

# トルキード電動システムについて

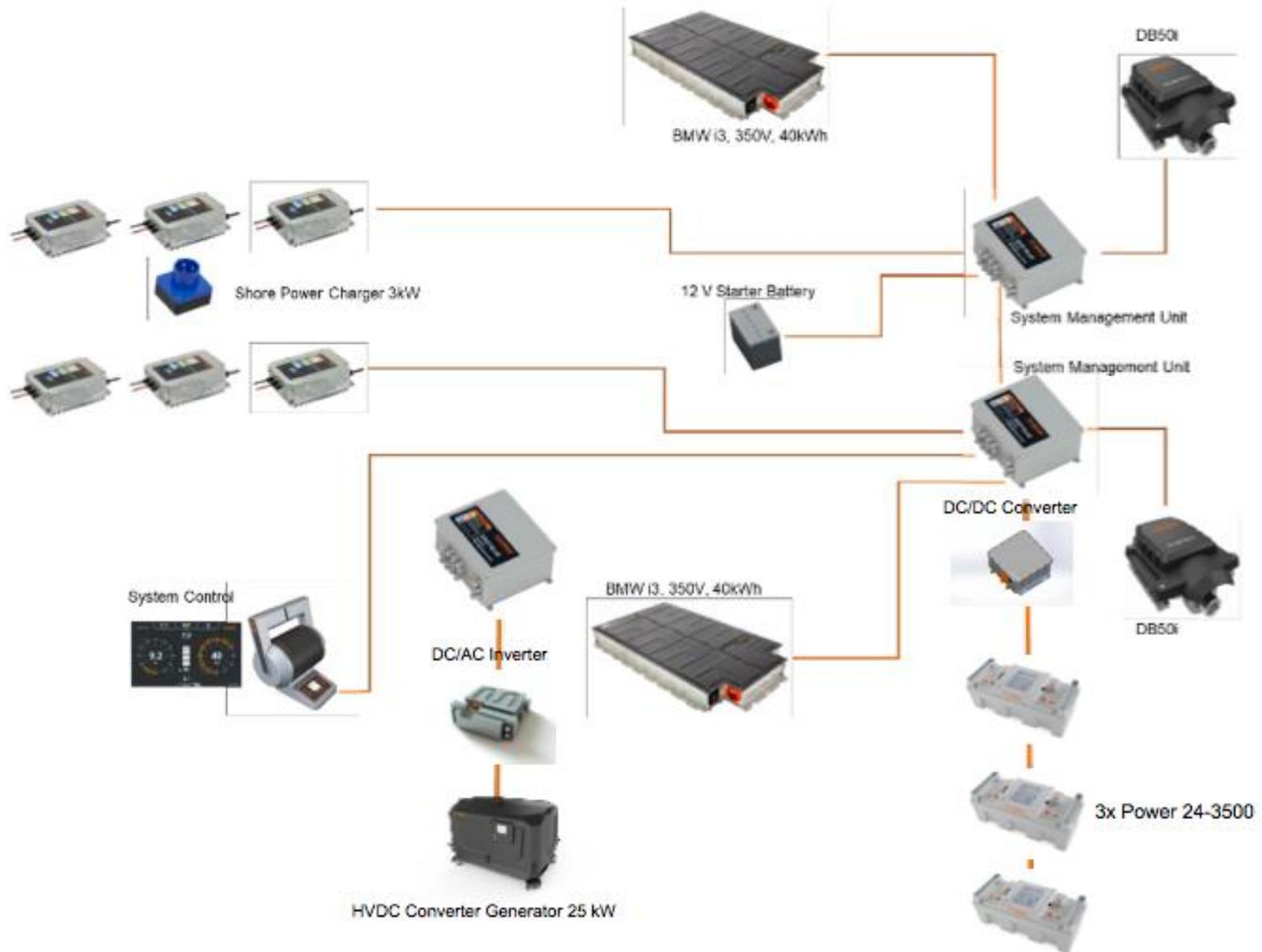


**JCI Approval for Torqeedo DEEP BLUE**

**INSULATION TESTING. MARCH 2020**

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# 導入例 (システム概要図): Motor x 2, Battery x 2



# モーター (DB50i 1400)

## \*PM型同期モーター

	DB 40 RL / RXL	DB 80 RL / RXL	DB 40 SAILDRIVE	DB 40i 1800 / 1400	DB 80i 1800 / 1400	DB 150i 900
El. input power continuous in kW	27.6	55.1	27.6	27.6	55.1	100 kW
El. input power peak (30 sec) in kW	-	66.0	-	-	63.4 / 66.0	-
Max. propulsive power in kW	16.2	32.4	16.2	> 16.2	> 32.4	tbd
Shaft power, continuous, in kW	not specified	not specified	24.4	25.1	50.3 / 50.3	92 kW
Shaft power, peak (30 sec), in kW	-	not specified	-	-	57.8 / 62.8	-
Maximum torque (continuous), in Nm	not specified	not specified	180	280/350	280/350	950
Maximum overall efficiency in %	54	54	54	> 54	> 54	tbd
Motor weight only, including power electronics in kg	139 (L) 145 (XL)	139 (L) 145 (XL)	125 (L)	80	80	470
Standard propeller	v50/p50k	v50/p50k	-	-	-	-
Maximum propeller speed in rpm	2'400	2'400	1'360 (2'350)	1'800 / 1'400	1'800 / 1'400	900
Propeller and shaft delivery	Included	included	Prop not included	Prop and Shaft not included	Prop and Shaft not included	Prop and Shaft not included
Steering	Standard remote	Standard remote	-	-	-	-
Tilting device & Trim Device	Electric from throttle	Electric from throttle	-	-	-	-
Shaft length / shaft diameter options	L: 20" / 51 cm XL: 25" / 63.5 cm	L: 20" / 51 cm XL: 25" / 63.5 cm (XL)	20" / 51 cm	30, 35, 40mm 1 1/8, 1 1/4 "	30, 35, 40mm 1 1/8, 1 1/4 "	40,45,50,55, 60,65,70 mm 1 1/4, 2 1/4, 2 1/2, 2"
Liquid Cooling	Sea Water 7 l/min, max. 32°C	Sea Water 7 l/min, max. 32°C	Sea Water 7 l/min, max. 32°C	Sea Water 7 l/min, max. 32°C	Sea Water 7 l/min, max. 32°C	Sea Water 30 l/min, max. 32°C

# コンバーター

## 6.4.1 Bi-Directional DC/DC CONVERTER 24V/350V 2.8 kW

The bi-directional DC/DC converter provides an elegant solution to connect the high-voltage system with a 24V low voltage system. It allows to easily move energy between the two voltage systems.

### DIMENSIONS AND SPECIFICATIONS

Full galvanic separation

Liquid cooling required

Parameter	Note	Value	Unit
Input Voltage		325...390	V DC
Output Voltage		21...29	V DC
Continuous Power	Conversion performance	2.8	kW
Peak Power		3.5	kW
Efficiency		96	%
Weight		5	kg
Dimensions			
Length		350	mm
Width		150	mm
Height		70	mm
Liquid Cooling	Max. 65°C	4...10	l/min
Protection Rating	(waterproof)	IP65	
Digital Communication		CAN bus	
Cable Length 24V	Maximum	2	m
Cable Length 350V	Maximum	3	m

# インバーター

## 6.1.1 High-Voltage DC-AC Inverter 6 kW

AC Power supply for on board supply of hotel loads and all kinds of appliances.

### DIMENSIONS AND SPECIFICATIONS

Maximum 6 paralleled units possible

Full galvanic isolation

Liquid cooling required

Parameter	Note	Value	Unit
Input Voltage	Range 325...390	345	V DC
Input Current	Max 29 A	25	A
Output Voltage	Split phase	2x120 / 1x240	V AC
Output Frequency	Selectable	50 or 60	Hz
Output Power	25 A AC	6 kW	V DC
Output Current		25	A AC
Efficiency	345V input, 4..6 kW output	92	%
Weight		25	kg
Dimensions	Length	375	mm
	Width	375	mm
	Height	155	mm
Liquid Cooling	Max. 65°C	1.5...3	l/min
Protection Rating	(waterproof)	IP67	
Digital Communication		CAN bus	
Output Cable Length	AC 120V/240V	3	m

## バッテリー(BMW i3)

Deep Blue Battery BMW i3

Nominal voltage: 360 V

Capacity: 40.0 kWh

Weight: 278 kg

Dimensions: 1660 x 964 x 174 mm



## まとめ

### Basic data

	Voltage (V)	Watt (KW)	Input	Output	Capacity in KWh	Remark
12 V バッテリー	12 V	0.4 KW	DC	DC	0.3	Standard Lead Acid
システムマネージメント	12 V	approx 0.1 KW	DC	NA	NA	System Controller
BMW i3 バッテリー	360 V	55 KW	DC	DC	40	Automotive Li Ion battery
モーター DB50i	360 V	50 KW	DC	NA	NA	Brushless, PMSM
インバーター	345V	6KW	DC	AC	NA	NA
コンバーター	325V- 390V	2.8KW	DC	DC	3.5	NA