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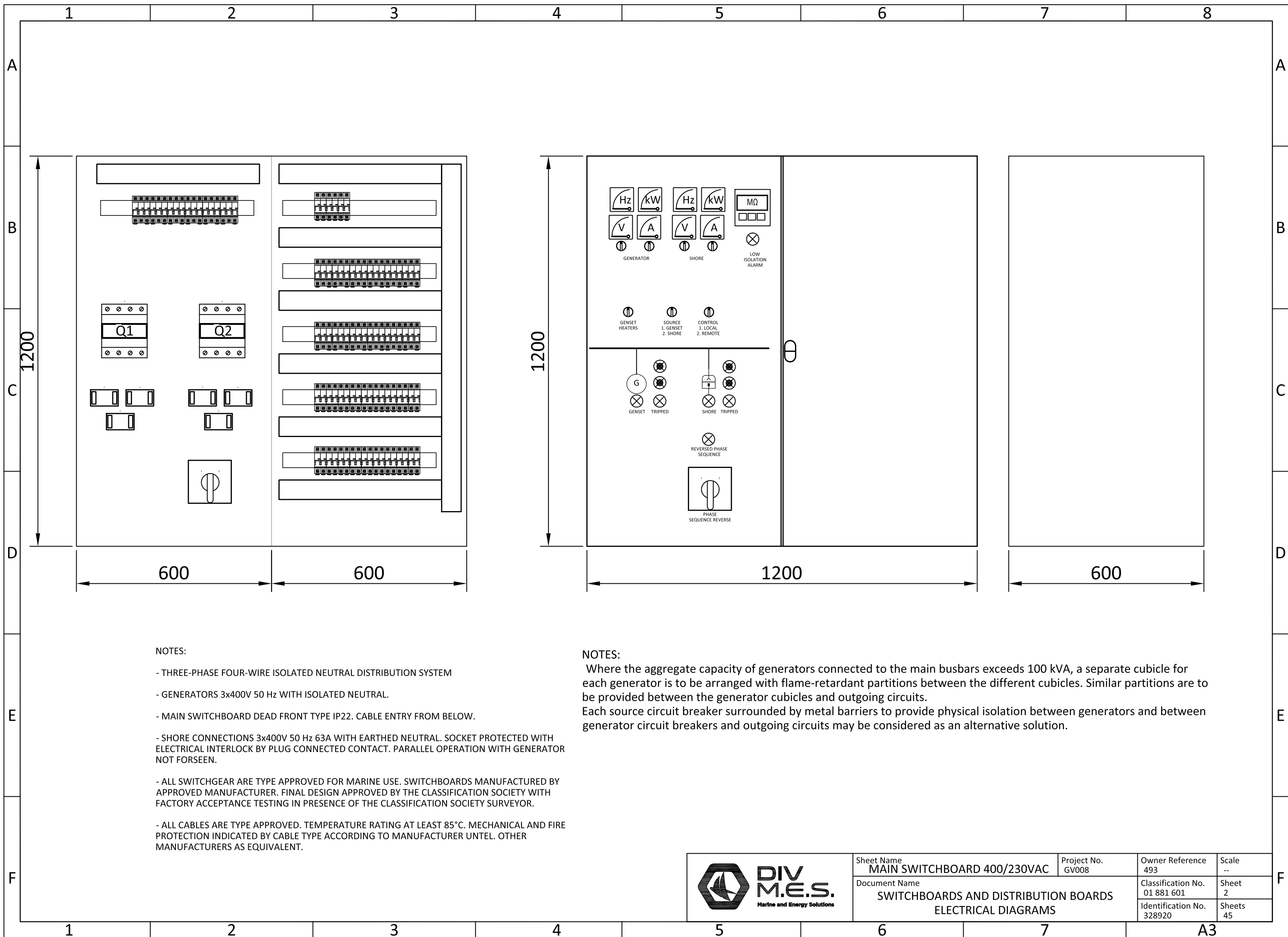
2-1	I.Rutnik	Updated starter cabinets according to equipment	2023-10-23
1	I.Rutnik	Updated according to comments	2023-09-14
0	I.Rutnik	Issued for Classification Society approval	2023-07-25
Rev.	Prepared by	Description	Date
Customer BRODOGRAĐEVNA INDUSTRIJA SPLIT d.d.		File GV008-E-881-601-Switchboards and distribution boards	Prepared by I. Rutnik, El.Eng.
Company Marine and Energy Solutions DIV d.o.o. HR-10020 Zagreb, Froudeova 5 mes@divgroup.eu		Project AUTONOMOUS UNMANNED SHIP CLASS DESIGN	Checked by P. Miloš Mech.Eng.
			Approved by M. Brlić, Nav.Arch.
		Sheet Name -	Project No. GV008
		Owner Reference 493	Scale --
		Classification No. 01 881 601	Sheet 1
		Identification No. 328920	Sheets 45

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NOTES:

- THREE-PHASE FOUR-WIRE ISOLATED NEUTRAL DISTRIBUTION SYSTEM
- GENERATORS 3x400V 50 Hz WITH ISOLATED NEUTRAL.
- MAIN SWITCHBOARD DEAD FRONT TYPE IP22. CABLE ENTRY FROM BELOW.
- SHORE CONNECTIONS 3x400V 50 Hz 63A WITH EARTHED NEUTRAL. SOCKET PROTECTED WITH ELECTRICAL INTERLOCK BY PLUG CONNECTED CONTACT. PARALLEL OPERATION WITH GENERATOR NOT FORSEEN.
- ALL SWITCHGEAR ARE TYPE APPROVED FOR MARINE USE. SWITCHBOARDS MANUFACTURED BY APPROVED MANUFACTURER. FINAL DESIGN APPROVED BY THE CLASSIFICATION SOCIETY WITH FACTORY ACCEPTANCE TESTING IN PRESENCE OF THE CLASSIFICATION SOCIETY SURVEYOR.
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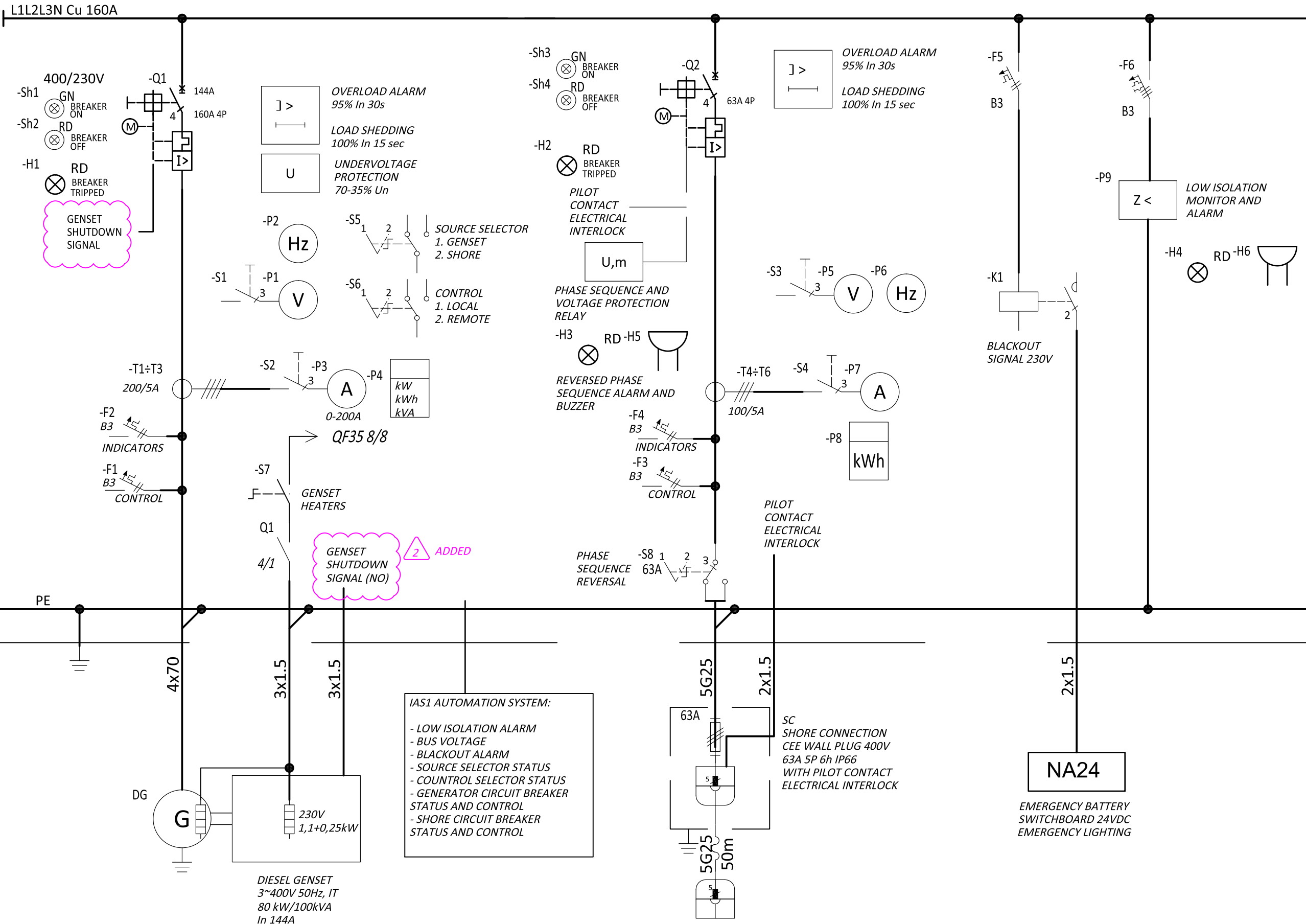
NOTES:

Where the aggregate capacity of generators connected to the main busbars exceeds 100 kVA, a separate cubicle for each generator is to be arranged with flame-retardant partitions between the different cubicles. Similar partitions are to be provided between the generator cubicles and outgoing circuits. Each source circuit breaker surrounded by metal barriers to provide physical isolation between generators and between generator circuit breakers and outgoing circuits may be considered as an alternative solution.

	Sheet Name MAIN SWITCHBOARD 400/230VAC	Project No. GV008	Owner Reference 493	Scale --
	Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 2
			Identification No. 328920	Sheets 45

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MSB MAIN SWITCHBOARD



IAS1 AUTOMATION SYSTEM:

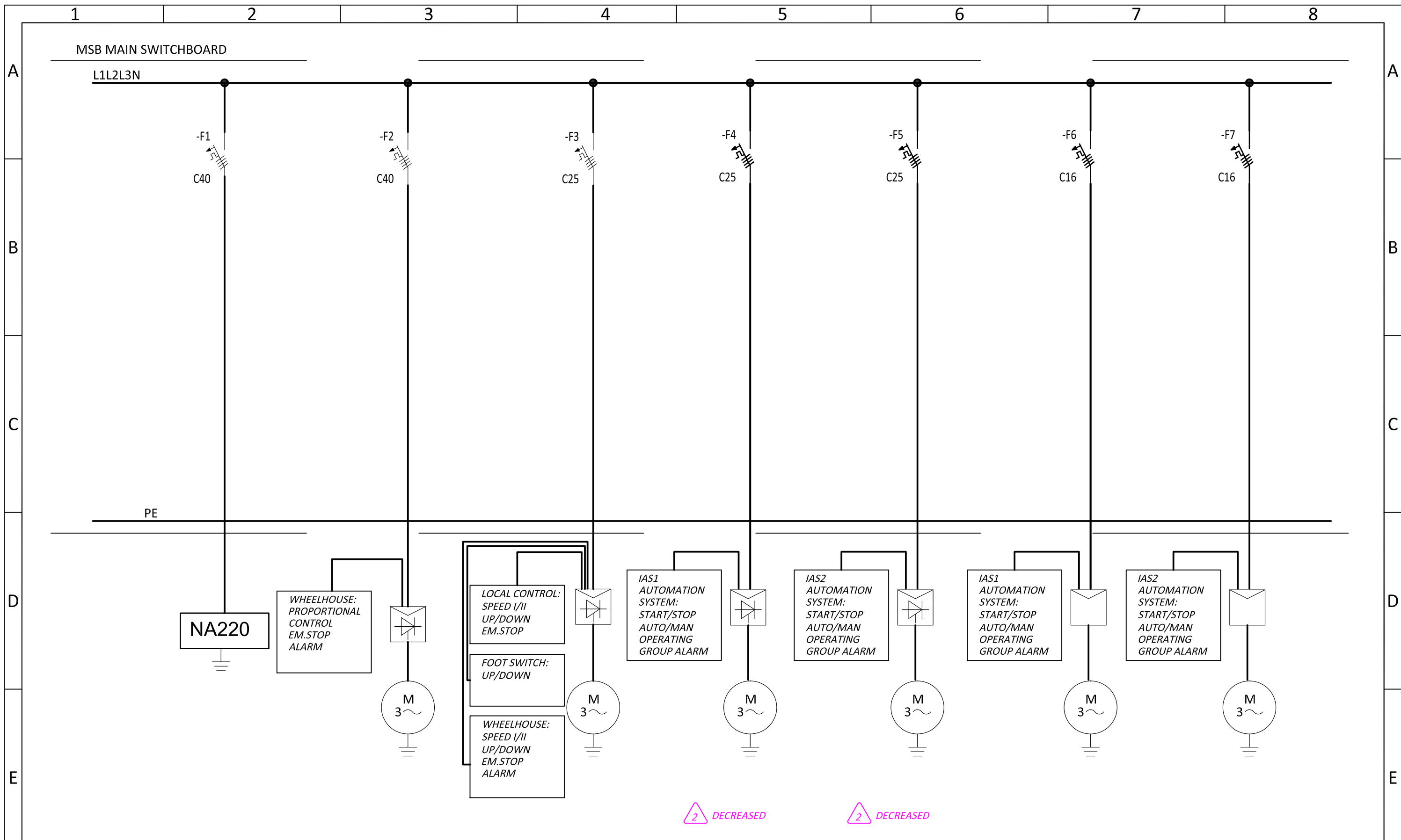
- LOW ISOLATION ALARM
- BUS VOLTAGE
- BLACKOUT ALARM
- SOURCE SELECTOR STATUS
- CONTROL SELECTOR STATUS
- GENERATOR CIRCUIT BREAKER STATUS AND CONTROL
- SHORE CIRCUIT BREAKER STATUS AND CONTROL

DIESEL GENSET
 3~400V 50Hz, IT
 80 kW/100kVA
 In 144A

SHORE TN-S 3x400V 50Hz



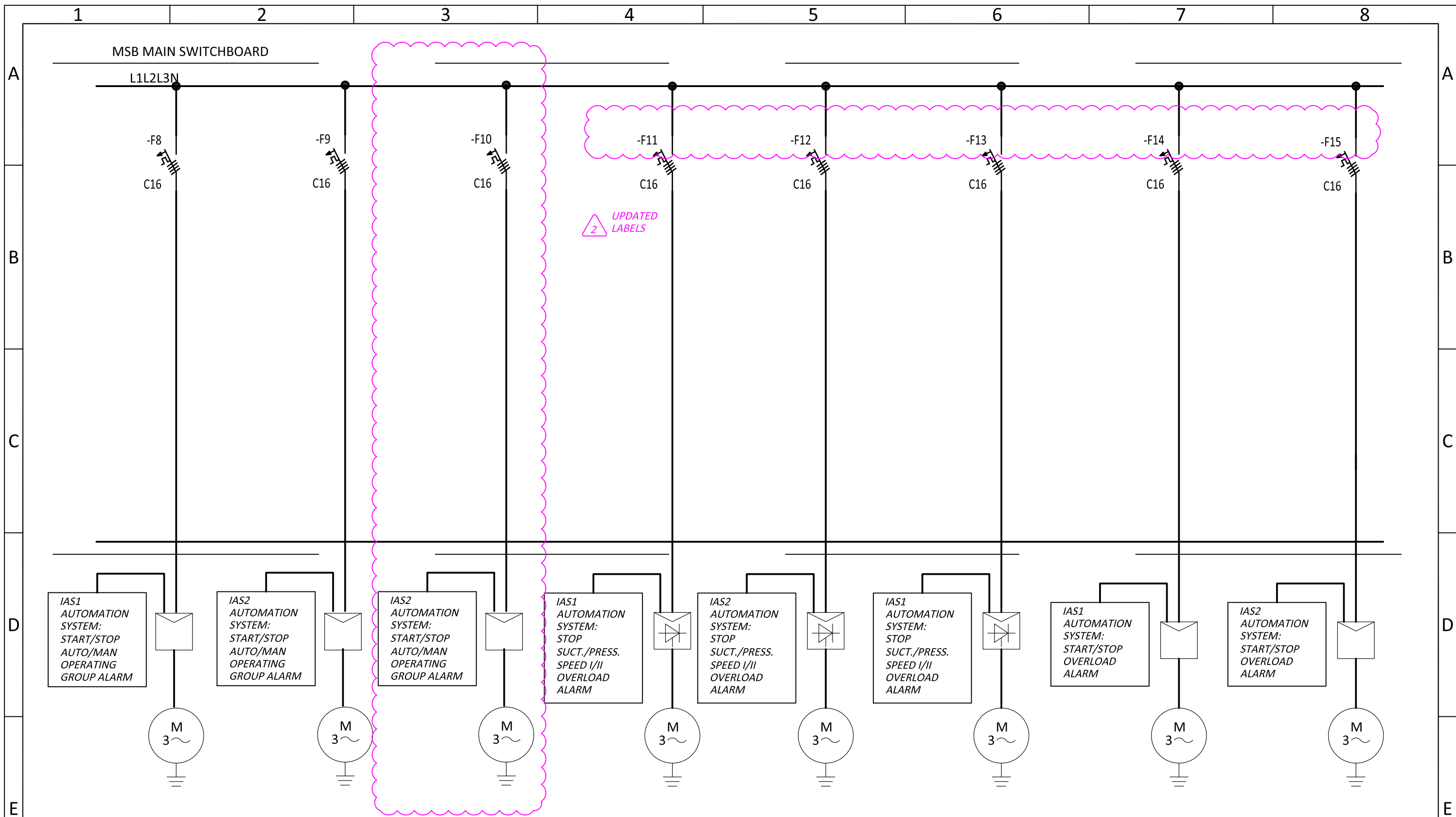
Sheet Name	MAIN SWITCHBOARD	Project No.	GV008	Owner Reference	493	Scale	--	
Document Name	SWITCHBOARDS AND DISTRIBUTION BOARDS		Electrical Diagrams		Classification No.	01 881 601	Sheet	4
				Identification No.	328920	Sheets	45	



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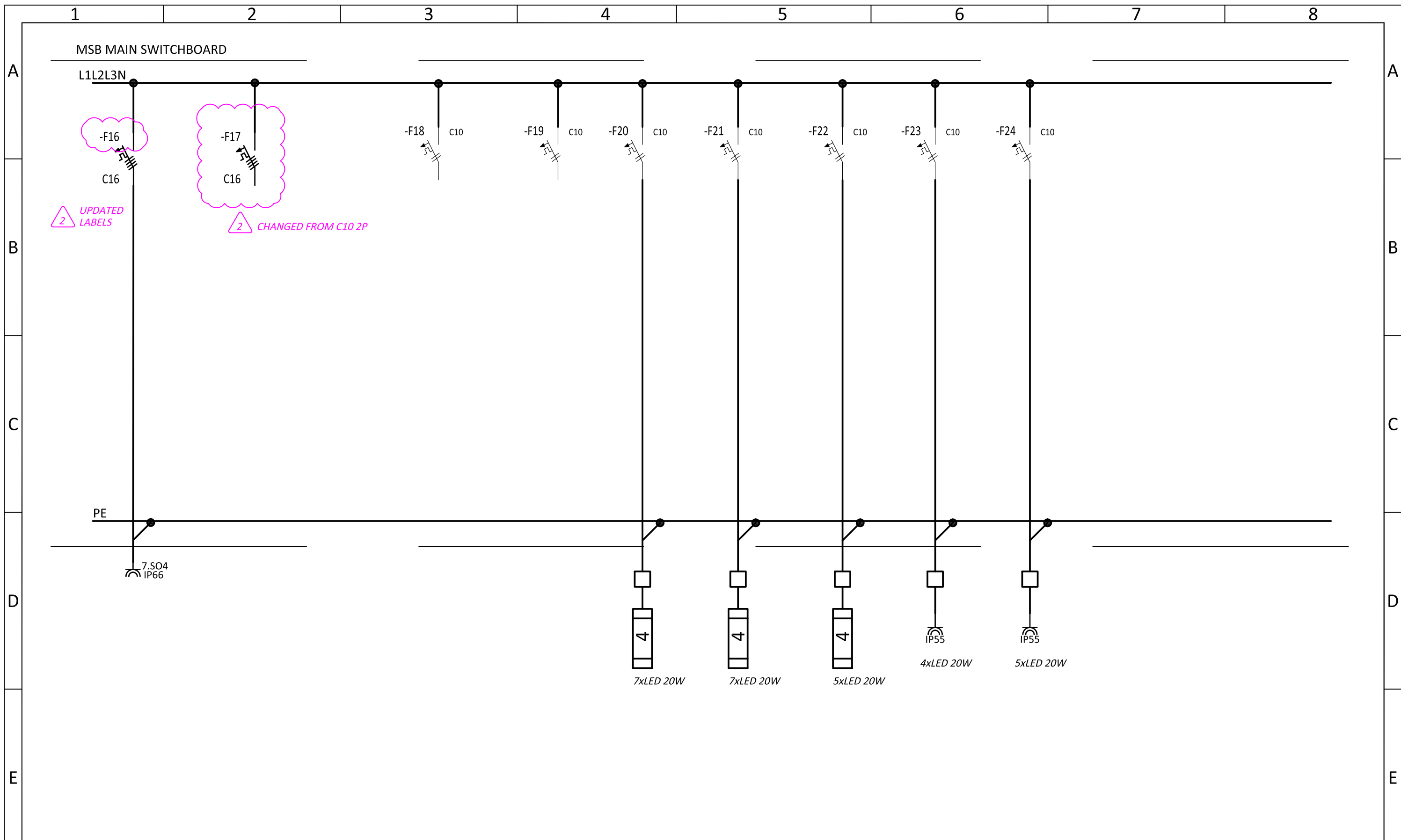
Circuit number	NA220	404.C	403.C	813.1C/813FP001	813.2C/813GP001	813.3C	813.4C
Circuit name	BRIDGE DISTRIBUTION BOARD 3x400/230V	BOW THRUSTER	ANCHOR-MOORING WINCH	MAIN FI-FI PUMP	GENERAL SERVICE PUMP	ME FI-FI PUMP 1	ME FI-FI PUMP 2
Location	WHEELHOUSE	BOW THR CMPT	BOW THR COMPT	MAIN ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	4x10	4x10	4x4	4x4	4x4	4x2.5	4x2.5
Load	66kW/max 32A	18.5kW 38A	1.5/2.5kW	5.5kW/10,9A/6,5In	5.5kW/10,9A/6,5In	2,2kW/3,35A/5,5In	2,2kW/3,35A/5,5In

	Sheet Name MAIN SWITCHBOARD	Project No. GV008	Owner Reference 493	Scale --
	SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 5
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Circuit number	803.1C/803PUMP01001	803.2C/803PUMP01002	803.3C/803PUMP01003	574.1C/574-MS-0013-FA	574.2C/574-MS-0014-FA	574.3C/574-MS-0011-FA	701.1C/701PUMP0101	701.2C/701PUMP0102
Circuit name	MAIN BILGE PUMP	AUXILIARY BILGE PUMP	OILY WATER PUMP	ME ER FAN 1	ME ER FAN 2	AUX ER FAN	FUEL-OIL TRANSFER PUMP 1	FUEL-OIL TRANSFER PUMP 2
Location	MAIN ENGINE ROOM	AUX ENGINE ROOM	AUX ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM	AUX ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	4x2.5	4x2.5	4x2.5	4x2.5	4x2.5	4x2.5	4x2.5	4x2.5
Load	1,5kW/3,36A/6,3In	2,2kW/4,55A/7,0In	0,75kW/1,9A/5,0In	3kW/6,2A/6,6In	3kW/6,2A/6,6In	1,1kW/2,45A/5,1In	0,75kW/1,96A/5,0In	0,75kW/1,96A/5,0In

				Sheet Name	Project No.	Owner Reference	Scale	
				MAIN SWITCHBOARD		GV008	493	--
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				ELECTRICAL DIAGRAMS		Identification No.		Sheets
						328920		45

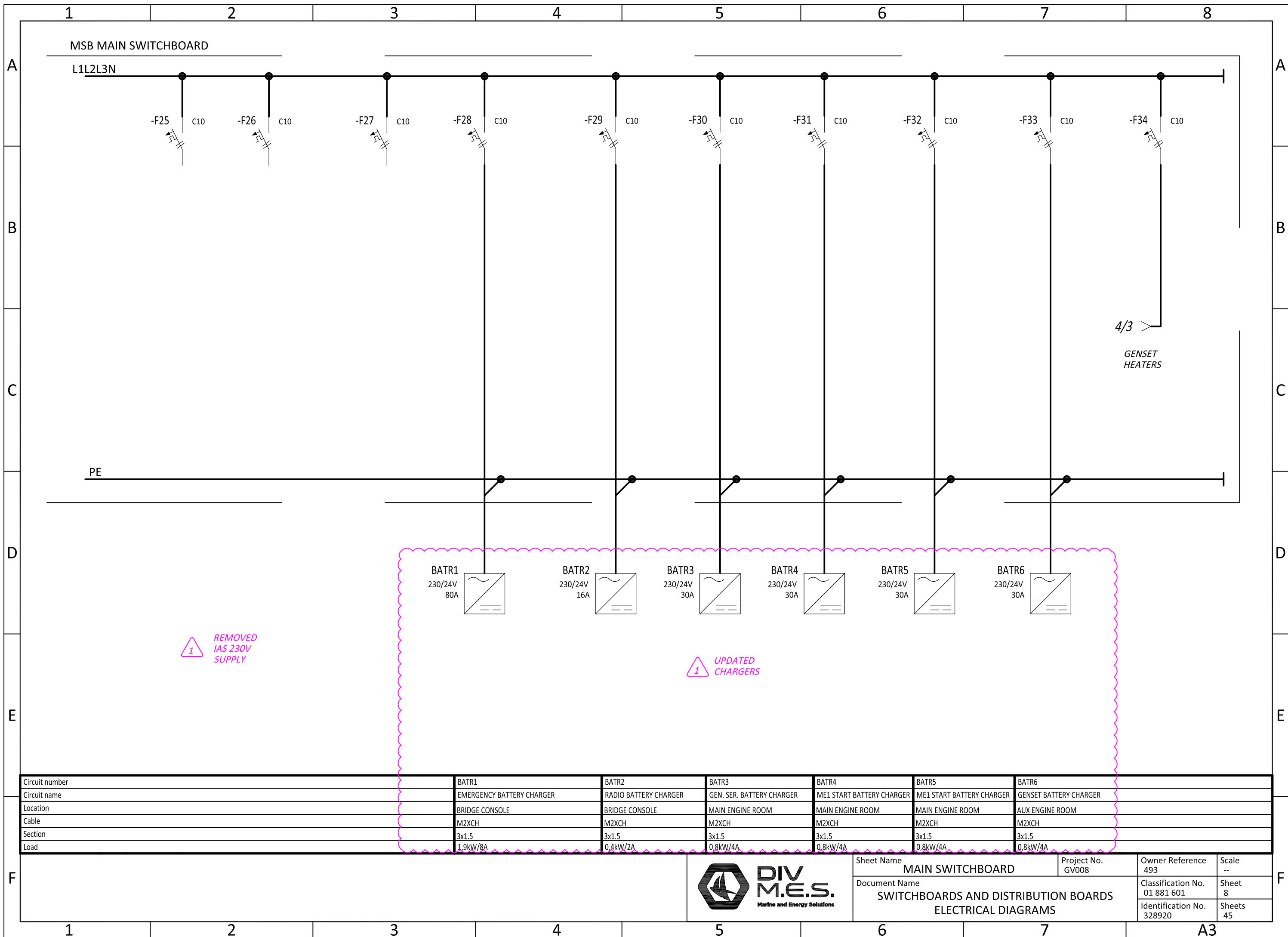


2 UPDATED LABELS

2 CHANGED FROM C10 2P

Circuit number						
Circuit name	OIL RECOVERY SYSTEM SOCKET	ER LIGHTING 1	ER LIGHTING 2	FORE COMPT LIGHTING	ER OUTLETS 1	ER OUTLETS 2
Location	MAIN DECK SUPERSTRUCTURE AFT	AFT PEAK/AUX ER/MAIN ER	AFT PEAK/AUX ER/MAIN ER	BOW THR COMPT/FORE PEAK	AFT PEAK/AUX ER/MAIN ER	AFT PEAK/AUX ER/MAIN ER/BOW THR COMPT/FORE PEAK
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	5x2,5	3x1.5	3x1.5	3x1.5	3x1.5	3x1.5
Load	3x400V 16A max 9kW	0.2kW	0.2kW	0.2kW	0.2kW	0.2kW

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	Document Name		Classification No.	
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ELECTRICAL DIAGRAMS		Identification No.		7
		328920		Sheets
				45

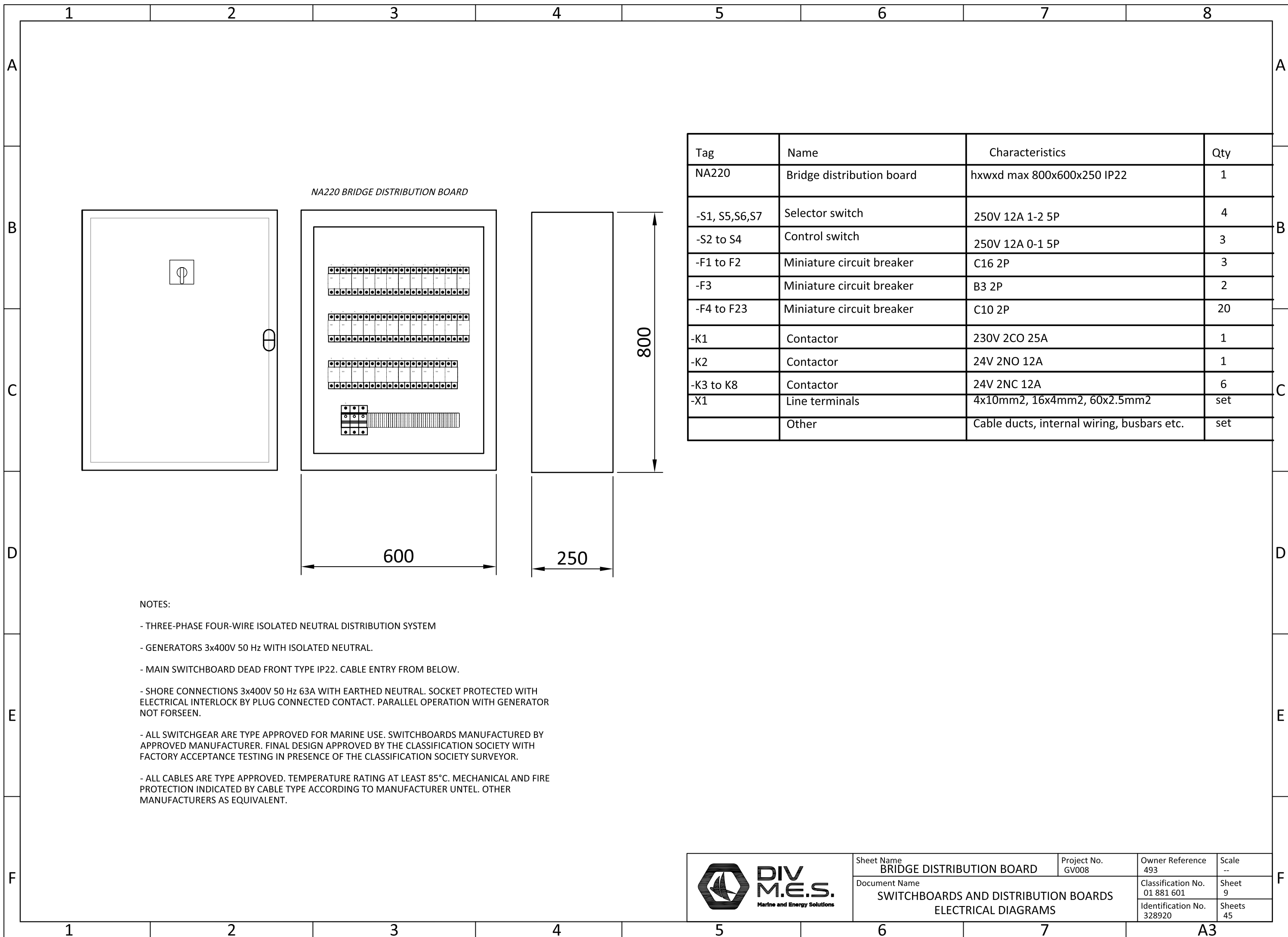


1 REMOVED IAS 230V SUPPLY

1 UPDATED CHARGERS

Circuit number	BATR1	BATR2	BATR3	BATR4	BATR5	BATR6
Circuit name	EMERGENCY BATTERY CHARGER	RADIO BATTERY CHARGER	GEN. SER. BATTERY CHARGER	ME1 START BATTERY CHARGER	ME1 START BATTERY CHARGER	GENSET BATTERY CHARGER
Location	BRIDGE CONSOLE	BRIDGE CONSOLE	MAIN ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM	AUX ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	3x1.5	3x1.5	3x1.5	3x1.5	3x1.5	3x1.5
Load	1,9kW/8A	0,4kW/2A	0,8kW/4A	0,8kW/4A	0,8kW/4A	0,8kW/4A

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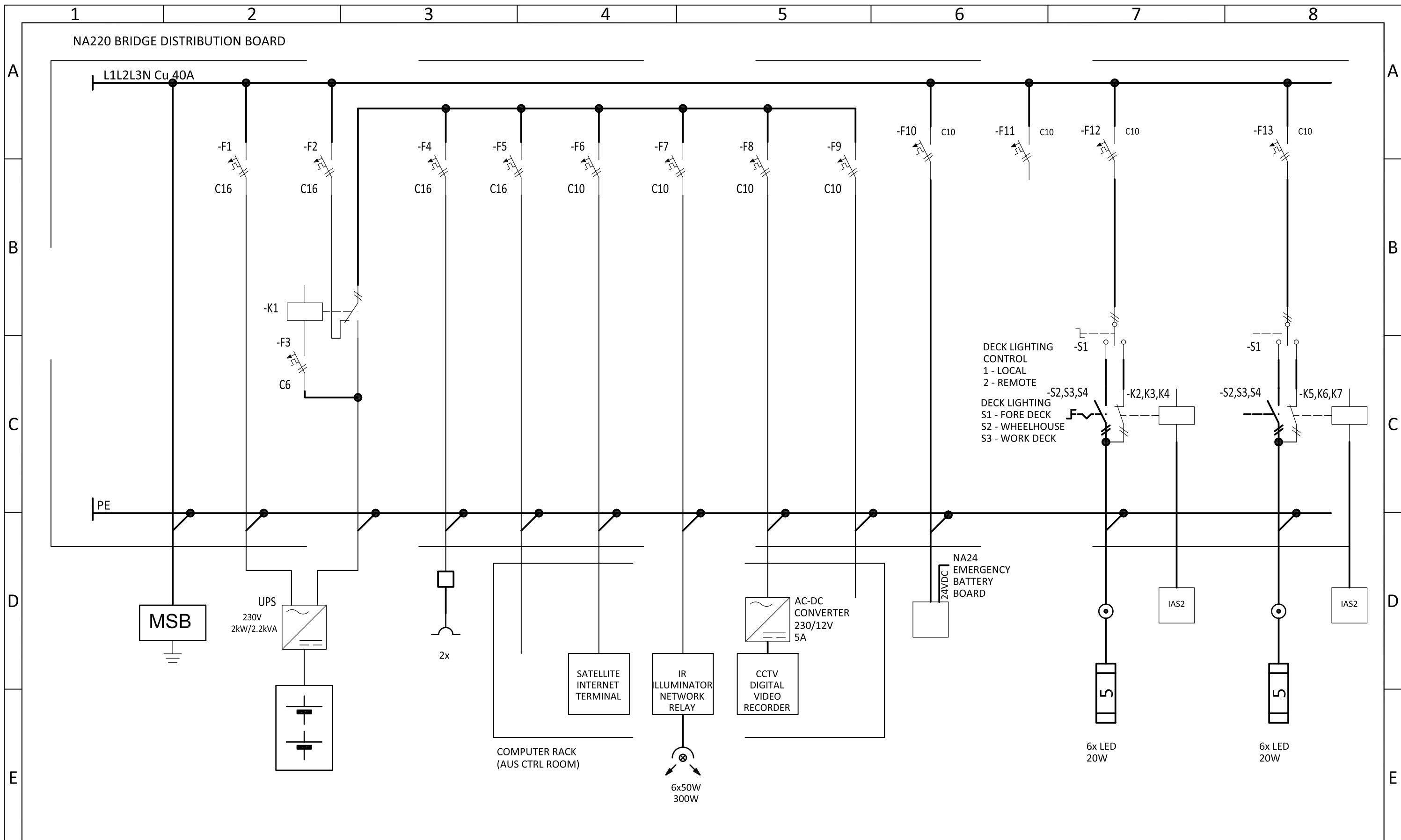
NA220 BRIDGE DISTRIBUTION BOARD

Tag	Name	Characteristics	Qty
NA220	Bridge distribution board	hxwxd max 800x600x250 IP22	1
-S1, S5,S6,S7	Selector switch	250V 12A 1-2 5P	4
-S2 to S4	Control switch	250V 12A 0-1 5P	3
-F1 to F2	Miniature circuit breaker	C16 2P	3
-F3	Miniature circuit breaker	B3 2P	2
-F4 to F23	Miniature circuit breaker	C10 2P	20
-K1	Contactors	230V 2CO 25A	1
-K2	Contactors	24V 2NO 12A	1
-K3 to K8	Contactors	24V 2NC 12A	6
-X1	Line terminals	4x10mm ² , 16x4mm ² , 60x2.5mm ²	set
	Other	Cable ducts, internal wiring, busbars etc.	set

NOTES:

- THREE-PHASE FOUR-WIRE ISOLATED NEUTRAL DISTRIBUTION SYSTEM
- GENERATORS 3x400V 50 Hz WITH ISOLATED NEUTRAL.
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	Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 9
			Identification No. 328920	Sheets 45

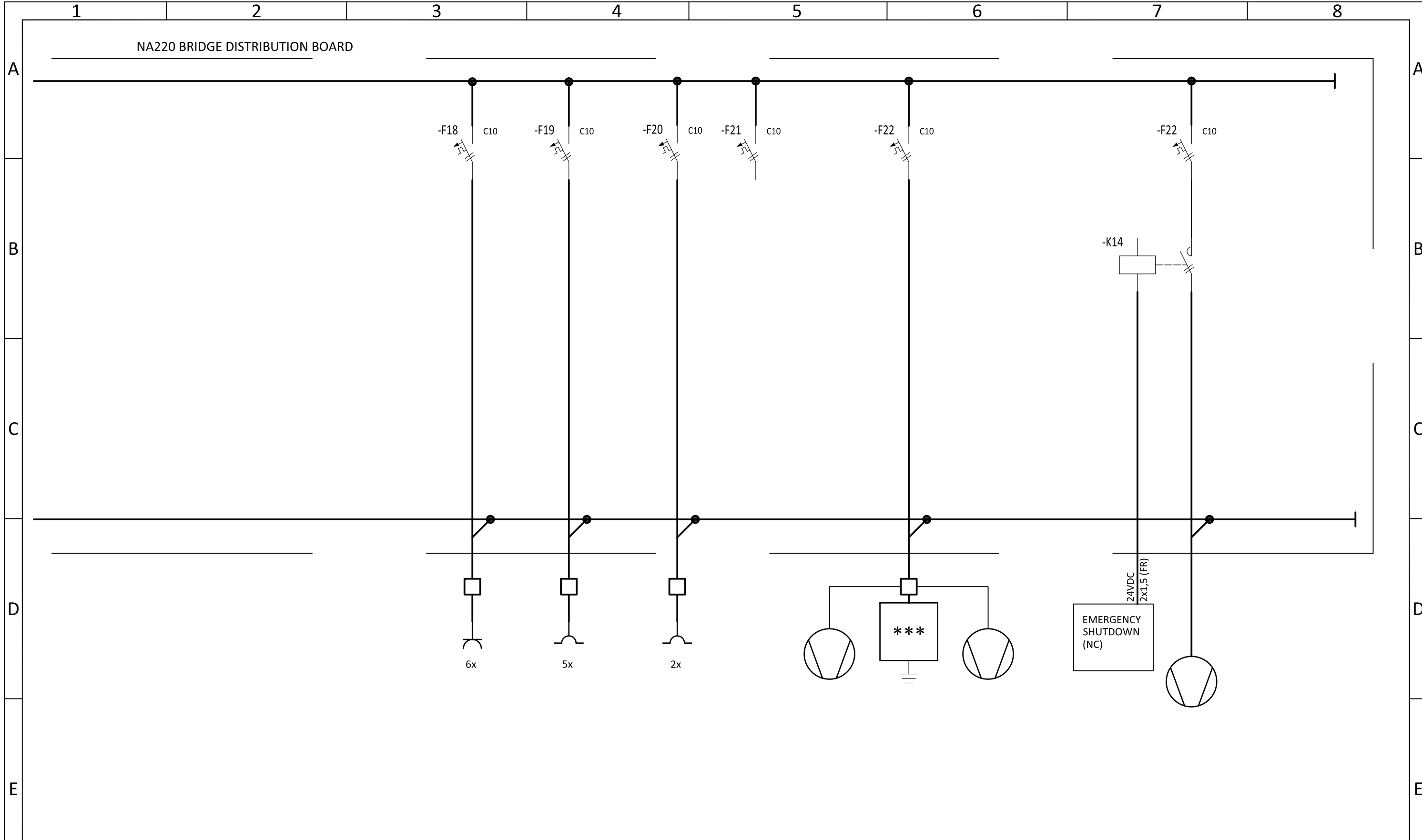


Circuit number	MSB	UPS	WHEELHOUSE OUTLETS 1	IR ILLUMINATOR	FIRE DETECTION SYSTEM	DECK LIGHTING 1	DECK LIGHTING 2
Circuit name	MAIN SWITCHBOARD 3x400/230V						
Location	AUX. ENGINE ROOM	BRIDGE CONSOLE	WHEELHOUSE	WHEELHOUSE ROOF	BRIDGE CONSOLE	WORK DECK/WH ROOF/FORE DECK	WORK DECK/WH ROOF/FORE DECK
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	4x10	3x2.5	3x2.5	3x1.5	3x1.5	3x1.5	3x1.5
Load	66kW/max 32A	2kW/2.2kVA	0.2kW	300W	max 140W/5A	1.5kW/5A	1.5kW/5A



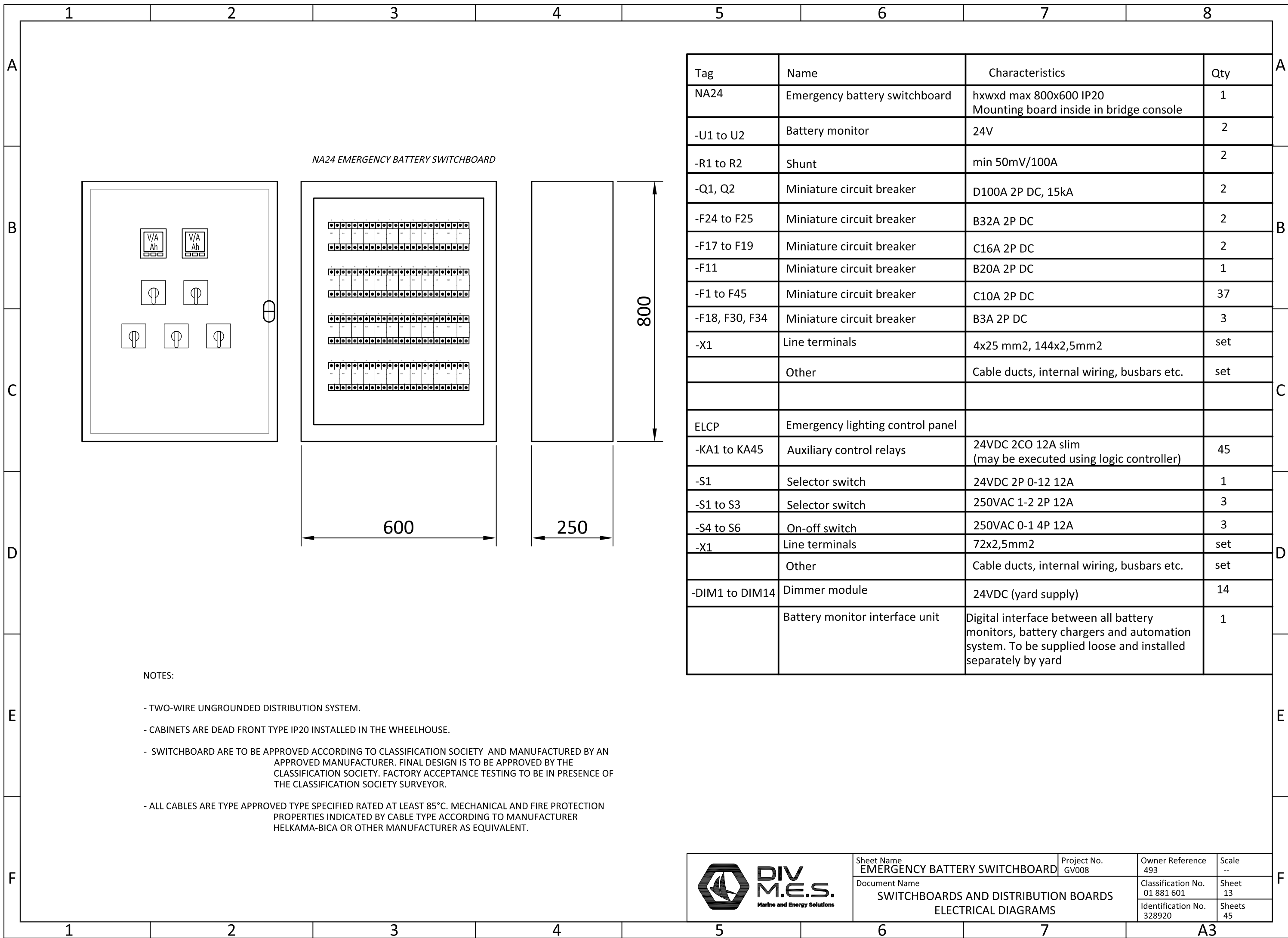
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Document Name	SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No.	01 881 601		Sheet	10
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NA220 BRIDGE DISTRIBUTION BOARD



Circuit number							
Circuit name	AUS CTRL ROOM OUTLETS 1	AUS CTRL ROOM OUTLETS 2	WHEELHOUSE OUTLETS 2	INDOOR A/C UNIT 1	MULTI SPLIT A/C OUTDOOR UNIT	INDOOR A/C UNIT 2	EXHAUST FAN
Location	AUS CTRL ROOM	AUS CTRL ROOM	WHEELHOUSE	WHEELHOUSE	SUPERSTRUCTURE AFT	AUS CTRL ROOM	AUS CTRL ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	3x2.5	3x2.5	3x2.5	3x2.5	3x2.5	3x2.5	3x1.5
Load	0.2kW	0.2kW	0.2kW	70W	2kW	70W	90W

	Sheet Name BRIDGE DISTRIBUTION BOARD	Project No. GV008	Owner Reference 493	Scale --
	Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 12
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NA24 EMERGENCY BATTERY SWITCHBOARD

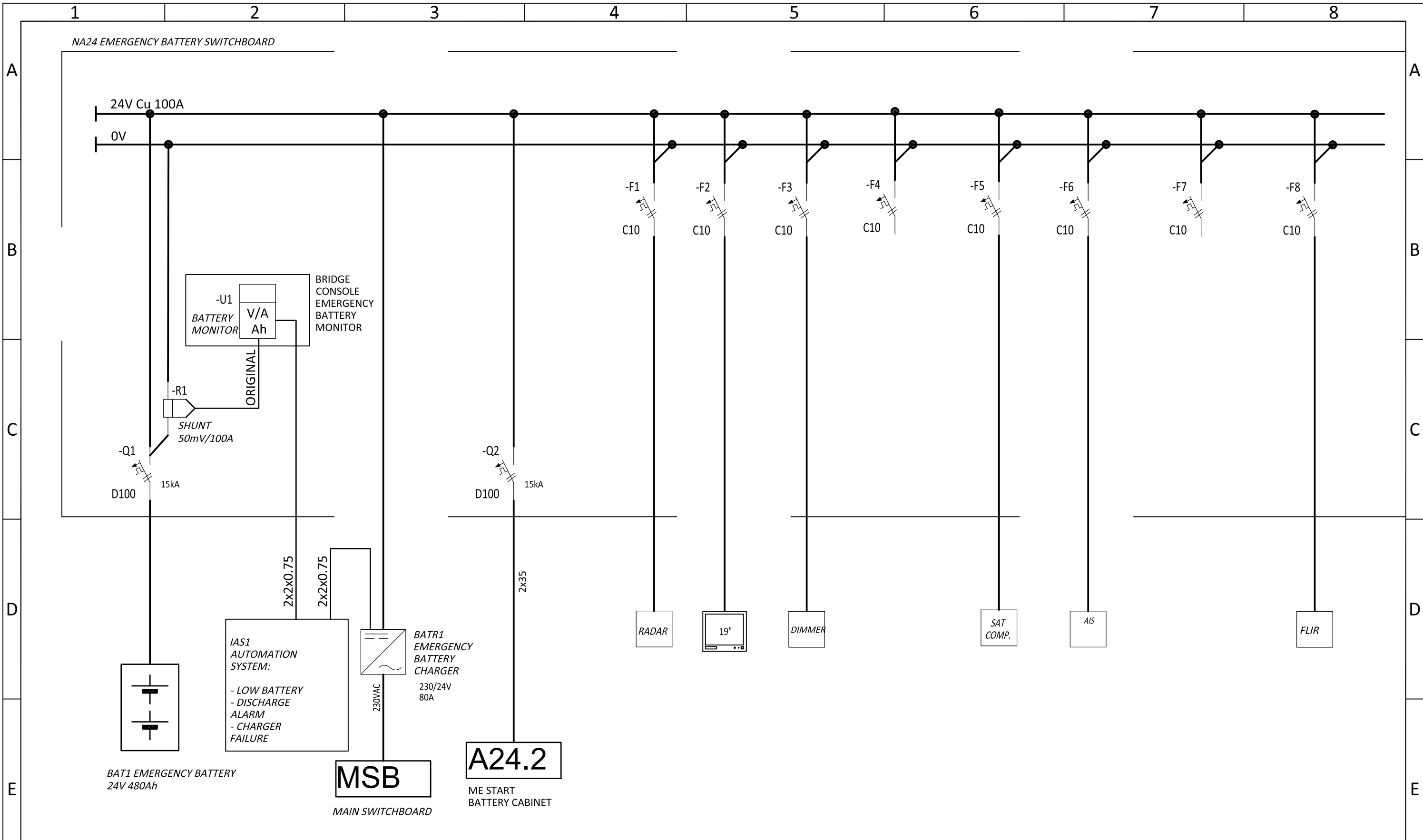
Tag	Name	Characteristics	Qty
NA24	Emergency battery switchboard	hwxwd max 800x600 IP20 Mounting board inside in bridge console	1
-U1 to U2	Battery monitor	24V	2
-R1 to R2	Shunt	min 50mV/100A	2
-Q1, Q2	Miniature circuit breaker	D100A 2P DC, 15kA	2
-F24 to F25	Miniature circuit breaker	B32A 2P DC	2
-F17 to F19	Miniature circuit breaker	C16A 2P DC	2
-F11	Miniature circuit breaker	B20A 2P DC	1
-F1 to F45	Miniature circuit breaker	C10A 2P DC	37
-F18, F30, F34	Miniature circuit breaker	B3A 2P DC	3
-X1	Line terminals	4x25 mm ² , 144x2,5mm ²	set
	Other	Cable ducts, internal wiring, busbars etc.	set
ELCP	Emergency lighting control panel		
-KA1 to KA45	Auxiliary control relays	24VDC 2CO 12A slim (may be executed using logic controller)	45
-S1	Selector switch	24VDC 2P 0-12 12A	1
-S1 to S3	Selector switch	250VAC 1-2 2P 12A	3
-S4 to S6	On-off switch	250VAC 0-1 4P 12A	3
-X1	Line terminals	72x2,5mm ²	set
	Other	Cable ducts, internal wiring, busbars etc.	set
-DIM1 to DIM14	Dimmer module	24VDC (yard supply)	14
	Battery monitor interface unit	Digital interface between all battery monitors, battery chargers and automation system. To be supplied loose and installed separately by yard	1

NOTES:

- TWO-WIRE UNGROUNDED DISTRIBUTION SYSTEM.
- CABINETS ARE DEAD FRONT TYPE IP20 INSTALLED IN THE WHEELHOUSE.
- SWITCHBOARD ARE TO BE APPROVED ACCORDING TO CLASSIFICATION SOCIETY AND MANUFACTURED BY AN APPROVED MANUFACTURER. FINAL DESIGN IS TO BE APPROVED BY THE CLASSIFICATION SOCIETY. FACTORY ACCEPTANCE TESTING TO BE IN PRESENCE OF THE CLASSIFICATION SOCIETY SURVEYOR.
- ALL CABLES ARE TYPE APPROVED TYPE SPECIFIED RATED AT LEAST 85°C. MECHANICAL AND FIRE PROTECTION PROPERTIES INDICATED BY CABLE TYPE ACCORDING TO MANUFACTURER HELKAMA-BICA OR OTHER MANUFACTURER AS EQUIVALENT.

	Sheet Name EMERGENCY BATTERY SWITCHBOARD	Project No. GV008	Owner Reference 493	Scale --
	Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 13
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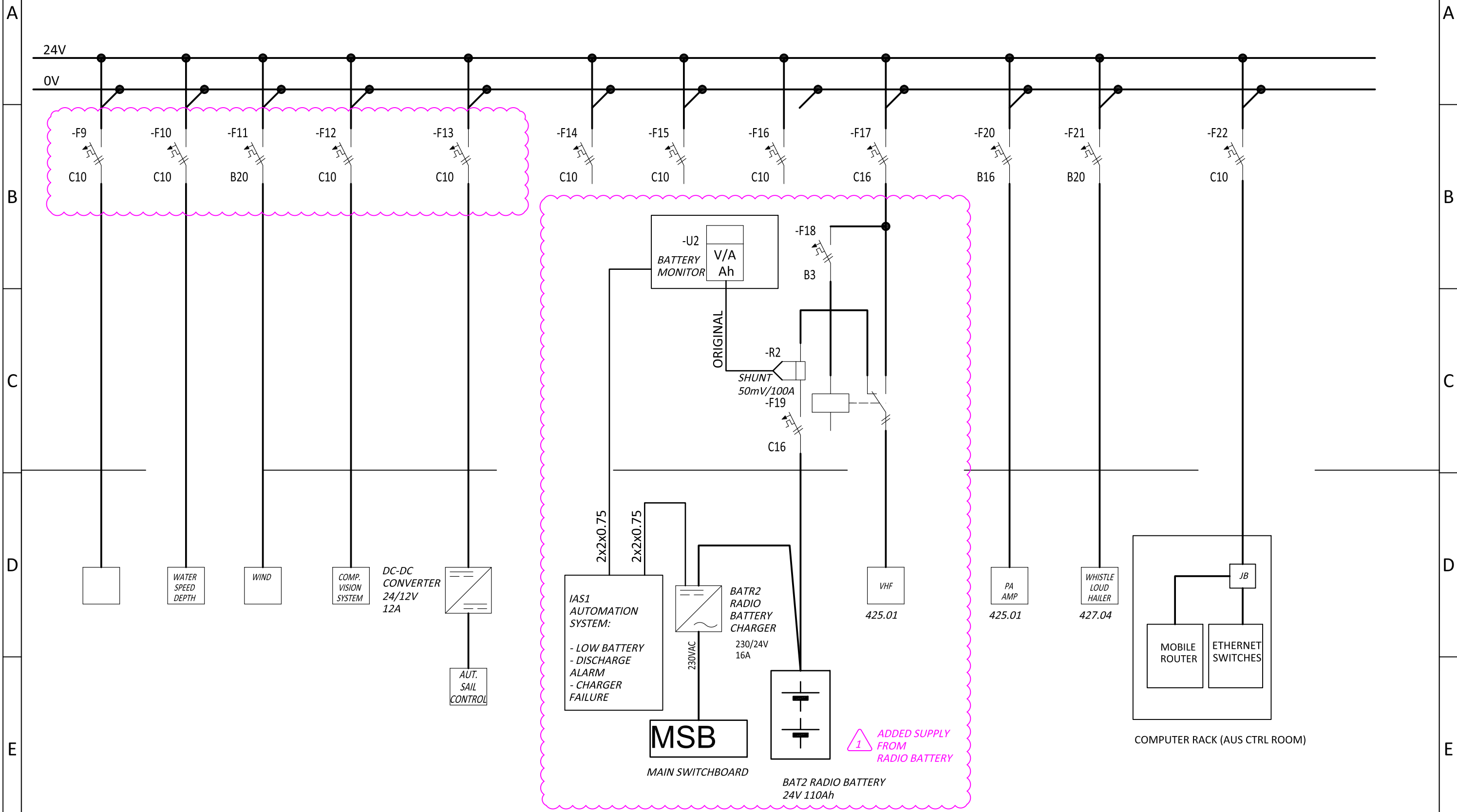
NA24 EMERGENCY BATTERY SWITCHBOARD



Circuit number	BAT1	BATR1	411.01	411.03	413.20	413.43	412.80	413.11	412.01
Circuit name	EMERGENCY BATTERY	BATTERY CHARGER	RADAR	CHARTPLOTTER	COMPASS DIMMER	SAT. COMPASS	AIS	LIDAR	THERMAL SENSOR
Location	SUPERSTRUCTURE AFT	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	2x25	2x25	2x1.5	2x1.5	2x1.5	2x1.5	2x1.5	2x1.5	3x1.5
Load		2kW / 80A	25W/1A	55W/2.3A	40W/1.67A	30W/1.3A	12W/0.5A	45W/1.8A	max 56W/5.3A

	Sheet Name EMERGENCY BATTERY SWITCHBOARD	Project No. GV008	Owner Reference 493	Scale --
	SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 14
			Identification No. 328920	Sheets 45

NA24 EMERGENCY BATTERY SWITCHBOARD

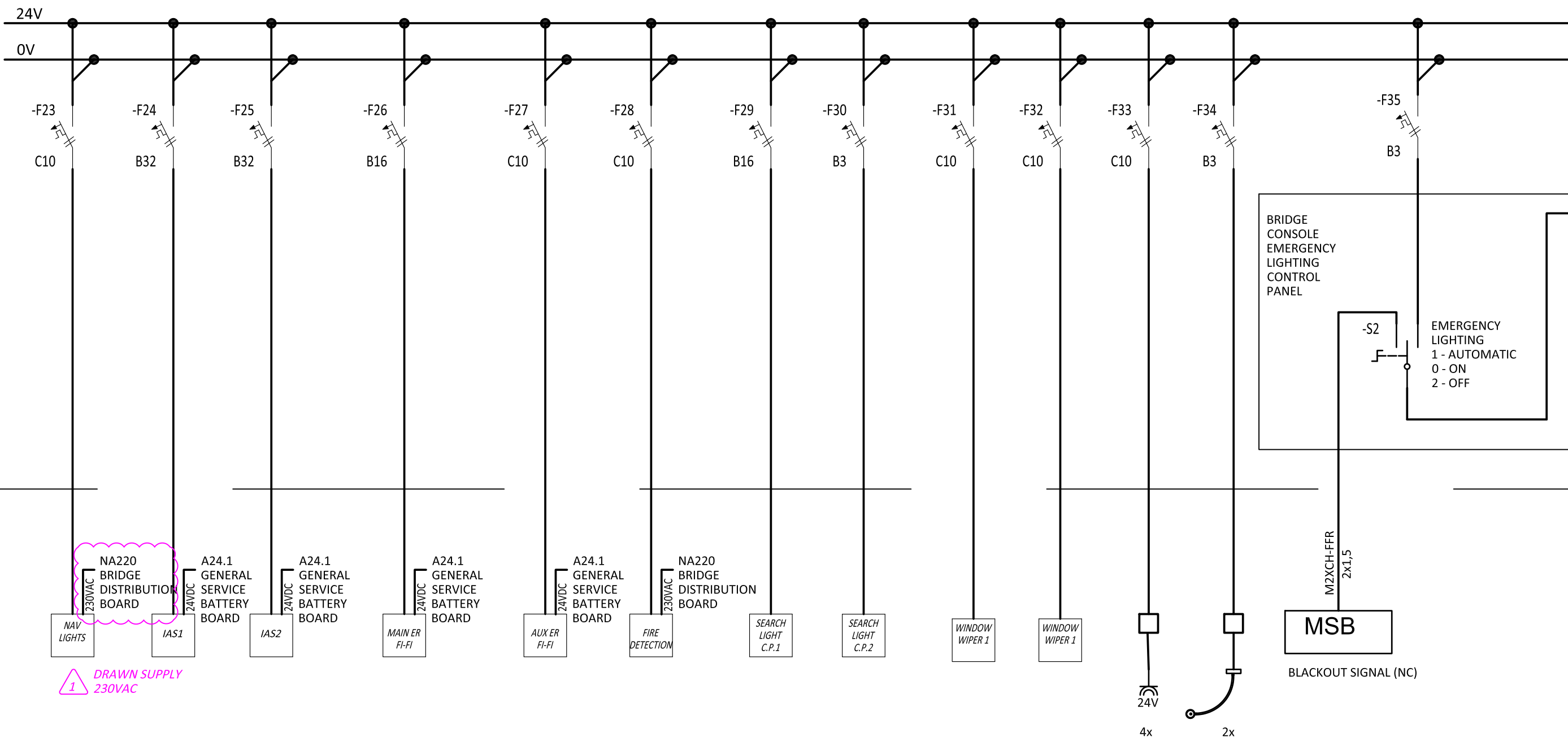


Circuit number						BATR2	425.02.01	425.01	427.04	
Circuit name	SOUND RECEPTION SYSTEM	WATER SPEED/DEPTH	WIND SENSOR	COMPUTER VISION SYSTEM	AUTONOMOUS NAVIGATION SYSTEM	RADIO BATTERY CHARGER	VHF DSC RADIO	PUBLIC ADDRESS	SHIP WHISTLE/LOUDHAILER	COMPUTER NETWORK
Location	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	WHEELHOUSE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	AUS CTRL ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	LKSM-HF
Section	2x1.5	2x1.5	2x1.5	2x4	2x4	2x6	2x1.5	2x4	2x4	2x4
Load	5W/0,2A	5W/0,2A	1W/0,05A	300W/15A	144W/6A	2kW / 80A	20W/1A	20W/1A	100W/4A	max 6,3A


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 Marine and Energy Solutions

Sheet Name	EMERGENCY BATTERY SWITCHBOARD	Project No.	GV008	Owner Reference	493	Scale	--
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NA24 EMERGENCY BATTERY SWITCHBOARD



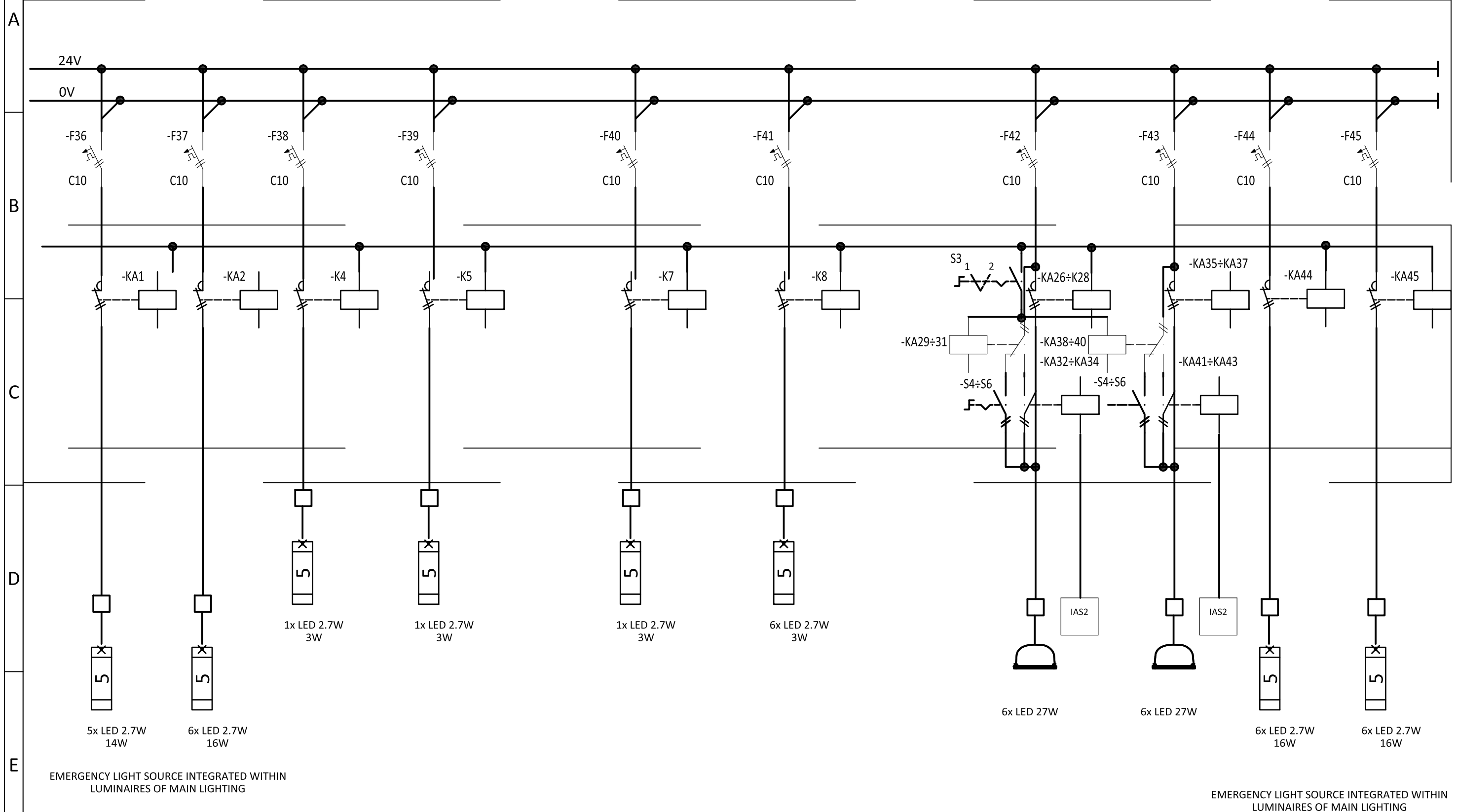
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Circuit number	427.40	IAS1	IAS2	815.1CB	815.2CB	811.CP	427.51	427.51	515.CP1	515.CP2	
Circuit name	NAVIGATION LIGHTS	AUTOMATION CABINET	AUTOMATION CABINET	FI-FI SYSTEM	FI-FI SYSTEM	FIRE DETECTION SYSTEM	SEARCHLIGHT CONTROL 1	SEARCHLIGHT CONTROL 2	WIPERS	WIPERS	CHARTLIGHTS
Location	BRIDGE CONSOLE	ENGINE ROOM	ENGINE ROOM	MAIN ENGINE ROOM	MAIN ENGINE ROOM	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE	BRIDGE CONSOLE
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	INT.WIRING
Section	2x6	2x4 (30m)	2x4 (30m)	2x1.5	2x1.5	2x1.5	2x2.5	2x2.5	2x2.5	2x2.5	2x2.5
Load	760W/31A	164W/7A	164W/7A	10W/0.5-2A	10W/0.5-2A	10W/0.5-2A	250W/11A	250W/11A	200W/8A	200W/8A	10W/0.5A



Sheet Name	EMERGENCY BATTERY SWITCHBOARD	Project No.	GV008	Owner Reference	493	Scale	--
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NA24 EMERGENCY BATTERY SWITCHBOARD



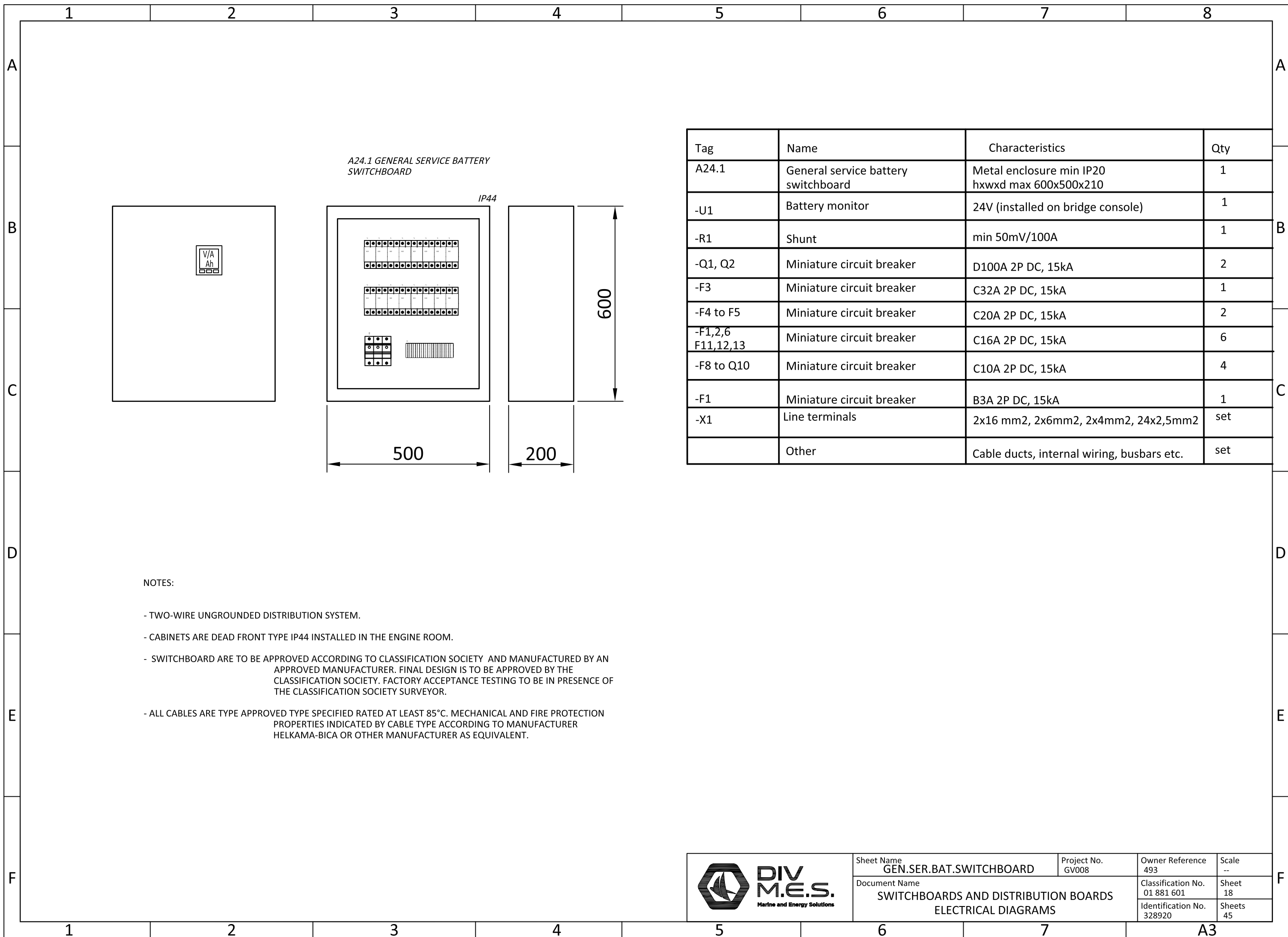
EMERGENCY LIGHT SOURCE INTEGRATED WITHIN LUMINAIRES OF MAIN LIGHTING

EMERGENCY LIGHT SOURCE INTEGRATED WITHIN LUMINAIRES OF MAIN LIGHTING

Circuit number										
Circuit name	MACHINERY EMERGENCY LIGHTING 1	MACHINERY EMERGENCY LIGHTING 2	AUS CTRL ROOM EM. LIGHTING 1	AUS CTRL ROOM EM. LIGHTING 2	WHEELHOUSE EM. LIGHTING 1	WHEELHOUSE EM. LIGHTING 2	MAIN/EM. FLOODLIGHTS 1	MAIN/EM. FLOODLIGHTS 2	MAIN DECK EMERGENCY LIGHTING 1	MAIN DECK EMERGENCY LIGHTING 2
Location	AFT P./AUX. E.R./MAIN E.R./BOW TH.	AFT P./AUX. E.R./MAIN E.R./FORE P.	AUS CONTROL ROOM	AUS CONTROL ROOM/BATHROOM	WHEELHOUSE	WHEELHOUSE	MAIN DECK	MAIN DECK	MAIN DECK	MAIN DECK
Cable	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR	M2XCH-FFR
Section	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5	2x2,5
Load	14W	16W	3W	3W	2W	2W	162W	162W	16W	16W



Sheet Name	EMERGENCY BATTERY SWITCHBOARD	Project No.	GV008	Owner Reference	493	Scale	--
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			Identification No.	328920	Sheets	45	



A24.1 GENERAL SERVICE BATTERY SWITCHBOARD

IP44

600

500

200

NOTES:

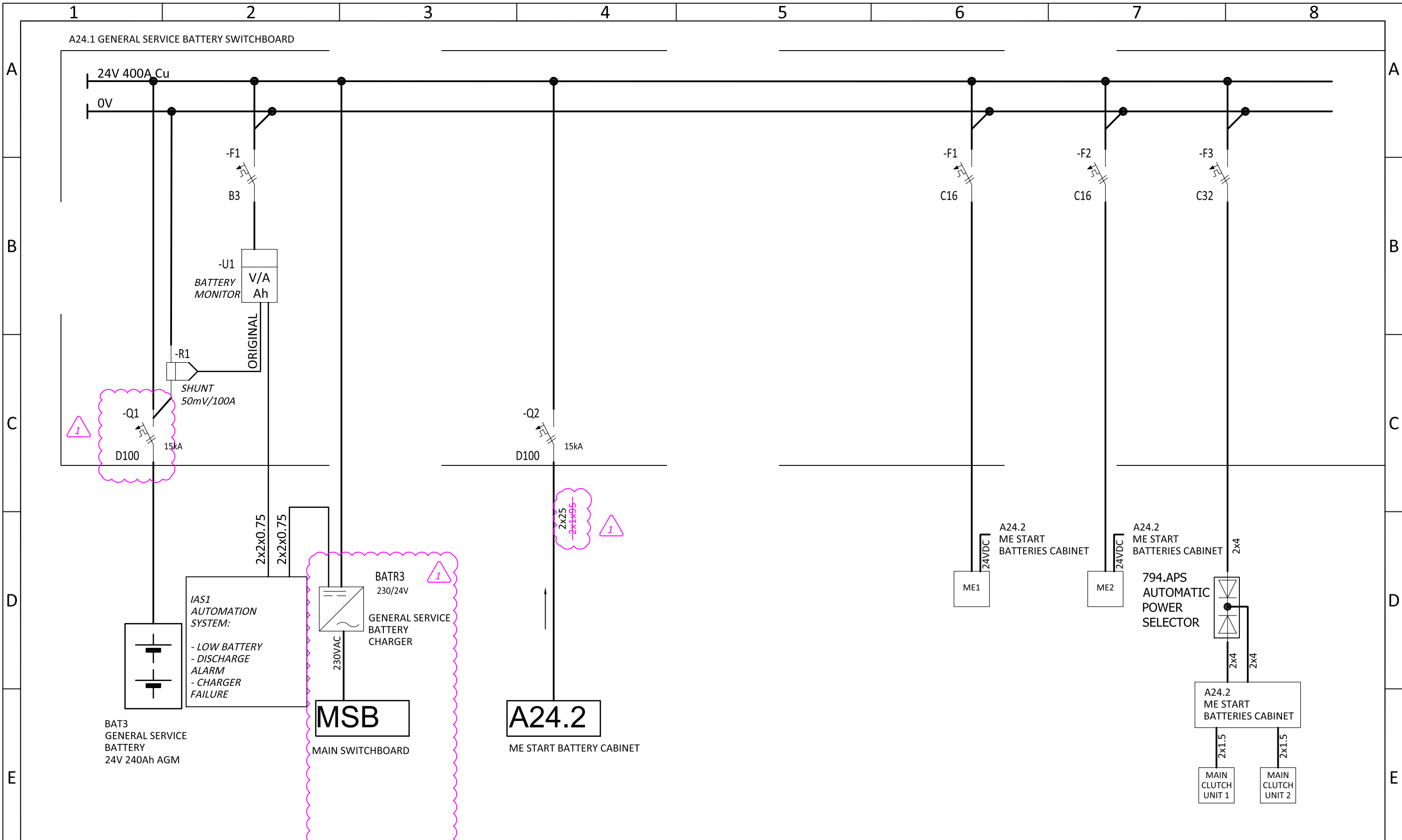
- TWO-WIRE UNGROUNDED DISTRIBUTION SYSTEM.
- CABINETS ARE DEAD FRONT TYPE IP44 INSTALLED IN THE ENGINE ROOM.
- SWITCHBOARD ARE TO BE APPROVED ACCORDING TO CLASSIFICATION SOCIETY AND MANUFACTURED BY AN APPROVED MANUFACTURER. FINAL DESIGN IS TO BE APPROVED BY THE CLASSIFICATION SOCIETY. FACTORY ACCEPTANCE TESTING TO BE IN PRESENCE OF THE CLASSIFICATION SOCIETY SURVEYOR.
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Tag	Name	Characteristics	Qty
A24.1	General service battery switchboard	Metal enclosure min IP20 hxwd max 600x500x210	1
-U1	Battery monitor	24V (installed on bridge console)	1
-R1	Shunt	min 50mV/100A	1
-Q1, Q2	Miniature circuit breaker	D100A 2P DC, 15kA	2
-F3	Miniature circuit breaker	C32A 2P DC, 15kA	1
-F4 to F5	Miniature circuit breaker	C20A 2P DC, 15kA	2
-F1,2,6 F11,12,13	Miniature circuit breaker	C16A 2P DC, 15kA	6
-F8 to Q10	Miniature circuit breaker	C10A 2P DC, 15kA	4
-F1	Miniature circuit breaker	B3A 2P DC, 15kA	1
-X1	Line terminals	2x16 mm ² , 2x6mm ² , 2x4mm ² , 24x2,5mm ²	set
	Other	Cable ducts, internal wiring, busbars etc.	set



Sheet Name GEN.SER.BAT.SWITCHBOARD	Project No. GV008	Owner Reference 493	Scale --
Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 18
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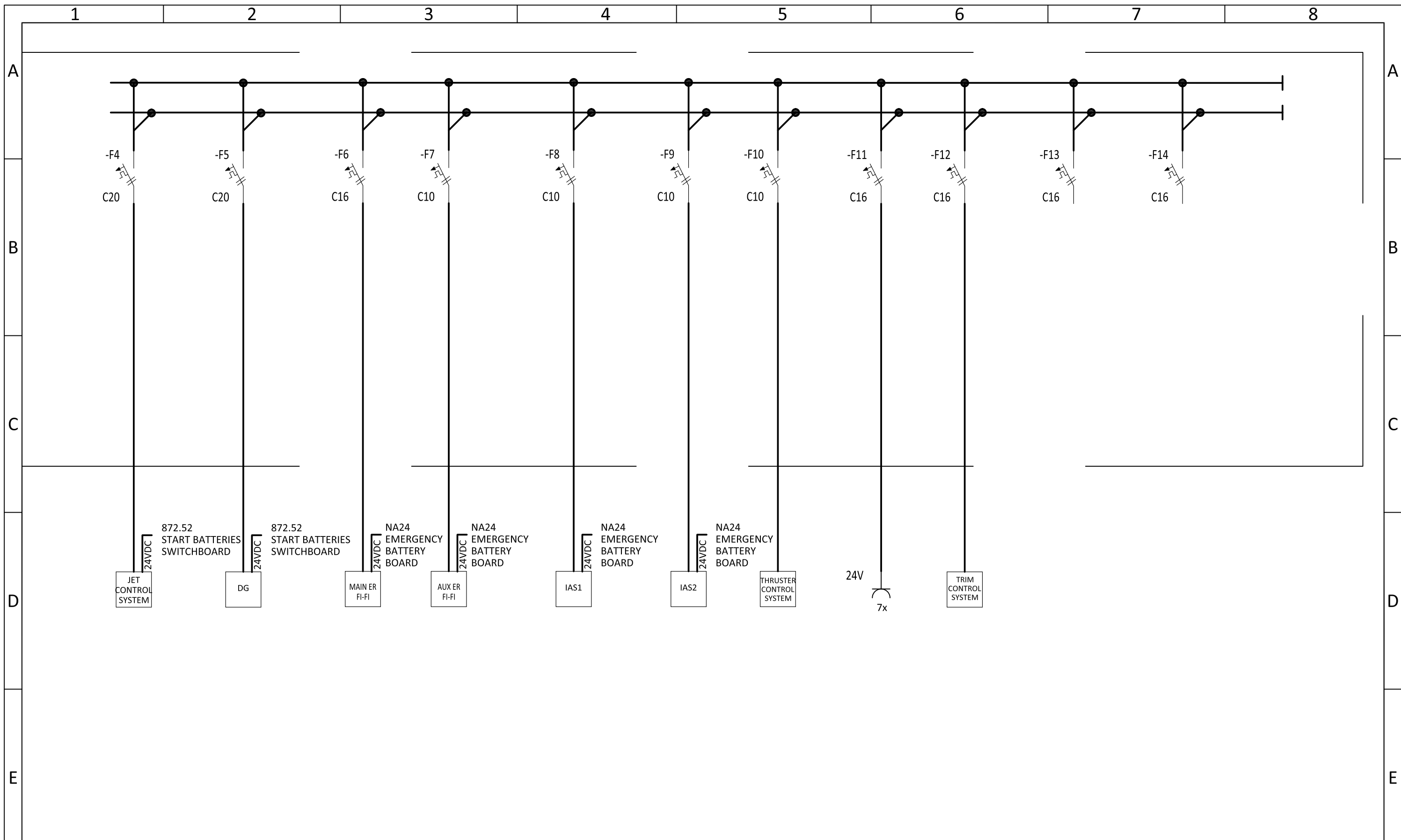
A24.1 GENERAL SERVICE BATTERY SWITCHBOARD



Circuit number	866.02	BATR3	794.ME1	794.ME2	794.APS
Circuit name	GENERAL SERVICE BATTERY	GENERAL SERVICE BATTERY CHARGER	CONTROL CABINET ME1	CONTROL CABINET ME2	GEARBOX AUT.POW.SELECTOR
Location	ENGINE ROOM	ENGINE ROOM	ENGINE ROOM	ENGINE ROOM	ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	2x25	2x16	2x2.5	2x2.5	2x4
Load	450W/60A	0,6kW / 30A	300W	300W	



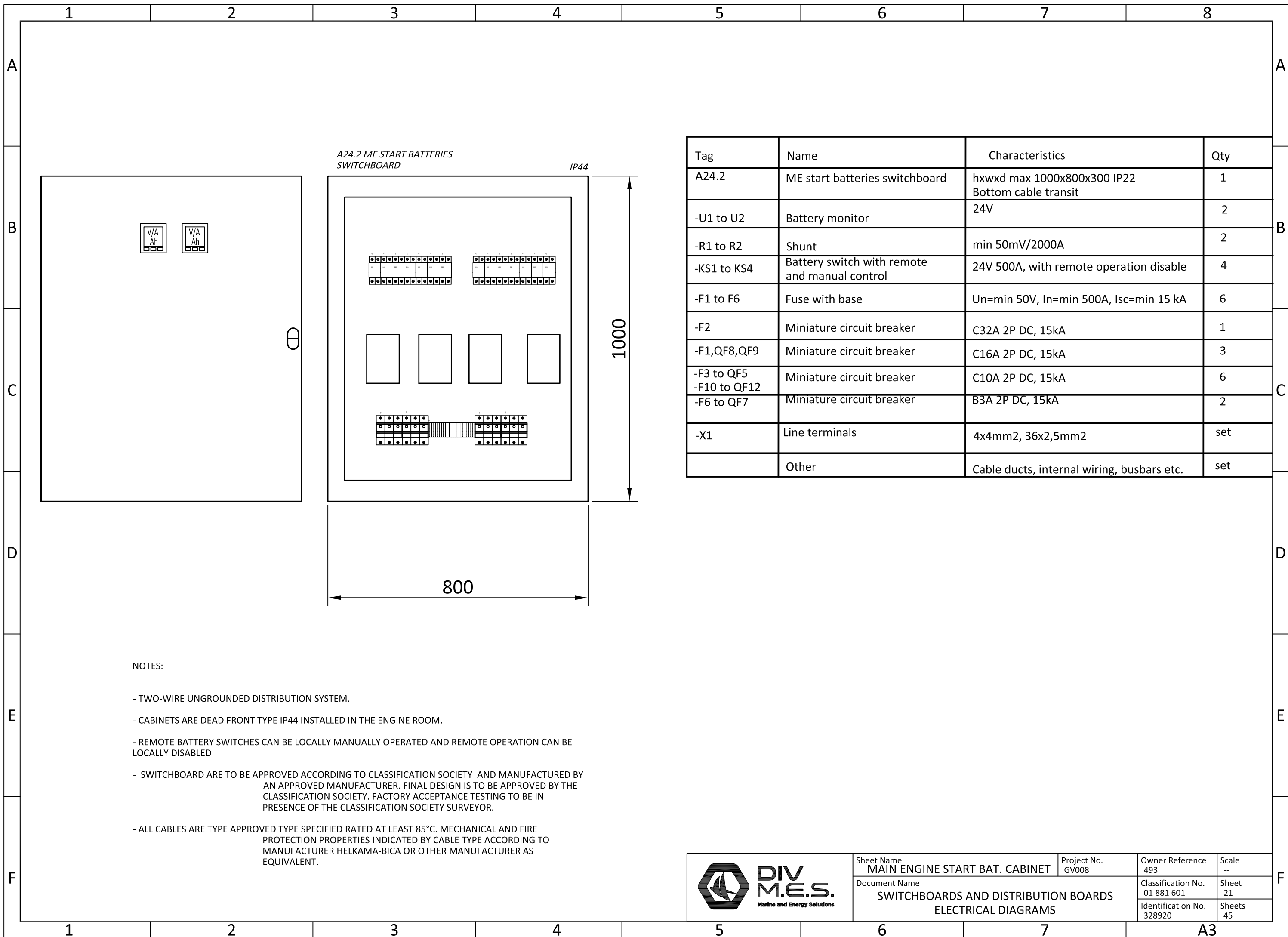
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Circuit number	815.1CB	815.2CB	IAS1	IAS1			
Circuit name	MAIN ER FI-FI SYSTEM CABINET	AUX ER FI-FI SYSTEM CABINET	AUTOMATION CABINET	AUTOMATION CABINET	THRUSTER CONTROL SYSTEM	OUTLETS 24V	TRIM CONTROL SYSTEM
Location	AUS CTRL ROOM	AUS CTRL ROOM	ENGINE ROOM	ENGINE ROOM	BOW THRUSTER COMPARTMENT	MACHINERY SPACES	ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH	M2XCH
Section	2x1.5	2x1.5	2x4 (30m)	2x4 (30m)	2x2.5	2x2.5	2x2.5
Load	10W/0.5-2A	10W/0.5-2A	164W/7A	164W/7A	20W	20W	20W




Sheet Name GEN.SER.BAT.SWITCHBOARD	Project No. GV008	Owner Reference 493	Scale --
Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 20
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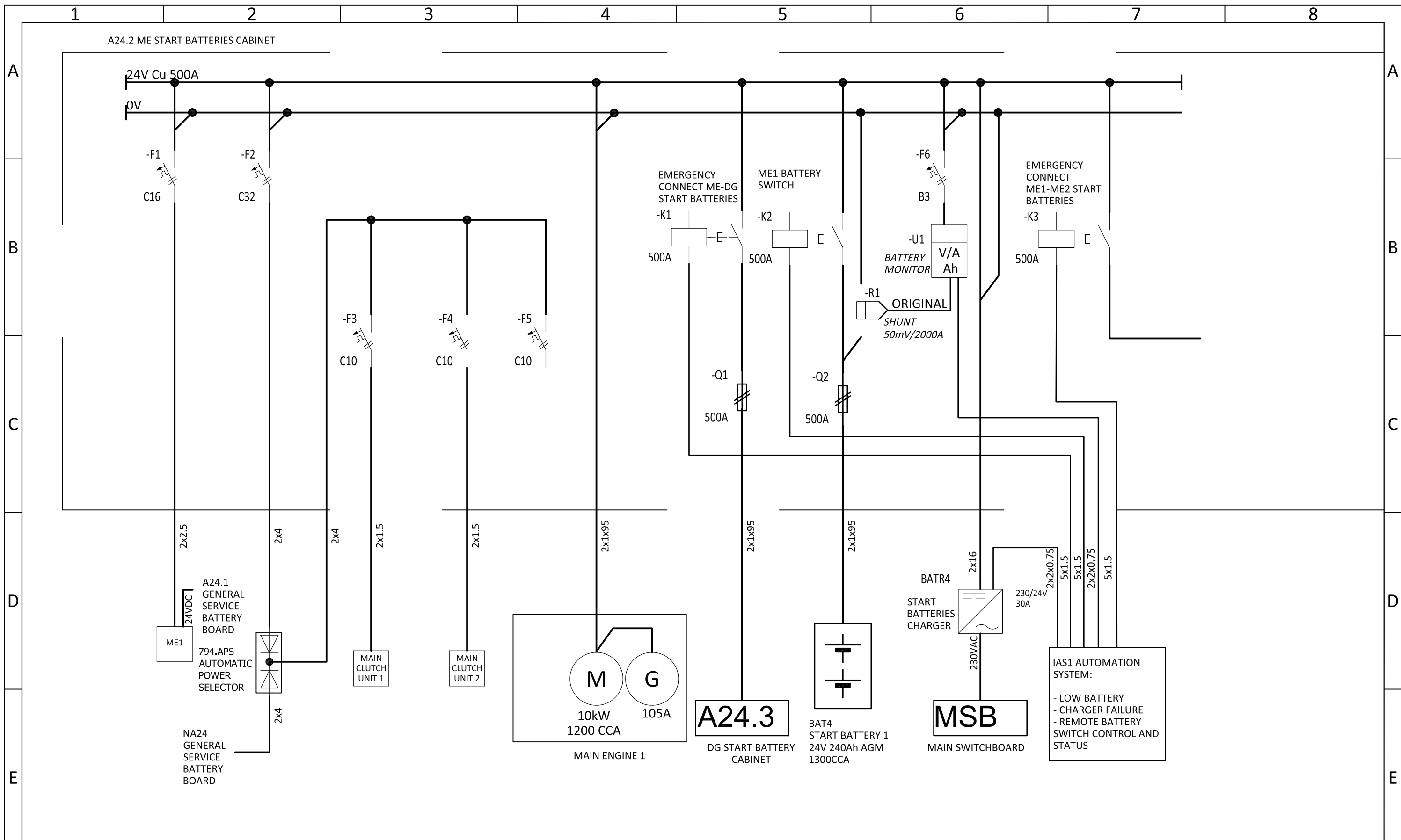


Tag	Name	Characteristics	Qty
A24.2	ME start batteries switchboard	hxwd max 1000x800x300 IP22 Bottom cable transit	1
-U1 to U2	Battery monitor	24V	2
-R1 to R2	Shunt	min 50mV/2000A	2
-KS1 to KS4	Battery switch with remote and manual control	24V 500A, with remote operation disable	4
-F1 to F6	Fuse with base	Un=min 50V, In=min 500A, Isc=min 15 kA	6
-F2	Miniature circuit breaker	C32A 2P DC, 15kA	1
-F1,QF8,QF9	Miniature circuit breaker	C16A 2P DC, 15kA	3
-F3 to QF5 -F10 to QF12	Miniature circuit breaker	C10A 2P DC, 15kA	6
-F6 to QF7	Miniature circuit breaker	B3A 2P DC, 15kA	2
-X1	Line terminals	4x4mm ² , 36x2,5mm ²	set
	Other	Cable ducts, internal wiring, busbars etc.	set

NOTES:

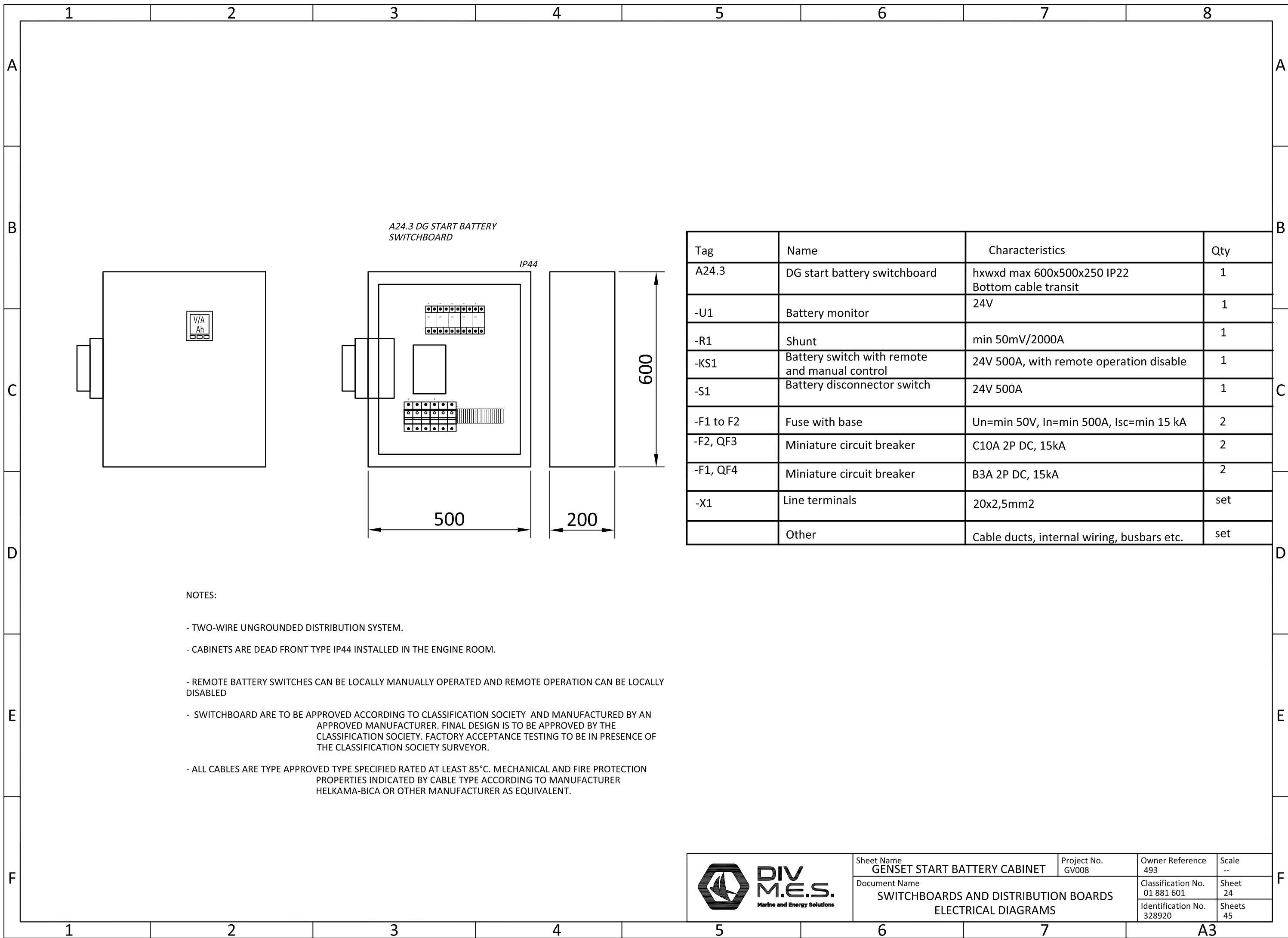
- TWO-WIRE UNGROUNDED DISTRIBUTION SYSTEM.
- CABINETS ARE DEAD FRONT TYPE IP44 INSTALLED IN THE ENGINE ROOM.
- REMOTE BATTERY SWITCHES CAN BE LOCALLY MANUALLY OPERATED AND REMOTE OPERATION CAN BE LOCALLY DISABLED
- SWITCHBOARD ARE TO BE APPROVED ACCORDING TO CLASSIFICATION SOCIETY AND MANUFACTURED BY AN APPROVED MANUFACTURER. FINAL DESIGN IS TO BE APPROVED BY THE CLASSIFICATION SOCIETY. FACTORY ACCEPTANCE TESTING TO BE IN PRESENCE OF THE CLASSIFICATION SOCIETY SURVEYOR.
- ALL CABLES ARE TYPE APPROVED TYPE SPECIFIED RATED AT LEAST 85°C. MECHANICAL AND FIRE PROTECTION PROPERTIES INDICATED BY CABLE TYPE ACCORDING TO MANUFACTURER HELKAMA-BICA OR OTHER MANUFACTURER AS EQUIVALENT.

	Sheet Name MAIN ENGINE START BAT. CABINET	Project No. GV008	Owner Reference 493	Scale --
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Circuit number	794.ME1	794.GB1	794.GB2	BATR4
Circuit name	CONTROL CABINET ME1	GEARBOX 1 PROCESSOR	GEARBOX 2 PROCESSOR	ME START BATTERY 1 CHARGER
Location	ENGINE ROOM	ENGINE ROOM	ENGINE ROOM	ENGINE ROOM
Cable	M2XCH	M2XCH	M2XCH	M2XCH
Section	2x2.5	2x1.5	2x1.5	3x1.5
Load	300W			0,6kW / 25A

	Sheet Name MAIN ENGINE START BAT. CABINET	Project No. GV008	Owner Reference 493	Scale --
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A24.3 DG START BATTERY SWITCHBOARD

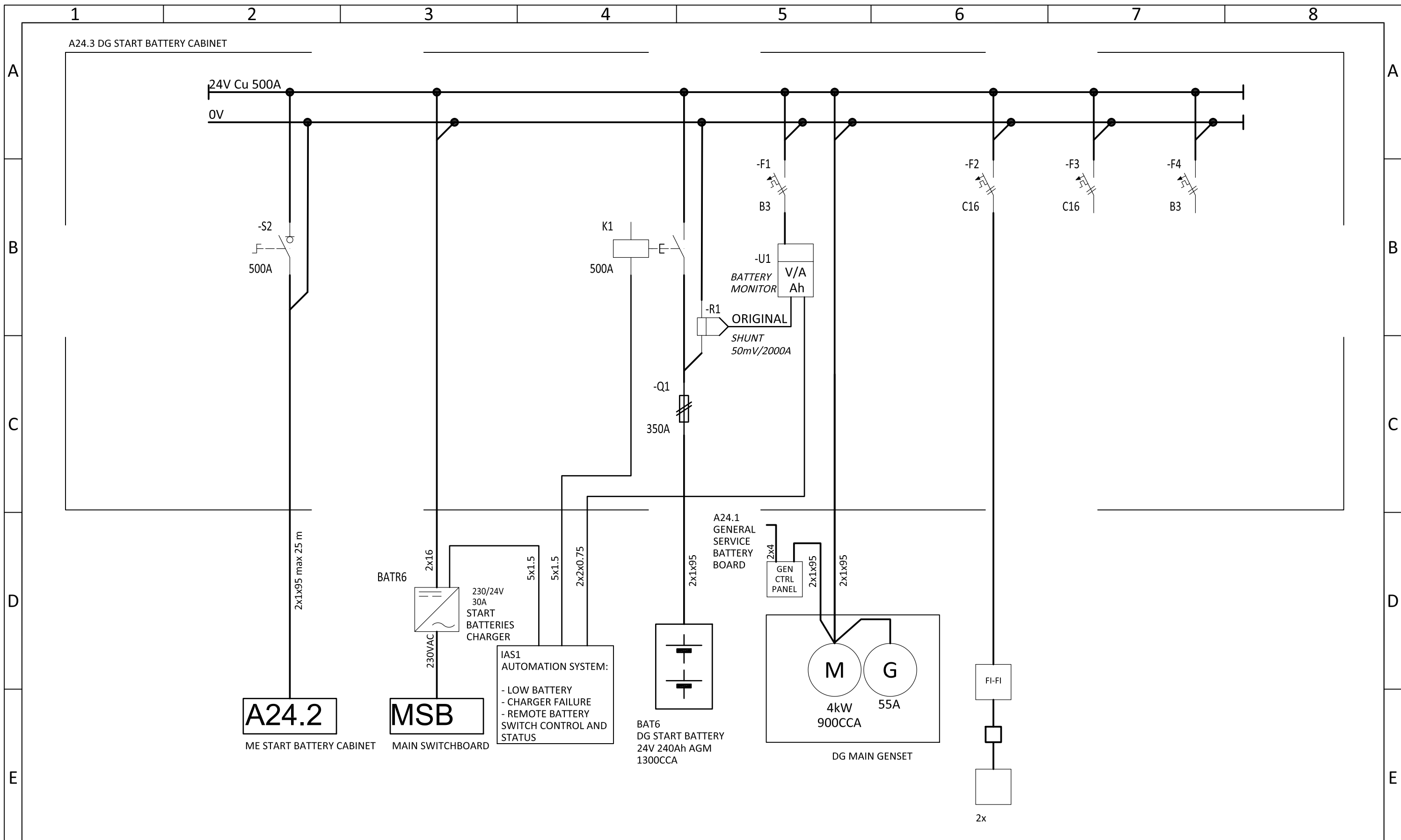
IP44

Tag	Name	Characteristics	Qty
A24.3	DG start battery switchboard	hxwd max 600x500x250 IP22 Bottom cable transit	1
-U1	Battery monitor	24V	1
-R1	Shunt	min 50mV/2000A	1
-KS1	Battery switch with remote and manual control	24V 500A, with remote operation disable	1
-S1	Battery disconnect switch	24V 500A	1
-F1 to F2	Fuse with base	Un=min 50V, In=min 500A, Isc=min 15 kA	2
-F2, QF3	Miniature circuit breaker	C10A 2P DC, 15kA	2
-F1, QF4	Miniature circuit breaker	B3A 2P DC, 15kA	2
-X1	Line terminals	20x2,5mm2	set
	Other	Cable ducts, internal wiring, busbars etc.	set

NOTES:

- TWO-WIRE UNGROUNDED DISTRIBUTION SYSTEM.
- CABINETS ARE DEAD FRONT TYPE IP44 INSTALLED IN THE ENGINE ROOM.
- REMOTE BATTERY SWITCHES CAN BE LOCALLY MANUALLY OPERATED AND REMOTE OPERATION CAN BE LOCALLY DISABLED
- SWITCHBOARD ARE TO BE APPROVED ACCORDING TO CLASSIFICATION SOCIETY AND MANUFACTURED BY AN APPROVED MANUFACTURER. FINAL DESIGN IS TO BE APPROVED BY THE CLASSIFICATION SOCIETY. FACTORY ACCEPTANCE TESTING TO BE IN PRESENCE OF THE CLASSIFICATION SOCIETY SURVEYOR.
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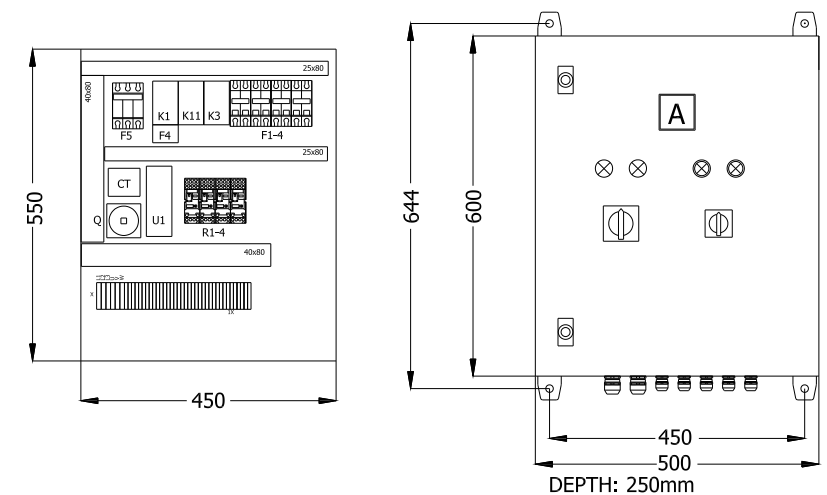
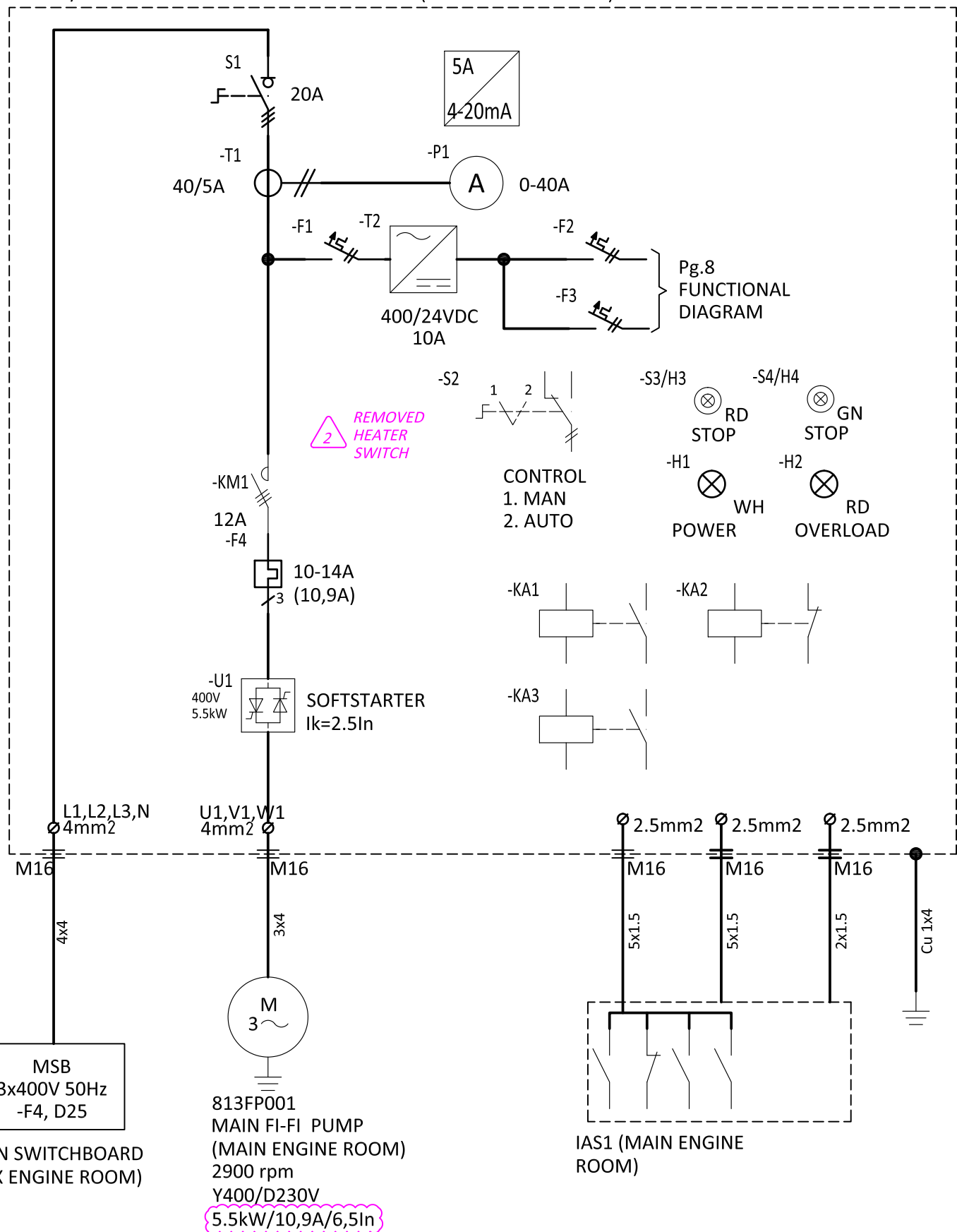
	Sheet Name GENSET START BATTERY CABINET	Project No. GV008	Owner Reference 493	Scale --
	Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 24
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Circuit number	BATR5	574-MS-0011-AFD TO 574-MS-0012-AFD
Circuit name	DG START BATTER CHARGER	AUX ER FIRE DAMPERS
Location	ENGINE ROOM	AUX ENGINE ROOM
Cable	M2XCH	M2XCH-FFR
Section	3x6	2x2.5
Load	1,5kW max 7A	10W

	Sheet Name GENSET START BATTERY CABINET	Project No. GV008	Owner Reference 493	Scale --
	SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 25
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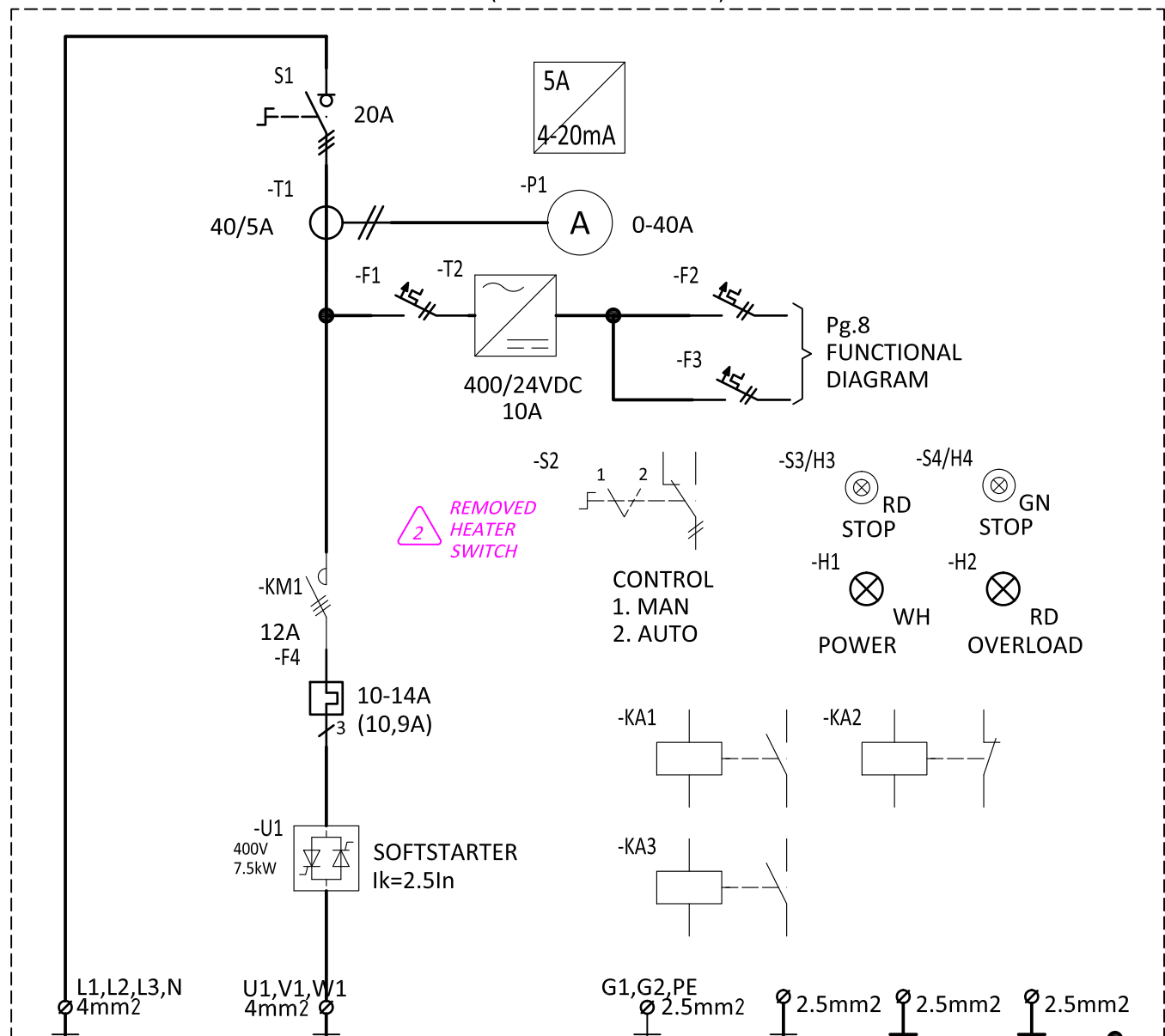
813.1C/EL. CABINET MAIN FI-FI PUMP STARTER (MAIN ENGINE ROOM)



Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM16, 2xM20	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	10-14A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor Contactor 3P	400V 3P 18A AC-1 Auxiliary contacts 3NO+1NC	1
-KA1 -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-P1	AC Ammeter	0-40A	1
-S1	Main switch	400V 3P 20A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Current transformer	40/5A	1
-T2	Control supply	400/24VDC	1
	Line terminals	4mm ²	6
	Line terminals	2.5mm ²	25
-U1	Soft starter	3x400V 50Hz 5.5kW IP44	1

Sheet Name EL. CABINETS FI-FI / GEN.SER.PUMPS	Project No. GV008	Owner Reference 493	Scale --
Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 26
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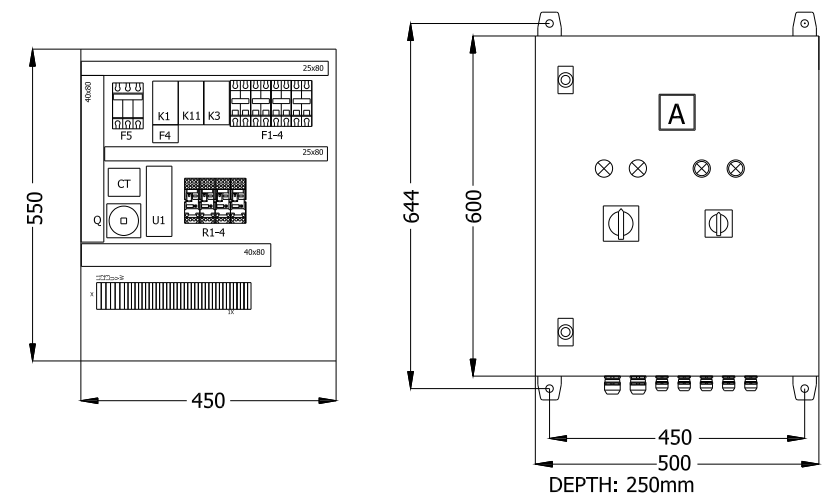
813.2C EL. GENERAL SERVICE PUMP STARTER (MAIN ENGINE ROOM)



Pg.8
FUNCTIONAL
DIAGRAM

2
REMOVED
HEATER
SWITCH

2
DECREASED



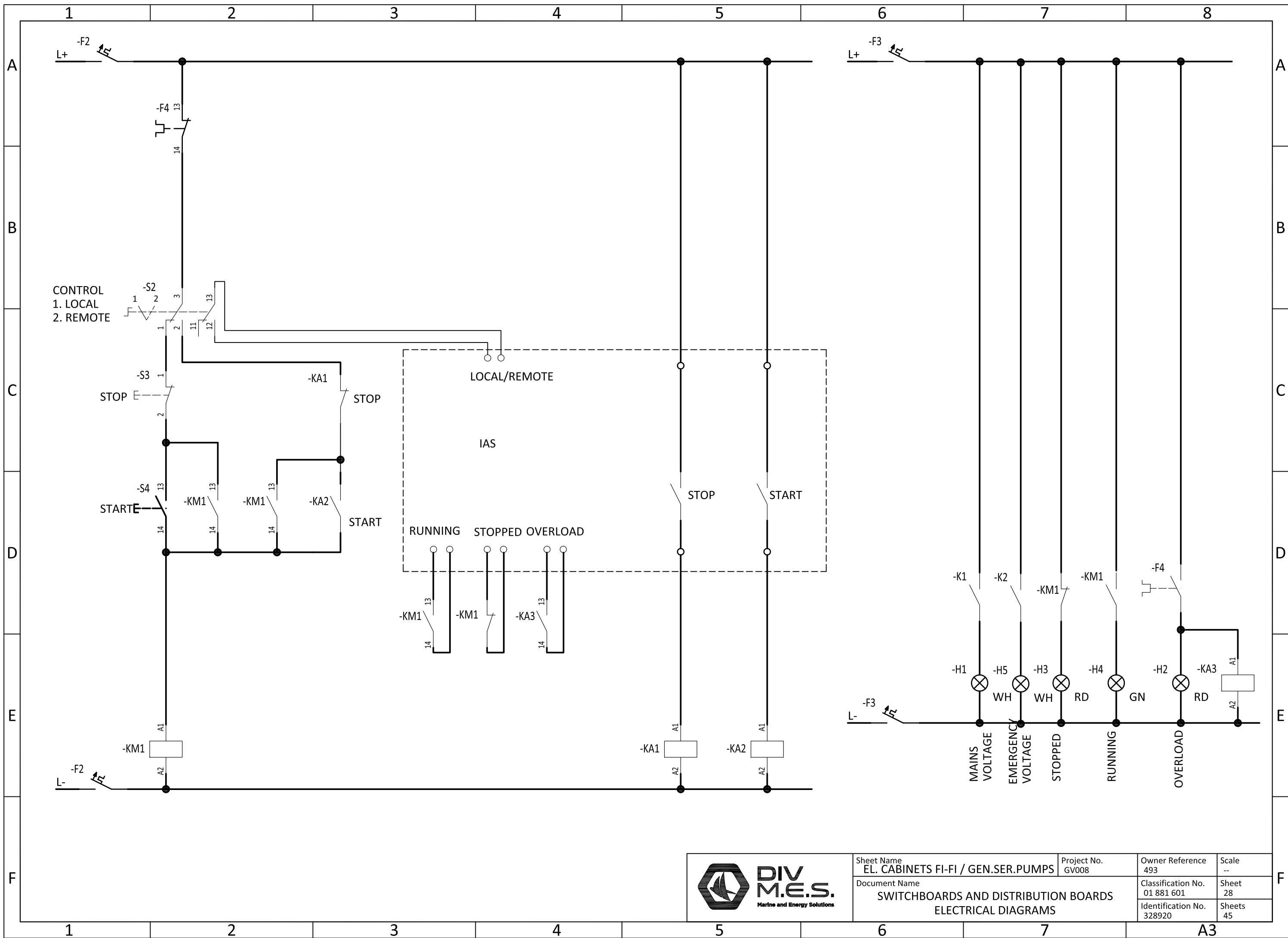
Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM16, 2xM20	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	10-14A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor Contactor 3P	400V 3P 18A AC-1 Auxiliary contacts 3NO+1NC	1
-KA1 -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-P1	AC Ammeter	0-40A	1
-S1	Main switch	400V 3P 20A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Current transformer	40/5A	1
-T2	Control supply	400/24VDC	1
	Line terminals	4mm ²	6
	Line terminals	2.5mm ²	25
-U1	Soft starter	3x400V 50Hz 5.5kW	1

MSB
3x400V 50Hz
-F5, D25
MAIN SWITCHBOARD
(AUX ENGINE ROOM)

813GP001
GENERAL SERVICE PUMP
(MAIN ENGINE ROOM)
2900 rpm
Y400/D230V
5.5kW/10,9A/6,5In

IAS2 (AUS CTRL ROOM)

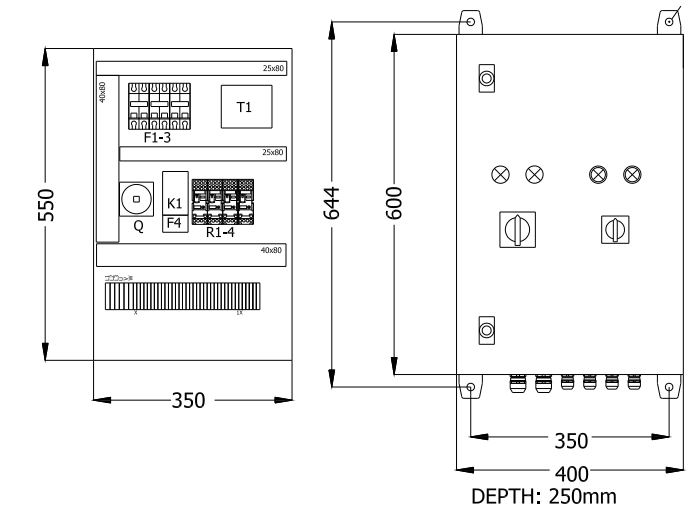
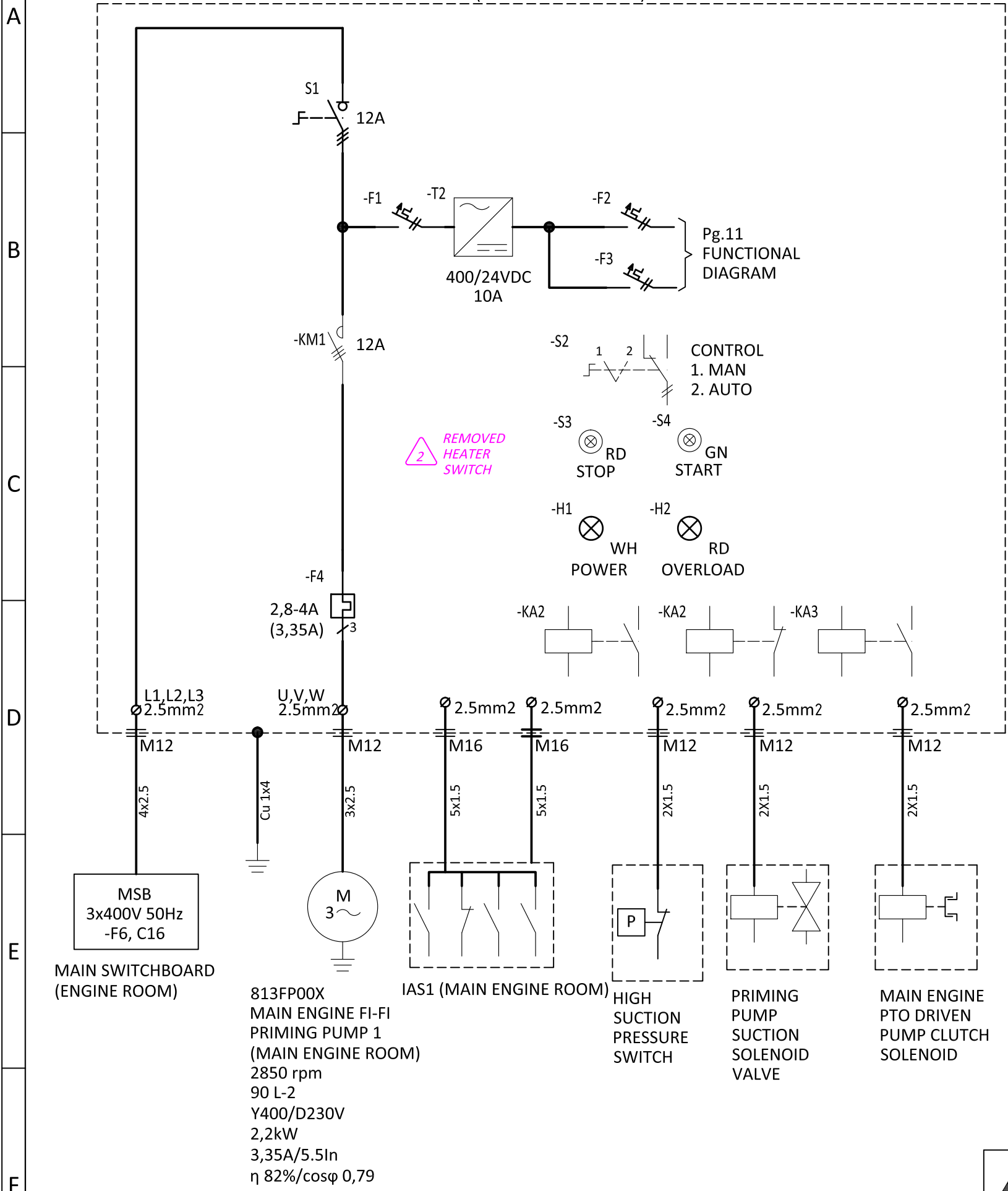
Sheet Name EL. CABINETS FI-FI / GEN.SER.PUMPS	Project No. GV008	Owner Reference 493	Scale --
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Sheet Name EL. CABINETS FI-FI / GEN.SER.PUMPS	Project No. GV008	Owner Reference 493	Scale --
Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 28
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A3

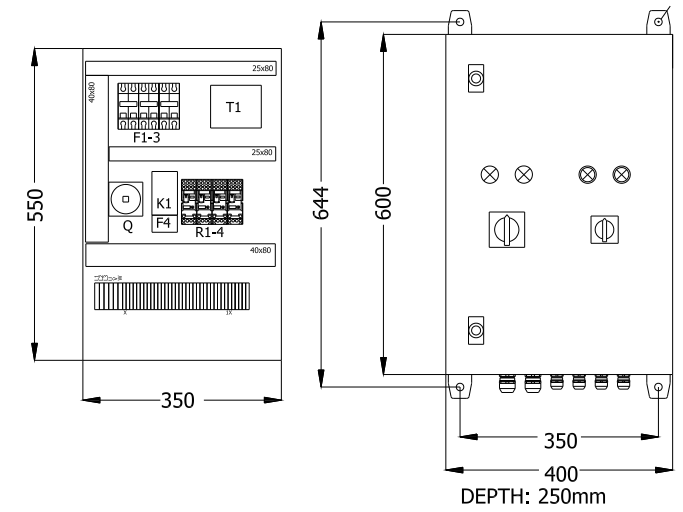
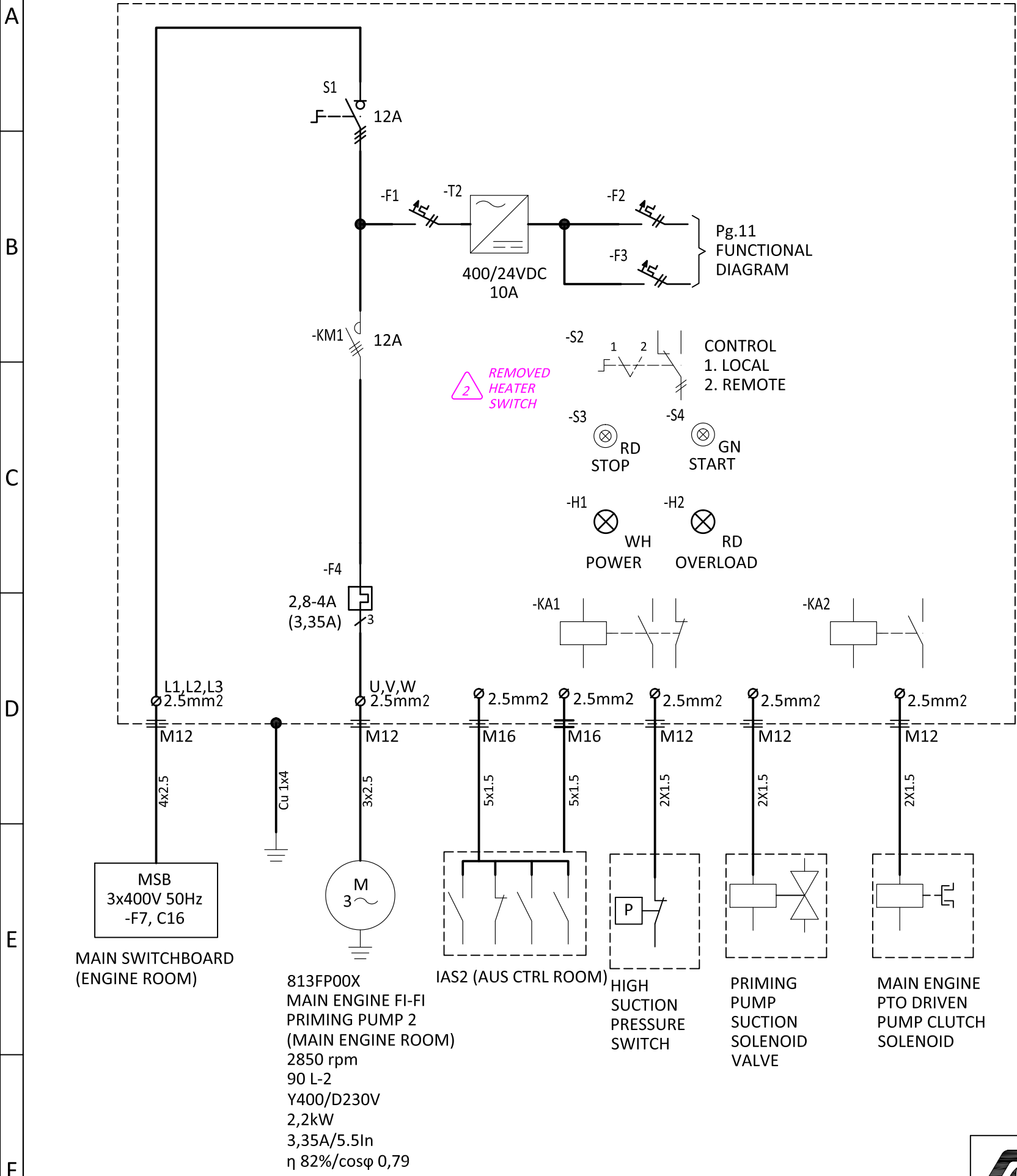
813.3C ME FI-FI WITH PRIMING PUMP 1 STARTER (MAIN ENGINE ROOM)



Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 400x300x210 IP44, 2xM16, 2xM20 3xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	2,8-4A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor contactor 3P	400V 3P 12A AC-3 Auxiliary contacts 3NO+1NC	1
-KA1, -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-KA2	Control relay	24V 1NC	1
-S1	Main switch	400V 3P 12A 0-1	1
-S2	Selector switch	250V 4P 12A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Control supply	400/24VDC	1
	Line terminals	2.5mm ²	38

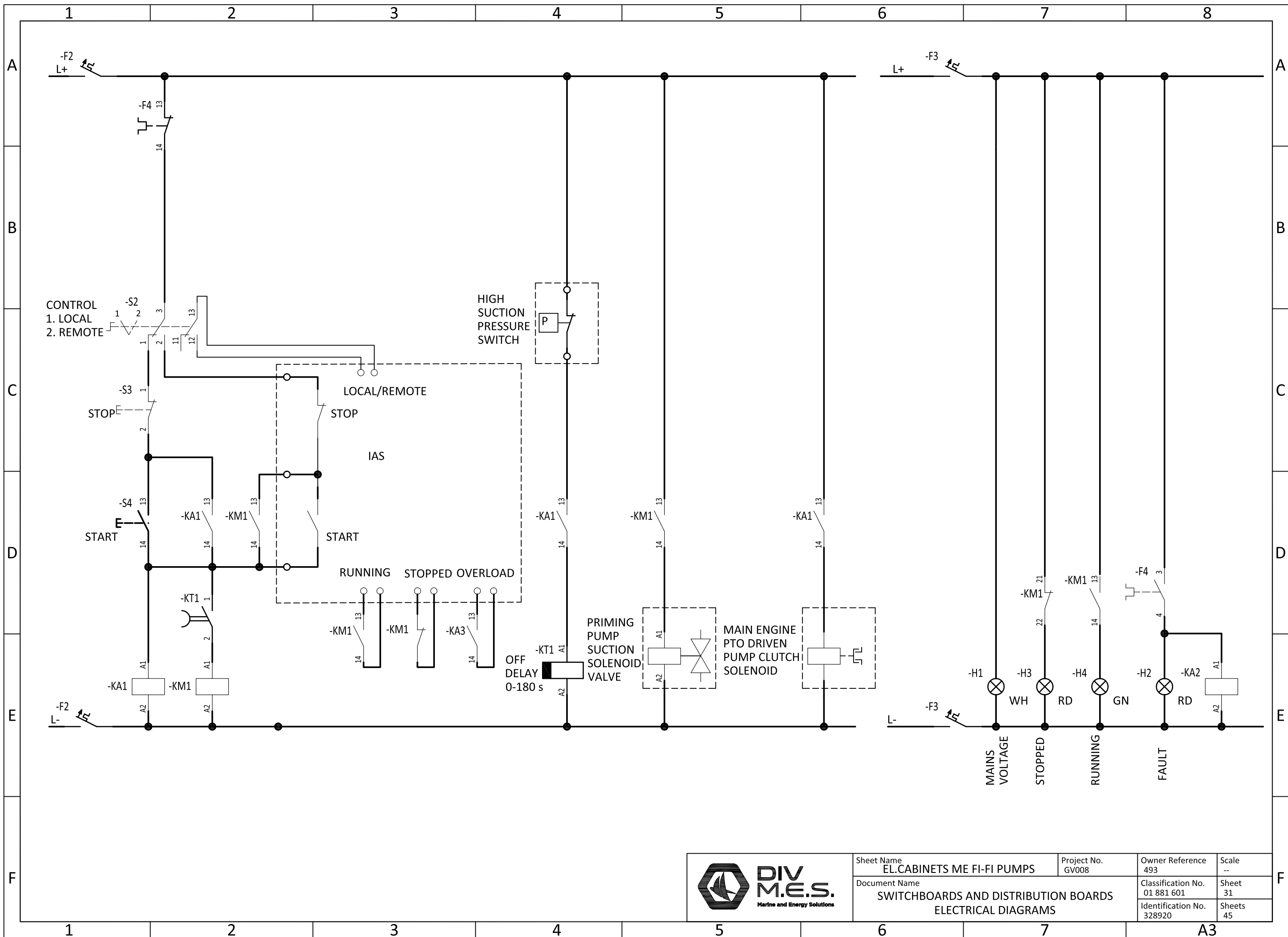
Sheet Name EL.CABINETS ME FI-FI PUMPS	Project No. GV008	Owner Reference 493	Scale --
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8134C ME FI-FI WITH PRIMING PUMP 2 STARTER (MAIN ENGINE ROOM)



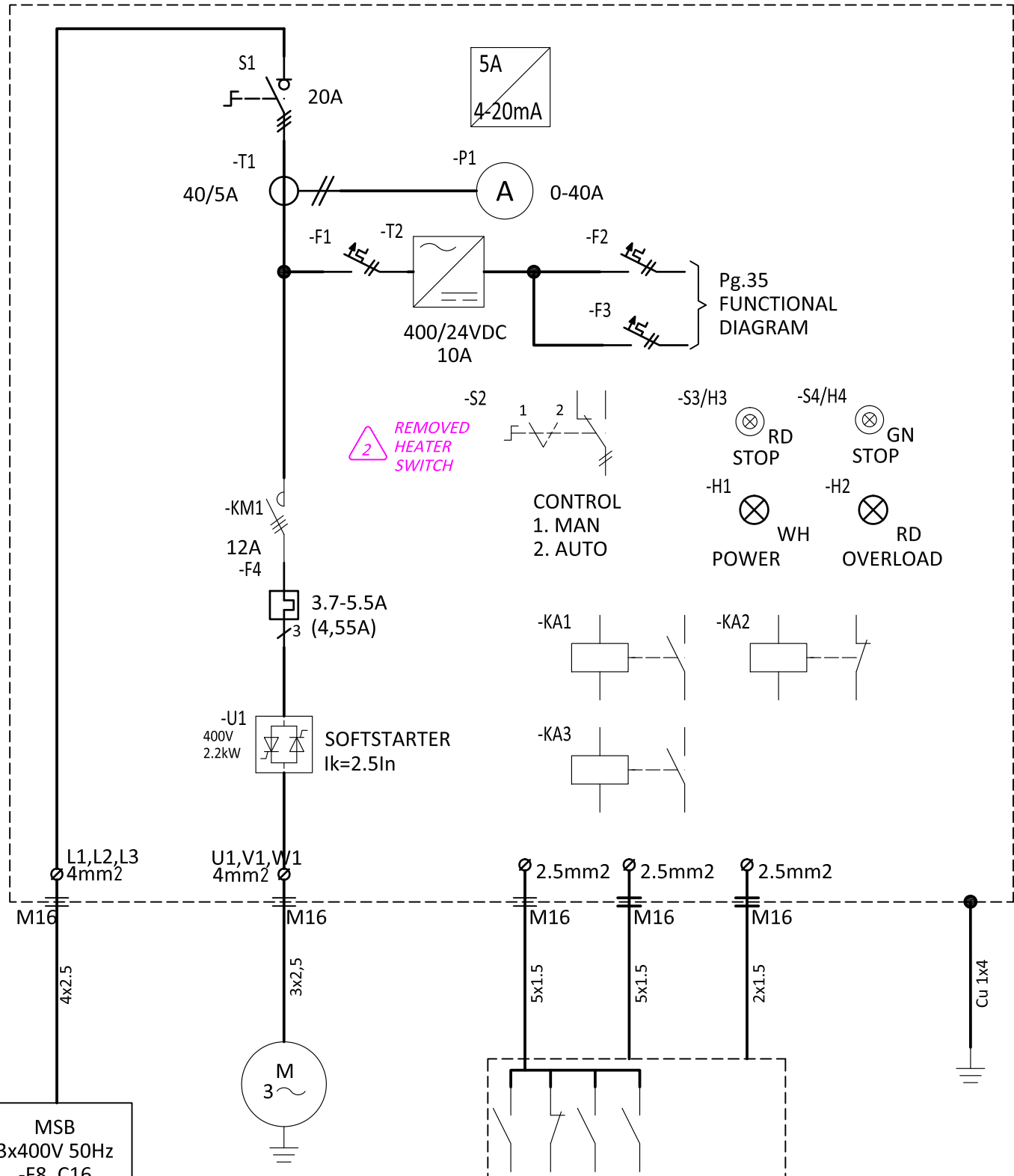
Tag	Name	Characteristics	Qty
	Housing with cable glands	hwxwd 400x300x210 IP44, 2xM16, 2xM20, 3xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	2,8-4A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor contactor 3P	400V 3P 12A AC-3 Auxiliary contacts 3NO+1NC	1
-KA1, -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-S1	Main switch	400V 3P 12A 0-1	1
-S2	Selector switch	250V 4P 12A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Control supply	400/24VDC	1
	Line terminals	2.5mm2	38

Sheet Name EL.CABINETS ME FI-FI PUMPS	Project No. GV008	Owner Reference 493	Scale --
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	Sheet Name EL.CABINETS ME FI-FI PUMPS	Project No. GV008	Owner Reference 493	Scale --
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803.1C MAIN BILGE PUMP STARTER (MAIN ENGINE ROOM)



MSB
3x400V 50Hz
-F8, C16
MAIN SWITCHBOARD
(ENGINE ROOM)

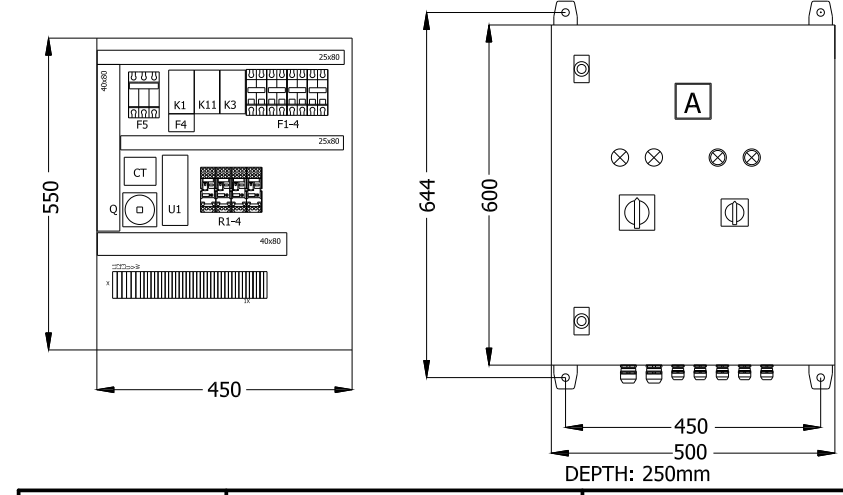
803PUMP01001
MAIN BILGE PUMP
(MAIN ENGINE ROOM)
2900 rpm
132 S1/2
Y400/D230V
2,2kW
4,55A/7,0In
 η 85%/cos ϕ 0,83

IAS1 (MAIN ENGINE ROOM)

Pg.35
FUNCTIONAL
DIAGRAM

REMOVED
HEATER
SWITCH

CONTROL
1. MAN
2. AUTO



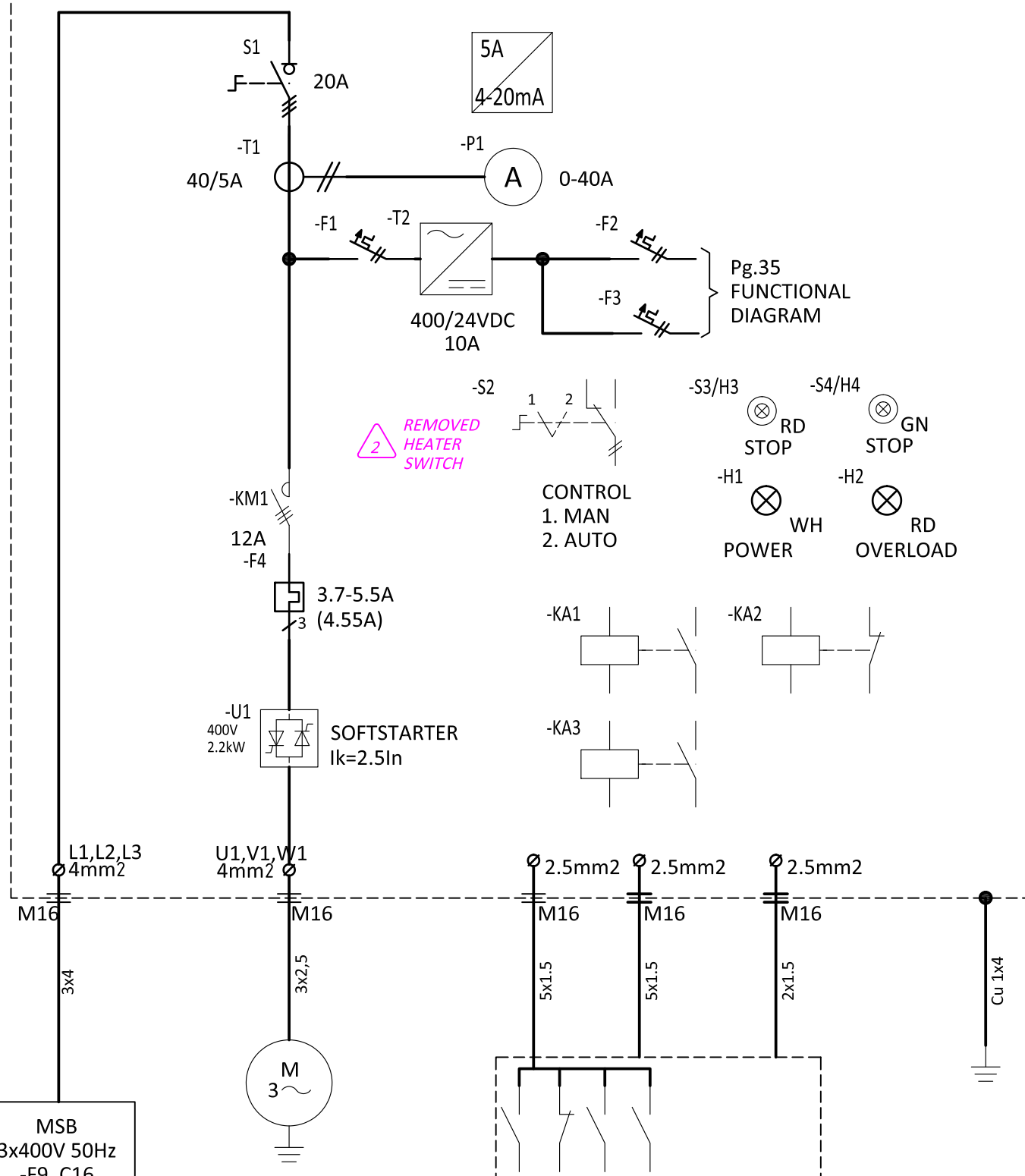
Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM16, 2xM20	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	3,7-5,5A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor Contactor 3P	400V 3P 12A AC-1 Auxiliary contacts 3NO+1NC	1
-KA1 -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-P1	AC Ammeter	0-40A	1
-S1	Main switch	400V 3P 20A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-S5	Heater switch	250V 2P 3A 0-1	1
-T1	Current transformer	40/5A	1
-T2	Control supply	400/24VDC	1
	Line terminals	4mm ²	6
	Line terminals	2.5mm ²	25
-U1	Soft starter	3x400V 50Hz 2.2kW	1

DIV
M.E.S.

Marine and Energy Solutions

Sheet Name EL.CABINETS BILGE PUMPS	Project No. GV008	Owner Reference 493	Scale --
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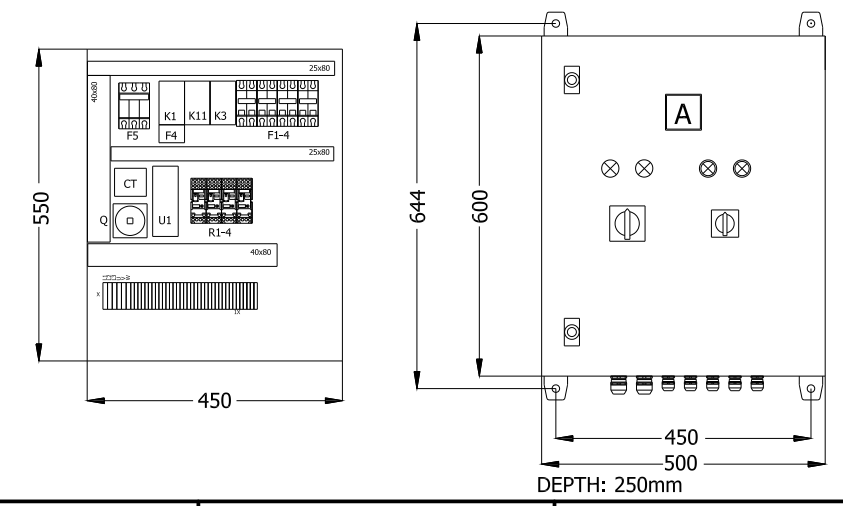
803.2C AUXILIARY BILGE PUMP STARTER (AUX ENGINE ROOM)



MSB
3x400V 50Hz
-F9, C16
MAIN SWITCHBOARD
(ENGINE ROOM)

803PUMP01002
AUXILIARY BILGE PUMP
(AUX ENGINE ROOM)
2900 rpm
132 S1/2
Y400/D230V
2,2kW
4,55A/7,0In
η 85%/cosφ 0,83

IAS2 (AUS CTRL ROOM)

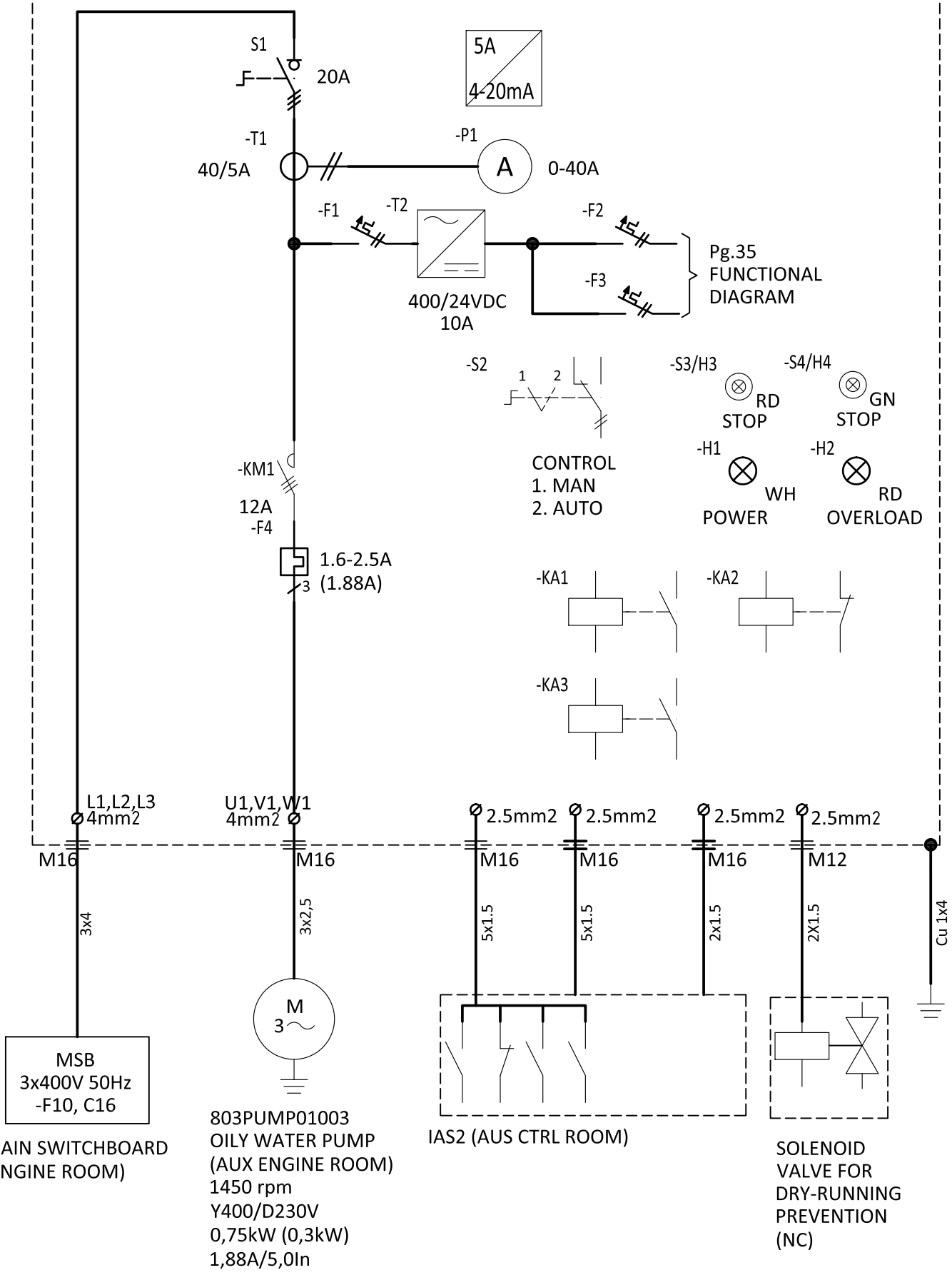


Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM16, 2xM20	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	3,7-5,5A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor Contactor 3P	400V 3P 12A AC-1 Auxiliary contacts 3NO+1NC	1
-KA1 -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-P1	AC Ammeter	0-40A	1
-S1	Main switch	400V 3P 20A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Current transformer	40/5A	1
-T2	Control supply	400/24VDC	1
	Line terminals	4mm ²	6
	Line terminals	2.5mm ²	25
-U1	Soft starter	3x400V 50Hz 2.2kW	1



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803.3C OILY WATER PUMP STARTER (AUX ENGINE ROOM)

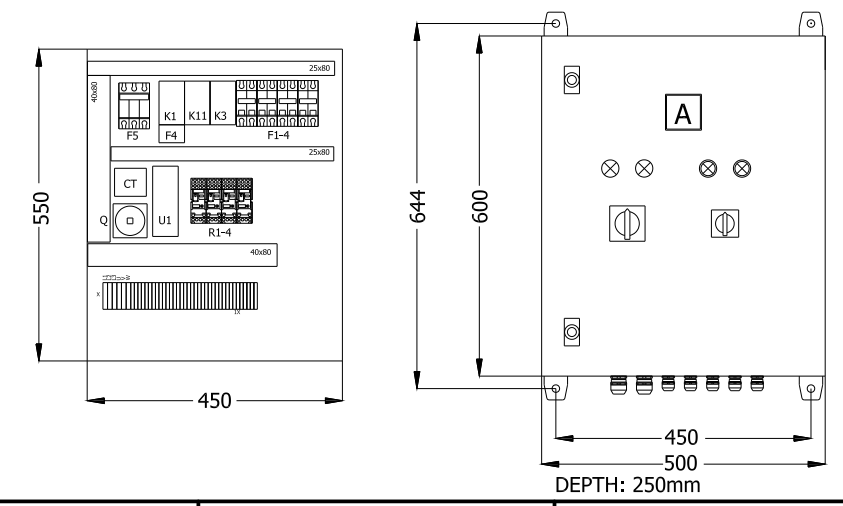


MSB
3x400V 50Hz
-F10, C16
MAIN SWITCHBOARD
(ENGINE ROOM)

803PUMP01003
OILY WATER PUMP
(AUX ENGINE ROOM)
1450 rpm
Y400/D230V
0,75kW (0,3kW)
1,88A/5,0In

IAS2 (AUS CTRL ROOM)

SOLENOID
VALVE FOR
DRY-RUNNING
PREVENTION
(NC)

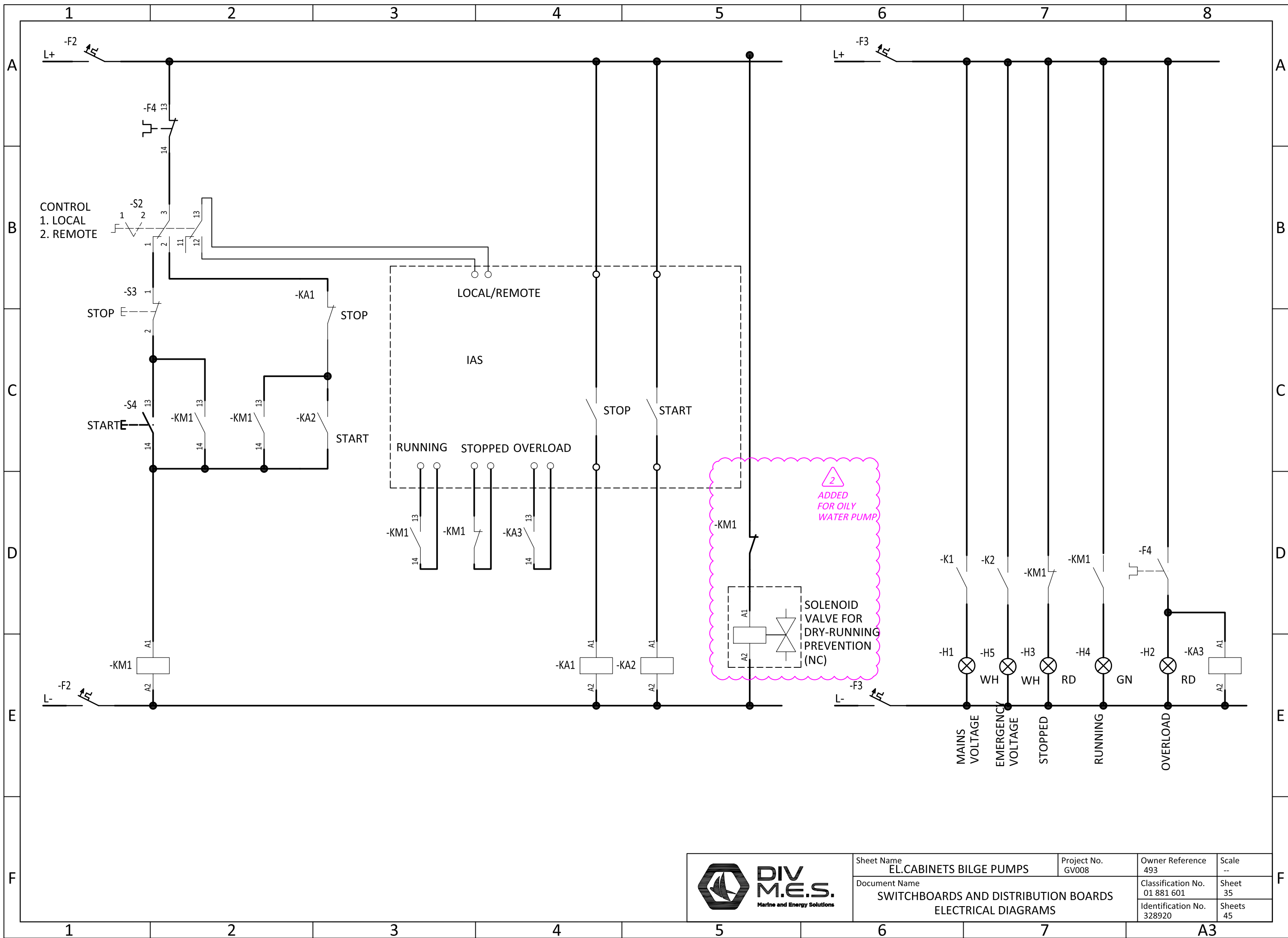



Tag	Name	Characteristics	Qty
	Housing with cable glands	hwxwd 500x400x210 IP44, 4xM16, 2xM20	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	1.6-2.5A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor Contactor 3P	400V 3P 12A AC-1 Auxiliary contacts 3NO+2NC	1
-KA1 -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-P1	AC Ammeter	0-40A	1
-S1	Main switch	400V 3P 20A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Current transformer	40/5A	1
-T2	Control supply	400/24VDC	1
	Line terminals	4mm2	6
	Line terminals	2.5mm2	25

2 ADDED

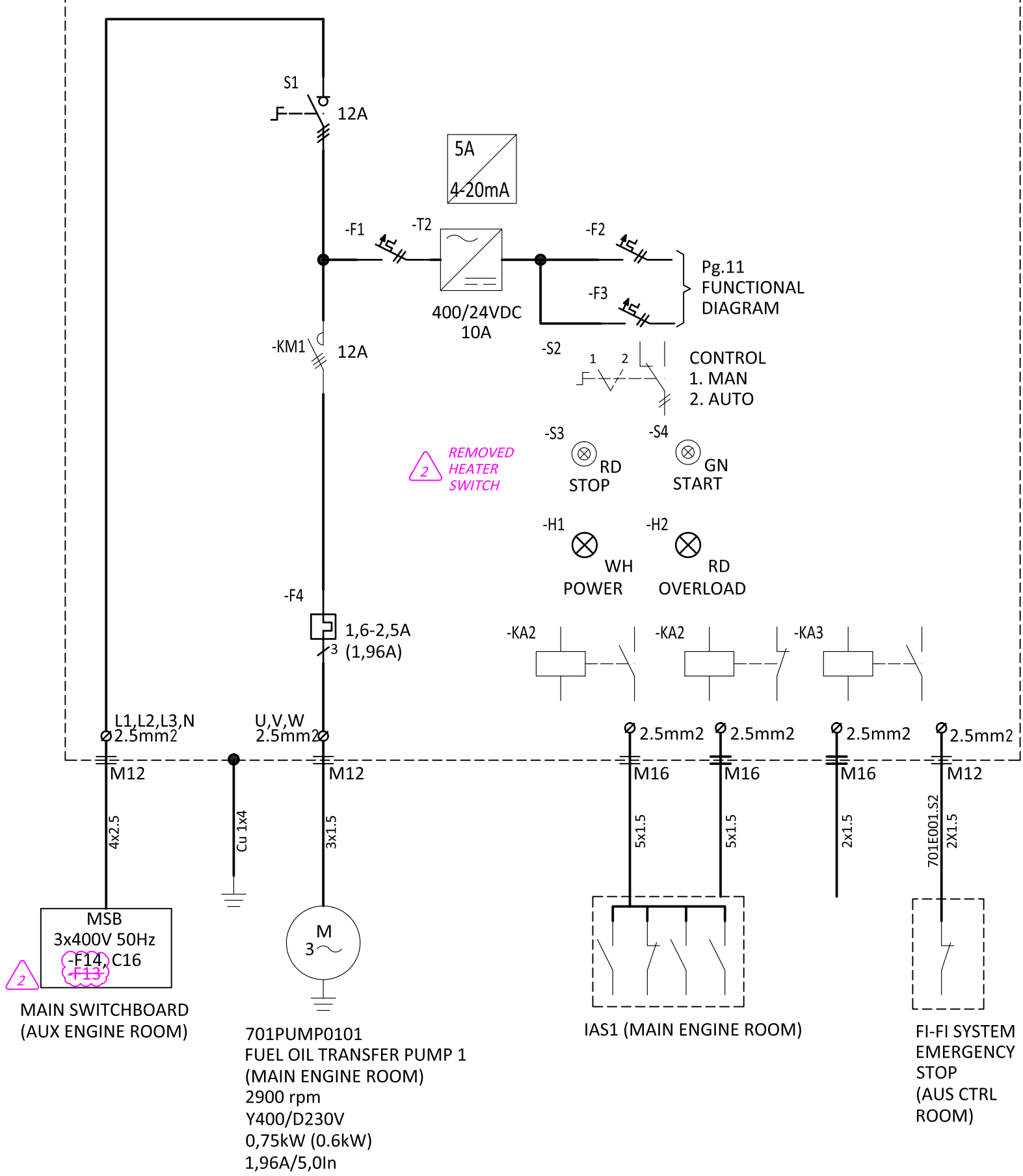


Sheet Name EL.CABINETS BILGE PUMPS	Project No. GV008	Owner Reference 493	Scale --
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	Sheet Name EL.CABINETS BILGE PUMPS	Project No. GV008	Owner Reference 493	Scale --
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701.1C FO PUMP 1 STARTER (MAIN ENGINE ROOM)

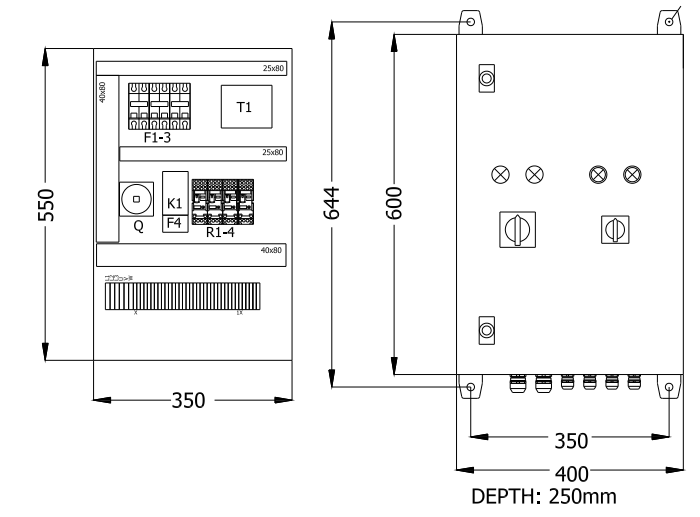


MSB
3x400V 50Hz
-F14, C16
MAIN SWITCHBOARD
(AUX ENGINE ROOM)

701PUMP0101
FUEL OIL TRANSFER PUMP 1
(MAIN ENGINE ROOM)
2900 rpm
Y400/D230V
0,75kW (0.6kW)
1,96A/5,0In

IAS1 (MAIN ENGINE ROOM)

FI-FI SYSTEM
EMERGENCY
STOP
(AUS CTRL
ROOM)



Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 400x300x210 IP44, 2xM16, 2xM20 3xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	1,6-2,5A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor contactor 3P	400V 3P 12A AC-3 Auxiliary contacts 3NO+1NC	1
-KA1, -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-S1	Main switch	400V 3P 12A 0-1	1
-S2	Selector switch	250V 4P 12A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Control supply	400/24V 10A	1
	Line terminals	2.5mm2	38

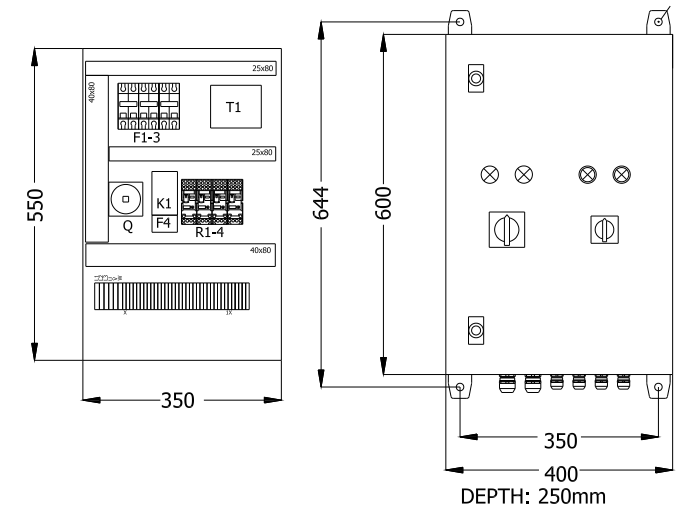
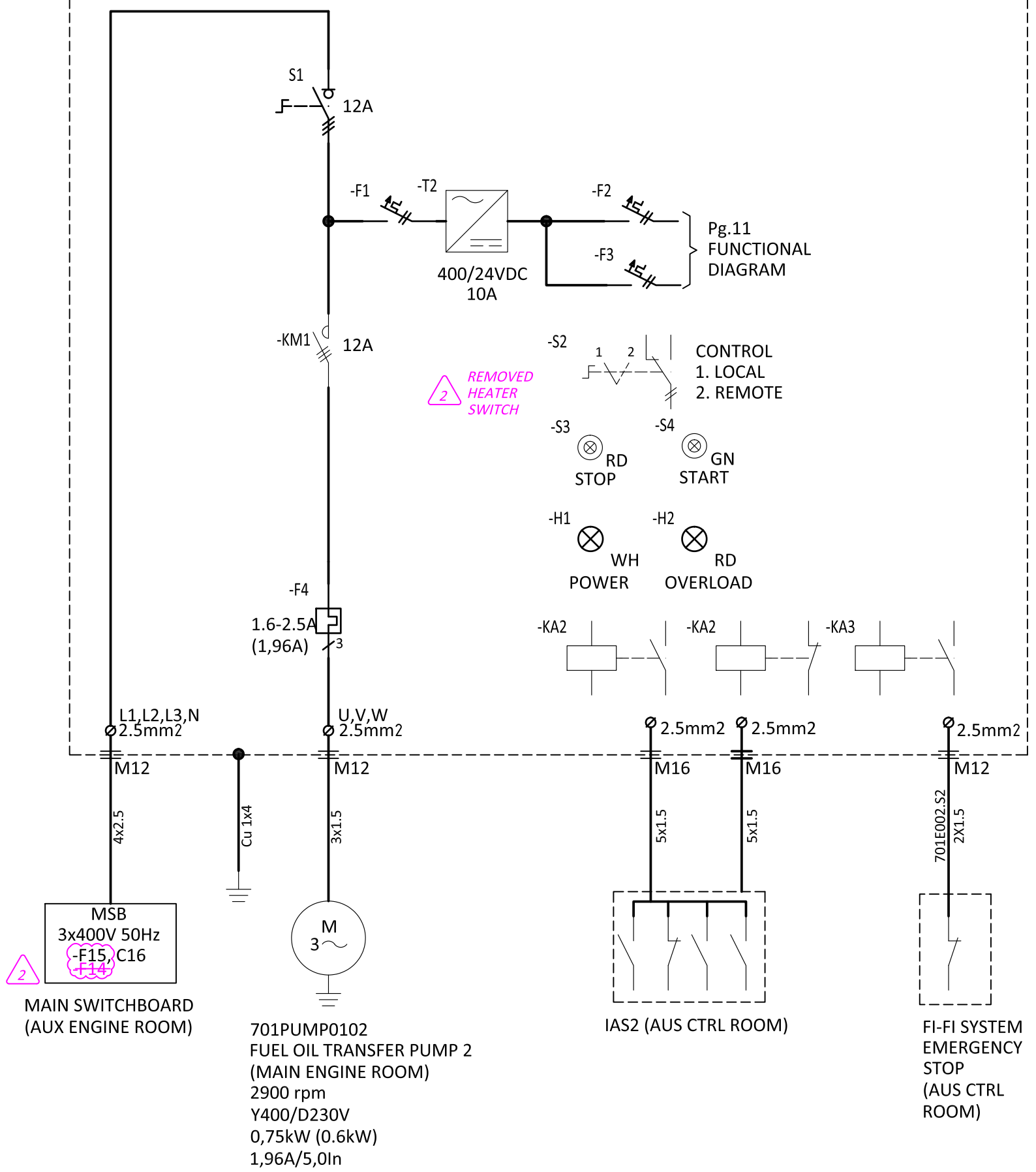
2 DECREASED

DIVE
M.E.S.

Marine and Energy Solutions

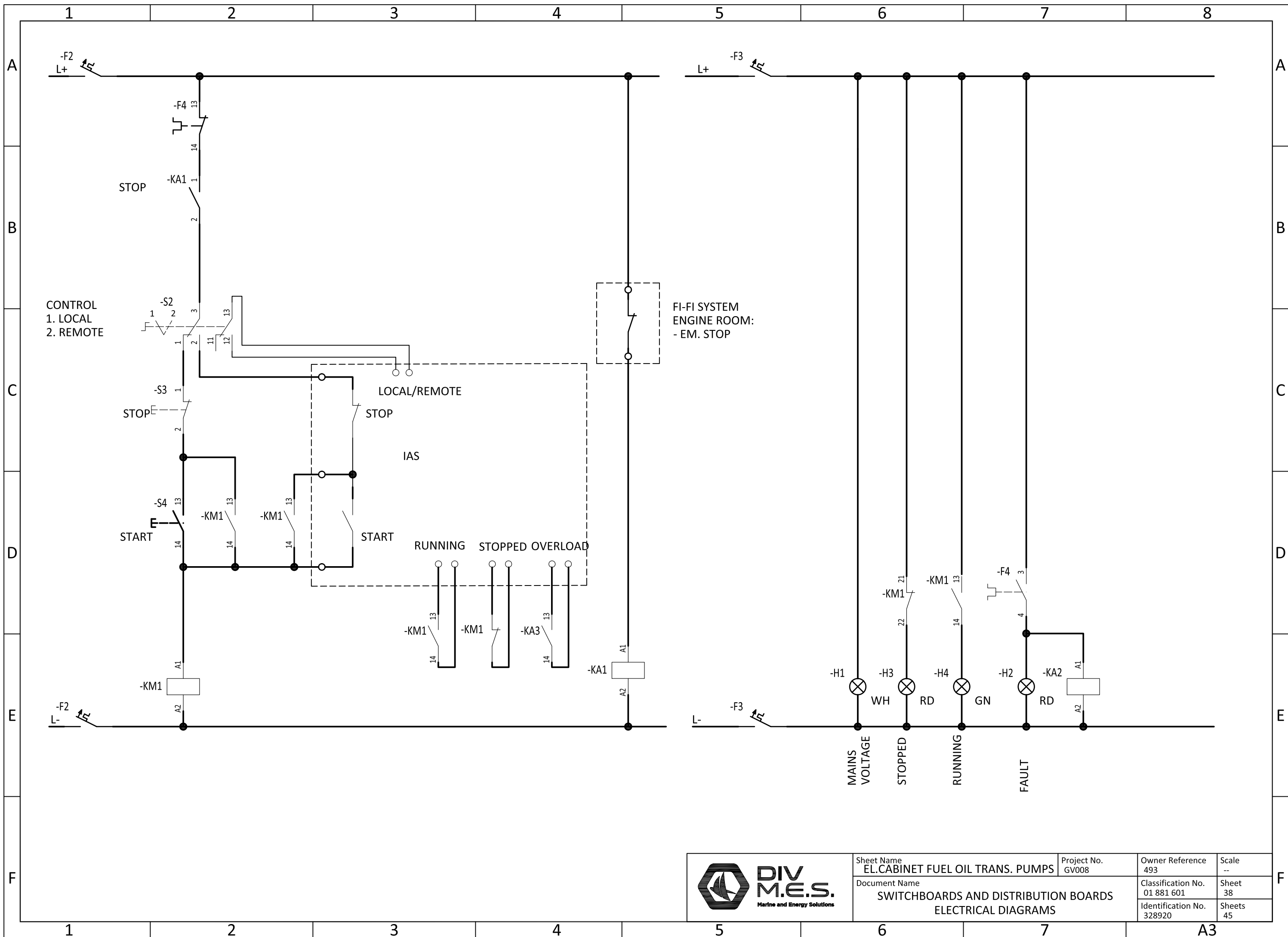
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701.2C FO PUMP 2 STARTER (MAIN ENGINE ROOM)



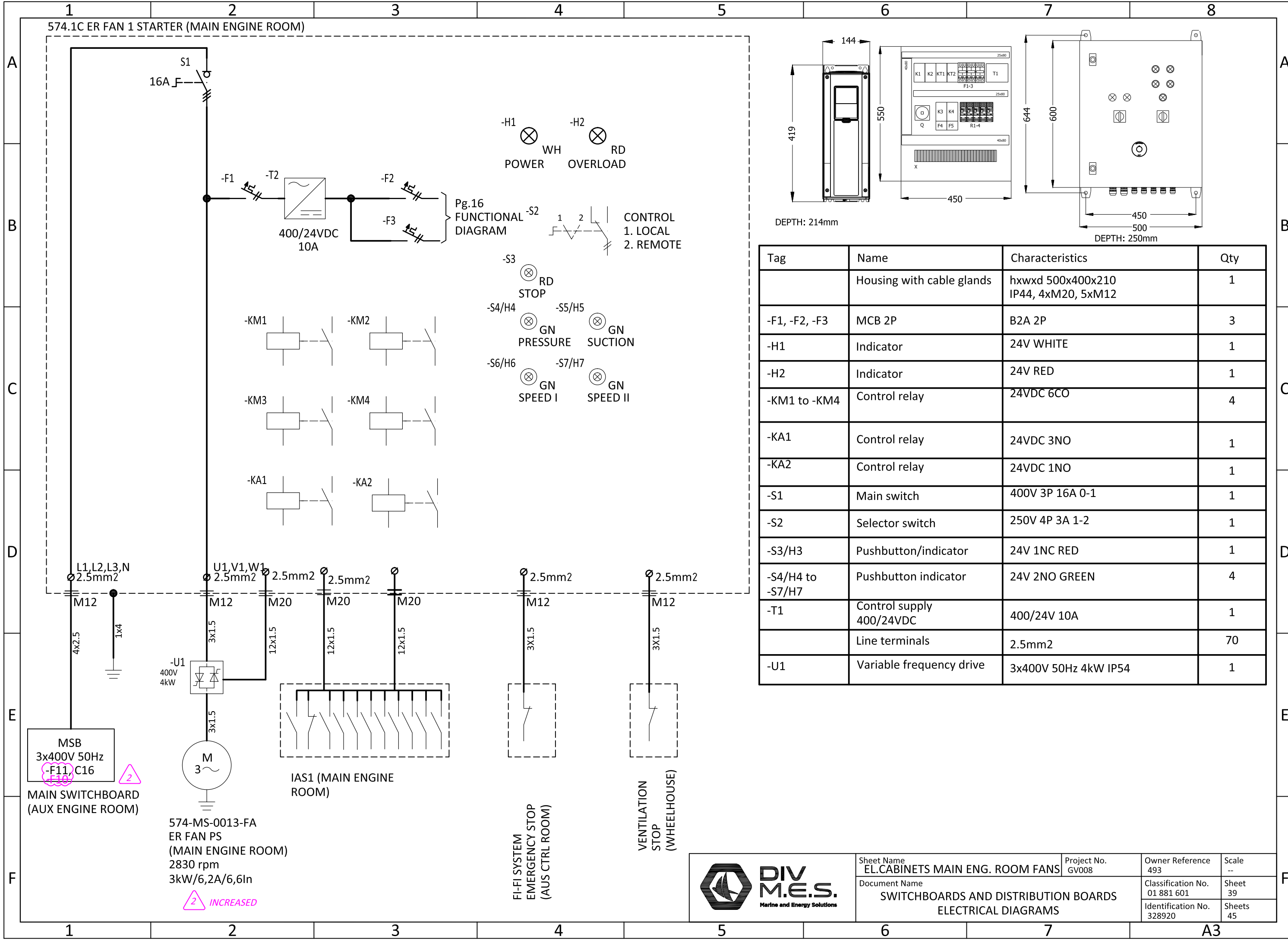
Tag	Name	Characteristics	Qty
	Housing with cable glands	hwxwd 400x300x210 IP44, 2xM16, 2xM20, 3xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-F4	Thermal overload relay, 3P	1,6-2,5A 3P 1NO 1NC	1
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1	Motor contactor 3P	400V 3P 12A AC-3 Auxiliary contacts 3NO+1NC	1
-KA1, -KA3	Control relay	24V 1NO	2
-KA2	Control relay	24V 1NC	1
-S1	Main switch	400V 3P 12A 0-1	1
-S2	Selector switch	250V 4P 12A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4	Pushbutton/indicator	24V 2NO GREEN	1
-T1	Control supply	400/24VDC	1
	Line terminals	2.5mm2	38

Sheet Name EL.CABINET FUEL OIL TRANS. PUMPS	Project No. GV008	Owner Reference 493	Scale --
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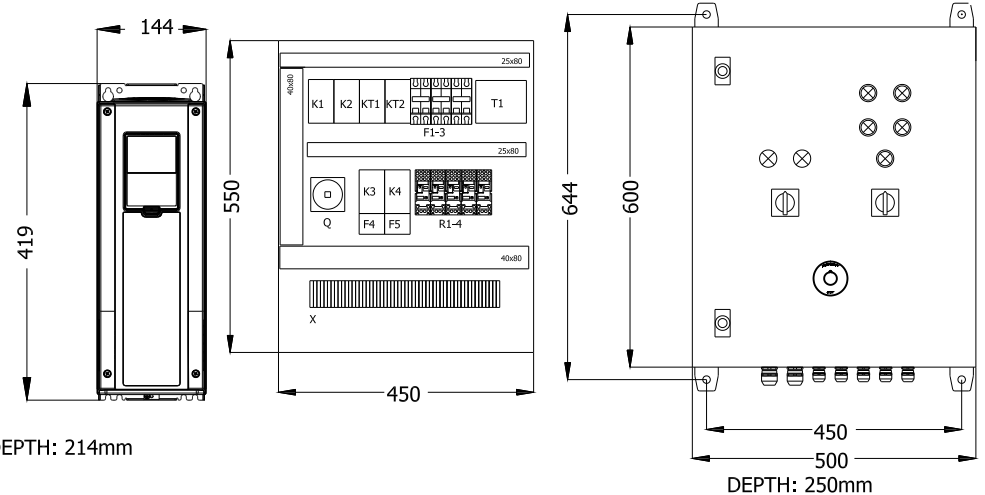
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574.1C ER FAN 1 STARTER (MAIN ENGINE ROOM)



Pg.16
FUNCTIONAL
DIAGRAM

CONTROL
1. LOCAL
2. REMOTE



Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM20, 5xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1 to -KM4	Control relay	24VDC 6CO	4
-KA1	Control relay	24VDC 3NO	1
-KA2	Control relay	24VDC 1NO	1
-S1	Main switch	400V 3P 16A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4 to -S7/H7	Pushbutton indicator	24V 2NO GREEN	4
-T1	Control supply	400/24V 10A	1
	Line terminals	2.5mm2	70
-U1	Variable frequency drive	3x400V 50Hz 4kW IP54	1

MSB
3x400V 50Hz
-F11, C16
MAIN SWITCHBOARD
(AUX ENGINE ROOM)

574-MS-0013-FA
ER FAN PS
(MAIN ENGINE ROOM)
2830 rpm
3kW/6,2A/6,6In

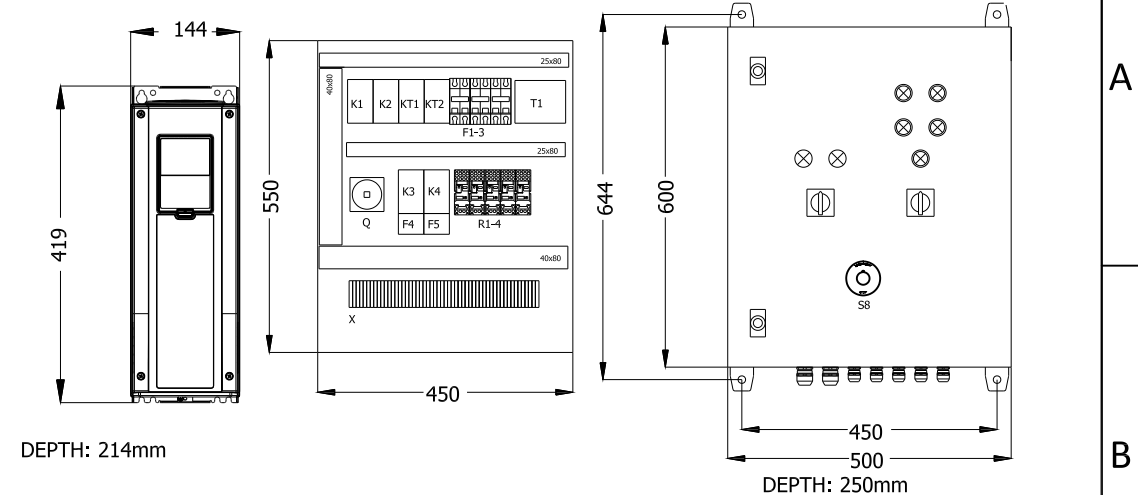
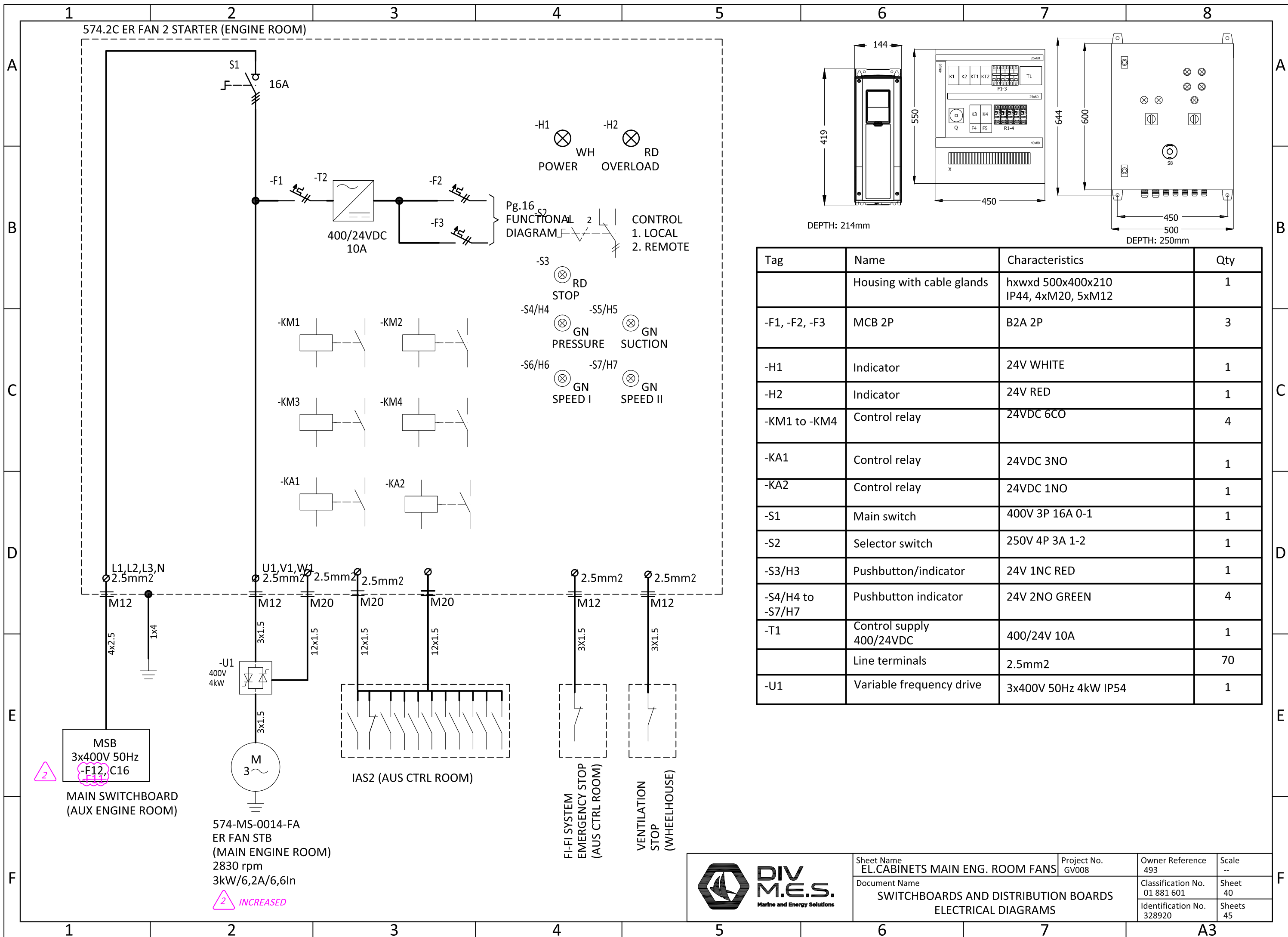
IAS1 (MAIN ENGINE ROOM)

FI-FI SYSTEM
EMERGENCY STOP
(AUS CTRL ROOM)

VENTILATION
STOP
(WHEELHOUSE)



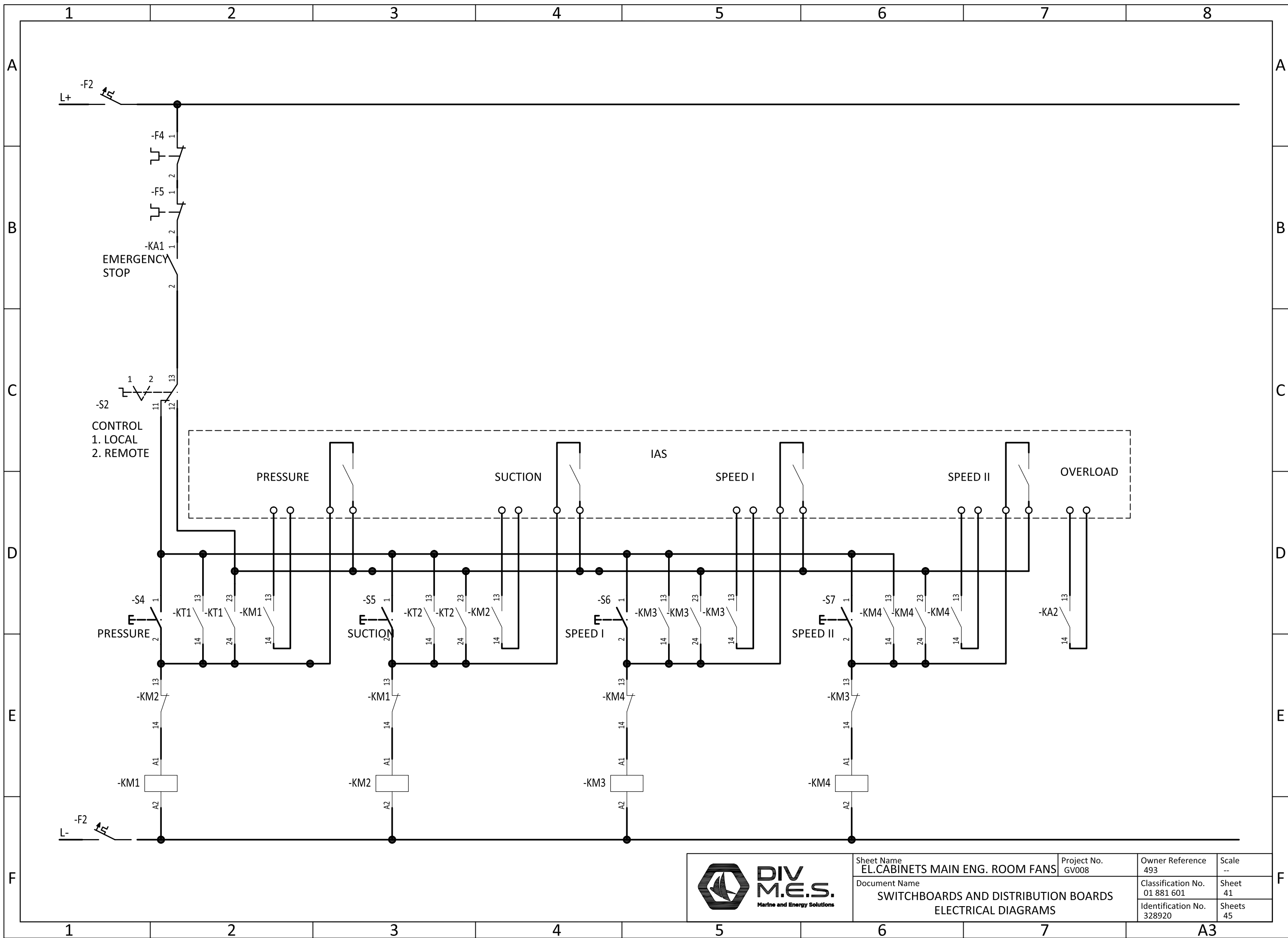
Sheet Name EL.CABINETS MAIN ENG. ROOM FANS	Project No. GV008	Owner Reference 493	Scale --
Document Name SWITCHBOARDS AND DISTRIBUTION BOARDS ELECTRICAL DIAGRAMS		Classification No. 01 881 601	Sheet 39
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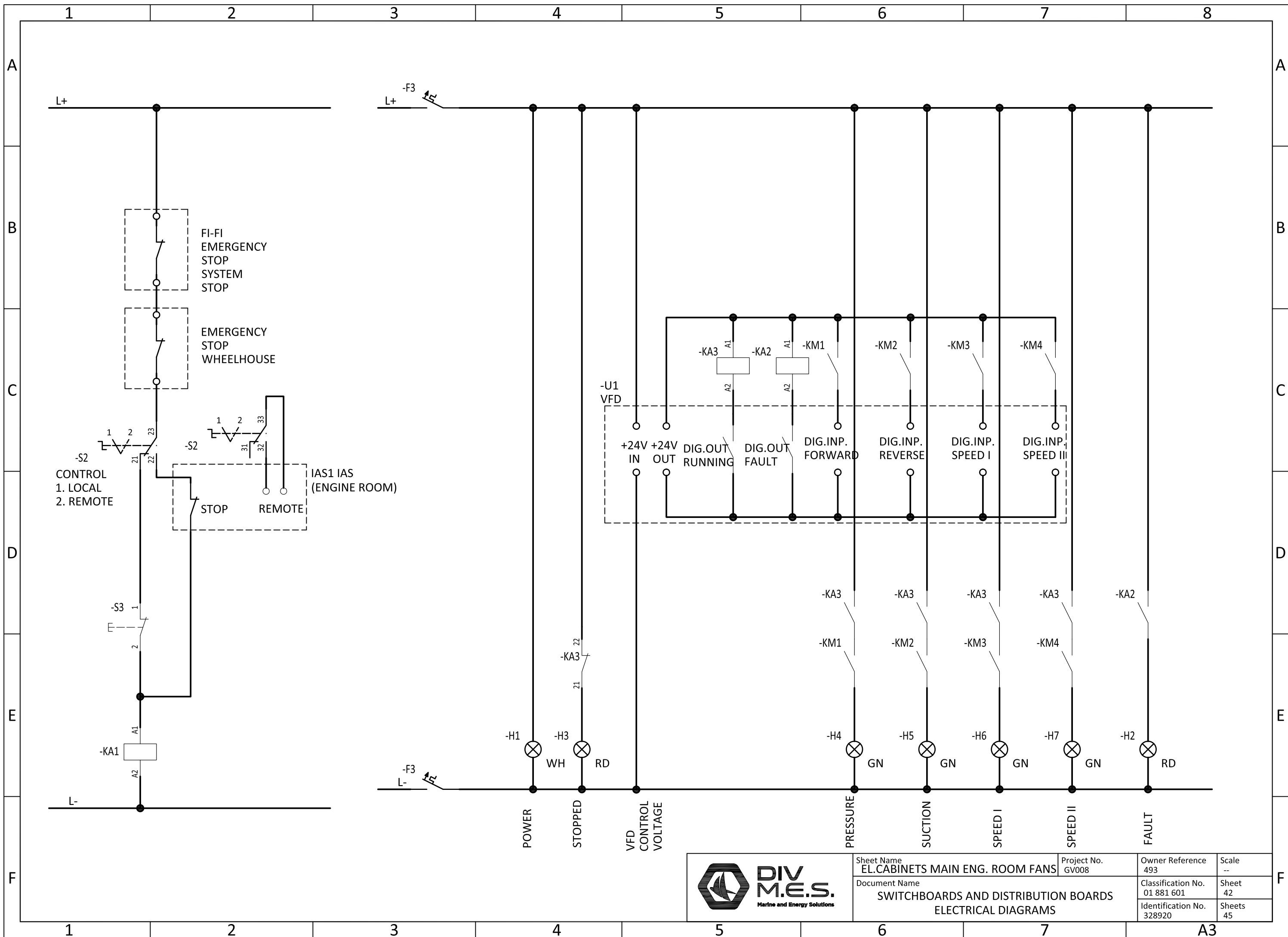
Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM20, 5xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1 to -KM4	Control relay	24VDC 6CO	4
-KA1	Control relay	24VDC 3NO	1
-KA2	Control relay	24VDC 1NO	1
-S1	Main switch	400V 3P 16A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4 to -S7/H7	Pushbutton indicator	24V 2NO GREEN	4
-T1	Control supply	400/24VDC	1
	Line terminals	2.5mm2	70
-U1	Variable frequency drive	3x400V 50Hz 4kW IP54	1

Sheet Name EL.CABINETS MAIN ENG. ROOM FANS	Project No. GV008	Owner Reference 493	Scale --
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2 INCREASED

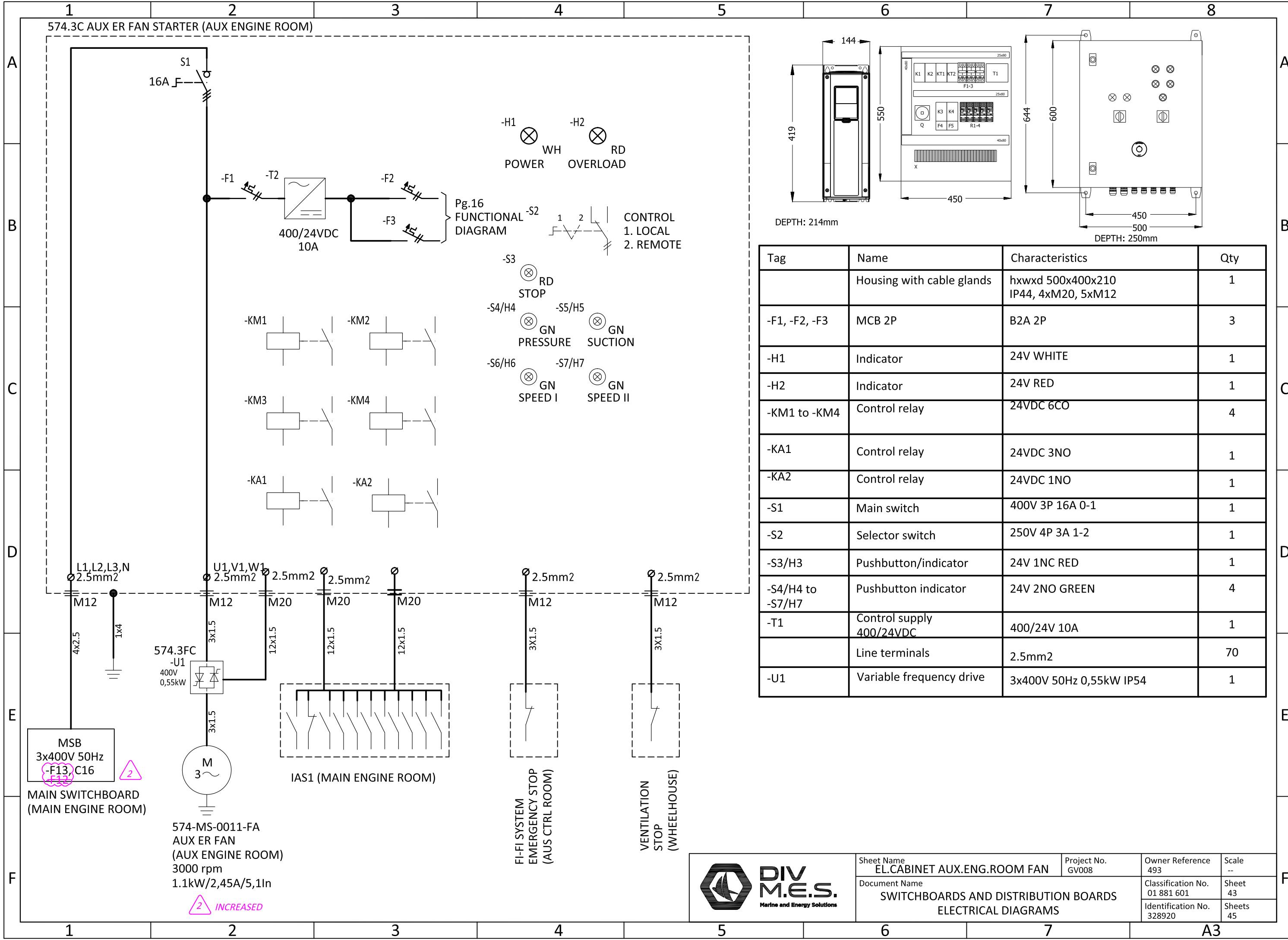


Sheet Name EL.CABINETS MAIN ENG. ROOM FANS	Project No. GV008	Owner Reference 493	Scale --
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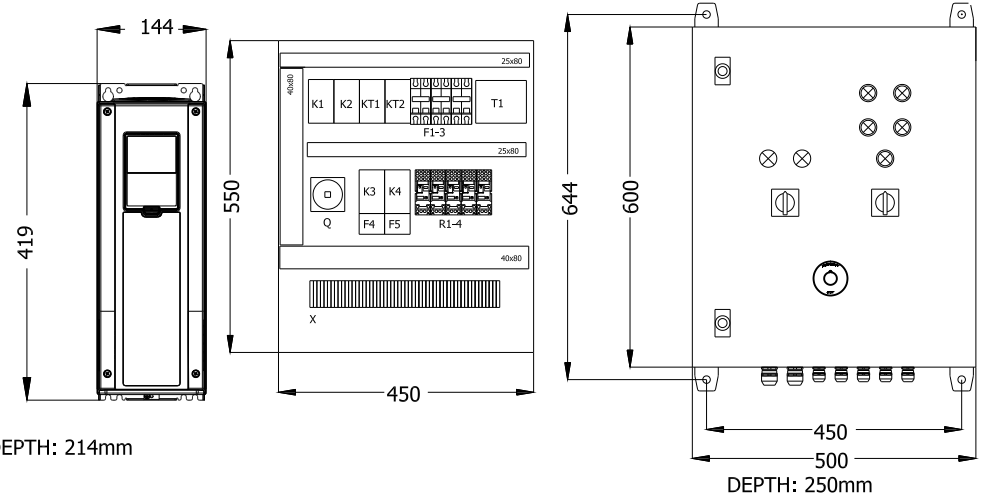
Sheet Name EL.CABINETS MAIN ENG. ROOM FANS	Project No. GV008	Owner Reference 493	Scale --
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574.3C AUX ER FAN STARTER (AUX ENGINE ROOM)



Pg.16
FUNCTIONAL
DIAGRAM

CONTROL
1. LOCAL
2. REMOTE



Tag	Name	Characteristics	Qty
	Housing with cable glands	hxwxh 500x400x210 IP44, 4xM20, 5xM12	1
-F1, -F2, -F3	MCB 2P	B2A 2P	3
-H1	Indicator	24V WHITE	1
-H2	Indicator	24V RED	1
-KM1 to -KM4	Control relay	24VDC 6CO	4
-KA1	Control relay	24VDC 3NO	1
-KA2	Control relay	24VDC 1NO	1
-S1	Main switch	400V 3P 16A 0-1	1
-S2	Selector switch	250V 4P 3A 1-2	1
-S3/H3	Pushbutton/indicator	24V 1NC RED	1
-S4/H4 to -S7/H7	Pushbutton indicator	24V 2NO GREEN	4
-T1	Control supply	400/24VDC	1
	Line terminals	2.5mm2	70
-U1	Variable frequency drive	3x400V 50Hz 0,55kW IP54	1

MSB
3x400V 50Hz
-F13, C16

MAIN SWITCHBOARD
(MAIN ENGINE ROOM)

574.3FC
-U1
400V
0,55kW

574-MS-0011-FA
AUX ER FAN
(AUX ENGINE ROOM)
3000 rpm
1.1kW/2,45A/5,1In

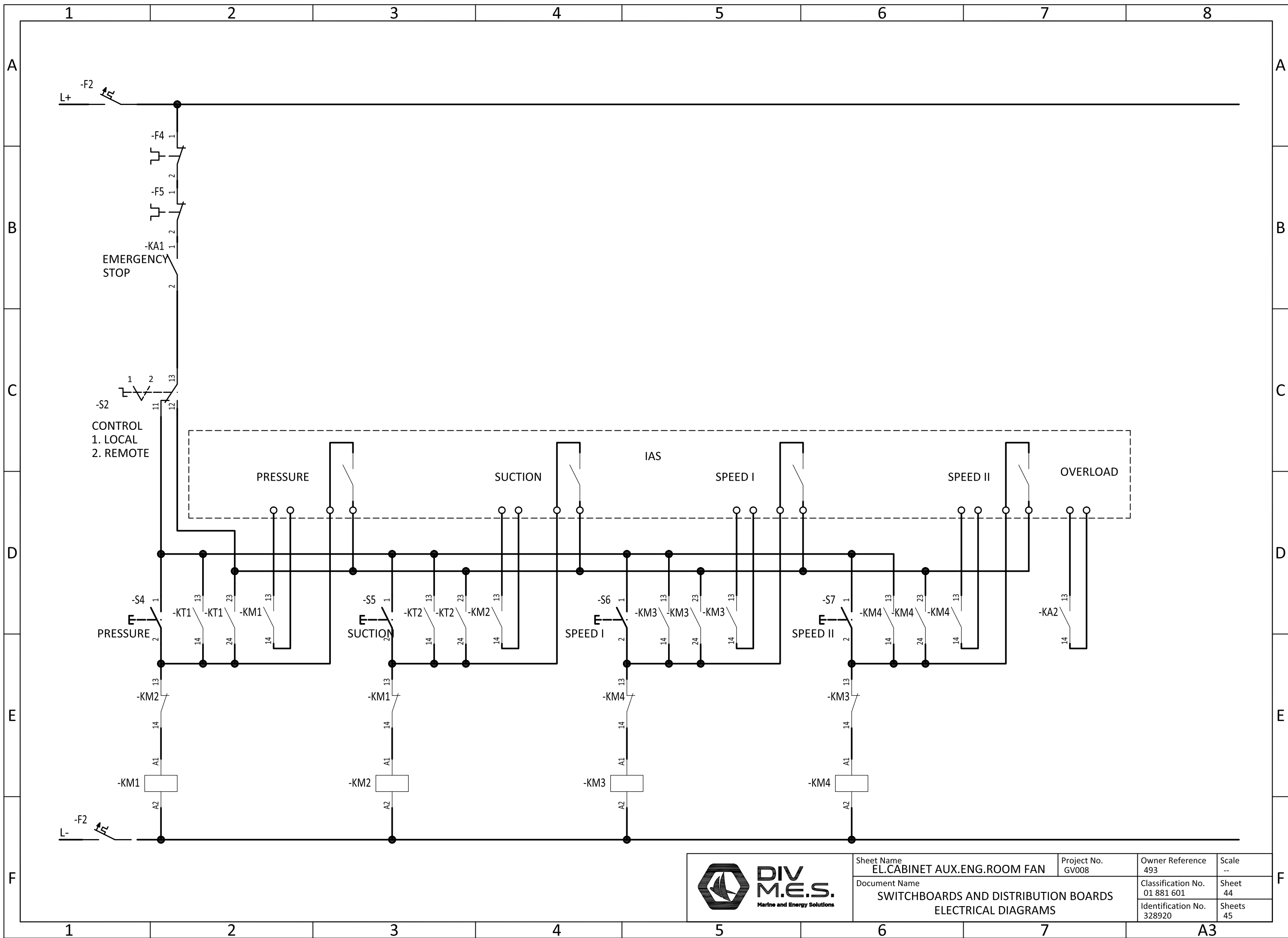
IAS1 (MAIN ENGINE ROOM)

FI-FI SYSTEM
EMERGENCY STOP
(AUS CTRL ROOM)

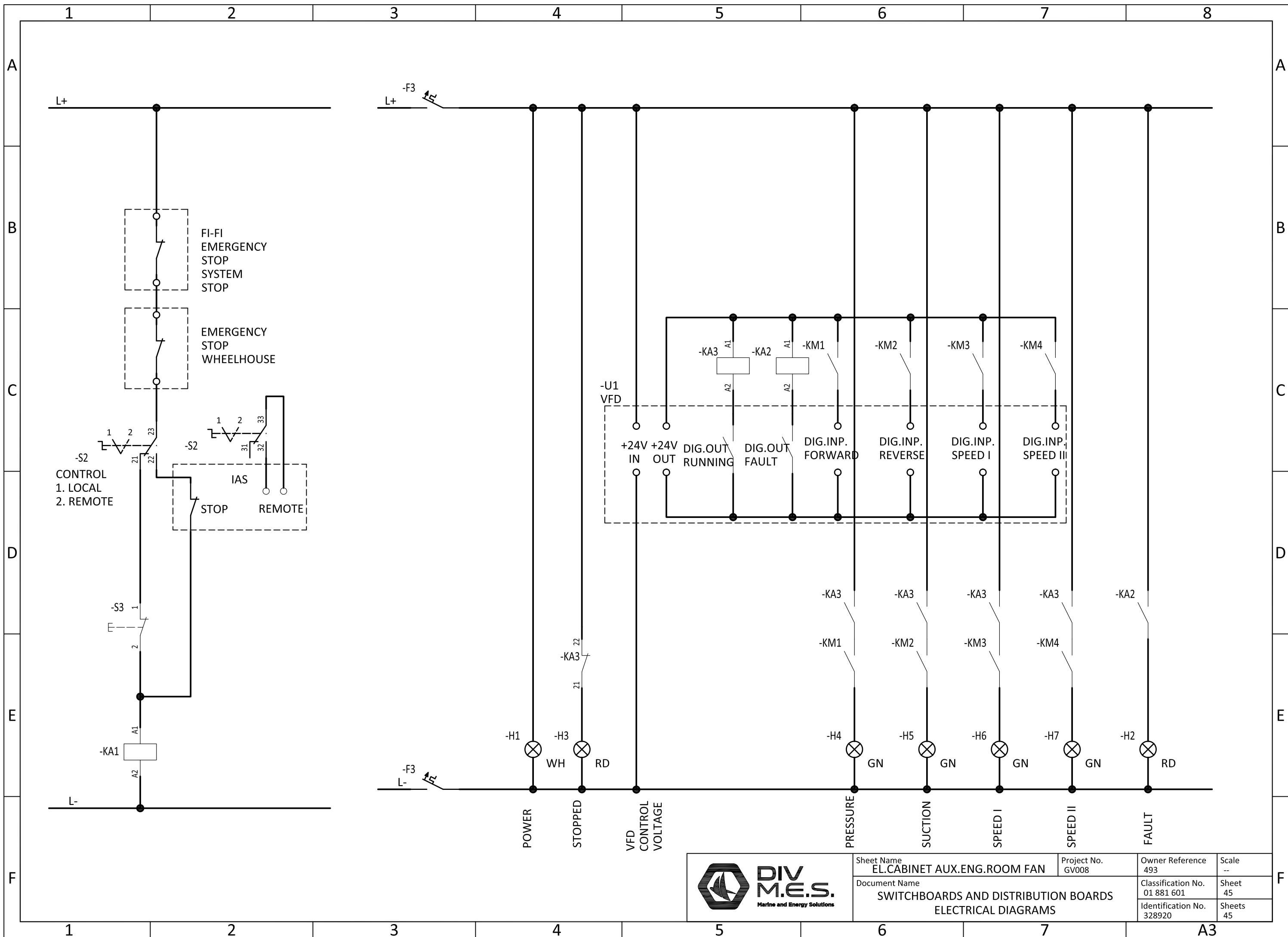
VENTILATION
STOP
(WHEELHOUSE)




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	Sheet Name EL.CABINET AUX.ENG.ROOM FAN	Project No. GV008	Owner Reference 493	Scale --
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			Identification No. 328920	Sheets 45