








Made in Holland

# OX Power CS series

“Combined System” battery solution



-  High energy density
-  Modular solution
-  Long battery life
-  Small series possible
-  Plug and play

### **The battery for machines that work long hours.**

Your latest generation of machines requires a sustainable power source, a battery system that contributes to a cleaner world. That is OX Power. We develop and supply battery systems that are both powerful and compact. That you can integrate quickly. And dimensioned for a hard day's work.

With the OX Power CS series we offer a battery system that is flexible to configure based on the requirements. System voltages from 80Vdc up to 1000Vdc.

MAKE THINGS WORK



### CS Power Distribution Unit (PDU)

This unit contains all required safety components to build one series string like: Master Battery Management System (BMS), contactors, precharge circuit, fuses, DC-connections, Communication interfaces etc. The unit will be configured for your needs.

When multiple series strings are placed in parallel it requires a PDU for each string to ensure safety and performance.



### CS battery module

The CS battery module is selected depending on the required voltage, capacity and available space. String voltage can be build from 80Vdc up to 1000Vdc.



#### Construction equipment

More and more is being demanded of your (new range of) machines. Emission free, sustainable and still need to work long hours. No matter how big your machine, OX Power can provide a battery system. Charged with smart solutions and easy to integrate.



#### Energy storage systems

The energy transition requires scalable storage systems with multiple charging possibilities, DC and/or AC. OX Power batteries are safe, have high energy density and are easy to install. Frame solutions are also possible.



#### Marine

Silent, safe and sustainable energy storage systems is what is needed in the marine sector. With the CS series there is always a configuration that fits in the available space with the multiple battery module types. Without complex cooling systems.

Battery module type	CS1P16S	CS2P12S	CS1P24S	CS2P22S
<b>Electrical data</b>				
Nominal voltage	51.2V	38.4V	76.8V	70.4V
Maximum voltage	58.4V	43.8V	87.6V	80.3V
Minimum voltage	40V	32.4V	64.8V	59.4V
Nominal energy	8.35 kWh	12.51 kWh	12.51 kWh	22.95 kWh
Capacity*	163Ah			
Chemical composition battery cell	Lithium Iron Phosphate (LiFePO4)			
Discharge temperature	-30°C up to 60°C			
Charge temperature	0°C up to 60°C			
Communication (modules)	Iso-SPI			
Communication (PDU)	CAN-bus			
Advised D.o.D. (Depth of Discharge)	90%			
Cycle Life (80% of nominal capacity)**	≥4000 cycli (@25°C, 1C/1C en 90% D.o.D.)			
<b>Mechanical data</b>				
Dimensions (L x B x H) in mm	455 x 388 x 280	611 x 388 x 280	611 x 388 x 280	999 x 388 x 280
Weight	62kg	92kg	92kg	167kg
Protection class	IP67			

\*Charge and discharge currents depending on the design of the Power Distribution Unit

\*\*Depending on individual user profile, especially D.o.D, temperature and power

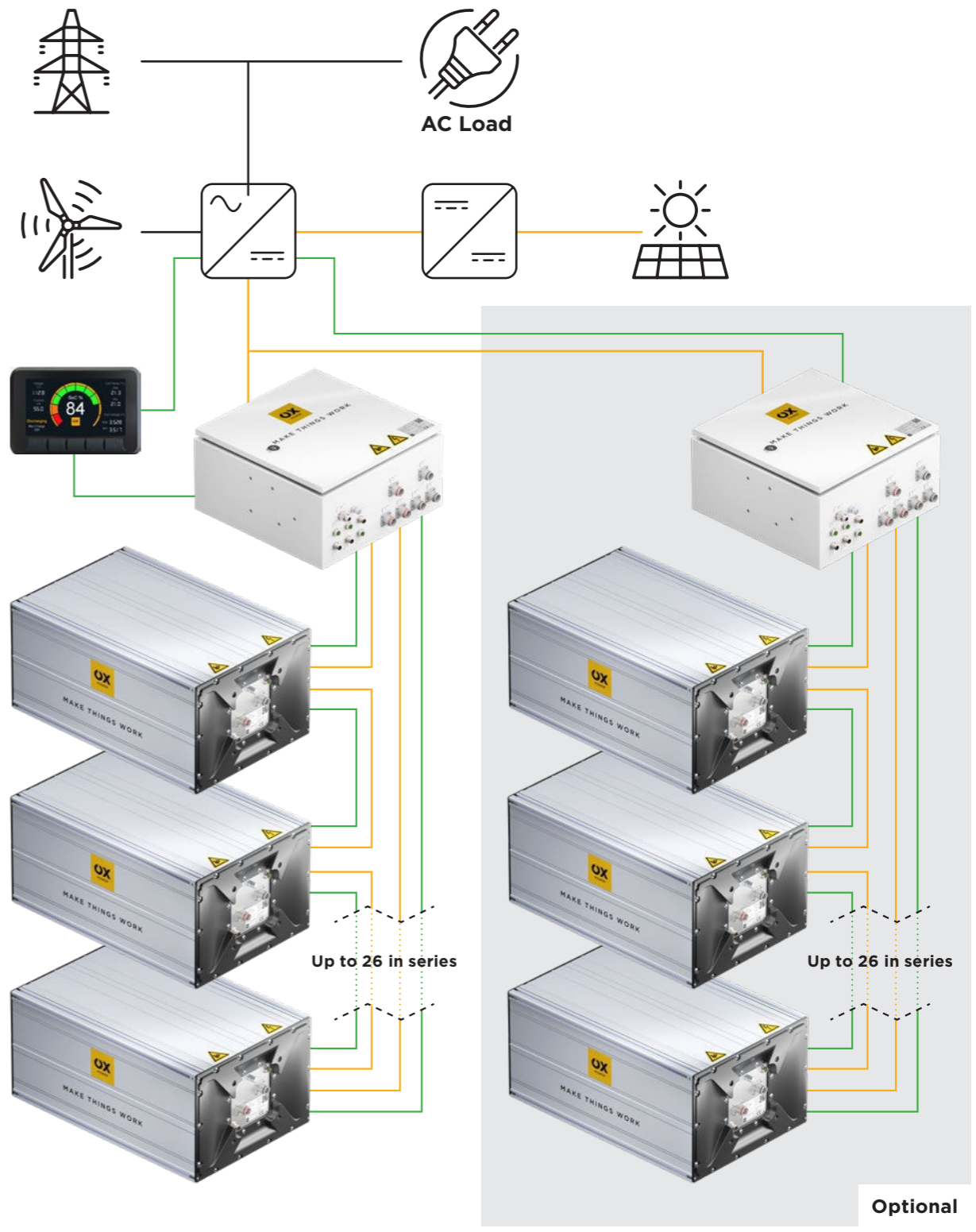
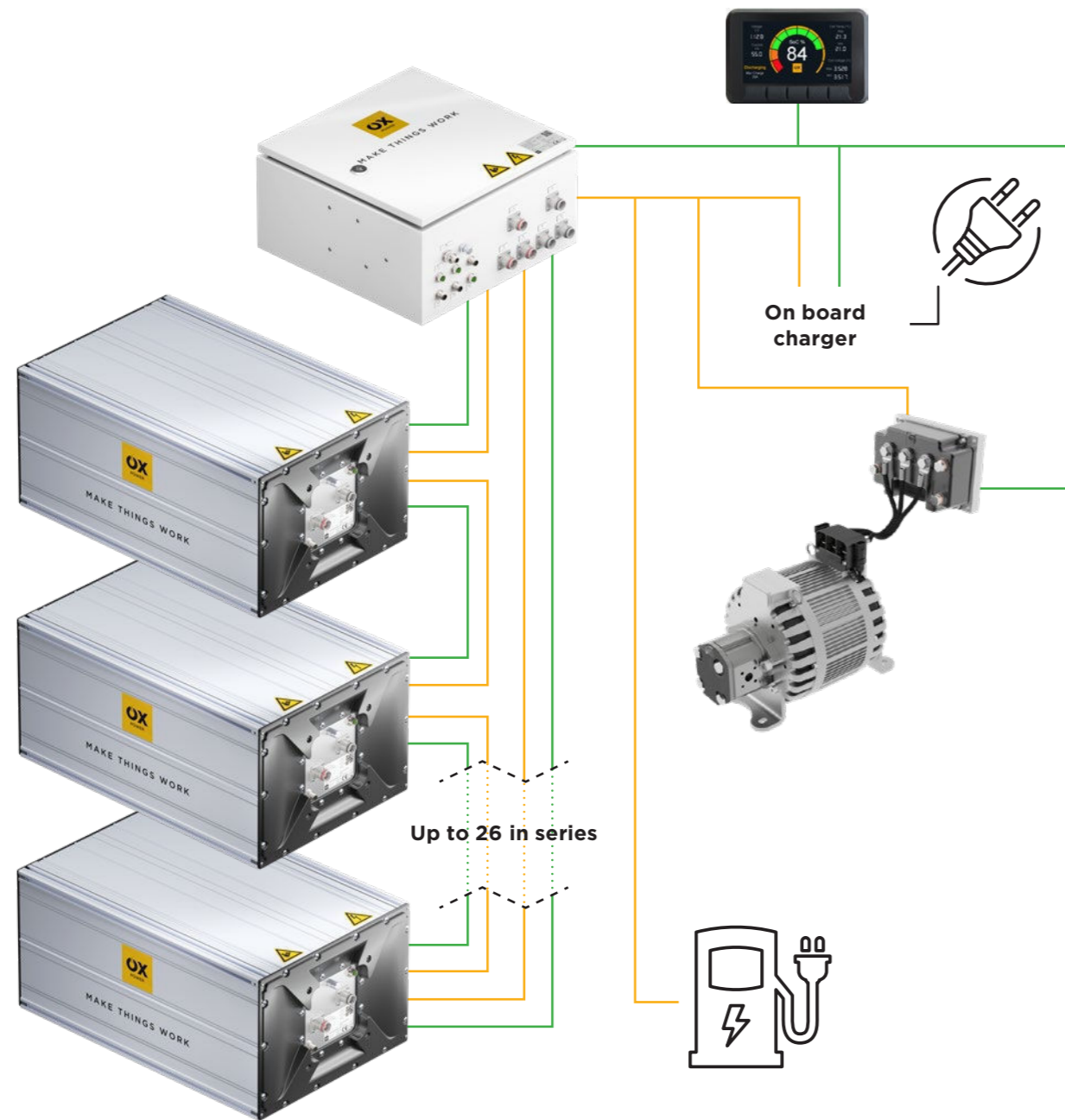
#### Key features

- High voltage interlock (HVIL)
- Current, voltage and temperature monitoring
- Flexible installation options
- Power Distribution Unit with built-in safety components and functions

#### Configuration

- Up to 26 modules in series
- CAN-bus (J1939, CANopen)

# System examples



Optional

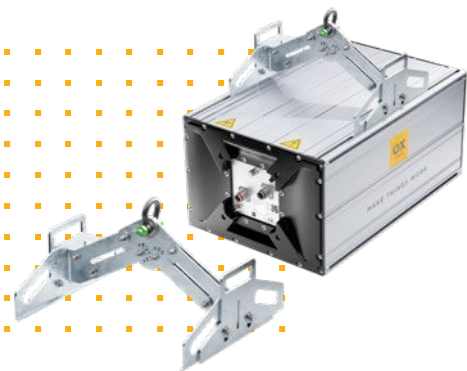


# System accessories

To make your system complete OX Power can provide multiple accessories



On board chargers, validated and tested for integration with OX Power battery systems



Certified lifting tools for safe and easy lifting



Displays to visualize battery system data for the users

# How do we work

## ORIENTATION

Based on the requirements we offer a suitable solution. Are the requirements not known yet? No problem, OX Power will assist to get them. Based on our experience we do not only look at the battery itself but at the complete system. To make sure that it will work.

## PROTOTYPE

Building a prototype could be very complex. OX Power provides the knowledge and support to help you out. With the short lead times, flexible battery configuration and easy communication setup we make sure that your system is up and running within a short period.

## PRODUCTION

No matter if it is a small or large series with the just-in-time delivery the production will go smooth and efficient. We know your market demands speed. OX Power is your partner that you can count on.

## AFTERSALES

We provide trainings for your team or dealers. This way you can be sure of professionals with sufficient knowledge and competences. During the production and/or maintenance of your systems you may have questions. Technical questions. Our battery specialists are here to advise and assist you. That is also part of our promise: MAKE THINGS WORK.



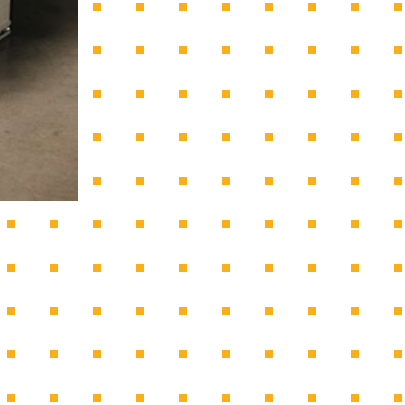


# Take the next step

Curious how our battery systems contribute to the quality of your products? Or is your business ready to take the next step in the electrification of your models?

**Get in touch.**

We listen to your needs and are happy to provide you with insight into the possibilities and opportunities. Send a message or call for more information or to schedule a introduction meeting.



MAKE THINGS WORK