30 countries worldwide.

Chargers & inverters



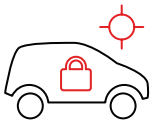


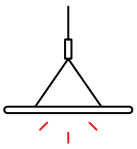
EV charging

Trip log

Electrical preheating

Security & tracking





Lighting

Cabin heating & security

Mobile services

DEFA®

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