

# AKA Closed Bus Technology

Pioneering Marine Power Solutions



AKA Energy Systems is a global leader in developing and deploying DP closed bus systems. Our commitment to innovation is demonstrated through our milestone of being the first company to successfully conduct live short-circuit testing on DP3 vessels while operating in closed bus.

## Closed Bus Operation

To ensure the smooth operation of closed bus technology, it's crucial to select the right solution. AKA provides a suite of solutions for marine power plants, including:

- Advanced Generator Protection (AGP)
- Intelligent Power Distribution (IPD)
- Advanced Thruster Control and Protection (ATCAP)
- System Analysis and Integration (From Design to Ship Operation)
- Live Short Circuit Testing to Meet Class Requirements .

## Advantages of Closed Bus Technology

- Enhanced Reliability
- Extended Operational Hours
- Reduced Fuel Consumption
- Environmental Sustainability
- Lower Maintenance Expenses

## Ideal Settings for Closed Bus Technology

Closed bus operation proves advantageous in multi-bus systems, especially when numerous operations lead to lightly loaded diesel generators in open bus configuration. This technology finds its perfect fit in a variety of vessels, including:

- OSV/PSV/DSV/OCV
- Cruise Ships
- Ice Breakers
- Work Boats
- Pipe Laying Vessels
- Drillships and Semi-submersibles
- Research and Science Vessels
- Navy Vessels
- Heavy Lift Vessels
- Cable Laying Vessels



## Why Choose AKA:

### Extensive Expertise:

With over 35 retrofit projects from open bus to closed bus and more than seven independent live short circuit tests, AKA boasts unmatched experience.

### Simplicity and Robustness:

Our closed bus technology is globally recognized for its simplicity and robustness.

### Class Compliance:

AKA's integrated system complies with DNV class requirements, offering a blackout-to-recovery period of approximately 20 seconds.

### Long-Term Performance:

Thanks to our unique autonomous design topology, AKA guarantees sustained performance throughout a vessel's lifecycle.

### Comprehensive Solutions:

Whether you need a full power and propulsion system, hardware integration from multiple suppliers, or a retrofit of the AKA system, we have you covered.

### Proven Track Record:

AKA boasts over 1 GW of closed bus and closed bus installations worldwide, spanning over 40 MV of power plants.

# AKA DP CLOSED BUS SOLUTIONS

VESSEL NAME	DEEPWATER THALASSA	DEEPWATER CONQUEROR	TRANSOCEAN SPITSBERGEN	DHURYBHAJ DEEPWATER KG2	OCEAN BLACKLION	LA MURALLA IV	WEST SATURN	DEEPWATER ATLAS	DEEPWATER TITAN	STENA DON	TURKISH PETROLEUM FATIH
SHIP TYPE	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship	Ultra Deepwater Drill Ship
SHIP OWNER	Transocean	Transocean	Transocean	Transocean	Diamond Offshore	GrupoR	Seadrill	Transocean	Transocean	Stena Drilling	Turkish Petroleum Corporation
YEAR: BUILT	2015	2016	2009	2010	2015	2012	2014	2022	2023	2024	2024
YEAR: RETROFIT	-	-	2019	2020	2020	2021	2022	-	-	-	-
CLASSIFICATION	DNV	DNV	DNV	ABS	ABS	DNV	ABS	DNV GL	DNV GL	DNV	DNV
MAIN POWER (KW)	6 x 6750 kW HHI	6 x 6750 kW HHI	8 Rolls Royce, 7,066	6 x 7.2 MW W16V32	6 x 4.5 MW Himsen	8 x Caterpillar	6 x Himsen 10,500 hp	6 x 7200 kW	6 x 7680 Kw	9 X 16V24 Generators	8 x 4 Cycle Turbocharged
EMERGENCY POWER (KW)	1 x 2000 kW	1 x 2000 kW	2 x main 2 x separate	1x 1,900 KW Cummins	1900 kW Cummins	1 x MAN 450 kW	1 x MTU 2,100 hp	1 x 4-stroke Cummins	1x 1,900 kW Cummins	Integrated in Main Power	1 x 1,500 EkW PMS
POWER DISTRIBUTION	AKA	AKA	Kongsberg ICS	ABB	2 x 9,000 kW Himsen V	8 x 4,700 kW	6 x ABB 9,200 hp	3 x 11 kV AC with AGP	3 x 11 kV AC with AGP	-	B&W/MAN 6 x 4,300 E kW
THRUSTERS	6 x FPP Azimuth (GE)	6 x FPP Azimuth (GE)	8 x RR Aquamaste	6 x Azimuth (RR)	6 x 5,000 kW Azimuth	8 x 3,500 kW	6 x Rolls Royce 6,000 hp	6 RR 5,500 kW	6 RR 5,500 kW	6 X Rolls Royce	6 x 5.0 MW thrusters
DP SYSTEM	DP3	DP3	DP3	DP3	K-POS	DP3	DP3	DP3	DP3	DP3	DP3
CLOSE RING SYSTEM	Built In	Built In	Retrofitted	AKA Integrated	AKA Integrated	AKA Integrated	AKA Integrated	AKA Integrated	AKA Integrated	AKA Integrated	AKA Integrated
SHORT CIRCUIT TEST	Done By AKA	Done By AKA	Not Required	Done By AKA	Done By AKA	Done By AKA	Done By AKA	Done By AKA	Done By AKA	Done By AKA	Done By AKA
AKA SUPPLIED EQUIPMENT	AGP	•	•	•	•	•	•	•	•	•	•
	ATCAP	•	•	•		•		•	•	•	•
	IPD	•	•					•	•		
	UPS	•	•				•	•	•		
	HDF	•	•					•	•		
	ESS	•	•					•	•		
	DOCUMENT	•	•					•	•		
	IPV	•	•				•	•	•		
	MV THRUSTER DRIVE										
	AKA INSIGHTS	•	•	•	•			•	•	•	
ADDITIONAL SUPPLY			Hybrid Battery Thrusters							Utility Trans. Pre-Mag	

AGP: Advanced Generator Protection System • ATCAP: Advanced Thruster Control and Protection System • IPD: Intelligent Power Distribution System  
 UPS: Uninterruptible Power Supply • HDF: Hybrid Drill Floor • ESS: Energy Storage System • IPV: Independent Process Validation

AKA closed bus technology is the simplest and most robust system in the world



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