

2024

MOBILE POWER SOLUTIONS

FOR WORK TRUCKS, DELIVERY TRUCKS,
LONG HAUL AND SERVICE VEHICLES.



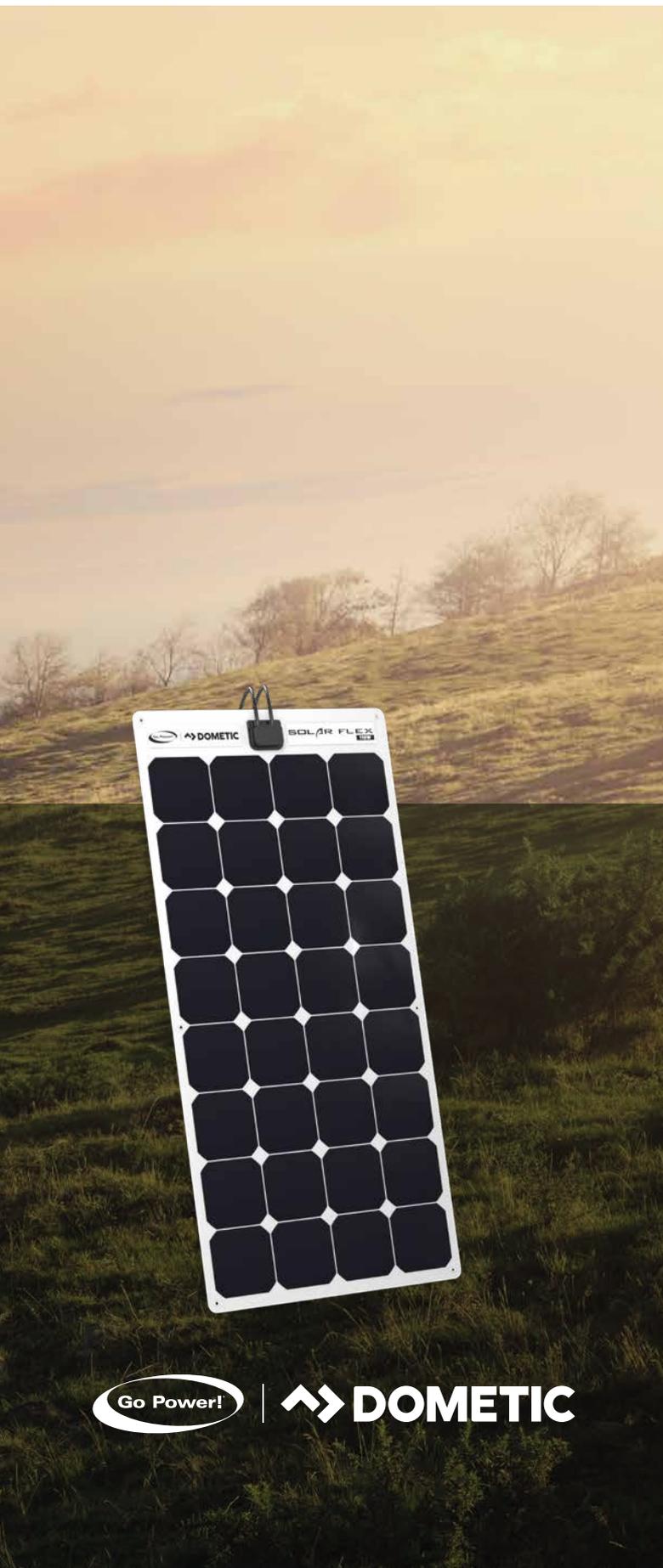
WELCOME TO DOMETIC GO POWER!

We have been creating mobile power solutions for over 26 years. With over 1 million panels sold and more than 300,000 mobile installations, we can draw on a wealth of know-how and experience. As pioneers in flexible and low profile, light-weight solar modules, we have created a seamless offer for different application areas and vehicle types. Our solar systems are suitable for work and service vehicles such as trucks, buses, construction machines, delivery vehicles, food trucks, animal transporters as well as rescue and municipal vehicles

Go on a journey of discovery through this brochure, and find out how adding a Dometic Go Power! solar system can benefit your business!

WHY GO POWER! SOLAR SYSTEMS?

- 26-year history in alternative energies
- Pioneers in flexible and low profile, light-weight solar modules
- Complete power systems consisting of highly efficient, perfectly coordinated components
- Certified quality: approvals on all components (UL458, CE, CSA)
- 5 year warranty on all Dometic Go Power! products



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HOW ADDING A GO POWER! SOLAR SYSTEM CAN BENEFIT YOUR BUSINESS

There are many good reasons why it pays to invest in a mobile power supply solution based on renewable solar energy. Continuous battery recharging from a solar panel eliminates dead batteries in almost any application. Moreover, it gives batteries a longer life

and prevents costly service calls due to battery failure. Fast return on investment is another benefit for vehicle owners and fleet operators. Chances are that a solar system pays off with a single service call avoided.



Solar systems cut operating costs by reducing fuel consumption and CO2 emissions

The combustion of one liter of Diesel fuel produces about 2.65 kg of carbon dioxide. Let's assume a truck driver would idle the engine for two hours per day to save on battery power. And now let's see how this affects the vehicle owner's

Two hours idling per day means ...

3.40 € extra cost per day (based on a Diesel price of 1.60 € / liter)

20.40 € extra cost per week (based on 6 working days)

979.20 € extra cost per year for a total of 576 l of Diesel (based on 48 working weeks)

576 l of Diesel burnt translates to 1,526.4 kg of CO2 emitted to the atmosphere. For a single truck. Imagine this being done on a fleet of 200 vehicles. Or several thousands.

With a solar panel on the roof, there's no need to idle the engine anymore. The battery bank is charged with free energy from the sun, while driving and when parked.

MINIMIZE DOWNTIME

Say goodbye to dead batteries and power related service call. Keep your trucks on the road moving freight reliably and efficiently.



Reduce fuel consumption and CO2 emissions

Cut down your operating costs by harnessing the power of the sun. Solar panels produce usable power free of charge anytime the sun is out.



Impressive return on investment

Get more from your money! Go Power! solar customers report a 6 to 12 month return on their investment. Some of them achieved ROI after avoiding a single service call.



Extend battery life

Add years of life of your batteries by topping them up with solar energy. Save costs by replacing batteries after years, not months.



Charging while driving or parked

Solar systems increase battery run time, because they charge while driving or parked. Customers report an additional 3 hours of run time with 330 watts of solar power installed.



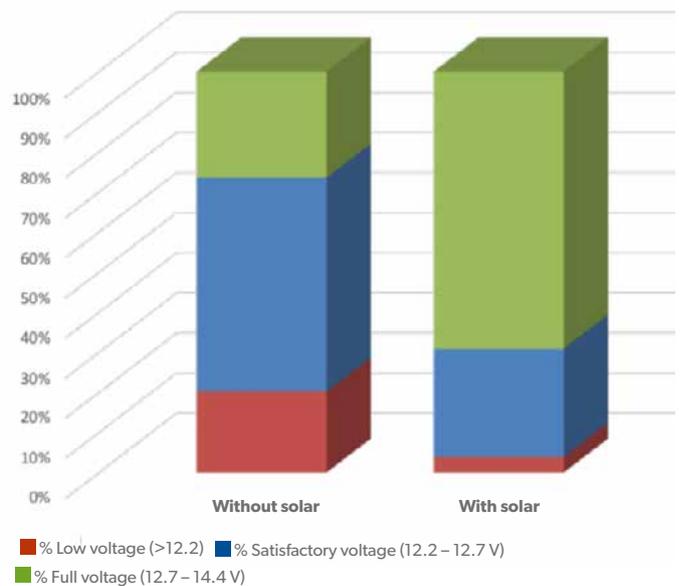
Solar systems cut operating costs by letting your batteries last longer

Example: Solar added to old batteries on lift gates

The diagram shows how a Go Power! solar solution resulted in a radical improvement in the mobile power resources.

- Non-solar batteries spend 20% of their life in a low-voltage state, which continuously causes battery decay.
- Go Power! solution dropped that number to only 4% on an already damaged battery.
- Go Power! solution put the battery back into a healthy state of charge.

Battery percentage breakdown





Lift gates, pallet jacks and other peripheral equipment can quickly run off the battery bank of a truck. Discharged batteries, in turn, lead to costly downtimes and expensive service calls. Dometic Go Power! solar systems provide a better alternative to recharge the batteries of trucks, vans and construction machinery. No need to invest in a generator, and no need to keep the engine idling. Moreover, battery charging with solar power can extend the battery life from months to years.

Our highly efficient solar panels are designed to meet the tough demands of the commercial vehicle industry. Perfectly matching solar controllers optimize the charging process to prevent overcharging and give batteries a longer life. We also supply perfectly coordinated harnessing and practical accessories for fast and hassle-free installation

Here are the key benefits:

- Battery recharging with solar power minimizes costly downtimes and service calls
- No more jump starting after periods of inactivity
- Extended battery life protects your investment
- Reduced fuel consumption for generators and idling
- Complete solutions with perfectly coordinated components (solar panel, solar charge controller, harnessing, installation accessories)

How a solar energy system works

In principle, a solar energy system consists of one or more solar modules on the roof and a control system fitted in the vehicle interior. When exposed to light, the solar energy system then emits 12 or 24 V direct current via the controller.

This DC current is taken up by the onboard battery until the controller detects that the battery charging is complete and then cuts off the connection. The solar controller ensures that the battery charging is always optimal. It prevents overcharging and ensures that no current can flow back to the solar modules during dark phases.

In other words, a solar energy system basically functions like a conventional battery charger. The difference is that it does not require a mains connection, so the batteries can be charged while driving and when parked.

Anatomy of a Go Power! solar system

Solar module – located somewhere on the top of the vehicle

Solar charge controller – stops the flow of power when the batteries are completely charged

Harnessing – gets the power from the solar module to the batteries

Batteries – holding the power from the solar system

Inverters – generating 230 VAC from battery voltage

THE DOMETIC GO POWER! SOLUTION CUSTOMIZED FROM PROFESSIONAL COMPONENTS

Dometic Go Power! solar solutions consist of professional components specially designed for harsh industrial applications. Ultra-thin, ultra-light, flexible solar modules on the roof team up with the matching solar charge controller, which makes sure that the battery is optimally charged. Regardless of how much solar

power you need, and no matter if you have a 12 or 24 V grid – we can configure a highly efficient solar system to meet your individual requirements. IP68 compliant, fully sealed cabinets (resistant to shock, vibration, dust and water ingress) and the use of water-proof plug connectors make your solutions fit for the rigors of mobile use.

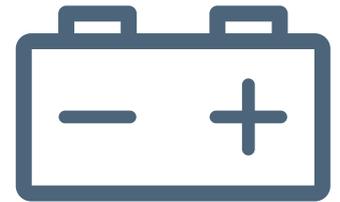
Our complete plug-and-play solution reliably supplies your vehicle with renewable solar power. A sustainable investment that pays back for your business, and protects our climate at the same time.



Solar panel

Charge controller

Batteries



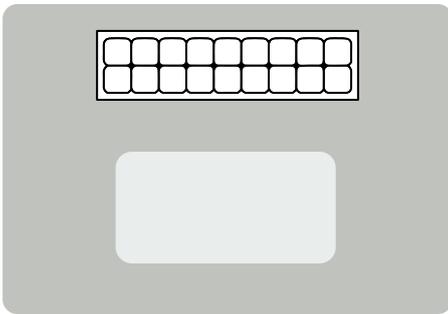
DOMETIC GO POWER! INSTALLATION EXAMPLES



Here are four configuration examples for different truck cabins. Draw inspiration from the solutions created by our engineers. We will gladly assist you in finding the best possible solar panel setup for your application.

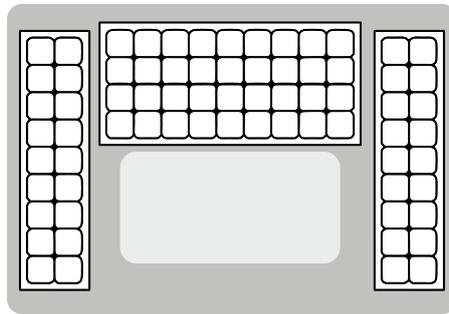
Installation example 1: Installation of 1 x 55Wp solar module

The self-adhesive solar module is attached to the roof along the corrugation. To secure it, self-tapping screws can be screwed into the roof at the front holes. The junction box disappears under the spoiler.



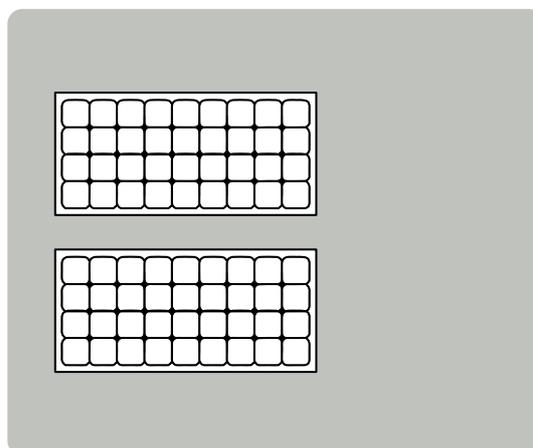
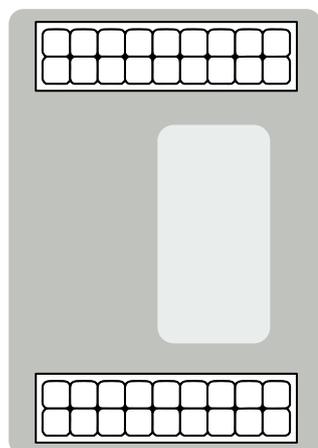
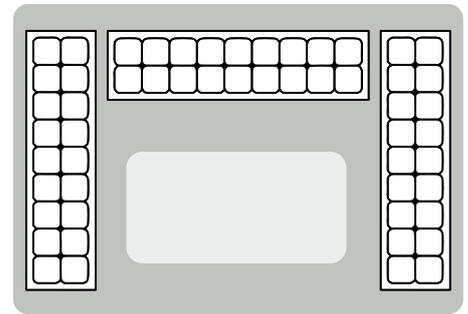
Installation example 2: Installation of 2 x 55Wp plus 1 x 110Wp

This illustration shows the maximum possible output of 220Wp. The 110Wp module can be glued and additionally screwed.



Installation example 3: Installation of 3 x 55Wp

On truck models where the 110Wp module cannot be used due to the corrugated roof surface, a possible alternative is to install 3 x 55Wp modules.



Installation example 4: Installation of 2 x 55Wp plus 2x 110Wp

This illustration shows a possible power of 330Wp.



HOW MUCH POWER DO YOU NEED?

How much power you need depends on the vehicle and the equipment on board. Here is an example to give you an idea of how to calculate the demand:

Go Power! installation example for a truck

Comfort devices on board

Microwave oven:	1,200 W	for 6 min.	= 120 Wh + 10 %	= 132 Wh
Coffee machine:	1,000 W	2 x for 5 min	= 166,66 Wh + 10 %	= 183 Wh
TV set:	40 W	for 5 hours	= 200 Wh + 10 %	= 220 Wh
			486,66 Wh + 10 %	= 535 Wh

Our recommendation:

220 Wp set, sufficient even in half-light conditions (fall/winter)

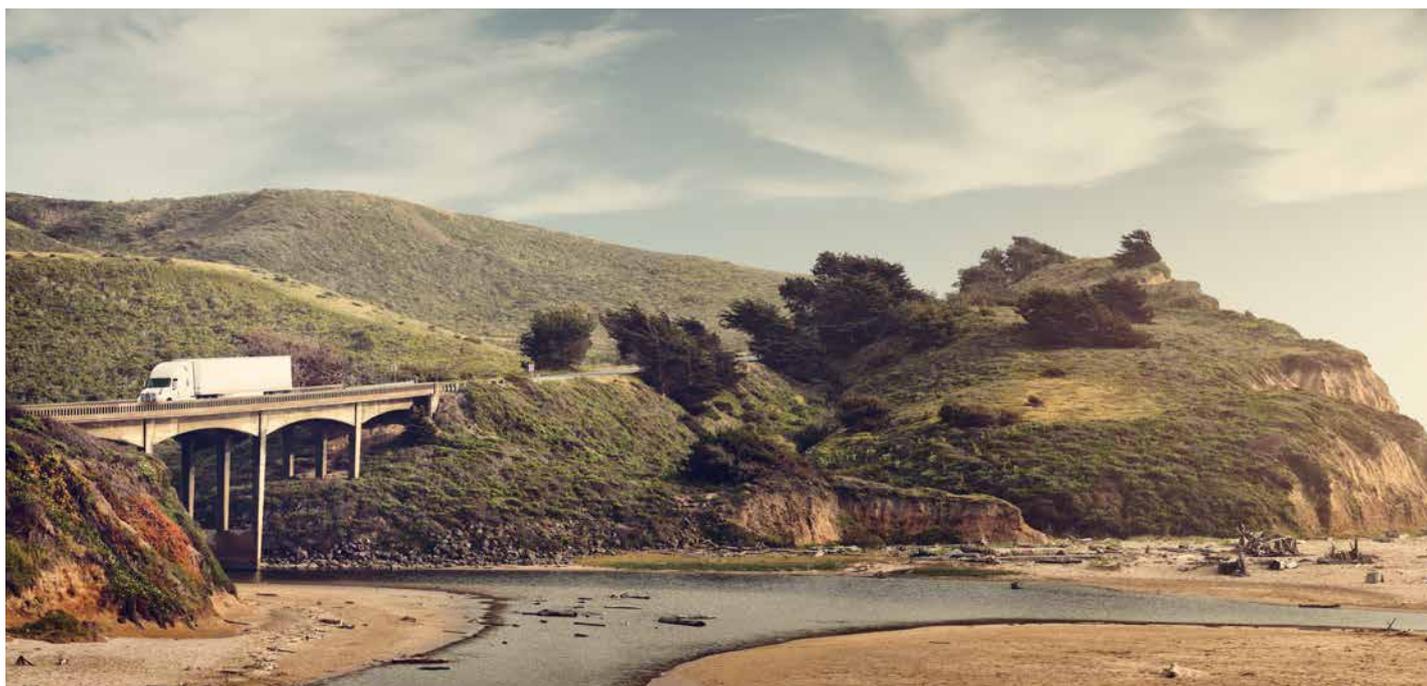
Power demand: 486,6 Wh

Solar: 220 Wp x 4 = 880 Wh / day



Power demand for typical commercial applications

- Inner city delivery (100 W)
- Lift gate / tail lift (200 to 300 W)
- Refrigeration (30 to 50 W)
- Electric pallet jack (300 to 600 W)a
- Telematics (10 to 50 W)
- HVAC (300 W)
- DC appliances powered from the battery (10 to 5000 W)



SOLAR PANELS

FOR BATTERY CHARGING IN COMMERCIAL VEHICLES



Dometic Go Power! FLEX

Solar modules

Avoid costly downtime by recharging the batteries of your work vehicles with solar energy! This flexible solar panel produces more power per square foot than any other flat panel on the market. Lightweight and ultra-thin at a mere 3 mm, it bends up to 30° and thus neatly contours to truck cabins, trailer bodies or curved van roofs. The panel is self-adhesive for ease of installation.

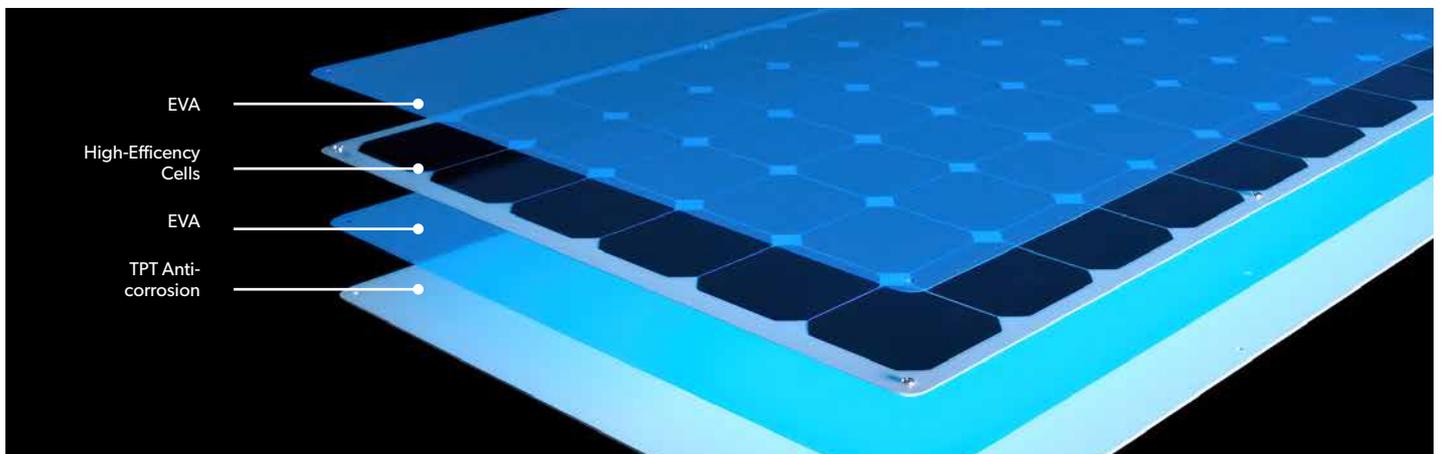
- Highly efficient monocrystalline solar cells for maximum solar yield per area
- Curves up to 30° and neatly contours to truck cabins, trailer bodies or curved van roofs
- Self-adhesive panel is simply attached to the surface
- Ultra-light weight – up to 82% lighter than other solar modules
- Aerodynamic design reduces fuel costs and emissions
- Durable and maintenance-free – 5 years limited power output warranty
- Industry-standard MC4 quick-connect cables (work in series or in parallel)

Dometic Go Power! FLEX

FLEX Solar Modules



	GP-FLEX-55	GP-FLEX-110
Ref. No.	9620013480	9620013481
Rated power (Pm)	55 W	110 W
Maximum power voltage (Vmp)	17.6 V	17.6 V
Maximum power current (Imp)	2.88 A	6.31 A
Open circuit voltage (Voc)	19.0 V	22.08 V
Short circuit current (Isc)	3.04 A	6.60 A
Current coefficient	2.2 mA / °C	2.2 mA / °C
Cell type	Monocrystalline	Monocrystalline
Solar cell efficiency	21 %	21 %
Weight	1.6 lb (0.72 kg)	2.9 lb (1.35 kg)
Dimensions	1140 x 286 x 3 mm	1134 x 544 x 3 mm
Connection cable length	330 mm	330 mm



CHARGING TECHNOLOGY

If you want to charge your batteries with solar power, the output voltage of the modules must be adjusted by suitable charging technology.

There are various systems available in the market, e.g. simple PWM charge controllers and more complex ones using MPPT technology (Multiple Power Point Tracking). In simple words, the MPPT controller determines the power curve of the modules and adjusts

the voltage and current to the maximum of this power curve. Efficiency is paramount in mobile applications, so we use MPPT technology exclusively. Temperature control and specially adapted charging characteristics for different types of batteries are a matter of course for us. With a Dometic solution, you can be sure that you are using the right technology for your application.

Battery charging under control

Our high-performance solar charge controllers are designed for harsh industrial environments. They ensure optimal battery charging and maximum yield from all types of solar systems. Robust, fully-sealed housings (IP68) resist vibration as well as dust and water ingress.



Dometic Go Power! MPPT 100-30

Solar charge controller, 100V/30A, MPPT

- Fully-sealed housing (IP68) – shock-resistant, vibration-resistant, water- and dust-proof
- Up to 98% power conversion efficiency with MPPT technology (Maximum Power Point Tracking) Works with 12 or 24 V batteries
- Easy to install with water-proof MC4 solar connectors and Delphi battery connectors
- Optimal charging extends the battery life from months to years
- Compatible with all battery types, including lithium-ion batteries
- 5-year warranty
- Plug & play - ready for connection



Dometic Go Power! BOOST 50-12

Solar charge controller, 50V/12A, MPPT

- Fully-sealed housing (IP68) – shock-resistant, vibration-resistant, water- and dust-proof
- Up to 98% power conversion efficiency with MPPT technology (Maximum Power Point Tracking) Works with 24, 36 or 48 V batteries
- Easy to install with water-proof MC4 solar connectors and Delphi battery connectors
- Optimal charging extends the battery life from months to years
- Compatible with all battery types, including lithium-ion batteries
- 5-year warranty
- Plug & play - ready for connection



Dometic Go Power!

Solar charge controller

		
	MPPT 100-30	GP-BOOST-50/12
Ref. no.	9620013484	9620013482
Nominal system voltage	12/24 V (automatic detection)	24/36/48 V (automatic detection)
Maximum charge current	30 A	12 A
Battery voltage range	9 – 15.5 V (12-V-System); 18 – 31 V (24-V-System)	9 – 60 V (12-V-System); 18 – 31 V (24-V-System)
Trickle charge	13.8/27.6 V (25 °C)	27.6/41.4/55.2 V (25 °C)
Main charge	14.4/28.8 V (25 °C) 0.5 h daily	28.8/44.2/57.6 V (25 °C) 0.5 h daily
Boost charge	14.4/28.8 V (25 °C) at 2 h activation: battery voltage < 12.3/24.6 V	28.8/44.2/57.6 V (25 °C) at 2 h activation: battery voltage < 24.6/36.9/49.2 V
Operating temperature	-40 to 60 °C	-40 to +60 °C
Dimensions (W × H × D), in mm	128 × 152 × 43	149 × 89 × 42
Weight	1300 g	750 g
IP protection class	IP68	IP68
Battery type	Lead acid (gel, AGM, liquid electrolyte), LiFePO4	Lead acid (gel, AGM, liquid electrolyte), LiFePO4



Dometic Go Power! FLEX AST

Multi-purpose adhesive tape

- Simply secure the cables in place with adhesive tape
- No visible cables and a tight seal all around the panel

Dometic Go Power! FLEX AST 5-450 /
Multi-purpose adhesive tape, 5 cm x 450 cm /
Ref. no. 9620013490

Dometic Go Power! FLEX AST 10-300 /
Multi-purpose adhesive tape, 10 cm x 300 cm /
Ref. no. 9620013491



Dometic Go Power! MPPT 100-30 BWH

Battery wiring harness for Dometic Go Power! MPPT 100-30

- Easy to install connection between the solar controller and the battery
- Withstands the harshest industrial environments
- Designed to fit the Dometic Go Power! MPPT 100-30 solar charge controller

Ref. no. 9620013485



Dometic Go Power! BOOST 50-12 BWH

Battery wiring harness for Dometic Go Power! BOOST 50-12

- Easy to install connection between the solar controller and the battery
- Withstands the harshest industrial environments
- Designed to fit the Dometic Go Power! BOOST 50-12 solar charge controller

Ref. no. 9620013483



Dometic Go Power! FLEX EC

Extension cable for solar modules

- Simply connect several solar modules in series
- Industry-standard MC4 quick connectors facilitate installation

Dometic Go Power! FLEX EC 180

180 cm / Ref. no. 9620013488

Dometic Go Power! FLEX EC 90

90 cm / Ref. no. 9620013489



Dometic Go Power! FLEX SWH

Solar wire harness with orange sheathing

- Complies with the ECR R100.2 directive for approval of electric road vehicles
- Mandatory for solar installations on electric vehicles when voltages exceed 60VDC or 30VAC
- Orange sheathing alerts workshop staff of potential dangers
- Industry-standard MC4 quick connectors facilitate installation
- Fits Dometic Go Power! FLEX solar panels

Dometic Go Power! FLEX SWH 610 /

Solar wire harness 610 cm with orange sheathing / Ref. no. 9620013486

Dometic Go Power! FLEX SWH 1220 /

Solar wire harness 1,220 cm with orange sheathing / Ref. no. 9620013487



Dometic Go Power! EBC-M2F / F2M

Expansion branch connector, 1M x 2F or 1F x 2M

- Interlocking connectors for easy parallel wiring of solar panels
- Compatible with all Go Power! Solar Flex and Rigid panels
- Ensures safe parallel or serial-parallel connection of PV-modules

Dometic Go Power! EBC-M2F / Ref. no. 9620015803

Dometic Go Power! EBC-F2M / Ref. no. 9620015804



Dometic Go Power! RBD

Reverse blocking diode

- Prevents reverse current flow in shaded panels for optimal efficiency
- Compatible with all Go Power! Solar kits, easy to install
- Protects cable connections, eliminates leaks for system longevity

Ref. no. 9620015805



Dometic Go Power! CEP

Cable entry plate

- Ensures tidy wire configuration, flexibility in rooftop installation
- Run wires close to the battery for efficient charging, minimal loss
- Compatible with industry-standard solar connector cables (SC)

Ref. no. 9620015806



Dometic Go Power! MC4

MC4 connector, F or M

- MULTILAM technology for enduring stability and minimal loss
- Supports cross-sections up to 10 mm² for diverse applications
- Protection classes (IP66 and IP68) for guaranteed maximum tightness

Dometic Go Power! MC4-F - female / Ref. no. 9620015807

Dometic Go Power! MC4-M - male / Ref. no. 9620015808

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