Base Load Power Hub (BLPH)

Technical Data Sheet (TDS) for Navigation Aid System

Document Number: 123A90-DDL-EL-DS-20088

Document Class: 2

03	13/01/2025	Accepted For Construction (AFC)	VRA	AMA	DLO
02	27/03/2024	Accepted For Construction (AFC)	VRA	AMA	DLO
01	07/02/2024	Issue for Review (IFR)	VRA	AMA	DLO
00	16/01/2024	Issue for Review (IFR)	KDS	FMA/AMA	FPA/DLO
Rev.	Date	Description	Prepared	Reviewed	Approved

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Table of Contents

SH.	DESCRIPTION	REVISIONS							
		00	01	02	03				
1	Cover	X	X	X	X				
2	Table of Contents	X	X	X	X				
3	Revision / Change Log	X	X	X	X				
4	References	X	X	X					
5	Technical Requirements	X	X	X					
17	Supplement	X	X						

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Revision / Change Log

Rev.	Description
00	ISSUE FOR REVIEW (IFR)
01	ISSUE FOR REVIEW (IFR)
02	ACCEPTED FOR CONSTRUCTION (AFC)
03	ACCEPTED FOR CONSTRUCTION (AFC)

HOLDS LIST

No.	Description
1.	
2.	
3.	
4.	

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

REFERENCE DOCUMENT AND STANDARD:

1)	Technical Specification, IDS and DDS for Navigation Aid System	Doc. No. 123A90-DDL-EL-SP-20087
2)	DEP Specification – Electrical Engineering Design	Doc. No. DEP 33.64.10.10
3)	MR for Navigation Aid System	Doc. No. 123A90-DDL-EL-MR-20086

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	General				
6	Tag No.	UP-200F2			02
7	Manufacturer	(*)			02
8	Model Number	(*)			02
9	Serial Number	(*)			02
10	Order Status	for Purchase			
11	General - Electrical Input Data				
12	System Voltage	230 Vac			02
13	Voltage Variation (Steady State)	+6%, -10%			
14	Rated Frequency	50Hz			
15	Frequency Variation (Steady State)	±5 %			
16	Number of Phases	1ph, 3ph + neutral TN-S system			
17	General - Electrical Output Data				
18	Nominal Voltage	24 V DC			
19	Voltage Variation (Steady State)	+6%, -10%			
20	Rated Frequency	DC			
21	Number of Phases	1ph+N (Positive / Negative)			02
22	Installation conditions Ambient temperature				
23	Hazardous Area Classification	Zone 1 Gas Group IIC (or) IIB + H2, T1		This equipment will be installed in safe area, but is required to be built for hazardous area as per CE matrix	02
24	Ambient Temperature	-8.4°C to +25°C			
25	Relative humidity (%)	Maximum 95 %			
26	Atmosphere	Marine Offshore-fixed			
27	Altitude > 1000 m (m)	not more than 1000 m			
28					
29					

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Navigational Aids Central Control Panel (NCCP)				02
6	Tag No.	NC-200F2			
7	Q.ty	1			
8	Location / Module	Indoor/Lower deck			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1		This equipment will be installed in safe area, but is required to be built for hazardous area as per CE matrix	02
10	Construction	Manufacturer standard			
11	Service Access (Front/Back)	Front			
12	Cable entry	Top			
13	Degree of Protection (IP)	IP 41			
14	Surge protection device	as option			
15	Anti-condensation heater	Yes			
16	Lifting Lugs	Yes			
17	Dimensions (L x W x H) mm	(*)			
18	Overall Weight (kg)	(*)			
19	Min. Clearance (In Front/Behind/Above mm)	(*)			
20	Maximum Electrical Power Consumption (kW / Amps)	(*)			
21	Maximum Heat Loss to Environment (kW)	(*)			
22	Recommended size of upstream protective dev. (A)	(*)			
23	Method of Ventilation	(*)			
24	Sound Pressure Level dB(A)	(*)			
25	Paint Colour	(*)			
26	Power (W)	(*)			
27	Tropicalization	No			
28					

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Construction Data of The Supply Section				
6	A.C. Circuit Breakers	(*)			
7	Contactors	(*)			
8	Indicating Instruments	(*)			
9	Control Swith and Push Button	(*)			
10	Metering Transducer	(*)			
11	Rectifiers	(*)			
12	D.C. Circuit Breakers	(*)			
13	D.C. Contactors	(*)			
14	Inverter for Fog Horns	(*)			
15	Construction Data of Control, Protection and Measuring Devices				
16	Control Devices	(*)			
17	Voltmeters	(*)			
18	Ammeters	(*)			
19	Construction Data of Control Of Distribution Section				
20	D.C. Circuit Breakers	(*)			
21	D.C. Contactors	(*)			
22	Interface Control & Monitoring Signals				
23	Control signal to NCCP control panel (hard wired)	(*)			
24	Control Signal From ICSS (hard wired)	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Battery Isolator/Breaker				
6	Tag No.	CB-200F2			02
7	Q.ty	1			
8	Location / Module	Indoor/Lower Deck			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
10	Manufacturer	(*)			
11	Model	(*)			
12	Dimensions (L x W x H) mm	(*)			
13	Overall Weight (kg)	(*)			
14	Degree of Protection (IP)	IP 41			
15	Isolator/MCCB Rating (A)	(*)			
16	Short Circuit Rating (kA)	(*)			
17	Number of Poles	(*)			
18	Tripping Release (Under voltage / Shunt)	(*)			
19	Cable Entry	Top			
20	Tropicalization	No			
21	Paint Colour	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5		Battery Bank			
6	Tag No.	BA-200F2			02
7	Q.ty	1			
8	Location / Module	Indoor/Lower Deck			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1		This equipment will be installed in safe area, but is required to be built for hazardous area as per CE matrix	02
10	Battery Type	Sealed Gell Filled VRLA or Sealed NiCd			
11	Battery Autonomy Time	96 hours at full load			
12	Manufacturer	(*)			
13	Type	(*)			
14	Degree of Protection (IP)	IP41			
15	Cable Entry	Top			
16	Tropicalization	No			
17	Paint Colour	(*)			
18	Ampere Hour Capacity at 20oC (Ah)	(*)			
19	Ampere Hour Capacity + Relevant Ageing (Ah)	(*)			
20	Battery Power at Rated Load Discharge + 20% Spare (kW)	(*)			
21	Battery Float/Fast/End Discharge (V)	(*)			
22	Battery Cell Interconnection (Type/Square Area)	(*)			
23	Nominal Cell Voltage (V)	(*)			
24	Number of Cells in Series	(*)			
25	Number of Strings in Parallel	(*)			
26	Cell End Voltage After Discharge (V)	(*)			
27	Cell Float Charge Voltage (V)	(*)			
28	Battery Termination Short Circuit Current (A for ms)	(*)			
29	Battery nominal Capacity	(*)			
30	Design Margin	(*)			
31	Aging factor	(*)			
32	Discharge time	(*)			
33	Installation	(*)			
34	Weight per Cell/Monoblock (kg)	(*)			
35	Weight Per Battery Bank Including Box (kg)	(*)			
36	Overall Dimensions Per Battery Bank/Box (mm)	(*)			
37	Maximum Hydrogen Emission per Bank (Litres/Hour)	(*)			
38	Maximum Heat Loss Per Battery Bank (kW)	(*)			
39	Battery Box Construction	(*)			
40	Maximum Storage Time Without Maintenance Charging	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Battery Charger/Rectifier				
6	Tag No.	BC-200F2A/B			02
7	Q.ty	2			
8	Location / Module	Indoor/Lower Deck			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1		This equipment will be installed in safe area, but is required to be built for hazardous area as per CE matrix	02
10	Time to Recharge After Full Discharge (Hours)	(*)			
11	Manufacturer	(*)			
12	Model	(*)			
13	Cable Entry	Top			
14	Tropicalization	No			
15	Paint Colour	(*)			
16	Rated Input Voltage/Variation (V/± %)	(*)			
17	Rated Power Factor (cos Phi)	(*)			
18	Rated Output (W)	(*)			
19	Rated Output Voltage/Variation (V/± %)	(*)			
20	Rated Output Current (A)	(*)			
21	Rated Output Frequency Variation (Hz/± %)	(*)			
22	Efficiency at Full Load (%)	(*)			
23	Output Short Circuit Level (Amp for ms)	(*)			
24	Total Harmonic Voltage Content (Load %)	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Main Lanterns				
6	Tag No.	EML-200-01/02			02
7	Q.ty	2			
8	Location / Module	Upper Deck			
9	Nominal Voltage	24 V DC			
10	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
11	Construction	Manufacturer standard			
12	Cable entry	Below/Side			
13	Degree of Protection (IP)	IP 66			02
14	Lamp Type	LED			
15	Lamp Life Expectancy (Hours)	100.000			
16	Lantern Intensity/Power abs. (Candelas/W)	(*)			
17	Light Colour	Yellow			02
18	Light Pattern	Morse Code "U" every 15 seconds			
19	Minimum nominal range	5 nautical miles			02
20	Manufacturer	(*)			
21	Model	(*)			
22	Operating Temperature Range (°C)	(*)			
23	Weight (kg)	(*)			
24	Power (W)	(*)			
25	Tropicalization	No			
26	Dimensions (L x W x H) mm	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Photocell System				
6	Tag No.	EPH-200-03			02
7	Q.ty	1			
8	Location / Module	Upper deck - North			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
10	Construction	Manufacturer standard			
11	Cable entry	Below/Side			
12	Degree of Protection (IP)	IP 66			02
13	Adjustable Range (Lux)	(*)			
14	Manufacturer	(*)			
15	Model	(*)			
16	Operating Temperature Range (°C)	(*)			
17	Power (W)	(*)			
18	Weight (kg)	(*)			
19	Special features	(*)			
20	Tropicalization	No			
21	Dimensions (L x W x H) mm	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Visibility Detector				
6	Tag No.	EVM-200-04			02
7	Q.ty	1			
8	Location / Module	Upper deck - North			
9	Nominal Voltage	24 V DC			
10	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
11	Construction	Manufacturer standard			
12	Cable entry	Below/Side			
13	Degree of Protection (IP)	IP 66			02
14	Measurement Method	Manufacturer standard			
15	Measurement Method	Manufacturer standard			
16	Manufacturer	(*)			
17	Model	(*)			
18	Operating Temperature Range (°C)	(*)			
19	Power (W)	(*)			
20	Weight (kg)	(*)			
22	Tropicalization	No			
23	Dimensions (L x W x H) mm	(*)			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Obstruction lights - Top Lights				
6	Tag No.	EOL-200-01/02			02
7	Q.ty	2			
8	Location / Module	Top Vent (medium intensity)			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
10	Construction	Manufacturer standard			
11	Cable entry	Below/Side			
12	Degree of Protection (IP)	IP66			02
13	Lamp Type	LED			
14	Light Color	Burning RED			02
15	Light Pattern	Steady			02
16	Optical reflector	Internal			
17	Manufacturer	(*)			
18	Model	(*)			
19	Operating Temperature Range (°C)	(*)			
20	Lamp Life Expectancy (Hours)	(*)			
21	Light Intensity (Cd)	2000			02
22	Power absorption (W)	(*)			
23	Weight (kg)	(*)			
24	Consumption during the light (A)	(*)			
25	Consumption during the eclipse (A)	(*)			
26	Tropicalization	No			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Obstruction lights - Intermediate Lights				
6	Tag No.	EOL-200-03/04			02
7	Q.ty	2			
8	Location / Module	Upper deck (medium intensity)			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
10	Construction	Manufacturer standard			
11	Cable entry	Below/Side			
12	Degree of Protection (IP)	IP66			02
13	Lamp Type	LED			
14	Light Color	Burning RED			02
15	Light Pattern	Steady			02
16	Optical reflector	Internal			
17	Manufacturer	(*)			
18	Model	(*)			
19	Operating Temperature Range (°C)	(*)			
20	Lamp Life Expectancy (Hours)	(*)			
21	Light Intensity (Cd)	2000			02
22	Power absorption (W)	(*)			
23	Weight (kg)	(*)			
24	Consumption during the light (A)	(*)			
25	Consumption during the eclipse (A)	(*)			
26	Tropicalization	No			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System				Rev.
4	Item	Required	Manufacturer Proposal	Comments	
5	Status Lights - Main access platform				
6	Tag No.	ESL-200-01			02
7	Q.ty	1			
8	Location / Module	Escape route/boat landing area			
9	Hazardous Area Certification (Ex)	Zone 1 Gas Group IIC (or) IIB + H2, T1			
10	Construction	Manufacturer standard			
11	Cable entry	Below/Side			
12	Degree of Protection (IP)	IP66			02
13	Lamp Type	LED			
14	Light Color	RED			
15	Optical reflector	Internal			
15	Light Pattern	Flashing			02
16	Manufacturer	(*)			
17	Model	(*)			
18	Operating Temperature Range (°C)	(*)			
19	Lamp Life Expectancy (Hours)	(*)			
20	Lantern Intensity/Power abs. (Candelas/W)	(*)			
22	Power (W)	(*)			
23	Weight (kg)	(*)			
24	Consumption during the light (A)	(*)			
25	Consumption during the eclipse (A)	(*)			
26	Tropicalization	No			

NOTE:
(*) MANUFACTURER TO ADVISE

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Row	Data Sheet for Navigation Aid System	Rev.
3	PURCHASE ORDER SPECIFIC REQUIREMENTS	

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy