

# POWER SOLUTIONS FOR UNDERWATER VEHICLES AND SUBSEA EQUIPMENT

# FIVE BATTERY VARIATIONS DESIGNED TO SERVE A WEALTH OF APPLICATIONS

DESIGNED TO WITHSTAND THE HARSH CONDITIONS OF THE SEABED



## Higher Performance

- 4X Longer Run Time Endurance (vs SLA)
- 100% Condition Based Monitoring
- High Current, High Power Versions

## Lower Risk

- ABS Certified & 2nd Generation Learned
- 6000M Pressure Tolerant Tested
- UN 38.3 Certified and Safety Tested
- ISO 9001 Quality Manufactured
  - Electronic Test Datasheets

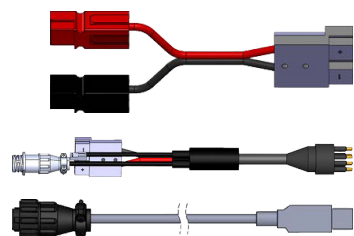
## Patented Battery Management System

- Automatic Cell Balancing
- Automatic Module-to-Module Balancing
- Continuous, Redundant Safety Protection
- Ability to Balance High Capacity Packs
- Subsea Application Proven

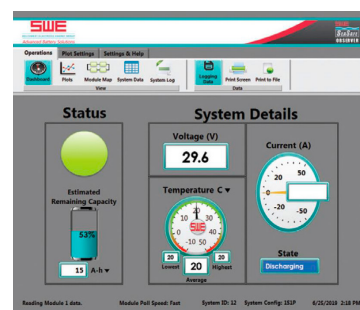
## Chargers



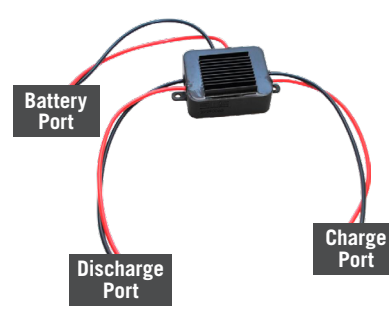
## Charger Cables



## Observer Software



## Diode OR-ing (DOM)



## THE FULL PRODUCT LINE-UP



USE DIRECT IN WATER



USE IN PBOF CASE

USE IN 1 ATM PV

- 24V, 30V and 37V Versions
- Battery System Sizing Flexibility
  - Connect in Series - System Voltage Increments
  - Connect in Parallel - System Endurance Capacity or Power Increments
- Three Versions for Best Battery Application Fit
  - Direct in Water - Pressure Tolerant - SeaSafe® Direct
  - In Oil Filled Case - Pressure Tolerant - SeaSafe® II
  - In Pressure Vessel - 1 Atmosphere - SeaSafe® Endurance

# SWE SEASAFE® BATTERIES TECHNICAL SPECIFICATIONS

## CONTACT US TO DISCUSS YOUR REQUIREMENTS:

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SWE SeaSafe® - Smart Subsea Battery Modules													PRELIMINARY			PRELIMINARY		
SPEC	FEATURE	UNIT		SeaSafe® II - Daisy Chain			SeaSafe® Direct			SeaSafe® Direct - 40 Amp			SeaSafe® Direct - Low Profile			SeaSafe® Endurance		
USE CASE	PRESSURE TOLERANT		<6,000M	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	
	IN CASE, DIRECT, OR PV			USE IN PBOF CASE IN OIL			USE DIRECT IN WATER			USE DIRECT IN WATER			USE DIRECT IN WATER			USE IN 1 ATM PV		
MODULE SIZE				24V	30V	37V	24V	30V	37V	24V	30V	37V	24V	30V	37V	24V	30V	37V
PART NUMBER		Main		46792428	46793028	46793728	46792428	46793028	46793728	46792428	46793028	46793728	46792428	46793028	46793728	77192445	77193045	77193745
		Ext		.3412	.3412	.3412	.3402	.3402	.3402	.3442	.3442	.3442	.3405	.3405	.3405	.3352	.3352	.3352
CELLS IN SERIES				7	8	10	7	8	10	7	8	10	7	8	10	7	8	10
VOLTAGE	OCV	VDC	NOM	25.9	29.6	37.0	25.9	29.6	37.0	25.9	29.6	37.0	25.9	29.6	37.0	25.9	29.6	37.0
	OCV @ 93% SOC	VDC	MAX	28.6	32.7	40.9	28.6	32.7	40.9	28.6	32.7	40.9	28.6	32.7	40.9	28.6	32.7	40.9
	OCV	VDC	MIN	21.0	24.0	30.0	21.0	24.0	30.0	21.0	24.0	30.0	21.0	24.0	30.0	21.0	24.0	30.0
CURRENT	DISCHARGE (CONTINUOUS)	A	MAX	40	40	40	10	10	10	40	40	40	20	20	20	40	40	40
	DISCHARGE (60 usec)	A	MAX	90	90	90	54	54	54	90	90	90	54	54	54	90	90	90
	CHARGE	A	MAX	40	40	40	10	10	10	40	40	40	20	20	20	40	40	40
POWER	DISCHARGE (CONTINUOUS)	W	MAX	1036	1184	1480	259	296	370	1036	1184	1480	518	592	740	1036	1184	1480
CAPACITY	93%/100% SOC	Ah	NOM	28/30	28/30	28/30	28/30	28/30	28/30	28/30	28/30	28/30	28/30	28/30	28/30	42/49	42/49	42/49
	93%/100% SOC	Wh	NOM	725/777	829/888	1036/1110	725/777	829/888	1036/1110	725/777	829/888	1036/1110	725/777	829/888	1036/1110	1088/1269	1243/1450	1554/1813
TEMPERATURE	DISCHARGE	°C	MIN/MAX	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60	-20/+60
	CHARGE	°C	MIN/MAX	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45	0/+45

## CONFIGURATIONS AND FEATURES FOR A WIDE VARIETY OF APPLICATIONS

CHOOSE YOUR PREFERRED SEASAFE BATTERY FOR YOUR APPLICATION					
	AUV/UV	MUV	ROV	OIL & GAS	OCEANOGRAPHY
SeaSafe® II	●	●		●	●
SeaSafe® Direct	●	●	●		●
SeaSafe® Direct (40 amp)	●		●	●	
SeaSafe® Direct (Low profile)	●	●	●	●	●
SeaSafe® Endurance	●			●	●

