



OWNER'S MANUAL

AXOPAR 45 XC CROSS CABIN

MODEL YEAR 2020-2023

AXOPAR 

Table of Contents

1 Introduction.....	5
1.1 Purpose of this manual.....	5
1.2 Safety symbols.....	5
1.3 Document conventions.....	6
1.4 Copyright.....	6
1.5 Disclaimer	6
1.6 Warranty.....	7
2 Safety.....	8
2.1 Safety diagram.....	9
2.2 Fire protection and control.....	9
2.2.1 Fire control equipment.....	10
2.2.2 Boat owners' and users' responsibilities.....	10
2.2.3 Checklist: Fire in the engine.....	11
2.2.4 Checklist: After fire.....	11
2.3 Carbon monoxide.....	11
2.4 Carbon monoxide monitor.....	12
2.5 Smoke alarm.....	13
2.6 Life raft.....	14
2.7 Safety labels on board.....	14
3 Product overview.....	23
3.1 Purpose of use.....	23
3.2 Identification.....	23
3.3 Builder's plate.....	23
3.4 CE certification.....	24
3.5 Dimensions and weight.....	25
3.6 Boat layout.....	27
4 Product description.....	29
4.1 Stability and buoyancy.....	29
4.1.1 Draining.....	29
4.1.2 Openings in the hull and deck.....	30
4.1.3 Bilge system.....	32
4.1.3.1 Bilge pumps and outlets.....	33
4.2 Technical systems.....	34
4.2.1 Electrical system.....	34
4.2.2 12 V system.....	35
4.2.3 Main switches.....	36

4.2.4 Direct supply fuses.....	37
4.2.5 Fuses.....	37
4.2.6 Heavy duty fuses.....	39
4.2.7 Batteries.....	39
4.2.7.1 Charging the batteries.....	40
4.2.7.2 Winter storage	40
4.2.7.3 Cleaning the batteries	40
4.2.8 110/230 V system.....	41
4.2.9 Fuel system.....	42
4.2.9.1 Refueling the boat.....	42
4.2.9.2 Maintaining the fuel system.....	43
4.2.10 Septic system.....	43
4.2.10.1 Toilet seat.....	44
4.2.10.2 Septic tank.....	45
4.2.10.3 Shower sump pump.....	45
4.2.11 Bow thruster.....	46
4.3 Optional equipment.....	46
4.3.1 Fresh water system.....	46
4.3.2 Heating system.....	48
4.3.3 Air conditioning.....	48
4.3.4 Navigation system.....	49
4.3.4.1 VHF equipment.....	50
4.3.5 Anchor windlass.....	50
4.3.6 Solar panels.....	51
4.3.7 Roof racks.....	51
5 Transportation.....	52
5.1 Lifting the boat.....	52
5.2 Transporting and storing the boat.....	53
6 Operation.....	55
6.1 Handling devices.....	55
6.1.1 Steering console.....	55
6.1.2 Steering console switch panel.....	57
6.1.3 Windscreen wipers	57
6.1.4 Steering system.....	57
6.1.4.1 Checking and topping up oil	58
6.1.4.2 Steering maintenance	58
6.1.5 Throttle lever.....	58
6.1.5.1 Trim and tilt.....	58
6.1.6 Starting the engine.....	58
6.2 Swivel seat - Driver and passenger seats.....	59

6.3 Inspecting the boat.....	60
6.3.1 Checklist: Regular inspection before leaving harbor.....	60
6.3.2 Checklist: After using the boat.....	61
6.4 Handling the boat.....	61
6.4.1 Checklist: Boat handling before leaving harbor	61
6.4.2 Leaving the jetty	61
6.4.3 Driving the boat.....	62
6.4.3.1 Dead man's switch	62
6.4.3.2 Driving at high speed.....	62
6.4.3.3 Driving in rough seas.....	63
6.4.3.4 Maneuvering in narrow channels.....	64
6.4.4 Visibility from steering position.....	64
6.4.5 Using the trim tabs.....	65
6.5 Preventing falling overboard.....	65
6.6 Anchoring, docking and mooring.....	67
6.6.1 Fastening points.....	67
6.6.2 Docking.....	68
6.6.3 Checklist: Before anchoring	68
6.6.4 Towing and mooring.....	69
7 Maintenance.....	70
7.1 Cleaning and maintaining the gelcoat surface.....	70
7.2 Antifouling.....	72
7.3 Maintaining the interiors.....	73
7.3.1 Wooden interiors.....	73
7.3.2 Plastic and painted surfaces.....	73
7.3.3 Fabrics.....	73
7.3.4 Doors and hatches.....	73
7.4 Maintaining the cover.....	73
7.4.1 Cleaning the cover.....	74
7.5 Protecting underwater metal parts.....	74
7.6 Preventing corrosion.....	75
7.7 Preventing frost damage.....	75
7.8 Checklist: Before winter lay-up.....	75
7.9 Checklist: Before launching.....	76
7.10 Corrective maintenance.....	76
7.10.1 Deposits.....	76
7.10.2 Scratches and nicks.....	77
7.10.3 Stains.....	77
7.10.4 Deep marks, gouges and holes.....	77
8 Environment.....	78
8.1 Requirements for North America.....	78

9 Appendix I: Checklists.....	79
9.1 Checklist: Fire in the engine.....	79
9.2 Checklist: After fire.....	79
9.3 Checklist: Regular inspection before leaving harbor.....	79
9.4 Checklist: After using the boat.....	80
9.5 Checklist: Boat handling before leaving harbor	80
9.6 Checklist: Before anchoring	81
9.7 Checklist: Before winter lay-up.....	81
9.8 Checklist: Before launching.....	82
10 Appendix II: Fuel system.....	83
11 Appendix III: Electrical diagrams.....	84
12 Appendix IV: AIS Decontamination – North America.....	85

1 Introduction

1.1 Purpose of this manual

This owner's manual contains important information and instructions for using your boat.

In this owner's manual you can find important information that help you handle and maintain your boat. The manual contains detailed information about the boat and the systems installed, and general information about handling and taking care of the boat. The latest version of the manual is available in electronic format at the manufacturer's website.

Read the manual carefully and familiarize yourself with your boat before you start to use it. Also ensure that the anticipated wind and wave conditions correspond to the design category of your boat, and that you and your crew are able to handle the boat in these conditions.



This owner's manual is not a substitute for boating safety skills or good seamanship.

If this is your first boat or if this boat type is new to you, ensure you can handle the boat before you set out for the first time.

For information about local sea schools and approved instructors, please ask your boat dealer, the local boat clubs and national motorboat or yacht federations for advice. They can also provide information on specific local regulations on issues such as a driving licence or authorization, registration, insurance, and safety equipment.

This owner's manual is not a detailed maintenance or troubleshooting guide. If problems occur, contact the boat manufacturer or its local representative. When you are in need of maintenance or repair and alteration work, always turn to competent and trained professionals. Changes that can affect the boat's security features must be assessed, carried out and documented by competent professionals. The boat manufacturer cannot be held responsible for unauthorized modifications. Every change to the boat's center of gravity (from highly mounted heavy equipment or a new engine type etc.) significantly affects the stability, trim and performance of the boat.

Keep this manual in a safe place and pass it on to the new owner if you sell your boat. If the manual is mislaid or destroyed, a copy can be ordered from your dealer or downloaded from the manufacturer's website.

See the purchase agreement or order for the scope of your purchase. In case something does not work satisfactorily with your boat or its equipment, you can check the service documents for possible service and repair measures. If uncertain, always contact your dealer.

1.2 Safety symbols

This owner's manual contains danger, warning, caution and notice statements informing the user or authorized service representatives of any potential harm to the product or person.

Hazard is defined as a source of potential injury to a person.

All abnormal use is forbidden, including disregarding information on safety.

⚠ DANGER

Danger indicates an imminently hazardous situation which, if not avoided, **will result in death or serious injury**.

⚠ WARNING

Warning indicates a potentially hazardous situation which, if not avoided, **could result in death or serious injury**.

⚠ CAUTION

Caution indicates a potentially hazardous situation which, if not avoided, **might result in minor or moderate injury**.

NOTICE

Notice indicates a potential situation which, if not avoided, **might result in property damage or in an undesirable result or state**.



The information icon calls attention to information that clarifies or simplifies a procedure.

1.3 Document conventions

Units

This manual uses SI units in accordance with ISO 1000. In some cases, other units may have been used alongside.

An exception is the wind velocity, which in the Recreational Boat Directive is given in the Beaufort Scale.

Terminology

In this manual, the right side of the hull is referred to as starboard (STB) and the left side as port.

1.4 Copyright

Copyright ©2023 Axopar Boats. All rights reserved.

This Owner's Manual is protected by copyright controlled by Axopar Boats. This manual cannot be wholly or partly reproduced without prior written authorization by Axopar Boats. This material also contains confidential information, which may not be disclosed to others without the prior written consent of Axopar Boats.

1.5 Disclaimer

The material in this manual is for information purposes only.

Axopar Boats reserves the right to change the products without prior notice to improve reliability, function, design or other characteristics of the products. Axopar Boats assumes no liability for any damages, losses, costs or expenses arising out of or relating to the use of this manual or the products described herein.

Axopar Boats makes no representations and warranties with respect to this manual, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

1.6 Warranty

The Limited Warranty for the boat and the relevant contact information are enclosed as a separate document.

2 Safety

WARNING

The boat owner is responsible for making sure that the safety equipment on the boat meets the rules and regulations of the local authorities.

- Keep the necessary safety equipment up to date and on the boat at all times.

Check the preferred location of the major safety equipment in the section **Safety diagram**.

WARNING

Overloading the boat can damage the engine, even when shut off.

- When loading the boat, never exceed the maximum recommended load of the boat shown in the builder's plate.
- Always load the boat carefully and distribute loads appropriately to maintain design trim.
- Avoid placing heavy equipment or material high up in the boat.

The liquids in the built-in tanks are not included in the maximum load shown on the builder's plate.

WARNING

When out on the water, always use the seats intended for the passengers.

Do not exceed the maximum number of persons allowed in the boat, shown in the builder's plate.

The total weight of the persons on board and their personal luggage must never exceed the maximum load of the boat shown in the builder's plate.

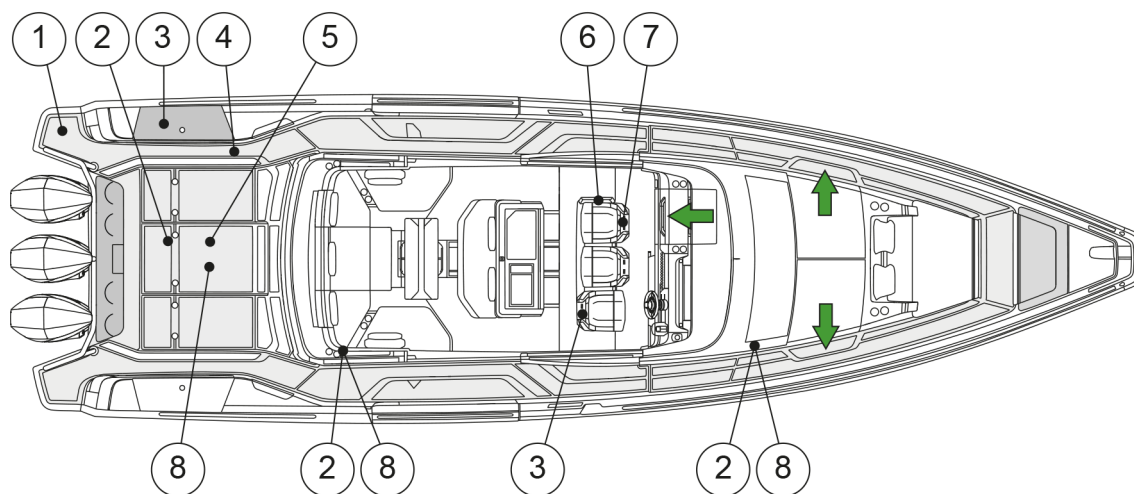
CAUTION

Risk of personal injury and risk of damage to the roof or roof structures.

Do not place or attach any load or equipment on the roof or to the roof structures if there is no specific roof rack.

It is forbidden to enter the roof or dangle from the roof structures.

2.1 Safety diagram



- (1) Swim ladder
- (2) CO monitor (also in the optional aft cabin)
- (3) Fire extinguisher
- (4) Remotely operated engine main switches
- (5) Life raft storage
- (6) Remote main switches
- (7) High water alarm
- (8) Fire alarm (also in the optional aft cabin)

2.2 Fire protection and control

The most common fire sources are the engine and the stove. If there is a fire in the boat, it may result in an explosion.

⚠ WARNING

Fire usually spreads very fast — be quick to extinguish the fire with the fire extinguisher on the boat!

See the section **Safety diagram** for the exact location of the fire extinguisher(s).

If the fire starts to get out of control, leave the burning boat to save lives.

⚠ WARNING

Always put down the fire by depriving the fire of oxygen.

Do not use water!

Using water in fire involving flammable liquids can spread the liquid and make the fire worse.

⚠ WARNING

If the fire reaches the fuel containers, an explosion may occur and cause a large area around the boat to burn.

- Keep the bilge clean and check it regularly for fuel and gas fumes or fuel and oil leaks.
- Do not hang curtains or other flammable material near or above the LPG cooker or other equipment with naked flames.
- Never leave the boat unattended when the cooker or heater is switched on.
- Never refuel or replace gas containers when the engines are running.
- Never smoke when handling fuel or gas.
- Never block evacuation routes or emergency exits.
- Never block access to safety equipment such as fuel valves or main power switches.
- Never block access to fire extinguishers, visible or concealed.
- Never modify the boat's systems (especially electrical, fuel or gas systems).

2.2.1 Fire control equipment

Check the exact locations of the fire control equipment in the section **Safety diagram**.

Fire extinguishers

You must fit the boat with hand-held fire extinguishers. The fire ratings of the fire extinguishers must be at least as follows:

- Fender box (for the engines): 34A/202B (6kg)
- Driver's seat (for the stove in the cabin): 8A/68B (2 kg).

Check the exact locations of the fire extinguishers in the section **Safety diagram**.



The fire extinguishers are not included in the manufacturer's delivery.

Fire blanket

A fire blanket is ideal for putting out small fires and also one of the best options if a person's clothes catch fire.

- Keep a fire blanket onboard in an easily accessible place.

2.2.2 Boat owners' and users' responsibilities

It is your responsibility as the boat owner and user to ensure that the fire control equipment is accessible at all times.

- Check the fire extinguishing equipment regularly at the intervals specified for the equipment.
- Replace equipment with expired date immediately with equivalent or better equipment.
- Advise the crew and guests of the location and instructions for use of the fire control equipment, and the location of evacuation routes and emergency exits.

2.2.3 Checklist: Fire in the engine

- Stop the engine.
- Steer the boat up against the wind, if possible.
- Make sure all passengers have life jackets.
- If necessary:
 - Evacuate the passengers.
 - Call for sea rescue.
- Shut off fuel and main power switches.
- Extinguish the fire.
- Wait until fully certain that the fire has been extinguished before opening the engine cover.
Carefully open the engine cover and be prepared to use the handheld fire extinguisher if necessary for post-fire extinguishing.
- Put out possible smoldering fires with water.

2.2.4 Checklist: After fire

- Open doors and windows for better ventilation.
- Inspect the boat and its equipment, and repair any damages.
- Contact local authorities, if needed.
- Make sure that the fire extinguishing equipment is refilled or replaced after use.

2.3 Carbon monoxide

WARNING

Carbon monoxide (CO) is colorless, odorless, tasteless, and extremely dangerous gas.

All engines, generators, and fuel burning appliances produce CO as exhaust.

Prolonged exposure to low concentrations or very quick exposure to high concentrations may cause brain damage or death.

Open all doors, curtains, windows, and hatches to let fresh air circulate when running an engine or generator or burning any fuel while the boat is anchored, moored or docked.

If you can smell engine or generator exhaust, you are inhaling CO. CO can also be present without the smell of exhaust fumes.

If the CO alarm is activated, make sure all persons onboard exit the closed spaces.

- If exhaust fumes are detected or if CO accumulation is suspected on the boat, take immediate action to ventilate these fumes.
- Turn off all engines and generators.
- Open all hatches, windows and ports to ventilate.

Changing course and speed to place the boat heading into the wind can improve ventilation.

Symptoms of carbon monoxide poisoning are dizziness, ears ringing, headache, nausea and unconsciousness. A poisoning victim's skin often turns cherry red.

Because the carbon monoxide gas is odorless, colorless and tasteless, it is unlikely to be noticed until a person is affected.

- **If CO poisoning is suspected, have the victim breath fresh air deeply.**
- **If breathing stops, resuscitate.**
- A victim often revives, but then relapses because organs are damaged by the lack of oxygen.
Seek immediate medical attention.

High levels of carbon monoxide may accumulate in the following ways:

- Blocking hull exhausts while operating at slow speed or if exhausts are submerged.
- Using canvas curtains.
- Winds blowing exhaust toward boat occupants.
- Operating engine or generator in a confined space.
- Operating with the bow high.

Dangerous concentrations of carbon monoxide are present if:

- the engine or generator exhaust systems leak
- insufficient fresh air is circulating where people are present
- fumes move from the rear of the boat into the cockpit and cabin area.

To minimize the danger of CO accumulation when the engine and generator are running or when using burning fuel applications:

- Be sure to have sufficient ventilation when using canvas or window-type side curtains when underway, anchored, moored or docked.
- If the convertible top is installed, operate with the forward hatch open and leave the cabin door open.
- Operate all burning fuel appliances, such as charcoal, propane, LPG, CNG or alcohol cooking devices, in areas where fresh air can circulate.
Do not use such devices where there is no noticeable air movement, especially in the cabin, when anchored, moored or docked.
- Do not idle the engine without moving the boat for more than 15 minutes at a time.
- Inspect the exhaust system regularly. See the manufacturer's manual for instructions.

2.4 Carbon monoxide monitor

There is a carbon monoxide monitor system in the boat.

The carbon monoxide monitors are located in all accommodation areas of the boat.

- With regular intervals, check that the monitor system is functioning. For instructions, see the equipment manufacturer's manual.
- It is not possible to turn the CO monitor off when the boat is in use.

See here the description of the audible and visual signals of the monitor.



Low battery voltage can trigger the carbon monoxide monitor to sound an alarm.

Operation	Audible Signal	Visual Signal
Normal	None	Green led flashes every minute
CO alarm	4 beeps, 5 seconds off - cycle repeats	Flashing red
Alarm malfunction	Beep every 30 seconds	Alternating red/green flash
End of life signal	Beep every 25-30 second	Red red green green flash sequence

2.5 Smoke alarm

Boat is equipped with smoke alarms.

Smoke alarm is battery powered. When the battery level reaches low level, the smoke alarm will start emitting low battery warning signal.

Smoke alarm may give false alarm if there is steam, condensation, or normal smoke or fumes in its vicinity.

The smoke alarm has a built-in hush or silence feature incorporated into the test button. This feature can be useful when unwanted alarm is caused by cooking or other non-hazardous sources trigger the alarm. Hush or silence feature temporarily silences the alarm and can be activated by pressing the test button for approximately 1 second. When hush or silence feature is activated, the alarm will enter dormant mode for 10-minute period with reduced sensitivity. Reduced sensitivity is indicated by red LED flashing every 10 seconds. After the period is over, the device will signal returning to normal sensitivity with two short beeps. If smoke density increases during hush or silence period, the device will automatically return to alarm mode.

Smoke alarms should be replaced at minimum every 5 years.

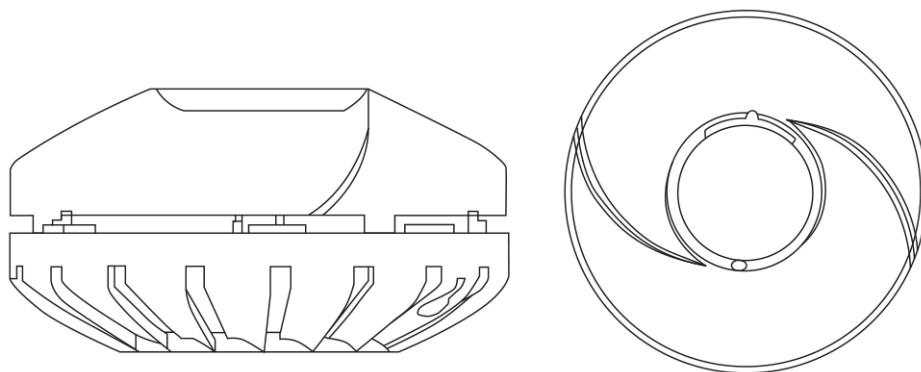


Figure 2.1 Smoke alarm

2.6 Life raft

The boat is not equipped with a life raft by the manufacturer.

Storing a life raft

If you decide to acquire a life raft for your boat, stow it to the aft of the boat, so that it is easily accessible in case of emergency.

Using the life raft

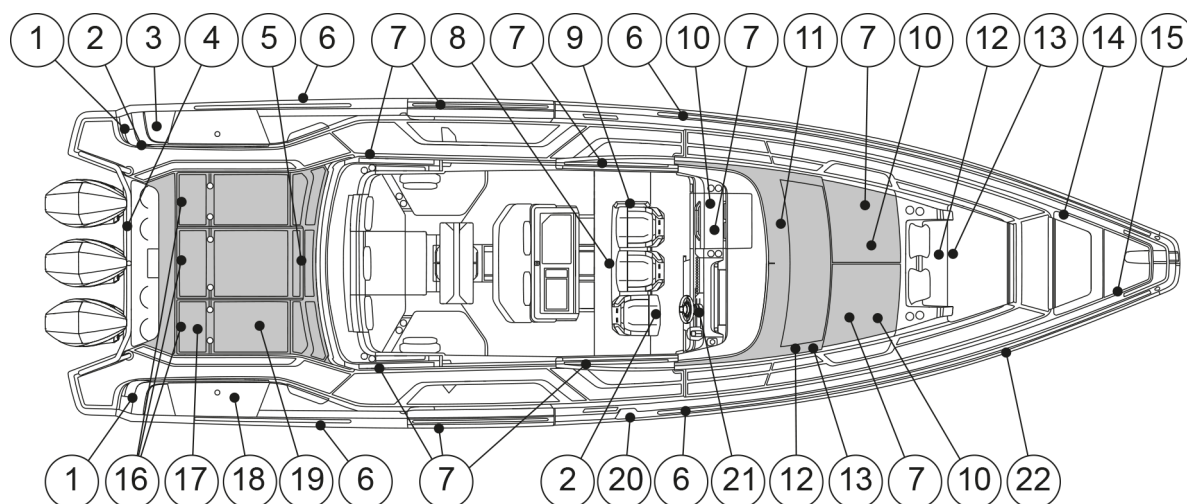
The life raft must be tied to the stern of the boat and prepared for use.

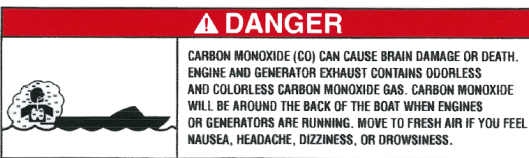
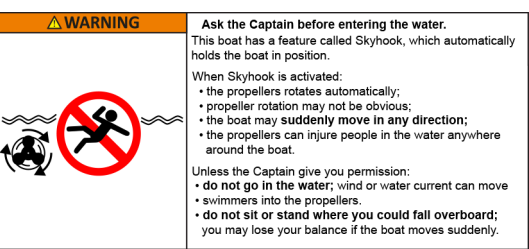
In an emergency, it is easiest and safest to board the life raft from the swimming deck. Switch off the engine before using the life raft.

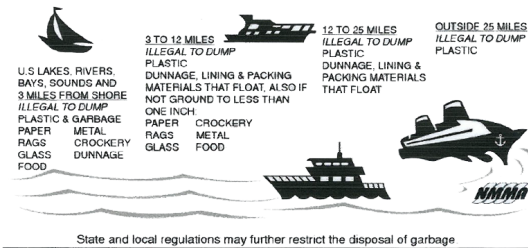
Follow the life raft manufacturer's instructions.

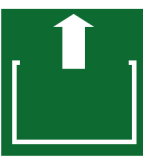
2.7 Safety labels on board

The following picture and table present the location and description of the safety labels on board.

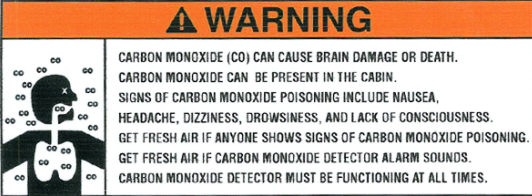
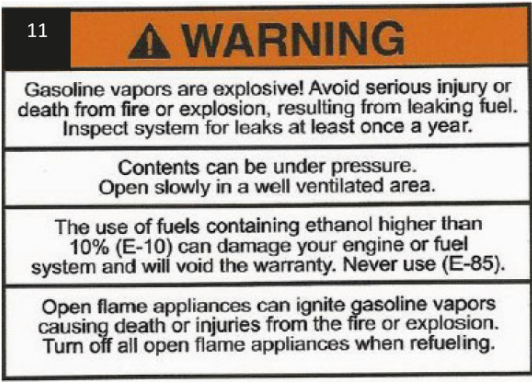


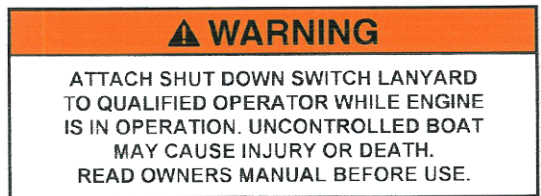
Position	Label	Description
1		Warning Rotating propeller may cause serious injury or death. Do not approach or use ladder when engine is running.
1		Danger Carbon monoxide (CO) can cause brain damage or death. Engine and generator exhaust contains odorless and colorless carbon monoxide gas. Carbon monoxide will be around the back of the boat when engines or generators are running. Move to fresh air if you feel nausea, headache, dizziness, or drowsiness.
1		Ask the captain before entering the water The boat has a Skyhook feature which automatically holds the boat in position. When Skyhook is activated: • The propellers rotate automatically • The rotation of the propellers may not be obvious • The boat may suddenly move in any direction • The propellers may injure people in the water anywhere around the boat Unless the Captain gives you permission: • Do not go in the water; wind or water current can move swimmers into the propellers • Do not sit or stand where you could fall overboard; you may lose your balance if the boat moves suddenly
2		Fire extinguisher

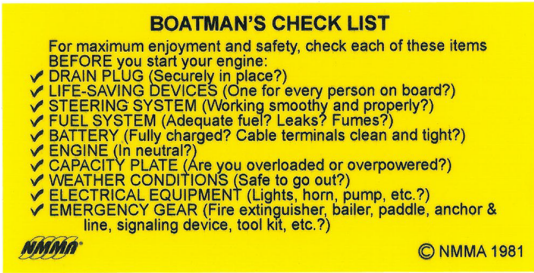
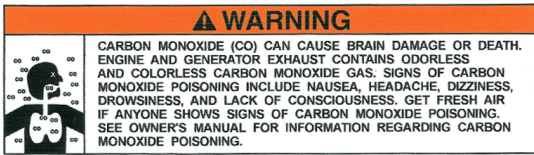
Position	Label	Description
3	DISCHARGE OF OIL PROHIBITED THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES, OR THE WATERS OF THE CONTIGUOUS ZONE, OR WHICH MAY AFFECT NATURAL RESOURCES BELONGING TO, APPERTAINING TO, OR UNDER THE EXCLUSIVE MANAGMENT AUTHORITY OF THE UNITED STATES, IF SUCH DISCHARGE CAUSES A FILM OR DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE SUBJECT TO SUBSTANTIAL CIVIL PENALTIES AND/OR CRIMINAL SANCTIONS INCLUDING FINES AND IMPRISONMENT. 	Discharge of oil prohibited The federal water pollution control act prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States, or the waters of the contiguous zone, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, if such discharge causes a film or discoloration of the surfaces of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to substantial civil penalties and/or criminal sanctions including fines and imprisonment.
3	LIQUIDS HERE IT IS ILLEGAL FOR ANY VESSEL TO DUMP PLASTIC TRASH ANYWHERE IN THE OCEAN OR NAVIGABLE WATERS OF THE UNITED STATES. ANNEX V OF THE MARPOL TREATY IS AN INTERNATIONAL LAW FOR A CLEANER, SAFER MARINE ENVIRONMENT. VIOLATION OF THESE REQUIREMENTS MAY RESULT IN CIVIL PENALTY UP TO \$25,000, FINE AND IMPRISONMENT.  State and local regulations may further restrict the disposal of garbage	Liquids here. It is illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the United States. Annex V of the Marpol Treaty is an international law for a cleaner, safer marine environment., Violation of these requirements may result in civil penalty up to \$25,000, fine and imprisonment. U.S. lakes, rivers, bays, sounds and 3 miles from shore Illegal to dump plastic & garbage, paper, metal, rags, crockery, glass, dunnage, food. 3 to 12 miles Illegal to dump plastic, dunnage, lining & packing materials that float. Also if not ground to less than one inch: paper, crockery, rags, metal, glass, food 12 to 25 miles illegal to dump plastic, dunnage, lining & packing materials that float Outside 25 miles illegal to dump plastic State and local regulations may further restrict the disposal of garbage.
4	WARNING SKI POLE MUST BE SECURED WHEN IN USE. TOW ROPE MAY BACKLASH INTO COCKPIT. DO NOT USE TO TOW ITEMS SUCH AS TUBES OR OTHER TOWABLES. MAX TOW LOAD CAPACITY IS 130 KG.	Warning Ski pole must be secured when in use. Tow rope may backlash into cockpit. Do not use to tow items such as tubes or other towables. Max tow load capacity is 130 kg.
5	DANGER FORE AND AFT SUN PADS SHOULD NOT BE USED WHEN VESSEL IS UNDER WAY.	Danger Fore and aft sun pads should not be used when vessel is under way.
6		Fastening point

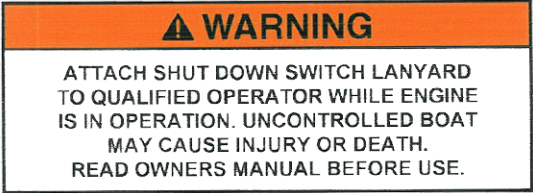
Position	Label	Description
7		Warning Running boat with door open could induce exhaust fumes into the cabin. See the owner's manual for instructions concerning carbon monoxide.
7		Keep shut while underway.
8		Warning Avoid serious injury or death. Unexpected seat rotation may cause ejection of occupant. Lock swivel when speed exceeds 5 mph.
9		Caution If switch is turned off while engine is running the alternator will be damaged.
10		Emergency exit
10		Waste tank shutoff valve
12		Danger Leaving window open could induce exhaust fumes into cabin resulting in severe personal injury or death.

Position	Label	Description
13	WARNING WATERTIGHT CLOSURE KEEP SHUT WHEN UNDER WAY	Warning Watertight closure. Keep shut when under way.⁴
14		Warning Keep hands out of machinery. Follow up instructions for remote control enabling.
15	WARNING ELECTRICAL SHOCK AND FIRE HAZARD. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN INJURY OR DEATH. (1) Turn off the boat's shore power connection switch before connecting or disconnecting the shore power cable. (2) Connect shore power cable at the boat first. (3) If polarity-warning indicator is activated, immediately disconnect cable. (4) Disconnect shore power cable at shore outlet first. (5) Close shore power inlet cover tightly. DO NOT ALTER SHORE POWER CABLE CONNECTORS MISE EN GARDE RISQUE DE CHOC ELECTRIQUE ET D'INCENDIE. LE NON RESPECT DE CES INSTRUCTIONS PEUT CAUSE DES BLESSURES SERIEUSES OU LA MORT. (1) Fermer l'interrupteur de l'alimentation à terre avant de raccorder ou de débrancher le câble d'alimentation. (2) Raccorder d'abord le câble d'alimentation à terre au navire. (3) Si l'indicateur de polarité est activé, débrancher immédiatement le câble d'alimentation. (4) Débrancher d'abord le câble d'alimentation à terre de la borne du quai. (5) Fermer hermétiquement le couvercle du câble d'alimentation à terre. NO PAS MODIFIER LE CABLE D'ALIMENTATION À LA TERRE	Warning Electrical shock and fire hazard. Failure to follow these instructions may result in injury or death. (1) Turn off the boat's shore power connection switch before connecting or disconnecting the shore power cable. (2) Connect shore power cable at the boat first. (3) If polarity-warning indicator is activated, immediately disconnect cable. (4) Disconnect shore power cable at shore outlet first. (5) Close shore power inlet cover tightly. Do not alter shore power cable connectors
15		Pay attention to the warnings and read the manual.
16	WARNING NO VENTILATION IS PROVIDED. FUEL VAPORS ARE A FIRE AND EXPLOSION HAZARD. TO AVOID INJURY OR DEATH, DO NOT STORE FUEL OR FLAMMABLE LIQUIDS HERE. 	Warning No ventilation is provided. Fuel vapors are a fire and explosion hazard. To avoid injury and death, do not store fuel or flammable liquids here.
17	WARNING Installation of Maintenance free AGM batteries are only allowed in this area.	Warning Installation of maintenance free AGM batteries are only allowed in this area.

Position	Label	Description
18		Warning Do not close the wetbar lid until the grill has completely cooled down.
19		Warning Carbon monoxide (CO) can cause brain damage or death. Engine and generator exhaust contains odorless and colorless carbon monoxide gas. Signs of carbon monoxide poisoning include nausea, headache, dizziness, drowsiness, and lack of consciousness. Get fresh air if anyone shows signs of carbon monoxide poisoning. See owner's manual for information regarding carbon monoxide poisoning.
20		Warning Gasoline vapors are explosive! Avoid serious injury or death from fire or explosion, resulting from leaking fuel. Inspect system for leaks at least once a year. Contents can be under pressure. Open slowly in a well ventilated area. The use of fuels containing ethanol higher than 10% (E-10) can damage your engine or fuel system and will void the warranty. Never use (E-85). Open flame appliances can ignite gasoline vapors causing death or injuries from the fire or explosion. Turn off all open flame appliances when refueling.
20		Warning Gasoline vapours may cause fires or explosions. Do not overfill fuel tank.. Keep the craft away from open flames and sparks. Do not start craft if liquid gasoline or vapours are present. Always replace engine cover (or seat) before starting. Warning Avoid serious injury or death from fire or explosion resulting from leaking fuel. Inspect system for leaks frequently.

Position	Label	Description
21		NMMA certificate
21		Certification plate US Design compliance with NMMA requirements and US Coast Guard safety standards. Meets EVAP standards using certified components
21		Warning Before activating Skyhook: 1. Check that no one is in the water. 2. Tell passengers not to enter water. Skyhook makes the propellers spin. This can injure swimmers. 8M0034159
21		Warning Use caution with skier in tow as tow rope may backslash into the cockpit when released.
21		Warning Qualified operator to be in control at all times. Operation by an unqualified operator can cause loss of control. This may result in severe injury, death, or property damage. Boat stability and handling will change with weight distribution. Read owners manual before use.
21		Warning Attach shutdown switch lanyard to a qualified operator while engine is in operation. Uncontrolled boat may cause injury or death. Read owner's manual before use.

Position	Label	Description
21		Warning Visibility from the seated position at this helm station is limited. Avoid serious injury or death from collisions. Operation from a standing position may be necessary to maintain lookout as required by rules of the road. Reas owners manual.
21		Boatman's checklist For maximum enjoyment and safety, check each of these items before you start your engine: - Drain plug (Securely in place?) - Life-saving devices (One for every person on board?) - Steering system (Working smoothly and properly?) - Fuel system (Adequate fuel? Leaks? Fumes?) - Battery (Fully charged? Cable terminals clean and tight?) - Engine (In neutral?) - Capacity plate (Are you overloaded or overpowered?) - Electrical equipment (Lights, horn, pump, etc?) - Emergency gear (Fire extinguisher, bailer, paddle, anchor & line, signaling device, tool kit, etc.?)
21		Warning Rotating propeller may cause serious injury or death. Shut off engine when near persons in water.
21		Warning Carbon monoxide (CO) can cause brain damage or death. Engine and generator exhaust contains odorless and colorless carbon monoxide gas. Signs of carbon monoxide poisoning include nausea, headache, dizziness, drowsiness and lack of consiousness. Get fresh air if anyone shows signs of carbon monoxide poisoning. See owner's manual for information regarding carbon monoxide poisoning.

Position	Label	Description
21	 ⚠ WARNING ATTACH SHUT DOWN SWITCH LANYARD TO QUALIFIED OPERATOR WHILE ENGINE IS IN OPERATION. UNCONTROLLED BOAT MAY CAUSE INJURY OR DEATH. READ OWNERS MANUAL BEFORE USE.	Warning Attach shut down switch lanyard to qualified operator while engine is in operation. Uncontrolled boat may cause injury or death. Read owners manual before use.
22	 ⚠ WARNING AVOID PERSONAL INJURY STAY INSIDE DECK RAILS (AND GATES) WHEN BOAT IS UNDERWAY.	Warning Avoid personal injury. Stay inside deck rails (and gates) when boat is underway.

3 Product overview

3.1 Purpose of use

The boat is a recreational boat, thus not suitable for professional use.

3.2 Identification

Each boat has a unique identification code, containing 14 characters and a hyphen.

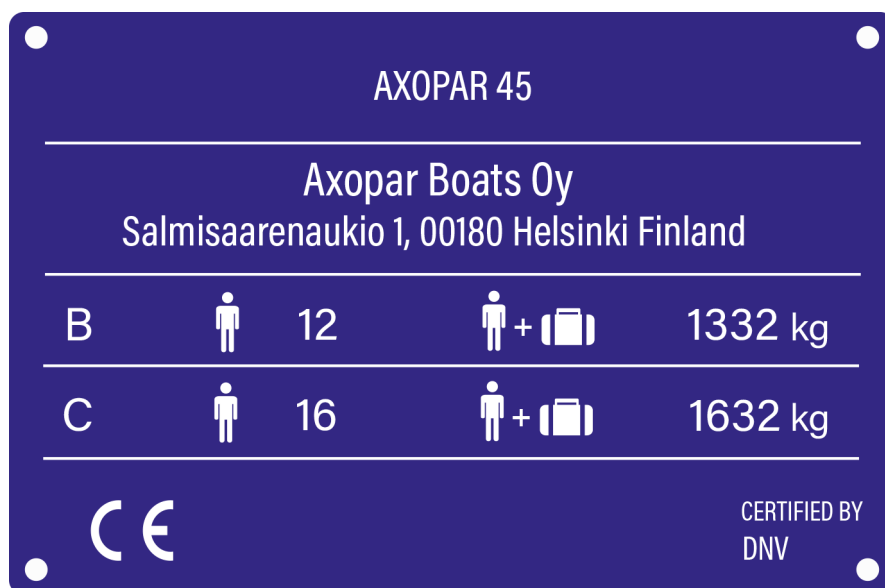
The height of the code text is 6 mm, and it is located on the starboard side of the stern.

Example: FI – AXOXC5100A222	Data
FI	Country of manufacturer: Finland
-	Hyphen
AXO	Manufacturer: Axopar Boats
C5	Boat model • C = XC Cross Cabin • E = Cross Top • 5 = Axopar 45
100	Boat number
F	Manufacturing month • A = January • B = February • C = March • etc.
2	Last digit of the manufacturing year
22	Model year

3.3 Builder's plate

The builder's plate is always located close to the steering position of the boat.

DNV has inspected that the boat fulfills the Recreational Boat Directive and related standards' requirements.



The builder's plate contains the following information:

- Boat model
- Manufacturer's address
- Maximum number of persons on board
- Maximum load: total weight of persons including personal luggage and basic equipment, and excluding tank contents
- Issuer of the CE certificate.

3.4 CE certification

This boat is classified to CE categories B and C.

The category is determined according to the maximum number of persons allowed onboard.

The CE certification indicates that a boat is designed and built in such a way that it retains its stability and buoyancy in given circumstances and meets other important requirements that are characteristic of the category in question. One of these requirements is that the boat must be easy to maneuver.

The CE categories classification also signifies that a boat is designed and constructed to withstand the following parameters in respect of stability, buoyancy, and other relevant essential requirements stated.

Category	Description
A. Ocean	The boat is designed for extended voyages, where conditions experienced may exceed wind force 8 on Beaufort Scale and include significant wave heights of at least 4 meters. Under such conditions, the boat must be largely self-sufficient.
B. Offshore	The boat is designed for offshore voyages, where conditions up to and including wind force 8 on Beaufort Scale and significant wave heights up to and including 4 meters may be experienced.
C. Inshore	The boat is designed for voyages in coastal waters, large bays, estuaries, lakes and rivers, where conditions up to and including wind force 6 Beaufort Scale and significant wave heights up to and including 2 m may be experienced.

3.5 Dimensions and weight

Dimensions

Dimension	SI units	US units
Hull length (LH)	13.91 m	45.64 ft
Overall length (LMAX) (including engines)	14.13 m	45.93 ft
Hull beam (BH)	4.11 m	13.48 ft
Draught at max. load (including engine)	1.2 m	3.94 ft
Height measured from waterline at light load (including radar, antennas)	5.0 m	16.4 ft
Height measured from waterline at light load (mast folded down)	2.9 m	9.5 ft
Depth of hull, without engines, in maximum load condition	0.8 m	2.63 ft

Power

	SI units	US units
Maximum recommended engine power	3 x 224 kW	3 x 300 hp
Maximum recommended engine weight	3 x 313 kg	3 x 690 lb

Weight and loading

	SI units	US units
Hull weight (excluding engines, batteries, basic equipment)	7430 kg	16380 lb
Weight of unloaded boat with maximum weight outboard engines	8600 kg	18956 lb
Includes basic equipment (ropes, fenders, anchor)	111 kg	245 lb
Boat weight at maximum load B	11361 kg	25047 lb
Boat weight at maximum load C	11661 kg	25708 lb
Maximum recommended load B	2761 kg	6087 lb
Maximum recommended load C	3061 kg	6748 lb

Of which:

	Category B		Category C	
Maximum number of persons Default weights: • Adult: 75 kg • Child: 37.5 kg	12		16	
Total weight of all persons	SI units	US units	SI units	US units
	900 kg	1984 lb	1200 kg	2646 lb

of which

	SI units	US units
Personal luggage	240 kg	529 lb
Cargo on roof racks	100 kg	220 lb
Life rafts	92 kg	203 lb
Mass on transportation (excludes person weights, personal equipment)	10107 kg	22282 lb

Tank capacity

	SI units	US units
Liquid in all fixed tanks	1429 kg	3150 lb
Fuel tank (nominal volume 1390 l / 368 gal)	1321 l / 990 kg	349 gal / 2183 lb
Fresh water tank (nominal volume 2 x 150 l / 2 x 40 gal)	285 kg	628 lb
Septic tank (nominal volume 120 l / 32 gal)	114 kg	251 lb
Diesel for heater (optional, nominal volume 49 l / 13 gal)	40 kg	88 lb

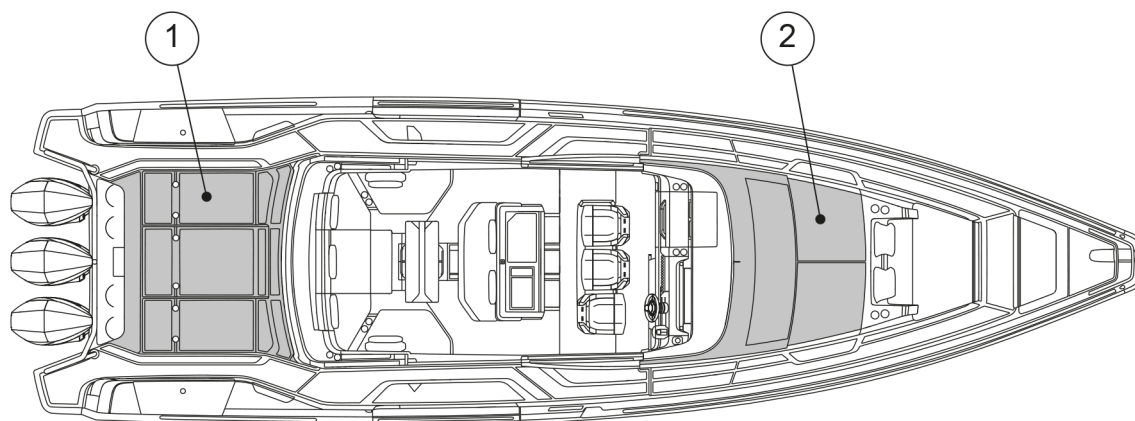
The boat's stability assessment is based on maximum load conditions.

The maximum recommended load only contains the weight components mentioned above.

3.6 Boat layout

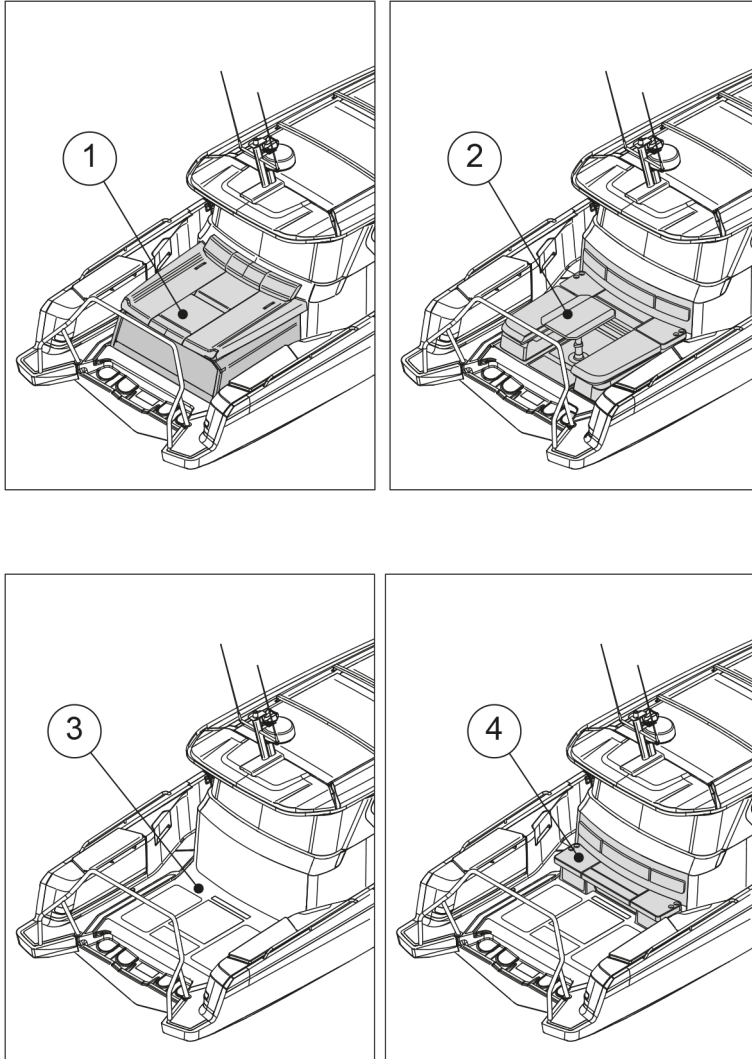
The standard boat has an open aft deck.

The front cabin of the boat is equipped with gullwing doors.



- (1) Aft deck
- (2) Gullwing doors

The boat has several aft deck options. The standard boat has an open, flat aft deck with stowage underneath. The stowage can be replaced with optional extra equipment such as an aft cabin, U-sofa or an aft deck bench.



- (1) Aft cabin
- (2) U-sofa
- (3) Open aft deck
- (4) Aft deck bench

4 Product description

4.1 Stability and buoyancy

Pay attention to the stability and buoyancy of the boat.

All weight dispositions (for example installing a fishing tower or radar, and engine replacement) can have a significant impact on the stability, trim, and performance of the boat.

- The bilge water level needs to be kept at a minimum.
- The stability of the boat is compromised if any weight is placed in a high position.

In stormy weather, all hatches, compartments and doors must be kept closed to minimize the risk of flooding.

Breaking waves represent a significant danger to stability.

⚠ WARNING

To avoid the risk of flooding, always keep the seacocks closed when not in use (for example, the seacock for the toilet's flushing water).

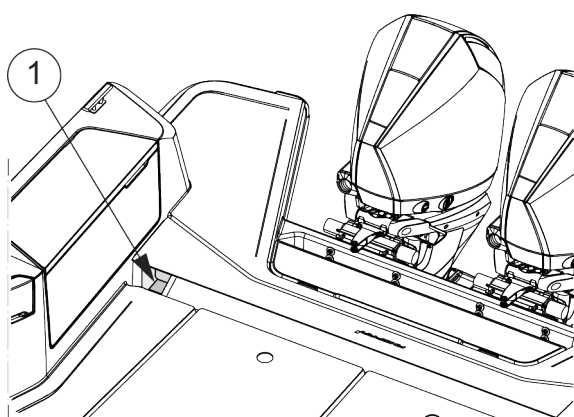
4.1.1 Draining

The boat is designed to drain rain and splashing water through the open and flat aft deck.

There are drain holes for water in both aft corners of the deck. The openings are directly connected to the sea. The deck of the boat has been designed to allow the water to drain straight into the sea via the water gullies.

⚠ CAUTION

Do not close the drain holes when using the boat.



(1) Drain hole

The drain holes must be open at all times. Clean the holes regularly by removing any accumulated debris to prevent clogging.

The system is built so as to drain the water from the deck in normal use. Do not close the taps when using the boat or when the boat is attached to the dock.

NOTICE

The self-emptying open space is meant for the removal of such water that ends up on the deck through rain, splashing or from breaking waves. A part of the rain water as well as water condensation in the bilge may end up in the bilge.

- Do not leave the boat unattended in the water for a long time.
- Observe the floating position of the boat and empty the bilge when necessary.

Leaving the boat unattended in the water for a long time may cause damage.

4.1.2 Openings in the hull and deck

There are several inlets through the boat with valves for opening and closing them.

- Keep the inlets closed if the boat is out of use for a long time, and open them when the boat is taken into use again.
- Keep the inlets open in rainy conditions or if the boat is lifted out from water.
- Always check that all hatches are securely closed before and after using the boat.
- Keep the windows, doors, deck hatches, roof hatches, vents and interior doors closed while driving.

In stormy weather, always keep them securely closed to minimize the risk of personal injuries and water getting into the boat.

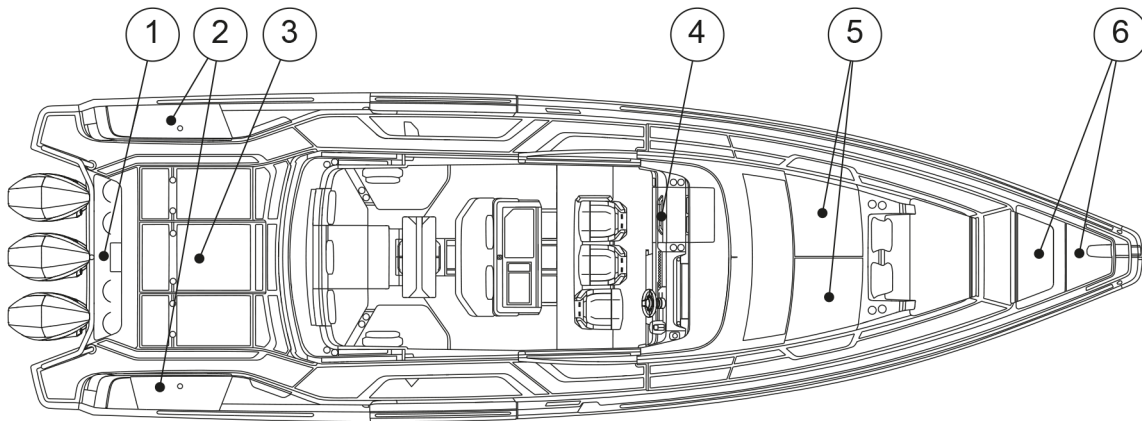
- In certain conditions and speeds, it is possible that water is sprayed inside through canopies, hatches or other openings, due to negative pressure or other effects.

Risk for this can be minimized by closing the canopies, hatches or other openings.

⚠ WARNING

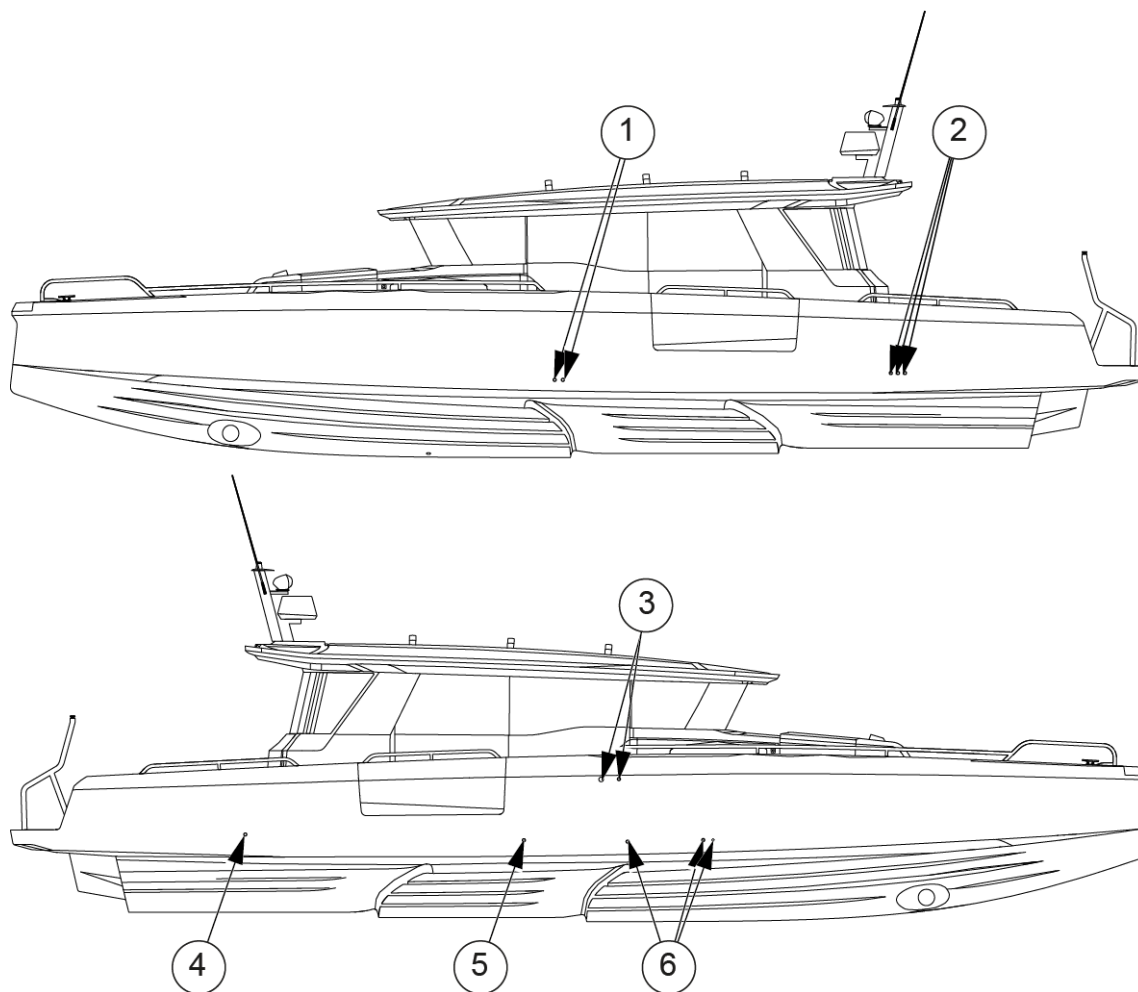
Keep all doors and hatches shut while driving the boat.

The figure shows the hatches that must be kept closed while under way or when the boat is left unmanned.



- (1) Inspection hatch in the engine bracket
- (2) Fender box hatches
- (3) Storage hatch
- (4) Front cabin door
- (5) Front cabin's gullwing doors
- (6) Bow storage box hatches

The location and number of these components depend on the level of the equipment on the boat.



- (1) Bilge outlets
- (2) Grey water outlets
- (3) Fuel tank vent
- (4) Waste water tank vent
- (5) Grey water wetbar
- (6) Grey water out bow

4.1.3 Bilge system

The bilge system is designed to enable keeping the bilge water level at a minimum. The system consists of several pumps that cover all the lower sections of the boat.

The boat is equipped with both manual and electric bilge pumps. The signs on the boat display the draining area of each pump.

The manual bilge pump is controlled with its handle.

The submersible electric bilge pumps are equipped with a float which triggers them automatically if there is water in the bilge space. The electric bilge pumps can also be controlled manually from the switches on the steering console.

⚠ WARNING

The bilge system is not designed for damage control.

The combined capacity of the bilge system is not designed to pump out the boat in the event of hull damage.

NOTICE

Keep the bilge area clean by washing it ever so often using bilge cleaner or biodegradable soap and water. Clean bilge significantly helps noticing signs of leaks or other problems that may occur.

NOTICE

- Check the functionality of the bilge pumps regularly by manually activating them.
- Remove any waste from the intakes.
- Clear the pump outlets from debris.

If seacocks are fitted in the fore and aft peak bulkheads, keep them closed, and only open to let water drain into the main bilges.

NOTICE

Do not run the pumps dry for a long time. The pumps will be damaged.

NOTICE

Avoid pollution.

Since the bilge system comprises of several automatic and manual pumps that cover all areas of the boat, the risk of accidental discharge of contaminated water by automatic pumps needs to be minimized.

Mitigate the risk by checking the bilge water regularly for contaminants such as oil, diesel, and glycol.

Before every use

Make sure that:

- The bilge pumps can operate freely, and there are no objects blocking operation.
 - Water can flow through the strainer, and there is no muck or material restricting the water flow.
- Clean the strainer by pushing the lock tabs in the pump motor and lifting the motor unit off.

4.1.3.1 Bilge pumps and outlets
Bilge pump output

- The manual bilge pump output is 33 liters (9 gallons) per minute.
- The automatic bilge pump output is 34 liters (9 gallons) per minute.

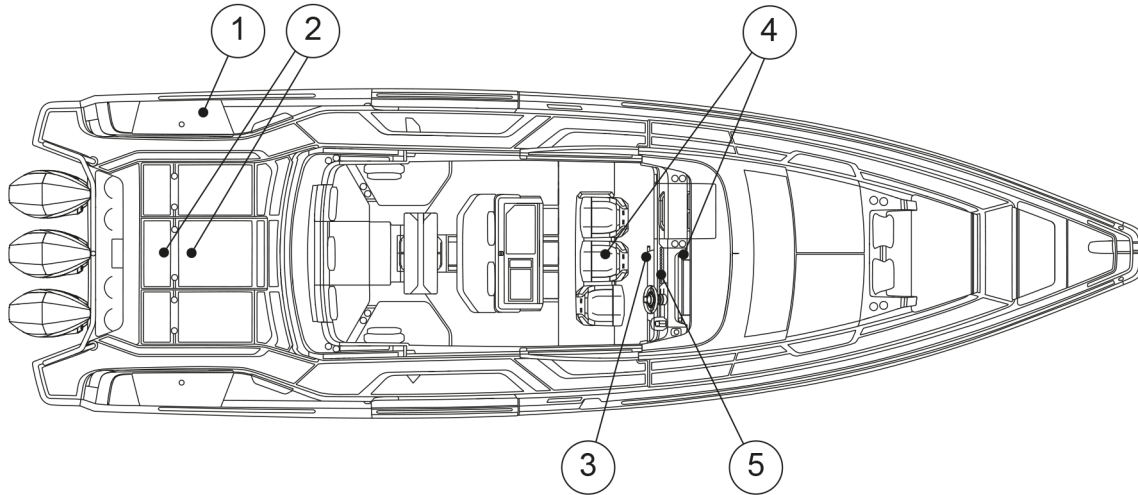
Bilge pump locations

The manual bilge pump's control handle is located in the port side stowage casing of the aft deck.

The electric bilge pumps are submersible. One electric bilge pump is located under the berth of the aft cabin or under the storage hatch. Another electric bilge pump is located under the front cabin floor.

The electric bilge pumps are by default in the automatic mode and pump out the bilge once the float-switch is triggered. The electric bilge pumps can also be started manually from the boat's main control panel.

One bilge pump is located in the technical space. It is operated from the technical space control panel.



- (1) Manual bilge pump
- (2) Aft electric bilge pump
- (3) Technical space control panel
- (4) Front electric bilge pump
- (5) Bilge pump control panel

4.2 Technical systems

4.2.1 Electrical system

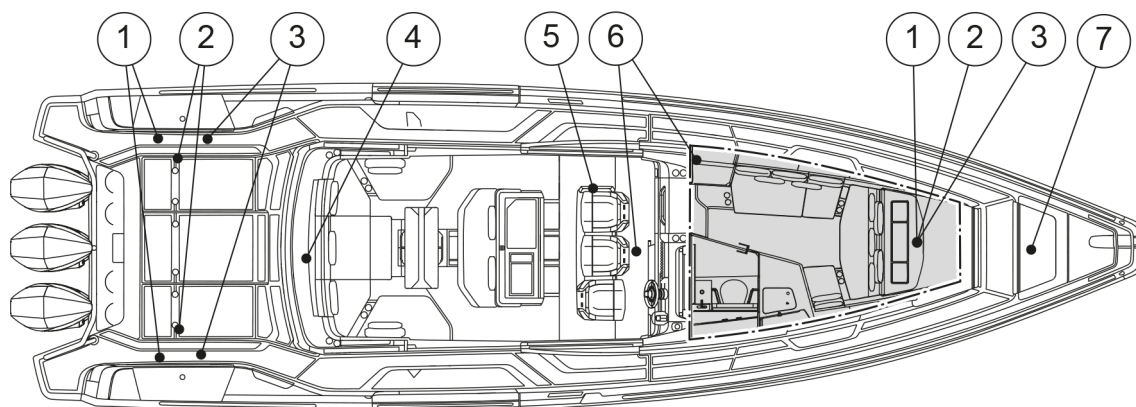
⚠ WARNING

Risks of fire, explosion and electric shock!

Improper use of electric DC and AC systems may result in fire or explosion.

Improper use of electric AC systems may result in electric shock.

Follow the instructions carefully.



- (1) High-current fuses
- (2) Main switches
- (3) Batteries
- (4) Shorepower charger and fuses
- (5) Remote controllers for main switches
- (6) Fuse panel
- (7) Shorepower socket

4.2.2 12 V system

Most of the boat's equipment uses the 12 V system.

The 12 V system consists of engine driven alternators, battery chargers for shore-side electricity, batteries and equipment. The power is supplied to the batteries via diodes from either the engine alternator or the shore power charger.

To activate the circuits in the 12V system, the main switches for the corresponding circuits need to be activated and the fuses intact. When the electronic circuit is switched on, the equipment can be operated from the main switch panel.

⚠ WARNING

- Never switch off the main switch when the engine is running, because this may cause damage to the alternator.
- Never carry out electrical installations when the power is switched on.
- Never modify the boat's electrical system or diagrams. Service and maintenance must be carried out by a qualified electrician.
- Never alter or modify the rated amperage of the overcurrent protective devices.
- Never install or replace electrical equipment with components that cause the circuit's nominal rated amperage to be exceeded.
- Never leave the boat unattended with the electrical system energized, except automatic bilge pump, fire protection, and alarm circuits.
- Maintain any damaged equipment before taking it back to use.

4.2.3 Main switches

The different electronic circuits of the boat are controlled by the main switches.

The main switches allow the batteries to be disconnected from all devices that consume electricity. When the main switches are in the On position, the current is conducted to the distribution board and from there to different parts of the boat.

When the remote switches are active, the text “On” is visible and a led above the text is illuminated.

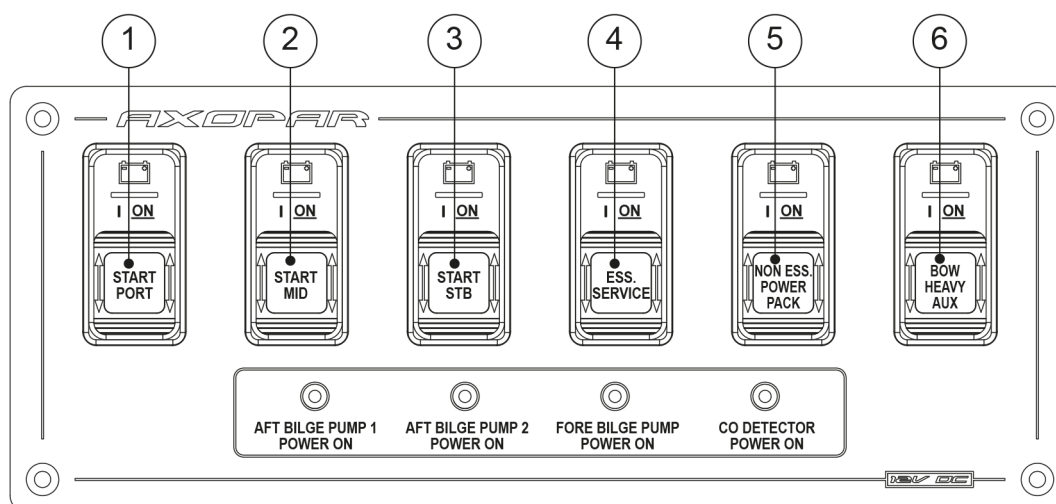
Devices that constantly need current are active regardless of the position of the remote switches.

The design drawing of the boat's electrical system is presented in **Appendix II**. The location of the main switches is presented in the section **Electrical system**.

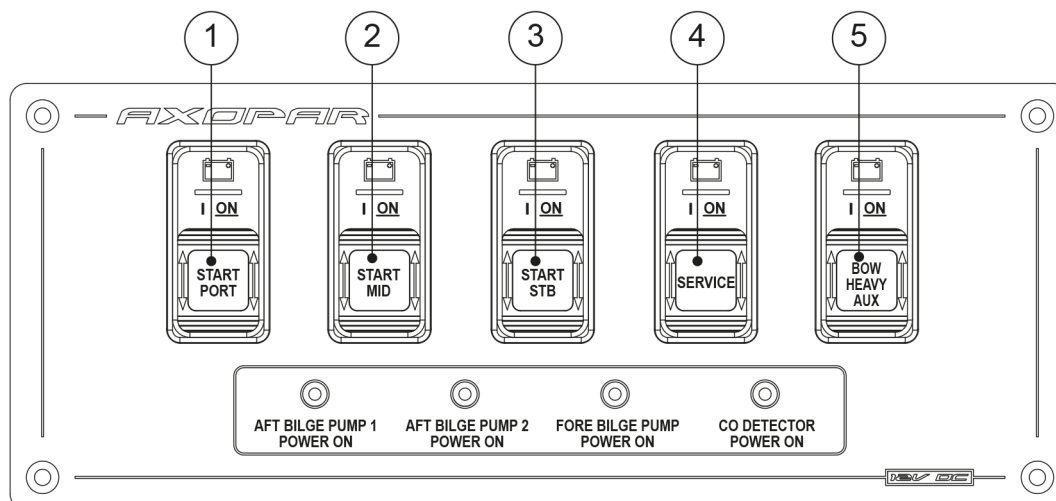
Power supply to the engines and devices is enabled by pulling the Start or Service switch to the lower position and pressing the On button. There is a remote switch for each engine and one switch for the service batteries. The optional bow thruster or windlass has a separate remote switch.

The manually operated main switches are located under the aft deck, behind hatches. These switches are only for emergency use. In normal situations, use the switches in the steering console.

Current is fed to the engine by sliding the Start switch to the On position. The current feed to other equipment is achieved by sliding the Service switch to the On position, and feed to the bow thruster and windlasses is achieved by sliding the Aux switch to the On position.



- (1) Port (PORT) engine battery
- (2) Middle (MID) engine battery
- (3) Starboard (STB) engine battery
- (4) Service battery
- (5) Power pack battery
- (6) Heavy-duty auxiliary battery



- (1) Port (PORT) engine battery
- (2) Middle (MID) engine battery
- (3) Starboard (STB) engine battery
- (4) Service battery
- (5) Heavy-duty auxiliary battery

4.2.4 Direct supply fuses

Some of the devices in the boat are supplied by direct supply switches. Direct supply switches are intended for such equipment that need current when the main switches are turned off.

When pushed down, the switch is on and when pushed up it is off. The switch indicates a short circuit or interference in the electronic circuit by springing up to the “off” position. The switch can be reconnected by pushing it back down to the “on” position. Do not reconnect the switch before you have found out the reason for the interference.

The direct supply switches must be left on even if the current from other circuits is switched off. An appliance that is switched off too early may cause the appliance to overheat and become damaged.

⚠ WARNING

Turning the direct supply switch off too early may cause the device (for example, the heater) to break or catch fire, because the devices have a ventilation feature that works even if the device is otherwise switched off.

- Make sure the device is cooled down before turning it off completely. For more information, see the manual of the device in question.

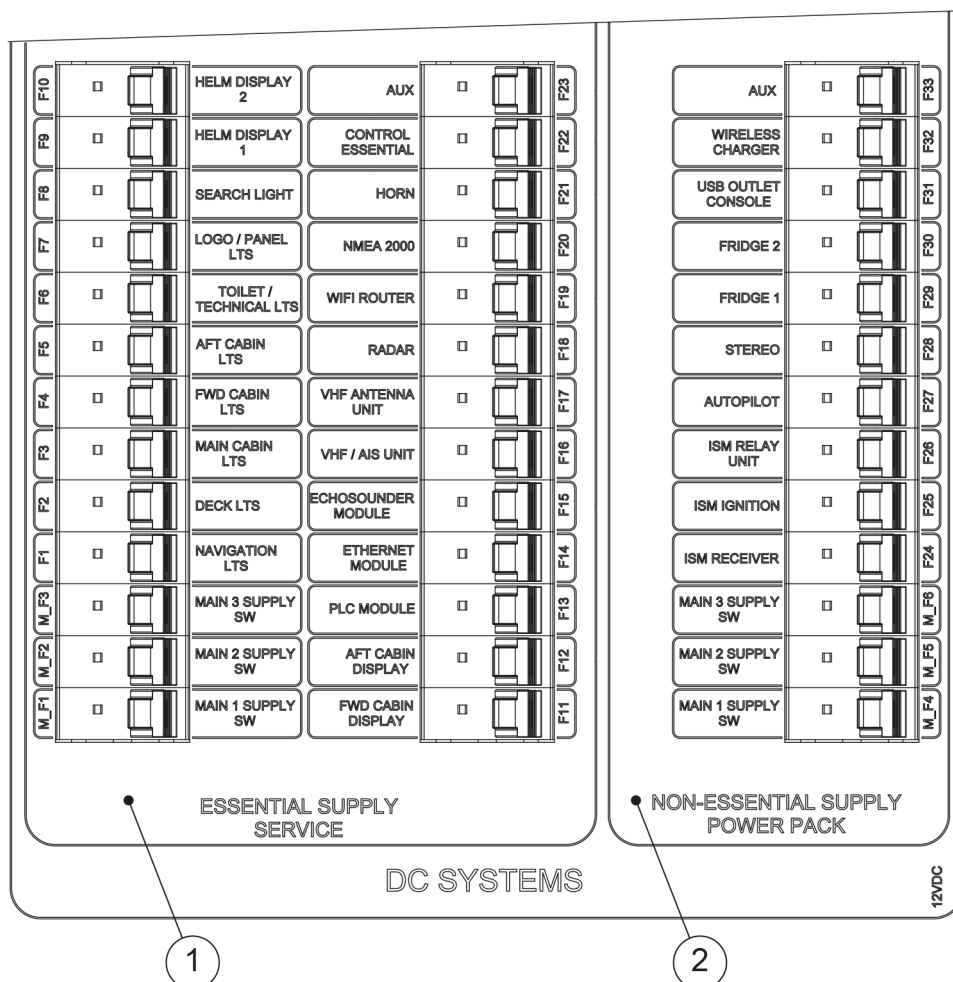
4.2.5 Fuses

The fuse panel includes fuses for the boat’s equipment.

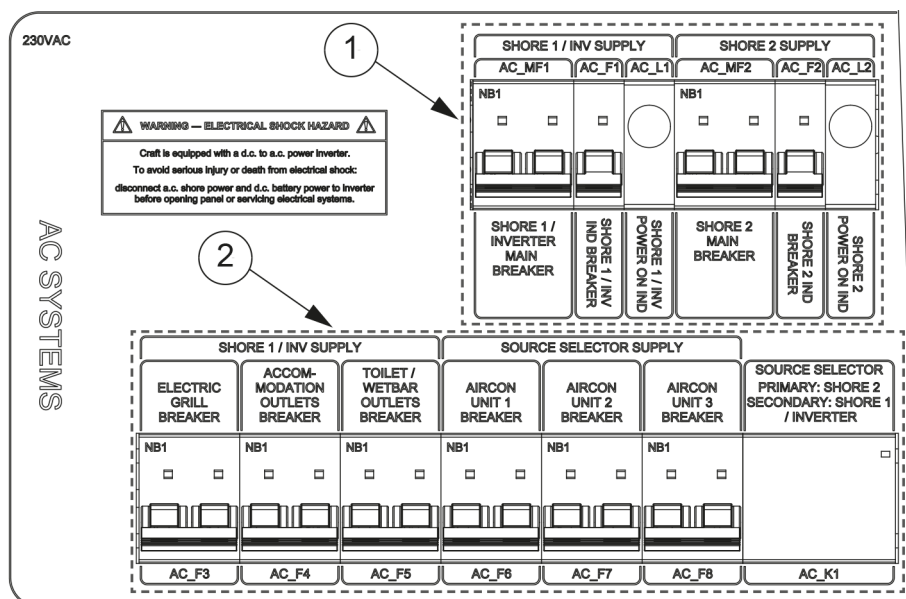
The fuses are in the form of trip switches that break the circuit and spring up when tripped. Do not reset the switch before you have found out the reason for the breaker tripping. After that press the switch back down.

⚠ WARNING

Before connecting an electric circuit, make sure that the circuit is not damaged and that there will be no short circuit or a fire caused by possible damages in the electric circuit. Any damaged equipment must be maintained or changed before they are again taken into use.



- 1 Essential supply, service battery
- 2 Non-essential supply, power pack



- 1 Shore power breakers
- 2 AC consumers

4.2.6 Heavy duty fuses

There are fuse panels containing fuses for appliances and electronic circuits which require large currents, such as windlasses, in the boat.

The bow thruster's and windlasses' high current fuses are located under the front cabin berth and the battery charger fuses are located on starboard side in the stern.

The functioning of fuses can be checked from the holes in the fuse's cover. If the metal strip visible in the hole is unbroken, the fuse is operational.

If the metal strip is damaged, meaning that an overload has occurred, contact a qualified nautical electrician.

⚠ WARNING

Opening the cover is not recommended, as there is a danger of electric shock and serious injury.

If the metal strip is damaged, contact a qualified nautical electrician. If it is necessary to open the cover, make sure that all the current cables from the batteries are disconnected.

4.2.7 Batteries

The boat is equipped with three start batteries, one for each engine. The start batteries supply current to the engine and engine-related equipment and the service batteries for other appliances and equipment on the boat.

The number of service batteries depends on the selected optional equipment. The dual battery system has been designed and built so that the boat's engine starts even if its service battery is empty. When the dual battery system has been installed, the start battery only supplies current for the engine system. All

other power consuming devices have been connected on to service battery. The batteries are charged by the engine alternator. Charging of the batteries is arranged so that the start batteries are always prioritized. Once the start batteries are full, charging of the service batteries starts automatically.

The batteries are located in the aft of the boat. The exact location of the batteries is presented in the section **Electrical System**.

⚠ WARNING

Only use maintenance-free AGM batteries in the boat.

- When you leave the boat, switch off the current from the main switch.
- Remove the batteries from the boat for winter storage.
 - When removing a battery, detach the negative pole first.
 - When disconnecting batteries, be careful not to touch both poles at the same time with a metal tool.

4.2.7.1 Charging the batteries

⚠ WARNING

- Make sure that the battery compartment is always well ventilated when charging batteries.
- Only charge batteries in the boat with the boat's own chargers. In other cases, remove the batteries from the boat.
- Remember that the batteries discharge an explosive oxy-hydrogen gas at a voltage of 14.4 volts.
 - The voltage of a normal battery in unloaded status is 12.3-12.7 V.
 - During charging, the voltage increases and the charging regulator stops the charging process automatically at a preset level.
 - The voltage measurement must be taken at the battery terminals, not the alternator, to achieve the correct result.

4.2.7.2 Winter storage

For winter storage, the batteries can be left on board only if they are fully charged.

A partially discharged battery can freeze and crack. Always disconnect the cable terminals from the battery to avoid oxidation. When removing batteries, disconnect the negative pole first and make sure that there are no flammable or explosive materials or liquids nearby. When putting the batteries back in place, connect them in reverse order (positive pole first).

4.2.7.3 Cleaning the batteries

The top of the batteries needs to be cleaned regularly to avoid current leakage between the cells. If the battery is located in a separate area, it is normally sufficient to clean it in the spring and autumn.

Make sure that the air holes in the cell plugs are open so that gas can be vented.

The terminals and cable terminals must be lubricated to prevent deposits and corrosion.

4.2.8 110/230 V system

You can choose to equip your boat with the optional 110/230 V AC system with a shore power connection, which will allow you to use devices that run on the standard mains current.

The system obtains its power from an external supply on shore or from the jetty (shore power). In the European market the system used is 230 V and in the American market 110 V.

The system functions when a shore power cable has been connected to the shore power socket connection.

1. Turn off the shore power switch before connecting or disconnecting the cable.
2. Connect the shore power cable to the boat before connecting it to the shore power.
3. Disconnect the shore power cable from the shore power before disconnecting from the boat.
4. Close the hatch of the boat's shore power connection.

The system's main fuse is located in a separate control panel. The system includes a battery charger, which starts charging batteries automatically when the boat has been connected to shore power. The location of the components is presented in the section **Electrical System**.

The shore power system needs to be checked at least biannually. Always disconnect the shore power cable when the system is not in use. Metal casings of installed electrical equipment must always be connected to earth in the boat electrical system. Use electrical equipment equipped with earth protection only.

DANGER

Risk of electric shock and fire!

- Do not touch an energized high voltage system.
- Do not change the plug of the shore power cable. Use compatible connectors only.
- Try to minimize the risk of electric shock, short circuit and fire.
- Do not allow the shore power cable to hang in the water. If it does, a hazardous electric field could be created in the water.
- Never modify the connections on the shore power cable. Use compatible connectors only.
- If the earth fault breaker is tripped, disconnect the shore power cable immediately. In such a case contact a qualified electrician for repairs before the system is used again.

DANGER

To avoid an electric shock and risk of fire:

- Switch off the shore power switch before connecting and disconnecting the cable.
- Connect the shore power cable to the boat before connecting it ashore.
- Disconnect the shore power cable ashore before disconnecting it from the boat.
- Close the hatch to the shore power socket on the boat carefully, avoiding getting it wet.

4.2.9 Fuel system

The boat has a fixed fuel system and a water-separating fuel filter on the suction line.

The EPA (United States Environmental Protection Agency) fuel system complies with the NMMA (National Marine Manufacturers Association) certification rules.

See the fuel system drawing in **Appendix II**. For care and maintenance of the fuel system, see the instructions in the engine manual.

⚠ WARNING

Never start the engines if there is strong gasoline odor present.

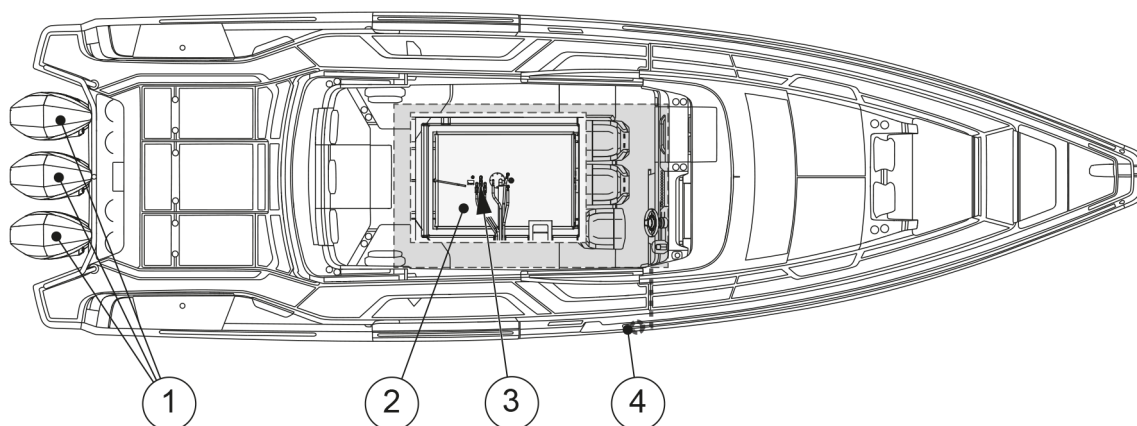
⚠ WARNING

Do not smoke or handle open flames when refueling.

Remember that it is not allowed to store fuel in spaces not specifically designed for it. Since there is no ventilated storage space on this boat, possible spare fuel cans must be stored on deck.

Fuel system component locations

- The fuel tank is located in the middle of the keel. Prevent damage to the fuel lines.
- The inlet pipe for fuel is located in the starboard side of the deck.
- If the boat has been equipped with an extra diesel tank, the inlet fitting is located next to the fuel inlet.



- (1) Engines
- (2) Fuel tank
- (3) Shut-off valve
- (4) Fuel inlet

4.2.9.1 Refueling the boat

This ensures that any fuel spillage will float on the water and not penetrate the decking material.

Water reaching the engine's injection system can cause rapid corrosion damage to the precision components in the injection pump components. For this reason, it is vital to check the extra fuel filter regularly for water. Every so often, drain a small quantity of fuel into a suitable container (avoid fuel spillage) and check that there is no condensation water. If there is water in the filter, continue to drain until only clean fuel appears.

The fuel system on the engine is sensitive to air bubbles in the fuel. Always fill the tanks well before they are completely empty. If the system has been run dry, it must be bled before the engine can be started again. See the engine manufacturer's instruction manual before bleeding the fuel system.

⚠ WARNING

- Never block access to safety equipment, fire extinguishers, fuel valves or main power switches.
- Never block any ventilation openings made in the boat because their purpose is to clear the air of fuel fumes.
- Never use a wrong type of fuel in the heater or cooker as this may damage them.
- Never use an open flame when detecting leaks.

4.2.9.2 Maintaining the fuel system

Follow the engine manufacturer's maintenance schedule.

- Annually, check the condition of the hoses and make sure that there are no visible cracks, abrasion, or deterioration.
- Replace worn parts with genuine, marine-grade parts only.
- Bi-monthly, inspect the fuel system for presence of water in the fuel tank.

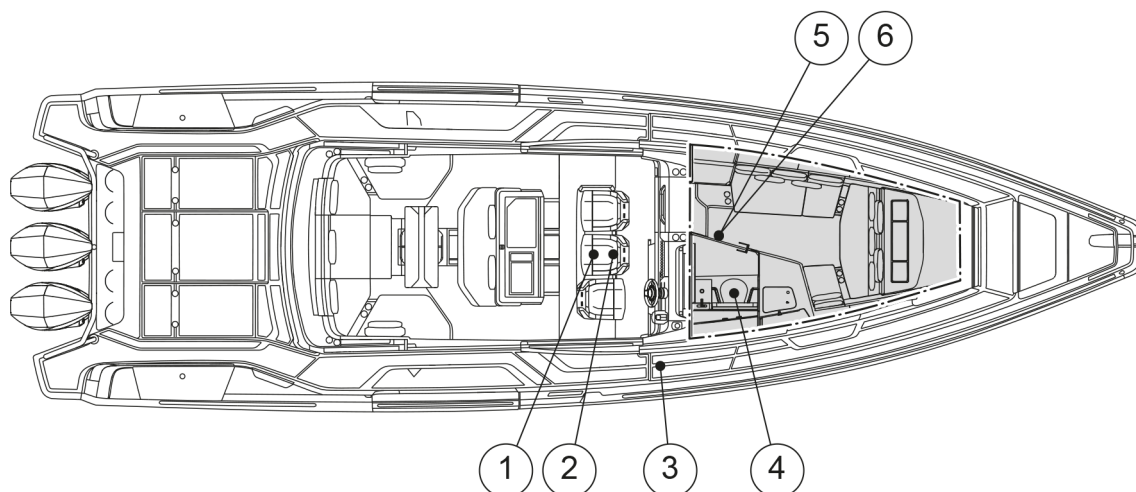
Presence of water in fuel can be checked by inspecting the contents of the fuel filter.

If any water is found, it must be removed and the whole fuel tank dried before the tank can be refilled with fuel.

- Examine the fuel tank and lines for corrosion and leaks.

4.2.10 Septic system

The boat's septic system consists of the toilet seat, the septic tank and the related systems.



- (1) Septic tank
- (2) Macerator pump
- (3) Deck suction fitting
- (4) Toilet
- (5) Shower sump pump
- (6) Septic tank seacock

Maintaining the macerator

The macerator pump can get stuck if it is not used for extended periods of time. Regular use of the macerator helps to prevent this from happening.

If the macerator pump gets stuck, please contact your dealer for repairs.

4.2.10.1 Toilet seat

The boat is equipped with an electrical toilet seat system that uses fresh water.

NOTICE

- Never put any other objects but toilet paper in the toilet.
- In order to avoid damages, you must also not pour hotter than lukewarm water into the toilet.
- It is under no circumstances allowed to flush paper towels, fabric or rubber products, hard objects, oil products or solvents down the toilet.

Using the electrical toilet

The electrical toilet is used with a separate operating switch. For more information on the device, see the manual for the toilet.

Maintaining the toilet

- Clean the toilet with a mild cleaner.
- Never use cleaning agents or deodorants which contain pine oil, formaldehyde or chlorine, nor corrosive or petroleum-based agents.

These materials can damage the plastic and rubber parts in the toilet.

- Lubricate the pump shaft with Vaseline to increase the service life of the seal.
- Flush the toilet system thoroughly with fresh water when the boat is not in use.

4.2.10.2 Septic tank



Avoid environmental pollution!

The black water tank is fitted with a deck outlet pump using an international standard type connection. Using the pump, the black water can be emptied to a permanent septic tanks ashore. These facilities must always be used.

In areas where there are no permanent septic tanks, the macerator is used to evacuate the contents of the tank straight into the water as follows: Open the sealed seacock. If possible, empty the tank daily and always in deep waters far from the shore. For the location of the pump, see the section **Septic system**.



The shut-off valve must be closed after the evacuation.

Do not allow the tank to become full. It can lead to paper becoming compacted in the bottom of the tank, making it more difficult to empty.

NOTICE

Before the boat is laid-up for winter storage, the whole system must be cleaned and flushed thoroughly while the boat is still in the water.

The whole system must be thoroughly drained of water when the boat is lifted out of the water.

This measure prevents frost damage, bacteria growth and smells.

Use of antifreeze is not recommended, since it is impossible to guarantee that it reaches all parts of the system.

4.2.10.3 Shower sump pump

The boat's shower floor is equipped with an drainage pump.

- Switch the pump on by using the pump switch located on the fuse panel.

Regular checks

- Clear the shower sump pump regularly of any accumulated debris and hair.
- Test that the float switch is in working order.

Before winter storage

- Empty the shower sump pump of water.

4.2.11 Bow thruster

The bow thruster enhances the maneuverability of the bow when docking or performing other maneuvers that require increased operator control.

The bow thruster is powered by the Aux battery. The main switch is located in the seatbase.

The control switch is located in the steering console.

The batteries must be disconnected from the electronic circuit before changing a fuse. For more information, see the manufacturer's manual.

WARNING

Incorrect use may cause overheating and short circuiting, and pose a fire risk.

- Use the bow thruster for only short periods at a time.
- Do not exceed four duty cycles (max. 30 seconds long in 25 mins).

If overloading occurs, contact a qualified marine electrician.

WARNING

- Do not touch the bow thruster or its fuse if the Aux main switch is switched on.

4.3 Optional equipment

This section presents the optional equipment and systems available for the boat.

4.3.1 Fresh water system

You can choose to equip your boat with an optional fresh water system.

The fresh water system consists of a fresh water tank, pump and filter.

The tank and pump are located under the front deck. The fresh water tank is filled via the filling cap inside the fore anchor hatch.

The fresh water system is turned on by switching on the fresh water pump. The pump switch is located on the fuse panel.

The system maintains a working pressure automatically, which is why the pump does not need to be shut after use.

- Switch off the system when the boat is left unmanned.
- Check the filter regularly.

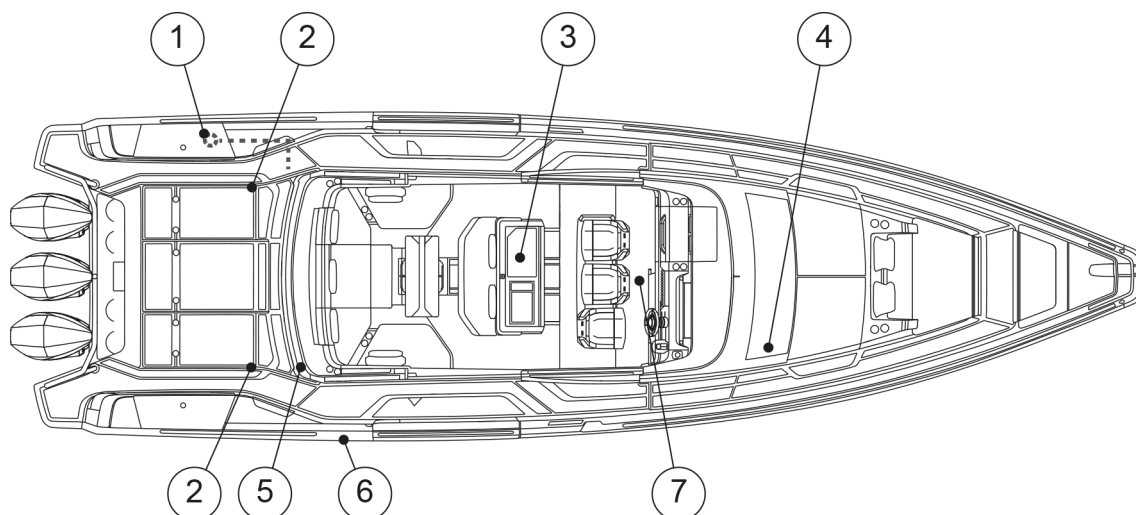
Antifreeze is added during production phase of the boat, and the dealer is responsible for disinfecting the fresh water tank before sale.

NOTICE

The water from the system is not meant for drinking.

The fresh water system must be thoroughly emptied for winter storage.

It is not recommended to use any anti-freeze products in the fresh water system.



- (1) Deck shower
- (2) Fresh water tank
- (3) Wet bar tap
- (4) Front cabin tap
- (5) Fresh water pump
- (6) Fresh water inlet pipe
- (7) Switch for water system

The water pump has air release valve which should be slightly opened to facilitate priming when starting the pump or emptying the tank. Once the pump operates normally, the valve should be closed.

The water pump has also two LEDs indicating the operating status and faults in the pump operation. For more information about the signals, please refer to manufacturer's manual.

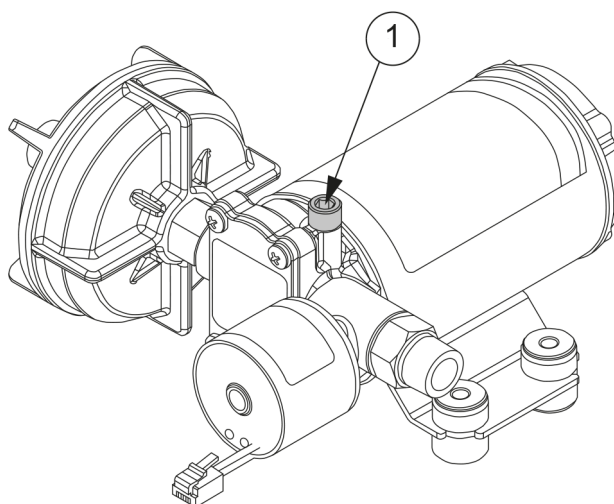


Figure 4.1 Water pump and air release valve

Fresh water system needs to be disinfected and flushed annually or after longer periods of non-use to keep the system in working order.

Disinfection procedure is described below:

1. Flush the entire system thoroughly by running potable water to flow through it.
2. Drain the system completely.
3. Fill the entire system with disinfecting solution and follow the manufacturer's instructions.
4. Drain the entire system once disinfection process is complete.
5. Flush the entire system thoroughly several more times with potable water.
6. Fill the system with potable water. Fresh water system is now ready to be used.

Maintenance: Annually inspect hose connections, tube fittings and pump electrical wiring connections for proper securing and no chafing. Water pump inlet filter is recommended to be checked and cleaned annually. Running the system regularly helps keep the water pump's impellers in working order.

4.3.2 Heating system

The boat can be equipped with a heating system as an optional equipment.

The heater unit is located behind the toilet room wall. In addition, there are a different number of heating vents available, depending on the boat's equipment.

The operation panel is located in the steering console.

The heater tank is located in the aft of the boat. The filling cap for the heater tank is located in the starboard afthatch.

WARNING

Appliances that burn fuel, consume oxygen and discharge toxic combustion products into the boat.

Good ventilation is essential when such an appliance is in use. Open ventilation holes and make sure that they are not blocked and that air flows freely through them.

- Never leave the boat unattended when the heater is in use.

NOTICE

Heater components may break if the wrong kind of fuel is used. For more information, see the manufacturer's manual.

- Do not switch off the heater's direct supply current before you have made sure that the appliance has cooled down.

4.3.3 Air conditioning

The boat can be equipped with a 230V/110V air conditioning (AC) as an optional system. Depending on the selected setup, the air conditioning allows climate control in the main cabin, the front cabin, and the aft cabin.

The optional air conditioning system consists of an air conditioning unit, a water pump, a strainer, a water intake valve and a ducting arrangement.

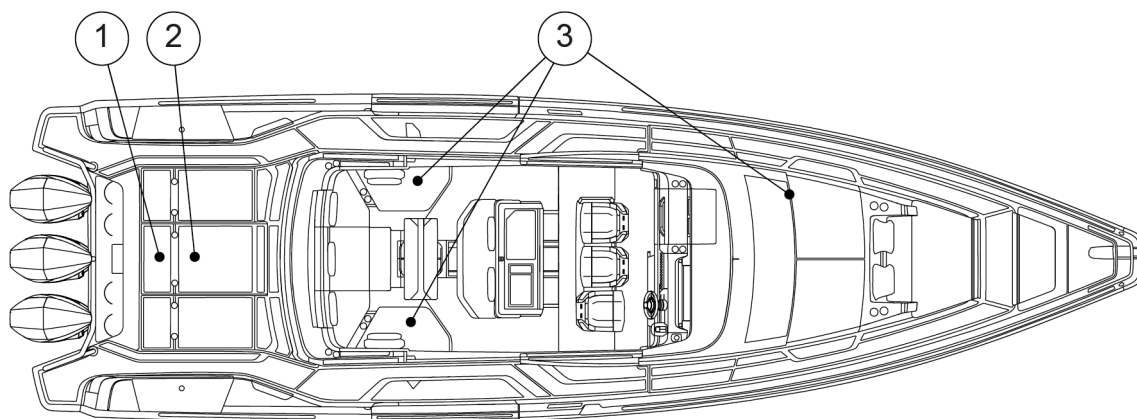
The air conditioning is controlled by control panel displays located in the main cabin and front cabin. When you set the desired temperature from the control panel displays, the unit automatically activates when the ambient temperature goes over or under the set value.

Before starting the unit:

- Ensure the sea water intake valve and the sea water outlet valves are open. The location of the valves is presented in the section **Openings in the hull and deck**.
- Ensure that the air conditioning circuit breaker is switched on.

NOTICE

Running the air conditioning unit when the water intake valve is shut can cause the unit to overheat and get damaged.



- (1) Optional AC water intake valve
- (2) Optional AC water pump and strainer
- (3) Optional AC unit

Maintenance

- Check and clean the air filter near the air conditioning unit monthly.
- Inspect the sea water circuit regularly for leaks.
- Inspect the electrical wiring and electrical connections annually for corrosion and firm seating.
- Coolant refills should be performed by a certified service provider.

Refer to the supplier's manual for complete operations, maintenance, and warranty instructions. In case of the air conditioning unit fails, please contact your boat dealer.

4.3.4 Navigation system

Your boat can be equipped with multifunction displays (MFD).

Depending on the boat configuration, the boat is equipped with single or multiple screens.

The multifunction display can be used to show electronic charts, plot courses, and navigate the boat. It also acts as interface for marine electronics and other digitally enabled equipment on board.

Refer to the supplier's manuals for complete user instructions and maintenance instructions of these functionalities and equipment.

4.3.4.1 VHF equipment

VHF radio allows instant communication between your boat and other boats, marinas, bridges, and maritime authorities.

The VHF radio is the recommended means of communication on the coastal waters, and it transmits messages on high frequency waves. The VHF system consists of a VHF radio unit near the drivers position and a radio antenna located on the mast of the boat.



Study the provided booklet for the local regulations and the functionalities related to the use of the VHF system.



For your safety, make sure the VHF system is operational before going out to open sea.

4.3.5 Anchor windlass

The boat can be equipped with a bow, and in some cases aft, anchor windlass (optional equipment).

Operation

To operate the windlass, windlass breaker must be switched on.

Windlass is operated with a momentary switch. Pushing the up button will raise the anchor and pushing the down button will lower the anchor.

If there is a loss of power to the windlass, check the windlass breaker to see if it needs to be reset. If the breaker keeps tripping after it has been reset, the anchor windlass system is recommended to be inspected by a qualified electrician.

The anchor windlasses are powered by the Aux battery. The battery and its fuse are located in the bow of the boat.

WARNING

- Do not touch the anchor windlass or its fuse if the main switch Aux is switched on.
- Even if the current is switched off, do not change the windlass fuse. The high current may cause a fatal electric shock.

Manual operation

In case of loss of power, the windlass can be manually operated by disengaging the clutch. Please refer to the manufacturer's manual how to operate the windlass manually.

Before using the anchor windlass

Always check that:

- The windlass is in working order.
- The anchor chain can move freely.

- The anchor and the chain cannot damage the boat when lowered.
- The anchor and anchor chain cannot hit any person.

For more information, see the manufacturer's manual.

While under way

The anchor windlass must be fixed mechanically to prevent it from coming loose when the boat is moving. For more information, see the manufacturer's manual.

WARNING

If the windlass loosens when the boat is moving at great speed, it may cause great damage to the boat, its passengers and outsiders.

- Always fix the anchor windlass mechanically in place before getting under way.

WARNING

- Keep all body parts and clothing away from an activated windlass.

NOTICE

- Do not use the windlass to pull or tow another vessel.

Maintenance

Salt deposit accumulating on the windlass should be washed away with fresh water regularly to prevent corrosion. For more information, please refer to the manufacturer's manual.

4.3.6 Solar panels

The boat can be equipped with solar panels.

The solar panels are located on the roof. The solar panel system includes a charger and a transformer which are located under the aft deck.

Follow the recommended instructions for use, maintenance and warranty schedule in the owner's manual of the solar panel.

4.3.7 Roof racks

The boat can be equipped with roof racks.

Roof racks allow for transportation of bulkier objects such as kayaks or bicycles. Objects put on the roof racks must be secured tight to prevent them from falling off or damaging the boat's roof or other components.



Load limit on roof racks in 25 kg / 55 lbs per roof half.

5 Transportation

5.1 Lifting the boat

Lift the boat only with a lifting beam and lifting straps. Use the specified locations for the lifting straps.



Commission only a reputable lifting company or a boatyard with sufficient lifting capacity to lift the boat. Make sure the company has full insurance cover, in case of any damages.

⚠ DANGER

Risk of serious injury or death by falling load.

- Do not stay under the boat when it is hanging in the crane.

Lift straps may slip on the hull. When appropriate, tie the straps together before lifting.

The position of the straps may need to be adjusted depending on how the boat is loaded.

In addition to the boat's own weight, take into account the equipment and other possible loads in the boat.

⚠ CAUTION

Note the location of the log transducer to avoid damaging it.

- Protect the hull sides well to avoid damages.

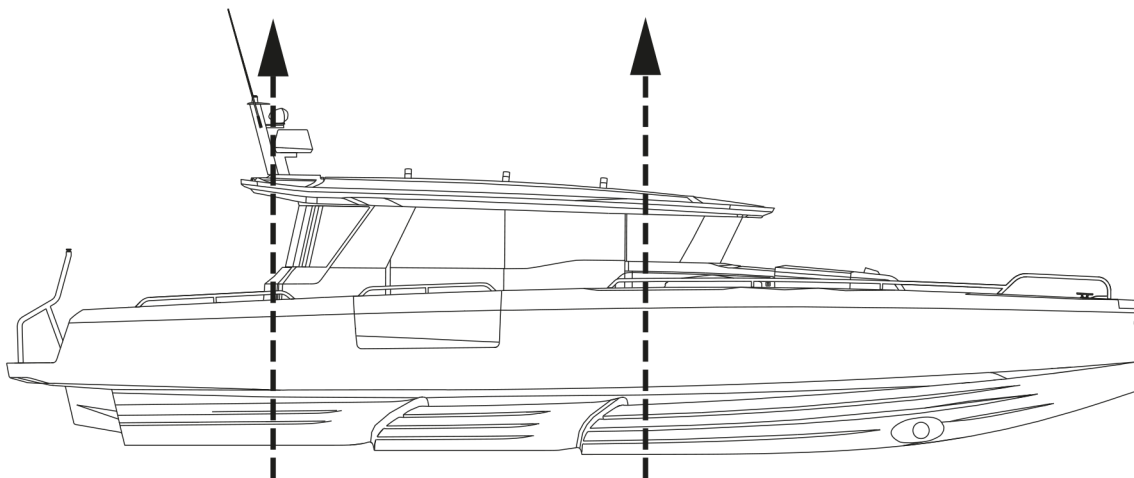
The lifting beam must be exactly the same width as the boat. Always take great precautions near and around the boat when lifting.

⚠ CAUTION

Risk of damage to the hull.

Do not lift the boat with a forklift.

The location of the lift straps is indicated in the figure.



Before operating any lifting equipment:

- Check and determine applicability of federal, state, or local requirements.
- Follow the lift equipment manufacturer's requirements and recommendations.
- Check the boat's lift points, weight and other information.
- Straddle lift operation is a highly technical area that requires trained and experienced operators.

During lifting:

- Check the boat for bilge water before lifting.
Excessive quantities of bilge water can shift, changing the balance of the load.
- Check for thru-hull appendages such as knot meters and stabilizers, rub, spray, and splash rails, so that they are not damaged by the lifting equipment.
- Check the hull structure to locate shafts, rudders, struts, and the forward and aft ends of any keels.
- Check the hull's structural configuration, including the location of bulkheads, stringers, engines, and tanks.
- Check bilges for water ingress following launch.
- Transport the boat as close to the ground as practicable.

5.2 Transporting and storing the boat

Before lifting the boat onto the trailer, make sure that the trailer is suitable for the boat.

Make sure that there is a sufficient number of supports to distribute the weight properly without excessive point loads, and the capacity and dimensions of the trailer are sufficient to carry the boat and its engine, equipment, battery, boating accessories and fuel on board. Pay special attention to exposed areas and edges of hull, such as strakes and steps in the hull, during loading, deloading and transportation.

WARNING

A boat trailer that does not have sufficient capacity or that is poorly maintained can become damaged and cause a danger on the road.

- Make sure that the trailer capacity is sufficient to also carry the weight of the engine, fuel and equipment.

CAUTION

The hull of the boat can be damaged if there is an insufficient amount of supports on the trailer or during the storage.

The trailer must be a little nose heavy. Make sure that the boat is securely fastened to the trailer, that it cannot move into any direction, and that the side supports provide an even support for the weight of the boat.

Before loading the boat on the trailer:

- Remove any unnecessary weight from the boat.
- Drain the bilge water.

- Adjust the side supports of the trailer so that the most weight rests on the keel supports, and the side supports only offer lateral support.
- Protect the boat by placing suitable padding between the tie down straps and the boat, if necessary.
- See the engine manual for any instructions on trailering.
- Make sure that the doors and hatches are properly closed.
- Pay attention to any equipment and accessories in the boat during trailering.
 - Make sure you secure all loose items in the boat.
 - Do not use a hood, canopy, tonneau cover or other similar top or cover on the boat during trailering.

These hoods and covers can become detached at high speeds and damage the boat and cause a danger to traffic.

A hood or other cover flapping in the wind during trailering can damage the boat surface.

- Keep the hood in its dedicated storage compartment during trailering, or remove the hood completely, if necessary.

6 Operation

The boat owner must take local and international regulations into consideration concerning the boat crew, equipment and handling of the boat. In some countries, a driving license or a separate authorization is required for driving the boat. Special regulations may also apply.

Ensure that the anticipated wind and wave conditions do not exceed the design category of the boat, and that the crew is able to handle the boat in these conditions. Even though the boat is designed for such conditions, they can still be very dangerous. Only a capable, fit and trained crew, using a well maintained boat, can satisfactorily operate in such conditions.

If the boat is fitted with a life raft, carefully read its operation manual. Onboard, the boat must have the appropriate safety equipment according to the boat type and weather conditions. This equipment is compulsory in some countries. The crew must be familiar with the use of all safety equipment and the most important actions in different emergency situations. Sailing schools and clubs regularly organize rescue drills.

The equipment in the boat may differ from the equipment used in the figures in this manual. This might be due to any optional equipment chosen or modifications made after producing this manual. In such cases, contact your local dealer for the operation instructions and additional information regarding the operation of the equipment in question.

Always maintain the boat properly and make allowance for the deterioration that occurs over time and as a result of heavy use or misuse of the boat. Any boat, no matter how strong it may be, can be severely damaged if not used properly. Inappropriate use of this boat not compatible with safe boating is not allowed. It is always important to adjust the handling of the boat to the sea conditions and own boating experience. The gelcoat parts, especially the colored parts, need to be polished and waxed approximately every fourth months to prevent the parts from fading or getting other visual defects.

6.1 Handling devices

6.1.1 Steering console

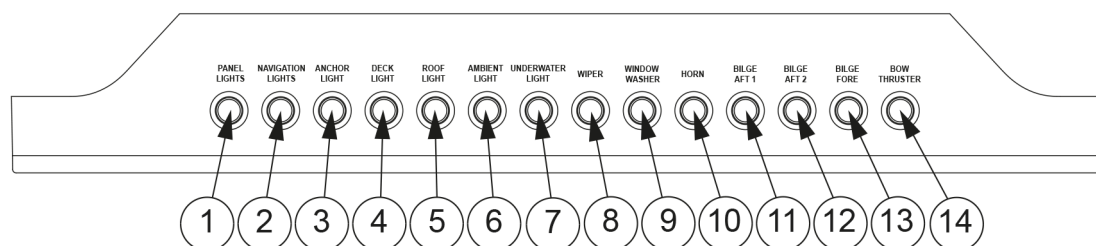
The controllers are situated so that the driver can easily manage them from the steering console.

The location and quantity of the devices depend on what optional equipment and engine models have been chosen. See the device manuals for further information on the devices.



- (1) Chart plotters
- (2) Bow thruster, trim tabs and audio control
- (3) Engine remote control
- (4) Steering console switch panel
- (5) System information display
- (6) Ignition keys
- (7) Emergency stop
- (8) VHF

6.1.2 Steering console switch panel



- (1) Panel lights
- (2) Navigation lights
- (3) Anchor lights
- (4) Deck lights
- (5) Roof lights
- (6) Ambient light
- (7) Underwater light
- (8) Wiper
- (9) Window washer
- (10) Horn
- (11) Bilge aft 1
- (12) Bilge aft 2
- (13) Bilge fore
- (14) Bow thruster

6.1.3 Windscreen wipers

The boat's windscreen wipers are controlled by the switches in the boat's steering console.

A switch for the windscreen washer is installed next to the switch for the windscreen wipers.

The windscreen wash-fluid tank is located under the driver's seat.

6.1.4 Steering system

The steering system is one of the most vital systems related to safe boating.

The boats are equipped with a hydraulic steering system with the alternatives of power steering and non-power steering systems. Please refer to the collateral manuals provided by the outboard engine and steering system manufacturer included in the manual package provided with the boat.

The non-power steering system consists of a steering wheel, a helm pump, a hydraulic hosing, and a hydraulic steering cylinder.

The power steering system includes a steering pump to help with the handling of the vessel.

6.1.4.1 Checking and topping up oil

Effective and properly working steering is crucial for the safety of the boat.

- Check the oil level in the pump before casting off.
- For detailed instructions and the steering system oil recommendation, see the manufacturer's documentation.

6.1.4.2 Steering maintenance

For the regular maintenance of the steering system components, please refer to supplier's manual.

If you encounter issues beyond regular maintenance needs, please contact your boat dealer immediately for service.

6.1.5 Throttle lever

The engine throttle and shift are controlled by the electronic throttle lever. To start the engine, the lever must be in the neutral position. The throttle lever is used to control the engine's RPM which affects the speed of the boat.

Moving the lever forward shifts engine into the forward gear, and moving the lever backwards shifts the engine into the reverse gear. Progressively moving the lever in one direction will increase the speed of the boat in that same direction.

For detailed guidelines about safe boating and component maintenance, please refer to the provided outboard engine literature. If you encounter issues beyond regular maintenance needs, or if noticeable failures occur, please contact your boat dealer immediately for service.

WARNING

Always make sure no one is close to the propeller when starting the engine or engaging the propeller! Acknowledge the information provided on the helm's warning labels.

6.1.5.1 Trim and tilt

The engine can be raised or lowered with the trim controls in the throttle lever.

Raising and lowering the engine is needed when trailering or launching the boat. Adjusting the trim angle of the engine also allows optimizing the run angle for the boat to achieve optimal performance or fuel efficiency.

Refer to the supplier's manuals for detailed operation instructions, maintenance, and warranty information.

6.1.6 Starting the engine

See the engine manufacturer's manual for engine information.

1. Set the engine lever in neutral.
2. Turn the ignition on and check the fuel level.

3. Start the engine by turning the ignition key.
4. Check that the gauges for oil pressure and volt meter show normal values.
5. Run the engine to operating temperature at idling speed. Never rev up a cold engine.

⚠ DANGER

Risk of carbon monoxide poisoning.

Be aware of the risks with engine exhausts. For example, under turbulence or disadvantageous wind conditions, exhaust can enter the boat. If this happens, avoid idling the engines. If these problems occur under way, do not open the hatches and ventilators, as it can worsen the problems. Instead, you may try solving the problems by changing the boat's speed or weight distribution.

⚠ WARNING

Never step onto the swim ladder when the engine is running. Stop the engine while the steering and propeller are being inspected.

⚠ WARNING

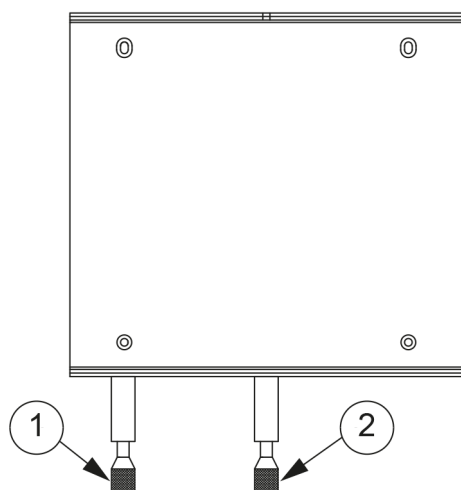
Do not operate this boat with an engine that exceeds the maximum engine power recommended by the manufacturer.

6.2 Swivel seat - Driver and passenger seats

The driver and passenger seats are operated with locking handles.

⚠ DANGER

The locking handles must be in the locked position before the boat speed exceed 5 knots.



- (1) Rotation locking handle
- (2) Moving locking handle

- For the rotating function, press the locking handle down to release the lock.
This allows you to rotate the seat on the post.
- For the moving function, lift the locking handle up to release the lock.
This allows you to move seat from back to front.

6.3 Inspecting the boat

Due to safety reasons, the below listed inspections must be carried out before and after using the boat.

6.3.1 Checklist: Regular inspection before leaving harbor

Safety

Make sure that:

- All the people onboard have life jackets.
- The wind and wave conditions do not exceed the design category of the boat.
- The dead man's switch is switched to driver.
- There is a fire extinguisher (or several) onboard and their approval/inspection date has not expired.
- The needed ropes and anchor are onboard.

Draining and tightness

Check that:

- There is no water in the bilge.
- All the bilge pumps are functional.
- The bilge has no signs of fuel or oil leaks.
- All deck hatches are tightly closed.

Electrical and engine

Check that:

- All the fuses are intact.
- The main switches are switched on.
- The batteries have enough power.
- The engine works properly.
- The engine cooling water flows as expected.
- The fuel level is sufficient.

WARNING

The specified tank capacity is not necessarily fully available, depending on the trim and load on board. The tank must always be kept at least 20% full.

6.3.2 Checklist: After using the boat

Make sure that:

- The main switches are switched off.
- The septic tank discharge valve is closed.
- There is no water in the bilge.
- The bilge pumps are functional.
- The deck draining works properly and all the draining valves are open.
- All deck hatches, roof canvas and doors are tightly closed.

6.4 Handling the boat

6.4.1 Checklist: Boat handling before leaving harbor

For safe navigation under all weather conditions, proper sound signaling equipment in compliance with regulations (COLREG, 1972) must be carried on board. Make sure that the sound signaling equipment on the boat is compliant with these regulations.

CAUTION

According to national regulations in some countries, it is a legal requirement to wear a life vest at all times.

- Check that the boat and its equipment are in seaworthy condition.
- Always listen to long-term weather forecasts when planning longer trips.
- Always make sure there is enough fuel and freshwater in the tanks.
- Check that all items on board are properly stowed and adequately secured to manage rough sea and wind conditions.
- Make sure that the swim ladder is raised out of the water before moving off.
- Make sure that the steering is correctly positioned before starting.
- All persons on board must wear an appropriate life vest when on deck.

6.4.2 Leaving the jetty

Before casting off, consider how to best leave the jetty.

- Check what the wind direction is.
- Using a bow thruster, move the bow out and then engage the propeller.
- If the boat has two engines, move away from the jetty by engaging the engine nearer the jetty astern at idling speed and engaging the other engine ahead at idling speed on.
- The boat will swing out from the jetty astern. As the bow will move against the jetty, fend off properly.

With only one engine this can be a little more challenging, especially if the wind is pressing the boat firmly against the jetty, you have to use a spring to get the stern out.

- Firmly fend off the bow from the jetty.
- Take a line from the bow around a bollard or cleat, so that it can be easily let go.
- Engage idling speed ahead and turn the rudder so that the stern glides out from the jetty.
- When the boat has reached a position, where it can safely be reversed, release and retrieve the line, quickly center the rudder and engage astern.

⚠ CAUTION

Gather in all lines and fenders while you are still in sheltered water. A rope around the propeller can disable a boat.

6.4.3 Driving the boat

Going out in a motor boat involves responsibility not just to those on board, but also to others we meet on the water. Showing consideration for others makes boating comfortable. Everyone has the same right to be at sea, whatever kind of boat they go afloat in.

The physical laws that apply to a boat are rather different from, for example, those affecting a car, as are the possibilities of controlling it.

You can influence a boat's behavior and the level of comfort on board primarily by adapting the speed to the prevailing sea conditions and by the intelligent use of the trim tabs. A planing boat rides almost level in the water at maximum speed. As the speed of the boat is reduced the trim angle increases and the bow rises slightly. This is normal, and is a prerequisite for good performance.

6.4.3.1 Dead man's switch

If the boat is equipped with a dead man's switch, attach its lanyard to yourself immediately after detaching the mooring lines. For more detailed instructions, see the engine manual.

It is very important that the boat stops if you for some reason fall overboard or stumble on board, particularly if you are alone. However, remember to detach the lanyard from your wrist before docking or beaching operations to prevent the engine from stopping unintentionally.

6.4.3.2 Driving at high speed

Although the boats have passed the CE requirements for swerve tests at full speed, does not recommend making sharp turns at high speed. When exceeding a certain speed limit any hull construction might lose its grip. This might lead to passengers hurtling out of the boat, especially in a single engine configuration.

- Do not use the boat if it has an engine with a higher power rating than indicated on the capacity plate.
- Do not drive the boat at high speed if the engine's rig angle is negative (bow down).
- Do not drive at full speed on congested waterways or if the visibility is limited because of weather conditions or waves.
- Reduce your speed and wake as a matter of courtesy, and also for the safety of yourself and others.
- Observe and obey speed limits and prohibitions associated with a swell.

- Follow the rules of navigation and the requirements of COLREG (Convention on the International Regulations for Preventing Collisions at Sea).
- Always make sure that you have the space needed for avoiding collisions and coming to a halt and for evasive maneuvers.
- Always use a dead man's switch if available.
- Reduce speed in high seas for increased comfort and safety.
- Learn the boat's speed potential. Utilize this knowledge for economical and safe cruising.
- Avoid using high speed along with large rudder movements when going astern, because that places great strain on the rudder and steering mechanism.
- Avoid sudden steering maneuvers at high speeds.
- Avoid staying in the bow area when driving at high speeds.

Avoid sudden changes in travel direction at high speed. Let the boat come to a stop, and the engine rev down before shifting between forward and reverse. Otherwise excessive strain is put on the engine, which could cause the engine to stop. In the worst case, sea water may enter the engine.

A right-handed propeller rotates clockwise and a left-handed propeller anti-clockwise, seen from the stern. The rotation of the propeller is critical for steering the boat. The right-handed propeller pushes the stern of the boat to starboard when the engine is engaged ahead and to port when it is going astern. The direction of rotation of the propeller has a major impact on the turning radius. A right-handed propeller gives a smaller turning radius to port than to starboard. This is called the propeller's paddlewheel effect.

The boat's propellers have considerable propulsion power that provides powerful acceleration. Take this into consideration to avoid dangerous situations arising from this.

DANGER

A revolving propeller is life-threatening to a swimmer or a person who has fallen overboard.

Use the dead man's switch and turn off the engine when someone is climbing on board.

6.4.3.3 Driving in rough seas

Never go out in rough seas, if you are uncertain whether the boat and those on board can cope. Follow these simple rules.

- Be well prepared.
- Remember to secure loose equipment.
- Always have a sea anchor and other emergency equipment easily accessible.
- Avoid breaking seas that can appear close to land and over shallows.
- If there are significant waves, always reduce speed to guarantee the safety of the persons on board.
- Use the trim tab to trim the bow down to reduce hull slamming in a head sea.

In a head sea

- Adjust speed to suit the size of the waves.
- Adjust the trim angle to the size of the waves. Avoid taking seas beam on.

In a following sea

Remember to keep the bow high in a following sea. Avoid crashing through waves, maintain low speed. If necessary, deploy the sea anchor to reduce speed.

Planing boats can be particularly exposed in rough following seas. The stern of the boat rises and the rudder does not answer, so the boat broaches while the bow cuts down into the sea.

6.4.3.4 Maneuvering in narrow channels

When maneuvering the boat in narrow channels, the engine speed must be kept as low as possible so that maneuvers are calm and steady.

In difficult wind and current conditions, more revs might be necessary to make full use of the power of the engine. In these conditions, it is important that maneuvers are made quickly and precisely to prevent the boat from drifting into trouble for example.

A good rule before starting a maneuver under difficult conditions, is to think through the different situations which could arise. Pay attention to the wind and current conditions and decide in advance which maneuver you will make. It is also important to brief crew members on what they need to do in different situations.

Always keep in mind that the stability of the boat may be reduced when towing.

CAUTION

Even a nonslip molding can be slippery to walk on when the deck is wet.

6.4.4 Visibility from steering position

The International Regulations for Preventing Collisions at Sea (COLREG) demand that a proper lookout is kept at all times, and the *right of way* rule is followed.

The following factors can considerably reduce visibility, among other things:

- Gear trim angle
- Trim tab angle
- Load and load position
- Speed
- Rapid acceleration
- Changeover from displacement speed to planing
- Sea conditions
- Rain and thunderstorms
- Darkness and fog
- Inner lighting when under way in the dark
- Position of curtains
- People and equipment that block the driver's view.

WARNING

Make only small adjustments at a time. Holding down the button for the trim tab for any length of time can result in partial loss of control of the boat.

6.4.5 Using the trim tabs

A boat does not need trim tabs to get up on the plane or to give good performance. However, trim tabs are a very useful aid when used correctly.

There are two situations in particular where the trim tabs need to be used:

- When it is desirable to trim the bow down in a rising sea and at speeds between going up planing and cruising speed.
- When running with a strong beam wind.

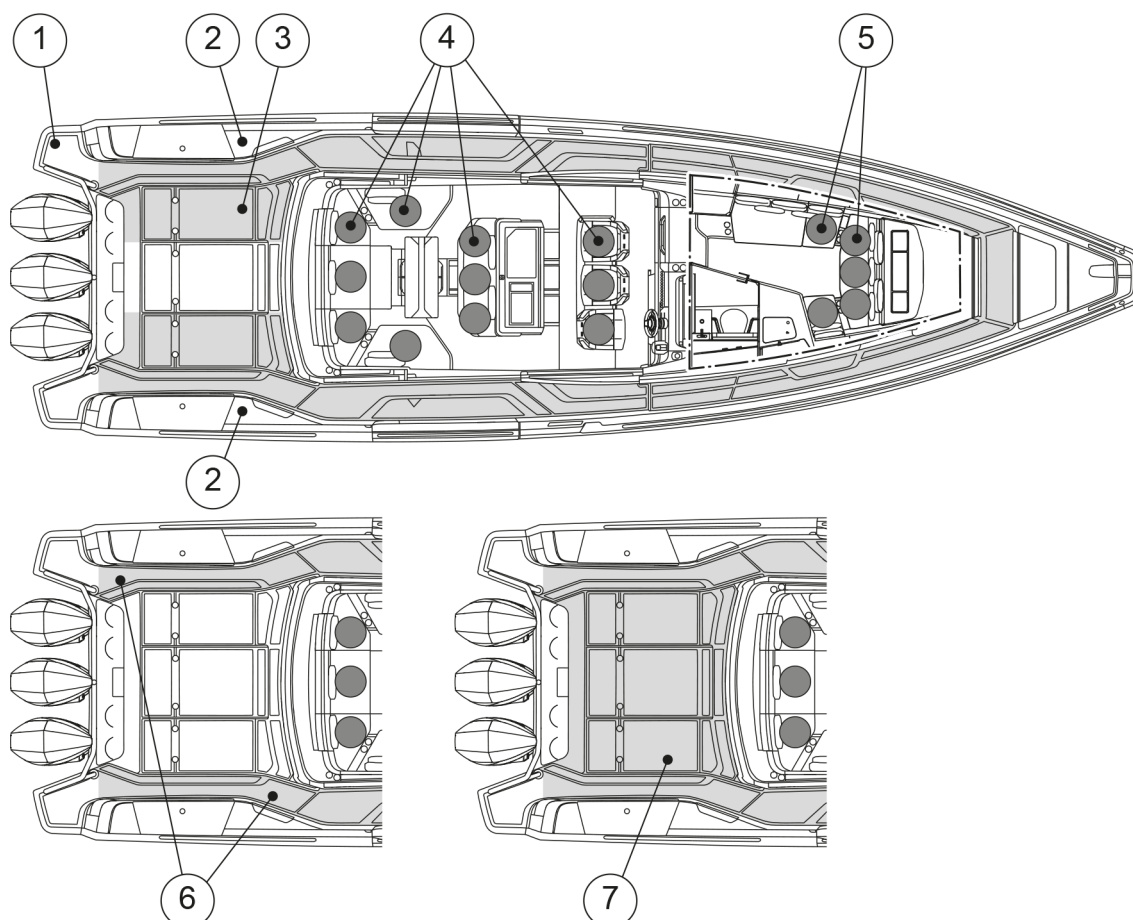
A planing boat always leans into a strong side wind. This reduces the boat's seakeeping qualities, which is why listing to one side needs to be eliminated as far as possible. Lowering the trim tab on the windward side brings the boat back into normal attitude.

For trimming the bow down, both trim tabs are used in parallel. Begin by retracting both trim tabs completely, then lower both of them a little at a time, so that you retain complete control over how the boat is affected. When running with a following sea, both trim tabs always need to be fully raised. The reason for this is that boats have a tendency to “dive” in a strong following sea, which can result in uncontrollable slowing. Therefore you must run the boat with a high bow angle in a following sea.

6.5 Preventing falling overboard

The boat's working decks are areas where people can move about when the boat is being maneuvered.

The working deck area is shown in grey in the figure.



- (1) Swim ladder
- (2) Hooking points
- (3) Working deck area (Open aft deck and aft deck bench options)
- (4) Seats
- (5) Seats in the front cabin
- (6) Working deck (Aft deck cabin option)
- (7) Working deck (U-sofa and table option)

The boat is equipped with rails and a high bulwark except for the open aft area. If you need to operate at the aft deck in bad weather, attach your lifevests harness to the hooking points in the aft corners.

Moving about in the aft part of the aft deck and on the front deck while the boat is under way is not recommended.

Keep the gates in the flat aft deck area closed while the boat is under way.

If a person has fallen into the water, the easiest way to get back on board is to use the swim ladder. The ladder can be pulled down also from the water.

Staying on deck

⚠ WARNING

Staying in the bow of the boat is not recommended in speeds exceeding 30 knots.

⚠ DANGER

A revolving propeller is life-threatening to a swimmer or a person who has fallen overboard.

- Use the dead man's switch.
- Turn off the engine when someone is climbing on board.



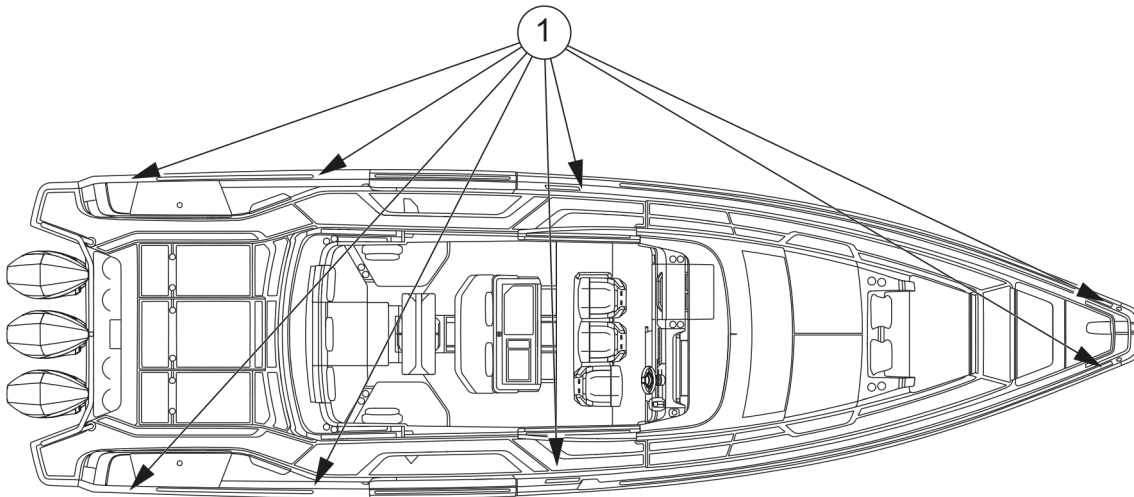
If the sun deck cushions or the front deck table are in place, observe the maximum speed of 15 knots to avoid the cushions or table detaching at speed or in high waves.

6.6 Anchoring, docking and mooring

6.6.1 Fastening points

Fastening points (or cleats) are located both at the stern, midship and bow.

- When anchoring or towing, the forward force is 51.8 kN.
- When mooring the forward force is 42.3 kN.
- When mooring the rearward force is 36.1 kN.



(1) Fastening points

6.6.2 Docking

Always brief your crew how you are planning to dock. Fenders and at least one mooring line fore and aft must be in place before approaching the jetty.

It is always easiest to dock against the wind. Try to hold the bow exactly into the wind and maintain sufficient speed for the boat to answer the rudder. If the bow is blown off in one direction, back out and repeat the maneuver. Bring the bow up to the jetty, and make sure you get a line ashore quickly.

Docking with a side wind is a little more difficult. Do not steer parallel to the jetty letting the boat blow in as there is always a risk of the bow being blown off towards other boats or the jetty. Instead, try to maneuver the boat so that the wind comes directly from astern. Then the boat can be maneuvered straight ahead since the wind helps hold the boat on a straight course. It is good to have someone on the foredeck that can go ashore and quickly turn the bow in the desired direction after the boat has stopped completely.

Try to always avoid sharp movements of the throttle, since idling speed in ahead and astern is generally adequate. Sharp movements of the throttle can lead to panic maneuvers.

CAUTION

The tensile strength of the lines or chains should normally not exceed the strength of the fastening point in question.

6.6.3 Checklist: Before anchoring

1. Check the chart to see if anchoring is permitted in the area.
2. Listen to the weather forecast for the area and take note of the expected wind conditions.
3. Switch on the echo sounder.
4. Study the seabed conditions and make sure that there is good holding ground.
5. Check that the safety chain has been released from the anchor.
6. Wait until you have reached the intended anchoring point before lowering the anchor.
7. Let out the anchor line equal to at least three times the depth of the water.
8. Put the engine in astern to check that the anchor has taken hold (only when bow anchoring).
9. Note your position on the GPS. Regularly check that the boat has not moved from its position.
10. Set the echo sounder to "Anchor Watch".

WARNING

Always fix the anchor in such a way that it is securely fastened onto the boat. An anchor that falls off when under way may cause serious damage to the boat and mortal danger to the crew.

6.6.4 Towing and mooring

CAUTION

When towing another boat or being towed, always drive slowly. If the boat you are towing is of the displacement hull type, never exceed its hull speed.

- Always attach the tow line so that it can be detached under load. It is the owner's and users' responsibility to ensure that the mooring lines, towing lines, anchor chains, anchor lines and anchors are adequate for the vessel's intended use.
- Always remember that the stability of the boat may decrease when being towed.

7 Maintenance

7.1 Cleaning and maintaining the gelcoat surface

The gelcoat surface of the boat is subjected to environmental conditions which can, under certain circumstances, lead to deterioration of the surface. Overtime, these external factors such as saltwater, high UV exposure and temperature variation, can have an effect on the gelcoat surface.

Generally, gelcoat should last 3 years without showing any significant signs of yellowing, chalking, or other deterioration in typical conditions.

NOTICE

Clean and maintain regularly all the gelcoat surfaces on the boat.

If the regular cleaning and maintenance is neglected, or if the boat is exposed to certain environmental conditions where it is berthed, deterioration of the surface finish such as fading, discoloration and brittles may become visible over time.

- Wash and clean the boat after every trip, and weekly if it is stored outside uncovered.
- Wax the boat twice a year if used all year, otherwise annually.
- Inspect the gelcoat surface annually for signs of deterioration, such as brittle surfaces or changed color tones.
- Small scratches or discolorations can be fixed by buffing or polishing.
- Severe scratches, discoloration or oxidation may require wet sanding before buffing, polishing and waxing.

Wet sanding is recommended to be performed by dealer or a trained professional.

- When the boat is not in use, keep the gelcoat surface out of the sun or cover the boat with a canvas tarpaulin.

Do not use plastic or other non-porous materials, which can trap moisture between the cover and the surface.

Washing

NOTICE

Use a cleaning product specially made for boats. Do not use household cleaning products, chlorine, acids or similar as they may damage the boat surface due to their improper pH value.

Wash the boat after every trip by using a mild cleaning product. Dilute the cleaning product with fresh water according to the instructions on the product label.

1. Rinse the deck and hull with fresh water to remove loose dirt.
2. Wash the surfaces with the diluted cleaning product and a soft-bristled brush.
3. Rinse off with fresh water.

Waxing

Waxing the gelcoat surface restores gloss and protects the finish. Only use wax recommended for gelcoat, and follow the product instructions carefully.

Wax can either be applied by hand using a clean rag, or with an orbital-motion buffing machine.

NOTICE

If using a buffing machine, do not exceed the speed of 1200 rpm. Using a higher speed may burn the gelcoat.

NOTICE

Do not wax a gelcoat surface in direct sunlight.

1. Apply wax and wait for a few minutes until the wax looks dry.
2. Buff the wax either by hand using a clean rag, or by using a buffing machine.
Buff in circular motions until the surface is clean and glossy.
3. Finish by wiping the potential wax residues off with a clean rag.

Polishing and buffing

Small scratches or discolorations can be fixed by polishing and buffing the boat. If the surface has severe discoloration or oxidation, wet sanding is recommended before polishing and buffing.

- Polishing compounds remove small scratches and discolorations.
- Buffing compounds contain abrasive and remove deeper scratches or oxidation.
Buffing compounds can be used, for example, to remove scratches on the hull caused by the fenders.
- After using the buffing compound, use polishing compound to achieve the best possible finish.
- Follow the product instructions of the compound carefully.

Polishing and buffing compounds can either be applied by hand using a clean rag, or with an orbital-motion buffing machine with a polishing pad.

NOTICE

When using a buffing machine, do not exceed the speed of 1200 rpm. Using a higher speed may burn the gelcoat.

NOTICE

Do not polish or buff a gelcoat surface in direct sunlight.

1. Apply polishing or buffing compound on the surface and wait for a few minutes until the compound looks dry.
2. Polish or buff the compound either by hand using a clean rag, or by using a buffing machine with a polishing pad.
Buff in circular motions until the surface is glossy.
3. Wax the surface.

Wet sanding**NOTICE**

Wet sanding is recommended to be performed by dealer or a trained professional.

Severe scratches, discoloration or oxidation of the gelcoat surface may require wet sanding. Wet sanding can be done either by hand or by using a machine.

NOTICE

When using a machine, do not exceed the speed of 1200 rpm.

Using a higher speed may burn the gelcoat.

NOTICE

Do not wet sand a gelcoat surface in direct sunlight.

1. Spray water to the area that needs to be sanded.

NOTICE

Keep the surface continuously moist while sanding.

2. Sand the surface with a 1000 grit sandpaper (for example Mirka Abralon).
If you use a machine, use a low rpm speed to get the best result.
Keep sanding until the entire surface is equally matt.
3. Sand the surface with a finer 1400 grit sandpaper.
4. Sand the surface once more with an even finer-grit sandpaper.
This saves time in the buffing and polishing stage.
5. After sanding, when the surface looks equally matt, rinse the surface with fresh water and allow to dry.
6. Buff and polish the surface to get the gloss back.
7. Wax the surface.

7.2 Antifouling

Painting your boat's hull with antifouling paint is worth considering if your boat is most of the season in water.

Boats that are frequently lifted out of the water and relaunched during the boating season can be affected by antifouling oxidization. Out-of-the water, antifouling paint will oxidize, which will prevent the biocide release and slowly cause antifouling to lose its effectiveness. Follow the paint manufacturer's specifications for launching window.

Antifouling wears gradually over time, depending on factors such as the location where the boat is used and how often the boat is used. As a rule of thumb, antifouling lasts one season once applied. When the antifouling needs to be repainted, it is important to use the same antifouling paint as the existing antifoul, or to scrub off old antifouling paint down to gel coat. If different antifouling paints are used, there is a risk that the composition of the paints are incompatible, preventing the antifouling paint from working.

Contact your nearest dealer in antifouling repainting and condition inspection related matters.

7.3 Maintaining the interiors

7.3.1 Wooden interiors

The interior details of the boat, such as the locker doors and drawer fronts and wooden strips, are made of oiled wood.

- Clean the wooden interior details with a damp cloth and a small amount of soapy water.
- Treat the wooden surfaces again every year to protect the wood.

7.3.2 Plastic and painted surfaces

1. Wet the surface evenly with water before the actual cleaning.
2. Remove stains.
 - Remove regular stains with a brush and a lightly diluted cleaner.
 - Remove grease with a brush or a sponge and window cleaner.
3. Clean the surface afterwards with sponge and water.
4. Wipe dry with a piece of cloth.

7.3.3 Fabrics

The interior fabrics are washed according to separate washing instructions (marking on the fabric).

In case the marking is not visible:

1. Wash in 40°C with a light spin cycle.
2. Hang to drip dry.

The material may slightly shrink. If you want to avoid shrinking, take the fabrics to a dry cleaner.

7.3.4 Doors and hatches

- Clean the tracks of sliding doors and hatches regularly and lubricate, if necessary.
- Lubricate handles and locks with regular lock lubricant.

7.4 Maintaining the cover



New covers may leak initially, as the seams need to swell.

During use

To prevent quick deterioration of the cover, secure it tightly in a folded-up position to prevent flapping.

After use

NOTICE

- Hang to dry. Never use a drying cabinet or iron to speed up drying.
- Check that the cover is completely dry before stowing. Stowing a moist cover can cause mold damage.
- Store the cover in dry indoor conditions for the winter.
- The cover must not be stored in the boat.

7.4.1 Cleaning the cover

The cover needs to be thoroughly cleaned two or three times a year.

NOTICE

Never use high pressure washers or chemical cleaning agents.

1. Let the fabric cover soak for at least 24 hours.
2. After soaking, wash the inside and outside of the cover with a sponge or a soft brush.
Use mild soapy water and plenty of water, max. 30°C.
3. Rinse thoroughly with freshwater.
Mix 12% vinegar in the final rinsing water to neutralize the soap residues.
4. Hang the cover to drip dry.

7.5 Protecting underwater metal parts

Boat's underwater metal components, such as thru-hulls, seacocks, trim tabs, engine internal components and propellers, are subject to electrolytic corrosion. Electrolysis and galvanic corrosion (corrosion of dissimilar metals in salt water) can occur in marine environment due to external factors such as stray currents, polluted waters, or proximity of other vessels. It is important for boat owner to be aware of the phenomena, as they can cause serious deterioration over time.

Signs of electrolytic corrosion are, for example, white, powdery substance on exposed metal such as propellers or breakers, or thru-hulls and seacocks turning greenish. If the corrosion has progressed far, even deep pitting can appear on the part's surface.

The boats are equipped with sacrificial anodes to protect the metal parts from galvanic corrosion. Additionally, boats equipped with shore power have galvanic isolators to stop low voltage currents from flowing through the boat.

All underwater metal parts need to be inspected annually for signs of corrosion. Additionally, underwater thru-hulls and seacocks are recommended to be replaced every 5 years. Please refer to chapter [Preventing corrosion](#) for more details.

7.6 Preventing corrosion

Sacrificial anodes are installed on the boat's trim tabs and engines to protect metallic parts from corrosion damage. The anodes need to be replaced regularly as they wear out to protect other metallic parts.

- Inspect the anodes monthly.
- Replace them when approximately fifty percent of the anode has deteriorated.

In general, anodes need replacement once a year in fresh water, and more frequently in saltwater environment. If there is an increase in the consumption speed, it can be a sign of electrical issue and the root cause should be investigated.

7.7 Preventing frost damage

- The bilge pump system is fitted with a water lock on the hose.
 - Detach the hose and fully drain the water from the water lock and run the pumps dry. Otherwise the pumps may freeze and break.
- Unscrew the frost plug on the underside of the shower fittings.
 - If there is no frost plug, unscrew the shower hose.
- Drain the water tank and all other components containing water in order to avoid frost damage.
- Run the freshwater pump dry to drain out all the water.
- Make sure that no water remains in the boat under any circumstances. Leave the hatches in the cabin partially open.

7.8 Checklist: Before winter lay-up

- Wash the hull and bottom immediately after lifting the vessel out of the water.
- Wash all parts inside, also under the floorboards.
- Leave all lockers, drawers, and cabin and wardrobe doors open.
- Remove the carpets.
 - Store the carpets and cushions indoors in a dry place.
 - If this is not possible, make sure that the cushions are dry and position them on their side.
- Disconnect and service the air conditioner.
 - Switch off the power and disconnect the power supply.
 - Close the seacocks.
 - Drain the cooling water circuits and pumps, or fill them with antifreeze.
 - Check the more detailed instruction in the manufacturer's manual.
- Disconnect and service the fridge.
 - Switch off the power and disconnect the power supply.
 - Defrost the fridge.
 - Clean and dry the exterior and the interior of the fridge.

- Empty and dry the condensate water tray.
- Leave the door slightly ajar to enable ventilation.
- Check the more detailed instruction in the manufacturer's manual.
- Ensure good ventilation in the boat.

NOTICE

If the batteries are left aboard, make sure they are fully charged, otherwise the batteries can freeze and crack.

7.9 Checklist: Before launching

1. Remove the tarpaulin in good time before launching.
2. Wash the hull with a regular shampoo and a soft brush.
3. Wax the hull, if necessary.
Use a standard boat wax.
4. If there are small scratches on the hull or if some of the surface gelcoat has lost its shine, use a rubbing compound on these areas before polishing.
5. Paint the bottom with antifouling paint.
6. If the batteries have been removed, put them back and check the electrolyte level in the cells.
Check the condition of the batteries.
7. Check all cables, clamps, engine mountings and other fastenings.
8. Check the steering before launching.
9. Check the instrumentation.
10. Close all water drain plugs.
11. Check that the seacocks are tight and in order, check for any frost damage.
12. Check all pipes, hoses and cocks.
13. Make a note of any frost damage.

7.10 Corrective maintenance

7.10.1 Deposits

Mild detergents and fine rubbing compounds reduce the weathering and calcium deposits accumulated on the surfaces.

NOTICE

Do not apply the rubbing compound in direct sunlight.

- Use only a fine grit compound, and follow the label instructions carefully.
- For the best result, wax the surface after treating it with the rubbing compound.

7.10.2 Scratches and nicks

Most scratches and nicks can be removed by using a rubbing compound followed by waxing.

7.10.3 Stains

Most stains can be removed by washing with a mild detergent.

- For stubborn stains, use a fine abrasive household cleanser followed by waxing to restore original luster.
- For non-water-soluble stains, such as grease, oil, and rubber heel marks, use a solvent such as acetone, rubbing alcohol, toluene or xylene, followed by a mild detergent.
 - If these solvents are not effective, try a rubbing compound or fine sanding followed by waxing.

7.10.4 Deep marks, gouges and holes

Deep marks, gouges and holes should be repaired professionally.

Gelcoats can be well repaired by professionals, and in most cases the repair will be undetectable.

NOTICE

In cases where the damage has pierced the gelcoat layer, further exposure to water or chemicals should be avoided.

Failure to observe this precaution may result in extensive and potentially costly damage to the underlying laminate structure.

8 Environment

When handling environmentally hazardous substances such as fuel, oils, solvents, grease, bottom coats, you need to consider the following:

- Always read the instructions for each product carefully and handle the product with care.
 - Make sure that the used packaging, cans and similar items are discarded in designated collection points.
 - If you are in any doubt whether the product is hazardous or not, contact the supplier or vendor of the product.
- The backwash from boats wears down the shoreline and creates problems for other boats near you.
 - Always adjust your speed to the situation and the surroundings to avoid unnecessary backwash.
- Always drive the boat at the most economical engine revs possible, taking the prevailing conditions into account, to avoid unnecessary emissions and noise.
- Make sure that the engine is properly serviced at regular intervals so that noise and emission levels are minimized.
 - Read the engine manufacturer's manual carefully.
- As a boat owner you must be aware of the local environmental laws, and respect codes of good practice.
 - Never empty the septic or black water tank into water.
 - Familiarize yourself with the international regulations on the prevention of marine pollution (MARPOL) and comply with these regulations.

8.1 Requirements for North America

The EPA standards state that in freshwater lakes, freshwater reservoirs or other freshwater impoundments whose inlets or outlets are such as to prevent the ingress or egress by vessel traffic subject to this regulation, or in rivers not capable of navigation by interstate vessel traffic subject to this regulation, marine sanitation devices certified by the U.S. Coast Guard installed on all vessels shall be designed and operated to prevent the overboard discharge of sewage, treated or untreated, or of any waste derived from sewage.

The EPA standards further state that this shall not be construed to prohibit the carriage of Coast Guard-certified flow-through treatment devices which have been secured so as to prevent such discharges. They also state that waters where a Coast Guard-certified marine sanitation device permitting discharge is allowed include coastal waters and estuaries, the Great Lakes and interconnected waterways, freshwater lakes and impoundments accessible through locks, and other flowing waters that are navigable interstate by vessels subject to this regulation (40 CFR 140.3).

9 Appendix I: Checklists

9.1 Checklist: Fire in the engine

- Stop the engine.
- Steer the boat up against the wind, if possible.
- Make sure all passengers have life jackets.
- If necessary:
 - Evacuate the passengers.
 - Call for sea rescue.
- Shut off fuel and main power switches.
- Extinguish the fire.
- Wait until fully certain that the fire has been extinguished before opening the engine cover.
Carefully open the engine cover and be prepared to use the handheld fire extinguisher if necessary for post-fire extinguishing.
- Put out possible smoldering fires with water.

9.2 Checklist: After fire

- Open doors and windows for better ventilation.
- Inspect the boat and its equipment, and repair any damages.
- Contact local authorities, if needed.
- Make sure that the fire extinguishing equipment is refilled or replaced after use.

9.3 Checklist: Regular inspection before leaving harbor

Safety

Make sure that:

- All the people onboard have life jackets.
- The wind and wave conditions do not exceed the design category of the boat.
- The dead man's switch is switched to driver.
- There is a fire extinguisher (or several) onboard and their approval/inspection date has not expired.
- The needed ropes and anchor are onboard.

Draining and tightness

Check that:

- There is no water in the bilge.
- All the bilge pumps are functional.

- The bilge has no signs of fuel or oil leaks.
- All deck hatches are tightly closed.

Electrical and engine

Check that:

- All the fuses are intact.
- The main switches are switched on.
- The batteries have enough power.
- The engine works properly.
- The engine cooling water flows as expected.
- The fuel level is sufficient.

WARNING

The specified tank capacity is not necessarily fully available, depending on the trim and load on board. The tank must always be kept at least 20% full.

9.4 Checklist: After using the boat

Make sure that:

- The main switches are switched off.
- The septic tank discharge valve is closed.
- There is no water in the bilge.
- The bilge pumps are functional.
- The deck draining works properly and all the draining valves are open.
- All deck hatches, roof canvas and doors are tightly closed.

9.5 Checklist: Boat handling before leaving harbor

For safe navigation under all weather conditions, proper sound signaling equipment in compliance with regulations (COLREG, 1972) must be carried on board. Make sure that the sound signaling equipment on the boat is compliant with these regulations.

⚠ CAUTION

According to national regulations in some countries, it is a legal requirement to wear a life vest at all times.

- Check that the boat and its equipment are in seaworthy condition.
- Always listen to long-term weather forecasts when planning longer trips.
- Always make sure there is enough fuel and freshwater in the tanks.
- Check that all items on board are properly stowed and adequately secured to manage rough sea and wind conditions.
- Make sure that the swim ladder is raised out of the water before moving off.
- Make sure that the steering is correctly positioned before starting.
- All persons on board must wear an appropriate life vest when on deck.

9.6 Checklist: Before anchoring

1. Check the chart to see if anchoring is permitted in the area.
2. Listen to the weather forecast for the area and take note of the expected wind conditions.
3. Switch on the echo sounder.
4. Study the seabed conditions and make sure that there is good holding ground.
5. Check that the safety chain has been released from the anchor.
6. Wait until you have reached the intended anchoring point before lowering the anchor.
7. Let out the anchor line equal to at least three times the depth of the water.
8. Put the engine in astern to check that the anchor has taken hold (only when bow anchoring).
9. Note your position on the GPS. Regularly check that the boat has not moved from its position.
10. Set the echo sounder to "Anchor Watch".

⚠ WARNING

Always fix the anchor in such a way that it is securely fastened onto the boat. An anchor that falls off when under way may cause serious damage to the boat and mortal danger to the crew.

9.7 Checklist: Before winter lay-up

- Wash the hull and bottom immediately after lifting the vessel out of the water.
- Wash all parts inside, also under the floorboards.
- Leave all lockers, drawers, and cabin and wardrobe doors open.
- Remove the carpets.
 - Store the carpets and cushions indoors in a dry place.
 - If this is not possible, make sure that the cushions are dry and position them on their side.
- Disconnect and service the air conditioner.
 - Switch off the power and disconnect the power supply.
 - Close the seacocks.

- Drain the cooling water circuits and pumps, or fill them with antifreeze.
- Check the more detailed instruction in the manufacturer's manual.
- Disconnect and service the fridge.
 - Switch off the power and disconnect the power supply.
 - Defrost the fridge.
 - Clean and dry the exterior and the interior of the fridge.
 - Empty and dry the condensate water tray.
 - Leave the door slightly ajar to enable ventilation.
 - Check the more detailed instruction in the manufacturer's manual.
- Ensure good ventilation in the boat.

NOTICE

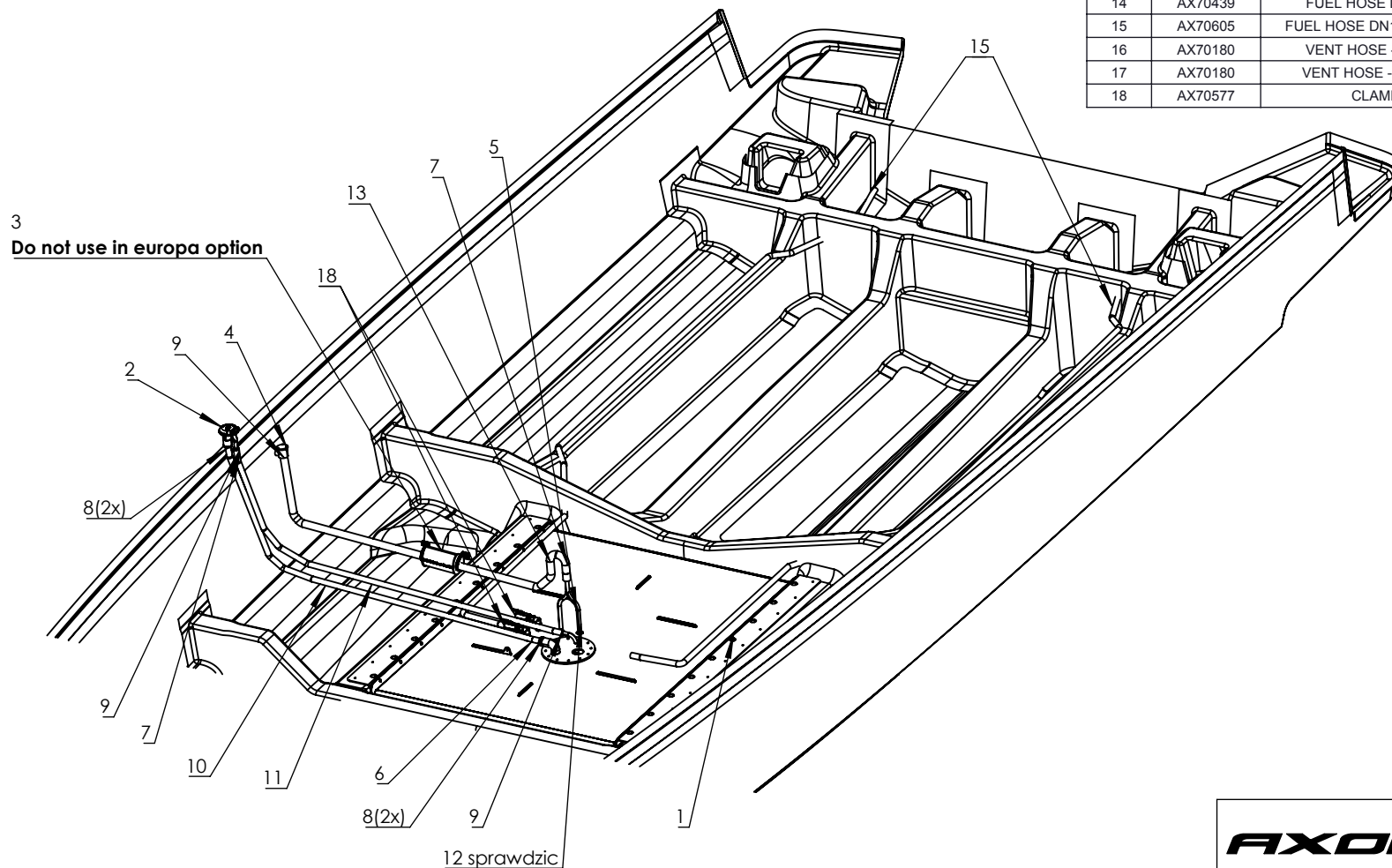
If the batteries are left aboard, make sure they are fully charged, otherwise the batteries can freeze and crack.

9.8 Checklist: Before launching

1. Remove the tarpaulin in good time before launching.
2. Wash the hull with a regular shampoo and a soft brush.
3. Wax the hull, if necessary.
Use a standard boat wax.
4. If there are small scratches on the hull or if some of the surface gelcoat has lost its shine, use a rubbing compound on these areas before polishing.
5. Paint the bottom with antifouling paint.
6. If the batteries have been removed, put them back and check the electrolyte level in the cells.
Check the condition of the batteries.
7. Check all cables, clamps, engine mountings and other fastenings.
8. Check the steering before launching.
9. Check the instrumentation.
10. Close all water drain plugs.
11. Check that the seacocks are tight and in order, check for any frost damage.
12. Check all pipes, hoses and cocks.
13. Make a note of any frost damage.

10 Appendix II: Fuel system

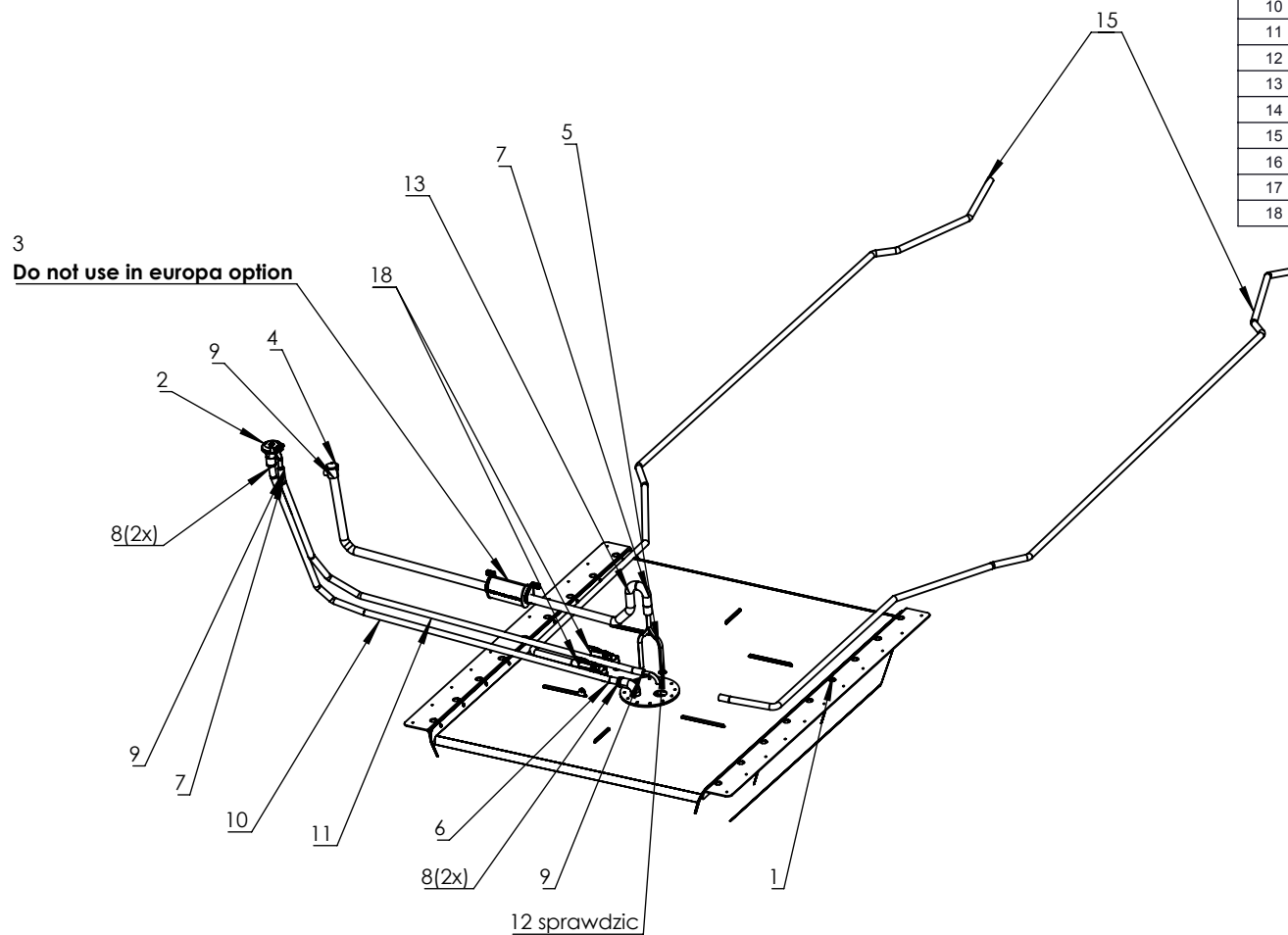
FIND NO	CODE	PART LIST	LENGHT [m]	QTY
1	AX81692	FUEL TANK		1
2	AX80817	FUEL INLET		1
3	AX81635	CARBON CANISTER		1
4	AX81636	P-TRAP		1
5	AX81720	TEE-ALU		1
6	AX81632	ONE DIRECTION VALVE FI 38		1
7	AX81633	ONE DIRECTION VALVE FI 16		1
8	AX70575	CLAMP 35X50		4
9	AX70576	CLAMP 16X27		10
10	AX70440	FUEL HOSE DN38 - FUEL INLET	4,8	1
11	AX70439	FUEL HOSE DN16 - MAIN VENT	4,7	1
12	AX70439	FUEL HOSE DN16 - TEE	0,1	11
13	AX70439	FUEL HOSE DN16 - CARBON CANISTER	1,9	1
14	AX70439	FUEL HOSE DN16 - P-TRAP	0,1	1
15	AX70605	FUEL HOSE DN12 - FUEL POWER	11,6	1
16	AX70180	VENT HOSE - AFT - FI75MM		1
17	AX70180	VENT HOSE - BOW - FI75MM		1
18	AX70577	CLAMP 12X22		2



NOTICE:

1. Do NOT use Sikalfex on fuel Hoses
2. See instruction **INS006/AX37-Sh800** for **FUEL PERKO** instalation
3. See instruction **"INSTALLATION INSTRUCTIONS FOR HOSE CLAMPS"**

		BOAT MODEL		AXOPAR 37L	
DRAWN		TITLE FUEL SYSTEM - PERKO			
Maciej Bukłaho					
MODEL ASSEMBLY		DATE			
Maciej Bukłaho					
APPROVED		DWG NO.		Rev.	SHEET
PROTOTYPE		02.07.2019		SY-AX37L-01	A 1 OF 1



3
Do not use in europa option

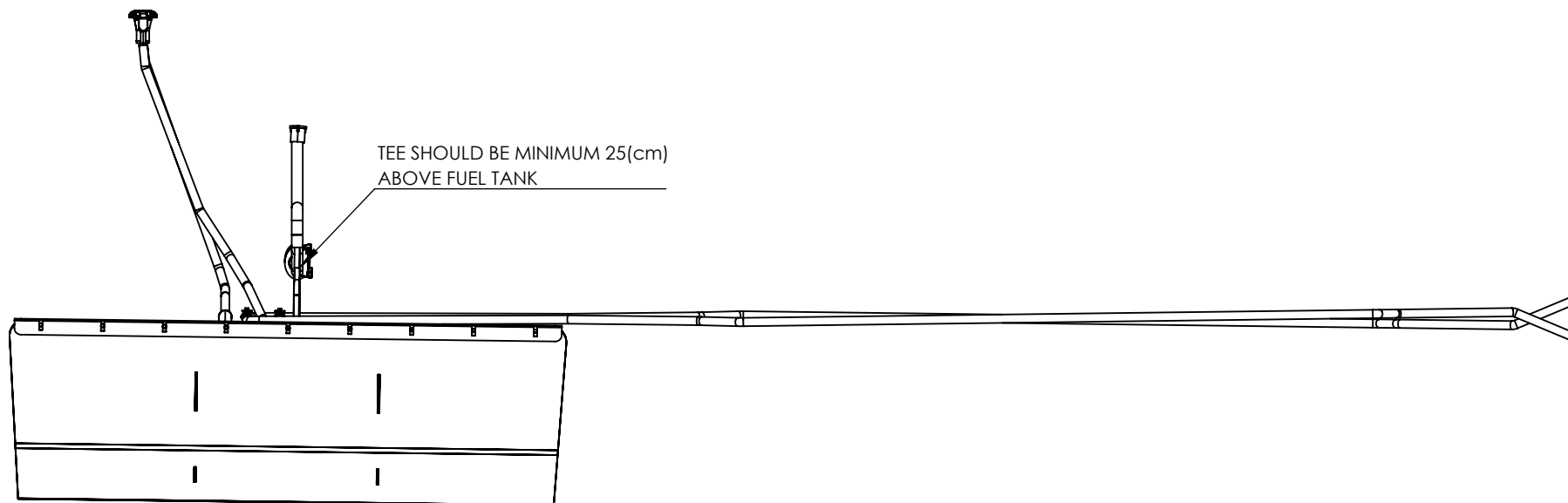
12 sprawdzic

FIND NO	CODE	PART LIST	LENGHT [m]	QTY
1	AX81692	FUEL TANK		1
2	AX80817	FUEL INLET		1
3	AX81635	CARBON CANISTER		1
4	AX81636	P-TRAP		1
5	AX81720	TEE-ALU		1
6	AX81632	ONE DIRECTION VALVE FI 38		1
7	AX81633	ONE DIRECTION VALVE FI 16		1
8	AX70575	CLAMP 35X50		4
9	AX70576	CLAMP 16X27		10
10	AX70440	FUEL HOSE DN38 - FUEL INLET	4,8	1
11	AX70439	FUEL HOSE DN16 - MAIN VENT	4,7	1
12	AX70439	FUEL HOSE DN16 - TEE	0,1	11
13	AX70439	FUEL HOSE DN16 - CARBON CANISTER	1,9	1
14	AX70439	FUEL HOSE DN16 - P-TRAP	0,1	1
15	AX70605	FUEL HOSE DN12 - FUEL POWER	11,6	1
16	AX70180	VENT HOSE - AFT - FI75MM		1
17	AX70180	VENT HOSE - BOW - FI75MM		1
18	AX70577	CLAMP 12X22		2

NOTICE:

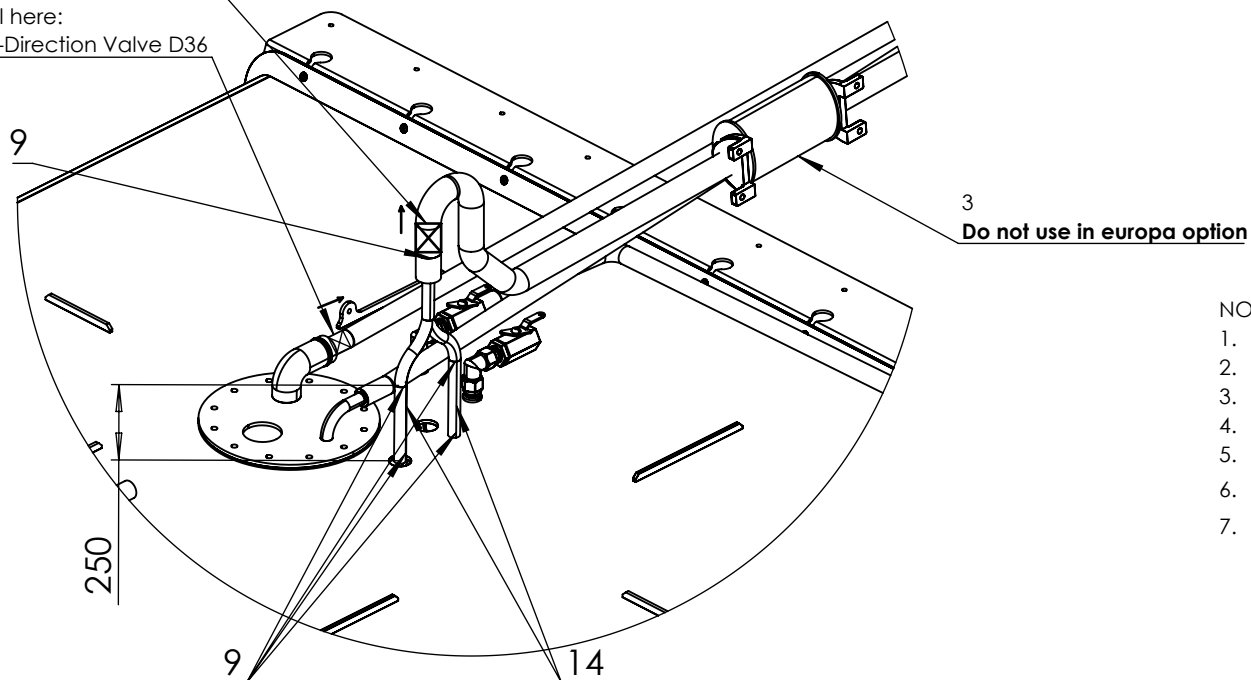
1. Do NOT use Sikalfex on fuel Hoses
2. See instruction **INS006/AX37-Sh800** for **FUEL PERKO** instalation
3. See instruction "**INSTALLATION INSTRUCTIONS FOR HOSE CLAMPS**"

AXOPAR		BOAT MODEL AXOPAR 37L		
		TITLE FUEL SYSTEM - PERKO		
DRAWN	Maciej Buklaho	DATE	DWG NO.	Rev.
MODEL ASSEMBLY	Maciej Buklaho	02.07.2019	SY-AX37L-01	A
APPROVED	PROTOTYPE			SHEET 1 OF 1



Instal here:
One-Direction Valve D16

Instal here:
One-Direction Valve D36



NOTICE:

1. Do NOT use Sikalfex on fuel Hoses
2. One direction Valve should be instaled in vertical position, or it is allowed to have 30deg tolerance from vertical position
3. Fuel hose should have minimum 3deg drop
5. When Hose is bended its need to keep clearance
6. See instruction **INS006/AX37-Sh800** for **FUEL PERKO** instalation
7. See instruction "**INSTALLATION INSTRUCTIONS FOR HOSE CLAMPS**"

		BOAT MODEL		AXOPAR 37L	
DRAWN		TITLE FUEL SYSTEM - PERKO			
Maciej Bukłaho					
MODEL ASSEMBLY		DATE			
Maciej Bukłaho					
APPROVED		DWG NO.		Rev.	SHEET
PROTOTYPE		02.07.2019		SY-AX37L-01	A 1 OF 1

11 Appendix III: Electrical diagrams

	1	2	3	4	5	6	7	8	
A									
B									
C	Axopar 37 MY20 ELECTRICAL DIAGRAM / PRODUCTION DRAWINGS DOCUMENT INCLUDES: BOAT HARNESS / PANEL GENERAL LAYOUT ELECTRICAL STRUCTURE OF 12V DC SYSTEM (EURO/USA); 230V, 50 Hz AC, EURO SYSTEM; 120V, 60 Hz AC, USA SYSTEM 12V DC DIAGRAM 230V, 50 Hz, AC, EURO DIAGRAM 120V, 60 Hz, AC, USA DIAGRAM (NOT DEFINED) PRODUCTION DRAWINGS NOTE! THIS DOCUMENT APPLIES ONLY TO B3-REVISION. NOTE! ALL CABLE AREAS ARE IN METRIC SYSTEM (mm2). REVISION B4								
D									
E									
F									
	10.10.2019	PN	B4: NEW REVISION.	Date 26.4.2019	NAVIX designed solutions Copyright by	Axopar			
	1.11.2019	TT	B5: NOT MODIFIED.	Drawing by TuM		Boat	Sub-product code	Product code	Project ID
	16.09.2019	AR	A3: NOT MODIFIED.	Sheet rev. 5		37 MY20	COVER	HL	1/ 149
	Date of modification	Modified by	Description	Project rev. B		Boat model	Title	Loc	
	1		2	3	4	5	6	7	8

Axopar 37 MY20

ELECTRICAL DIAGRAM / PRODUCTION DRAWINGS

DOCUMENT INCLUDES:
BOAT HARNESS / PANEL GENERAL LAYOUT
ELECTRICAL STRUCTURE OF 12V DC SYSTEM (EURO/USA); 230V, 50 Hz AC, EURO SYSTEM; 120V, 60 Hz AC, USA SYSTEM
12V DC DIAGRAM
230V, 50 Hz, AC, EURO DIAGRAM
120V, 60 Hz, AC, USA DIAGRAM (NOT DEFINED)
PRODUCTION DRAWINGS
NOTE! THIS DOCUMENT APPLIES ONLY TO B3-REVISION.
NOTE! ALL CABLE AREAS ARE IN METRIC SYSTEM (mm2).

REVISION B4

LEGEND:
(APPLIES ONLY THIS PAGE)

X3

X3

SOCKET CONNECTOR
(INCLUDES PIN CONTACTS)

PLUG CONNECTOR
(INCLUDES SOCKET CONTACTS)

OR

ALL PRODUCTS TIED "OR" -LABEL ARE
ALTERNATIVE OPTIONS DEPENDING THE SET-UP OR MODEL OF
BOAT. BOTH PRODUCTS WITH "OR" -LABEL CANNOT
INSTALL TO BOAT.

NOTE! CONNECTOR NAME LIKE "X3" IS HEADER
ONLY FOR EXAMPLE X3 CONNECTORS INCLUDES
VARIOUS CONNECTORS:
X3a, X3b, X3c, X3d, X3e, X3f and X3g.
MORE DETAILS IN ELECTRIC SCHEMATIC AND
PRODUCTION DRAWINGS.

STRUCTURE OF 12Vdc SYSTEM, EURO/USA

SYSTEM GROUPS:

NOTICE!
ALL PRODUCTS INCLUDED INDICATED
SYSTEM GROUP NEED TO INSTALL
TO BOAT.

BOW BATTERY SYSTEM PRODUCTS

HEAVY AMPLIFIER SYSTEM PRODUCTS

AFT ANCHOR WINCH PRODUCTS

12Vdc HARNESS STRUCTURE:

12Vdc BATTERY BOX PRODUCTS: STANDARD

29637 BATTERY BOX STANDARD

SEPARATE PANELS:

(STANDARD)

BATTERY BOX
FWD WALL PANEL
29617

(STANDARD)

BATTERY BOX
AFT WALL PANEL
29618

BATTERY CABLES:

(STANDARD)

BATTERY BOX
CABLES STANDARD
29607

(STANDARD)

BATTERY BOX
STB PANEL
29613

(STANDARD)

BATTERY BOX
PORT PANEL
29615

12Vdc BATTERY BOX
PRODUCTS: OPTIONAL

(OPTIONAL)

INVERTER
CABLE SET
29611

(OPTIONAL)

AUTOPILOT
HARNESS
30736

(OPTIONAL)

POWER STEERING
CABLES 1xPUMP
30880

(OPTIONAL)

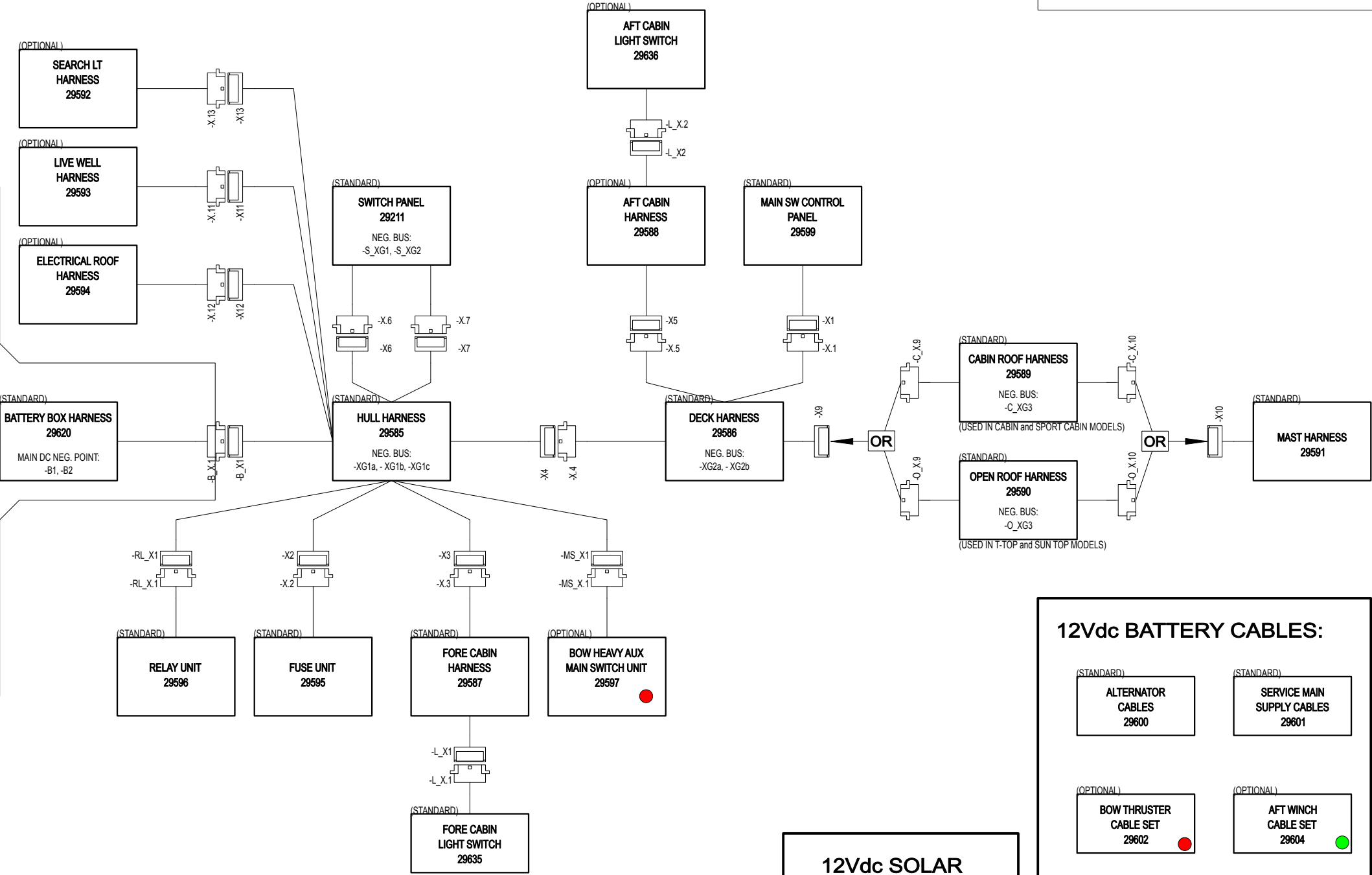
ISM HARNESS
30735

(OPTIONAL)

BATTERY BOX
CHARGER CABLES
30737

(OPTIONAL)

POWER STEERING
CABLES 2xPUMP
30881



12Vdc BATTERY CABLES:

(STANDARD)

ALTERNATOR
CABLES
29600

(STANDARD)

SERVICE MAIN
SUPPLY CABLES
29601

(OPTIONAL)

BOW THRUSTER
CABLE SET
29602

(OPTIONAL)

AFT WINCH
CABLE SET
29604

(OPTIONAL)

BOW WINCH
CABLE SET
29603

(OPTIONAL)

HEAVY AMPLIFIER
CABLES
29605

(ONLY WITH BOW THRUSTER
CABLE SET)

12Vdc SOLAR PANEL SYSTEM:

(OPTIONAL)

SOLAR PANEL
CABLES
29606

10.10.2019	PN	B4: SEVERAL MODIFICATIONS.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		EL. STRUCTURE - 12Vdc SYSTEM, EURO/USA	HL		
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title	Loc	2 / 149 Sheet	

	1	2	3	4	5	6	7	8	
A									
B									
C									
D	NOT DEFINED								
E									
F									
	10.10.2019	PN	B4: NOT MODIFIED.	Date 2.5.2019	NAVIX designed solutions Copyright by	Axopar			
	1.11.2019	TT	B5: NOT MODIFIED.	Drawing by TuM		Boat	Sub-product code	Product code	Project ID
	17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev. 5		37 MY20	EL. STRUCTURE - 230Vac/50Hz SYSTEM, EURO	HL	3 / 149
	Date of modification	Modified by	Description	Project rev. B		Boat model		Loc	
	1	2	3	4	5	6	7	8	

NOT DEFINED

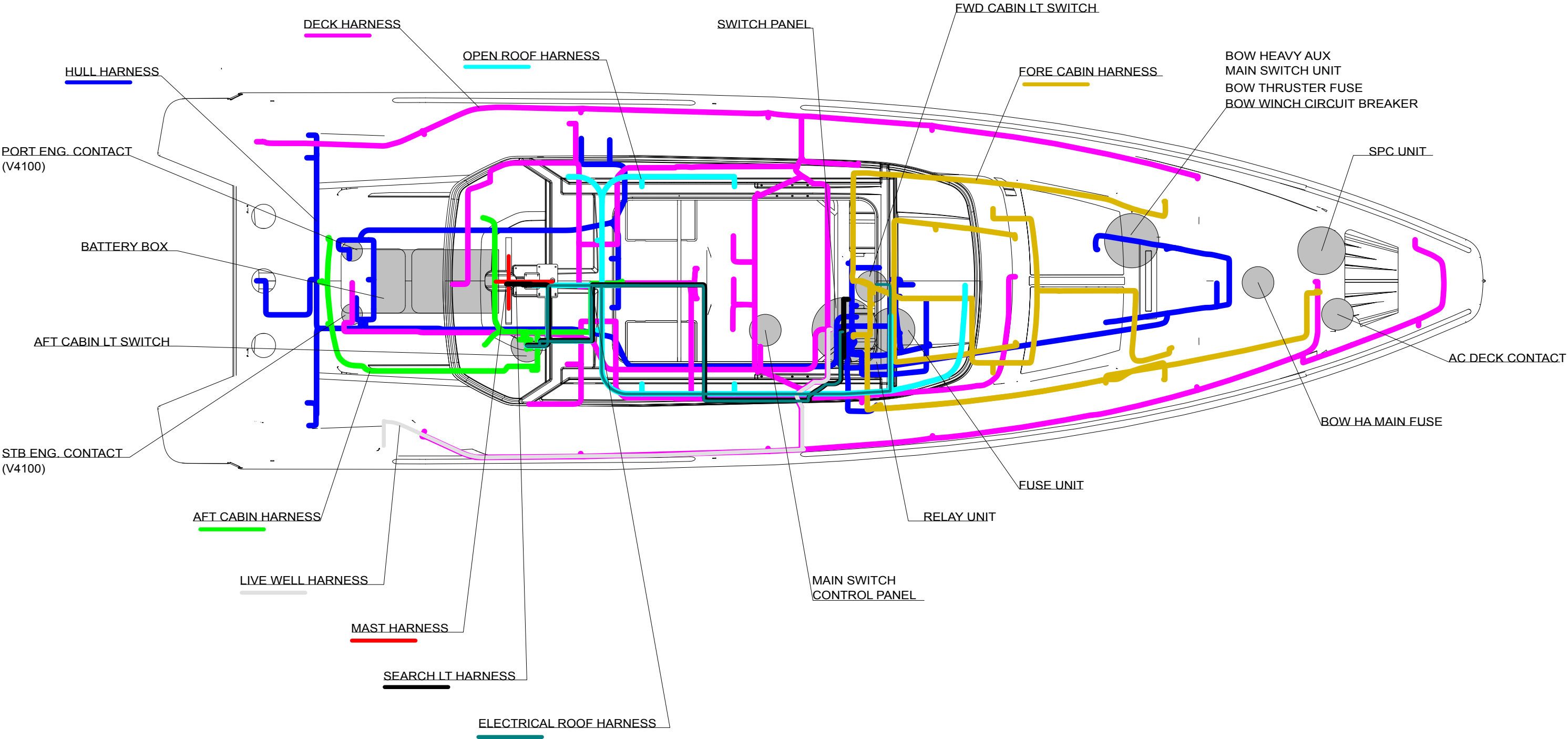
	1	2	3	4	5	6	7	8	
A	NOT DEFINED								
B									
C									
D									
E									
F									
10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	NAVIX designed solutions Copyright by	Axopar			
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	EL. STRUCTURE -		4 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model	120Vac/60Hz SYSTEM, USA	HL Loc	
1	2	3	4	5	6	7	8		

NOT DEFINED

T-TOP (TT) HARNESS/ PANEL GENERAL LAYOUT

TOP VIEW

NOTE!
LAYOUT GIVES ONLY APPROXIMATE LOCATION OF PANEL AND HARNESS.

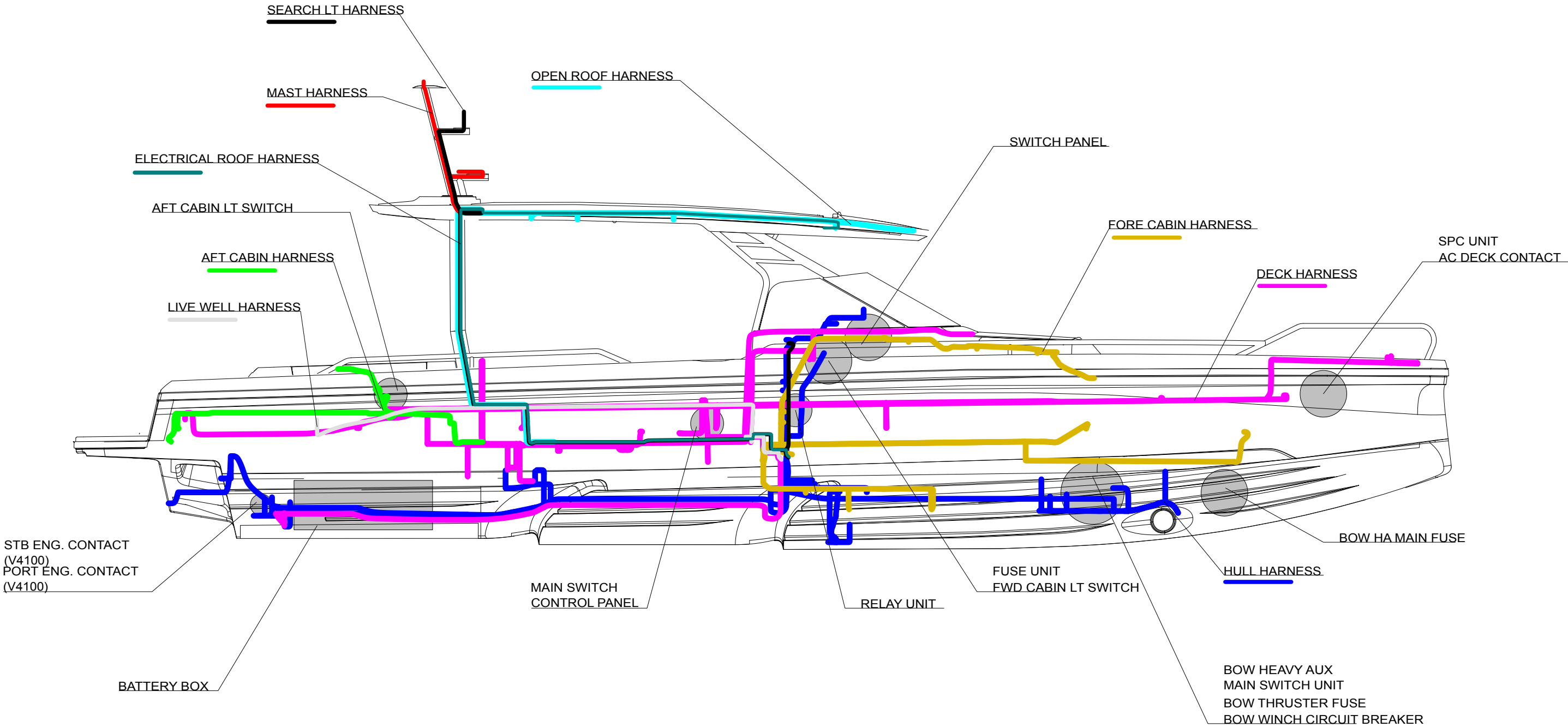


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat	37 MY20	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Boat model		HARNESS LAYOUT - T-TOP (TT)		HL	5 / 149
Date of modification	Modified by	Description	Project rev.	B			Title	Loc	Sheet	

T-TOP (TT) HARNESS/ PANEL GENERAL LAYOUT

SIDE VIEW

NOTE!
LAYOUT GIVES ONLY APPROXIMATE LOCATION OF PANEL AND HARNESS.

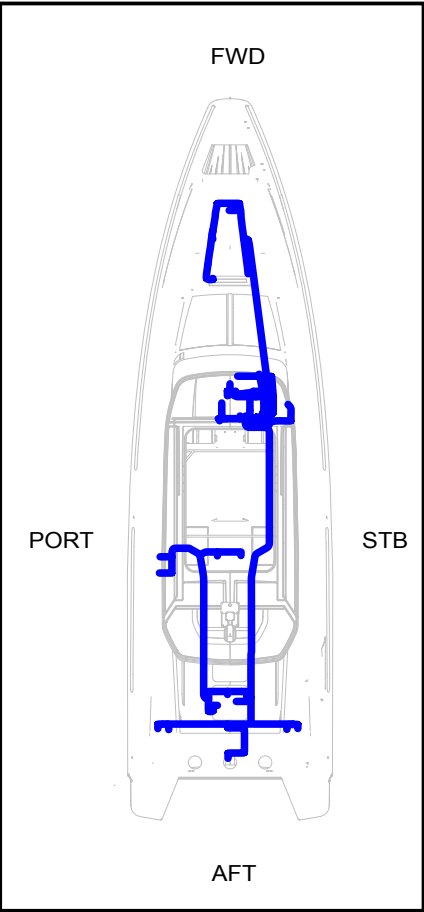
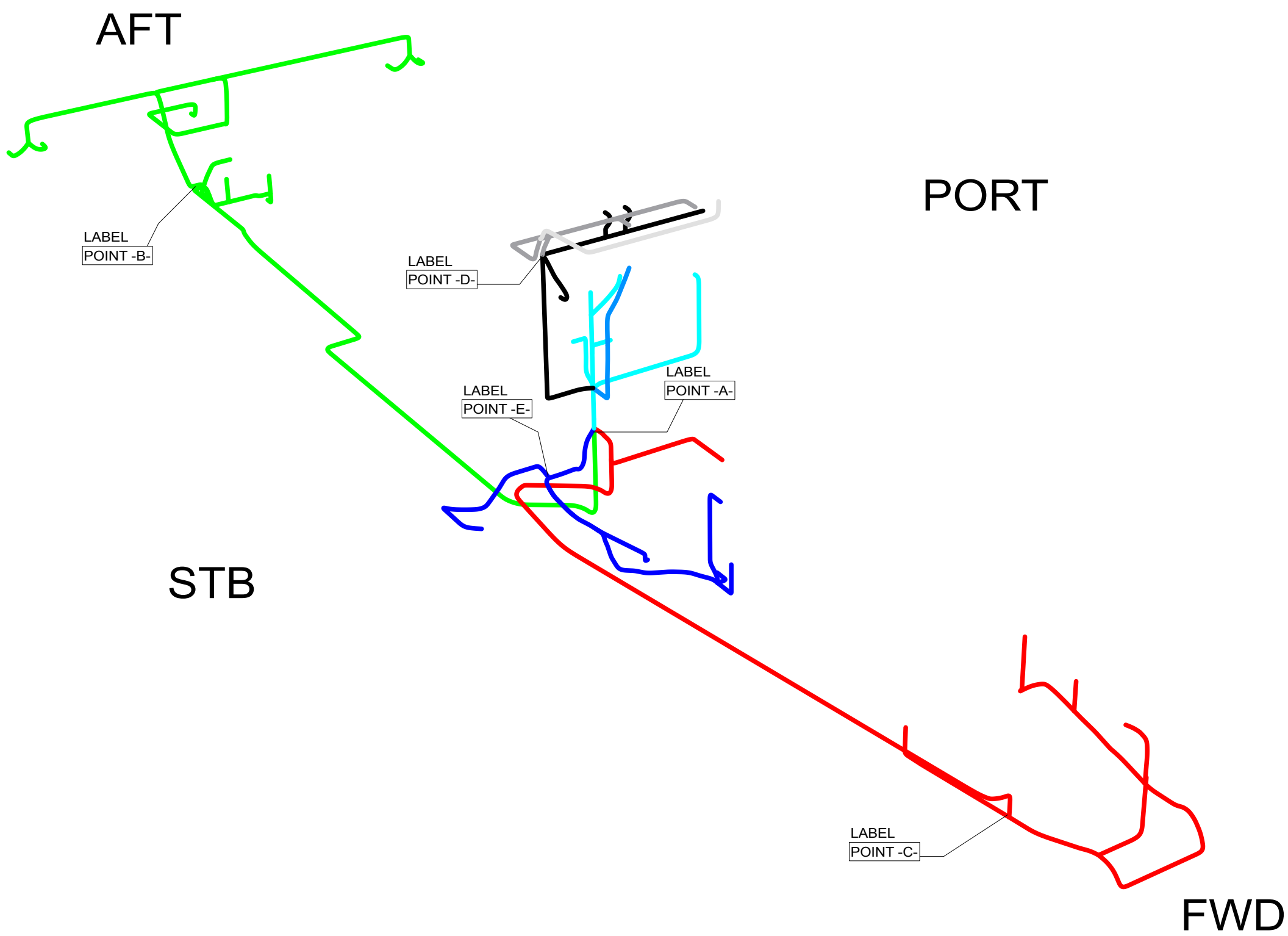


10.10.2019	PN	B4: NOT MODIFIED.	Date	11.7.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		HARNESS LAYOUT -		HL	6 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		T-TOP (TT)		Loc	
1		2		4		6		7		8

NAVIX
designed solutions

Copyright by

HULL HARNESS - LAYOUT



10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code		Product code	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		HULL HARNESS - LAYOUT		HL	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc	
1		2		4		6		7		8

NAVIX

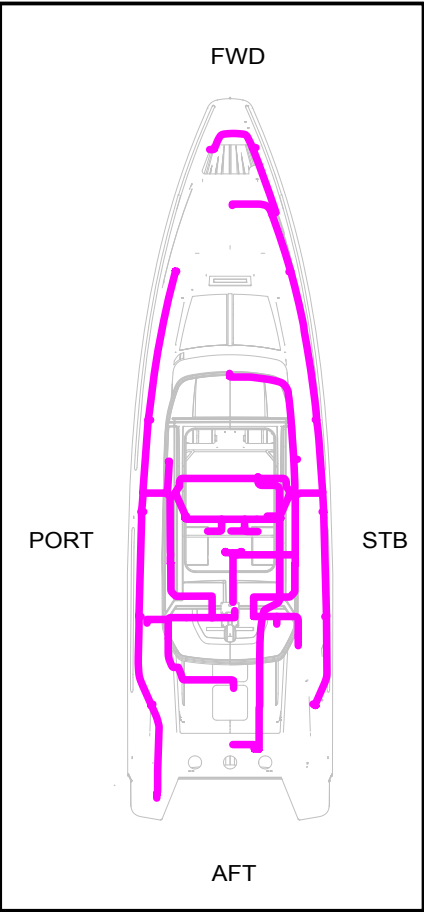
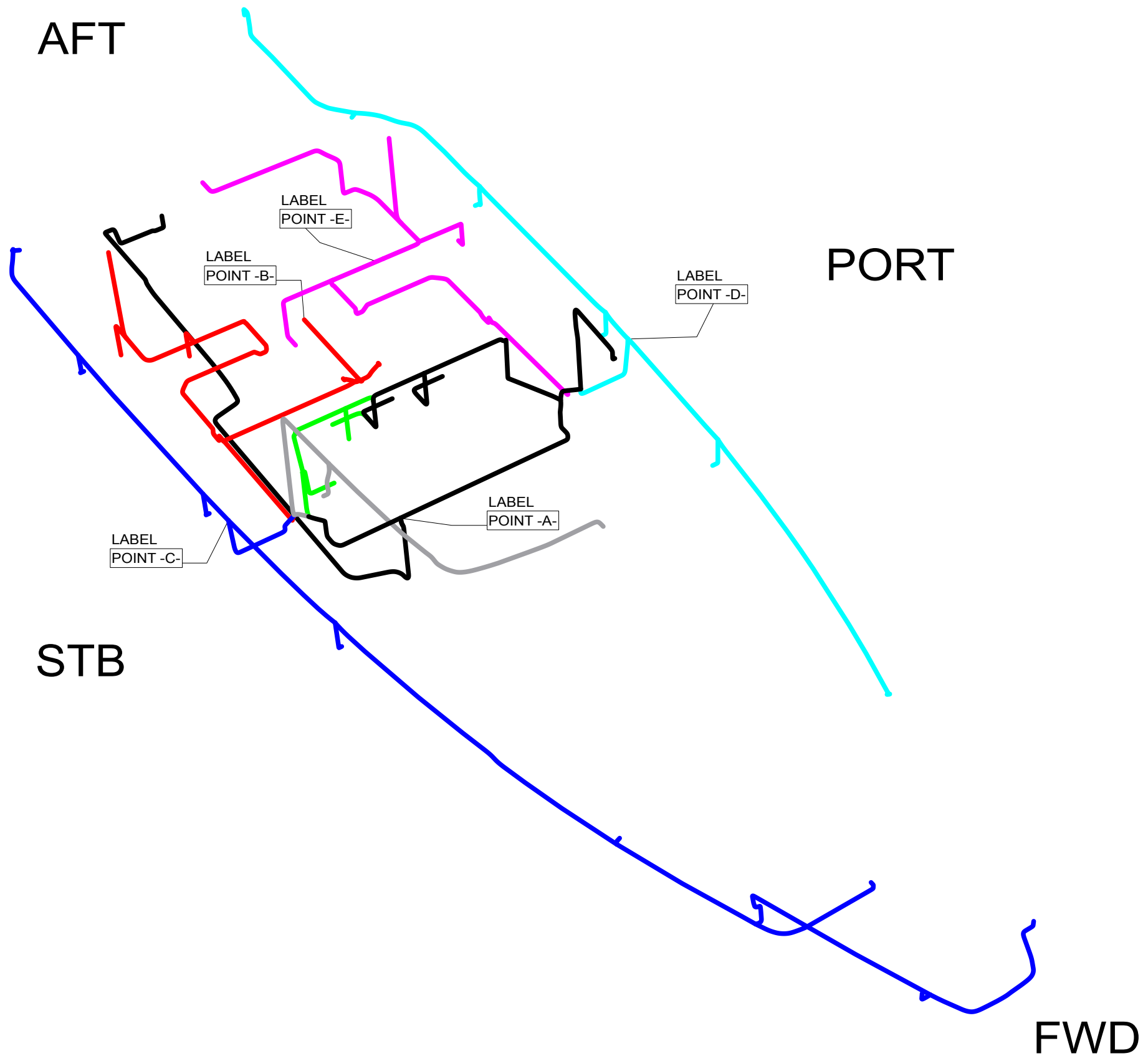
designed solutions

Copyright by

7 / 149

Sheet

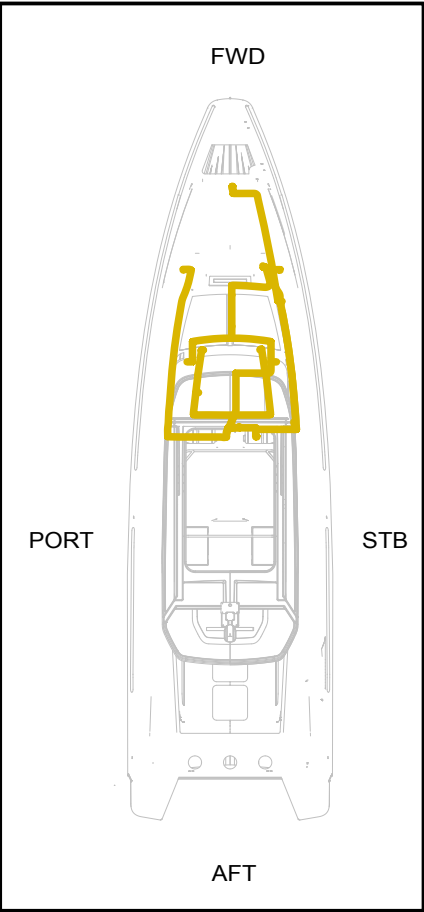
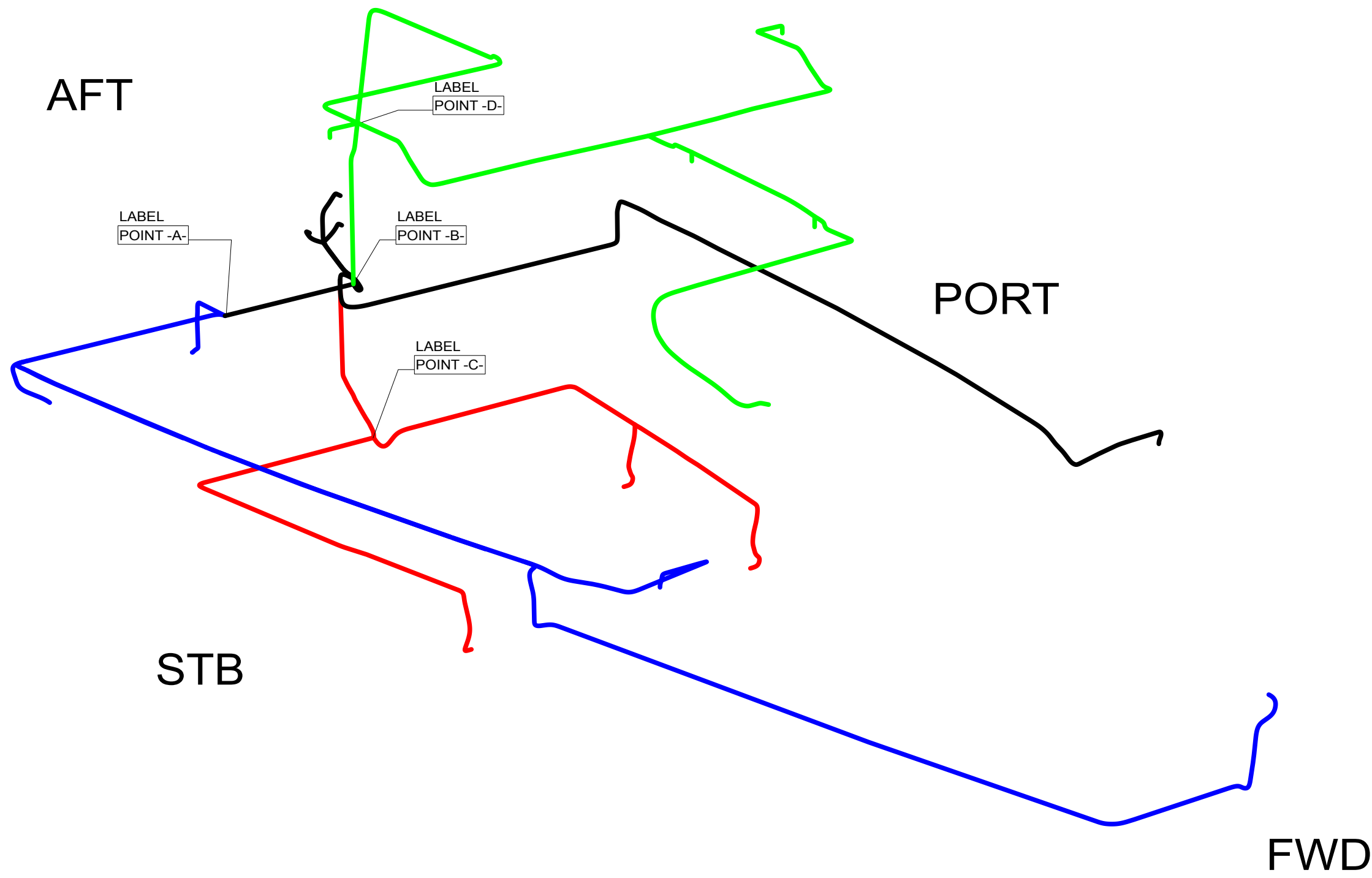
DECK HARNESS - LAYOUT



10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	DECK HARNESS - LAYOUT	HL		8 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc	Sheet	



FORE CABIN HARNESS - LAYOUT

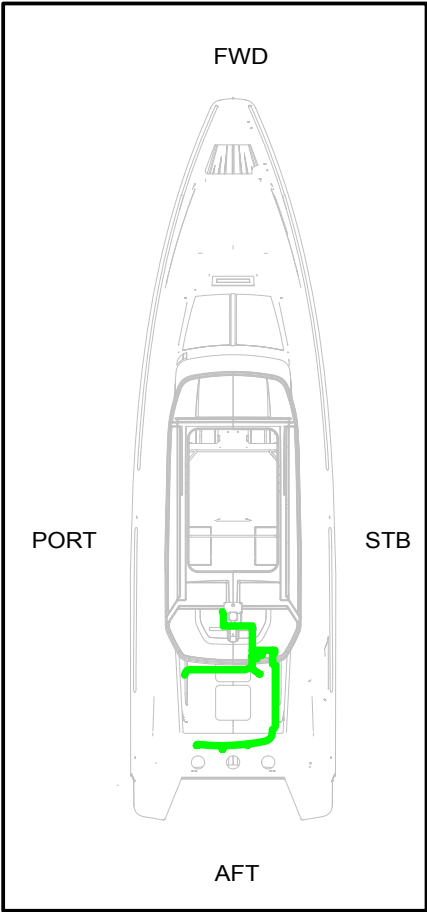
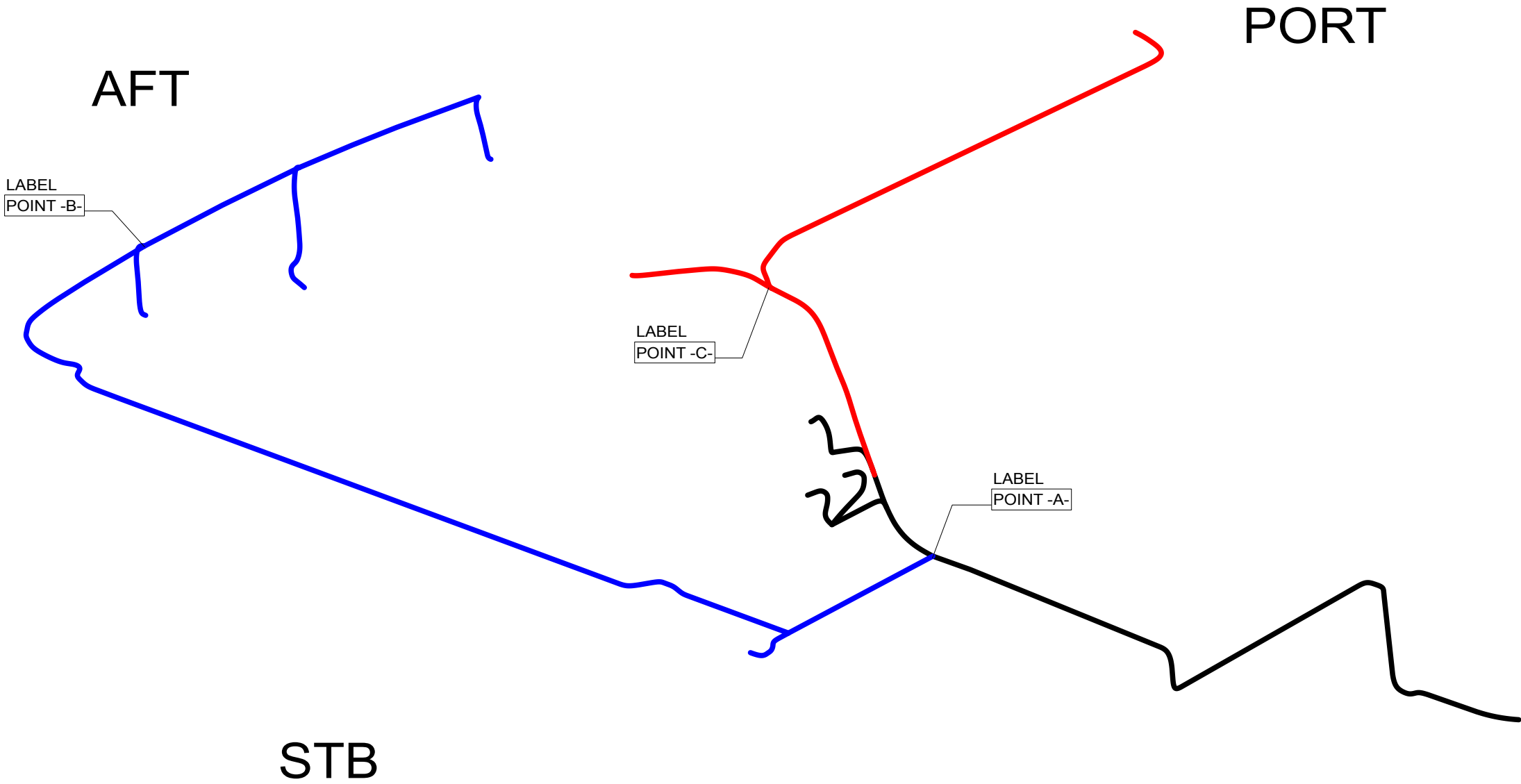


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20		FORE CABIN HARNESS		TIL		9 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		LAYOUT		Loc			
Sheet													



Copyright by

AFT CABIN HARNESS - LAYOUT



10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	AFT CABIN HARNESS - LAYOUT	HL	10 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc

NAVIX
designed solutions

Copyright by

(OPEN/ CABIN) ROOF HARNESS - LAYOUT

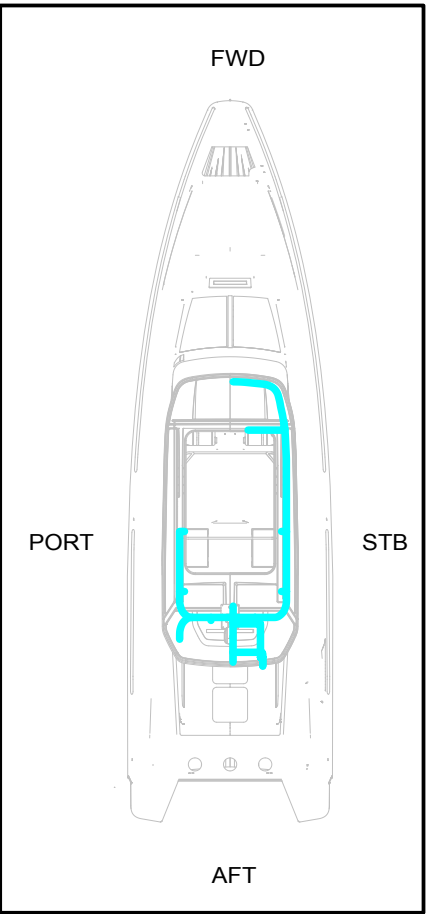
AFT

PORT

STB

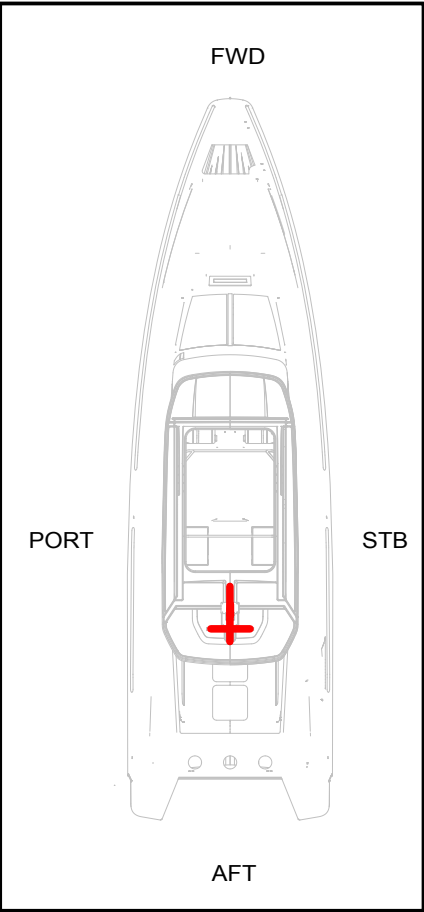
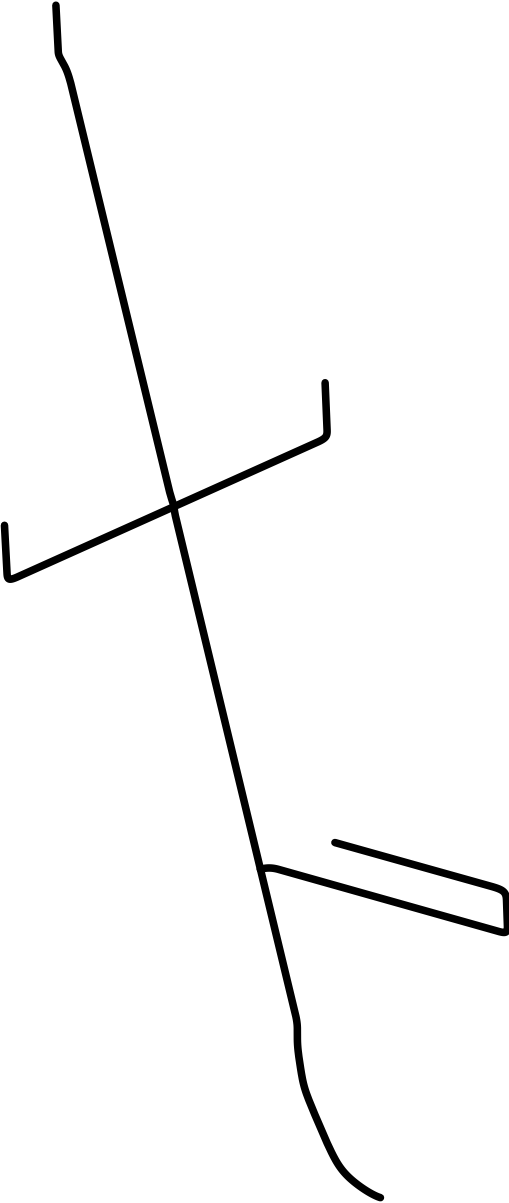
FWD

LABEL
POINT -B-
LABEL
POINT -C-
LABEL
POINT -A-



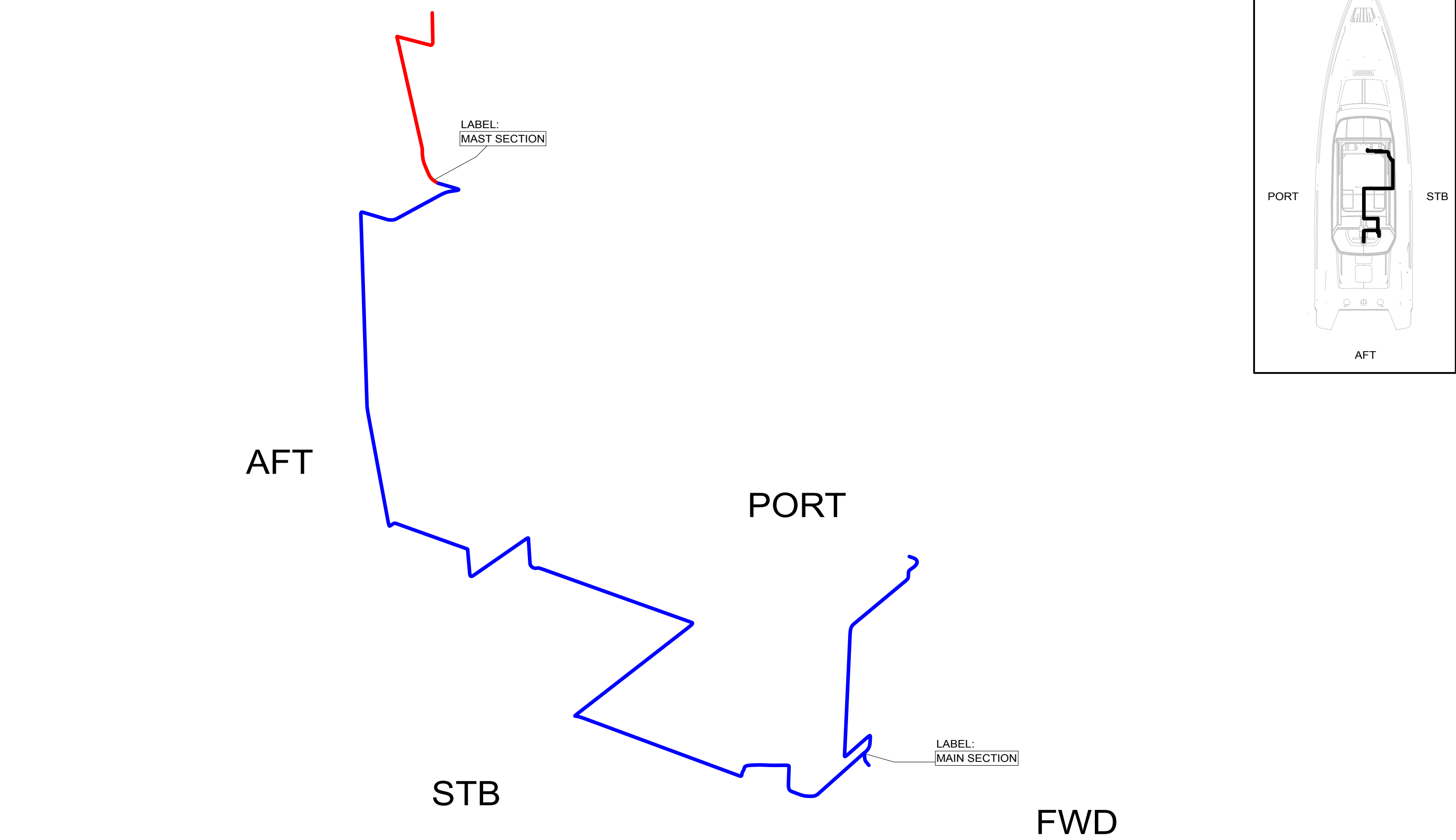
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	ROOF HARNESS - LAYOUT		HL		11/ 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc				

MAST HARNESS - LAYOUT



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	MAST HARNESS - LAYOUT	HL	12 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		

SEARCH LT HARNESS - LAYOUT



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat	37 MY20	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Copyright by		SEARCH LT HARNESS LAYOUT		HL		13 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	Title	Loc		Sheet	

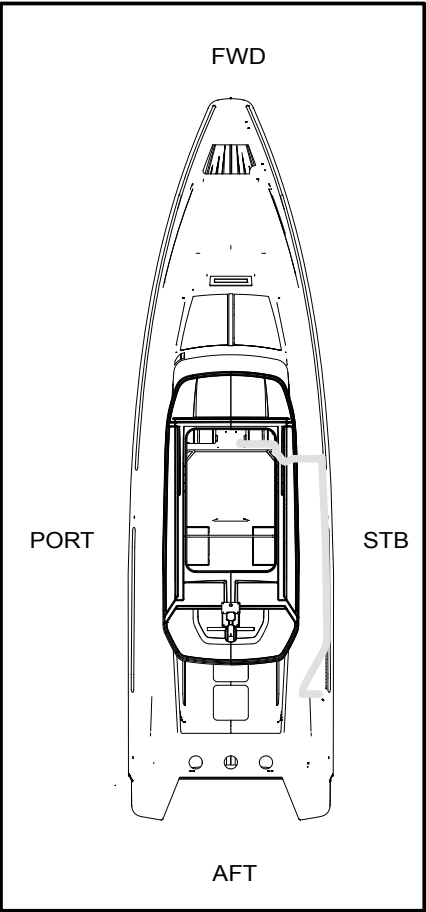
LIVE WELL HARNESS - LAYOUT

AFT

PORT

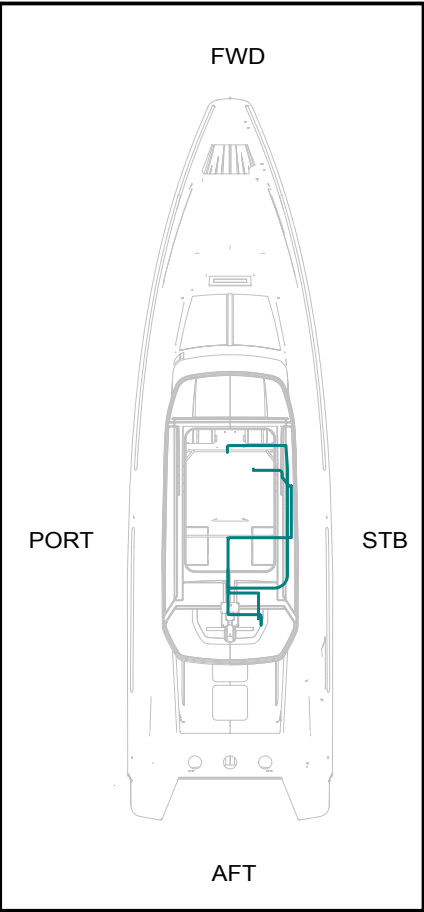
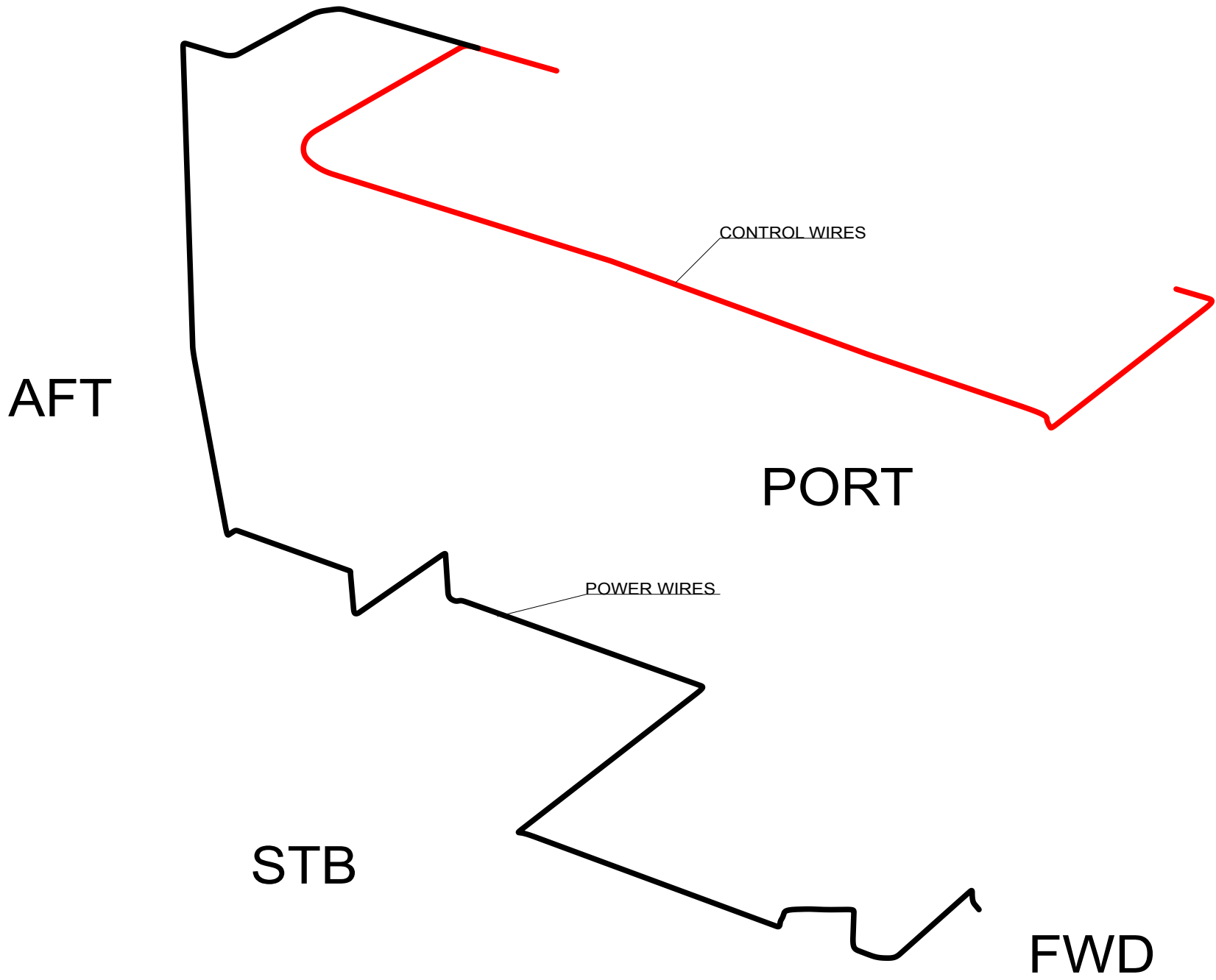
STB

FWD



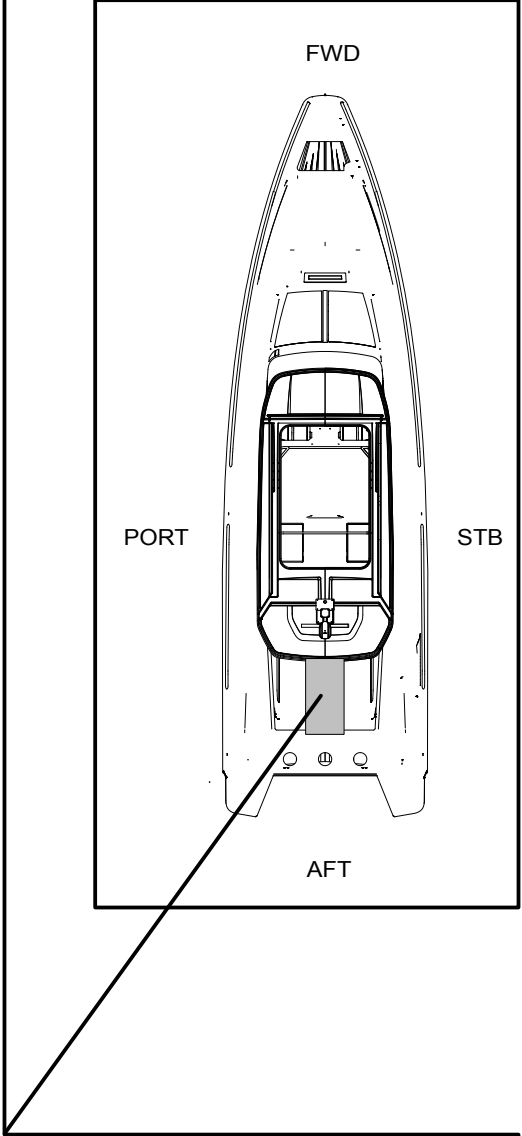
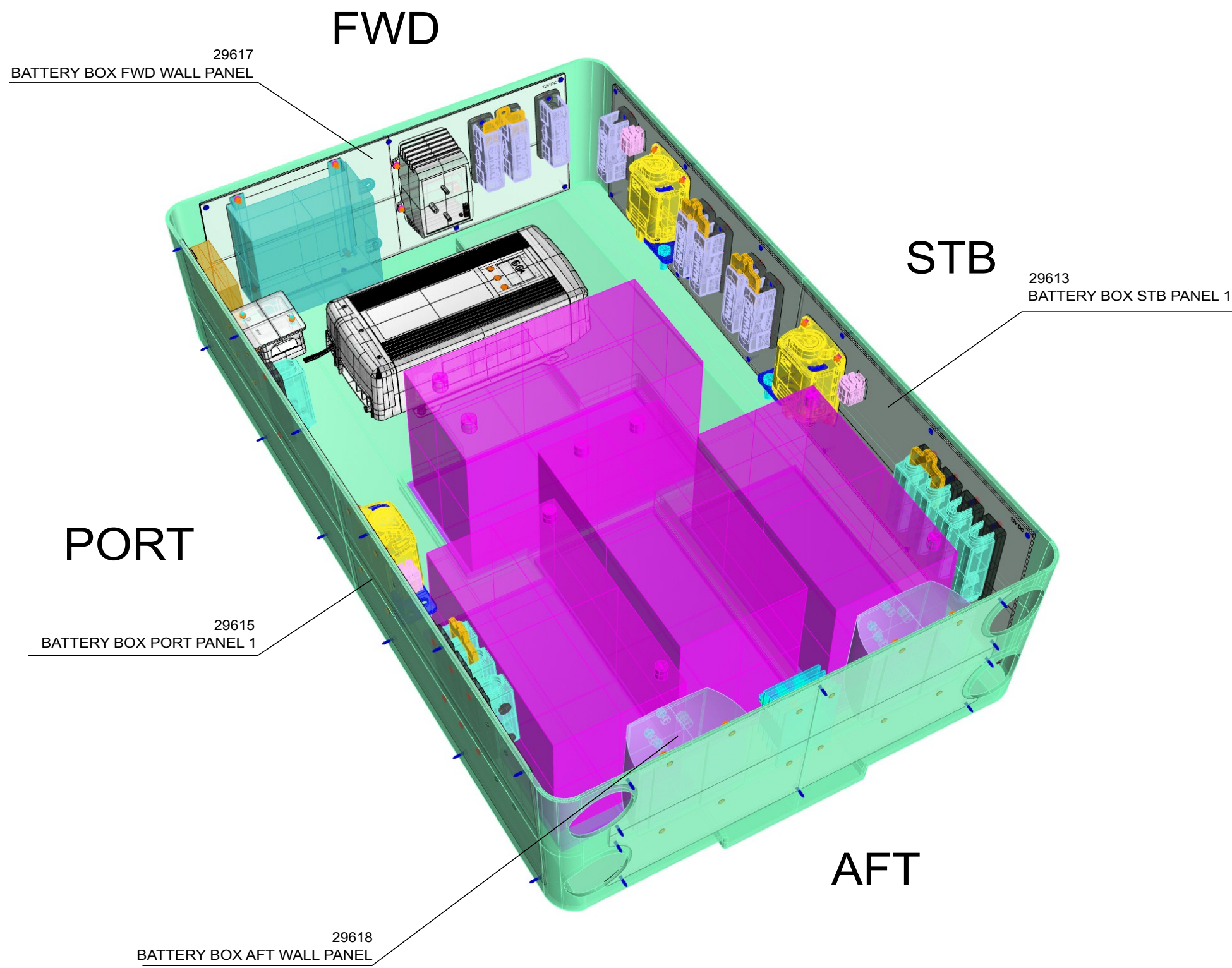
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code		Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	LIVE WELL HARNESS - LAYOUT	HL		14 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title	Loc	

ELECTRICAL ROOF HARNESS - LAYOUT

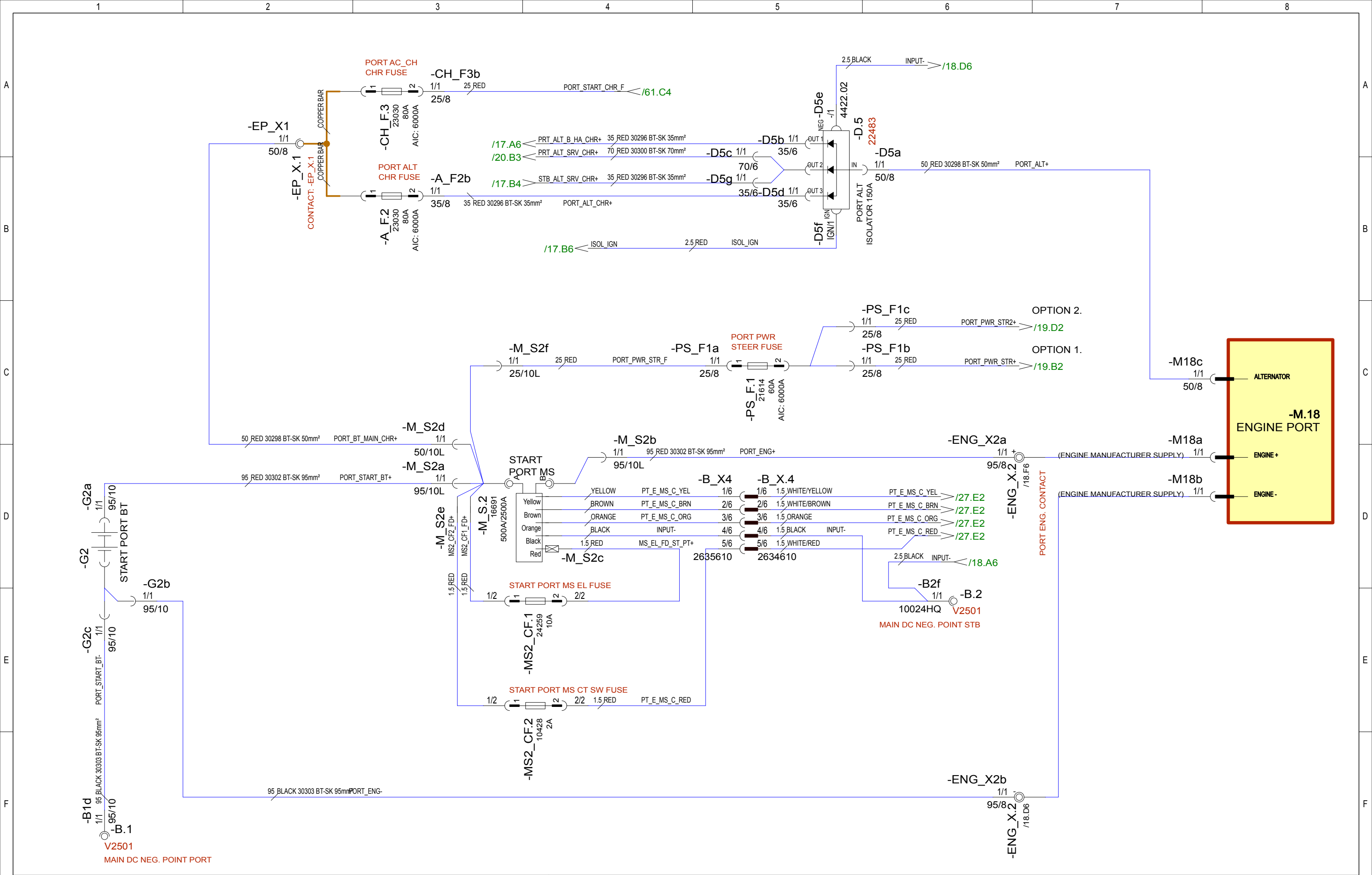


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.7.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	ELECTRICAL ROOF HARNESS - LAYOUT	HL	15 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc

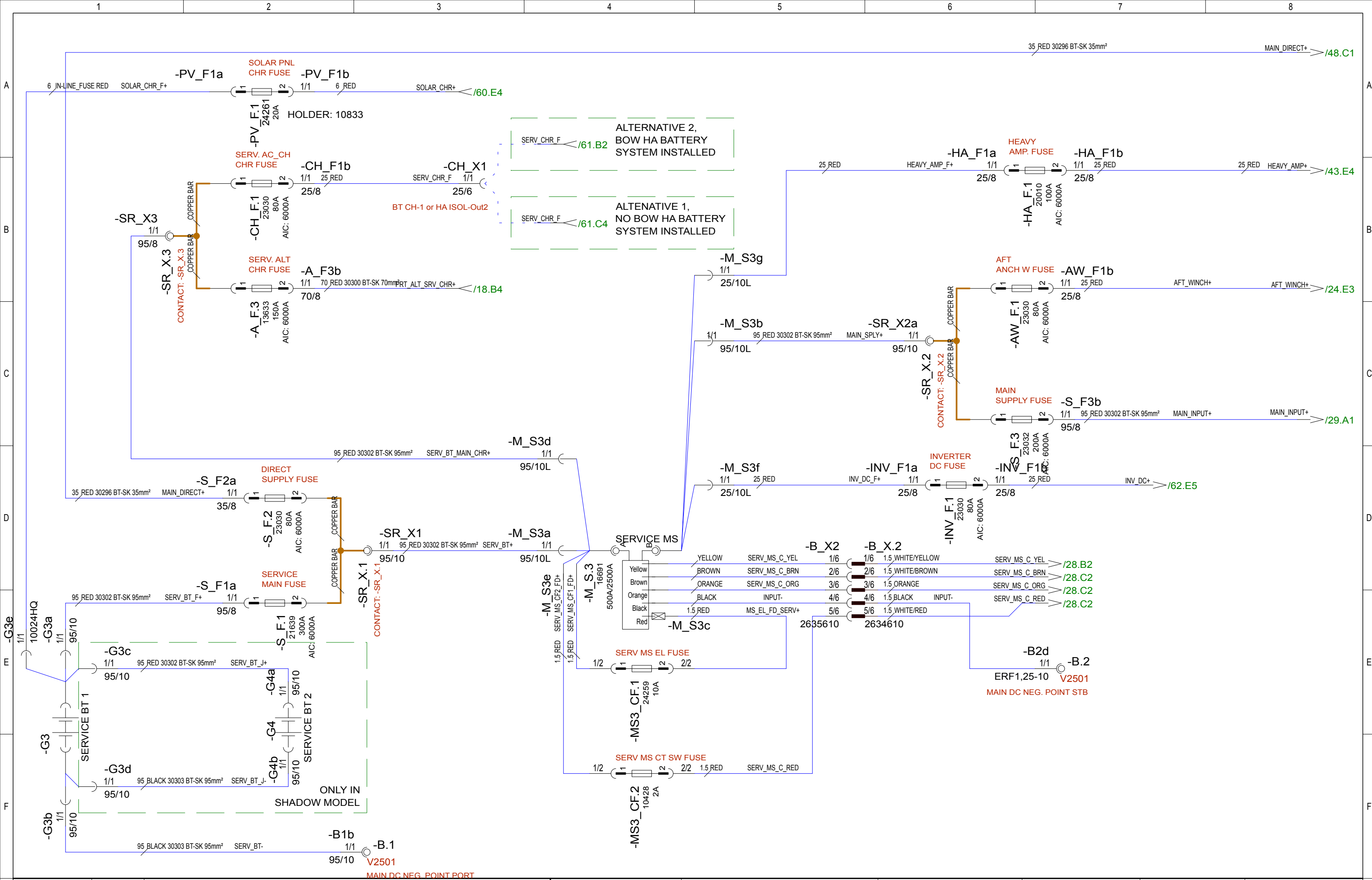
BATTERY BOX PANEL LAYOUT



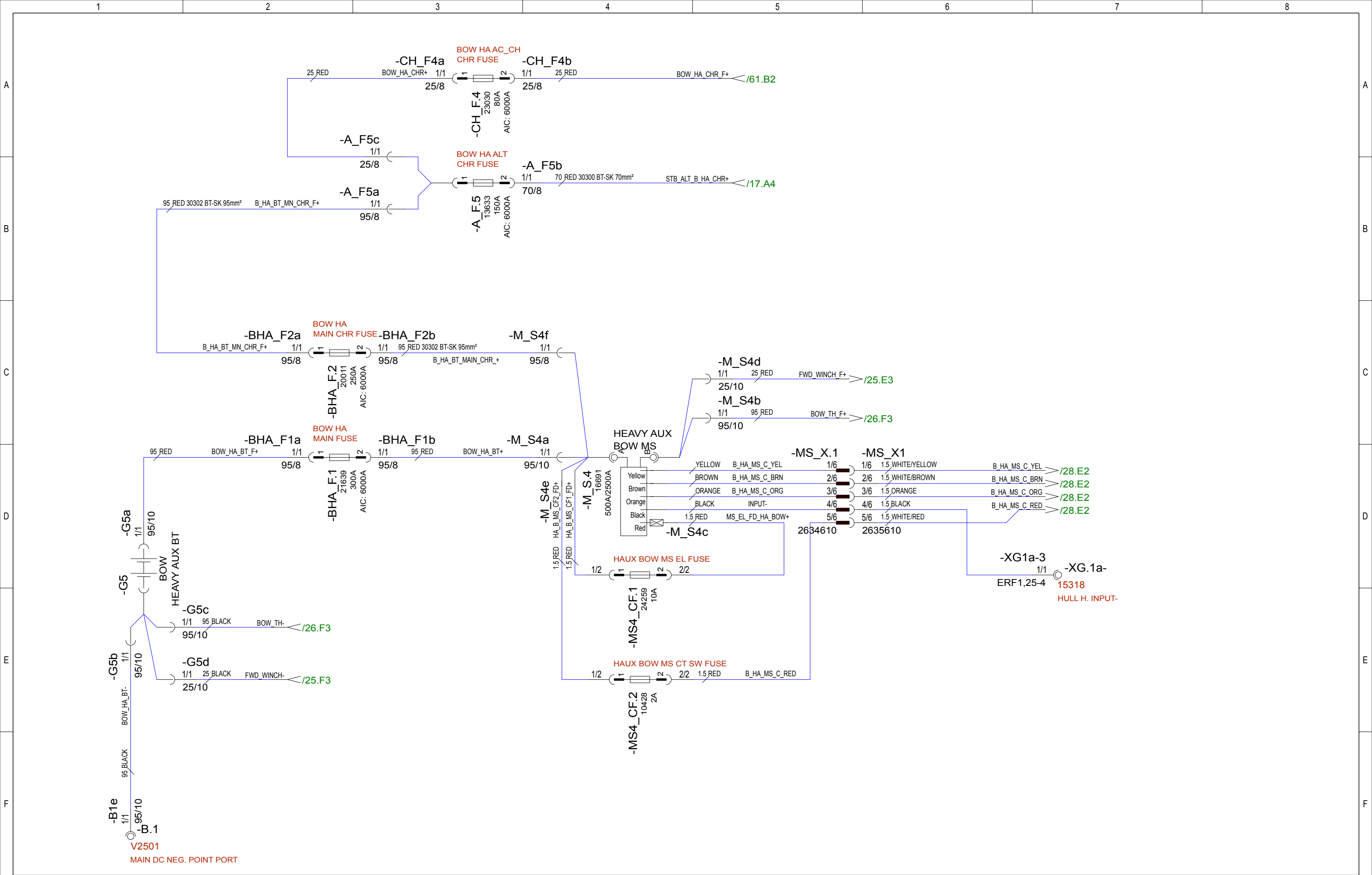
10.10.2019	PN	B4: SEVERAL MODIFICATIONS FOR PANELS.			Date	11.7.2019	 Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.			Sheet rev.	5		37 MY20		BATTERY BOX - PANEL LAYOUT		HL		16 / 149 Sheet	
Date of modification	Modified by	Description			Project rev.	B		Boat model				Title			
1		2		3		4		5		6		7		8	



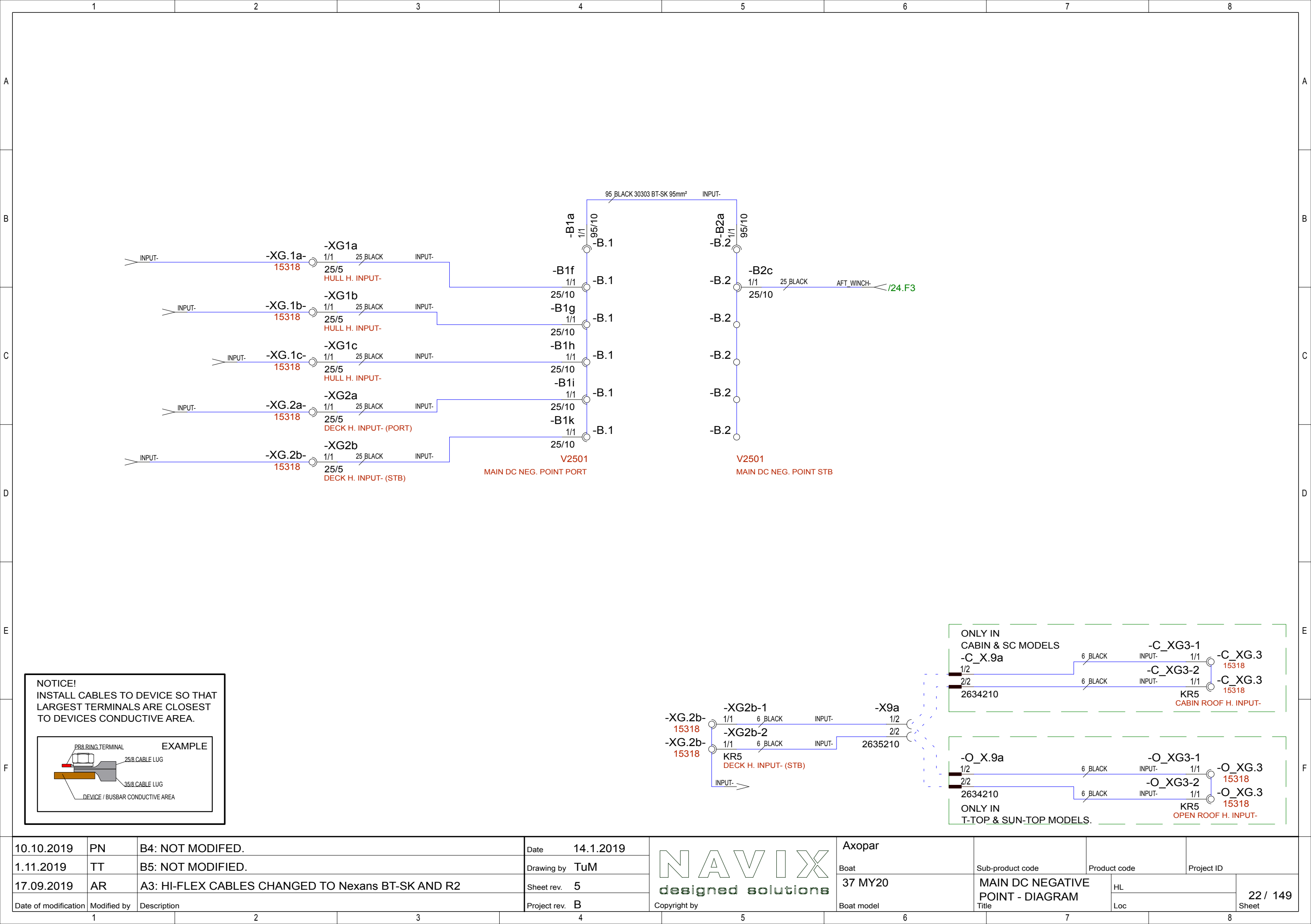
10.10.2019	PN	B4: ADDED POWER CABLE FOR STEERING PUMP OPTION 2.	Date	14.1.2019	 Copyright by	Axopar	Sub-product code	Product code	Project ID						
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat									
17.09.2019	AR	A3: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Sheet rev.	5		37 MY20	ENGINE PORT - DIAGRAM	HL	18 / 149						
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc		Sheet					
1		2		3		4		5		6		7		8	



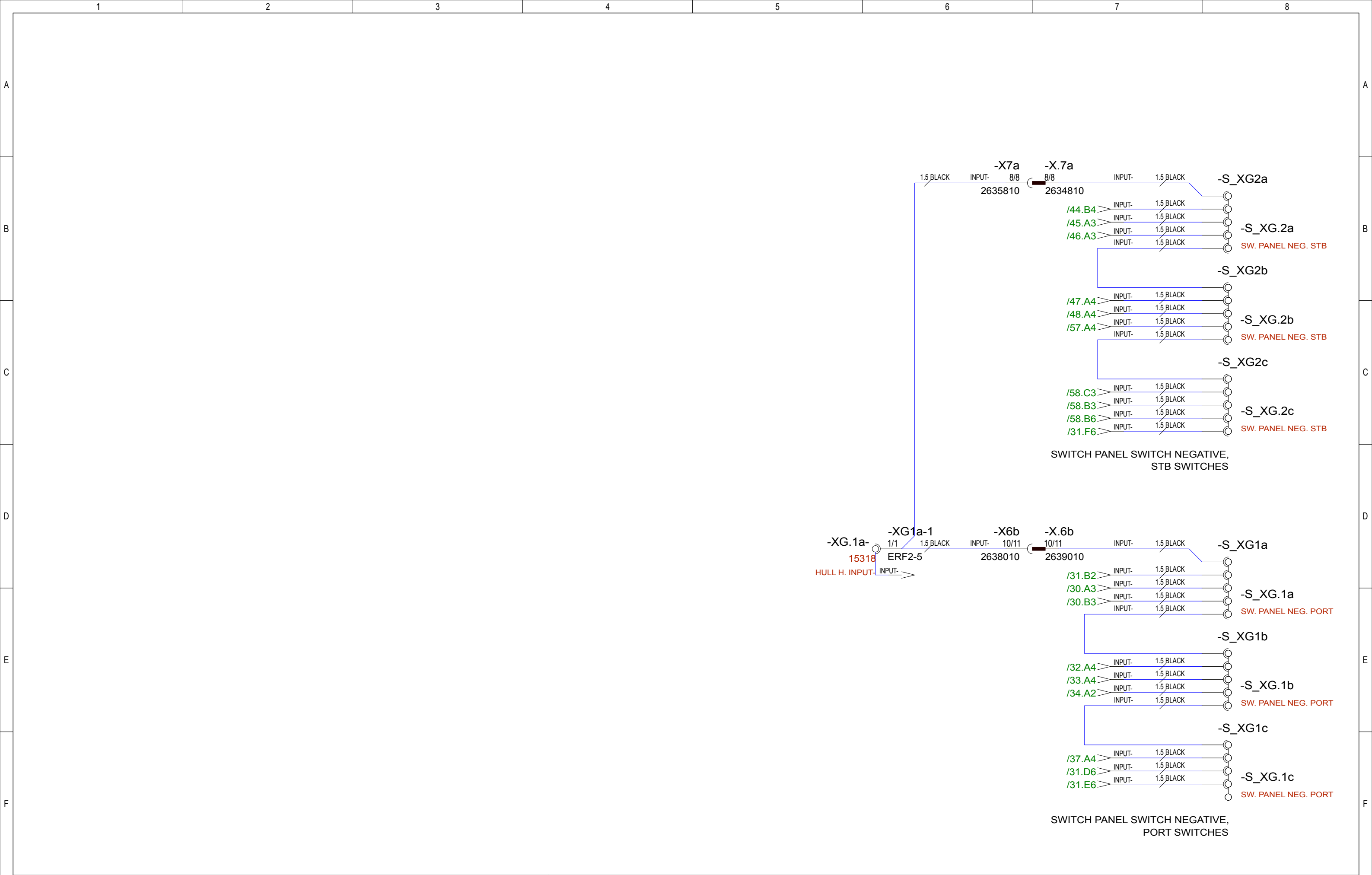
10.10.2019	PN	B4: REMOVED -SB_X.2, -SB_X.3, -SB_X.4 & -PB_X.3.			Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code	Product code		Project ID			
17.09.2019	AR	A3: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2			Sheet rev.	5		37 MY20	SERVICE - DIAGRAM		HL		20 / 149		
Date of modification	Modified by	Description			Project rev.	B		Boat model			Loc			Sheet	
1		2		3		4		5		6		7		8	



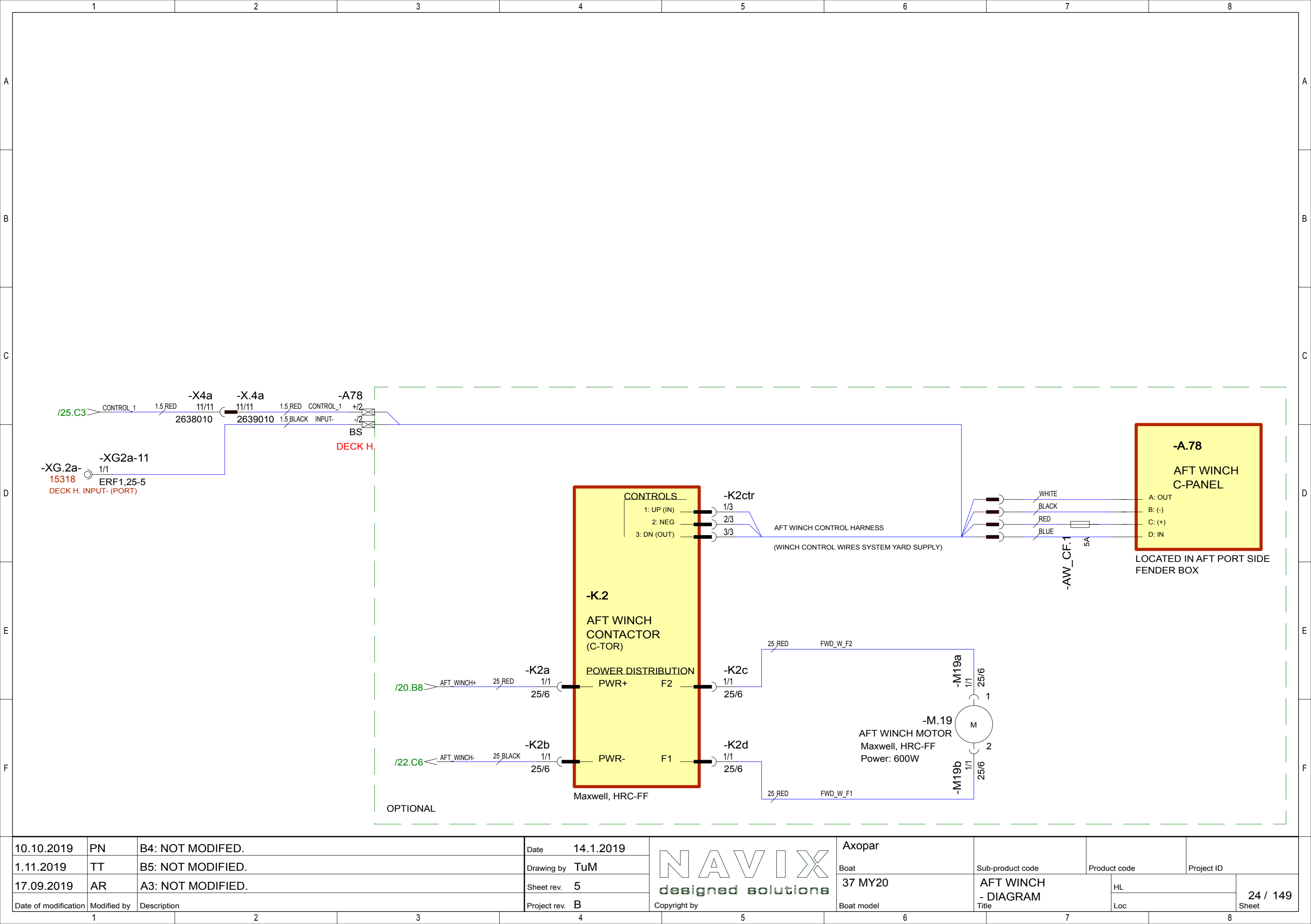
10.10.2019	PN	B4: CHARGER CABLES CIRCUIT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Sheet rev.	5	Copyright by		37 MY20	HEAVY AUX BOW - DIAGRAM		HL	21/ 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	Title		Loc	Sheet	



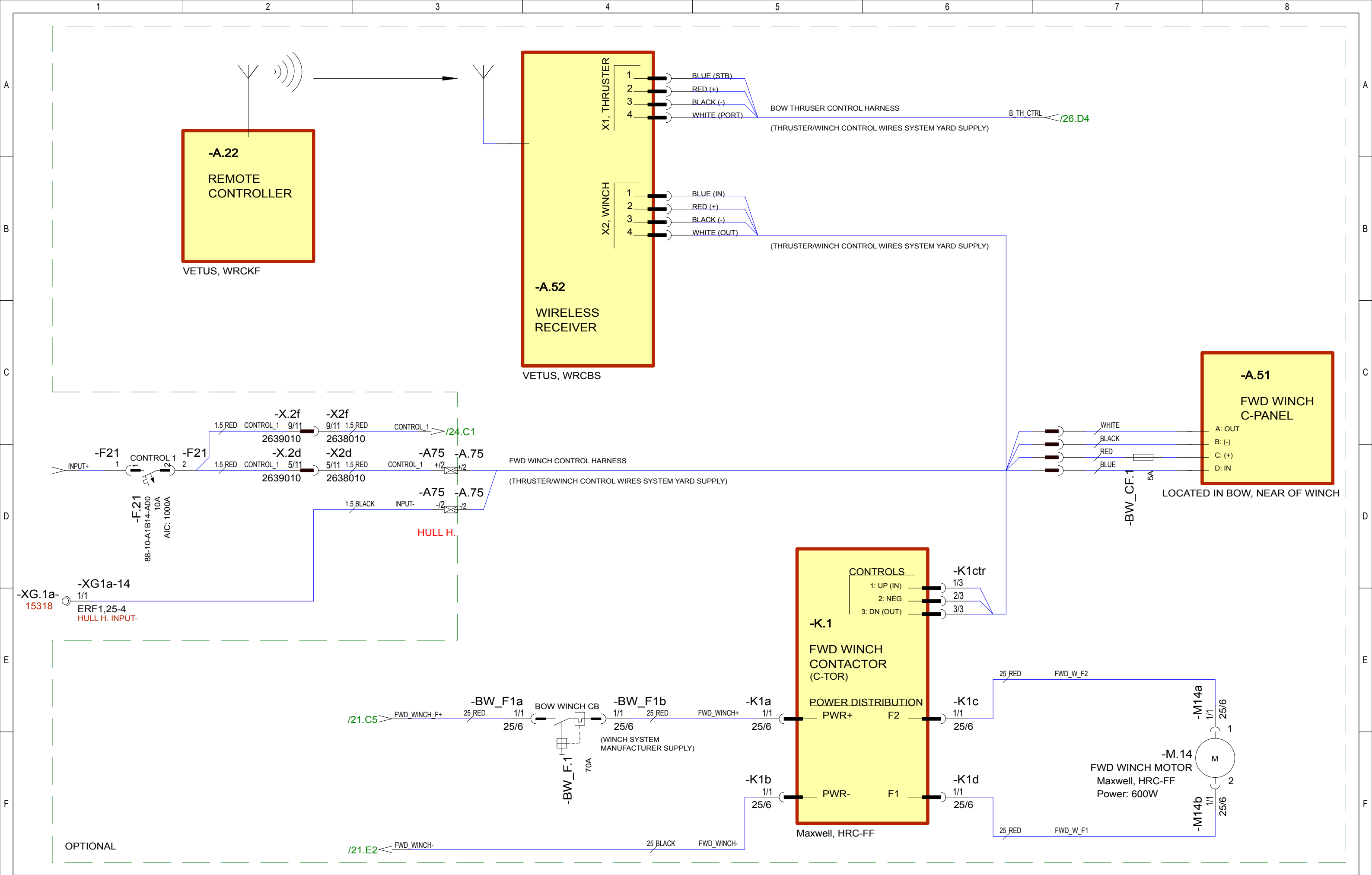
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Sheet rev.	5	37 MY20		MAIN DC NEGATIVE POINT - DIAGRAM		HL	22 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc	



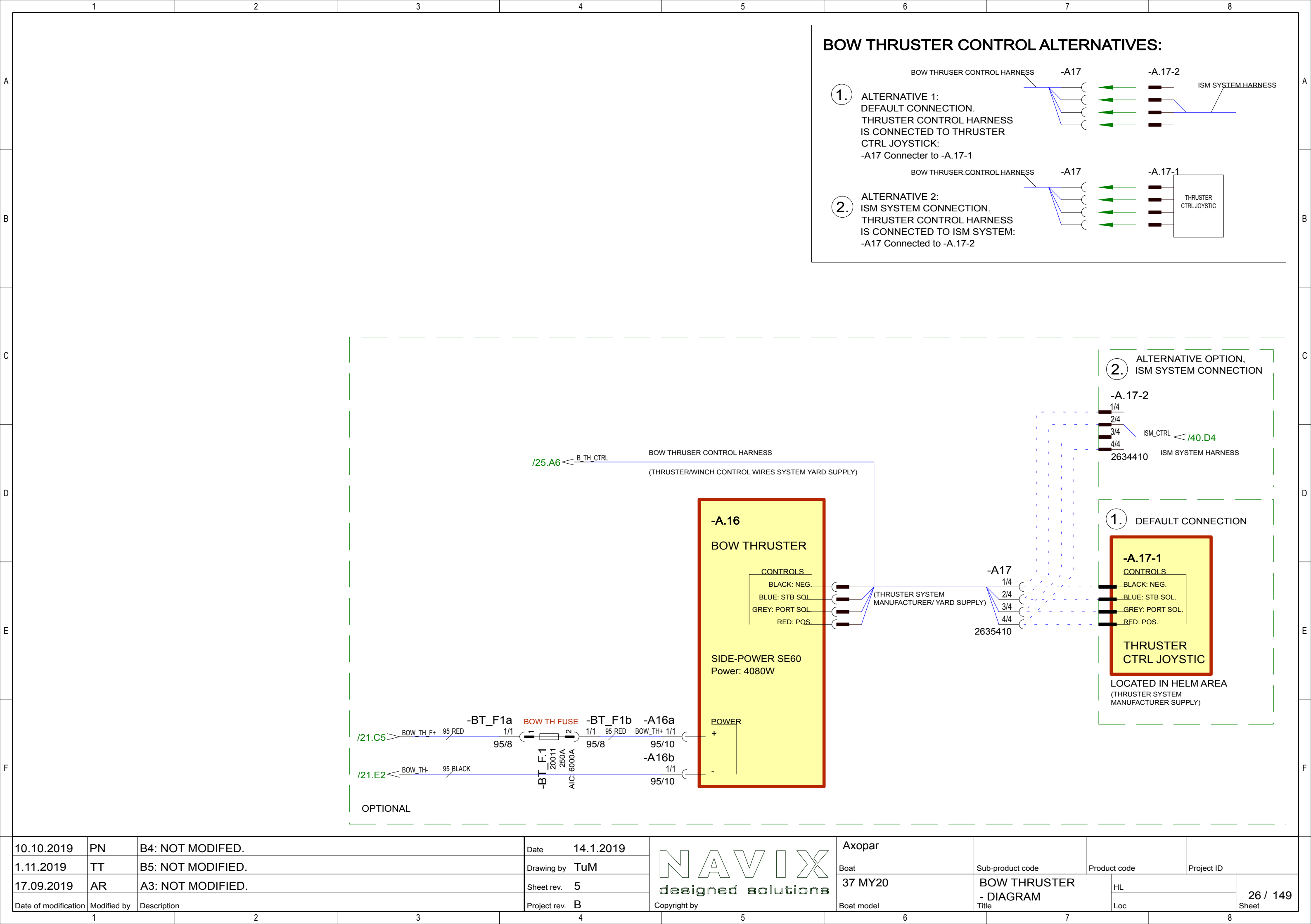
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	SWITCH PANEL INPUT- - DIAGRAM	HL		23 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc	Sheet	



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Copyright by		37 MY20	AFT WINCH - DIAGRAM		HL	24 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	Title		Loc	Sheet	



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar									
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID						
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	FWD WINCH/ WIRELESS		FIL		25 / 149				
Date of modification	Modified by	Description	Project rev.	B		Boat model	REMOTE - DIAGRAM		Loc		Sheet				
1		2		3		4		5		6		7		8	

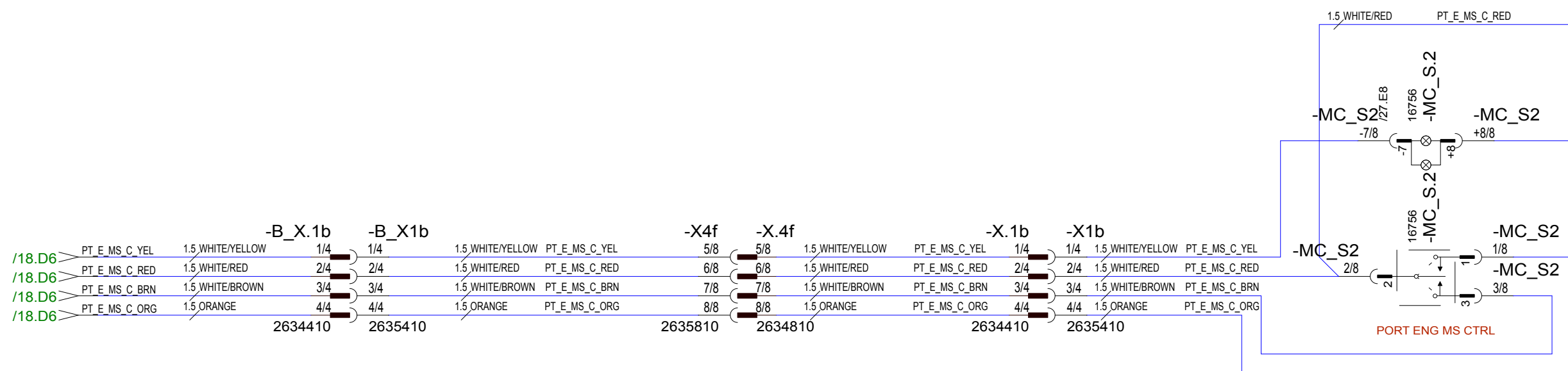
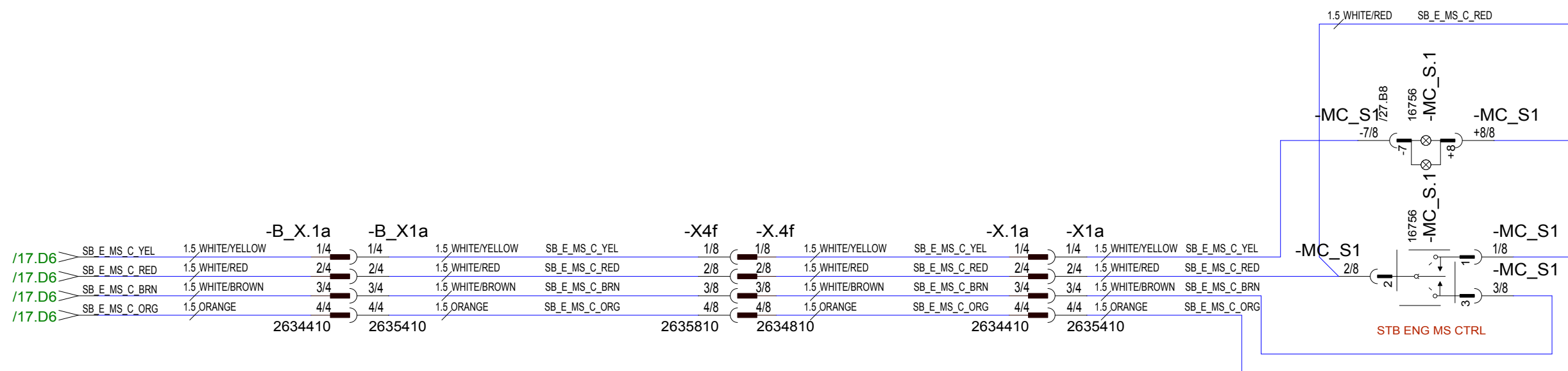


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5
Date of modification	Modified by	Description	Project rev.	B

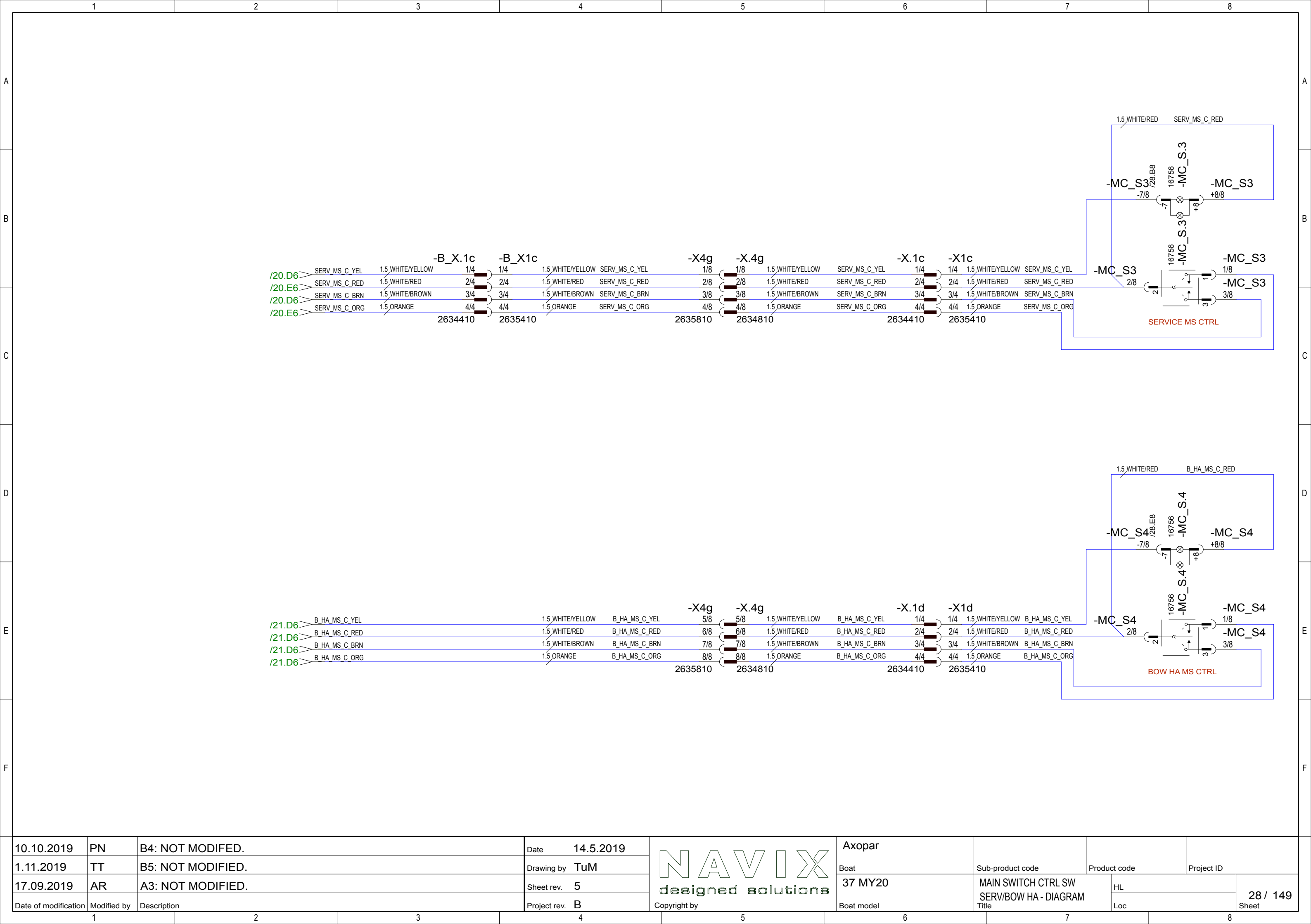
NAVIX
designed solutions

Copyright by

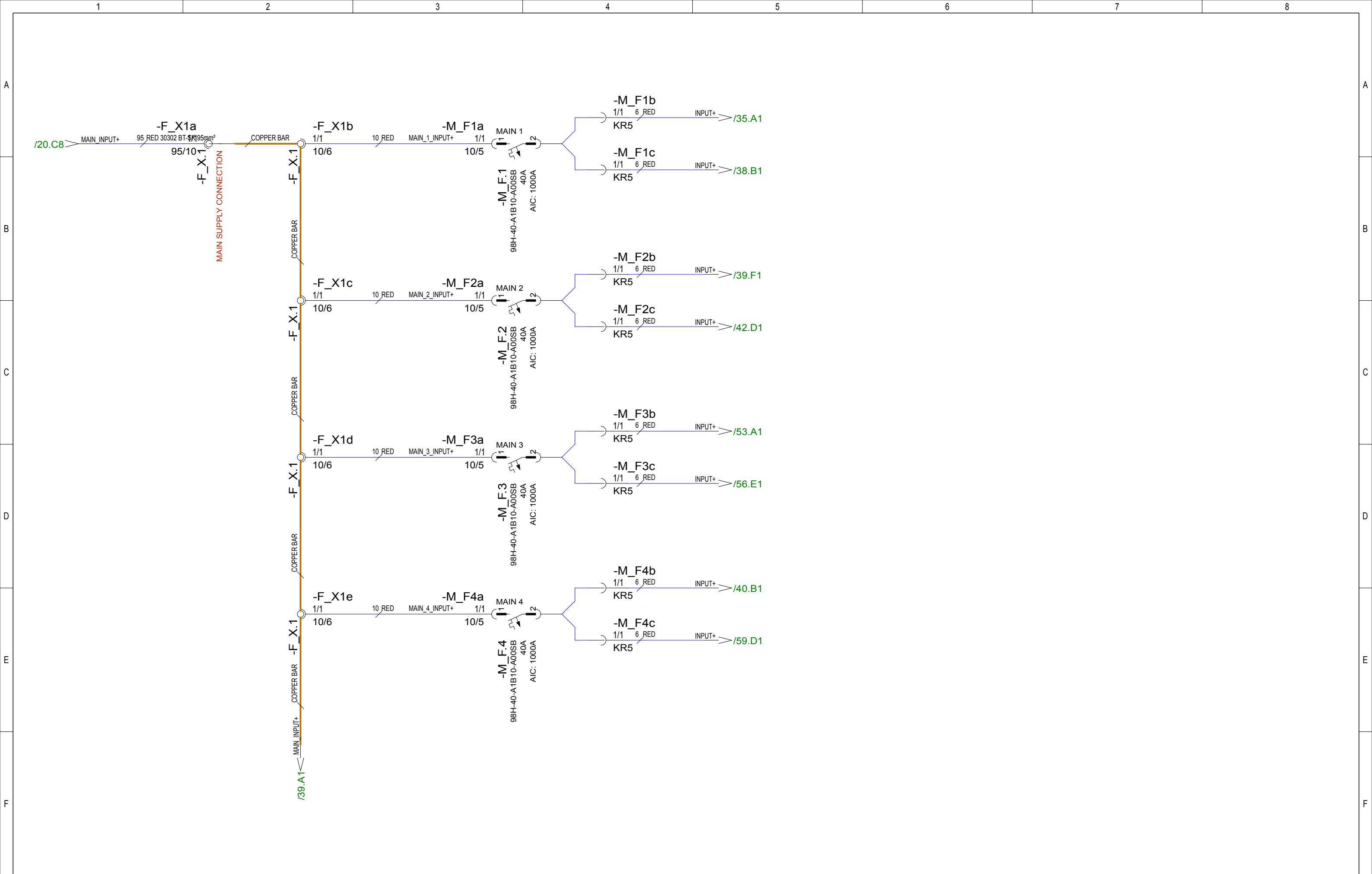
Axopar				
Boat	37 MY20	Sub-product code	Product code	Project ID
Boat model		BOW THRUSTER - DIAGRAM	HL	26 / 149
		Title	Loc	Sheet



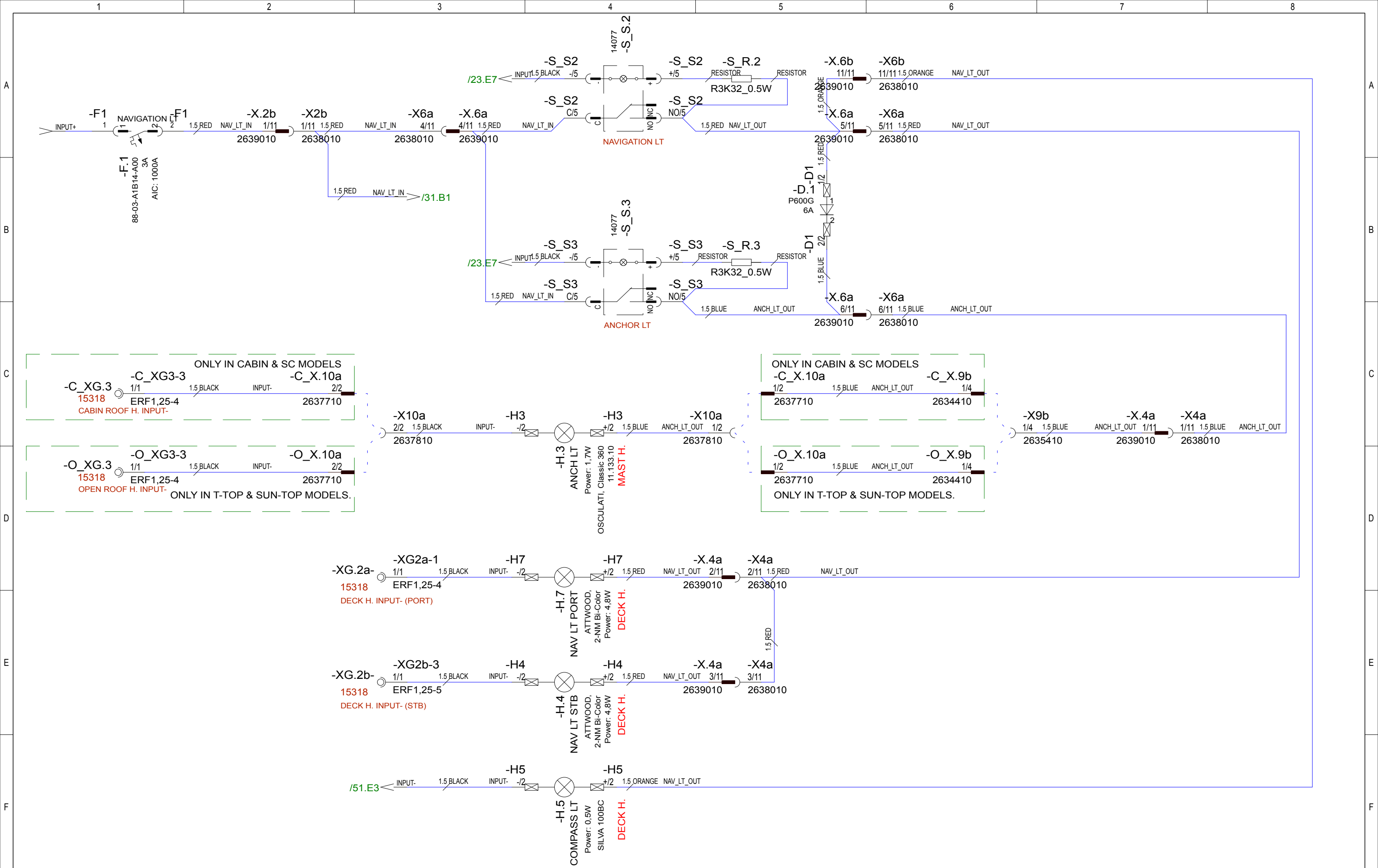
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	MAIN SWITCH CTRL SW	HL	27 / 149	Sheet
Date of modification	Modified by	Description	Project rev.	B		Boat model	START STB/PORT - DIAGRAM	Loc		



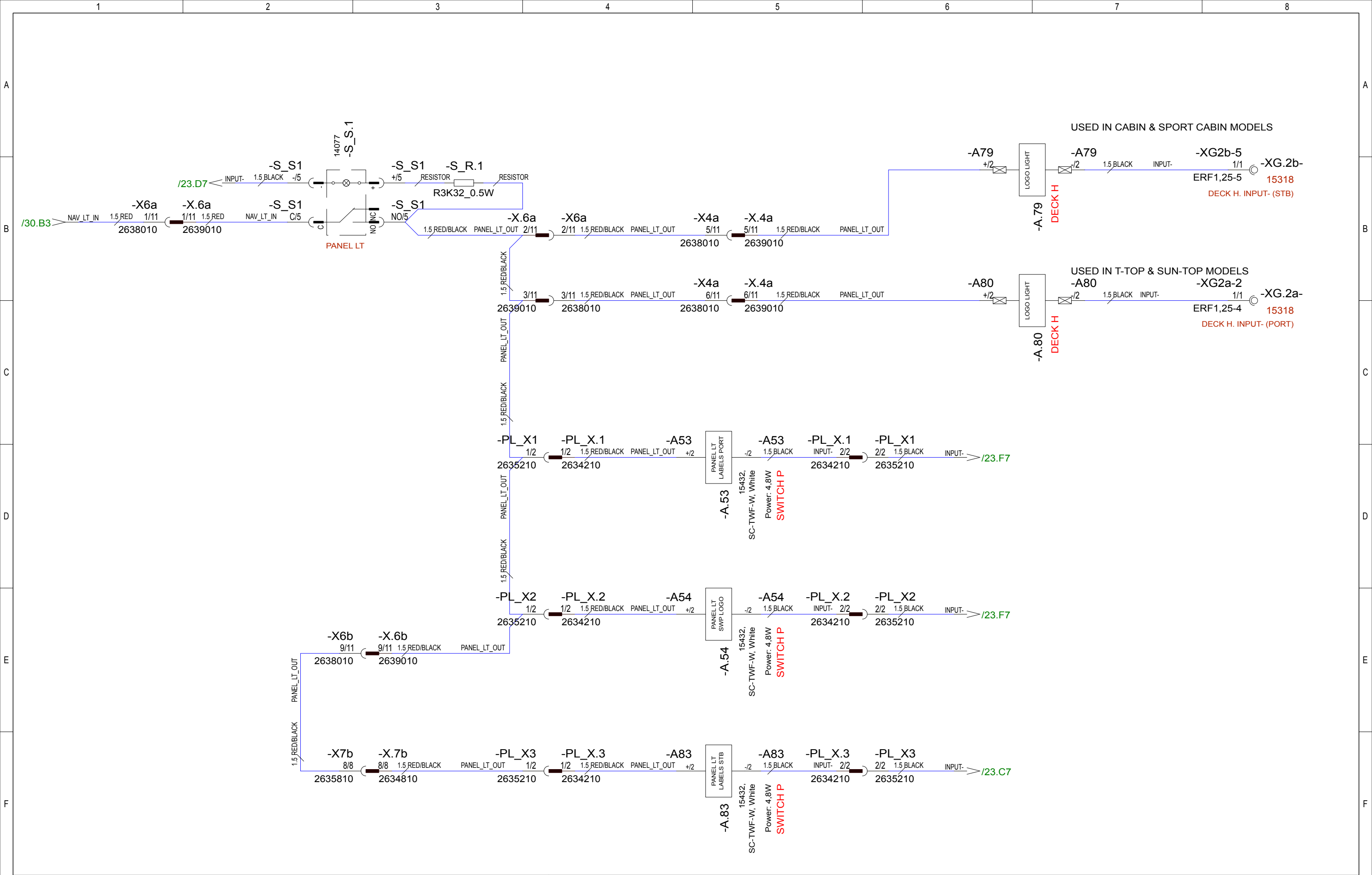
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.5.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		MAIN SWITCH CTRL SW		HL	28 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		SERV/BOW HA - DIAGRAM		Loc	



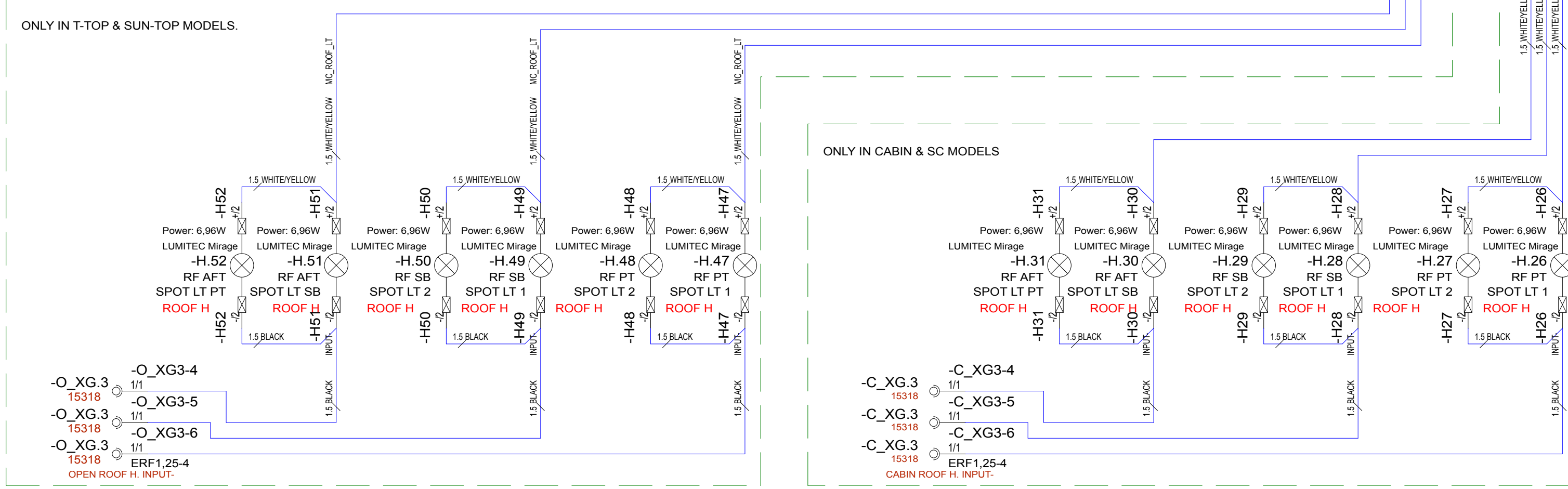
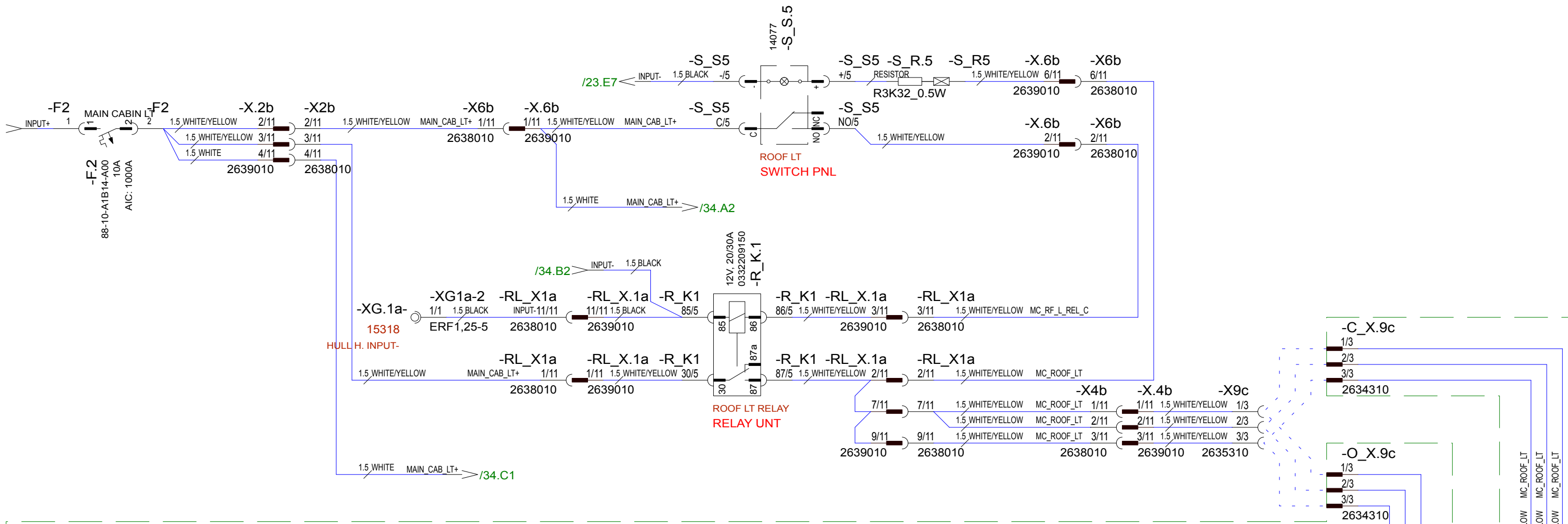
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat	37 MY20	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	MAIN SUPPLY - DIAGRAM		HL		29 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Loc		Sheet	



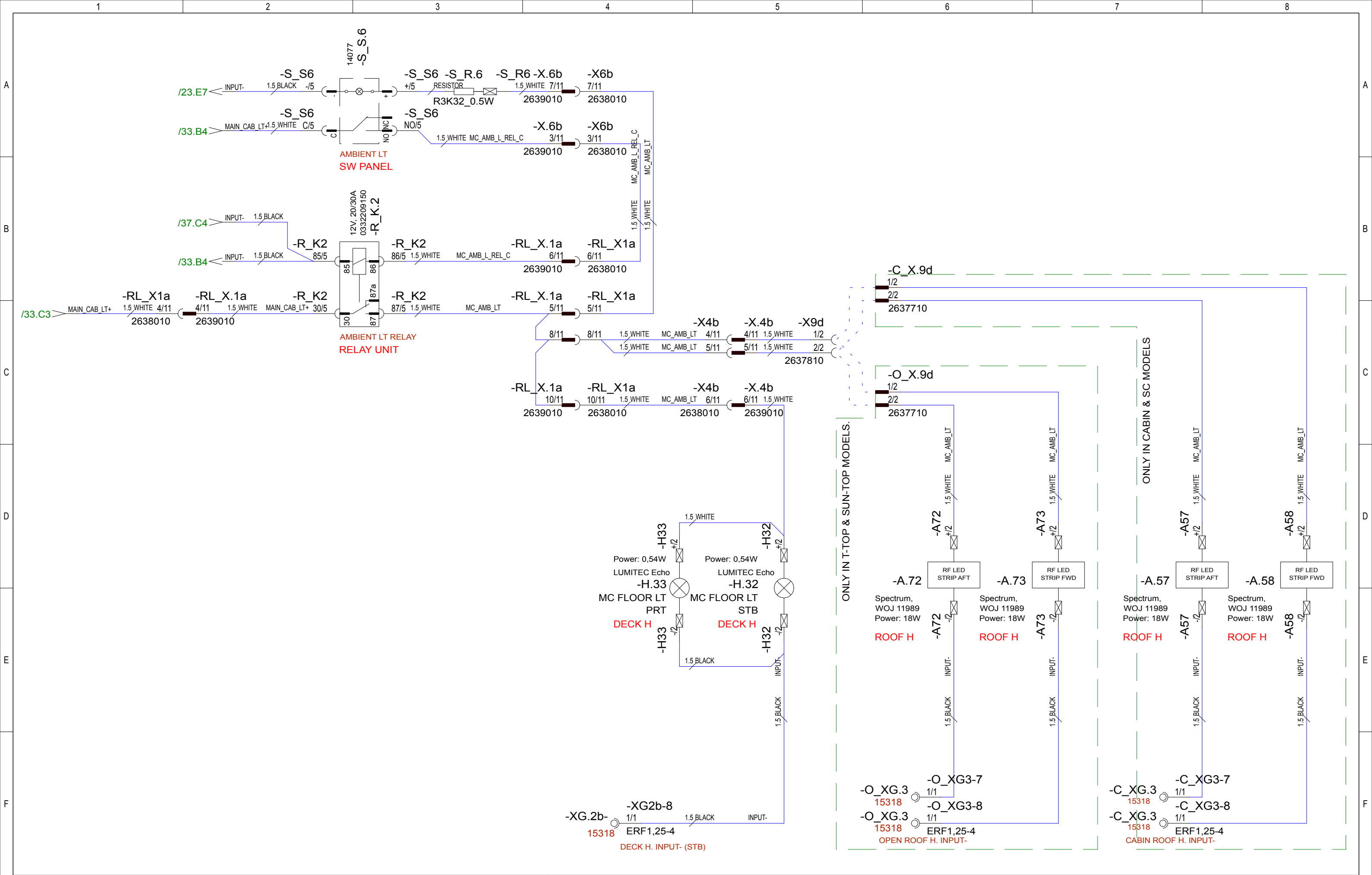
10.10.2019	PN	B4: NOT MODIFIED.			Date	14.1.2019	 Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code	Product code	Project ID				
17.09.2019	AR	A3: NOT MODIFIED.			Sheet rev.	5		37 MY20	NAVIGATION LIGHTS - DIAGRAM		HL	30 / 149 Sheet			
Date of modification	Modified by	Description			Project rev.	B		Boat model	Title	Loc					
1		2		3		4		5		6		7		8	



10.10.2019	PN	B4: REMOVED -A.55 & -A.56, CHANGED -A.79 & -A80 -> LOGO LIGHT.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat		Sub-product code		Product code	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20		PANEL/LOGO LIGHTS - DIAGRAM		HL	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc	
										31/ 149 Sheet	



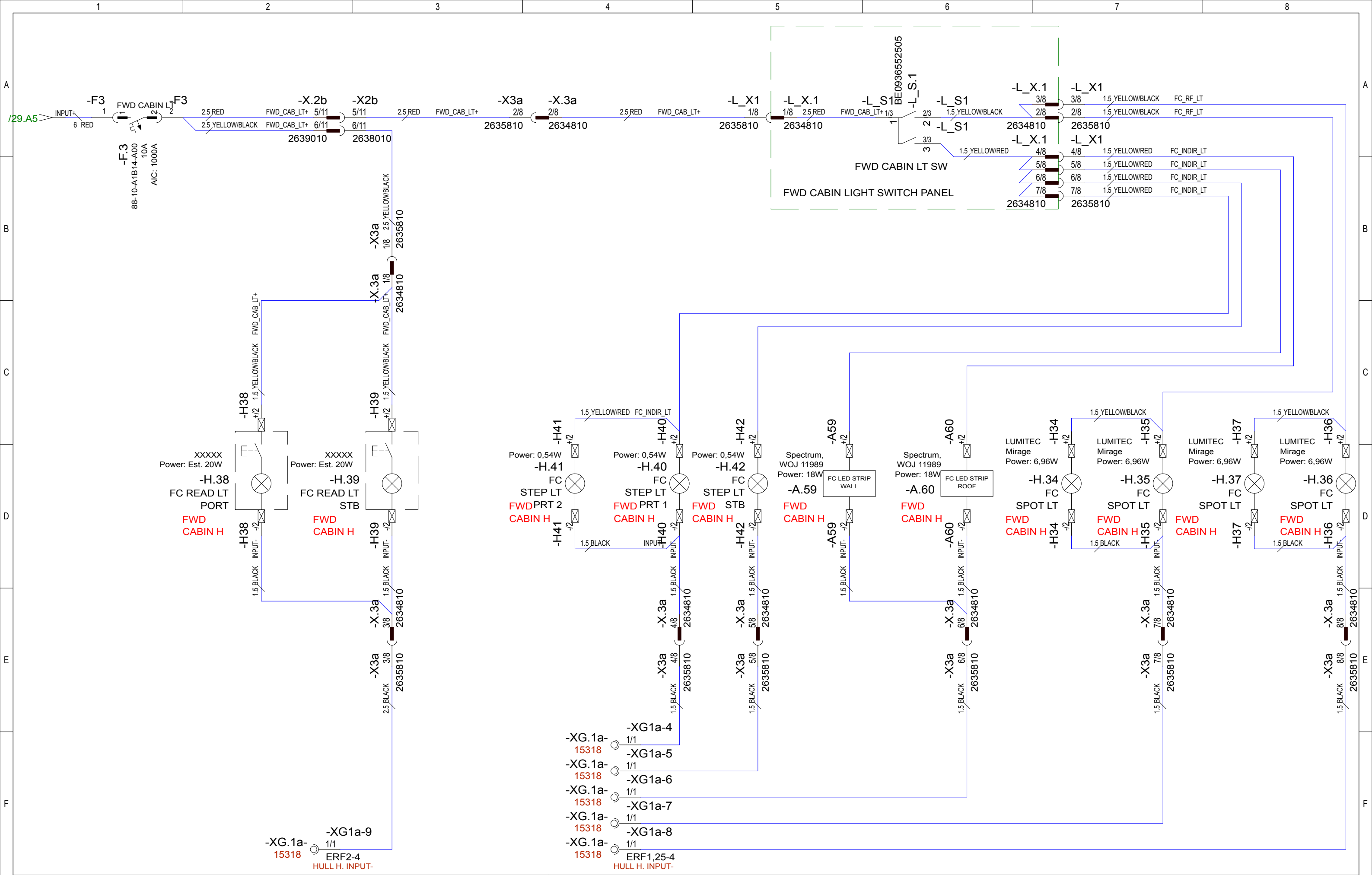
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat	37 MY20	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		MAIN CABIN LIGHT, SPOT - DIAGRAM		HL	33 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc	



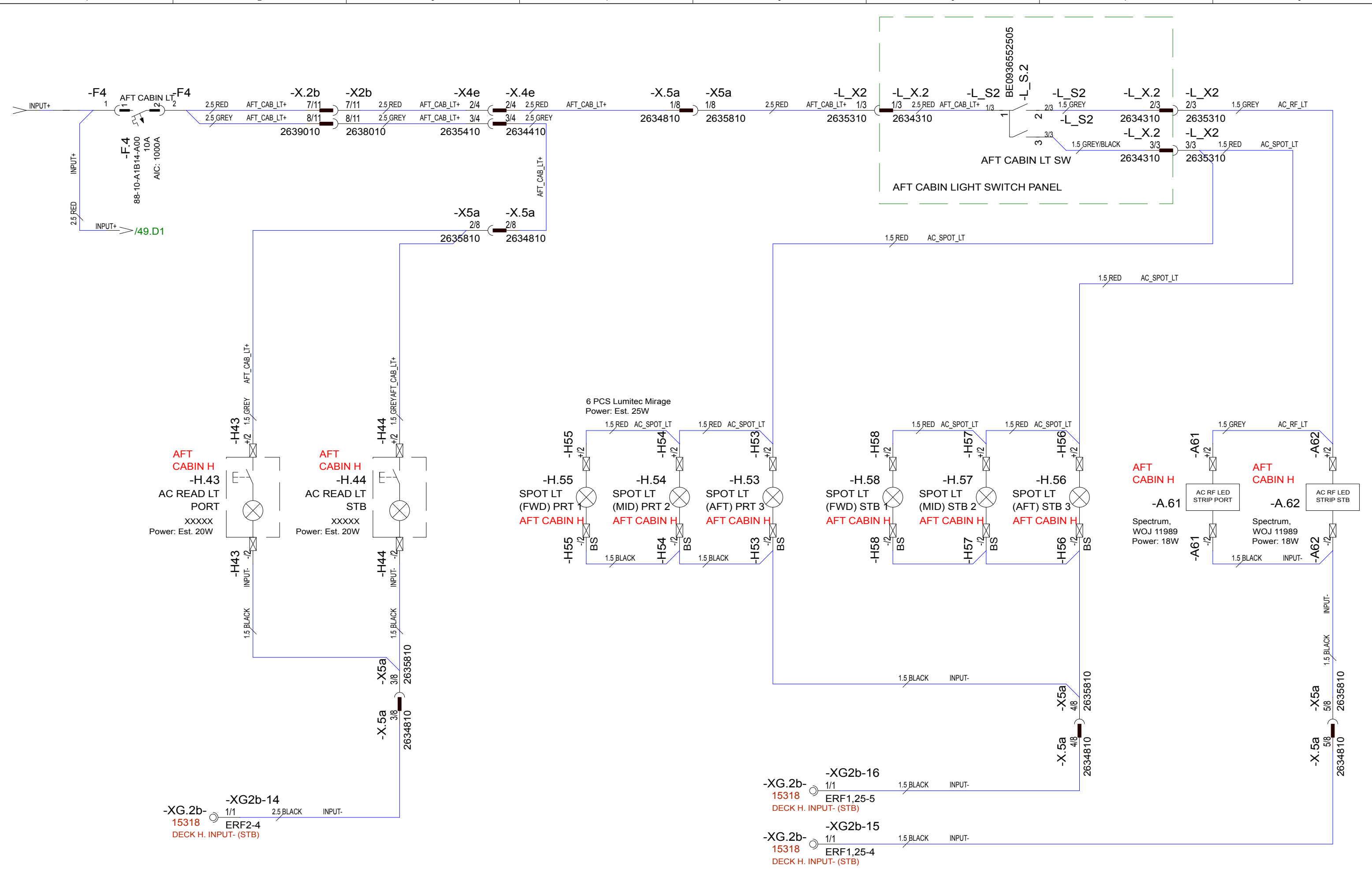
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat	Sub-product code		Product code		Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20	MAIN CABIN LIGHT, AMBIENT - DIAGRAM		HL		34 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model	Title		Loc		Sheet



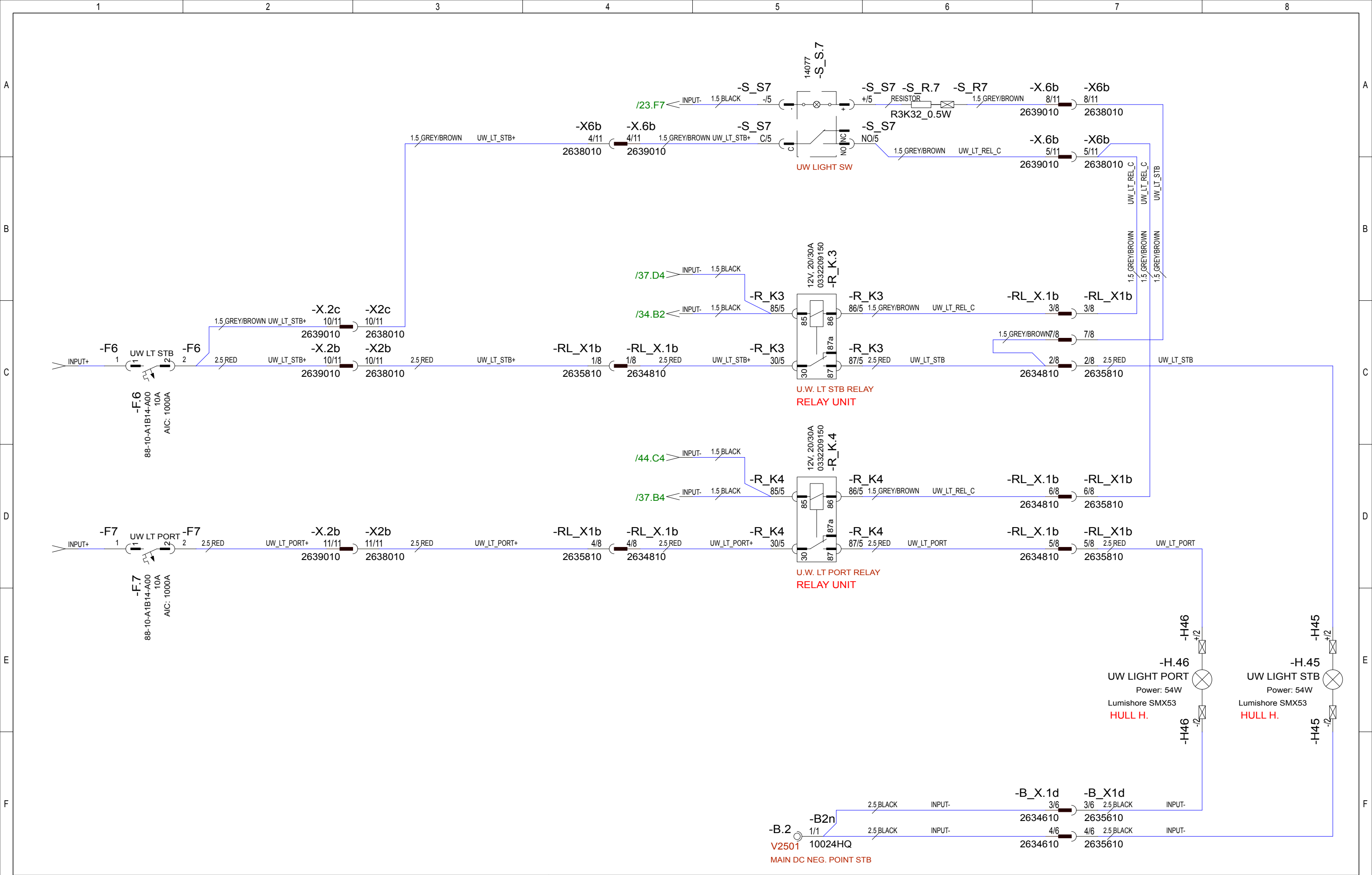
Copyright by



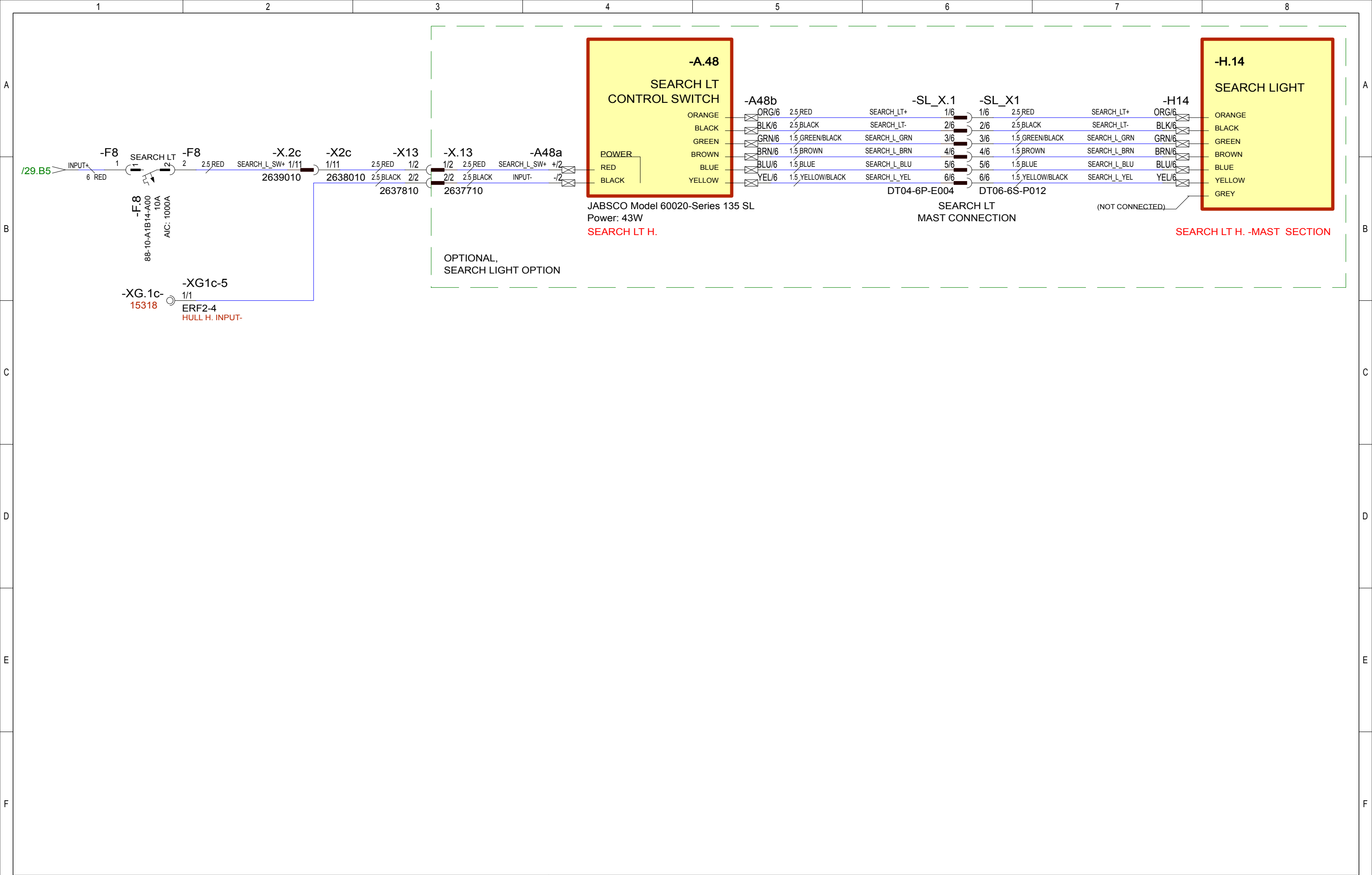
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	 designed solutions Copyright by	Axopar	Sub-product code	Product code	Project ID						
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat									
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	FWD CABIN LIGHTS - DIAGRAM	HL	35 / 149						
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc		Sheet					
1		2		3		4		5		6		7		8	



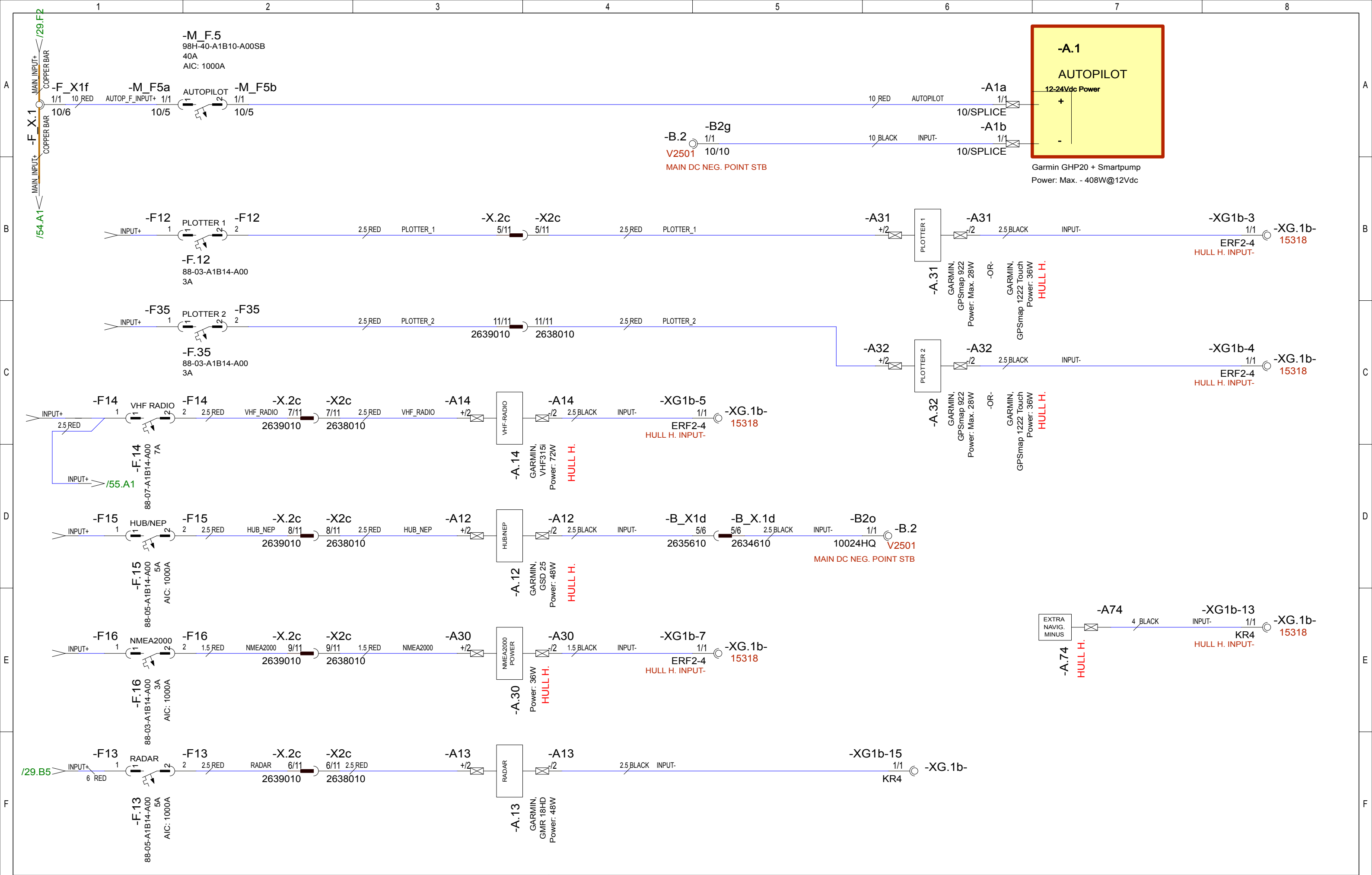
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM	Boat	37 MY20	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	designed solutions		AFT CABING LIGHTS		HL	36 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		- DIAGRAM		Loc	Sheet
1	2	3	4	5	6	7	8			



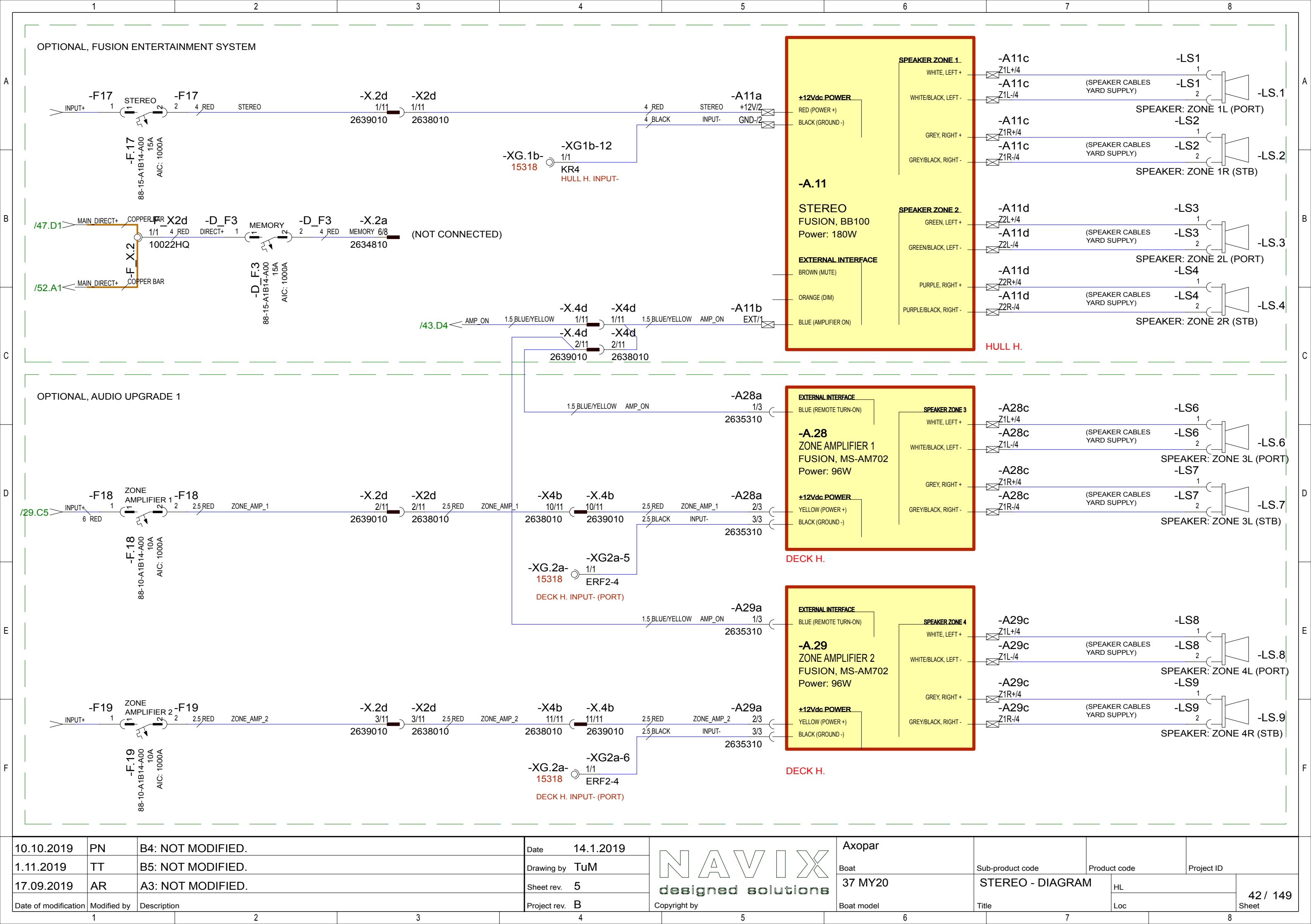
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5			37 MY20		UNDER WATER LT - DIAGRAM		HL	37 / 149
Date of modification	Modified by	Description	Project rev.	B			Boat model				Loc	
1			4		5		6		7		8	

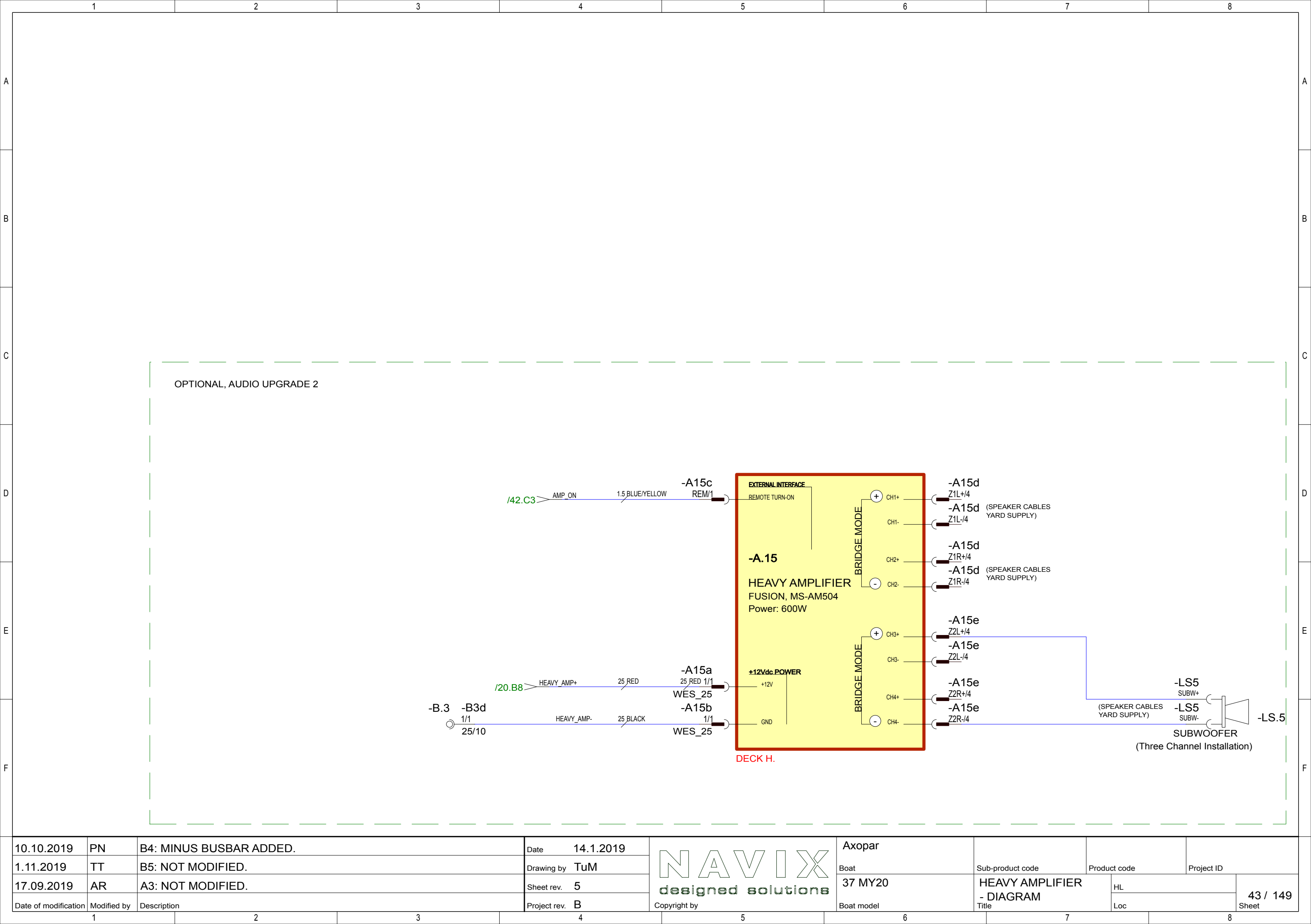


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Copyright by		37 MY20	SEARCH LIGHT		HL	38 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	- DIAGRAM		Loc	Sheet	

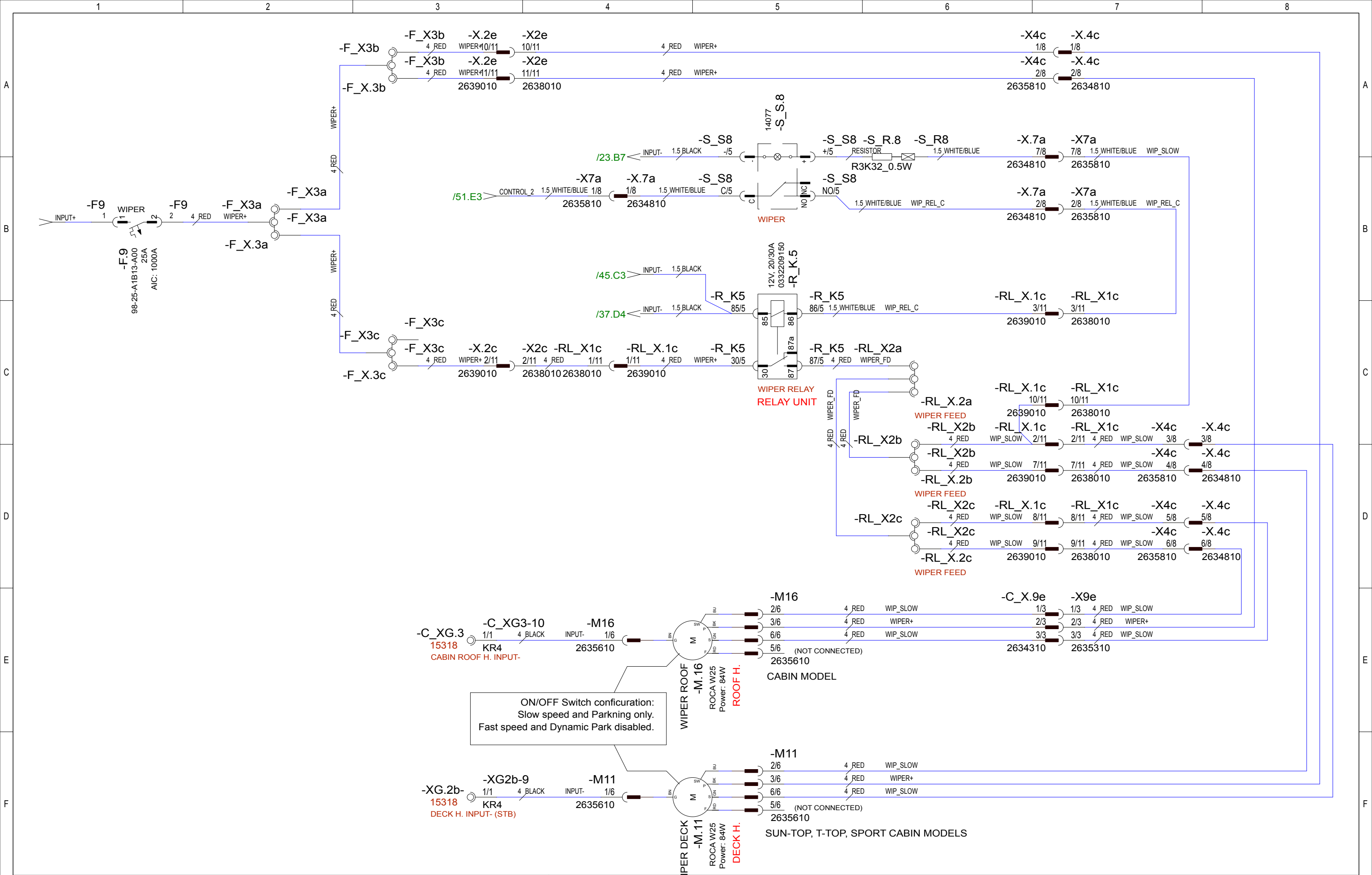


10.10.2019	PN	B4: RADAR MOVED TO HULL HARNESS.			Date	14.1.2019	 designed solutions	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.			Sheet rev.	5		37 MY20		NAV. EQUIPMENT - DIAGRAM		HL		39 / 149	
Date of modification	Modified by	Description			Project rev.	B		Boat model		Title		Loc			
1		2		3		4		5		6		7		8	



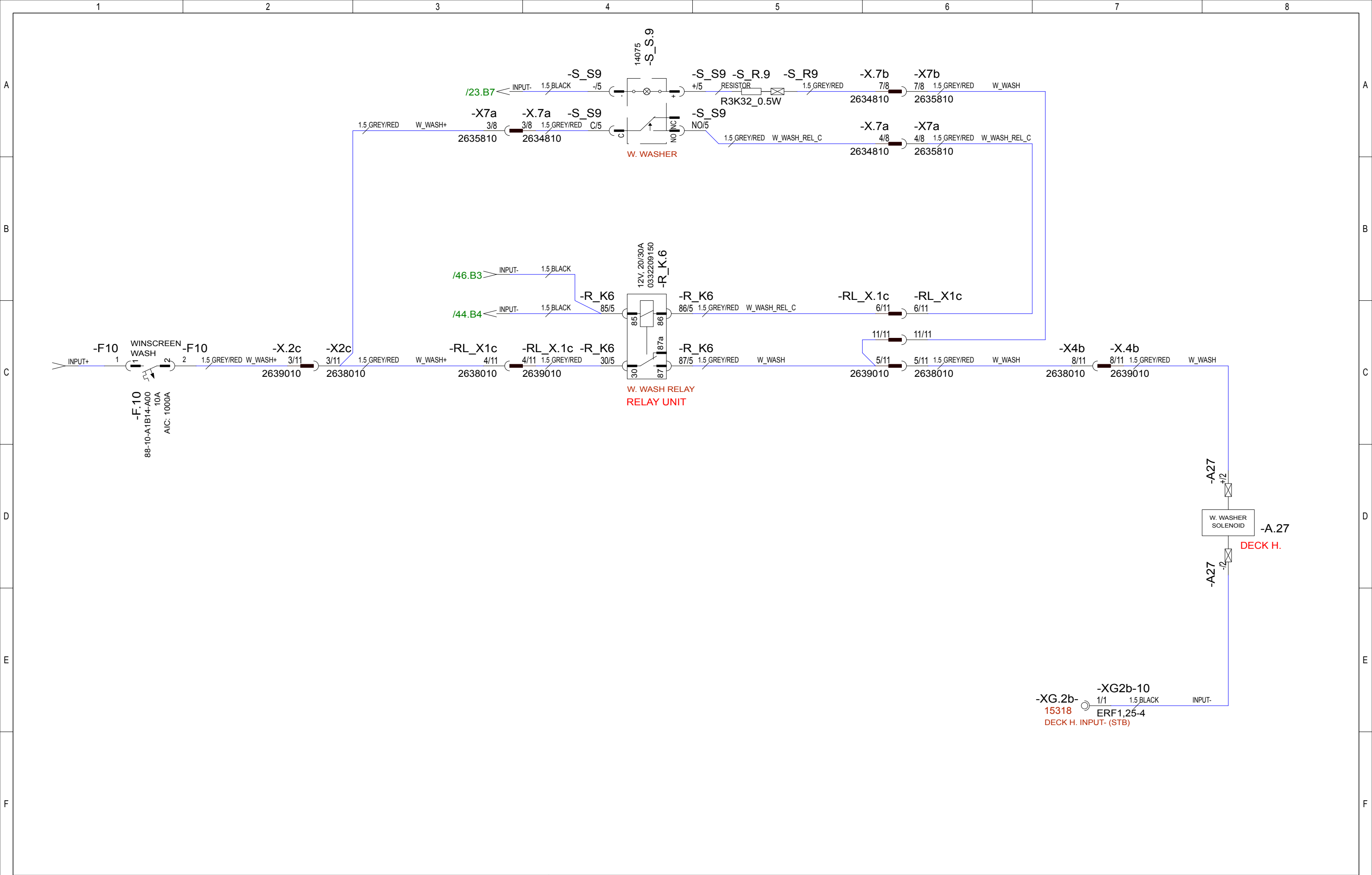


10.10.2019	PN	B4: MINUS BUSBAR ADDED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Copyright by		37 MY20	HEAVY AMPLIFIER		HL	43 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	- DIAGRAM		Loc		
1		2		3	4	5	6	7			8	

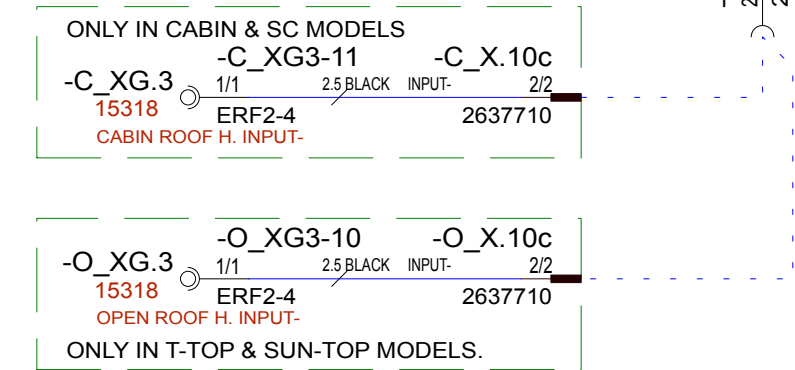
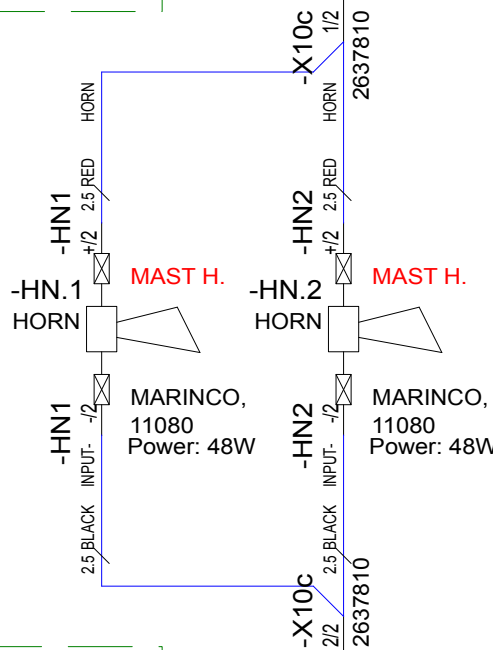
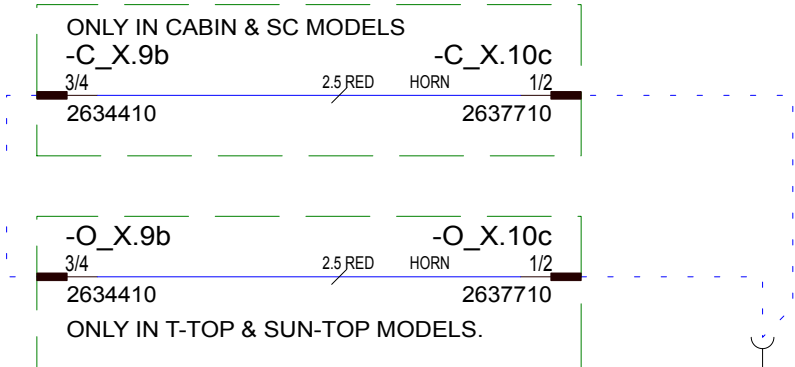
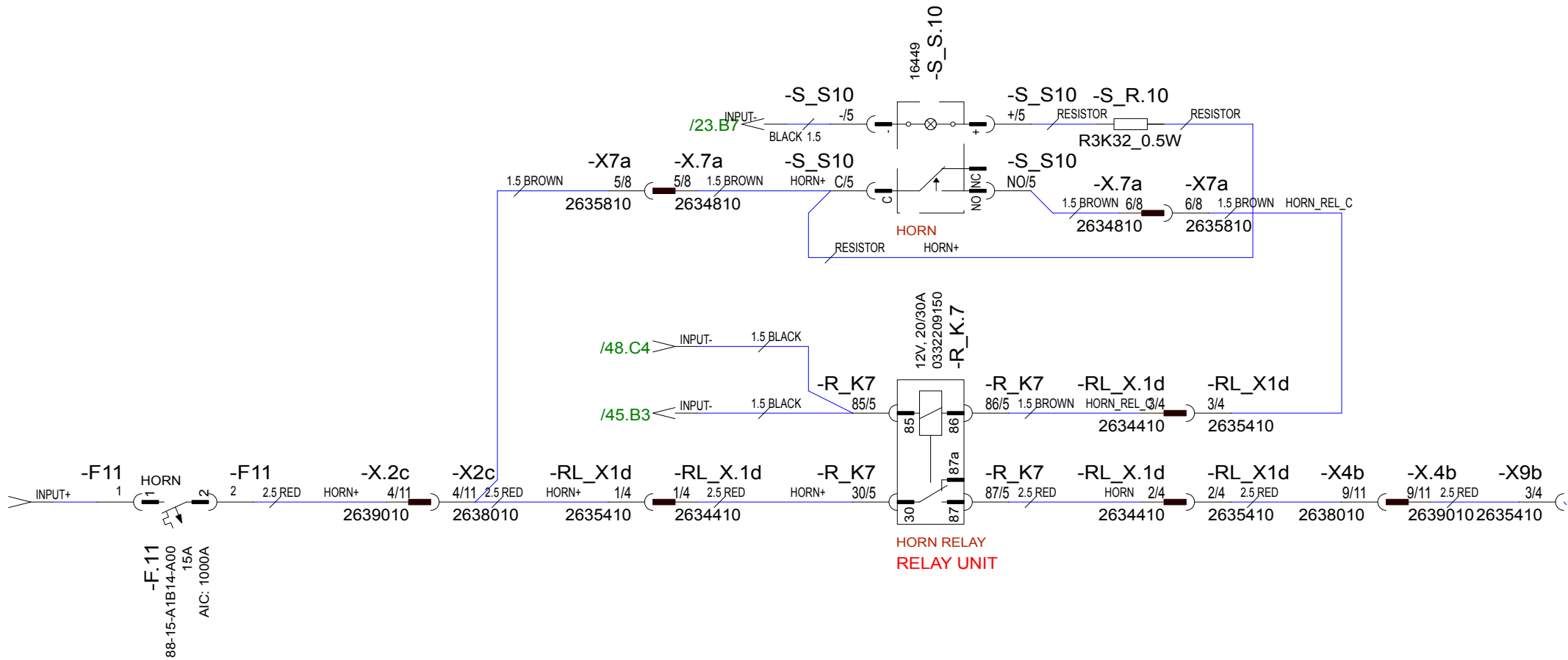


ON/OFF Switch configuration:
Slow speed and Parking only.
Fast speed and Dynamic Park disabled.

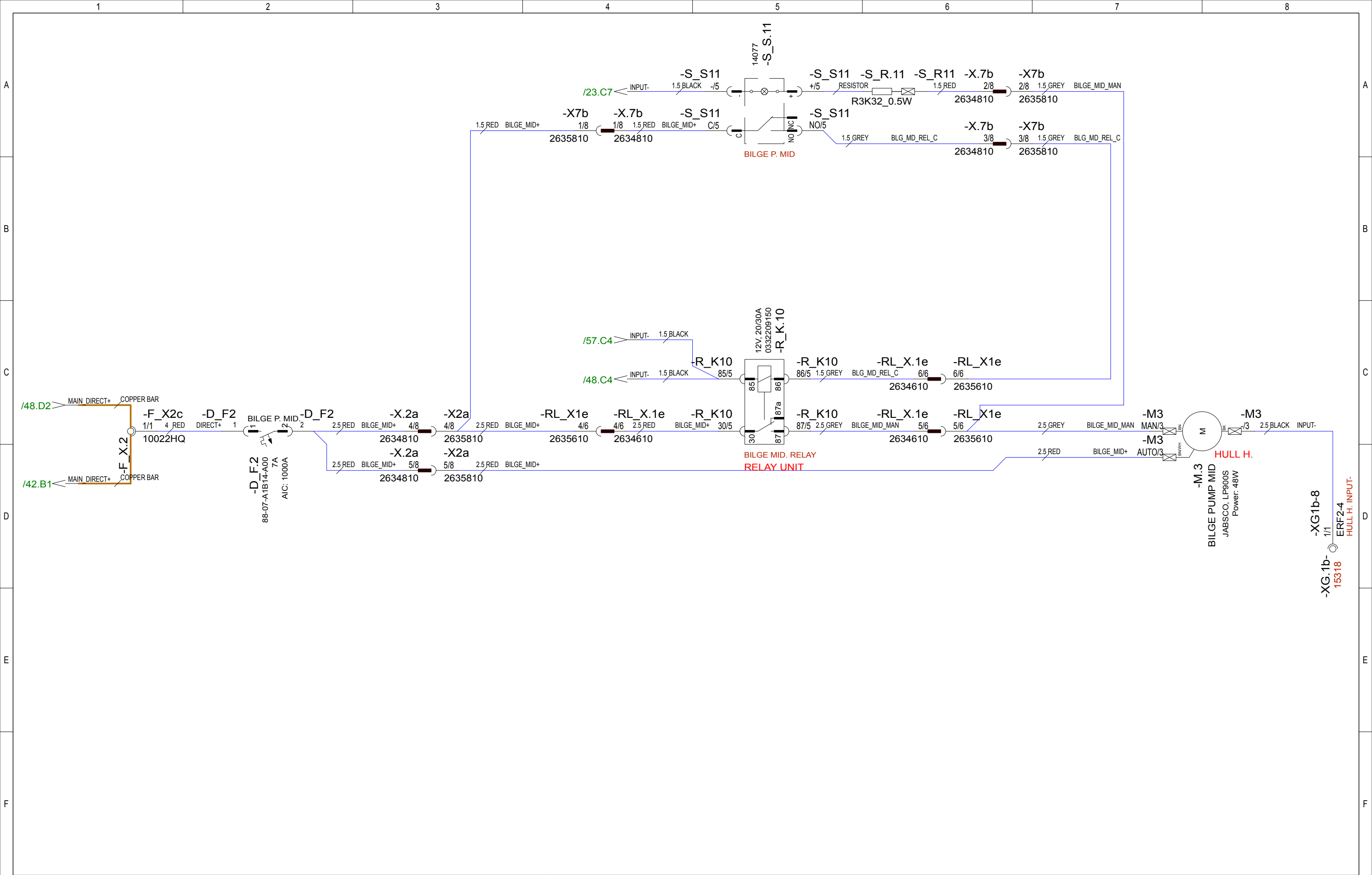
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code		Product code	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5			37 MY20		WIPERS - DIAGRAM		HL	
Date of modification	Modified by	Description	Project rev.	B			Boat model		Title		Loc	
1	2	3	4	5	6		7		8		44 / 149 Sheet	



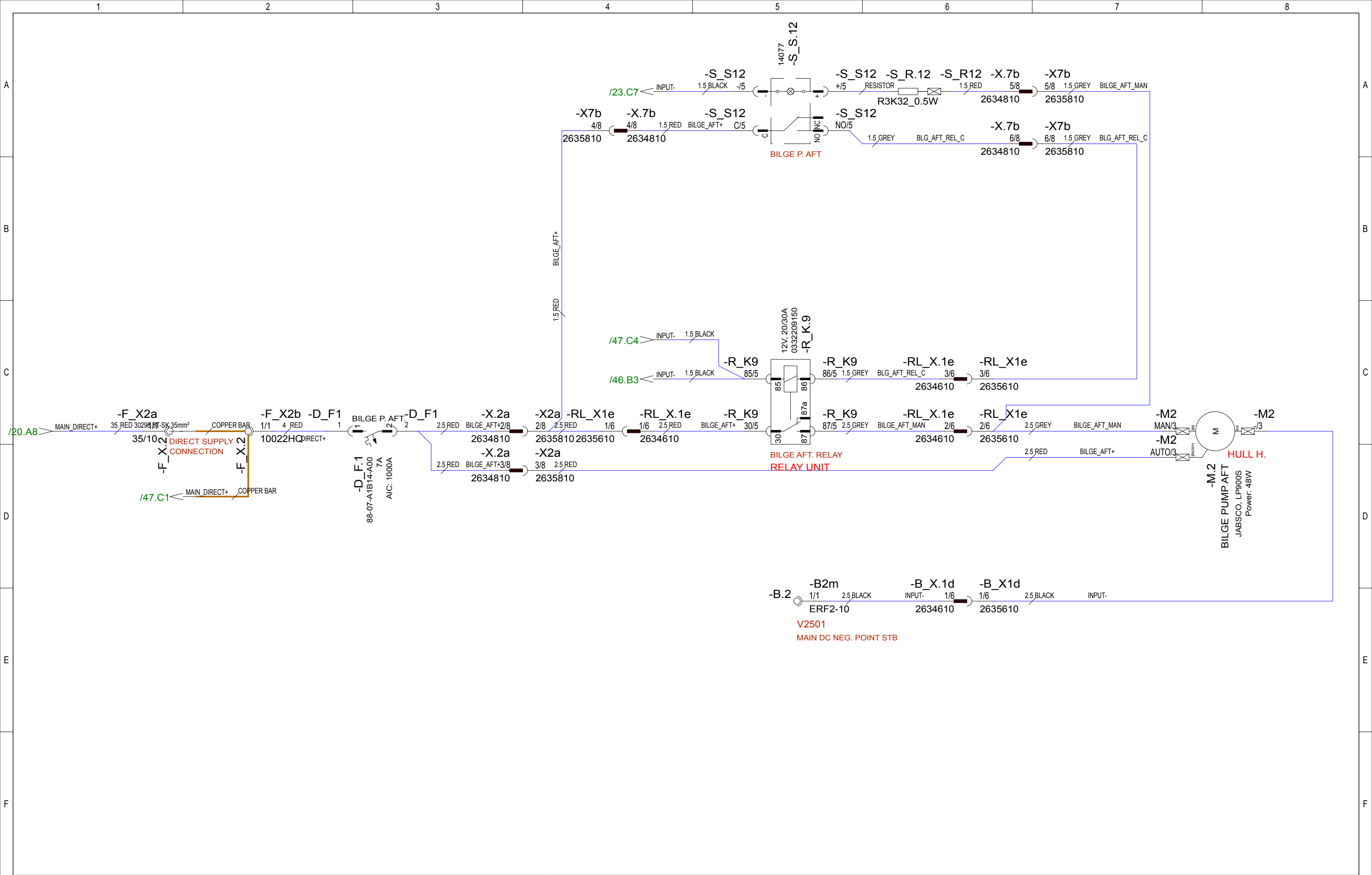
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	Copyright by		37 MY20	WINDSCREEN WASH		HL	45 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model	- DIAGRAM		Loc		
1		2		3	4	5	6	7			8	



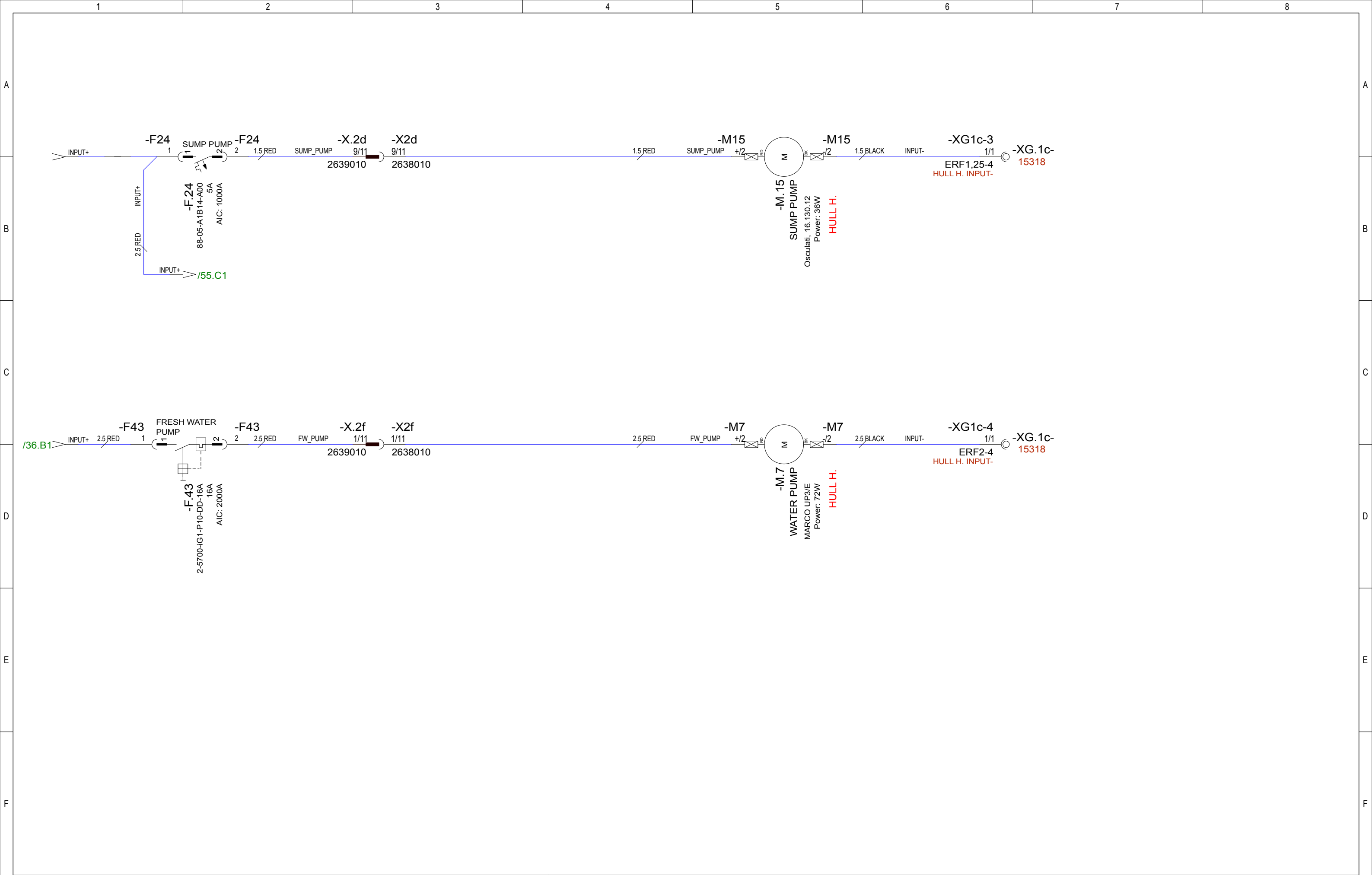
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code		Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	HORN		HL	
Date of modification	Modified by	Description	Project rev.	B		Boat model	- DIAGRAM		Loc	
						Title				46 / 149
										Sheet



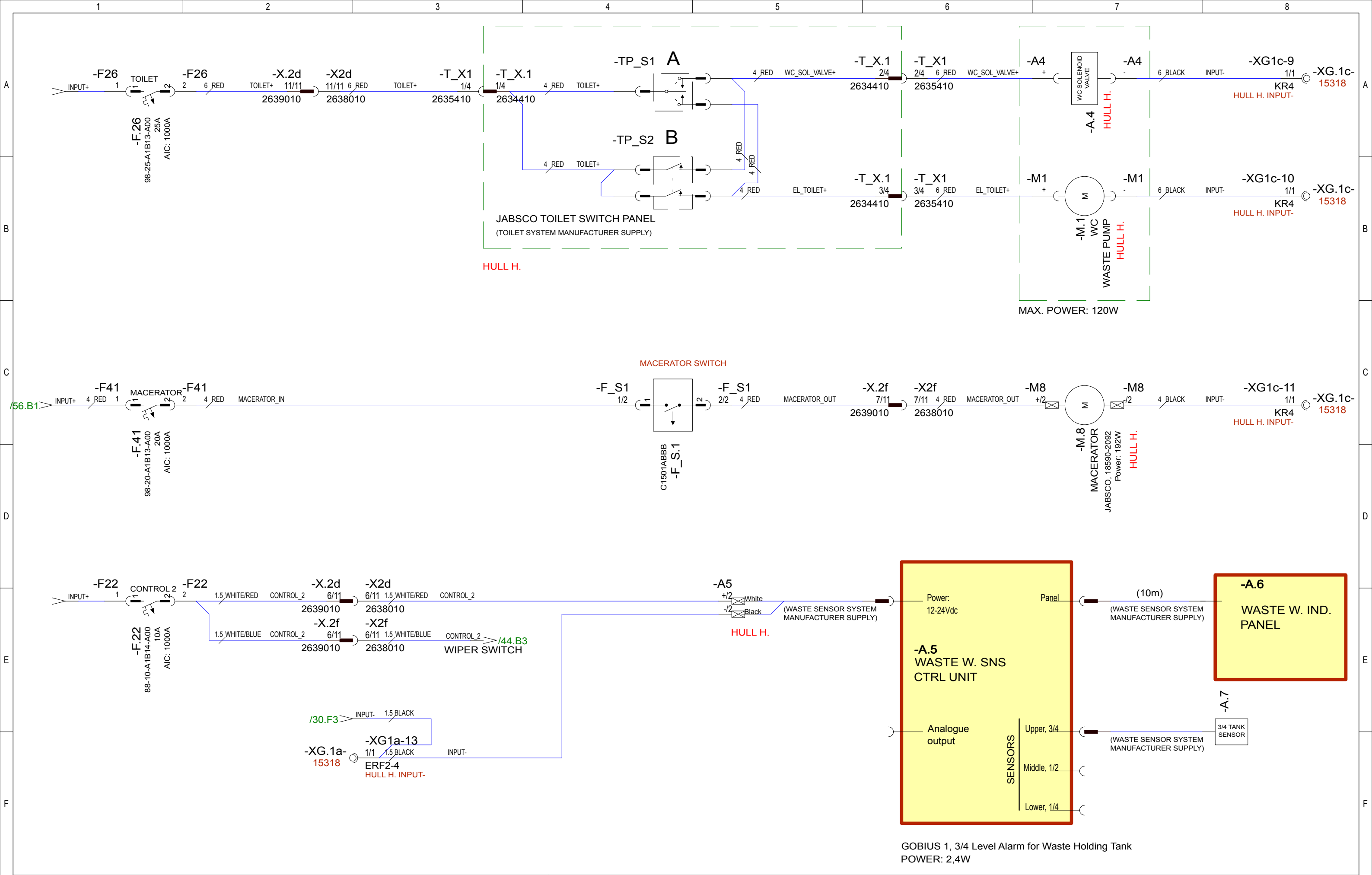
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat	Sub-product code		Product code	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5			37 MY20	BILGE PUMP MID		HL	
Date of modification	Modified by	Description	Project rev.	B			Boat model	Title		Loc	
1	2	3	4	5	6	7	8	47 / 149		Sheet	



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions		Axopar					
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5			37 MY20		BILGE PUMP AFT		HL	48 / 149
Date of modification	Modified by	Description	Project rev.	B			Boat model		- DIAGRAM		Loc	



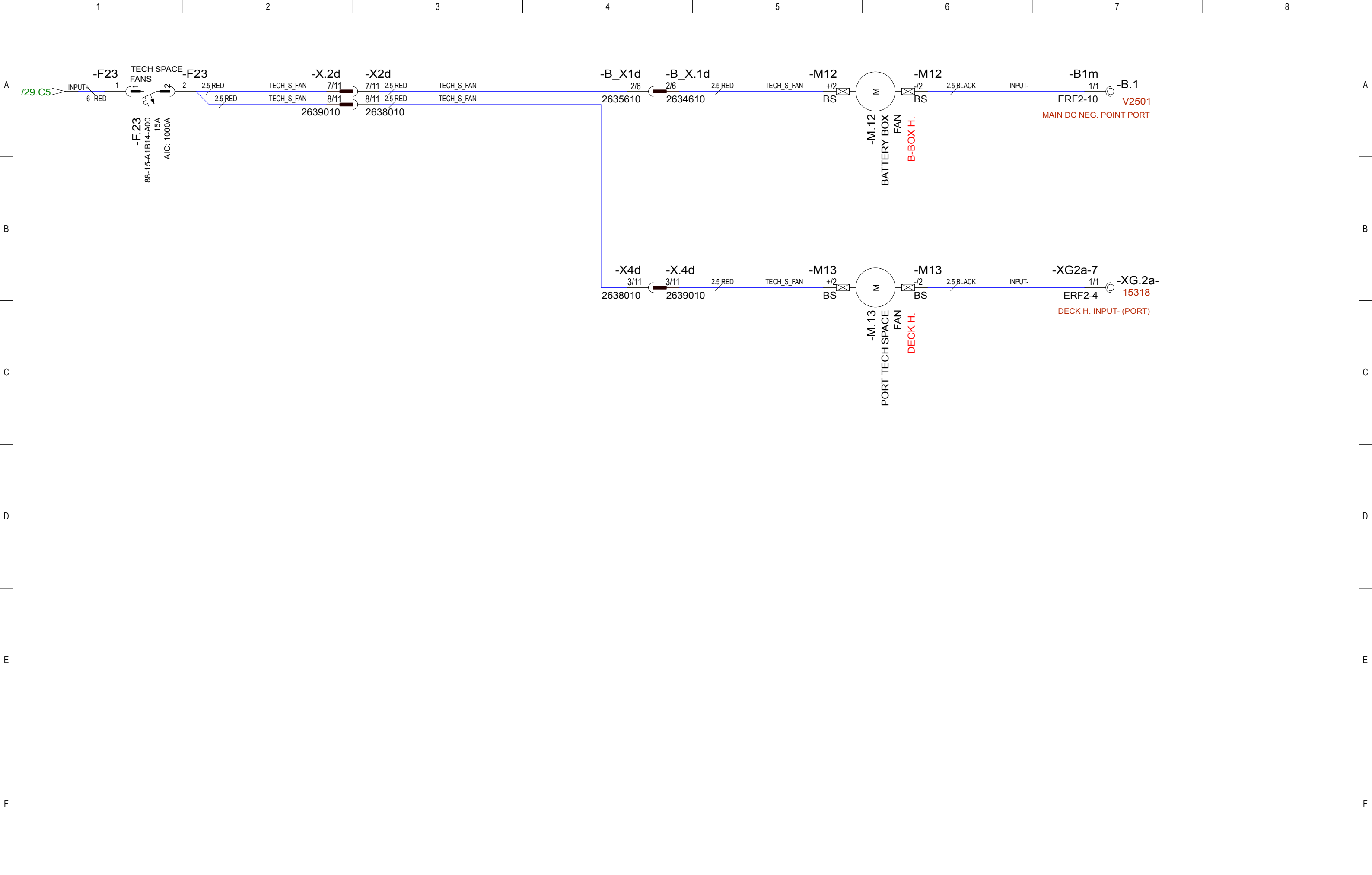
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20		PUMPS - DIAGRAM		HL		49 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			



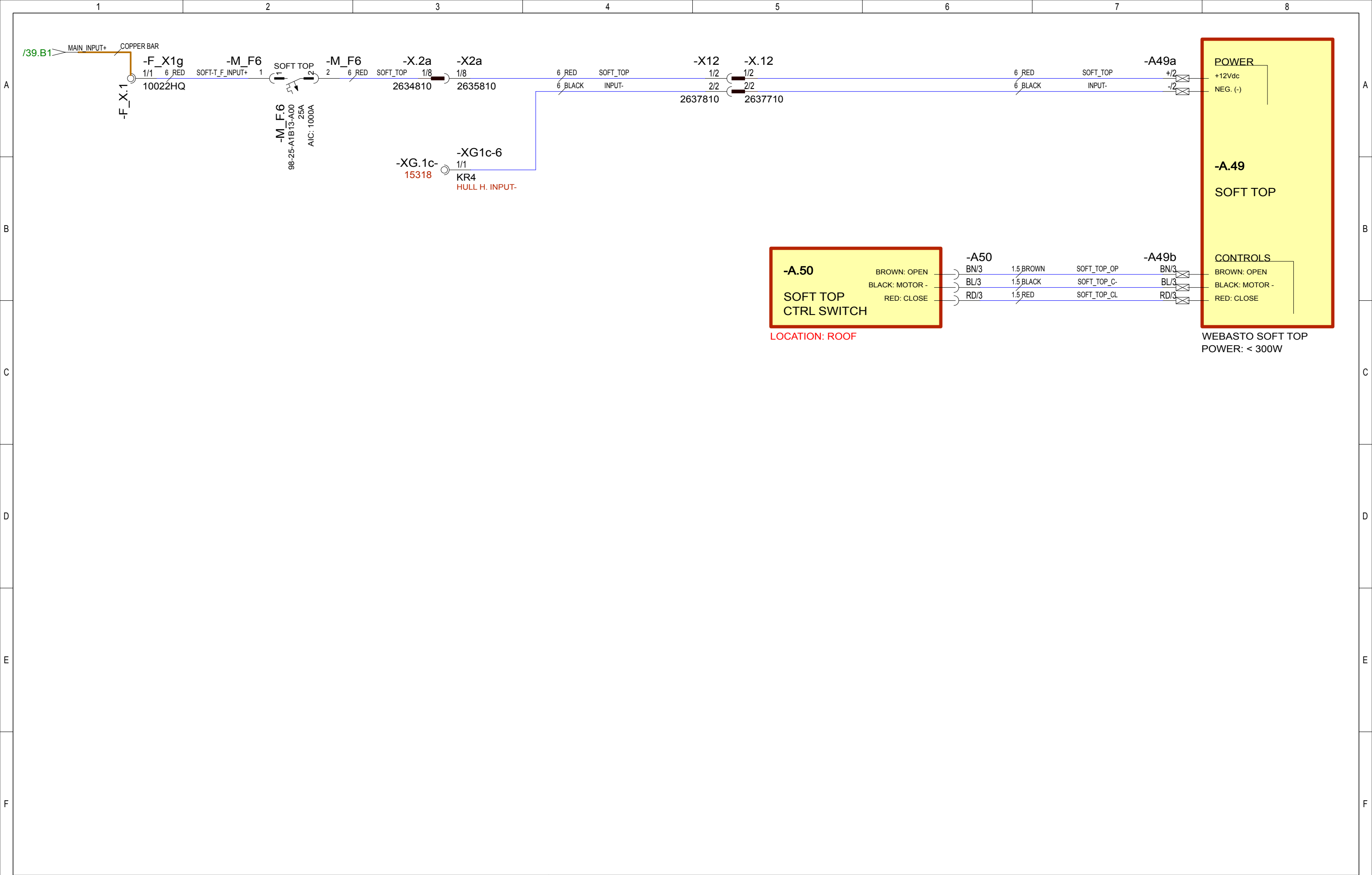
GOBIUS 1, 3/4 Level Alarm for Waste Holding Tank
POWER: 2,4W

10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar									
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID						
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	TOILET/ MACERATOR/ WASTE TANK SNS - DIAGRAM	HL	51/ 149						
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc		Sheet					
1		2		3		4		5		6		7		8	

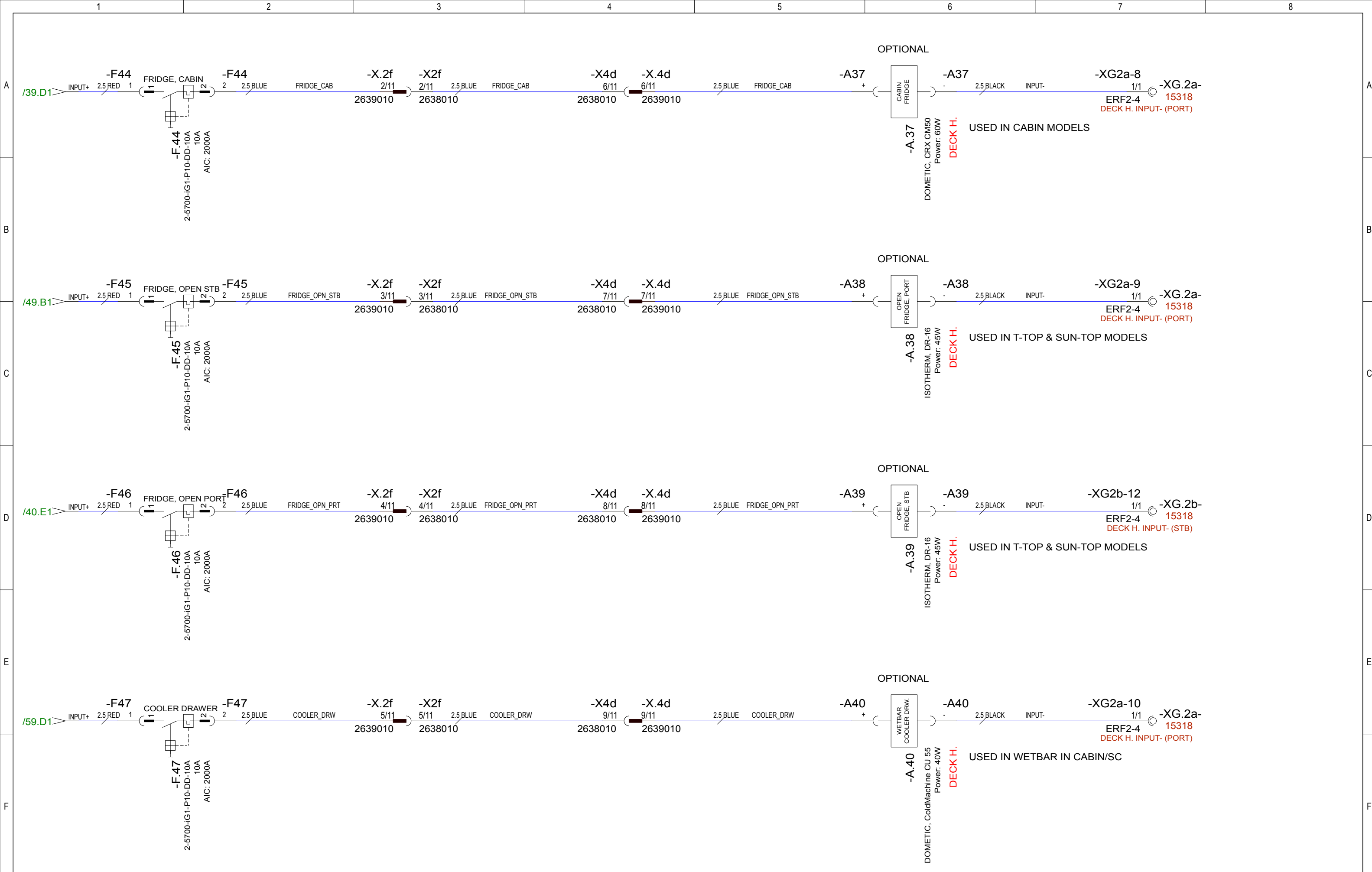




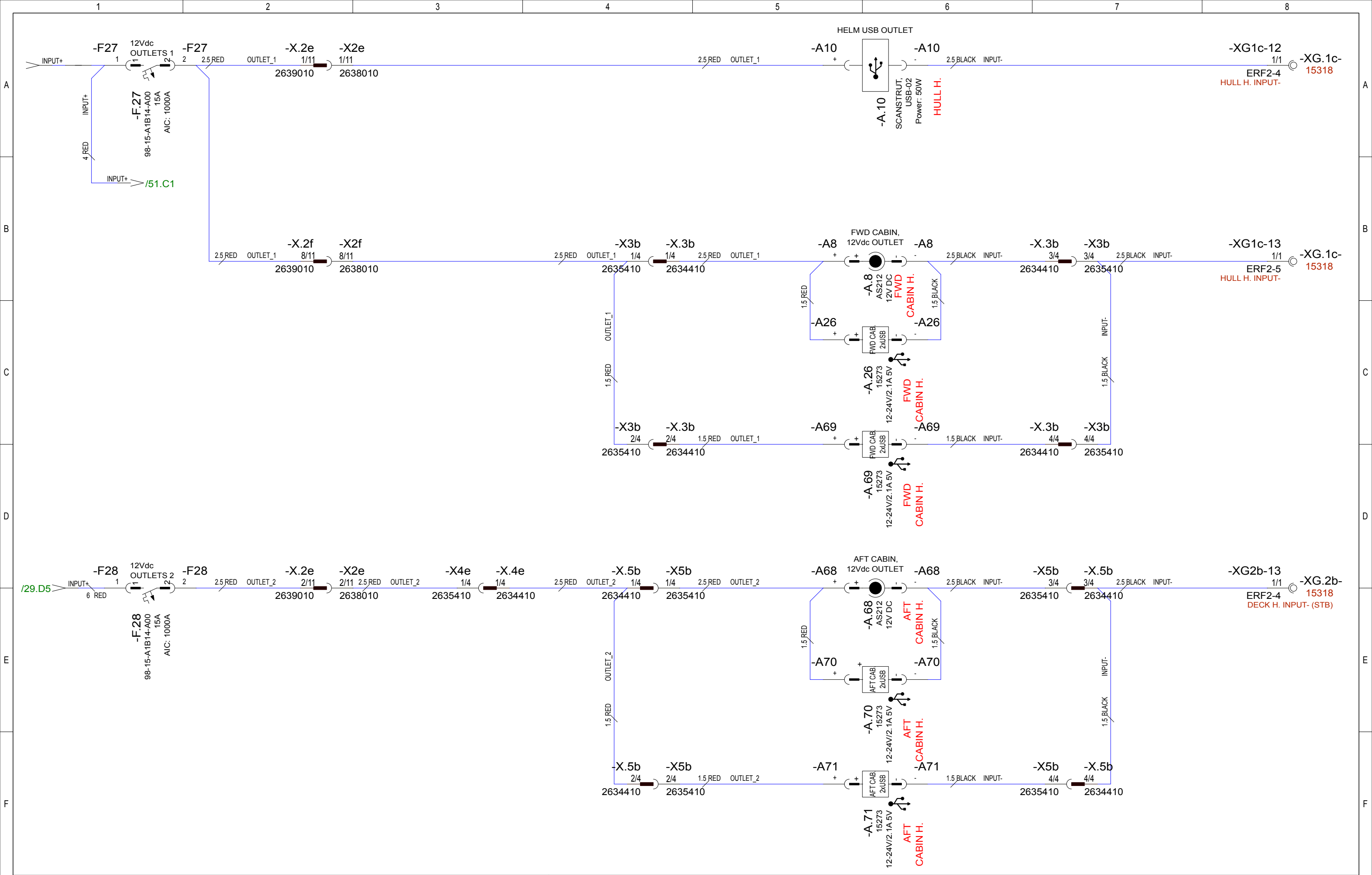
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20		TECH SPACE FANS - DIAGRAM		HL		53 / 149 Sheet	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			



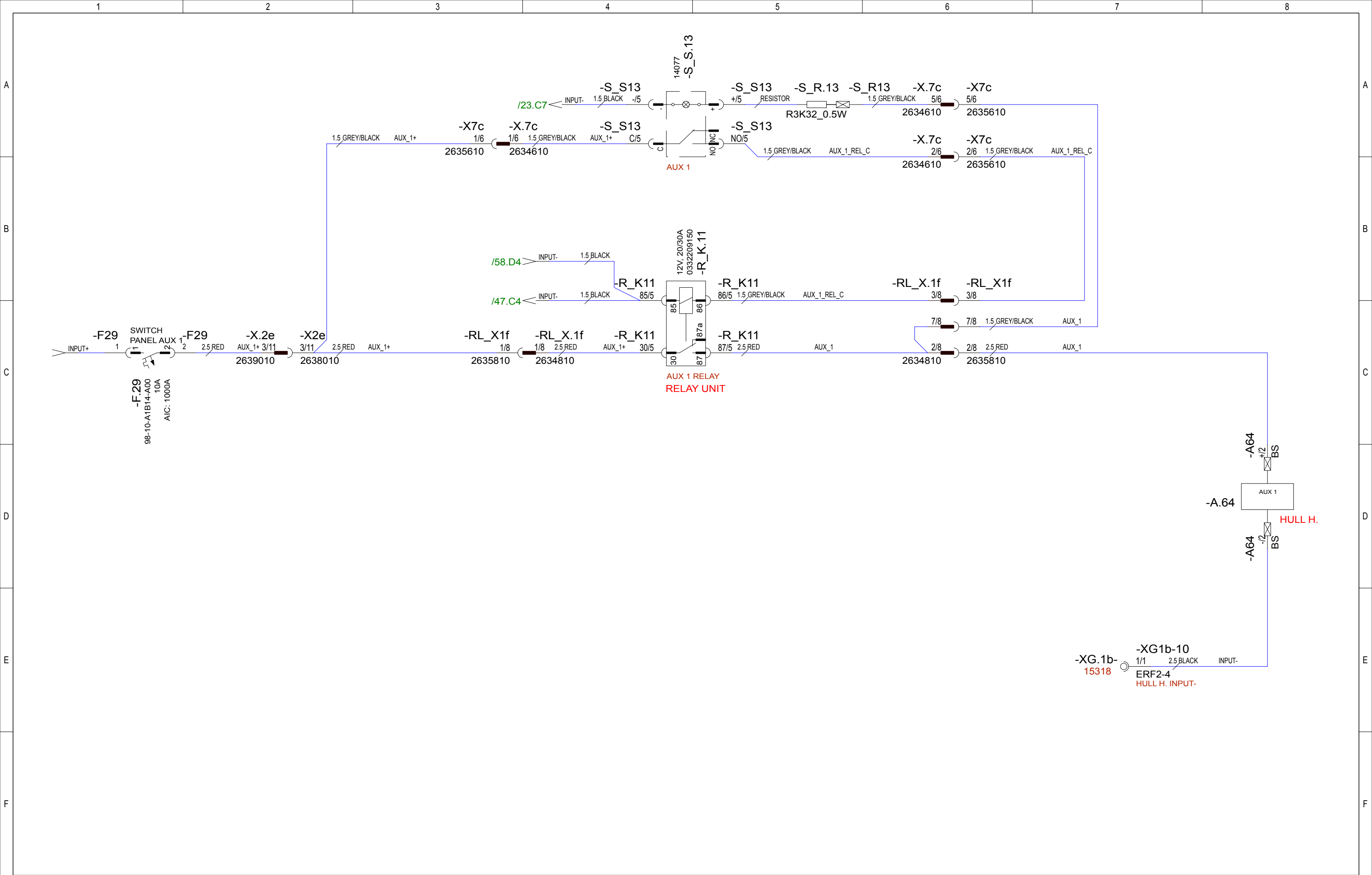
10.10.2019	PN	B4: NOT MODIFIED.	Date	5.4.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	SOFT TOP - DIAGRAM		HL		54 / 149 Sheet		
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc				



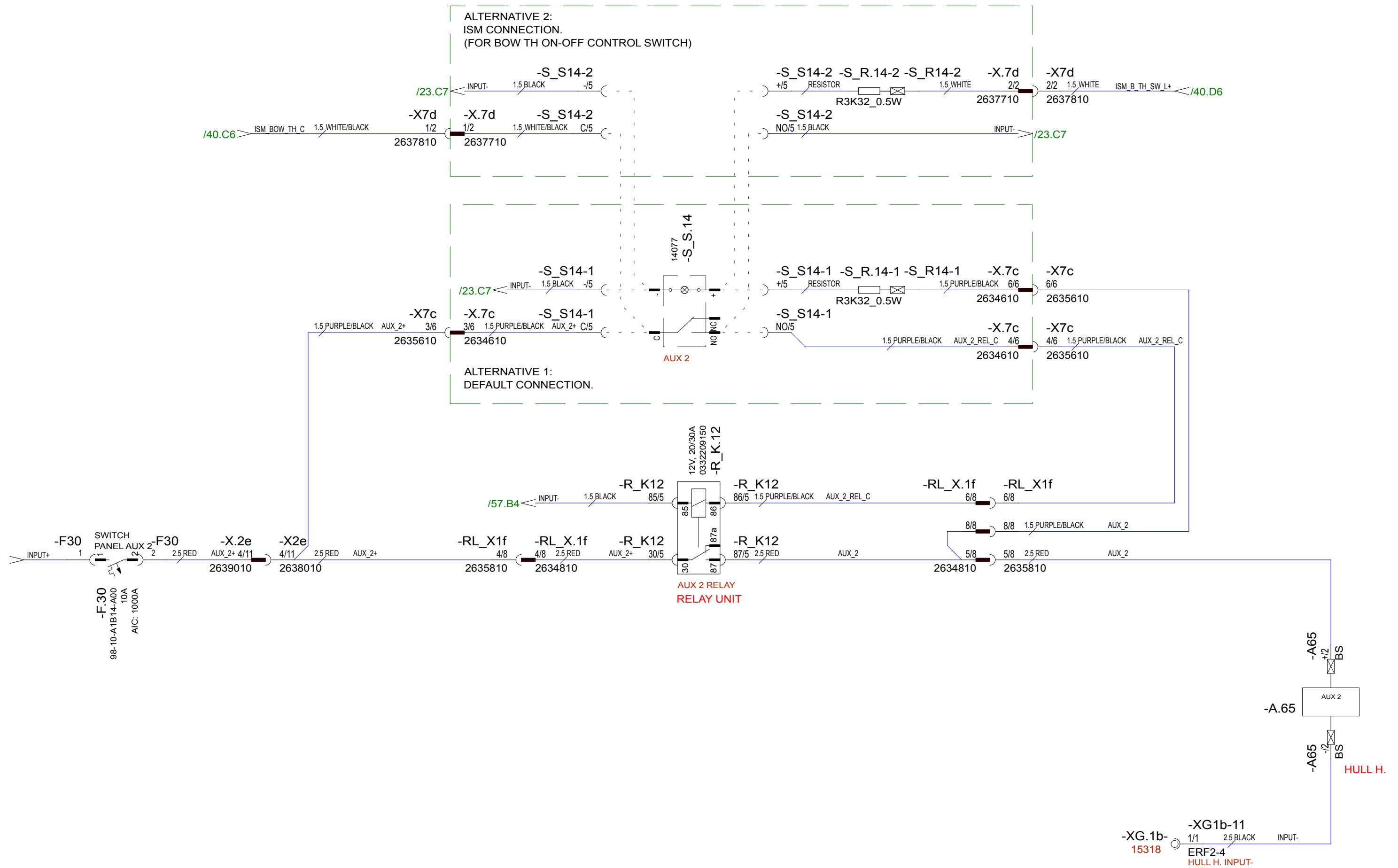
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar									
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID						
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	REFRIGERATORS	HL	55 / 149						
Date of modification	Modified by	Description	Project rev.	B		Boat model	- DIAGRAM	Loc							
1		2		3		4		5		6		7		8	



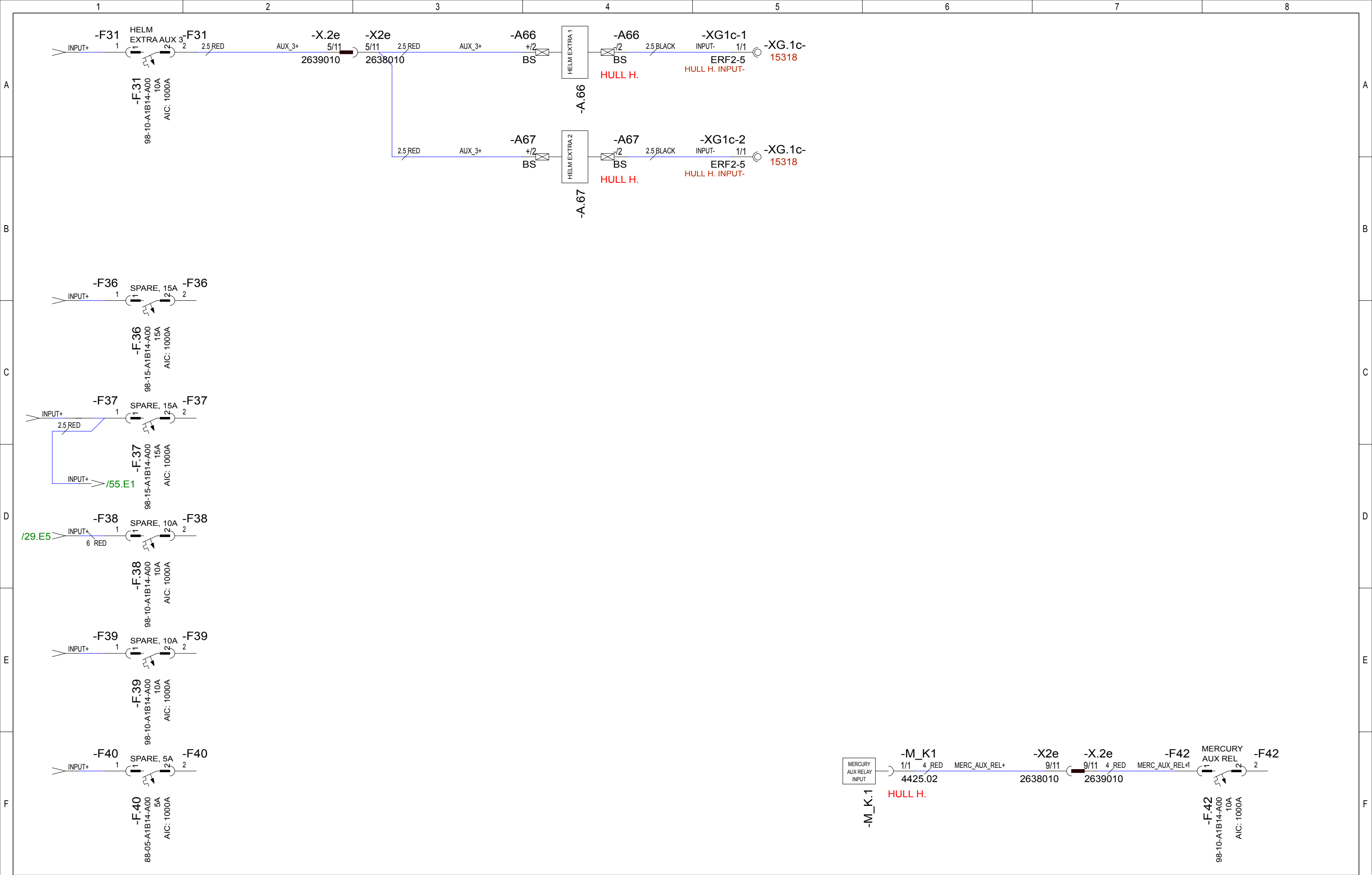
10.10.2019	PN	B4: NOT MODIFIED.			Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar								
1.11.2019	TT	B5: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code		Product code		Project ID			
17.09.2019	AR	A3: NOT MODIFIED.			Sheet rev.	5		37 MY20		12Vdc OUTLETS/ USB - DIAGRAM		HL		56 / 149		
Date of modification	Modified by	Description			Project rev.	B		Boat model		Title		Loc				
1		2			3		4		5		6		7		8	



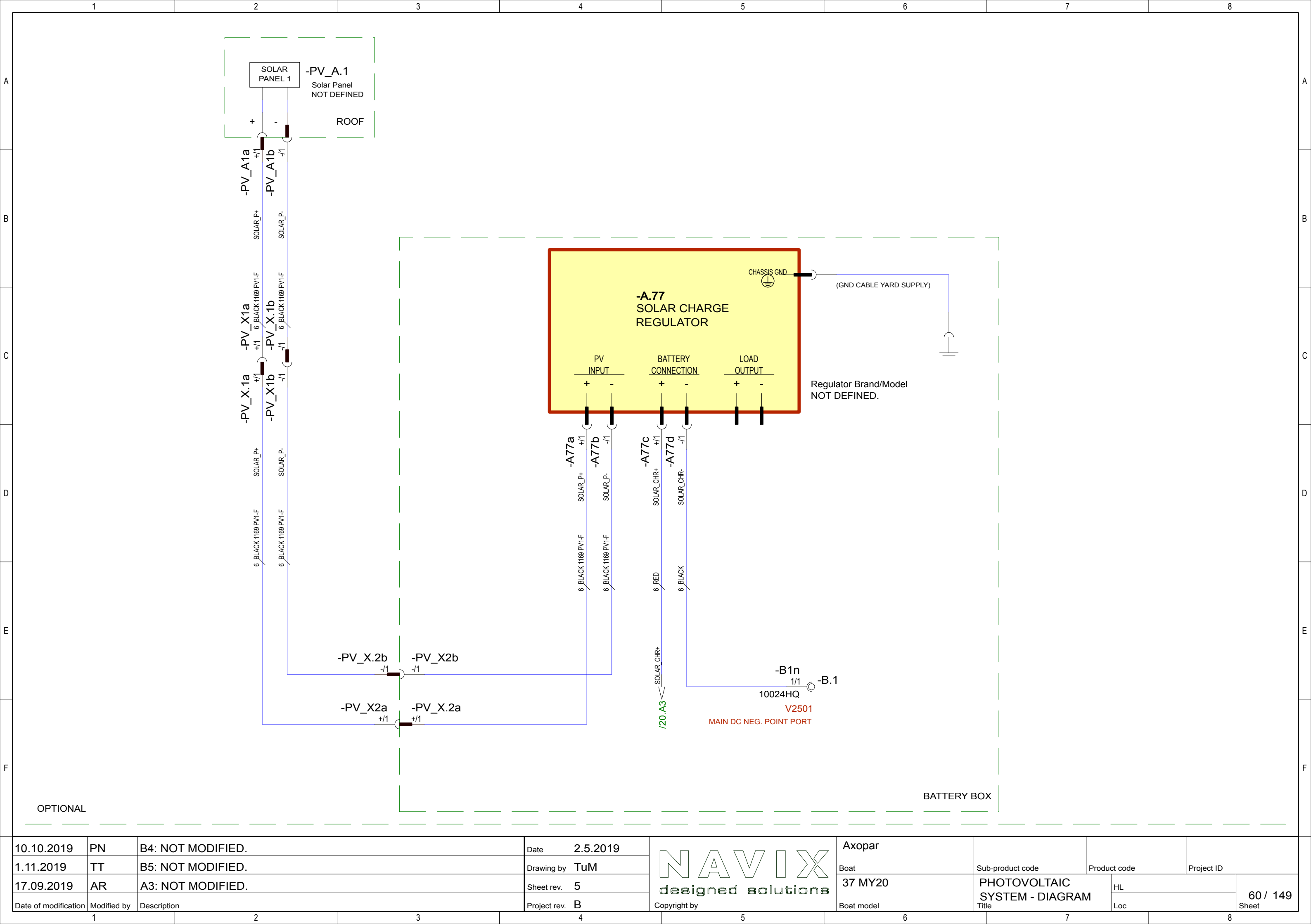
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	AUX 1 - DIAGRAM		HL		57 / 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc				



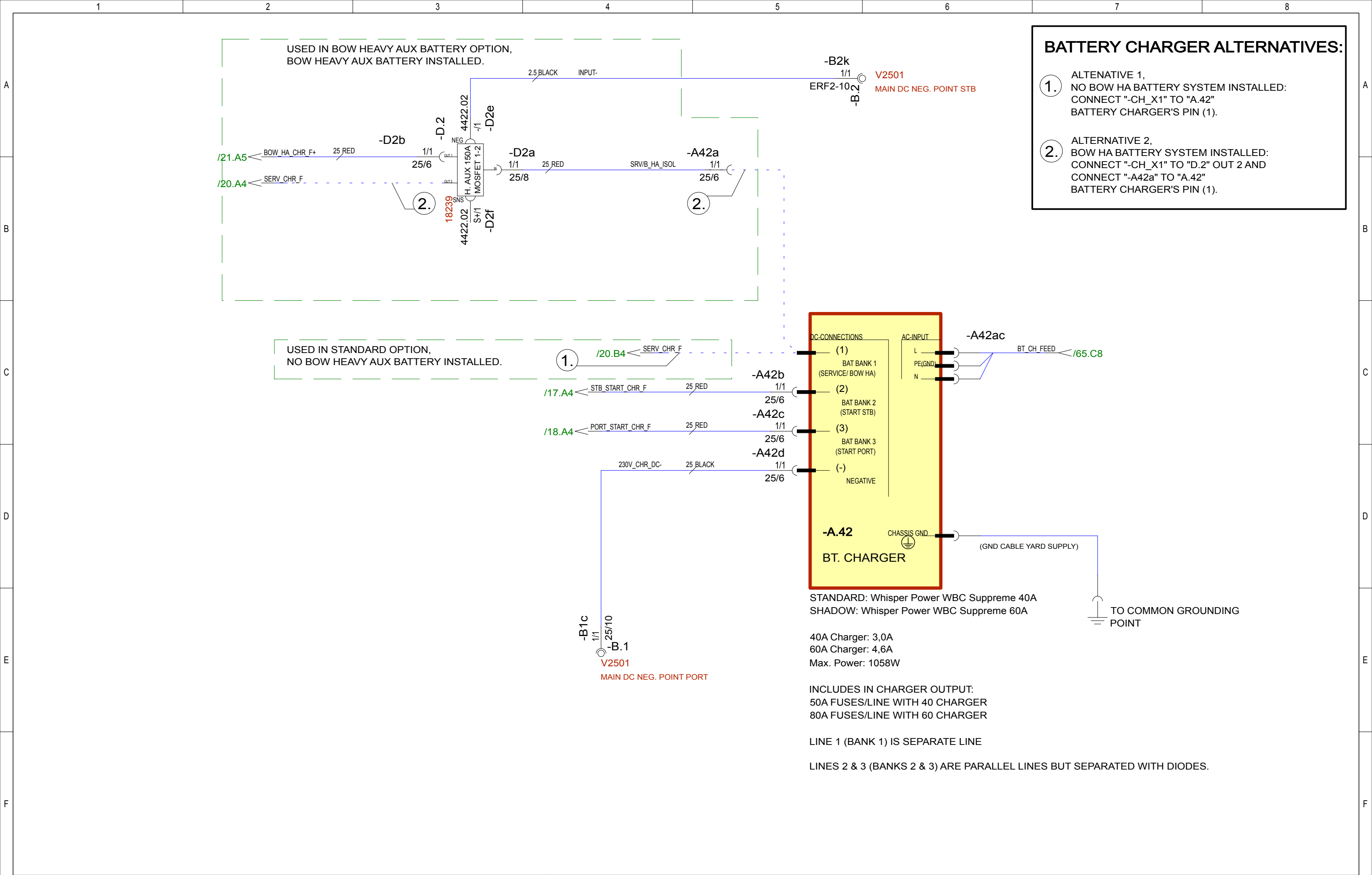
10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar			
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	AUX 2 - DIAGRAM	HL	58 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc	



10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20		AUX 3, SPARE, EXTRA, MERCURY AUX - DIAGRAM		HL		59 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			

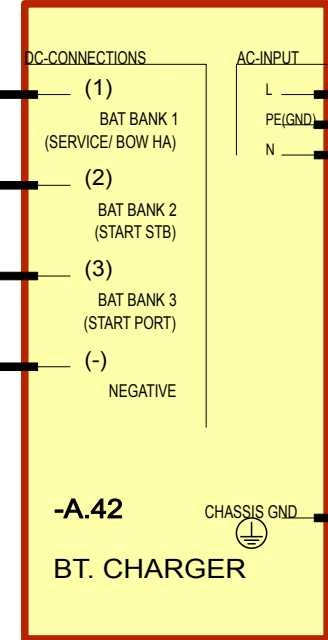


10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	NAVIX designed solutions Copyright by	Axopar						
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	PHOTOVOLTAIC SYSTEM - DIAGRAM		HL		60 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model			Loc			



BATTERY CHARGER ALTERNATIVES:

1. ALTERNATIVE 1,
NO BOW HA BATTERY SYSTEM INSTALLED:
CONNECT "-CH_X1" TO "A.42"
BATTERY CHARGER'S PIN (1).
2. ALTERNATIVE 2,
BOW HA BATTERY SYSTEM INSTALLED:
CONNECT "-CH_X1" TO "D.2" OUT 2 AND
CONNECT "-A42a" TO "A.42"
BATTERY CHARGER'S PIN (1).



STANDARD: Whisper Power WBC Supreme 40A
SHADOW: Whisper Power WBC Supreme 60A

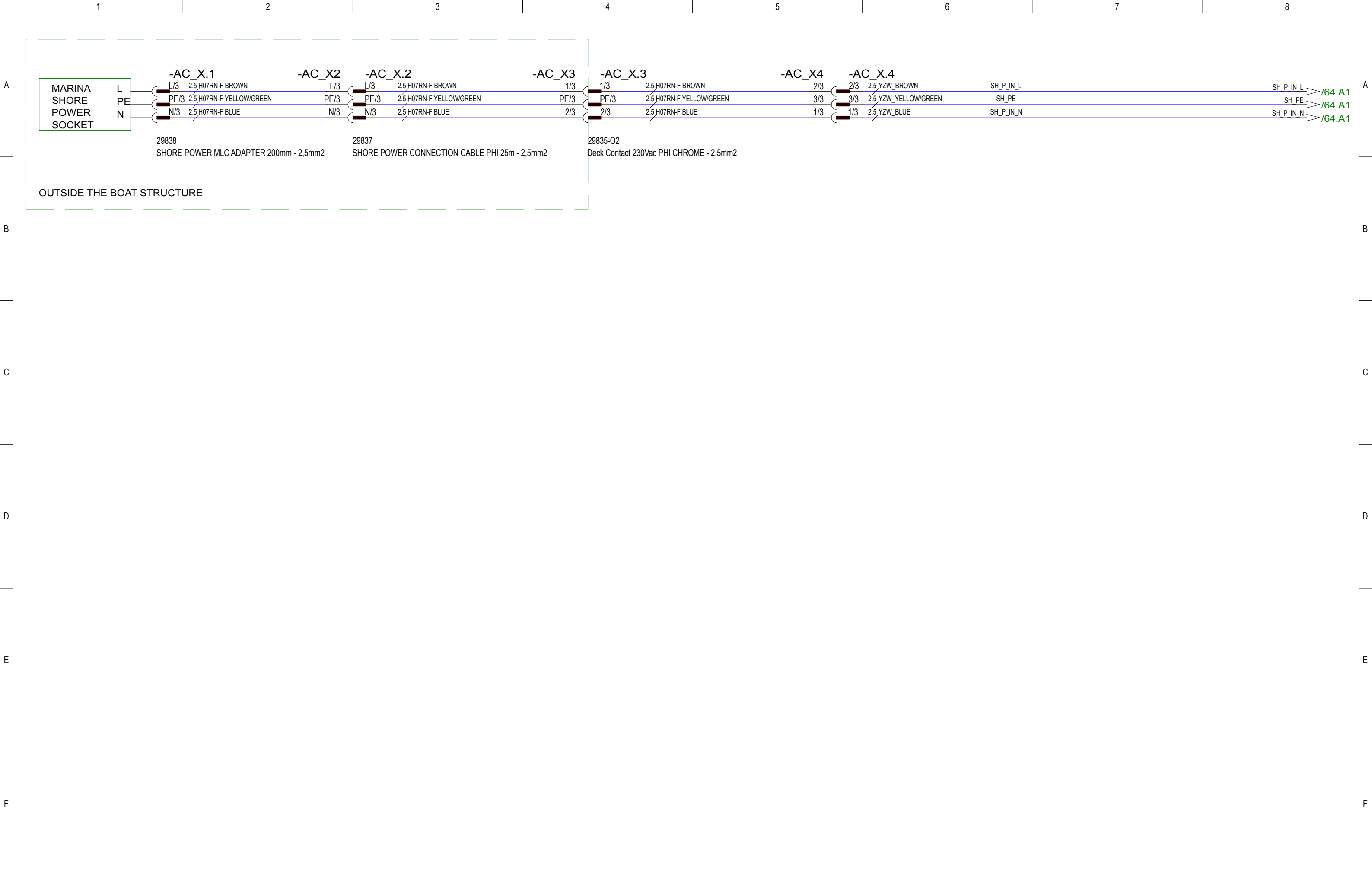
40A Charger: 3,0A
60A Charger: 4,6A
Max. Power: 1058W

INCLUDES IN CHARGER OUTPUT:
50A FUSES/LINE WITH 40 CHARGER
80A FUSES/LINE WITH 60 CHARGER

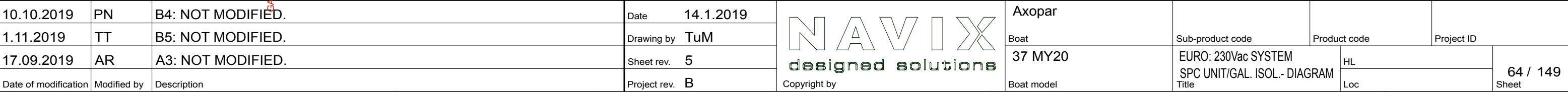
LINE 1 (BANK 1) IS SEPARATE LINE

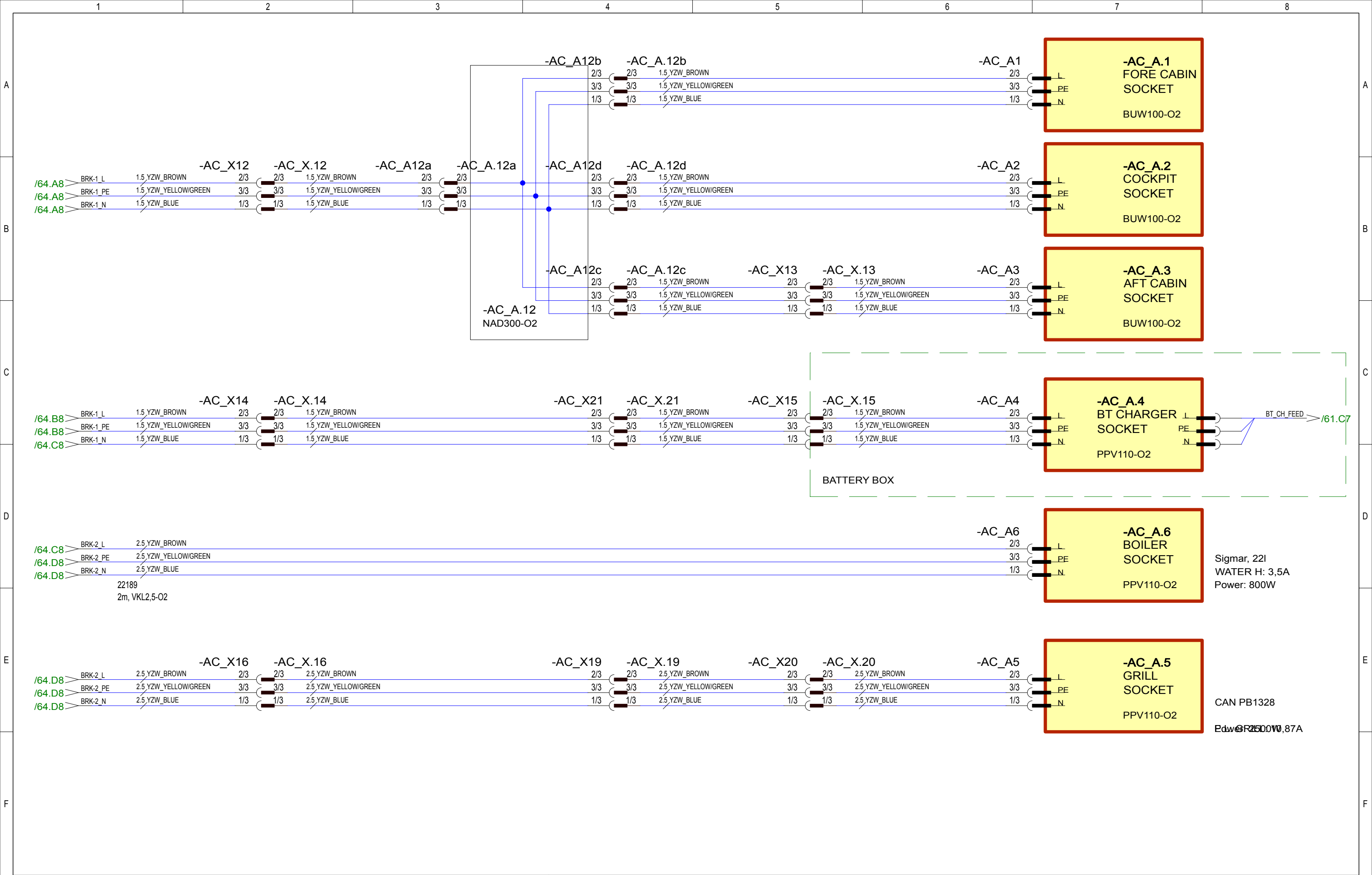
LINES 2 & 3 (BANKS 2 & 3) ARE PARALLEL LINES BUT SEPARATED WITH DIODES.

10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar							
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
17.09.2019	AR	A3: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Sheet rev.	5		37 MY20		BATTERY CHARGER - DIAGRAM		HL		61/ 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			

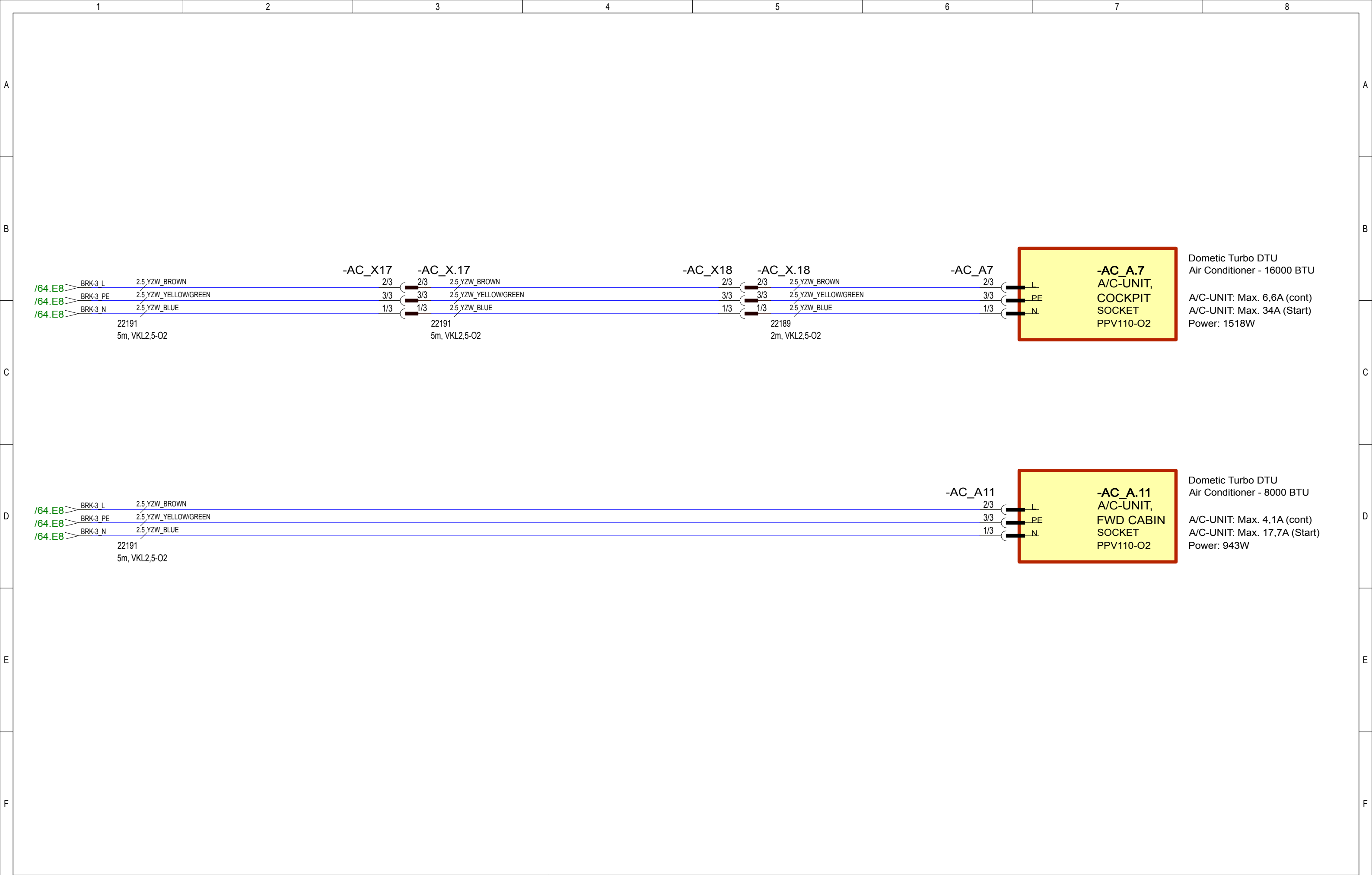


10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar				
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	EURO: 230Vac SYSTEM	HL		63 / 149
Date of modification	Modified by	Description	Project rev.	B		Boat model	SHORE LINE- DIAGRAM	Loc		
1		2		3	4	5	6	7		





10.10.2019	PN	B4: NOT MODIFIED.	Date	14.1.2019	NAVIX designed solutions Copyright by	Axopar				EURO: 230Vac SYSTEM DEVICES - DIAGRAM	HL	65 / 149 Sheet
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID			
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20						
Date of modification	Modified by	Description	Project rev.	B		Boat model						



10.10.2019	PN	B4: NOT MODIFIED.	Date	2.5.2019	NAVIX designed solutions Copyright by	Axopar	EURO: 230Vac SYSTEM DEVICES - DIAGRAM	HL	66 / 149
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat			
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20			
Date of modification	Modified by	Description	Project rev.	B		Boat model			
1	2	3	4	5	6	7	8		

	1	2	3	4	5	6	7	8	
A									
B									
C									
D									
E									
F									
	10.10.2019	PN	B4: NOT MODIFIED.	Date	4.5.2019	Axopar			
	1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM				
	17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5	37 MY20		USA: 120Vac SYSTEM	
	Date of modification	Modified by	Description	Project rev.	B	Boat model		SHORE LINE- DIAGRAM	
	1	2	3	4	5	6	7	8	

	1	2	3	4	5	6	7	8	
A	NOT DEFINED								
B									
C									
D									
E									
F									
10.10.2019	PN	B4: NOT MODIFIED.	Date	4.5.2019	NAVIX designed solutions Copyright by	Axopar			
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	USA: 120Vac SYSTEM		HL
Date of modification	Modified by	Description	Project rev.	B		Boat model	SPC UNIT/GAL. ISOL.- DIAGRAM		
1	2	3	4	5	6	7	8		

NOT DEFINED

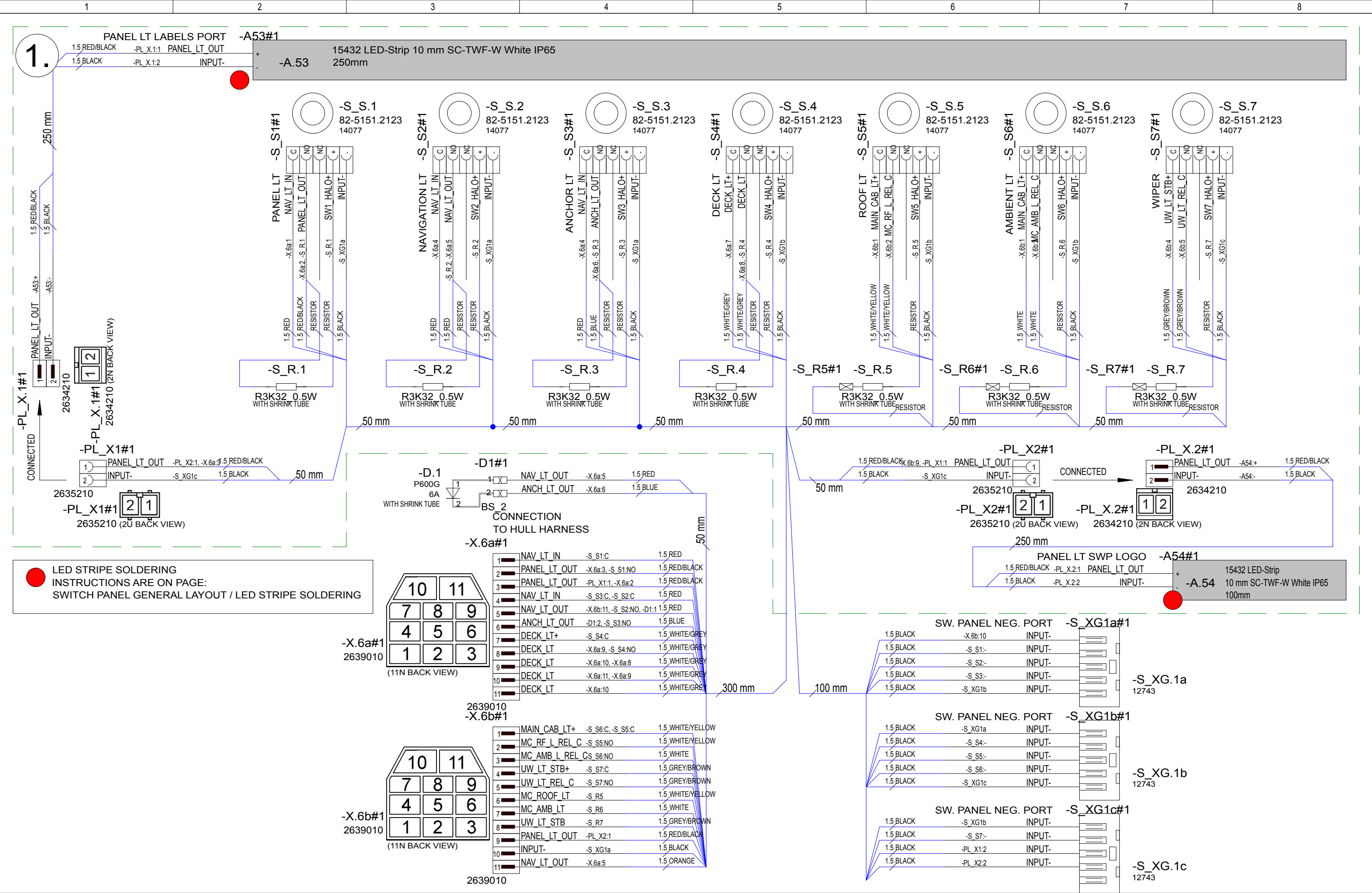


	1	2	3	4	5	6	7	8	
A	NOT DEFINED								
B									
C									
D									
E									
F									
10.10.2019	PN	B4: NOT MODIFIED.	Date	4.5.2019	NAVIX designed solutions Copyright by	Axopar			
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	USA: 120Vac SYSTEM		HL
Date of modification	Modified by	Description	Project rev.	B		Boat model	DEVICES - DIAGRAM		69 / 149
1	2	3	4	5	6	7	8		

NOT DEFINED

	1	2	3	4	5	6	7	8		
A	NOT DEFINED									
B										
C										
D										
E										
F										
10.10.2019	PN	B4: NOT MODIFIED.	Date	4.5.2019	NAVIX designed solutions Copyright by		Axopar			
1.11.2019	TT	B5: NOT MODIFIED.	Drawing by	TuM			Boat	Sub-product code	Product code	Project ID
17.09.2019	AR	A3: NOT MODIFIED.	Sheet rev.	5		37 MY20	USA: 120Vac SYSTEM		HL	70 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model	DEVICES - DIAGRAM	Loc	Sheet		
1	2	3	4	5	6	7	8			

NOT DEFINED



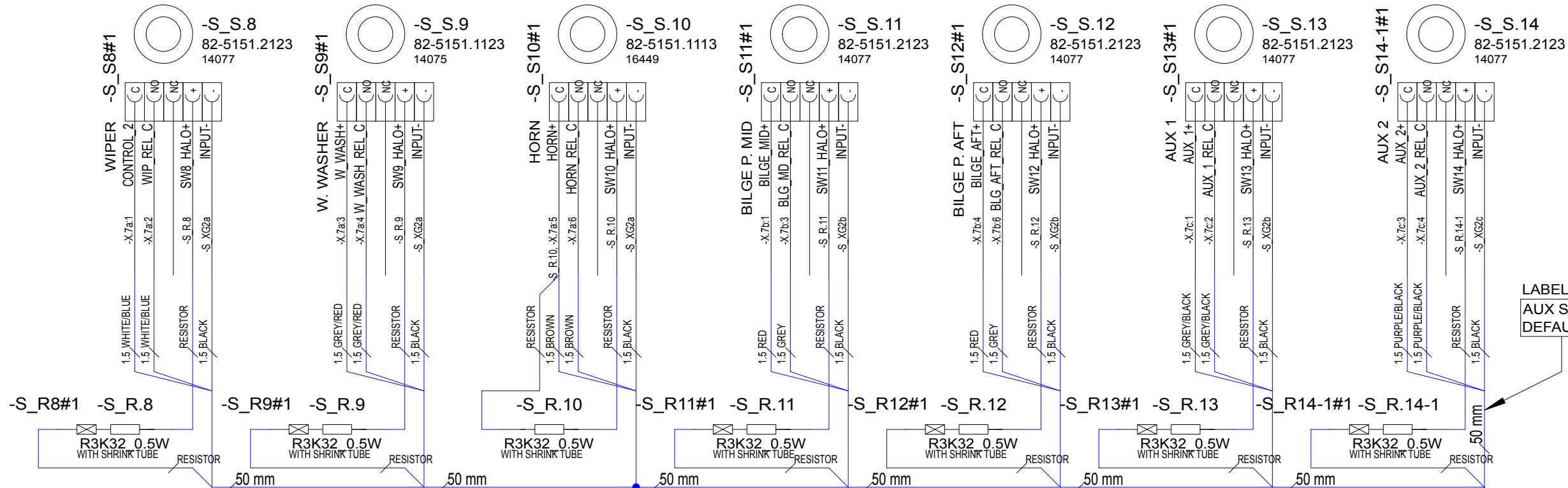
22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions	Axopar	SEE EXP VIEW		29211	71/ 149
11.09.2019	PN	A2: NEW PANEL ADDED	Drawing by	TuM		Boat	Sub-product code		Product code	
10.10.2019	PN	B2: NOT MODIFIED	Sheet rev.	2		37 MY20	SWITCH PANEL		HL	
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc	

2.

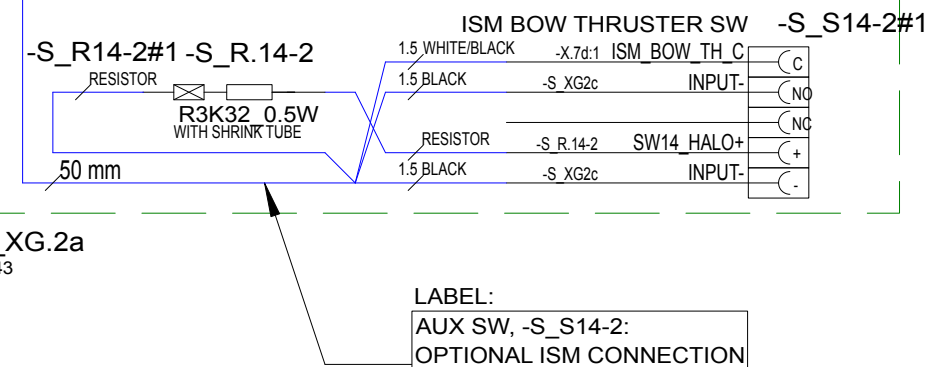
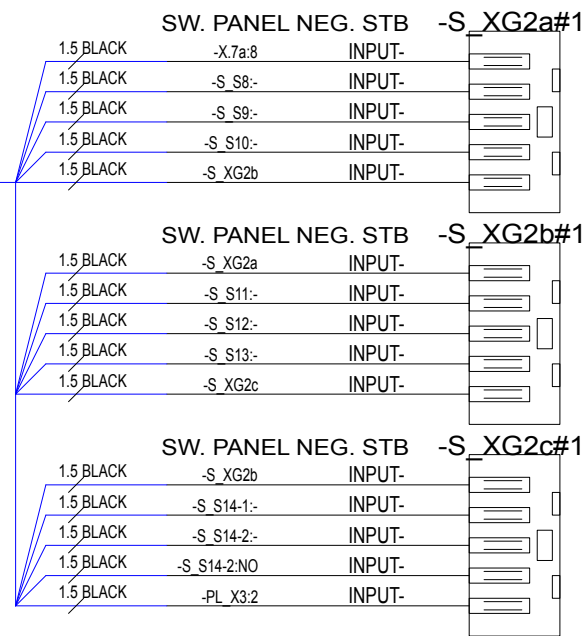
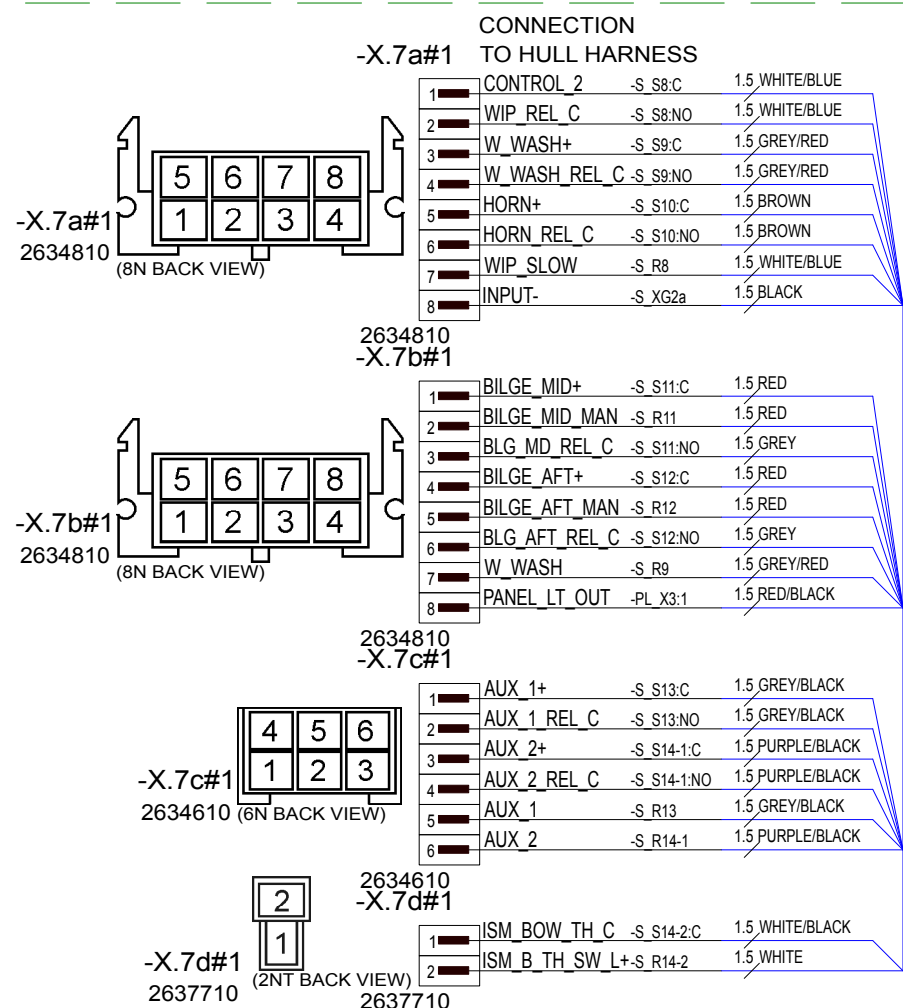
15432 LED-Strip 10 mm SC-TWF-W White IP65
250mm

-A.83

-A83#1 PANEL LT LABELS STB
PANEL_LT_OUT -PL_X3:1 1.5 RED/BLACK
INPUT- -PL_X3:2 1.5 BLACK



LABEL:
AUX SW, -S_S14-1:
DEFAULT CONNECTION.

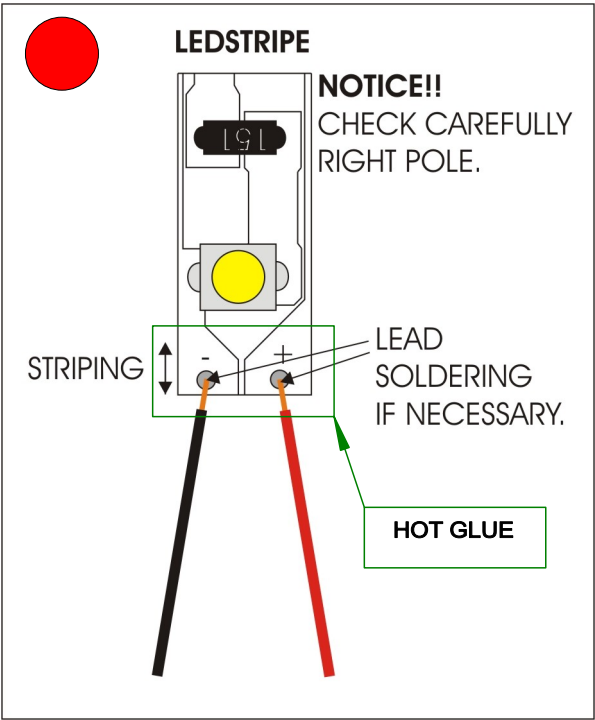
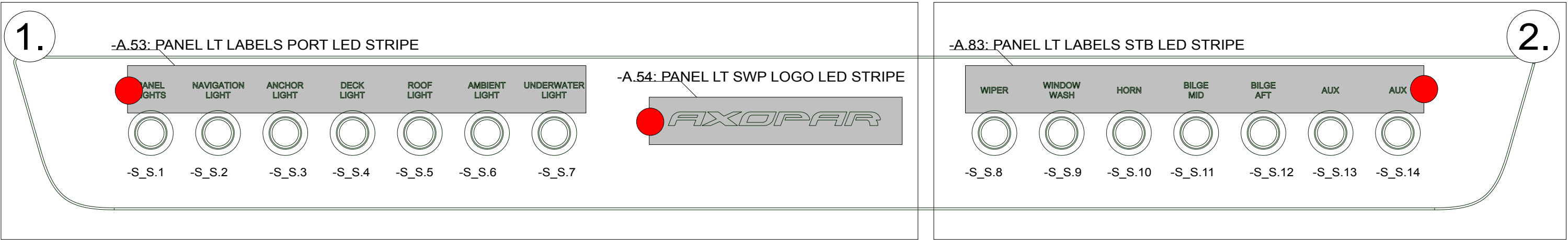


LABEL:
AUX SW, -S_S14-2:
OPTIONAL ISM CONNECTION

LED STRIPE SOLDERING
INSTRUCTIONS ARE ON PAGE:
SWITCH PANEL GENERAL LAYOUT / LED STRIPE SOLDERING

22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar Boat 37 MY20 Boat model	SEE EXP VIEW Sub-product code SWITCH PANEL Title	29211 Product code HL Loc	Project ID 72 / 149 Sheet
11.09.2019	PN	A2: NEW PANEL ADDED	Drawing by	TuM					
10.10.2019	PN	B2: NOT MODIFIED	Sheet rev.	2					
Date of modification	Modified by	Description	Project rev.	B					

SWITCH PANEL GENERAL LAYOUT / LED STRIPE SOLDERING



NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

MARKING

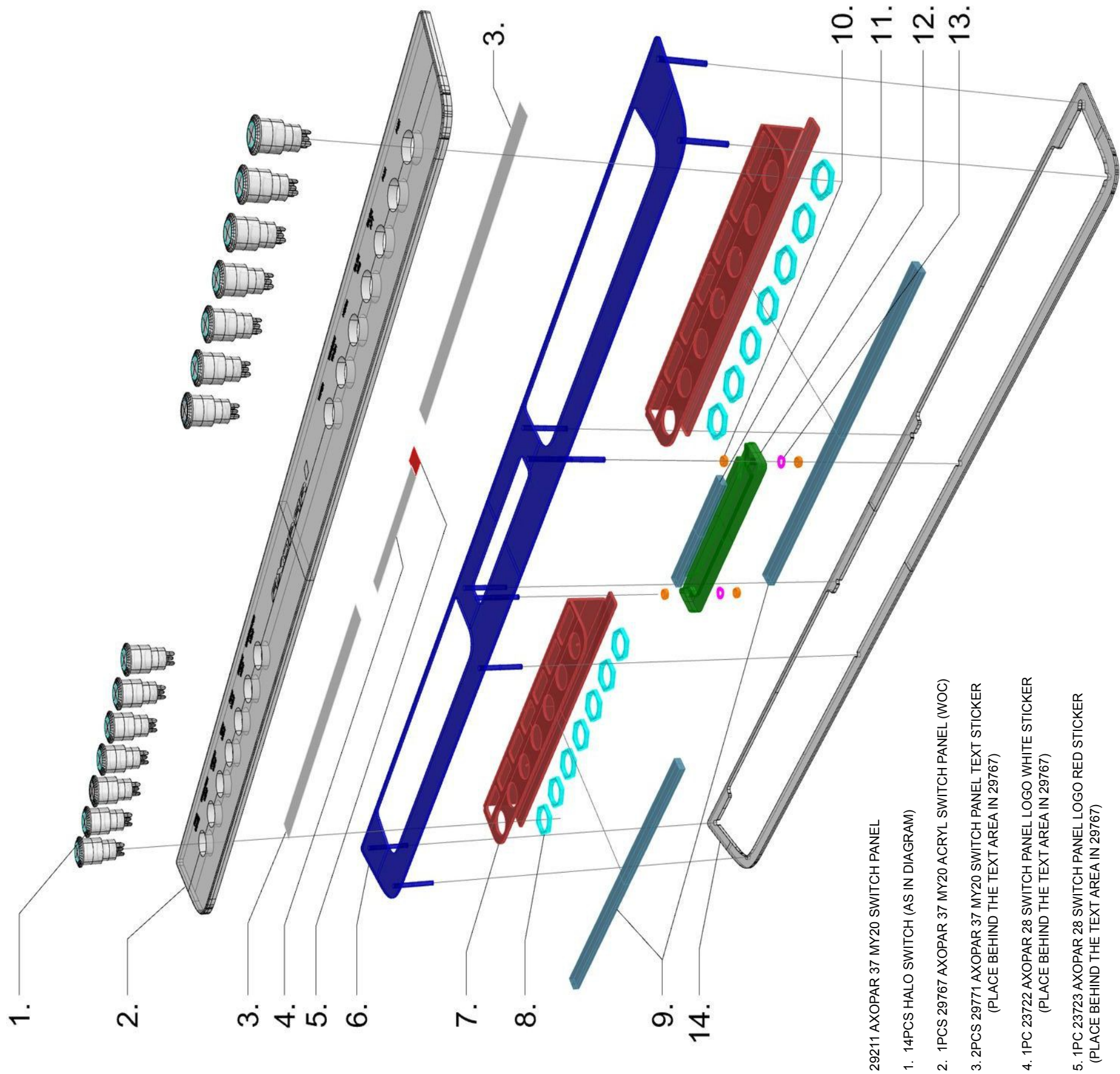
R2 ISO 6722 100V AWG16 +100 C

CABLE

EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29211	Project ID	
11.09.2019	PN	A2: NEW PANEL ADDED	Drawing by	TuM		Boat				
10.10.2019	PN	B2: NOT MODIFIED	Sheet rev.	2		37 MY20	SWITCH PANEL	HL	73 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc		Sheet

29211_AXOPAR_37_MY20_SWITCH_PANEL



29211 AXOPAR 37 MY20 SWITCH PANEL

- 1. 14PCS HALO SWITCH (AS IN DIAGRAM)
- 2. 1PCS 29767 AXOPAR 37 MY20 ACRYL SWITCH PANEL (WOC)
- 3. 2PCS 29771 AXOPAR 37 MY20 SWITCH PANEL TEXT STICKER (PLACE BEHIND THE TEXT AREA IN 29767)
- 4. 1PC 23722 AXOPAR 28 SWITCH PANEL LOGO WHITE STICKER (PLACE BEHIND THE TEXT AREA IN 29767)
- 5. 1PC 23723 AXOPAR 28 SWITCH PANEL LOGO RED STICKER (PLACE BEHIND THE TEXT AREA IN 29767)
- 6. 1PC 29768 AXOPAR 37 MY20 SWITCH PANEL METAL BACK FRAME ATTACH TO 29767 WITH BLACK MS-POLYMER GLUE
- 7. 2PCS 29770 AXOPAR_37 MY20 SWITCH PANEL LIGHT BRACKET (WOC)
- 8. 14PCS HALO SWITCH NUT
- 9. 2PCS 250mm LED STRIP (AS IN DIAGRAM) ATTACH TO BRACKET WITH CABLE TIES AND 2-SIDED TAPE
- 10. 4PCS M4 NUT A4
- 11. 1PC 100mm LED STRIP (AS IN DIAGRAM) ATTACH TO BRACKET WITH 2-SIDED TAPE
- 12. 1PC 30604 AXOPAR 37 MY20 SWITCH PANEL LOGO LIGHT BRACKET
- 13. 2PCS M4 SPRING WASHER A4

ADJUST THE DISTANCE OF THE LED BRACKET SO THE LIGHT SHINES TO LOGO CORRECTLY.

- 14. 1PCS 29769 AXOPAR 37 MY20 SWITCH PANEL GASKET (WOC) GLUE WITH 2-SIDED TAPE TO THE BACKSIDE OF 29768

TE 20.05.2019
TE 11.09.2019

EXP VIEW

22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019
11.09.2019	PN	A2: NEW PANEL ADDED	Drawing by	TuM
10.10.2019	PN	B2: NOT MODIFIED	Sheet rev.	2
Date of modification	Modified by	Description	Project rev.	B

NAVIX

designed solutions

Copyright by

Axopar	SEE EXP VIEW	29211		
Boat	Sub-product code	Product code	Project ID	
37 MY20	SWITCH PANEL	HL	74 / 149	
Boat model	Title	Loc	Sheet	

Axopar 37 MY20 SWITCH PANEL 29211 INSPECTION SHEET

PRUDUCT LABEL



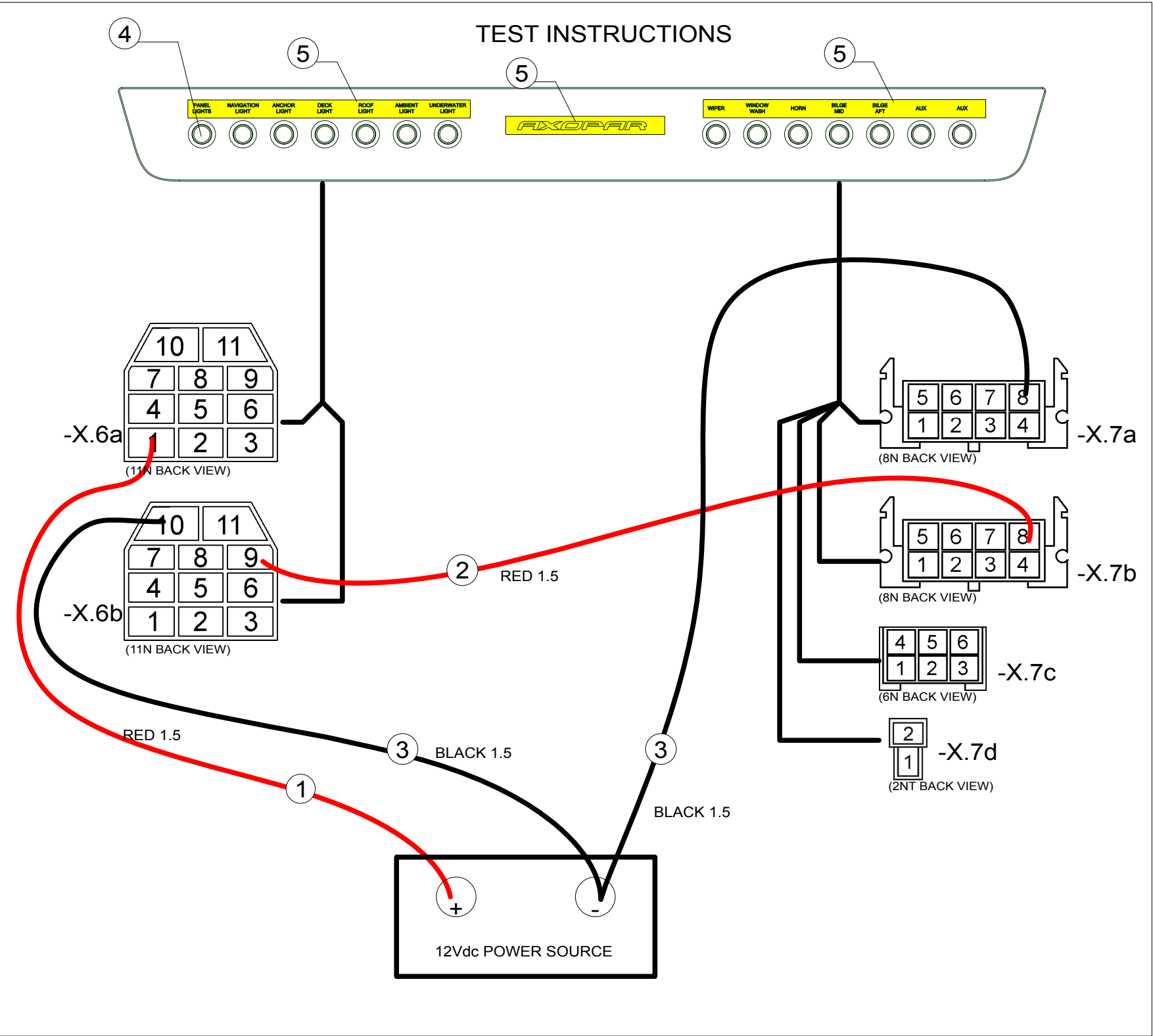
TEST

- 1) Put +12V to -X.6a/1
- 2) Put jump wire to -X.6b/9 -> -X.7b/8
- 3) Put MINUS (-) to -X.6b/10 and -X.7a/8
- 4) Press PANEL LT (-S_S1) -switch on
- 5) Check you have panel texts illuminated

PASS / FAIL

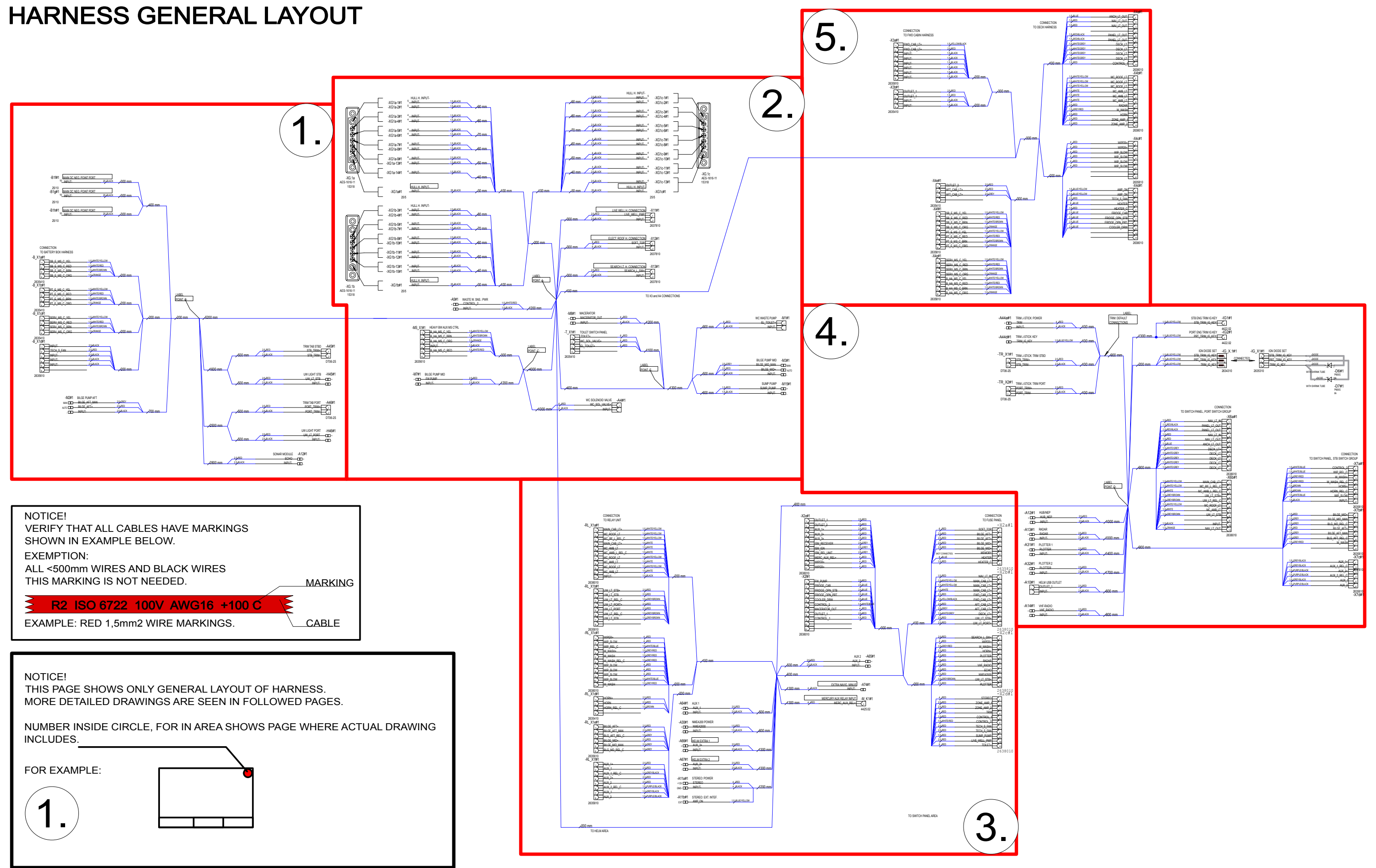
DATE

TESTED BY

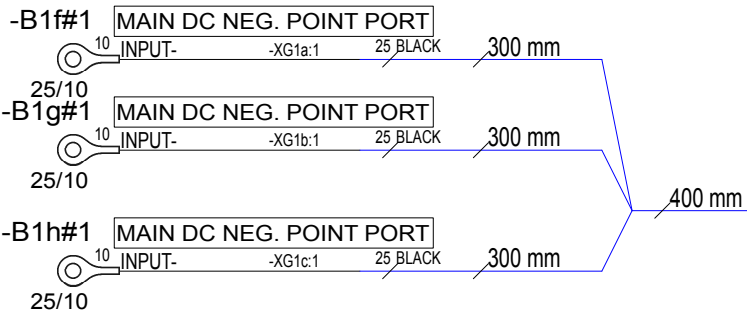


22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29211	Project ID
11.09.2019	PN	A2: NEW PANEL ADDED	Drawing by	TuM		Boat	Sub-product code	Product code	
10.10.2019	PN	B2: NOT MODIFIED	Sheet rev.	2		37 MY20	SWITCH PANEL	HL	
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc	
1	2	3	4	5	6	7	8	9	75 / 149 Sheet

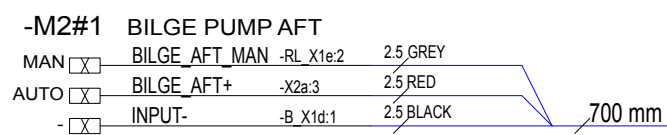
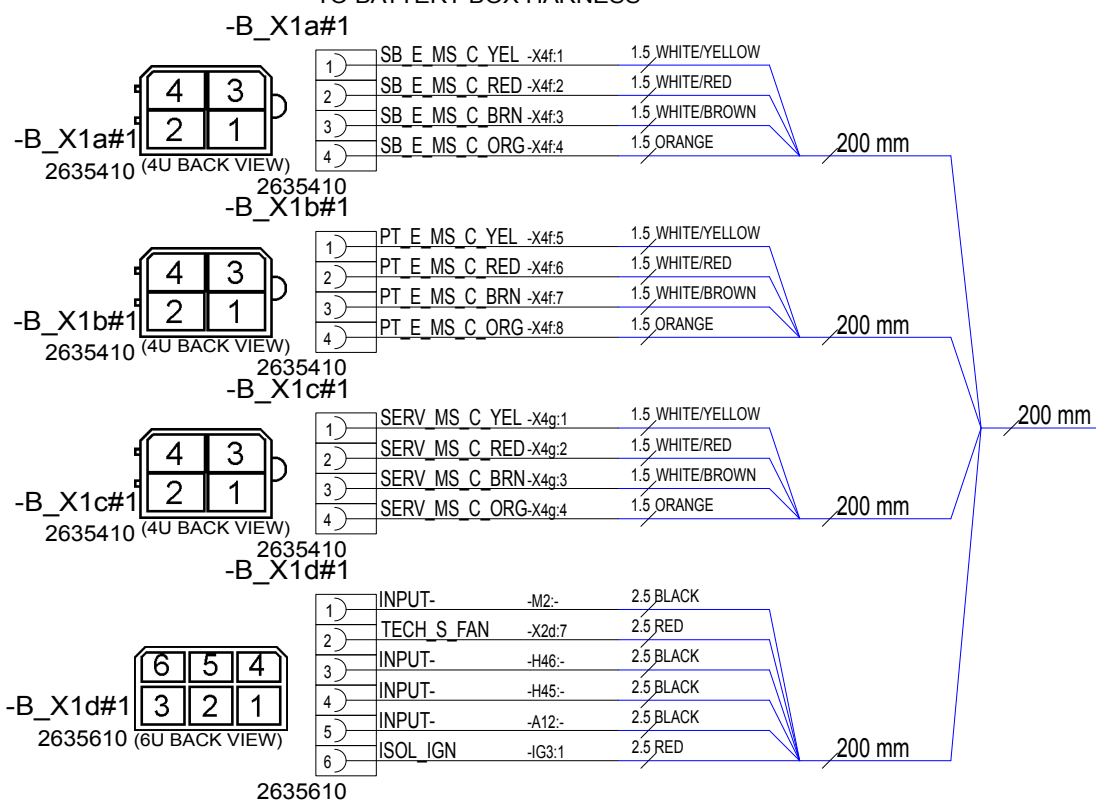
HARNESS GENERAL LAYOUT



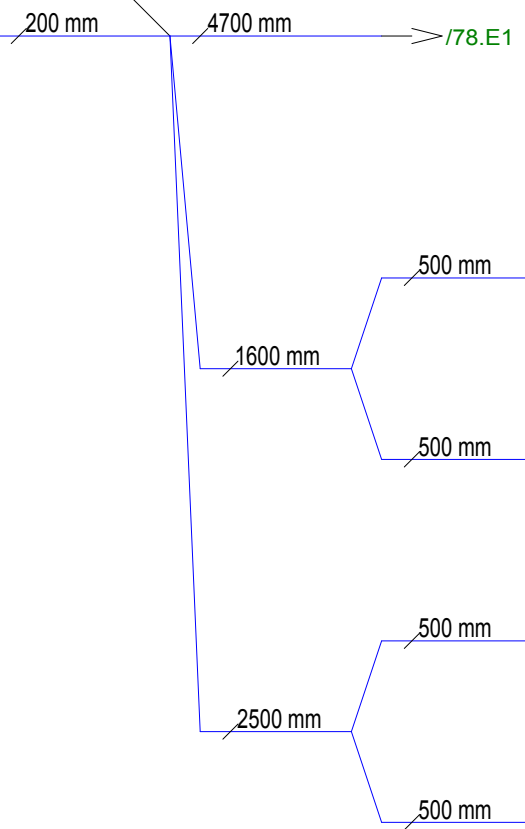
20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	 designed solutions Copyright by	Axopar				
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13	Drawing by	TuM		Boat	Sub-product code	29585	Product code	Project ID
			Sheet rev.	2		37 MY20	HULL HARNESS		HL	76 / 149 Sheet
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc	



CONNECTION
TO BATTERY BOX HARNESS



LABEL
POINT -B-



NOTICE!
BATTERY CABLES NEED TO ADD MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG6 +100 C

EXAMPLE: RED 16mm2 WIRE MARKINGS.

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

EQUIVALENCY:	
mm2	AWG
10 mm2	= AWG8
16 mm2	= AWG6
25 mm2	= AWG3
35 mm2	= AWG2

LOOK FOR EQUIVALENT AWG SIZE FOR mm2
AND ADD THIS TO CABLE MARKINGS.

FOR EXAMPLE:
CABLE SIZE IS 25mm2 --> MARKING AWG3.

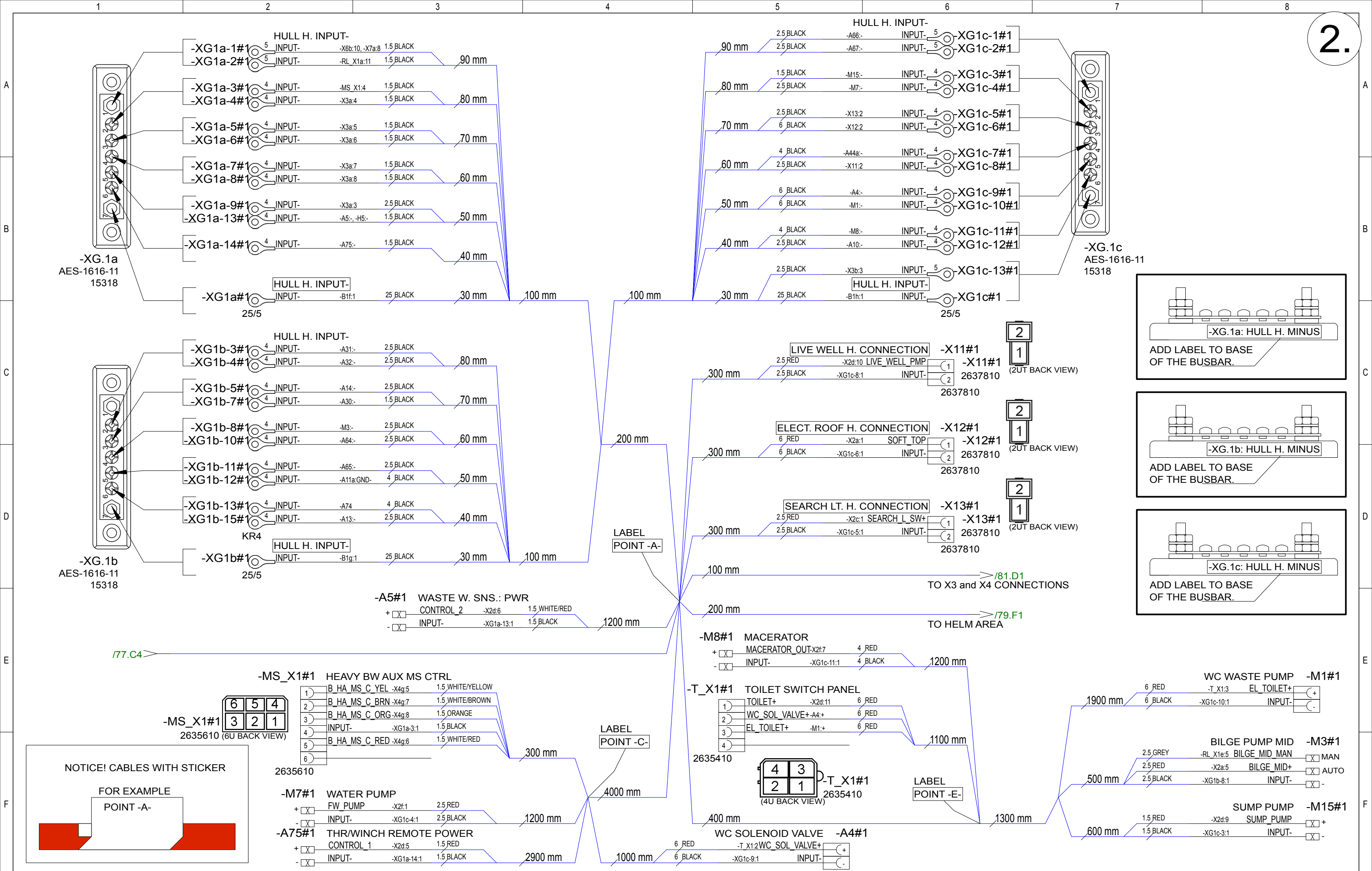
DELIVERED SEPARATELY

-A.45a & -A.46a
2 PCS DT04-2P
16461
+ 2PCS WEDGELOCK: W2P
16467
+ 4 PCS DLU 10931852

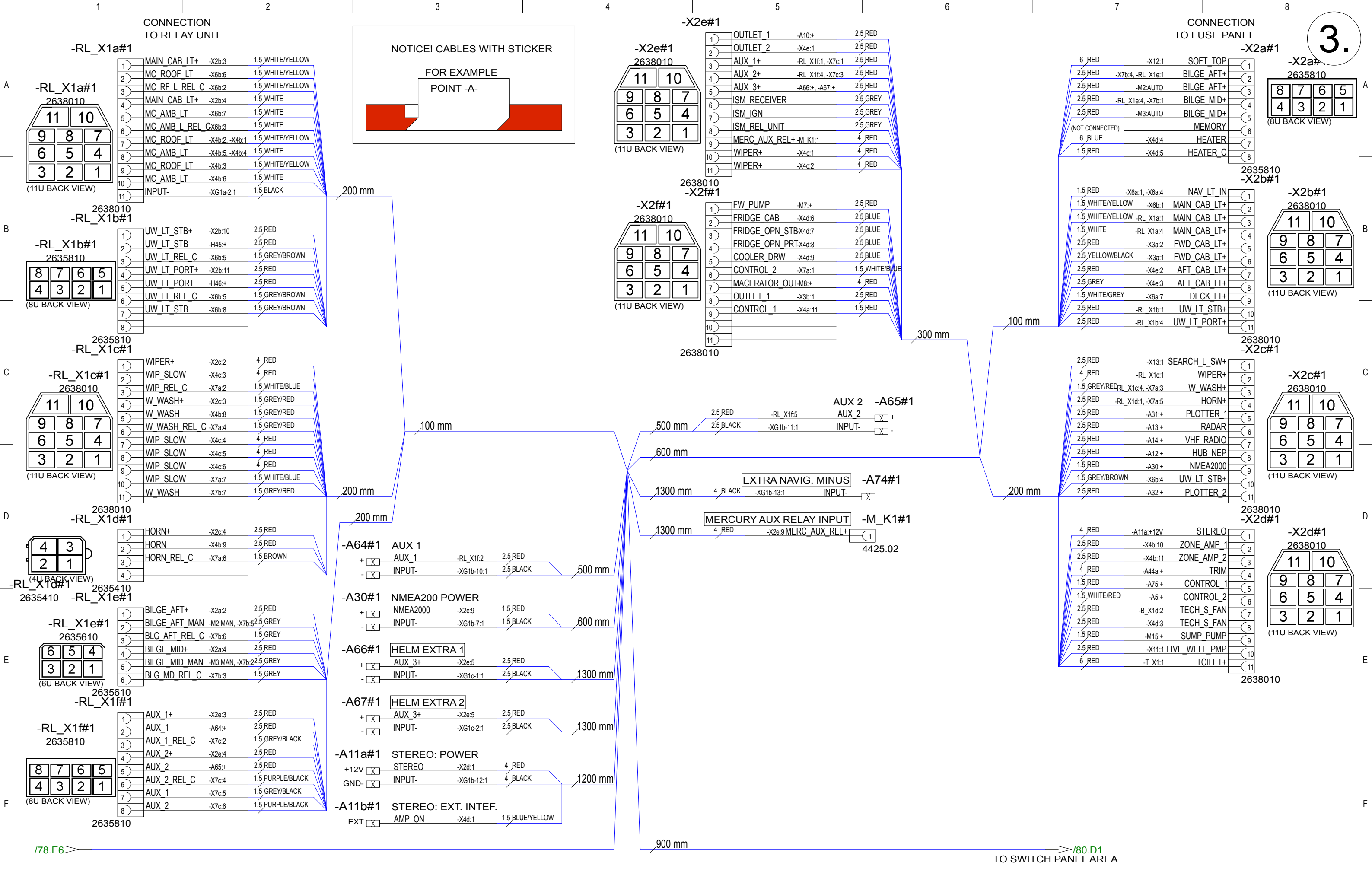
NOTICE! CABLES WITH STICKER

FOR EXAMPLE
POINT -A-

20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	Axopar		29585			
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13	Drawing by	TuM	Boat		Sub-product code	Product code	Project ID	
			Sheet rev.	2	37 MY20		HULL HARNESS	HL	77 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title	Loc	Sheet	
1		2	3	4	5	6	7		8	



20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	NAVIX designed solutions	Axopar	Boat	37 MY20	Boat model	Sub-product code	HULL HARNESS	29585	Product code	Project ID	78 / 149
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13	Drawing by	TuM											
			Sheet rev.	2											
Date of modification	Modified by	Description	Project rev.	B	Copyright by					Title		HL	Loc		Sheet

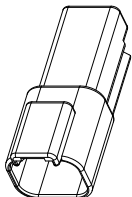


3.

20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	NAVIX designed solutions Copyright by	Axopar				29585		Project ID	
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13	Drawing by	TuM		Boat	Sub-product code						
			Sheet rev.	2		37 MY20		HULL HARNESS		HL		79 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			

DELIVERED SEPARATELY

2PCS DT04-2P
16461
+ 2PCS WEDGELOCK: W2P
16467
+ 4 PCS DLU 10931852

**-A44a#1 TRIM J-STICK: POWER**

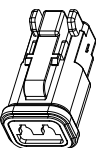
+ ☐ TRIM -X2d:4 4 RED
- ☐ INPUT- -XG1c:7:1 4 BLACK

-A44d#1 TRIM J-STICK: KEY

☐ TRIM_IG_KEY -IG_X.1:3 1.5 BLUE/YELLOW

-TR_X1#1

DT06-2S
10930002
+WEDGELOCK: W2S
10930102

**-TR_X1#1 TRIM J-STICK: TRIM STBD**

1 STB_TRIM+ -A45:1 2.5 RED
2 STB_TRIM- -A45:2 2.5 BLACK

-TR_X2#1 TRIM J-STICK: TRIM PORT

1 PORT_TRIM+ -A46:1 2.5 RED
2 PORT_TRIM- -A46:2 2.5 BLACK

-TR_X2#1

DT06-2S
10930002
+WEDGELOCK: W2S
10930102



/79.F7

-A12#1 HUB/NEP

+ ☐ HUB_NEP -X2c:8 2.5 RED
- ☐ INPUT- -B_X1d:5 2.5 BLACK

-A13#1 RADAR

+ ☐ RADAR -X2c:6 2.5 RED
- ☐ INPUT- -XG1b:15:1 2.5 BLACK

-A31#1 PLOTTER 1

+ ☐ PLOTTER 1 -X2c:5 2.5 RED
- ☐ INPUT- -XG1b:3:1 2.5 BLACK

-A32#1 PLOTTER 2

+ ☐ PLOTTER 2 -X2c:11 2.5 RED
- ☐ INPUT- -XG1b:4:1 2.5 BLACK

-A10#1 HELM USB OUTLET

+ ☐ OUTLET_1 -X2e:1 2.5 RED
- ☐ INPUT- -XG1c:12:1 2.5 BLACK

-A14#1 VHF-RADIO

+ ☐ VHF_RADIO -X2c:7 2.5 RED
- ☐ INPUT- -XG1b:5:1 2.5 BLACK

-H5#1 COMPASS LT

+ ☐ NAV_LT_OUT -X6b:11 1.5 ORANGE
- ☐ INPUT- -XG1a:13:1 1.5 BLACK

NOTICE! CABLES WITH STICKER

FOR EXAMPLE
POINT -A-



LABEL:
TRIM: DEFAULT
CONNECTIONS

LABEL
POINT -D-

STB ENG TRIM IG KEY -IG1#1

1.5 BLUE/YELLOW -IG_X.1:1 STB_TRIM_IG_KEY

PORT ENG TRIM IG KEY -IG2#1

1.5 BLUE/YELLOW -IG_X.1:2 PRT_TRIM_IG_KEY

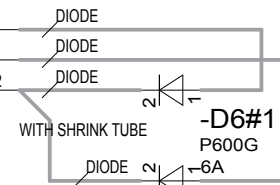
IGN DIODE SET -IG_X.1#1

1.5 BLUE/YELLOW -IG1:1 STB_TRIM_IG_KEY
1.5 BLUE/YELLOW -IG2:1 PRT_TRIM_IG_KEY
1.5 BLUE/YELLOW -A44d TRIM_IG_KEY

CONNECTED

IGN DIODE SET

1 STB_TRIM_IG_KEY -D6:1
2 PRT_TRIM_IG_KEY -D7:1
3 TRIM_IG_KEY -D6:2, -D7:2

**-IG_X.1#1**

2634310 (3NT BACK VIEW)

-IG_X1#1

2635310 (3UT BACK VIEW)

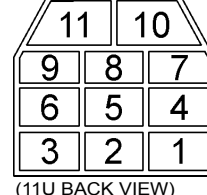
CONNECTION
TO SWITCH PANEL, PORT SWITCH GROUP

-X6a#1

1.5 RED -X2b:1 NAV_LT_IN
1.5 RED/BLACK -X4a:5 PANEL_LT_OUT
1.5 RED/BLACK -X4a:6 PANEL_LT_OUT
1.5 RED -X2b:1 NAV_LT_IN
1.5 RED -X4a:2 NAV_LT_OUT
1.5 BLUE -X4a:1 ANCH_LT_OUT
1.5 WHITE/GREY -X2b:9 DECK_LT+
1.5 WHITE/GREY -X4a:7 DECK_LT
1.5 WHITE/GREY -X4a:8 DECK_LT
1.5 WHITE/GREY -X4a:9 DECK_LT
1.5 WHITE/GREY -X4a:10 DECK_LT

-X6a#1

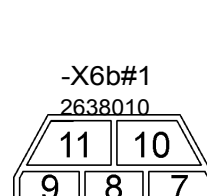
2638010



(11U BACK VIEW)

-X6b#1

2638010



(11U BACK VIEW)

1.5 WHITE/YELLOW -X2b:2 MAIN_CAB_LT+
1.5 WHITE/YELLOW -RL_X1a:3 MC_RF_L_REL_C
1.5 WHITE -RL_X1a:6 MC_AMB_L_REL_C
1.5 GREY/BROWN -X2c:10 UW_LT_STB+
1.5 GREY/BROWNRL_X1b:3, -RL_X1b:6 UW_LT_REL_C
1.5 WHITE/YELLOW -RL_X1a:2 MC_ROOF_LT
1.5 WHITE -RL_X1a:5 MC_AMB_LT
1.5 GREY/BROWN -RL_X1b:7 UW_LT_STB
1.5 RED/BLACK -X7b:8 PANEL_LT_OUT
1.5 BLACK -XG1a:1:1 INPUT-
1.5 ORANGE -H5:+ NAV_LT_OUT

2638010

ISOLATOR IGN -IG3#1

1.5 RED -B_X1d:6 ISOL_IGN

4422.02

CONNECTION
TO SWITCH PANEL, STB SWITCH GROUP

-X7a#1

1.5 WHITE/BLUE -X2f:6 CONTROL_2
1.5 WHITE/BLUE -RL_X1c:3 WIP_REL_C
1.5 GREY/RED -X2c:3 W_WASH+
1.5 GREY/RED -RL_X1c:6 W_WASH_REL_C
1.5 BROWN -X2c:4 HORN+
1.5 BROWN -RL_X1d:3 HORN_REL_C
1.5 WHITE/BLUE -RL_X1c:10 WIP_SLOW
1.5 BLACK -XG1a:1:1 INPUT-

-X7a#1

2635810



(8U BACK VIEW)

-X7b#1

1.5 RED -X2a:4 BILGE_MID+
1.5 GREY -RL_X1e:5 BILGE_MID_MAN
1.5 GREY -RL_X1e:6 BLG_MD_REL_C
1.5 RED -X2a:2 BILGE_AFT+
1.5 GREY -RL_X1e:2 BILGE_AFT_MAN
1.5 GREY -RL_X1e:3 BLG_AFT_REL_C
1.5 GREY/RED -RL_X1c:11 W_WASH
1.5 RED/BLACK -X6b:9 PANEL_LT_OUT

-X7b#1

2635810



(8U BACK VIEW)

-X7c#1

1.5 GREY/BLACK -X2e:3 AUX_1+
1.5 GREY/BLACK -RL_X1f:3 AUX_1_REL_C
1.5 PURPLE/BLACK -X2e:4 AUX_2+
1.5 PURPLE/BLACK -RL_X1f:6 AUX_2_REL_C
1.5 GREY/BLACK -RL_X1f:7 AUX_1
1.5 PURPLE/BLACK -RL_X1f:8 AUX_2

-X7c#1

2635610



(6U BACK VIEW)

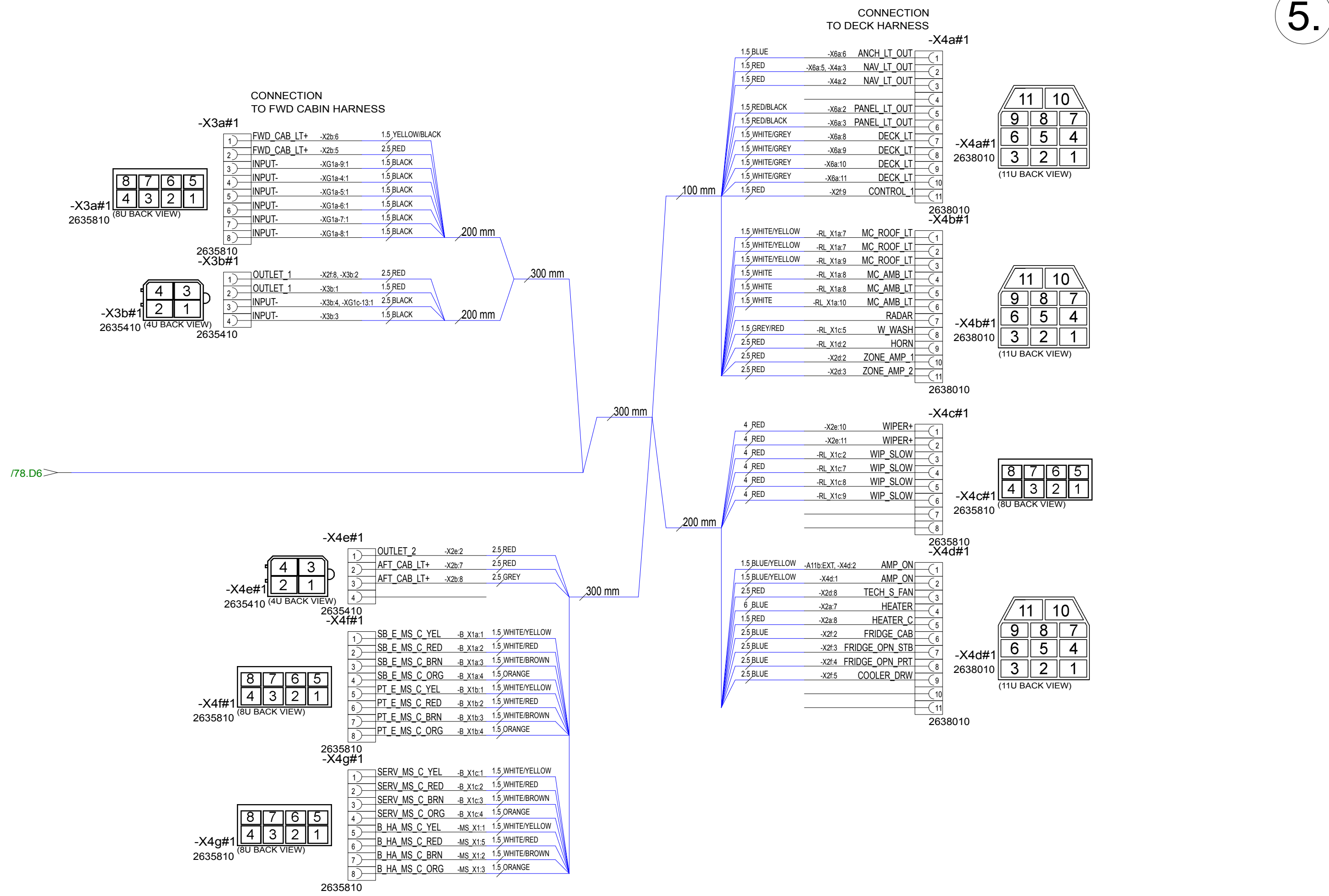
2635610

20.5.2019	TuM	A1: INTRODUCED DRAWING.
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13
Date of modification	Modified by	Description

Date	20.5.2019
Drawing by	TuM
Sheet rev.	2
Project rev.	B

NAVIX
designed solutions
Copyright by

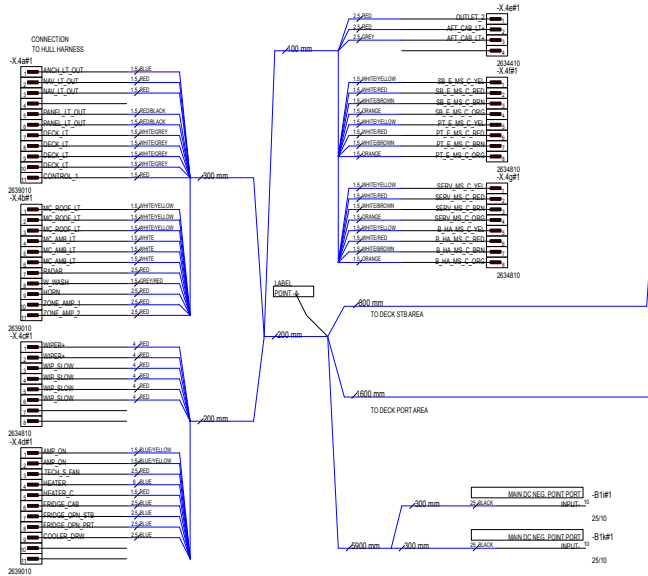
Axopar	29585	Project ID
Boat	Sub-product code	Product code
37 MY20	HULL HARNESS	HL
Boat model	Title	Loc
		80 / 149 Sheet



20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	NAVIX designed solutions Copyright by	Axopar		29585		Project ID	
10.10.2019	PN	B2: MOVED TO OWN HARNESS ISM & AUTOPILOT, MOVED -A4, ADDED -A12, -A13	Drawing by	TuM		Boat	Sub-product code				
			Sheet rev.	2		37 MY20		HULL HARNESS		HL	81/ 149
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title	Loc	Sheet	

HARNESS GENERAL LAYOUT

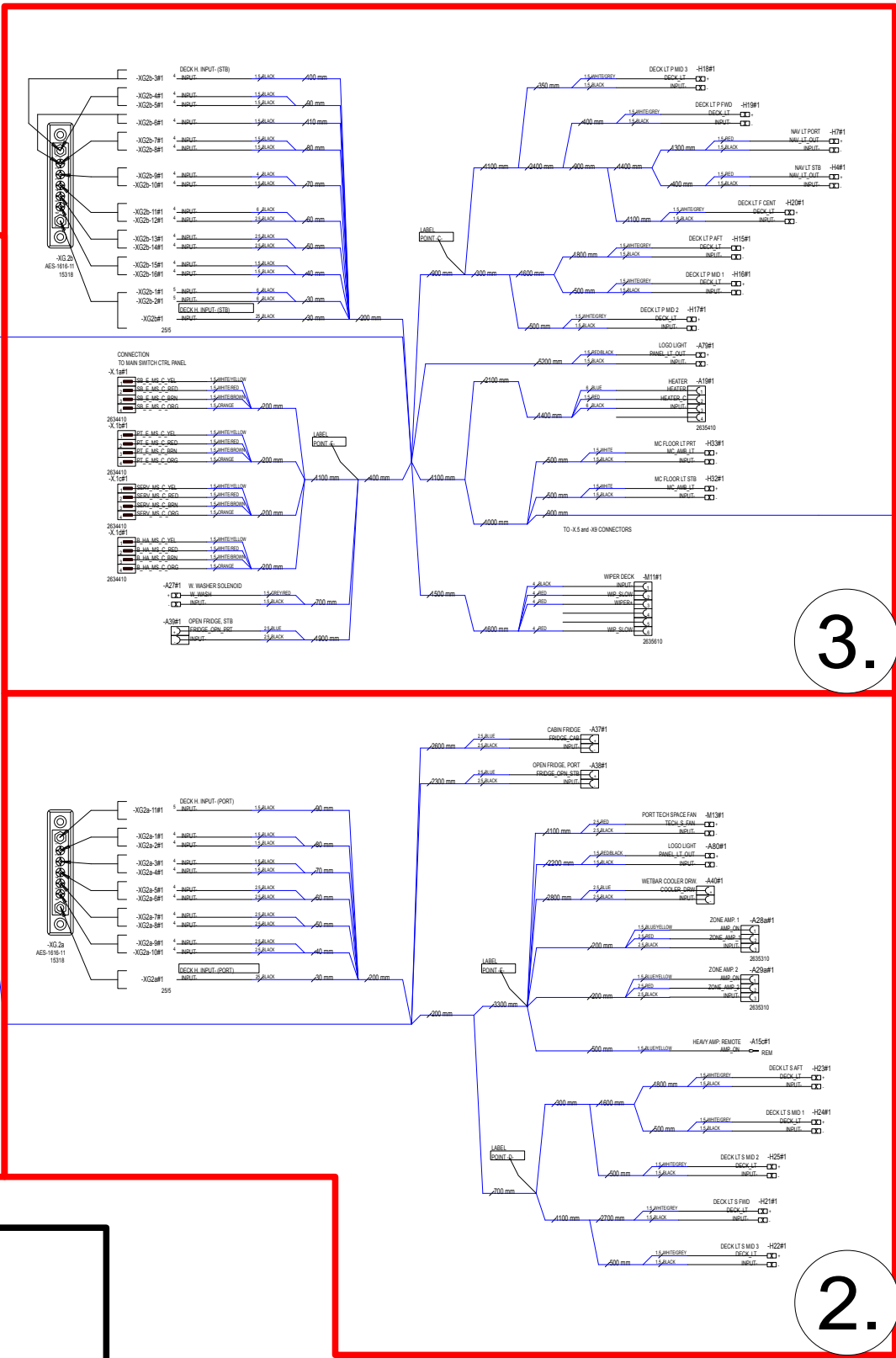
1.



NOTICE!
THIS PAGE SHOWS ONLY GENERAL LAYOUT OF HARNESS.
MORE DETAILED DRAWINGS ARE SEEN IN FOLLOWED PAGES.

NUMBER INSIDE CIRCLE, FOR IN AREA SHOWS PAGE WHERE ACTUAL DRAWING INCLUDES.

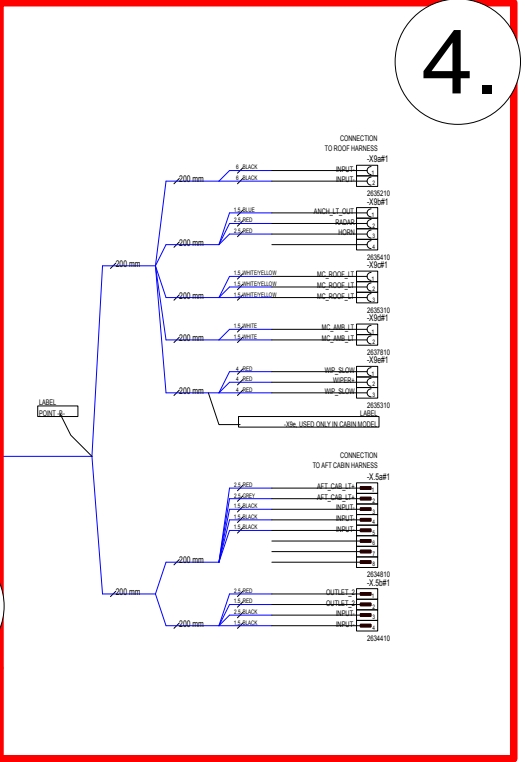
FOR EXAMPLE:



3.

2.

4.



NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

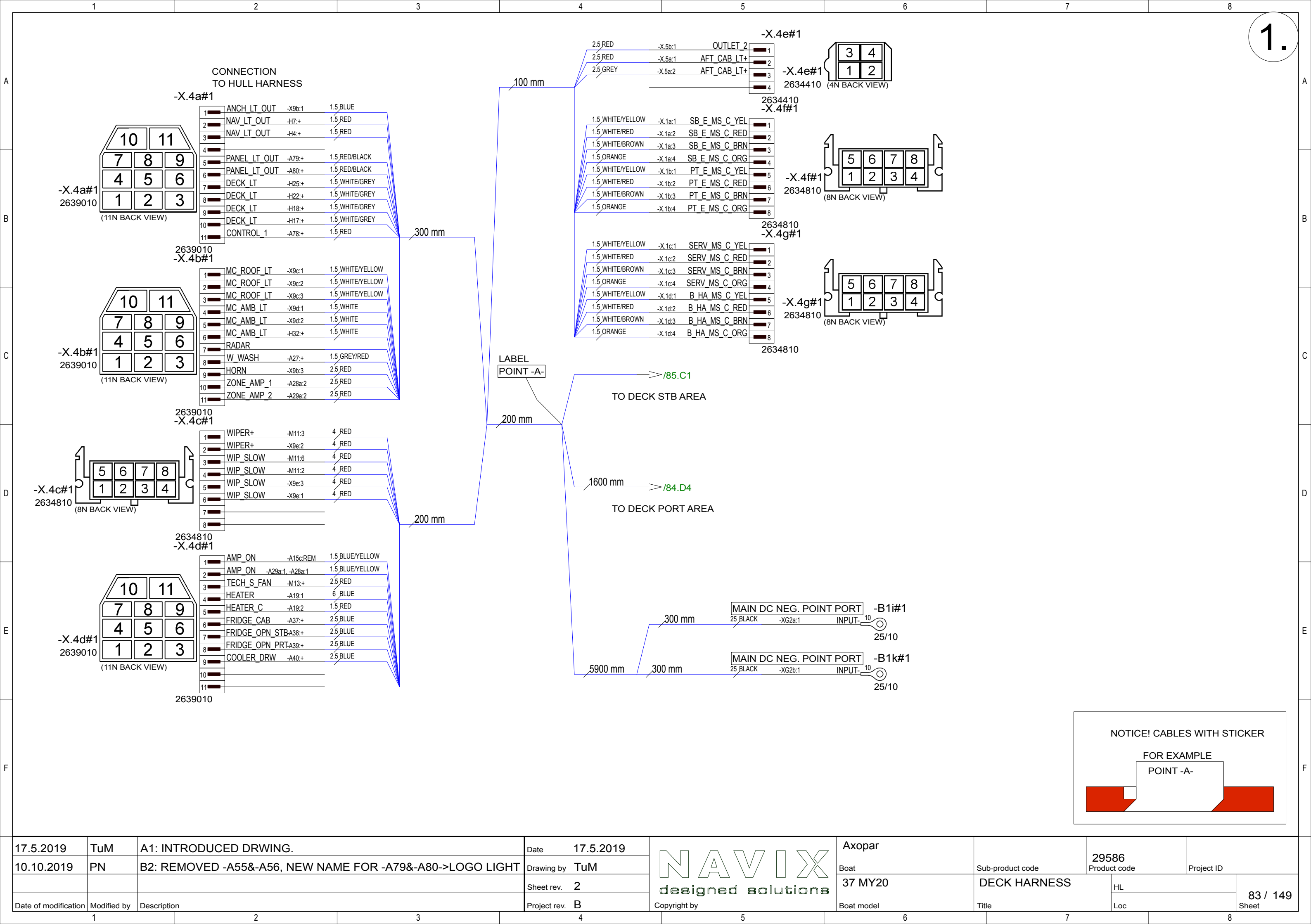
R2 ISO 6722 100V AWG16 +100 C

EXAMPLE: RED 1,5mm² WIRE MARKINGS.

MARKING

CABLE

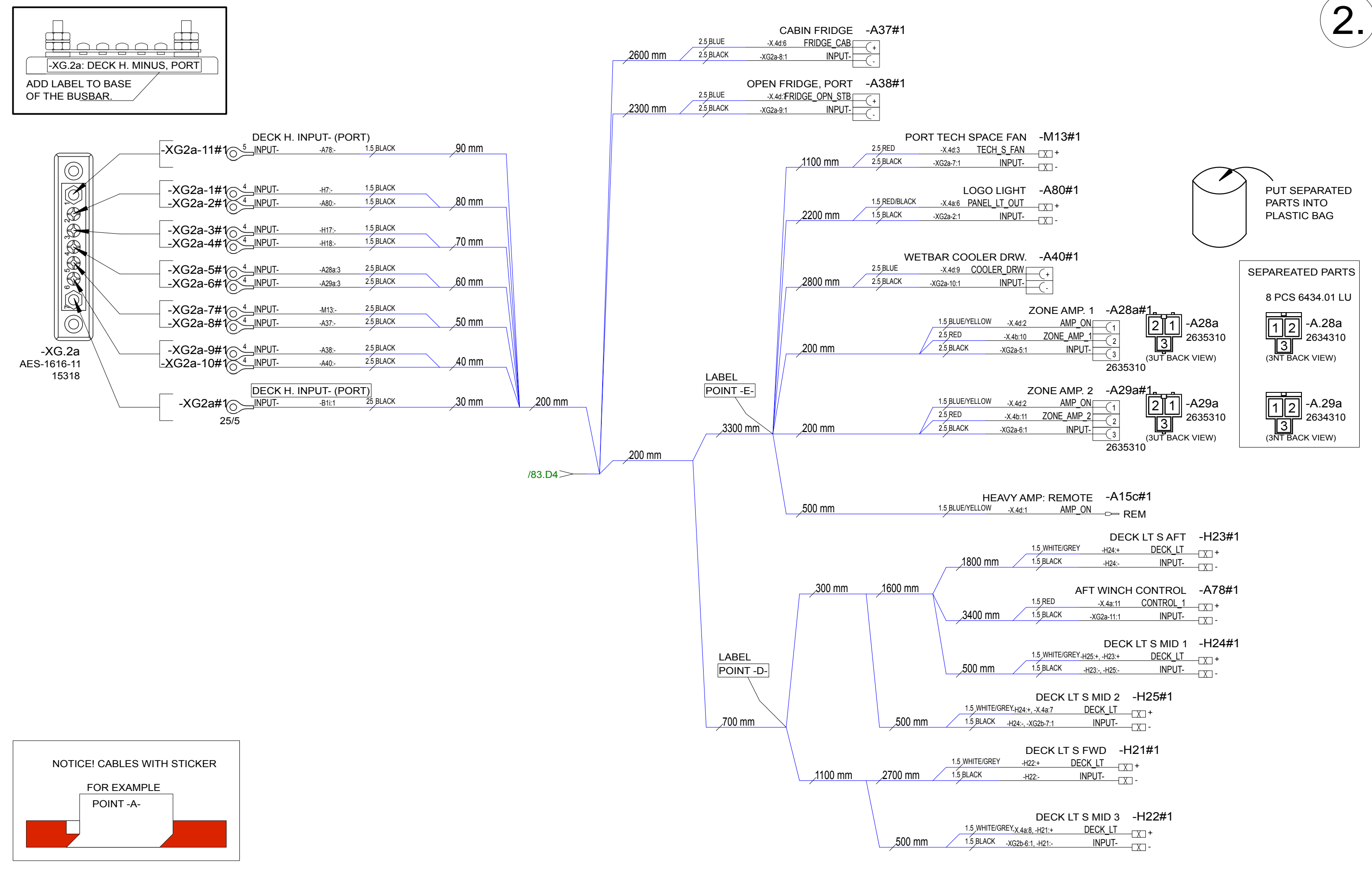
20.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	20.5.2019	Axopar		29586	
10.10.2019	PN	B2: REMOVED -A55&-A56, NEW NAME FOR -A79&-A80->LOGO LIGHT	Drawing by	TuM	Boat		Product code	Project ID
			Sheet rev.	2	37 MY20		HL	82 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model	Title	Loc	Sheet



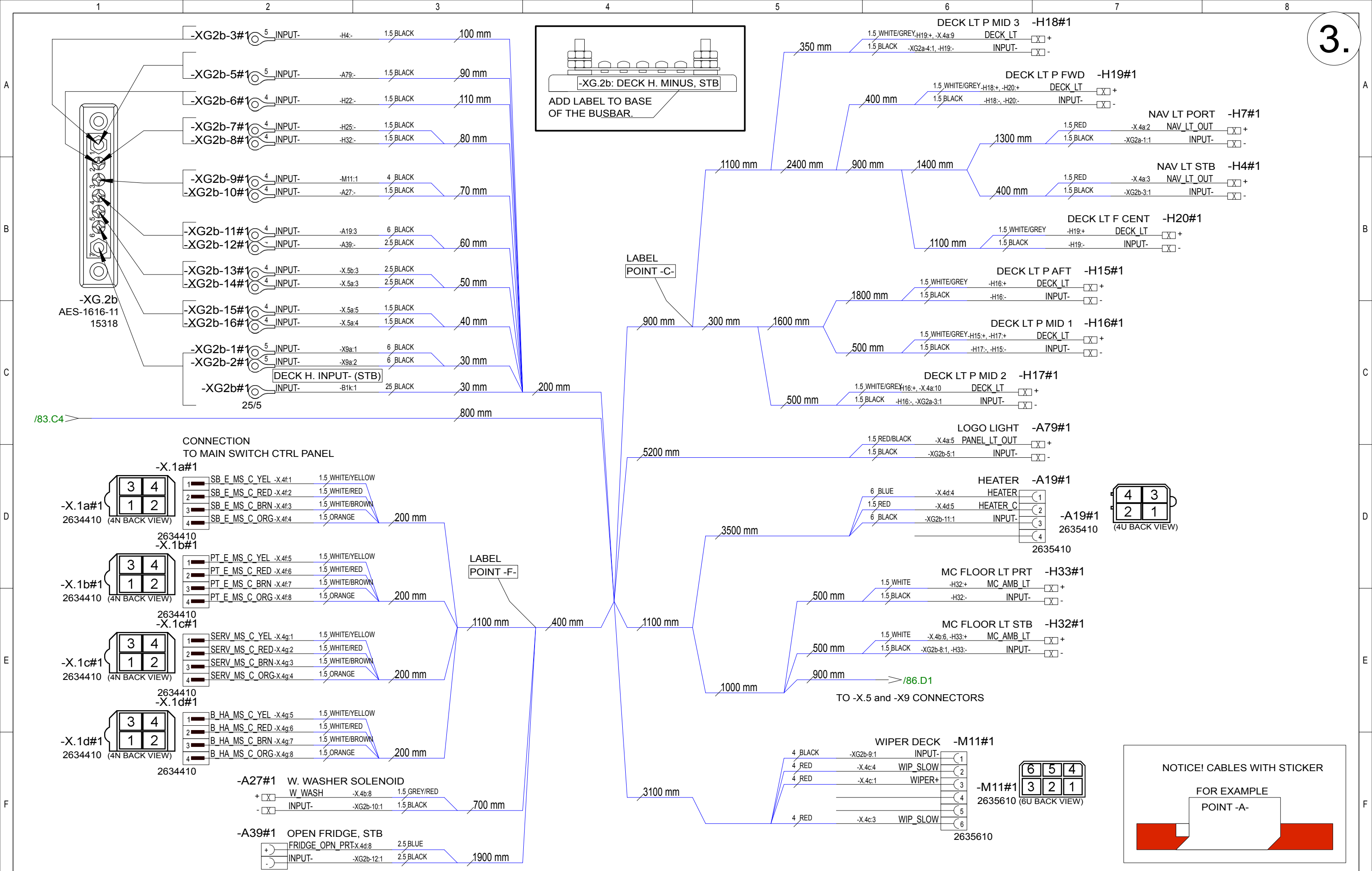
NOTICE! CABLES WITH STICKER

FOR EXAMPLE

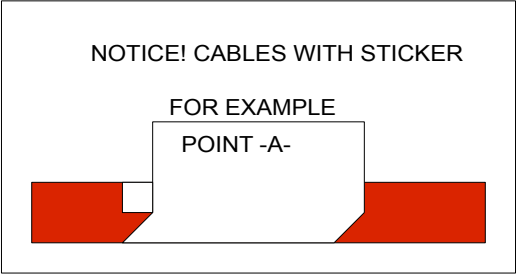
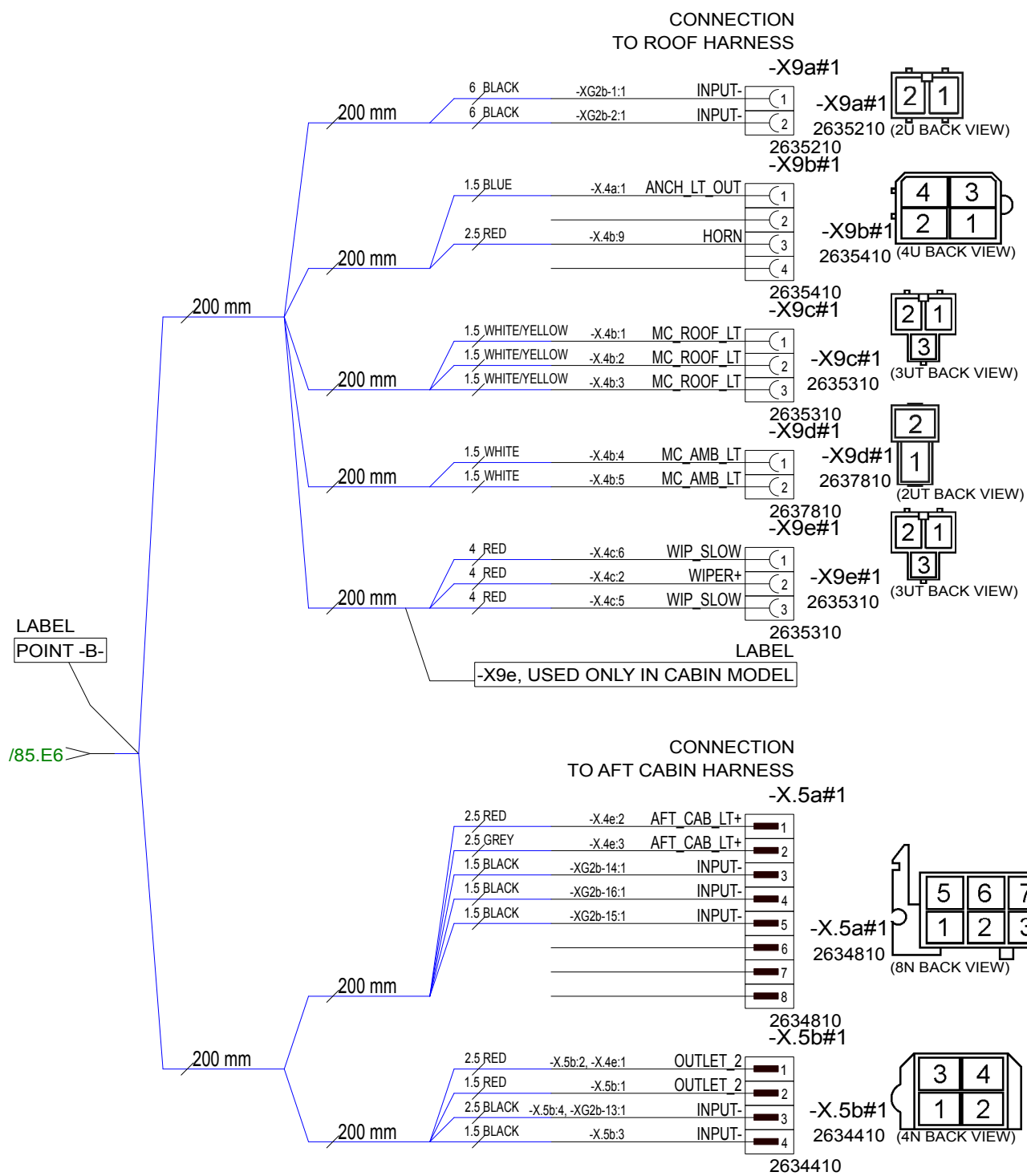
POINT -A-



17.5.2019	TuM	A1: INTRODUCED DRWING.	Date	17.5.2019	NAVIX designed solutions		Axopar					
10.10.2019	PN	B2: REMOVED -A55&-A56, NEW NAME FOR -A79&-A80->LOGO LIGHT	Drawing by	TuM			Boat		Sub-product code	29586	Product code	Project ID
			Sheet rev.	2	Copyright by		37 MY20		DECK HARNESS		HL	84 / 149
Date of modification	Modified by	Description	Project rev.	B			Boat model		Title		Loc	
1		2		3	4	5	6	7	8			



17.5.2019	TuM	A1: INTRODUCED DRWING.			Date	17.5.2019		Axopar				29586			
10.10.2019	PN	B2: REMOVED -A55&-A56, NEW NAME FOR -A79&-A80->LOGO LIGHT			Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
					Sheet rev.	2		37 MY20	DECK HARNESS		HL		85 / 149		
Date of modification	Modified by	Description			Project rev.	B		Boat model	Title		Loc				
1		2		3		4		5		6		7		8	



17.5.2019	TuM	A1: INTRODUCED DRWING.	Date	17.5.2019	Axopar		29586			
10.10.2019	PN	B2: REMOVED -A55&-A56, NEW NAME FOR -A79&-A80->LOGO LIGHT	Drawing by	TuM	Boat	37 MY20	Sub-product code	Product code	Project ID	
			Sheet rev.	2	DECK HARNESS		HL	86 / 149		
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title	Loc	Sheet	

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.
EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG16 +100 C
EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

MARKING

CABLE

CONNECTION
TO HULL HARNESS

-X.3a#1

1	FWD_CAB_LT+	-H39:+, -H38:+	1.5 YELLOW/BLACK
2	FWD_CAB_LT+	-L_X1:1	2.5 RED
3	INPUT-	-H38:-, -H39:-	1.5 BLACK
4	INPUT-	-H40:-	1.5 BLACK
5	INPUT-	-H42:-	1.5 BLACK
6	INPUT-	-A60:-, -A59:-	1.5 BLACK
7	INPUT-	-H35:-	1.5 BLACK
8	INPUT-	-H36:-	1.5 BLACK

-X.3a#1
2634810
(8N BACK VIEW)

2634810
-X.3b#1

3	4
1	2

-X.3b#1
2634410
(4N BACK VIEW)

1	OUTLET_1	-A8:+	2.5 RED
2	OUTLET_1	-A69:+	1.5 RED
3	INPUT-	-A8:-	2.5 BLACK
4	INPUT-	-A69:-	1.5 BLACK

2634410

-A59#1 FC LED STRIP WALL

+	FC_INDIR_LT	-L_X1:5	1.5 YELLOW/RED
-	INPUT-	-X.3a:6	1.5 BLACK

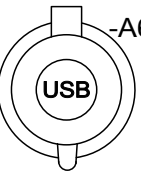
-H39#1 FC READ LT STB

+	FWD_CAB_LT+	-X.3a:1	1.5 YELLOW/BLACK
-	INPUT-	-X.3a:3	1.5 BLACK

-A69#1 FWD CABIN, USB OUTLET

+	OUTLET_1	-X.3b:2	1.5 RED
-	INPUT-	-X.3b:4	1.5 BLACK

-A.69#1
15273



LABEL
POINT -D-

LABEL
POINT -C-

LABEL
POINT -B-

LABEL
POINT -A-

FC SPOT LT -H34#1

1.5 YELLOW/BLACK	-H35:+	FC_RF_LT	+
1.5 BLACK	-H35:-	INPUT-	-

FC LED STRIP ROOF -A60#1

1.5 YELLOW/RED	-L_X1:4	FC_INDIR_LT	+
1.5 BLACK	-X.3a:6	INPUT-	-

FC SPOT LT -H37#1

1.5 YELLOW/BLACK	-H36:+	FC_RF_LT	+
1.5 BLACK	-H36:-	INPUT-	-

FC SPOT LT -H36#1

1.5 YELLOW/BLACK	-H37:+, -L_X1:3	FC_RF_LT	+
1.5 BLACK	-H37:-, -X.3a:8	INPUT-	-

FC SPOT LT -H35#1

1.5 YELLOW/BLACK	-H34:+, -L_X1:2	FC_RF_LT	+
1.5 BLACK	-H34:-, -X.3a:7	INPUT-	-

FWD C STEP LT PT 2 -H41#1

1.5 YELLOW/RED	-H40:+	FC_INDIR_LT	+
1.5 BLACK	-H40:-	INPUT-	-

F C STEP LT PRT 1 -H40#1

1.5 YELLOW/RED	-H41:+, -L_X1:7	FC_INDIR_LT	+
1.5 BLACK	-H41:-, -X.3a:4	INPUT-	-

FC STEP LT STB -H42#1

1.5 YELLOW/RED	-L_X1:6	FC_INDIR_LT	+
1.5 BLACK	-X.3a:5	INPUT-	-

CONNECTION
TO FWD CABIN LIGHT SWITCH

-L_X1#1

2.5 RED	-X.3a:2	FWD_CAB_LT+	1
1.5 YELLOW/BLACK	-H35:+	FC_RF_LT	2
1.5 YELLOW/BLACK	-H36:+	FC_RF_LT	3
1.5 YELLOW/RED	-A60:+	FC_INDIR_LT	4
1.5 YELLOW/RED	-A59:+	FC_INDIR_LT	5
1.5 YELLOW/RED	-H42:+	FC_INDIR_LT	6
1.5 YELLOW/RED	-H40:+	FC_INDIR_LT	7
			8

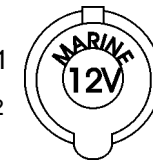
-L_X1#1
2635810
(8U BACK VIEW)

2635810

FWD CABIN, 12Vdc OUTLET -A8#1

2.5 RED	-X.3b:1, -A26:+	OUTLET_1	+
2.5 BLACK	-A26:-, -X.3b:3	INPUT-	-

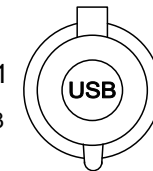
-A.8#1
AS212



FWD CABIN, USB OUTLET -A26#1

1.5 RED	-A8:+	OUTLET_1	+
1.5 BLACK	-A8:-	INPUT-	-

-A.26#1
15273



FC READ LT PORT -H38#1

1.5 YELLOW/BLACK	-X.3a:1	FWD_CAB_LT+	+
1.5 BLACK	-X.3a:3	INPUT-	-

NOTICE! CABLES WITH STICKER

FOR EXAMPLE
POINT -A-



16.5.2019	TuM	A1: INTRODUCED DRAWING.
10.10.2019	PN	B1: NOT MODIFIED.
Date of modification	Modified by	Description

Date	16.5.2019
Drawing by	TuM
Sheet rev.	1
Project rev.	B

NAVIX
designed solutions
Copyright by

Axopar	29587	Project ID	
Boat	Sub-product code	Product code	Project ID
37 MY20	FORE CABIN HARNESS	HL	87 / 149
Boat model	Title	Loc	Sheet

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

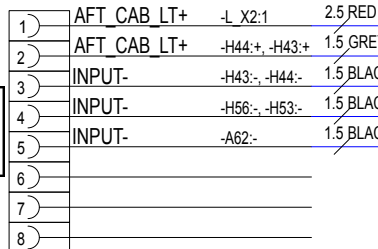
R2 ISO 6722 100V AWG16 +100 C
EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

MARKING

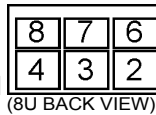
CABLE

CONNECTION
TO DECK HARNESS

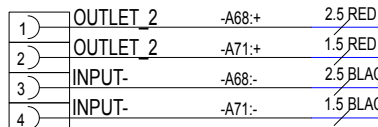
-X5a#1



-X5a#1
2635810



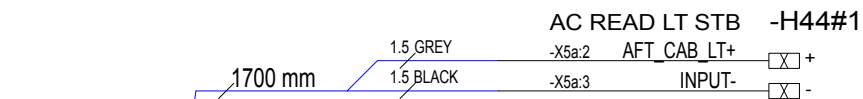
2635810
-X5b#1



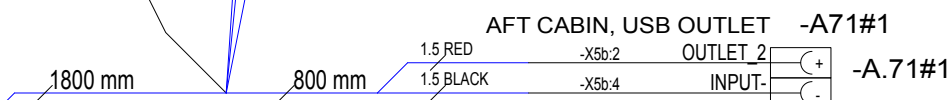
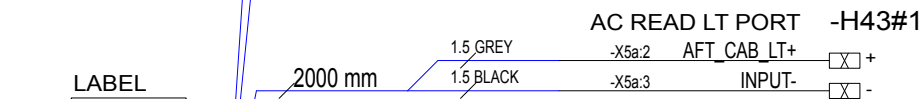
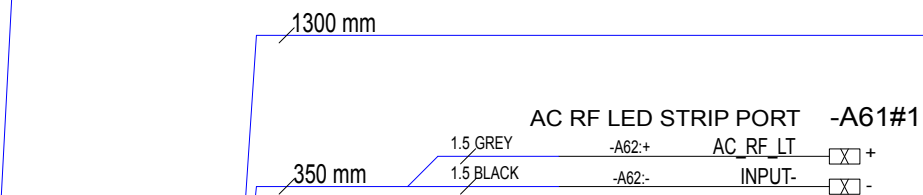
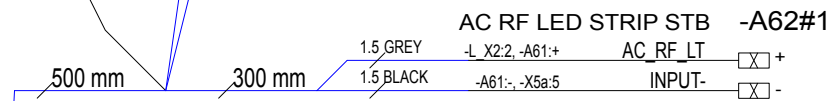
-X5b#1
2635410



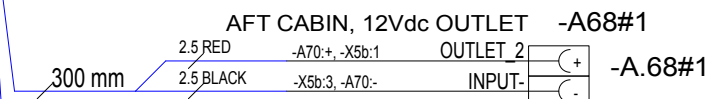
2635410



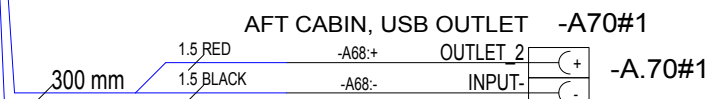
LABEL
POINT -C-



-A.71#1
15273



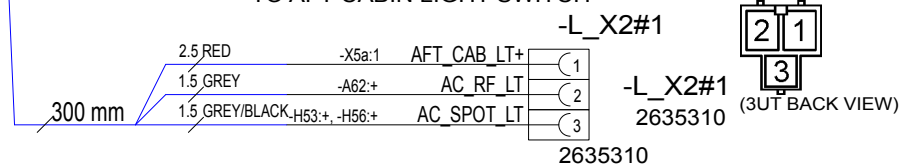
-A.68#1
AS212



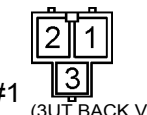
-A.70#1
15273



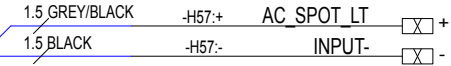
CONNECTION
TO AFT CABIN LIGHT SWITCH



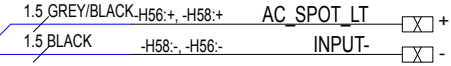
-L_X2#1
2635310



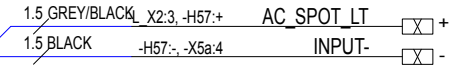
ROOF CABIN LIGHT STB 1 -H58#1



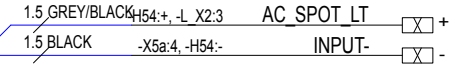
ROOF CABIN LIGHT STB 2 -H57#1



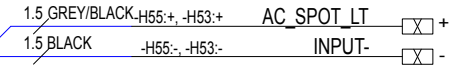
ROOF CABIN LIGHT STB 3 -H56#1



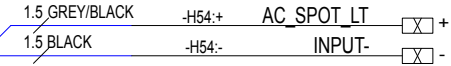
ROOF CABIN LIGHT PRT 3 -H53#1



ROOF CABIN LIGHT PRT 2 -H54#1



ROOF CABIN LIGHT PRT 1 -H55#1



NOTICE! CABLES WITH STICKER

FOR EXAMPLE
POINT -A-

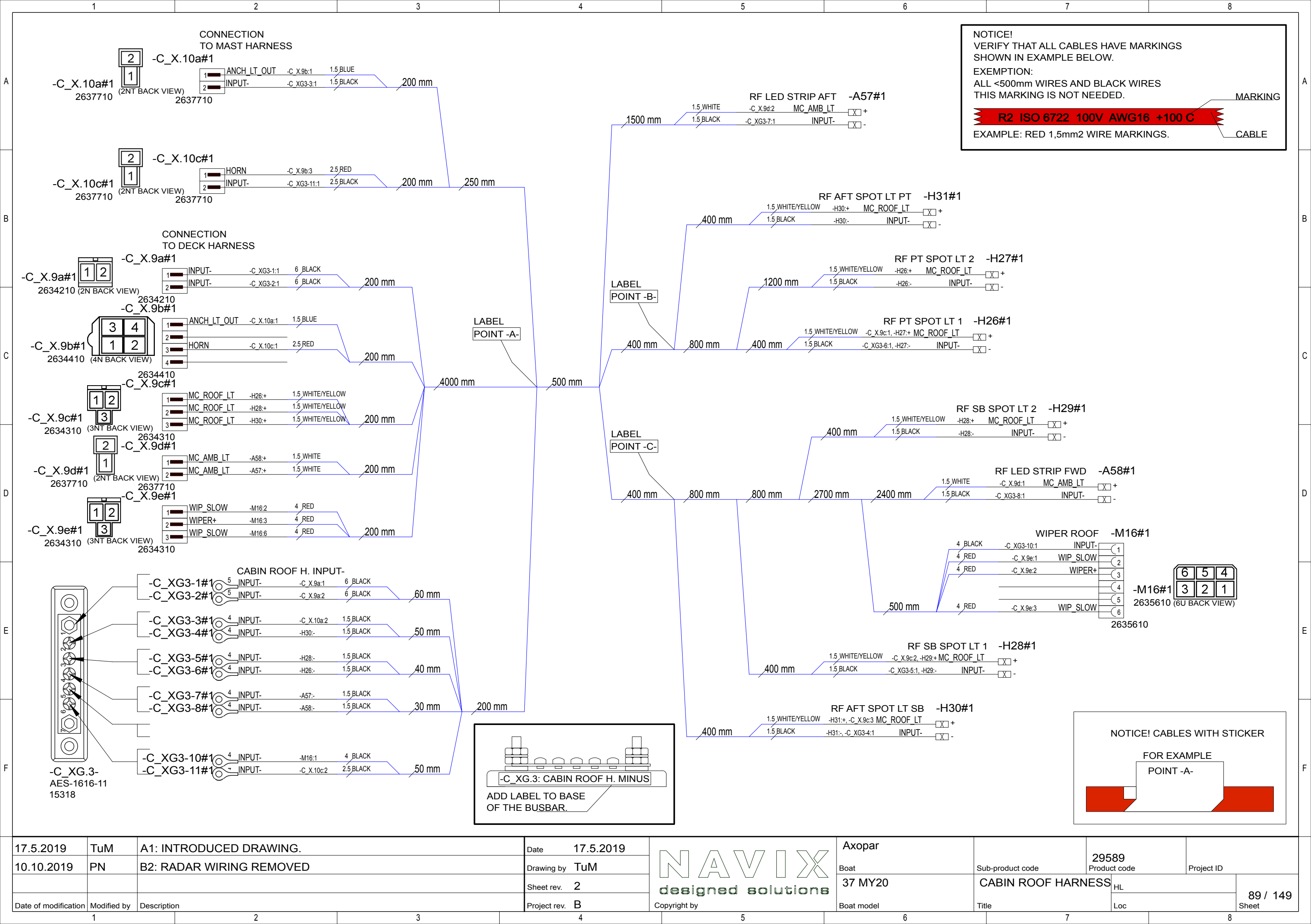


16.5.2019	TuM	A1: INTRODUCED DRAWING.
10.10.2019	PN	B2: ADDED 6 SPOT LTS, SEVERAL MEASUREMENTS CHANGED.
Date of modification	Modified by	Description

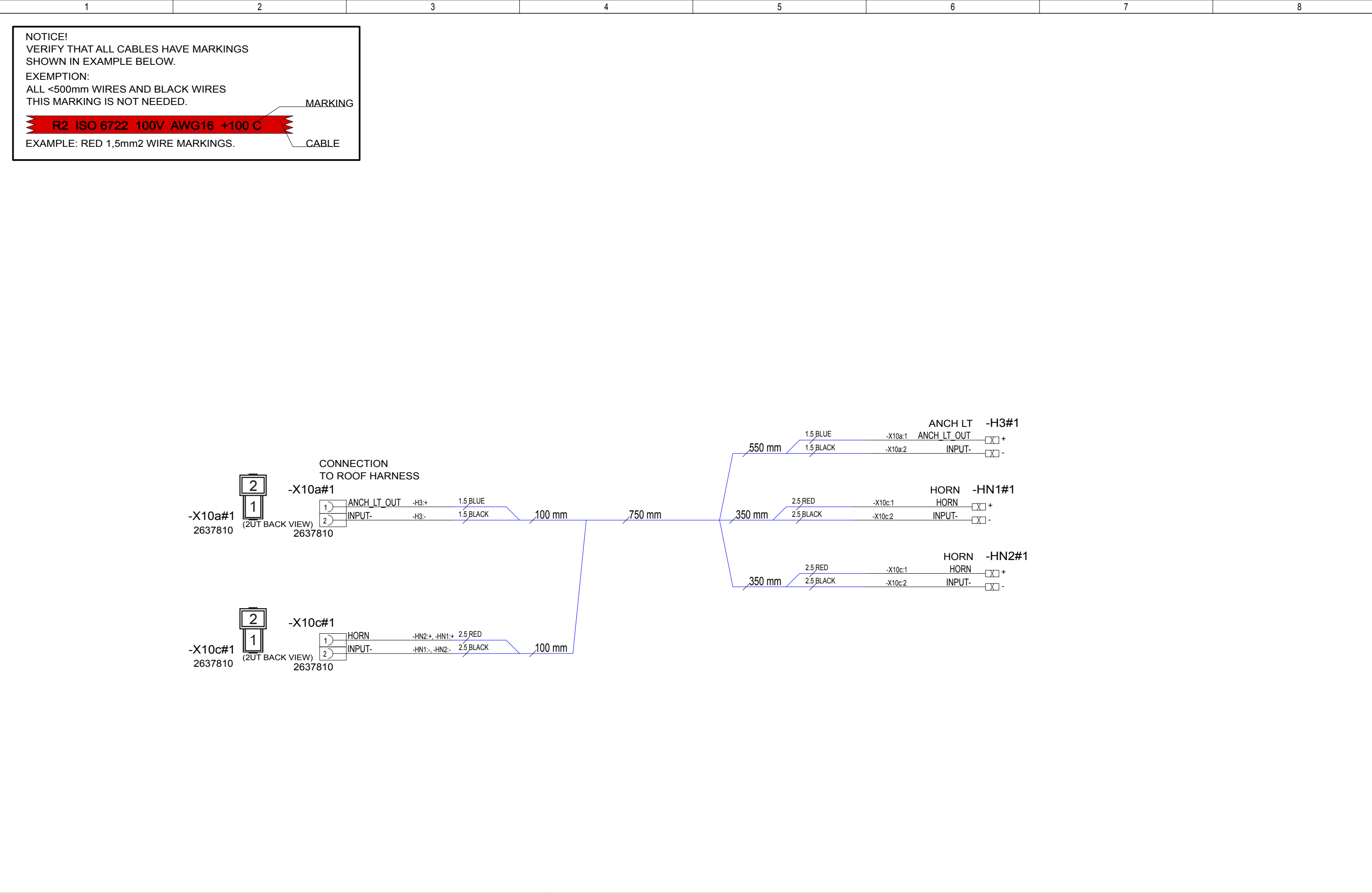
Date	16.5.2019
Drawing by	TuM
Sheet rev.	2
Project rev.	B

NAVIX
designed solutions
Copyright by

Axopar			29588	
Boat		Sub-product code	Product code	Project ID
37 MY20		AFT CABIN HARNESS	HL	88 / 149
Boat model		Title	Loc	Sheet



17.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	17.5.2019	NAVIX designed solutions	Axopar	29589	CABIN ROOF HARNESS	89 / 149
10.10.2019	PN	B2: RADAR WIRING REMOVED	Drawing by	TuM		Boat			
			Sheet rev.	2		37 MY20			
Date of modification	Modified by	Description	Project rev.	B	Copyright by	Boat model	Sub-product code	Product code	Project ID
1	2	3	4	5	6	7	8	9	10

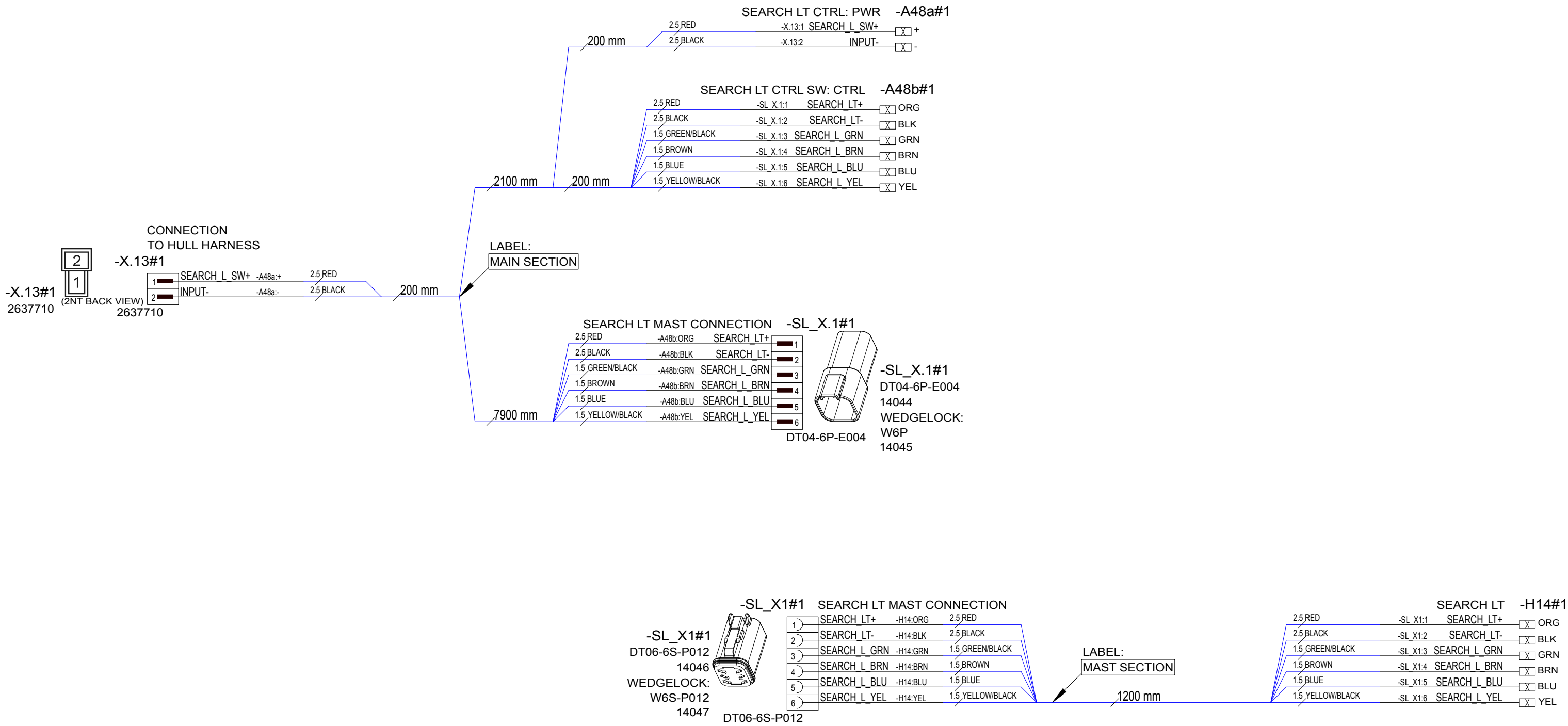


NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.
EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

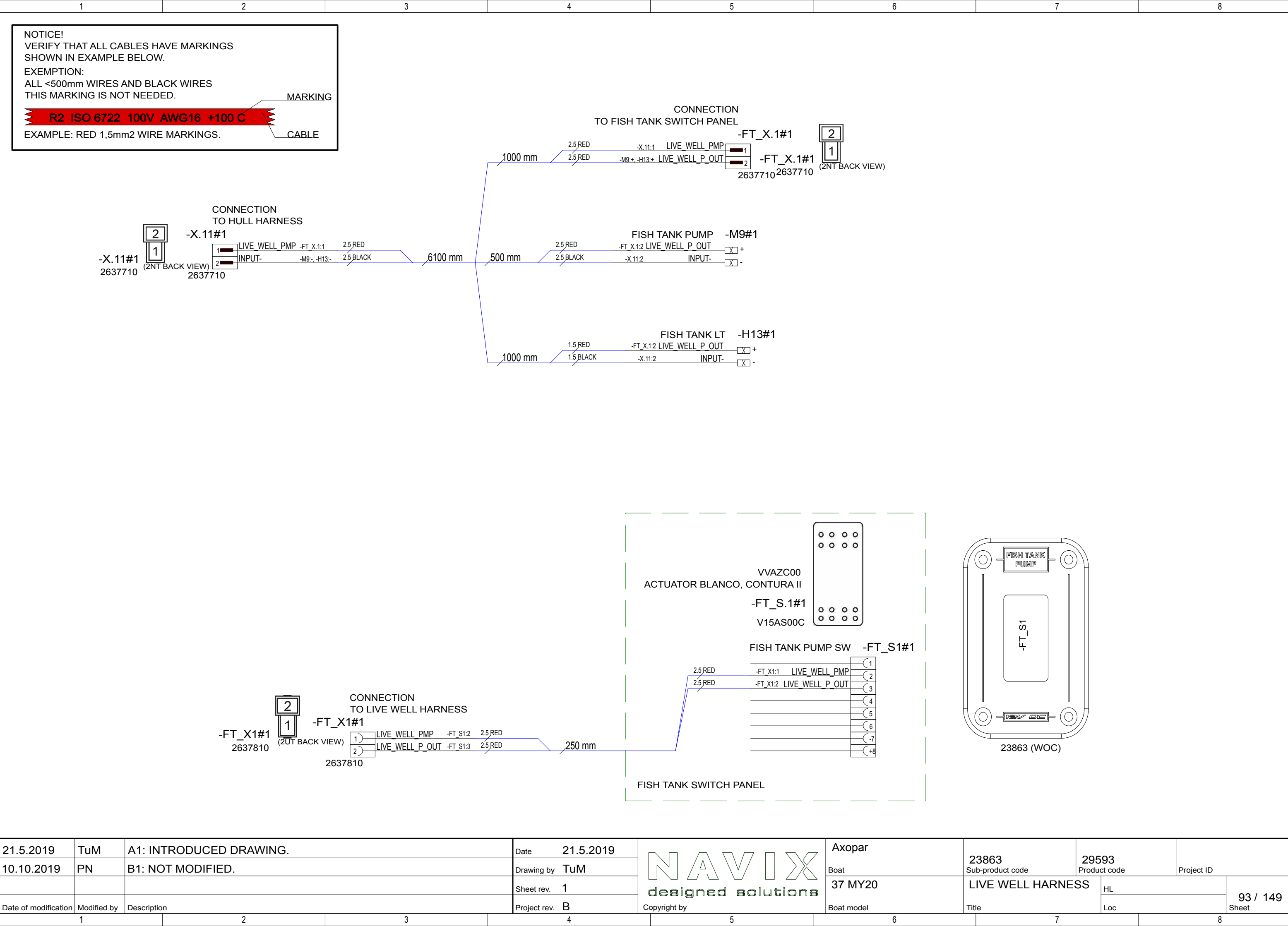
R2 ISO 6722 100V AWG16 +100 C
EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

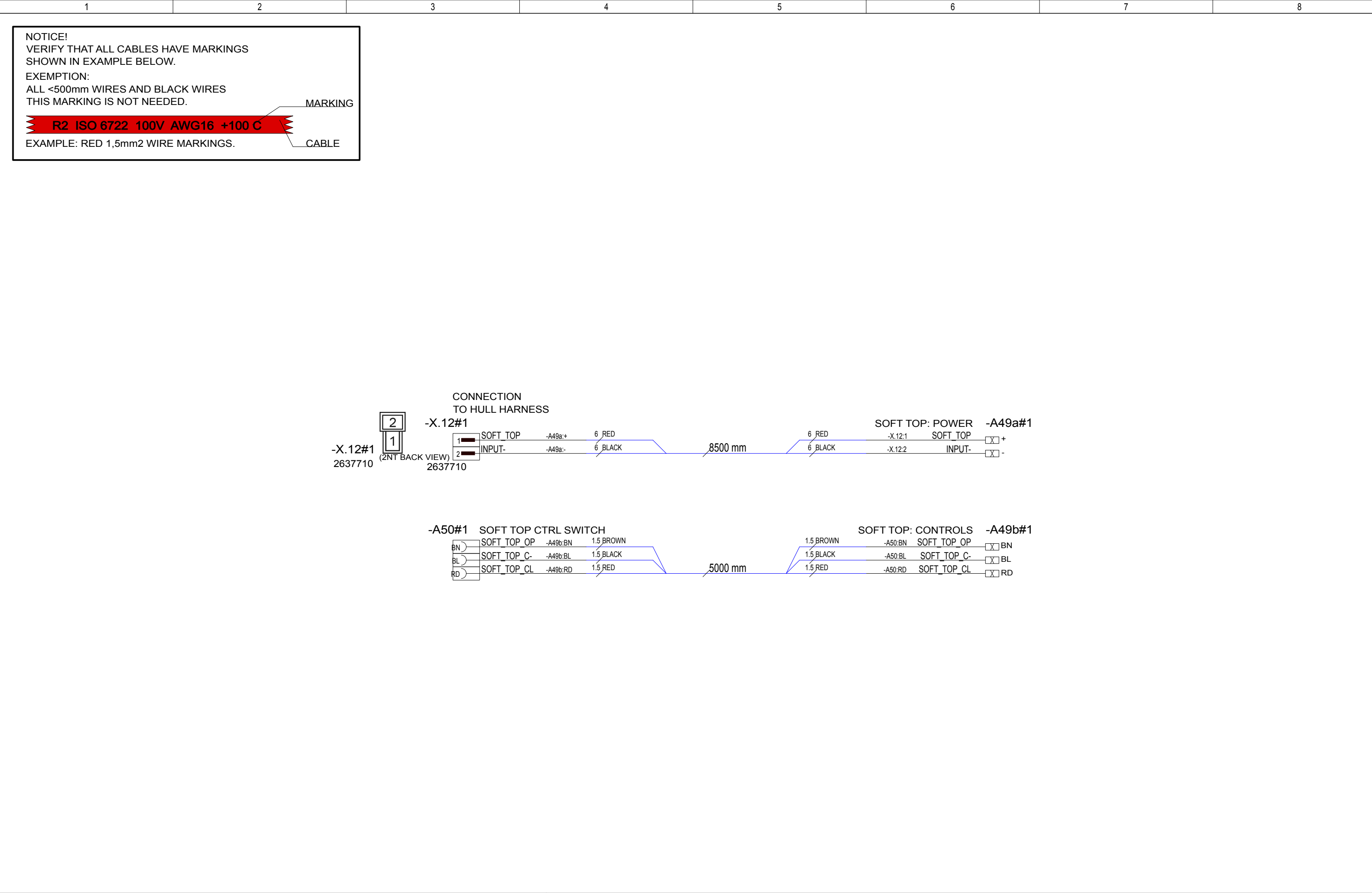
NOTICE! CABLES WITH STICKER

FOR EXAMPLE
POINT -A-



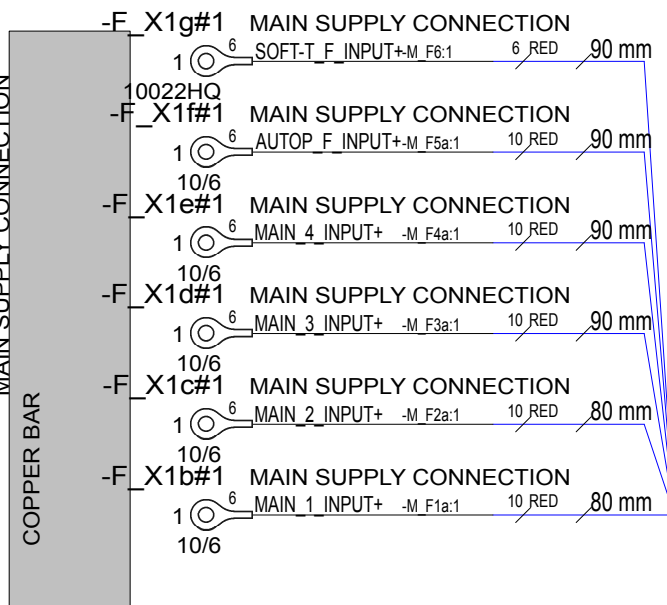
21.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	21.5.2019	Axopar					
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	29592	Product code	Project ID
			Sheet rev.	1	37 MY20	SEARCH LT HARNESS		HL	92 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title	Loc	Sheet	
1		2	3	4	5	6	7		8	



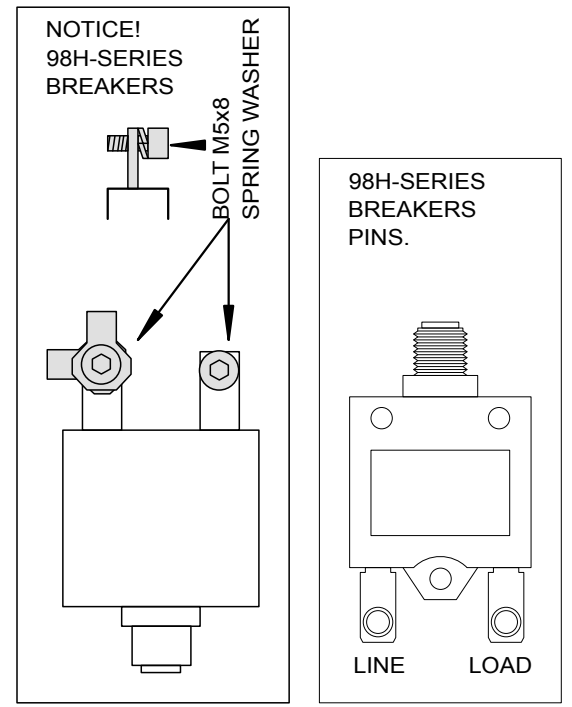
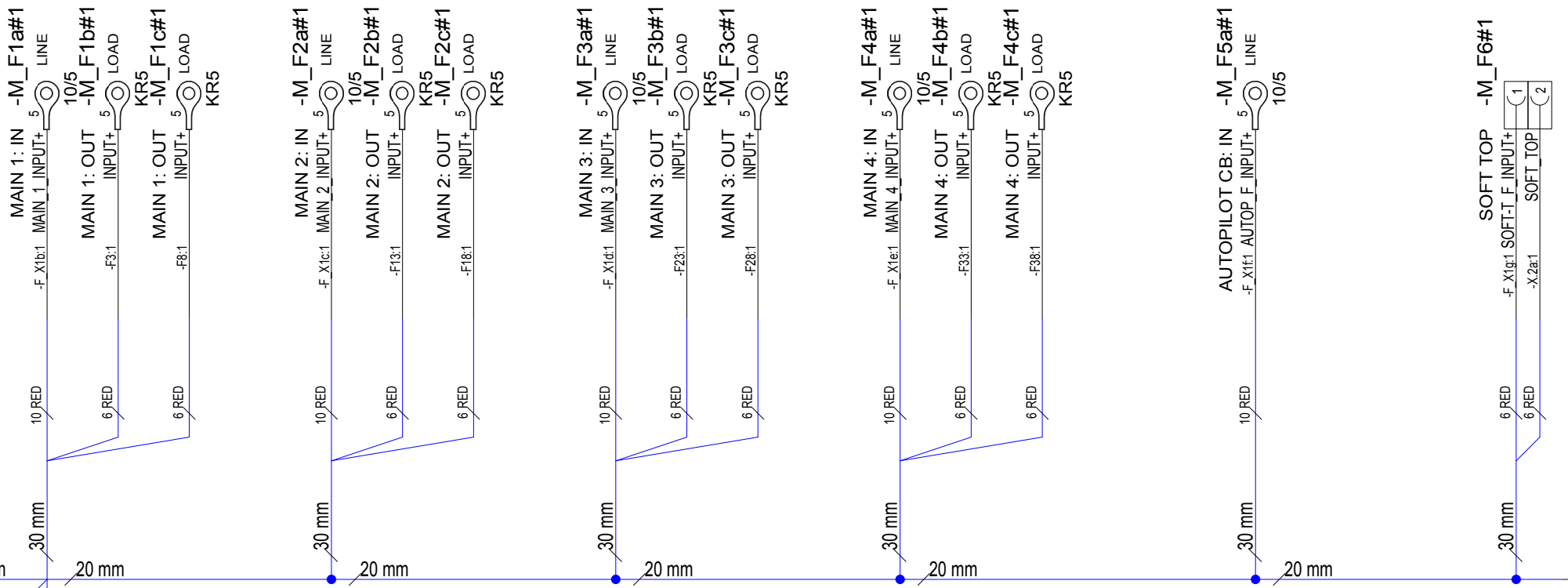
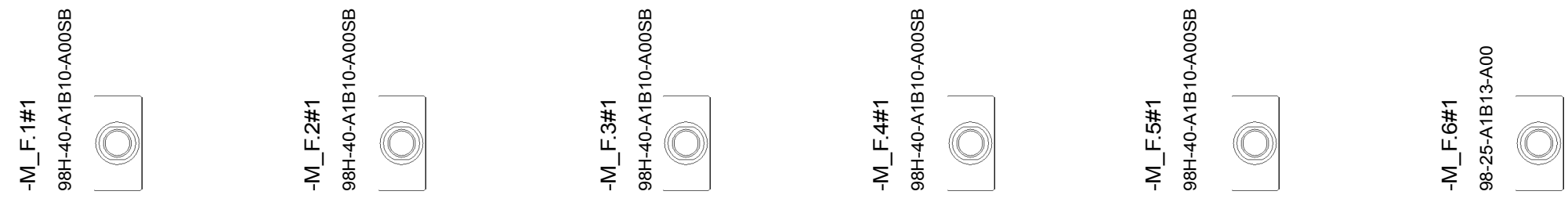
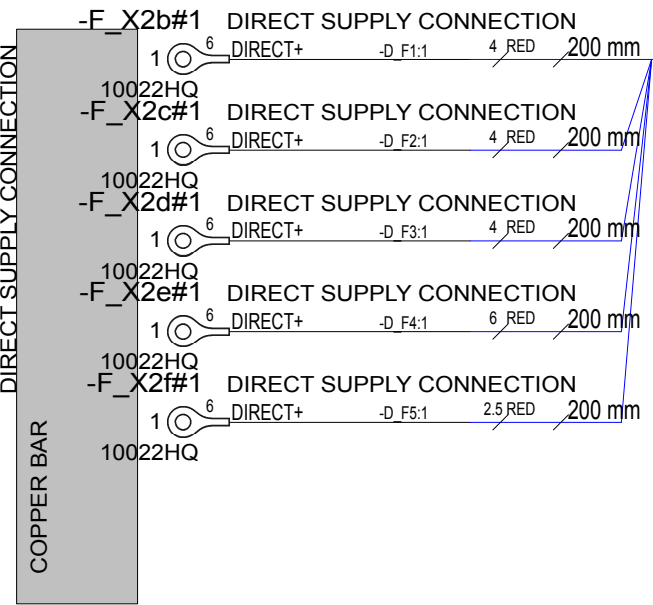


1.

-F_X.1
MAIN SUPPLY CONNECTION

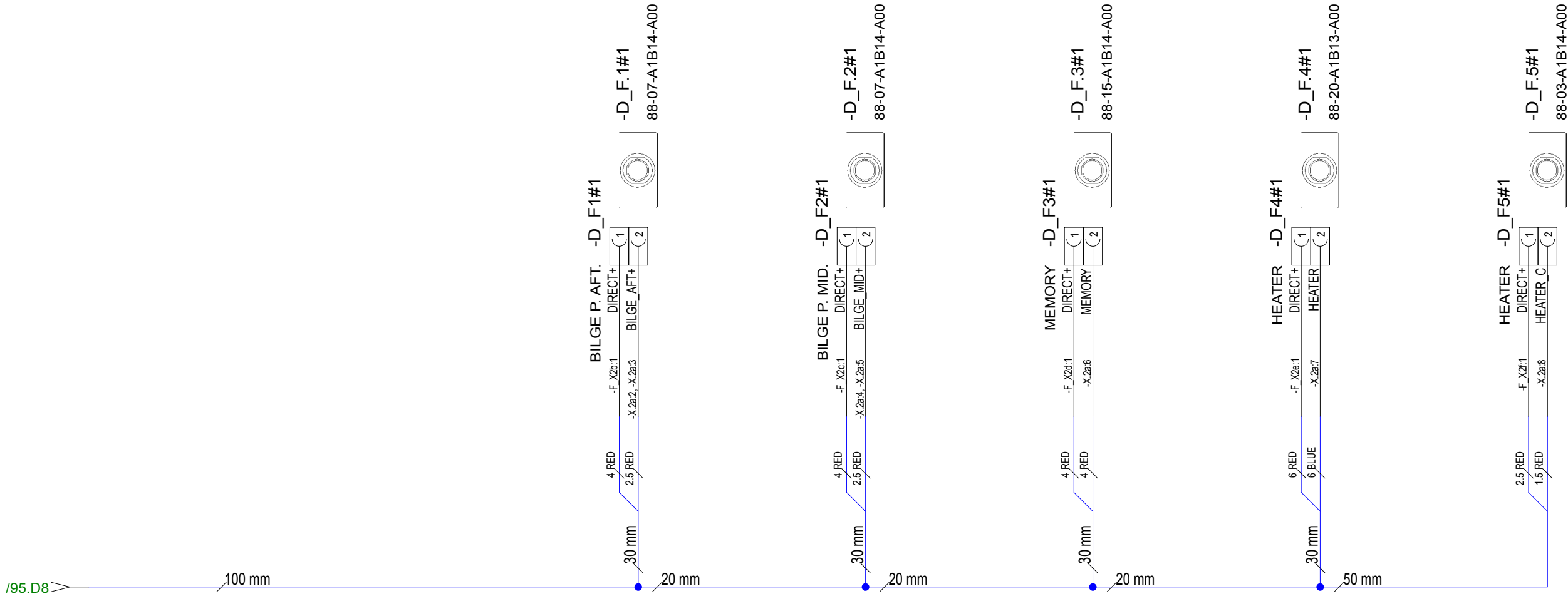


-F_X.2
DIRECT SUPPLY CONNECTION

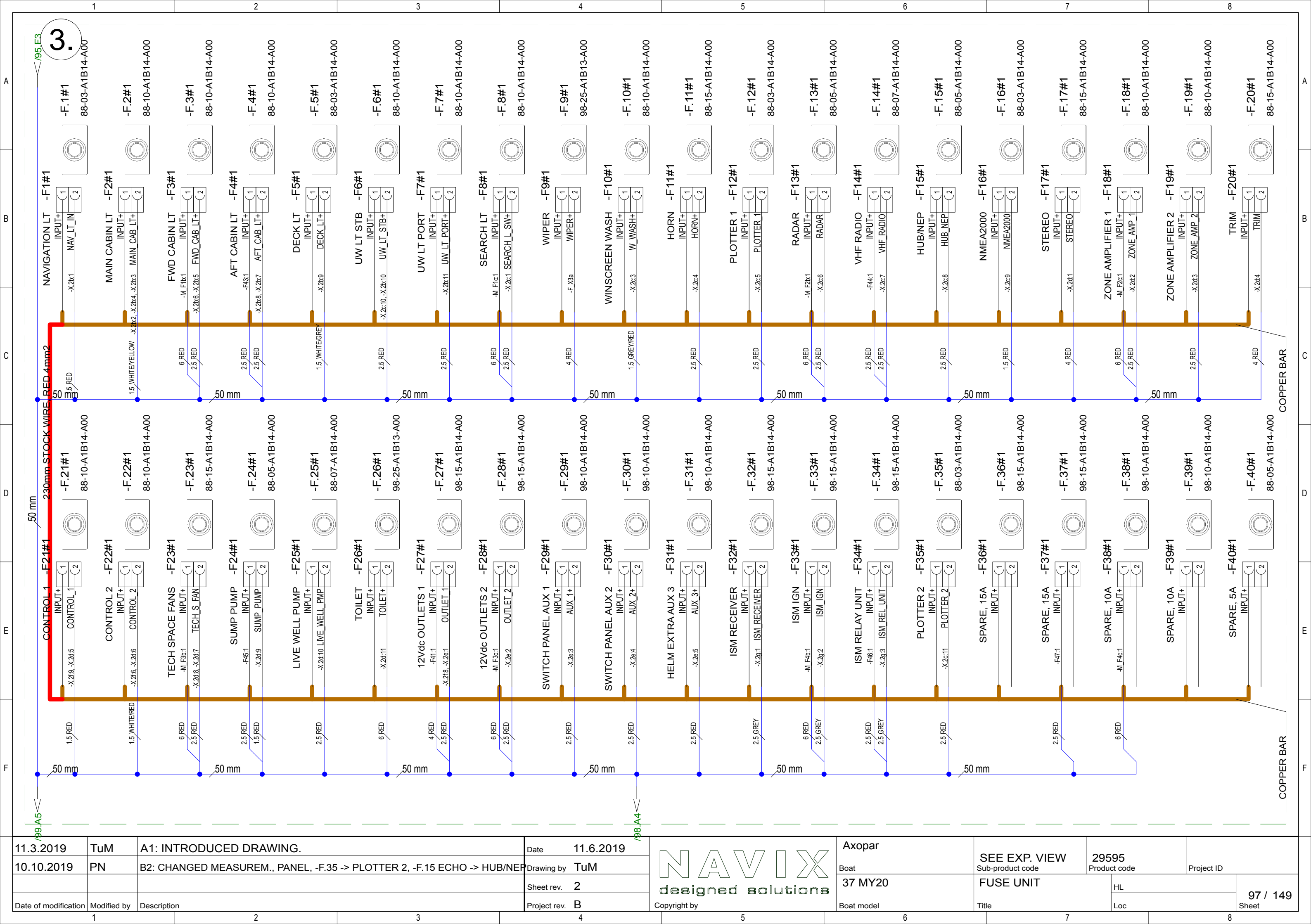


11.3.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019	Axopar		SEE EXP. VIEW		29595			
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM	Boat		Sub-product code		Product code		Project ID	
			Sheet rev.	2	37 MY20		FUSE UNIT		HL		95 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc		Sheet	

2.



11.3.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019	NAVIX designed solutions		Axopar		SEE EXP. VIEW		29595			
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM			Boat		Sub-product code		Product code		Project ID	
			Sheet rev.	2	Copyright by		37 MY20		FUSE UNIT		HL		96 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model		Title		Loc		Sheet	

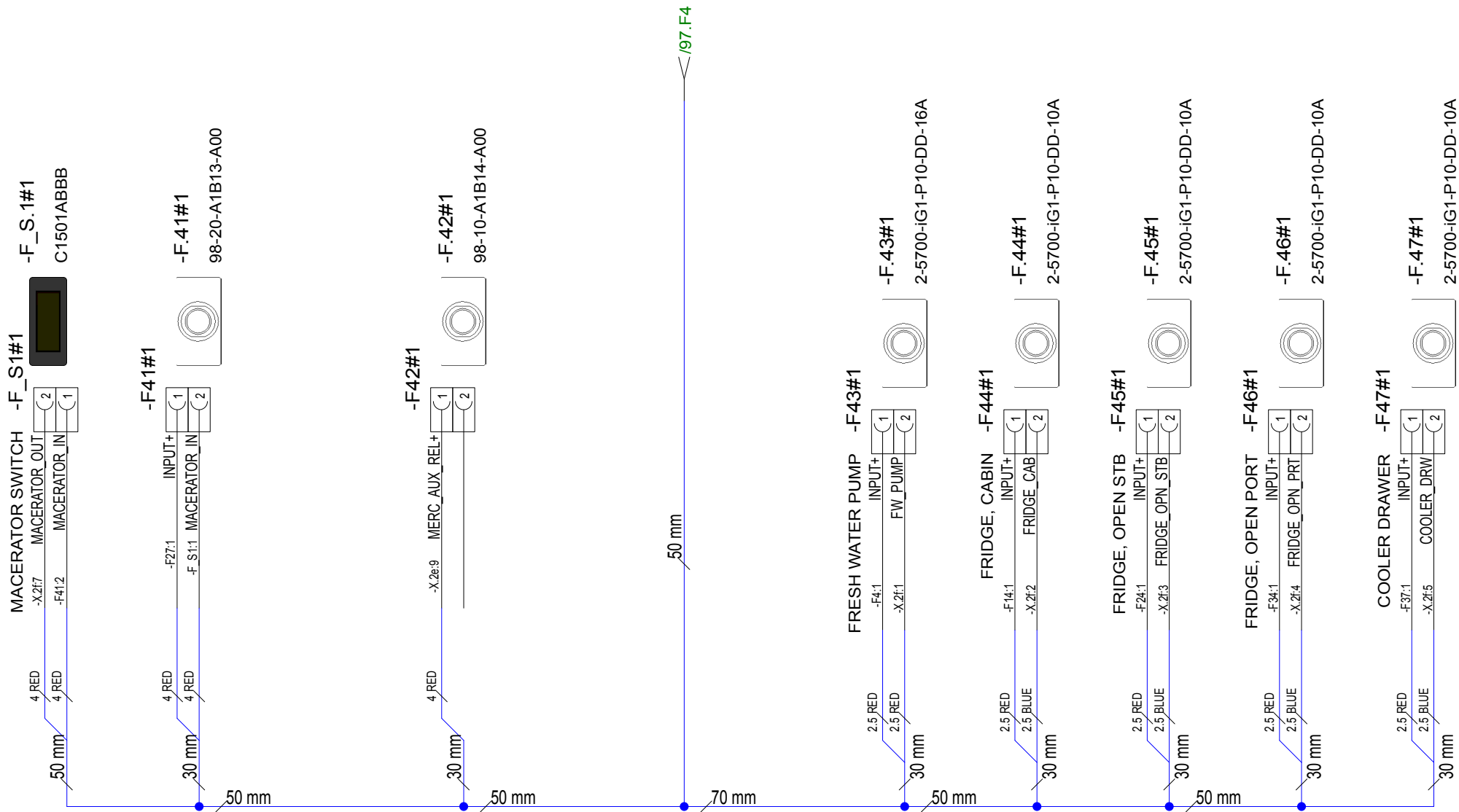


11.3.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM
			Sheet rev.	2
Date of modification	Modified by	Description	Project rev.	B

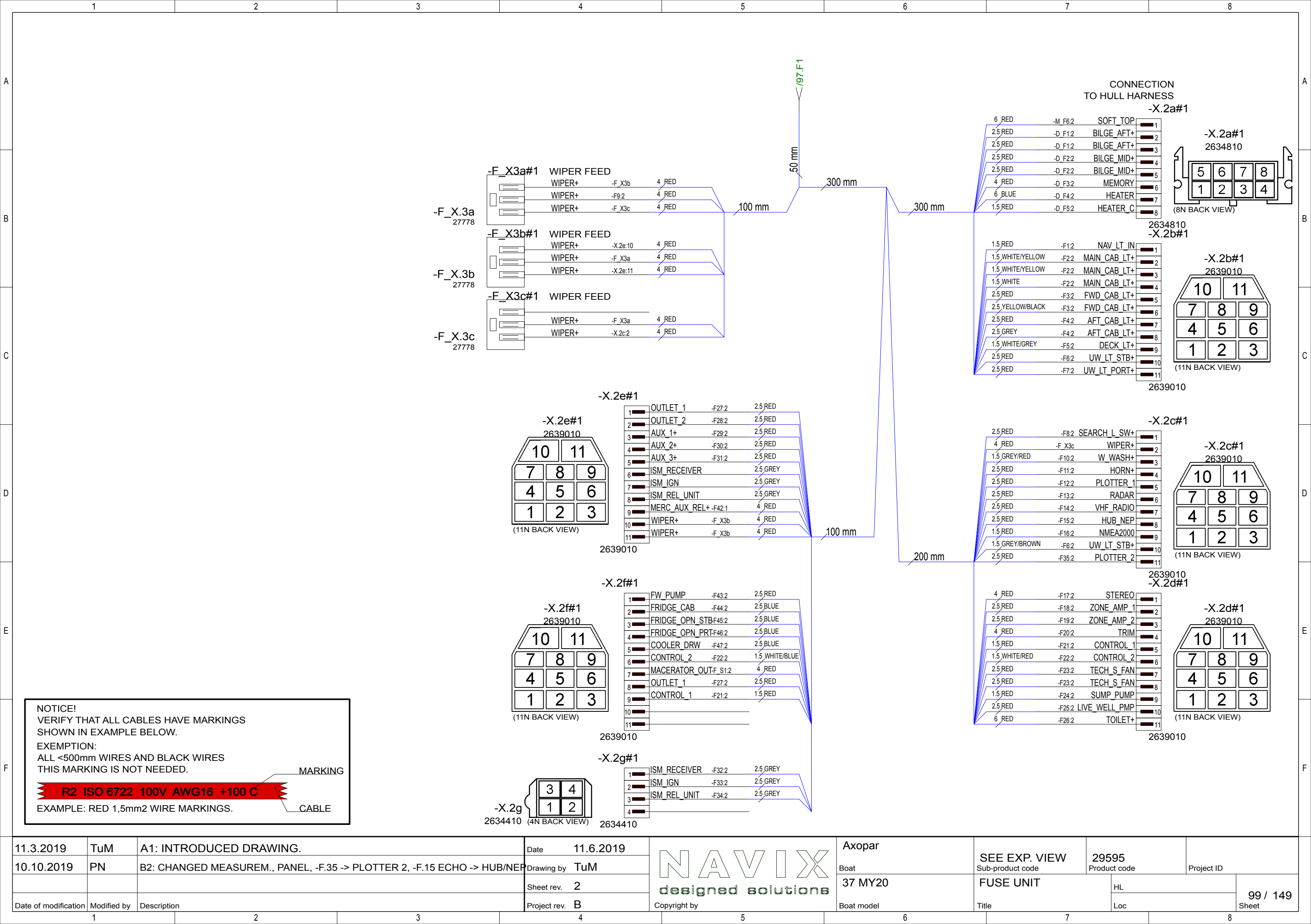


Axopar	SEE EXP. VIEW	29595	
Boat	Sub-product code	Product code	Project ID
37 MY20	FUSE UNIT	HL	97 / 149
Boat model	Title	Loc	Sheet

4.

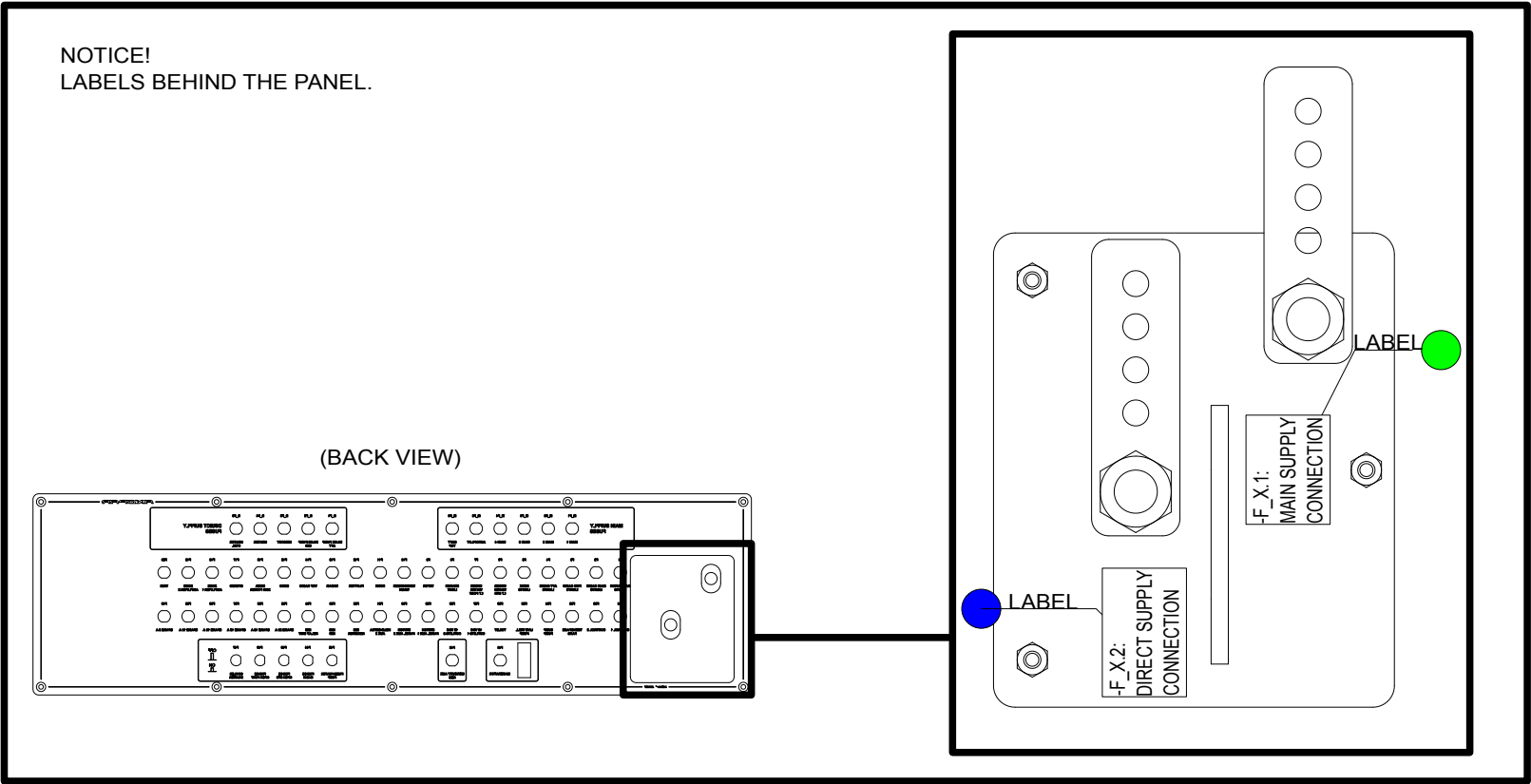
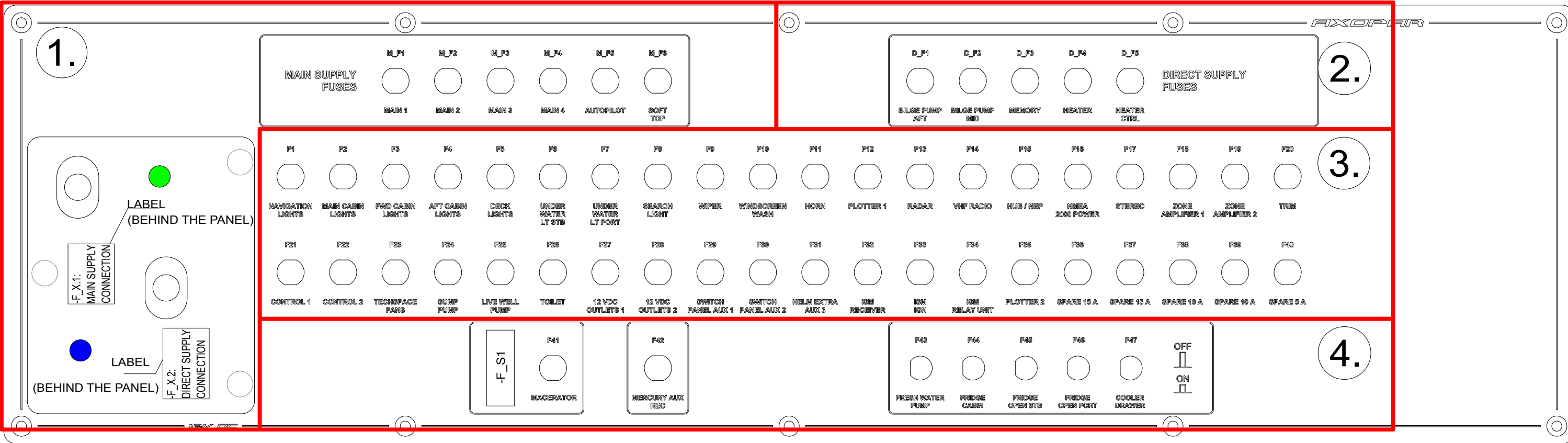


11.3.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019	Axopar		SEE EXP. VIEW		29595			
10.10.2019	PN	B2: CHANGED MEASUREMENT, PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM	Boat		Sub-product code		Product code		Project ID	
			Sheet rev.	2	37 MY20		FUSE UNIT		HL		98 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc		Sheet	



11.3.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019	Axopar	SEE EXP. VIEW	29595	
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM	Boat	Sub-product code	Product code	Project ID
			Sheet rev.	2	37 MY20	FUSE UNIT	HL	99 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model	Title	Loc	Sheet
1		2	4	5	6	7		8

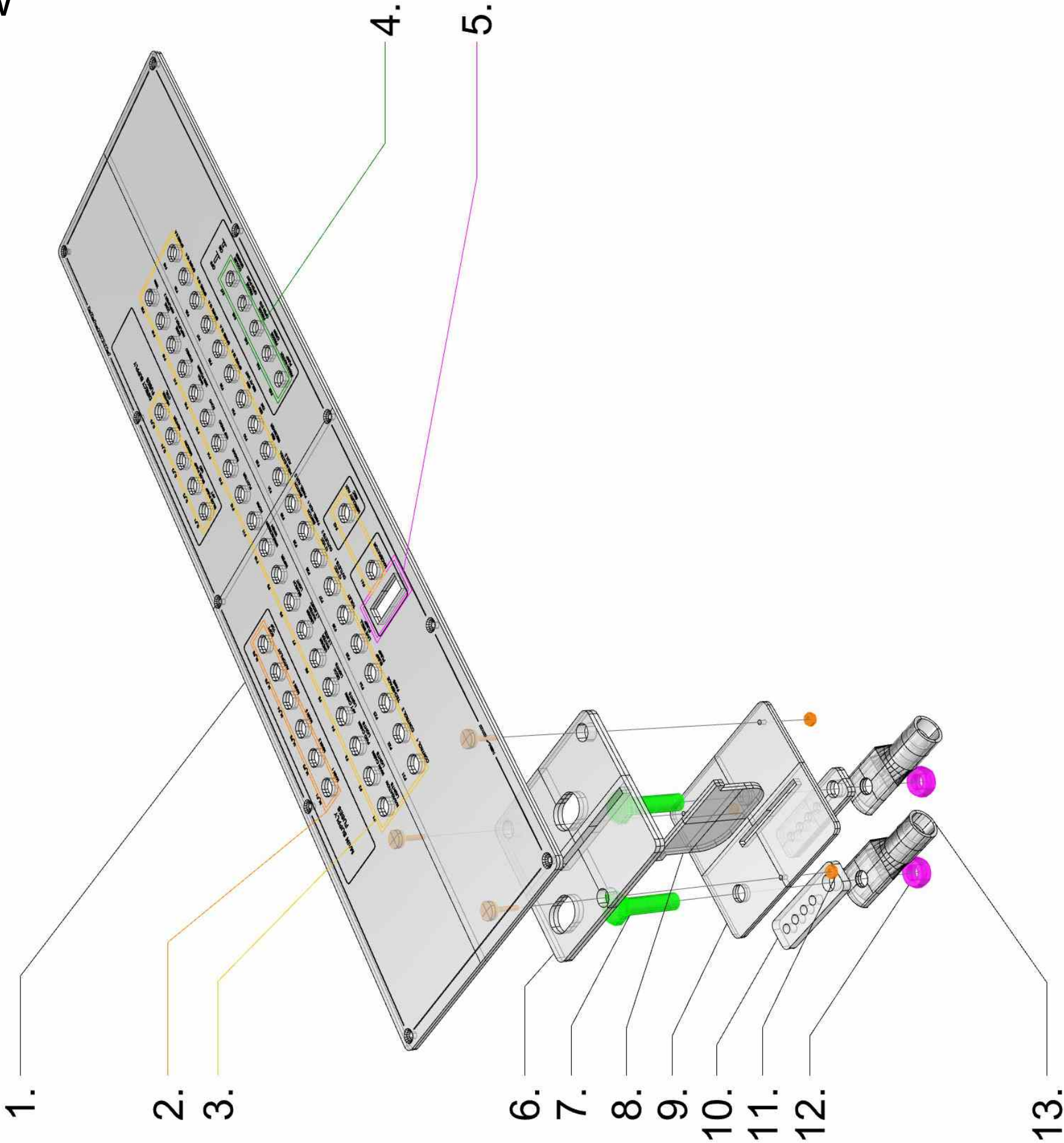
FUSE PANEL GENERAL LAYOUT/ LABELS



2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	2.7.2019	NAVIX designed solutions Copyright by	Axopar Boat 37 MY20 Boat model	SEE EXP VIEW Sub-product code FUSE UNIT Title	29595 Product code HL Loc	Project ID 100 / 149 Sheet
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM					
			Sheet rev.	2					
Date of modification	Modified by	Description	Project rev.	B					

EXP VIEW

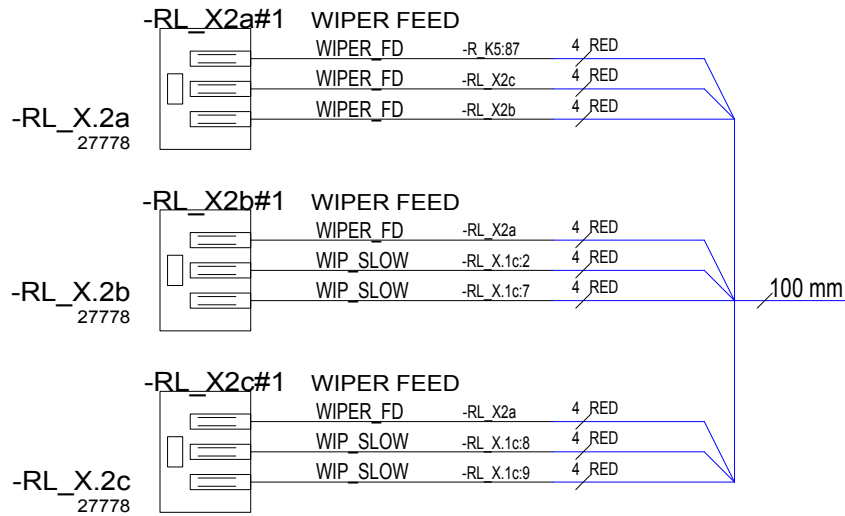
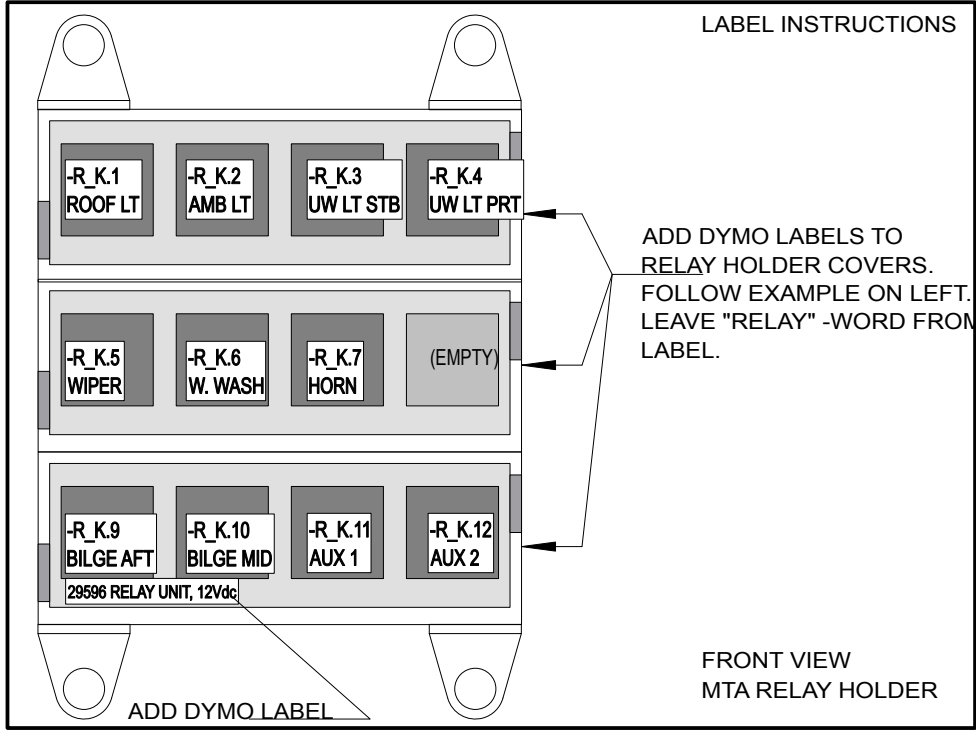
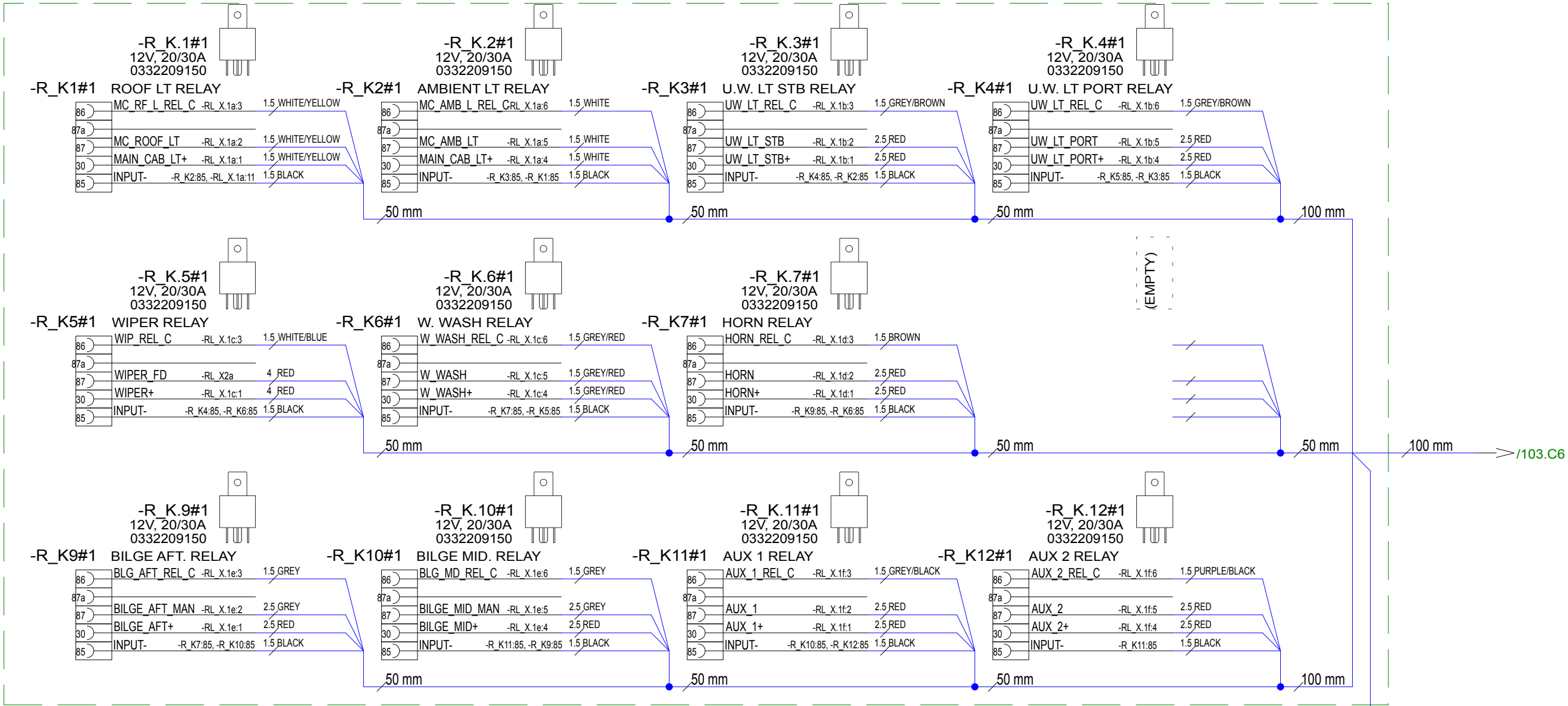
29595_AXOPAR_37_MY20_FUSE_UNIT_PANEL



- 29595_AXOPAR_37_MY20_FUSE_UNIT_PANEL
- 1. 1PC 29916_AXOPAR_37_MY20_FUSE_UNIT_PANEL_(WOC)
 - 2. 6PCS KUOYUH_98H_SERIES
 - 3. 47PCS KUOYUH_98_SERIES
 - 4. 5PCS ETA 1140 FUSE
 - 5. 1PC ARCOLECTRIC_15..B_33.4X14.0
 - 6. 1PC 29918_AXOPAR_37_MY20_FUSE_UNIT_MS_DC_BT_M_PANEL_(WOC)
 - 7. 2PCS M10 L40
 - 8. 1PC 29920_AXOPAR_37_MY20_FUSE_UNIT_MS_DC_SPACER_PANEL_(WOC)
 - 9. 1PC 29919_AXOPAR_37_MY20_FUSE_UNIT_MS_DC_TOP_PANEL_(WOC)
 - 10. 2PCS 30167_NAVIX_LINE_VIRTAKISKO_FOUR_SPOT_SMALL
 - 11. 3PCS M4 NUT A4
 - 12. 2PCS M10 SPRING WASHER
 - 2PCS M10 NUT A4
 - 13. 2PCS CABLE SHOES (AS IN DIAGRAM)

TE 01.07.2019
TE 11.09.2019

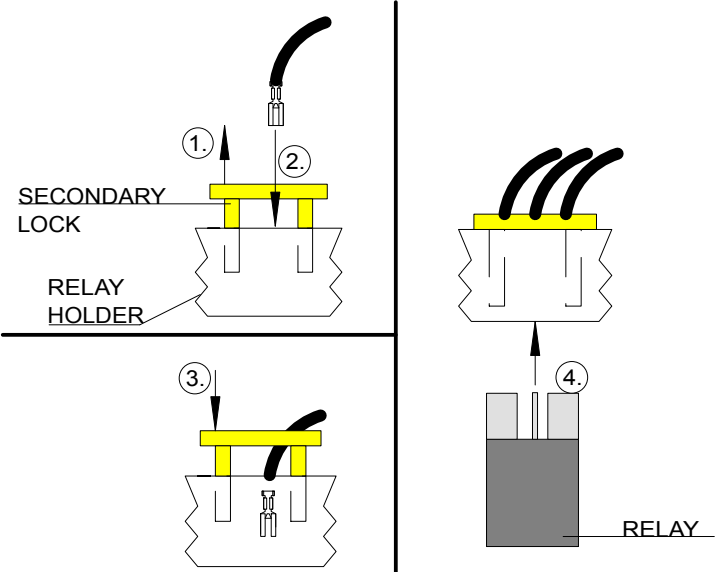
11.6.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.6.2019	Axopar		SEE EXP. VIEW		29595			
10.10.2019	PN	B2: CHANGED MEASUREM., PANEL, -F.35 -> PLOTTER 2, -F.15 ECHO -> HUB/NEP	Drawing by	TuM	Boat		Sub-product code		Product code		Project ID	
			Sheet rev.	2	37 MY20		FUSE UNIT		HL		101/ 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc		Sheet	



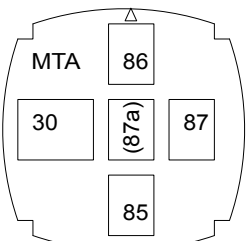
22.5.2019	TuM	A1: INTRODUCED DRAWING.			Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar			29596		Project ID		
10.10.2019	PN	B1: NOT MODIFIED.			Drawing by	TuM		Boat	Sub-product code	Product code					
					Sheet rev.	1		37 MY20	RELAY UNIT		HL		102 / 149 Sheet		
Date of modification	Modified by	Description			Project rev.	B		Boat model	Title		Loc				
1		2		3		4		5		6		7		8	

INSTRUCTIONS FOR ATTACHING CABLES/ RELAYS TO RELAY HOLDER:

1. PULL SECONDARY LOCK OUT OF RELAY HOLDER APPROX 1cm WITH TOOL IF NEEDED (DO NOT PULL COMPLETELY OUT)
2. MOUNT WIRES
3. PUSH SECONDARY LOCK BACK IN
4. MOUNT RELAY TO RELAY HOLDER



PIN ORDER

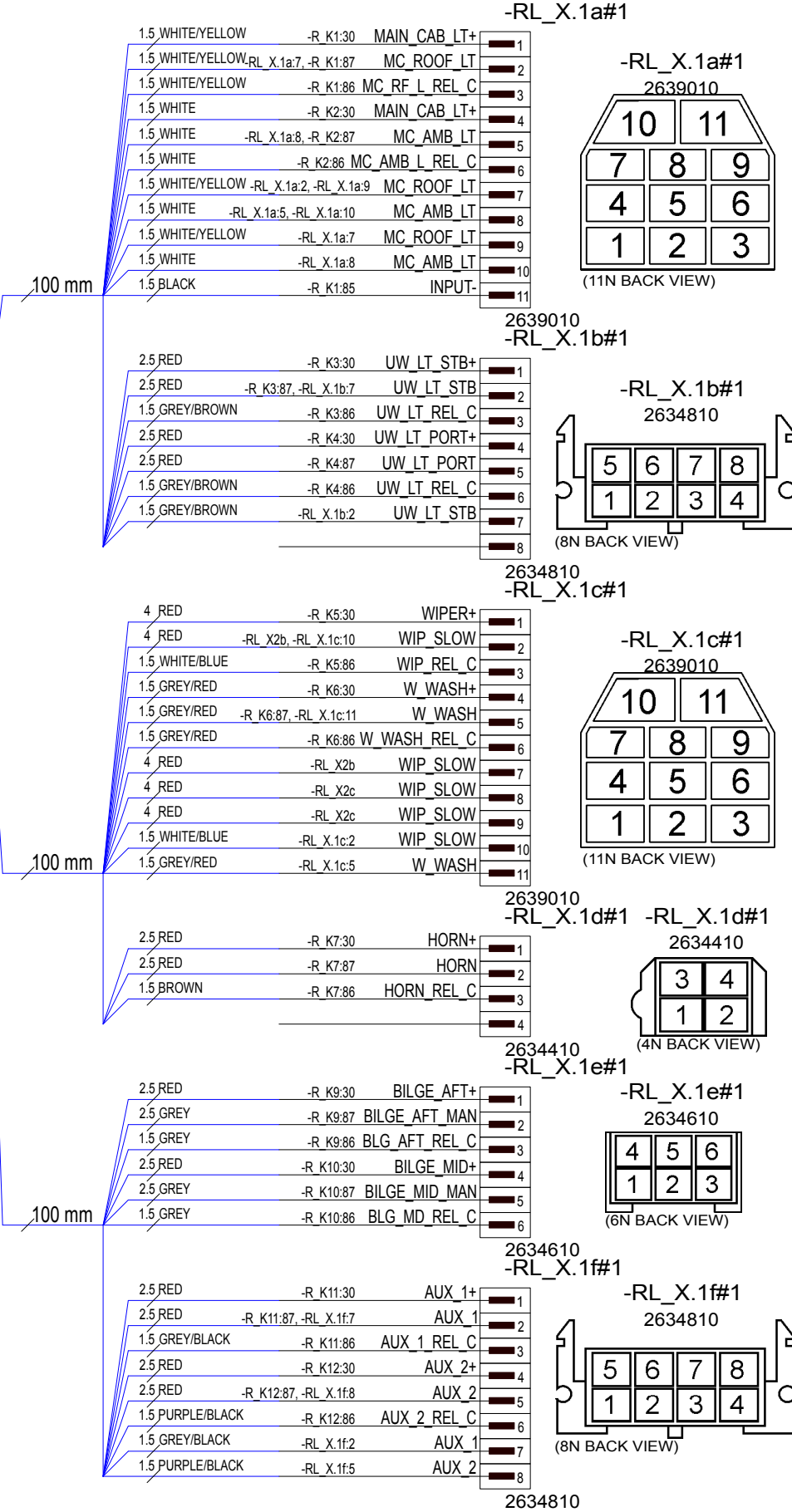
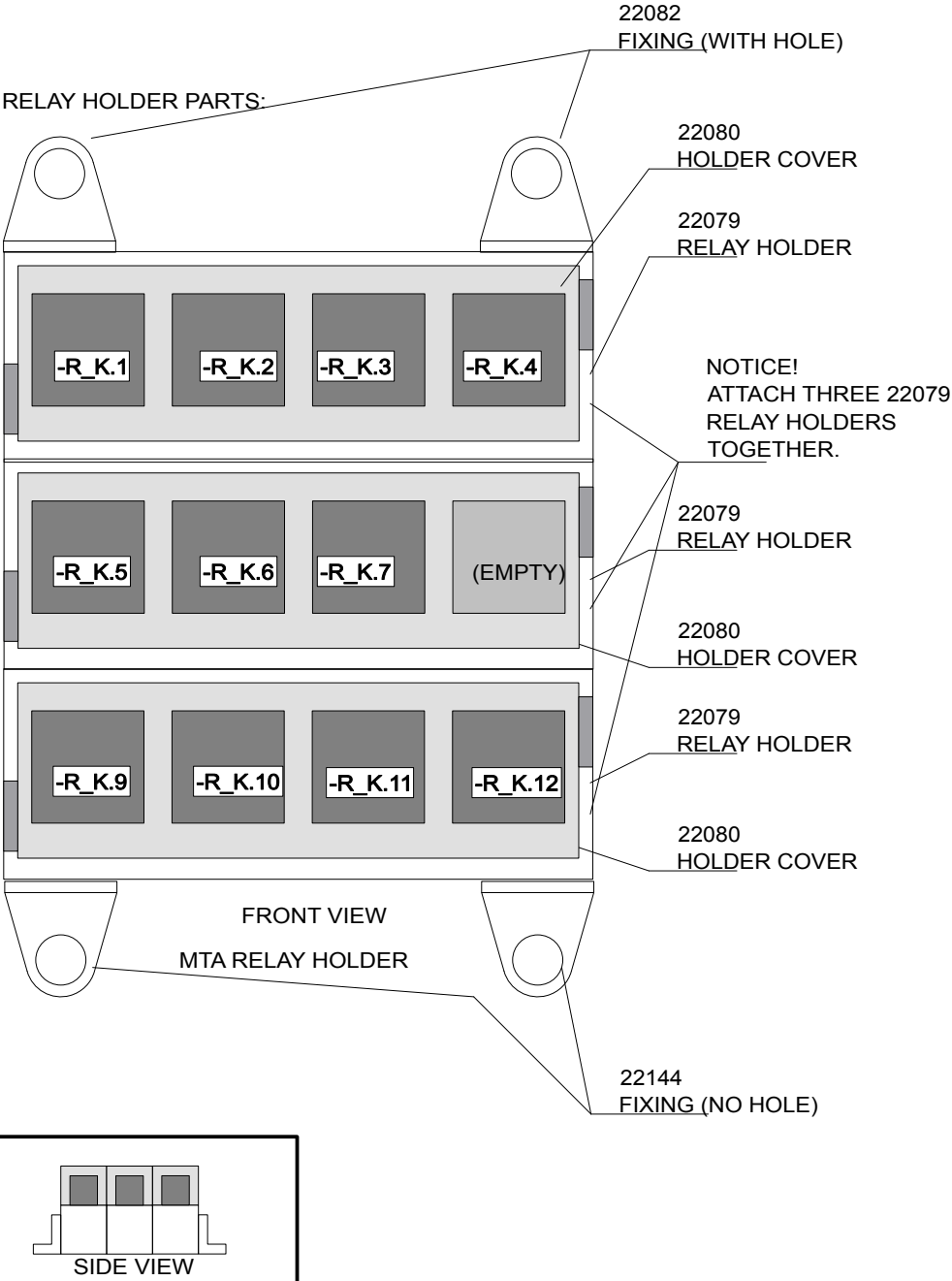
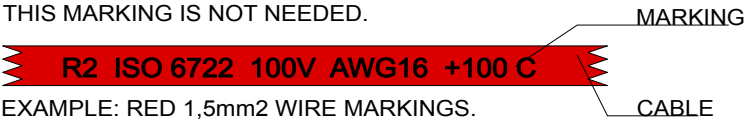


SECONDARY LOCK

SEEN FROM
WIRING SIDE
(BACK VIEW)

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.



22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX		Axopar					
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM	designed solutions		Boat		29596			
			Sheet rev.	1	Copyright by		37 MY20		RELAY UNIT		103 / 149	
Date of modification	Modified by	Description	Project rev.	B			Boat model		Title		Sheet	

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.
EXEMPTION:
ALL <500mm WIRES, BLACK WIRES AND HI-FLEX CABLES
THIS MARKING IS NOT NEEDED.

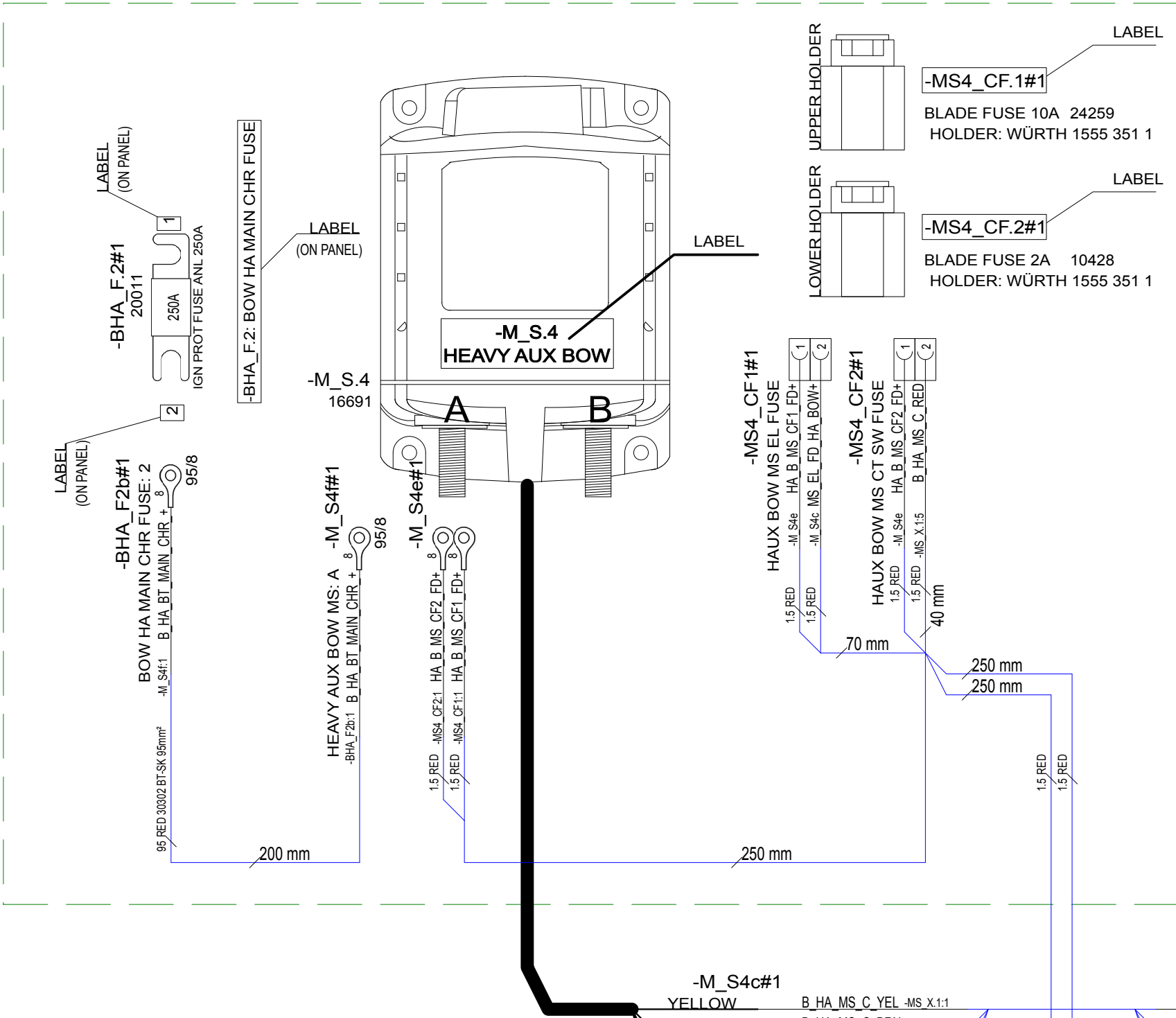
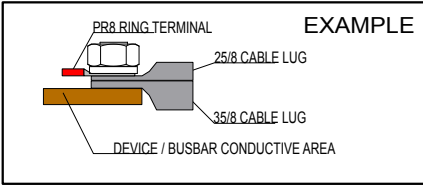
MARKING

R2 ISO 6722 100V AWG16 +100 C

CABLE

EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

NOTICE!
INSTALL CABLES TO DEVICE SO THAT
LARGEST TERMINALS ARE CLOSEST
TO DEVICES CONDUCTIVE AREA.



-M_S4c#1

YELLOW B_HA_MS_C_YEL -MS_X.1:1

BROWN B_HA_MS_C_BRN -MS_X.1:2

ORANGE B_HA_MS_C_ORG -MS_X.1:3

BLACK INPUT- -MS_X.1:4

RED MS_EL_FD_HA_BOW+ -MS4_CF1:2

CONNECTION
TO HULL HARNESS
-MS_X.1#1

-MS_X.1#1
2634610

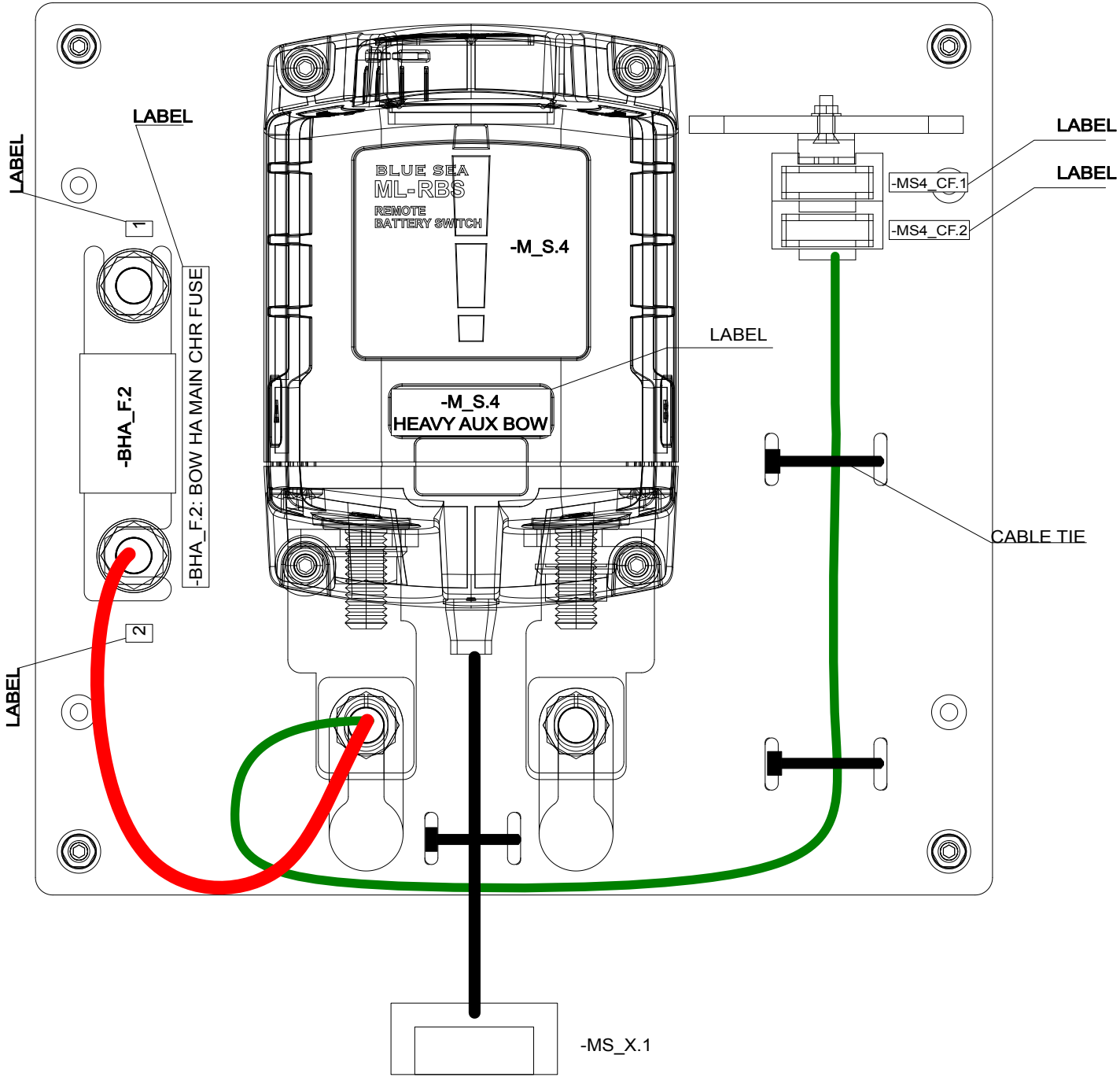
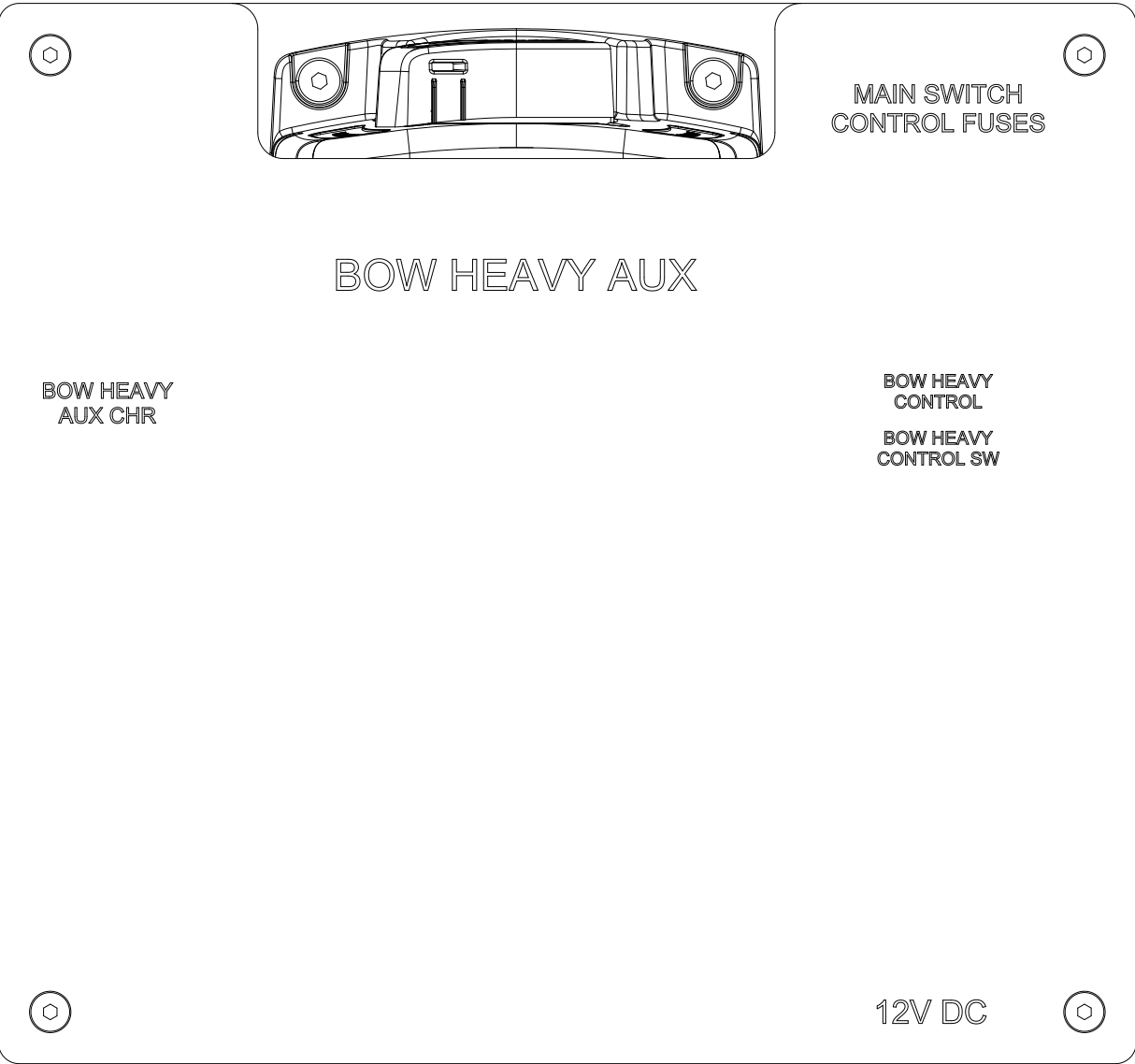
4	5	6
1	2	3

(6N BACK VIEW)

2634610

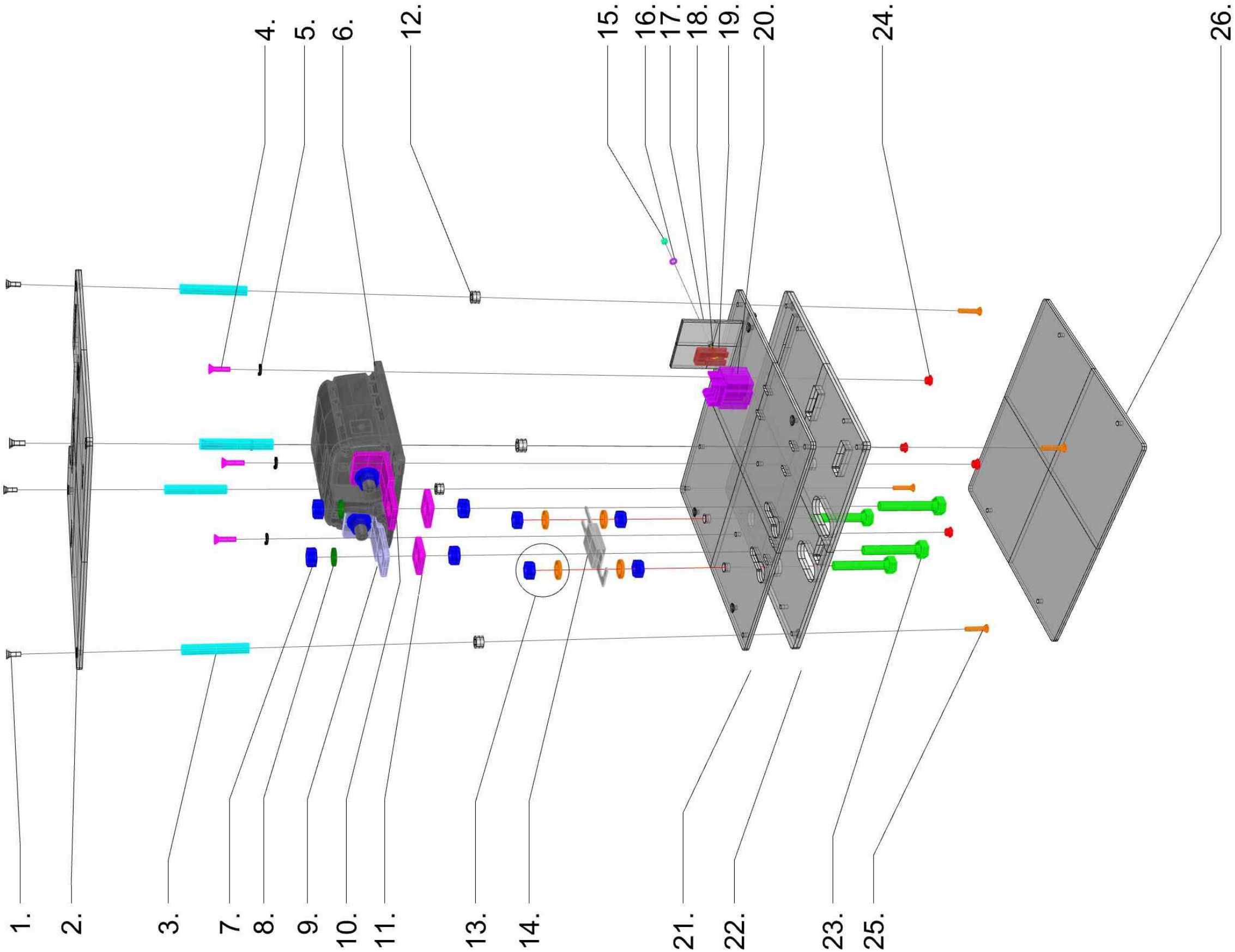
23.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	23.5.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29597		
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID	
10.10.2019	PN	B3: BOW HEAVY AUX MAIN SWITCH UNIT/BOX/DESIGN CHANGED.	Sheet rev.	3		37 MY20	BOW HEAVY AUX	HL	104 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	Main SWITCH UNIT	Loc	Sheet	

GENERAL LAYOUT / LABLES / CABLE ROUTES



23.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	23.5.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW		29597		Project ID	
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code				
10.10.2019	PN	B3: BOW HEAVY AUX MAIN SWITCH UNIT/BOX/DESIGN CHANGED.	Sheet rev.	3		37 MY20	BOW HEAVY AUX MAIN SWITCH UNIT	HL		105 / 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc				
Sheet												

EXP VIEW



29597_AXOPAR_37_MY20_BOW_HEAVY_AUX_MAIN_SWITCH_UNIT

- 29597_AXOPAR_37_MY20_BOW_HEAVY_AUX_MAIN_SWITCH_UNIT
- 1. 4PCS M4 x 10 COUNTERSINK HEX BOLT
 - 2. 1PC 29868_AXOPAR_37_MY20_BOW_HEAVY_AUX_MSU_COVER_(WOC)
 - 3. 4PCS EXTENSION BOLT_L50mm
 - 4. 4PCS M4 X 12 COUNTERSINK
 - 5. 4PCS M4 SPRING WASHER
 - 6. 1PC BLUE SEA ML-RBS
 - 7. 4PCS M8 NUT
 - 8. 2PCS M8 SPRING WASHER
 - 9. 1PC 20329_VIRTAKISKO_BLUE_SEA_ML_SHORT_LEFT
 - 10. 1PC 20330_VIRTAKISKO_BLUE_SEA_ML_SHORT_RIGHT
 - 11. 2PCS 3667
 - 12. 4PCS 18455_NAVIX_LINE_6mm_ABS_SPACER_FOR_M5
 - 13. 4PCS M8_WASHER
 - 4PCS M8 NUT

- 14. 1PC ANL
- 15. 1PC M3 NUT
- 16. 1PC M3 WASHER
- 17. 1PC 29872_AXOPAR_37_MY20_FUSE HOLDER_PLATE_1_SPOT_(WOC)
- 18. 1PC M3 BOLT
- 19. 1PC FUSE HOLDER
- 20. 2PCS FUSE
- 21. 1PC 29869_AXOPAR_37_MY20_BOW_HEAVY_AUX_MSU_TOP_(WOC)
- 22. 1PC 29870_AXOPAR_37_MY20_BOW_HEAVY_AUX_MSU_MID_(WOC)
- 23. 4PCS M8X50 BOLT
- 24. 4PCS EMHART M4
- 25. 4PCS M4 x 20 COUNTERSINK HEX BOLT
- 26. 1PC 29871_AXOPAR_37_MY20_BOW_HEAVY_AUX_MSU_BOTTOM_(WOC)
- 4PCS CONNECT 29871 WITH CABLE
- TIE DURING TRANSPORTATION

TE 10.06.2019

23.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	2.10.2019
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM
10.10.2019	PN	B3: BOW HEAVY AUX MAIN SWITCH UNIT/BOX/DESIGN CHANGED.	Sheet rev.	3
Date of modification	Modified by	Description	Project rev.	B

NAVIX

designed solutions

Copyright by

Axopar	SEE EXP VIEW	29597		
Boat	Sub-product code	Product code	Project ID	
37 MY20	BOW HEAVY AUX MAIN SWITCH UNIT	HL	106 / 149	
Boat model	Title	Loc	Sheet	

NOTICE!
BATTERY CABLES NEED TO ADD MARKINGS
SHOWN IN EXAMPLE BELOW.
EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

BT-SK EN 60228 100V? AWG2 +100 C

EXAMPLE: RED 50mm2 WIRE MARKINGS.

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

LOOK FOR EQUIVALENT AWG SIZE FOR mm2
AND ADD THIS TO CABLE MARKINGS.

FOR EXAMPLE:
CABLE SIZE IS 70mm2 --> MARKING AWG2/0.

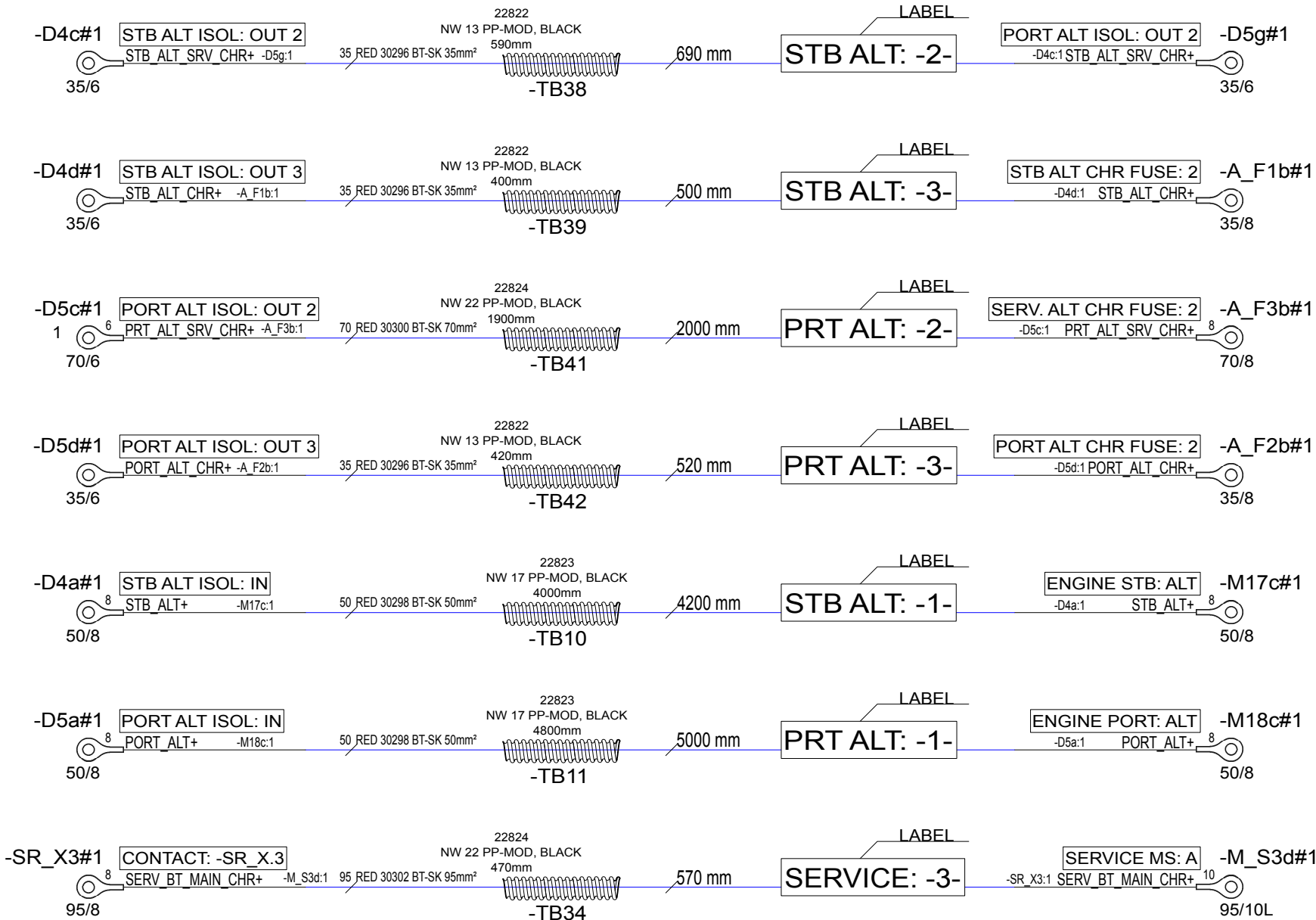
EQUIVALENCY:

mm2		AWG
25 mm2	=	AWG3
35 mm2	=	AWG2
50 mm2	=	AWG0
70 mm2	=	AWG2/0
95 mm2	=	AWG3/0
120 mm2	=	250 kcmil

NOTICE! CABLES WITH STICKER

FOR EXAMPLE

HEAVY AMP: POWER+



22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar			29600		
10.10.2019	PN	B2: ALTERNATOR CABLES COMBINED TO THIS PRODUCT.	Drawing by	TuM		Boat	Sub-product code		Product code	Project ID	
			Sheet rev.	2		37 MY20	ALTERNATOR CABLES		HL	108 / 149 Sheet	
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title		Loc		

1

2

3

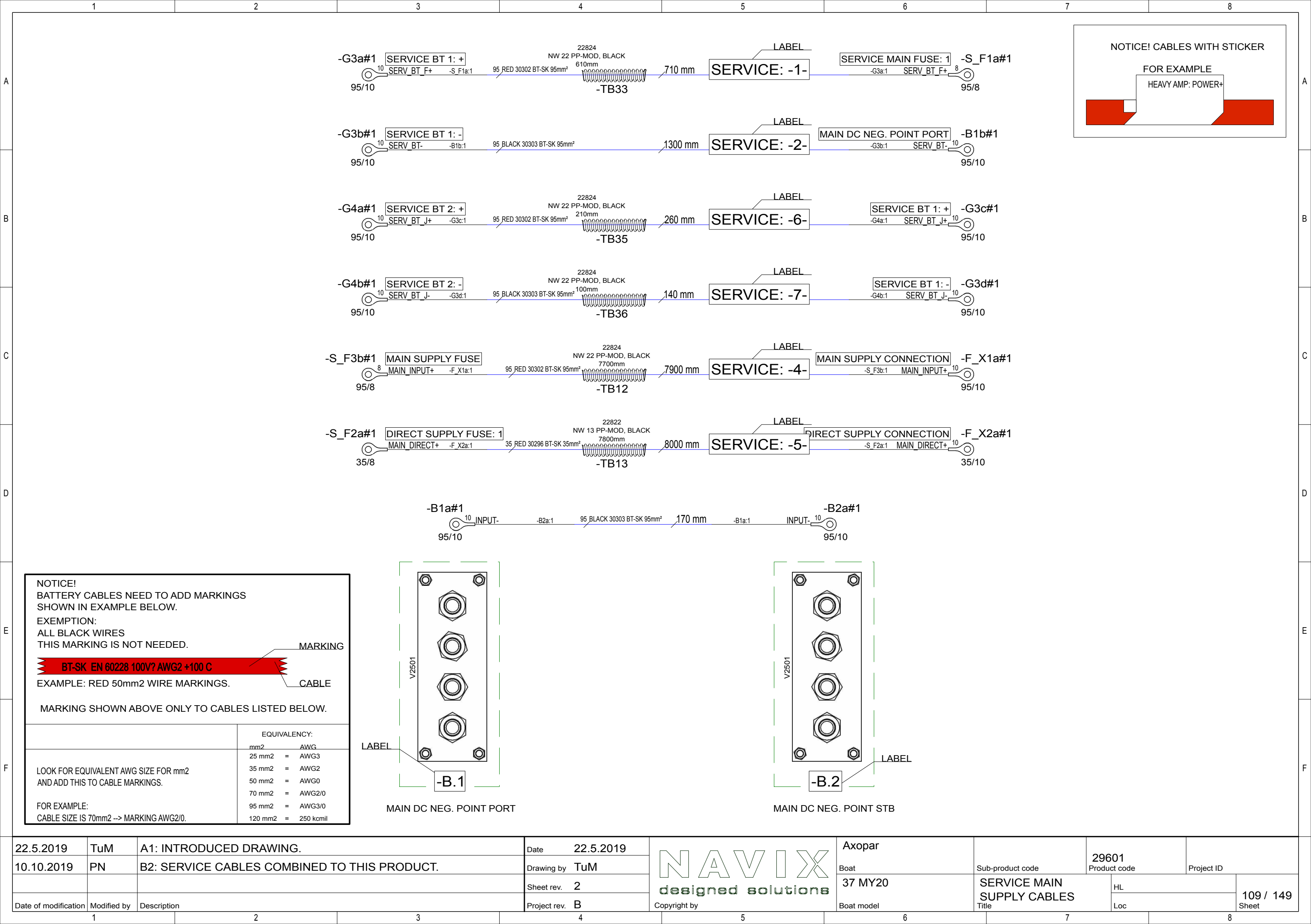
4

5

6

7

8





MARKING

CABLE

ELOW.

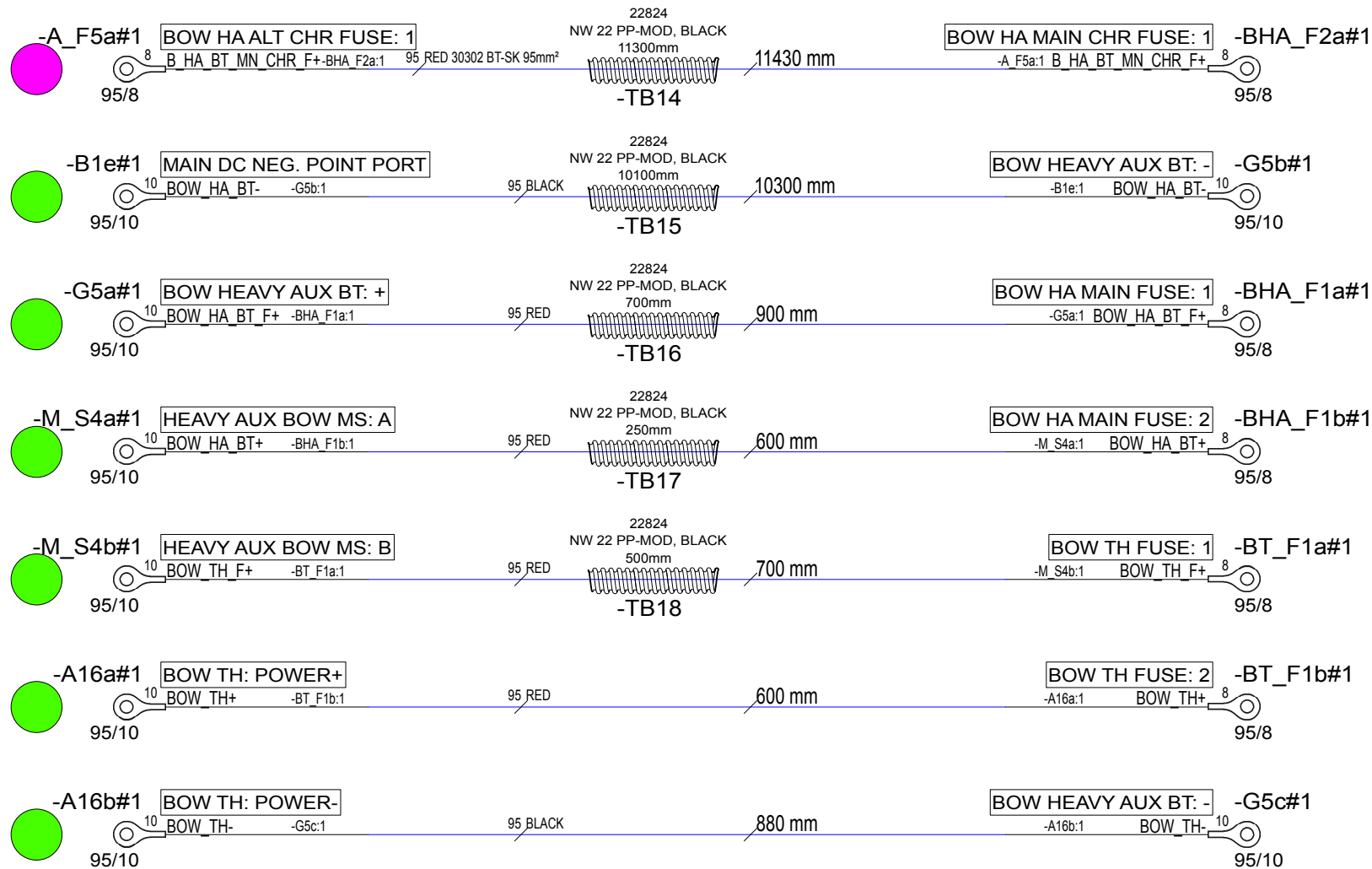
	EQUIVALENCY:
	mm2 AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS.	50 mm2 = AWG0
	70 mm2 = AWG2/0
FOR EXAMPLE:	95 mm2 = AWG3/0
CABLE SIZE IS 70mm2 --> MARKING AWG2/0.	120 mm2 = 250 kcmil

MARKING

CABLE

ELOW.

	EQUIVALENCY:
	mm2 AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS. FOR EXAMPLE: CABLE SIZE IS 70mm2 --> MARKING AWG2/0.	25 mm2 = AWG3
	35 mm2 = AWG2
	50 mm2 = AWG0
	70 mm2 = AWG2/0
	95 mm2 = AWG3/0
	120 mm2 = 250 kcmil

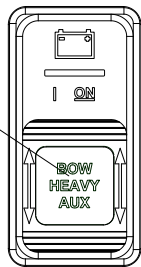


FOR EXAMPLE

HEAVY AMP: POWER+

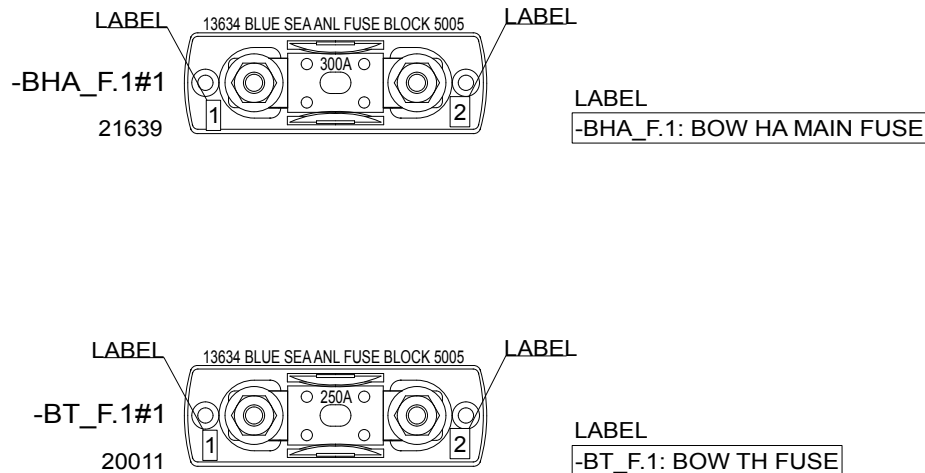


28584 (WOC)
LABEL

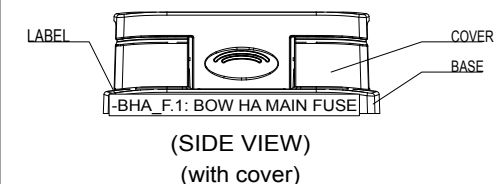
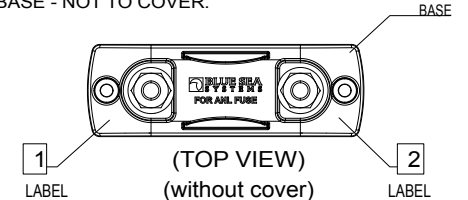


16756

BOW HA MS CTRL SWITCH



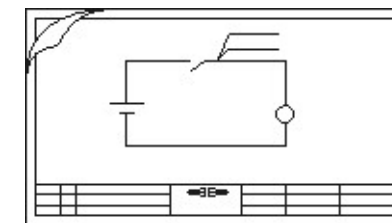
NOTICE! PUT LABELS TO FUSE HOLDER
BASE - NOT TO COVER.



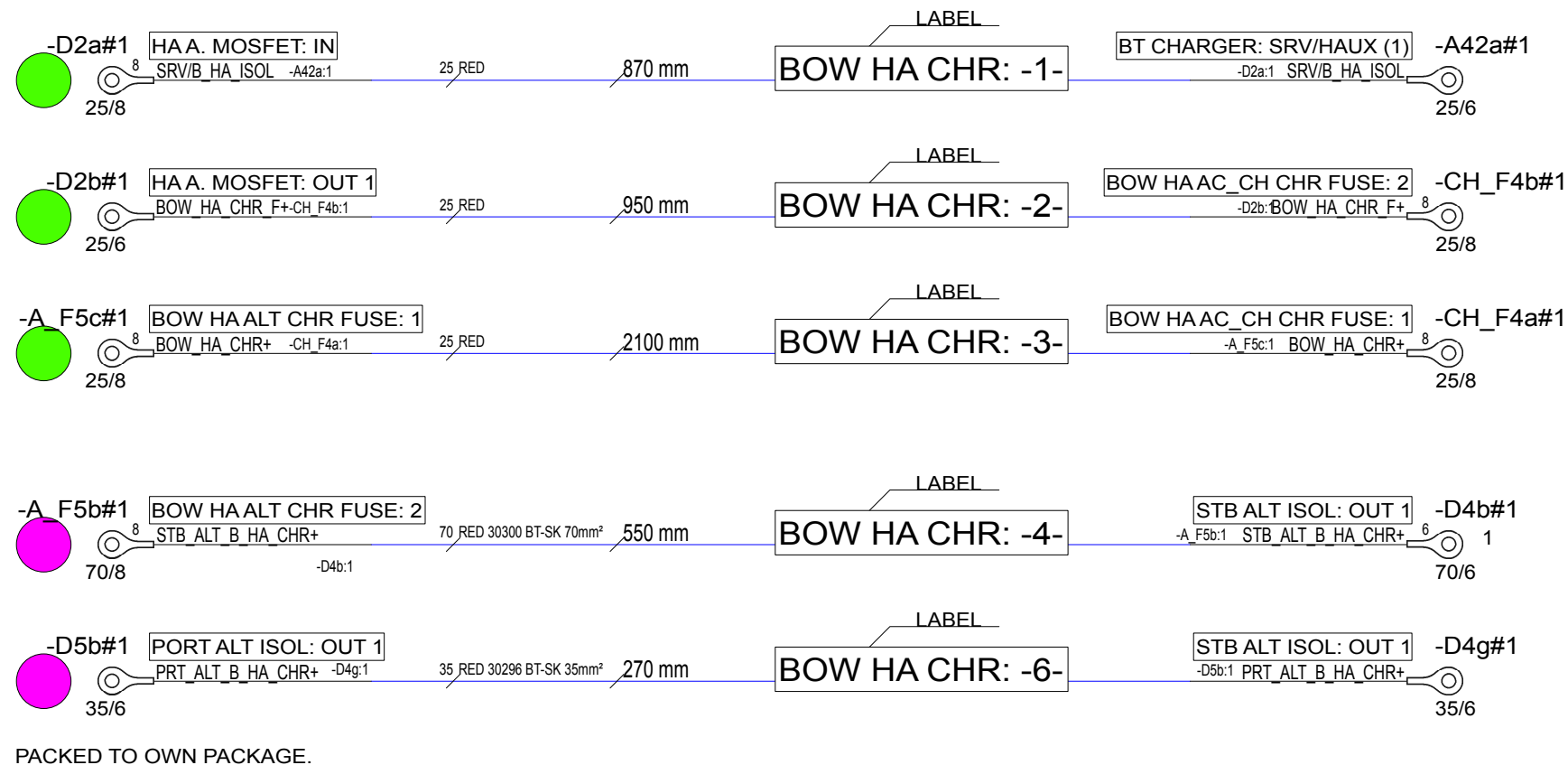
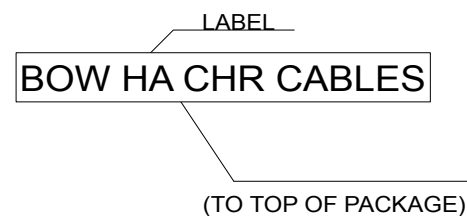
22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date 22.5.2019	NAVIX designed solutions Copyright by	Axopar	28584 Sub-product code	29602 Product code	Project ID	
			Drawing by TuM		Boat				
10.10.2019	PN	B3: BOW HA CABLES (29608) COMBINED TO THIS PRODUCT	Sheet rev. 3		37 MY20	BOW THRUSTER CABLE SET	HL	110 / 149 Sheet	
Date of modification	Modified by	Description	Project rev. B		Boat model	Title	Loc		

FOR EXAMPLE

HEAVY AMP: POWER+



29608 BATTERY BOX
BOW HEAVY AUX CHR CABLE SET



PACKED TO OWN PACKAGE.

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

	EQUIVALENCY:
	mm ² AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm ² AND ADD THIS TO CABLE MARKINGS.	25 mm ² = AWG3
	35 mm ² = AWG2
	50 mm ² = AWG0
	70 mm ² = AWG2/0
	95 mm ² = AWG3/0
	120 mm ² = 250 kcmil
FOR EXAMPLE: CABLE SIZE IS 70mm ² --> MARKING AWG2/0.	

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

	EQUIVALENCY:
	mm2 AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS.	10 mm2 = AWG8 16 mm2 = AWG6 25 mm2 = AWG3 35 mm2 = AWG2
FOR EXAMPLE: CABLE SIZE IS 25mm2 --> MARKING AWG3.	

7.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	6.7.2019	 NAVIX designed solutions Copyright by	Axopar				
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Drawing by	TuM		Boat	Sub-product code	29602	Product code	Project ID
10.10.2019	PN	B3: BOW HA CABLES (29608) COMBINED TO THIS PRODUCT	Sheet rev.	3		37 MY20	BOW THRUSTER	HL		
Date of modification	Modified by	Description	Project rev.	B		Boat model	CABLE SET	Loc		111/ 149
							Title		Sheet	

NOTICE!
BATTERY CABLES NEED TO ADD MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG6 +100 C

EXAMPLE: RED 16mm² WIRE MARKINGS.

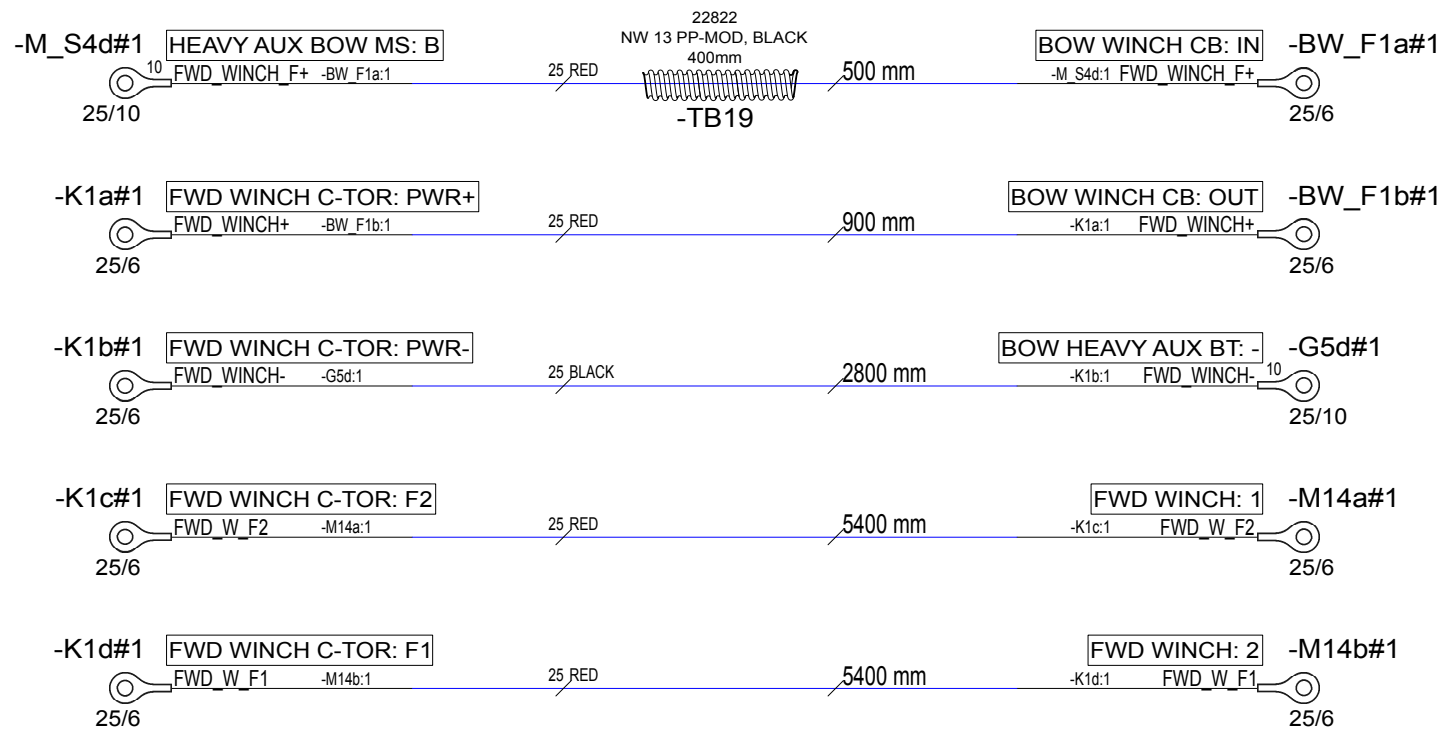
MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

	EQUIVALENCY:	
	mm2	AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS.	10 mm2	= AWG8
	16 mm2	= AWG6
	25 mm2	= AWG3
	35 mm2	= AWG2
FOR EXAMPLE: CABLE SIZE IS 25mm2 --> MARKING AWG3.		

NOTICE! CABLES WITH STICKER

FOR EXAMPLE

HEAVY AMP: POWER+



22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar		29603	Project ID	112 / 149 Sheet
10.10.2019	PN	B1:NOT MODIFIED.	Drawing by	TuM		Boat				
			Sheet rev.	1		37 MY20	BOW WINCH CABLE SET	HL		
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc		

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

EXAMPLE: RED 16mm² WIRE MARKINGS.

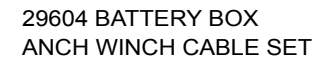
	EQUIVALENCY:
--	--------------

FOR EXAMPLE:
CABLE SIZE IS 25mm² --> MARKING AWG3.

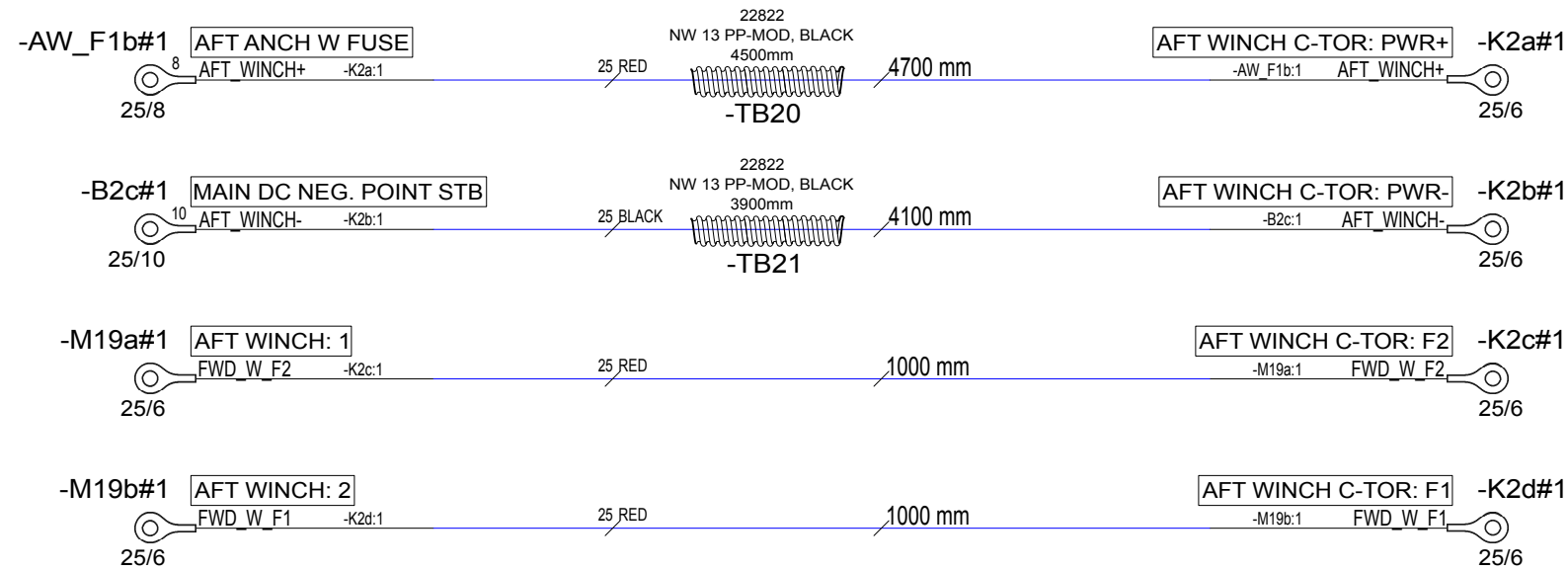
mm2	AWG
-----	-----

16 mm² = AWG6

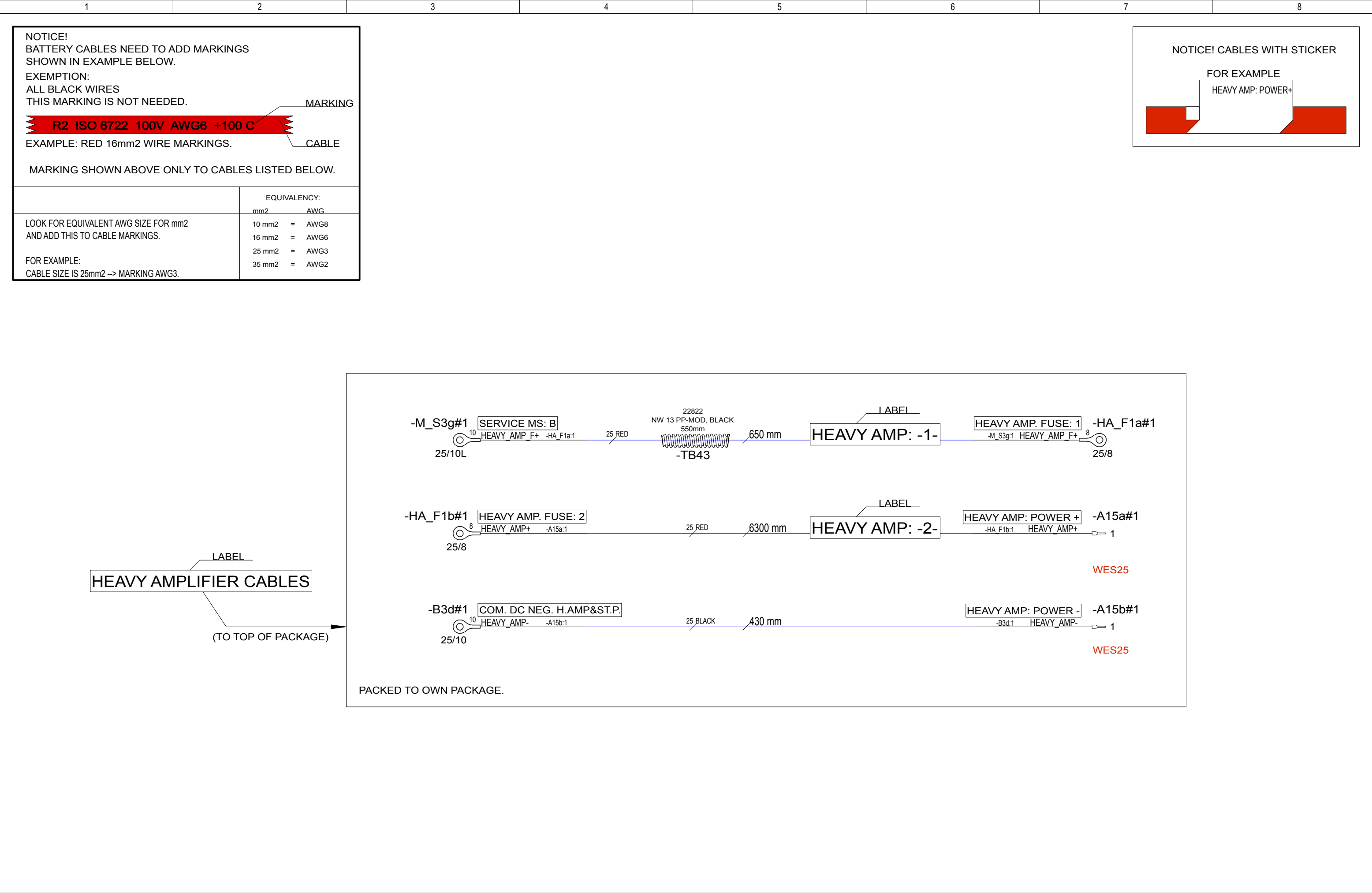
35 mm² = AWG2



HEAVY AMP: POWER+



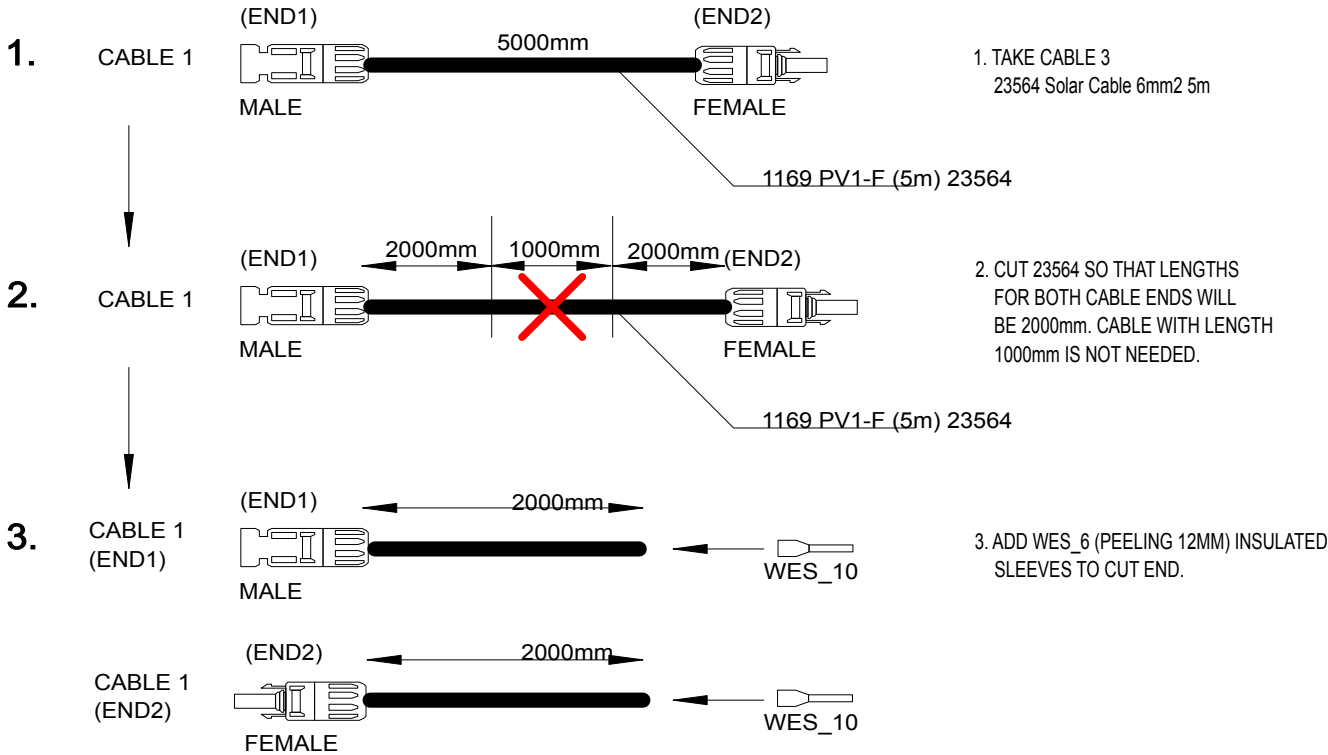
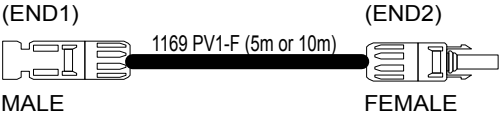
22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	NAVIX designed solutions Copyright by	Axopar	Sub-product code	29604 Product code	Project ID	113 / 149 Sheet
10.10.2019	PN	B2: CABLE FROM K2a CONNECTED DIRECT TO THE FUSE -AW_F1b	Drawing by	TuM		Boat				
			Sheet rev.	2		Boat model		Title	Loc	
Date of modification	Modified by	Description	Project rev.	B						



	1	2	3	4	5	6	7	8
A								
B								
C								
D								
E								
F								

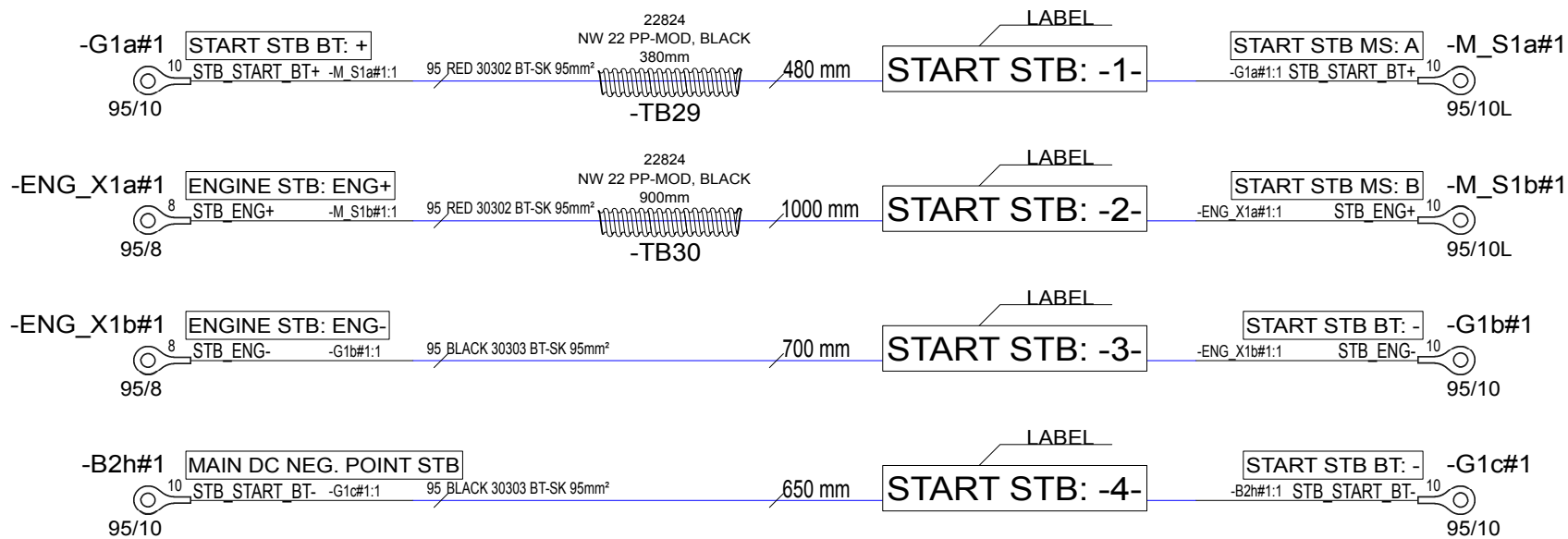
ASSEMBLY NOTES FOR SOLAR PANEL CABLES

1169 PV1-F CABLES NEEDED:
1x 23564 (5m)
SOLAR CABLECONNECTORS NEEDED:



7.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	6.7.2019	NAVIX designed solutions Copyright by	Axopar							
10.10.2019	PN	B2: 29612 CABLES MOVED TO THE 29606	Drawing by	TuM		Boat	Sub-product code		29606 Product code		Project ID		
			Sheet rev.	2		37 MY20		SOLAR PANEL CABLES		HL		116 / 149 Sheet	
Date of modification	Modified by	Description	Project rev.	B		Boat model		Title		Loc			

HEAVY AMP: POWER+

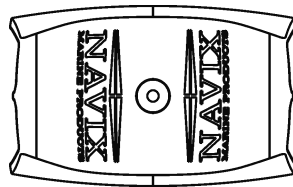


START STB CABLES

 LABEL

(TO TOP OF PACKAGE)

INCLUDED



-ENG X.1#1

V4100

PACKED TO OWN PACKAGE.

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

MARKING

BT-SK EN 60228 100V? AWG2 +100 C

EXAMPLE: RED 50mm² WIRE MARKINGS.

CABLE

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

	EQUIVALENCY:
	mm2 AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS.	25 mm2 = AWG3
	35 mm2 = AWG2
	50 mm2 = AWG0
	70 mm2 = AWG2/0
	95 mm2 = AWG3/0
FOR EXAMPLE: CABLE SIZE IS 70mm2 --> MARKING AWG2/0.	120 mm2 = 250 kcmil

6.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	6.7.2019	NAVIX designed solutions Copyright by	Axopar		29607		
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Drawing by	TuM		Boat				
10.10.2019	PN	B3: REMOVED TO OTHER PRODUCTS SERVICE-, AC CHARGER-, ALTERNATOR CABLES	Sheet rev.	3		37 MY20	BATTERY BOX	HL	117 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	CABLES STANDARD	Loc		Sheet

NAVIX
designed solutions

Copyright by

Axopar

Boat

37 MY20

Boat model

Sub-product code

BATTERY BOX
CABLES STANDARD

Title

29607

Product code

HL

Loc

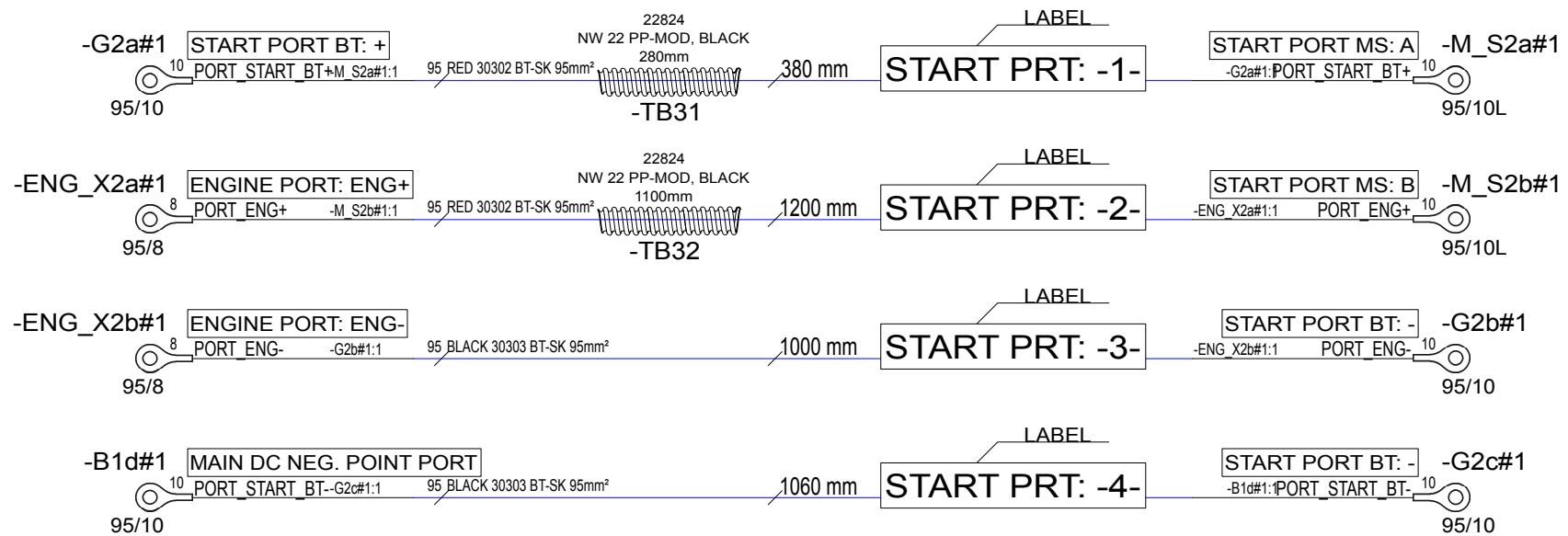
Project ID

117 / 149

Sheet

FOR EXAMPLE

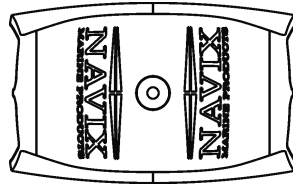
HEAVY AMP: POWER+



START PRT CABLES

(TO TOP OF PACKAGE)

INCLUDED



-ENG_X.2#1
V4100

PACKED TO OWN PACKAGE.

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

MARKING

BT-SK EN 60228 100V? AWG2 +100 C

EXAMPLE: RED 50mm² WIRE MARKINGS.

CABLE

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

	EQUIVALENCY:
	mm2 AWG
LOOK FOR EQUIVALENT AWG SIZE FOR mm2 AND ADD THIS TO CABLE MARKINGS.	25 mm2 = AWG3
	35 mm2 = AWG2
	50 mm2 = AWG0
	70 mm2 = AWG2/0
FOR EXAMPLE:	95 mm2 = AWG3/0
CABLE SIZE IS 70mm2 --> MARKING AWG2/0.	120 mm2 = 250 kcmil

6.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	5.7.2019	NAVIX designed solutions Copyright by	Axopar		29607	118 / 149	
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Drawing by	TuM		Boat				Sub-product code
10.10.2019	PN	B3: REMOVED TO OTHER PRODUCTS SERVICE-, AC CHARGER-, ALTERNATOR CABLES	Sheet rev.	3		37 MY20	BATTERY BOX	HL		
Date of modification	Modified by	Description	Project rev.	B		Boat model	CABLES STANDARD	Loc		

NAVIX
designed solutions

Copyright by

Axopar

Boat

37 MY20

Boat model

Sub-product code

BATTERY BOX
CABLES STANDARD

Title

29607

Product code

HL

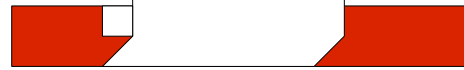
Loc

Project ID

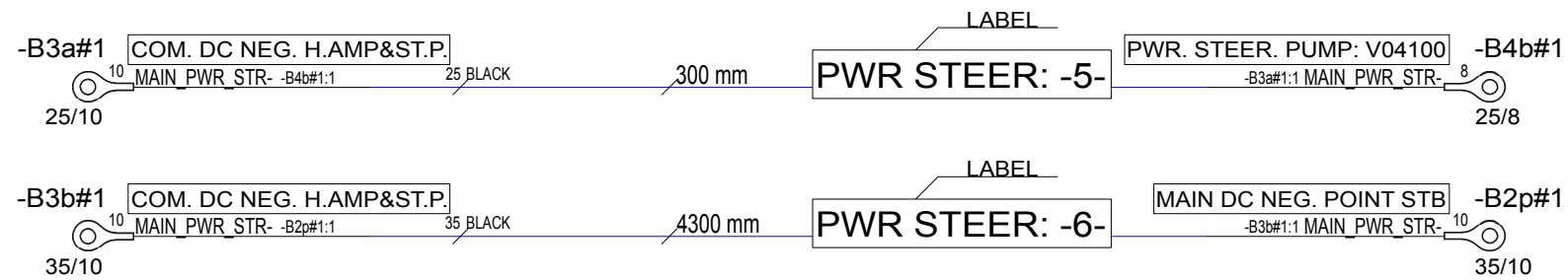
118 / 149

Sheet

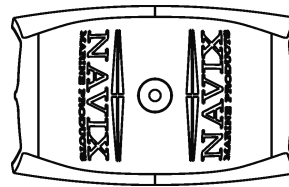
HEAVY AMP: POWER+



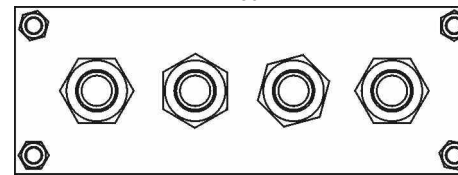
(TO TOP OF PACKAGE)



-B.4#1
V4100



V2501

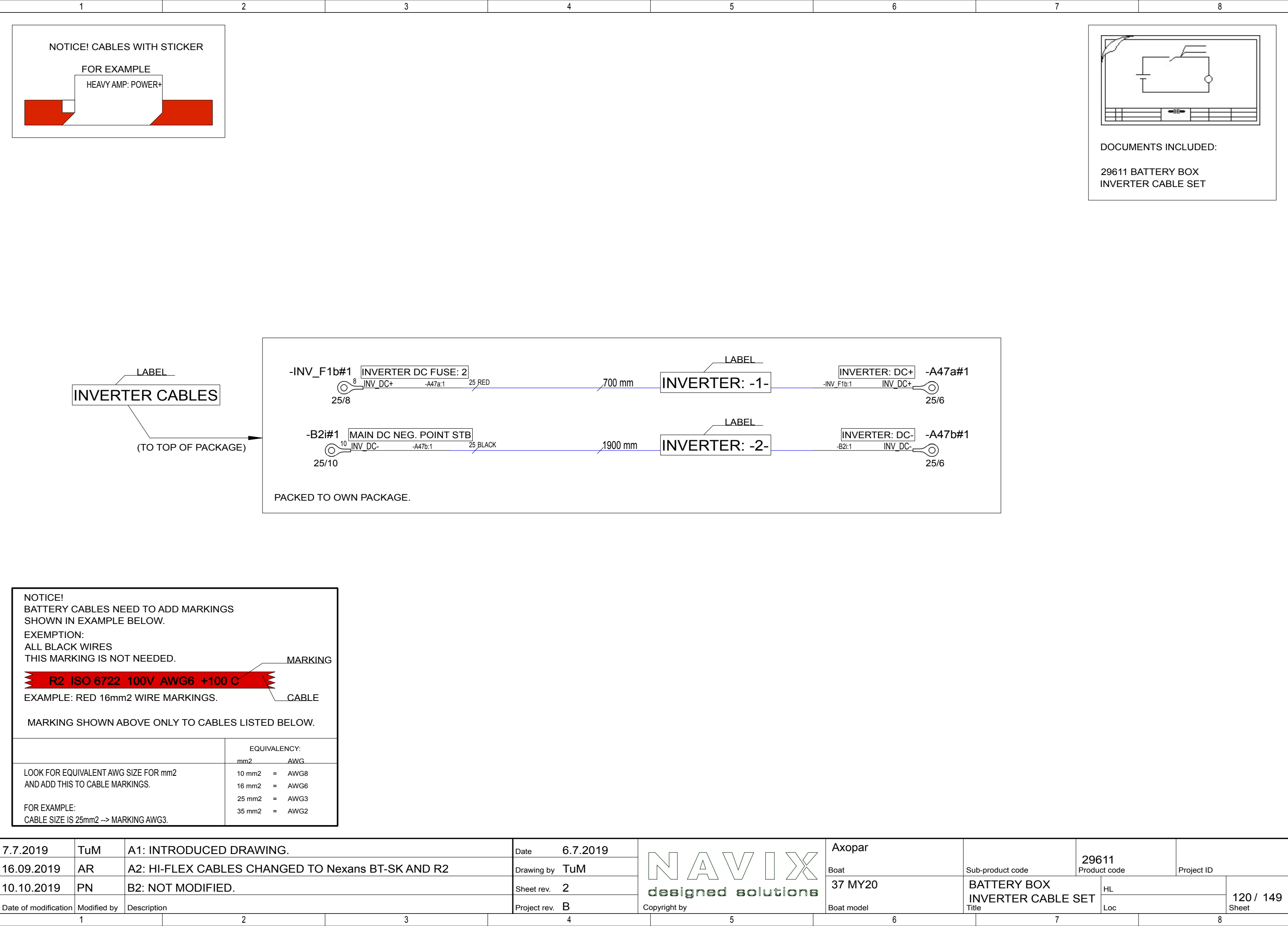


-B.3

LABEL

COM. DC NEG. H.AMP&ST.P

6.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	5.7.2019	NAVIX designed solutions Copyright by	Axopar		29607		119 / 149
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Drawing by	TuM		Boat				
10.10.2019	PN	B3: REMOVED TO OTHER PRODUCTS SERVICE-, AC CHARGER-, ALTERNATOR CABLES	Sheet rev.	3		37 MY20	BATTERY BOX	HL		
Date of modification	Modified by	Description	Project rev.	B		Boat model	CABLES STANDARD	Loc		



NOTICE!

BATTERY CABLES NEED TO ADD MARKINGS

SHOWN IN EXAMPLE BELOW.

EXEMPTION:

ALL BLACK WIRES

THIS MARKING IS NOT NEEDED.

MARKING

R2 ISO 6722 100V AWG6 +100 C

CABLE

EXAMPLE: RED 16mm2 WIRE MARKINGS.

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

EQUIVALENCY:

mm2

AWG

10 mm2 = AWG8

16 mm2 = AWG6

25 mm2 = AWG3

35 mm2 = AWG2

LOOK FOR EQUIVALENT AWG SIZE FOR mm2

AND ADD THIS TO CABLE MARKINGS.

FOR EXAMPLE:

CABLE SIZE IS 25mm2 --> MARKING AWG3.

7.7.2019

TuM

A1: INTRODUCED DRAWING.

Date

6.7.2019

16.09.2019

AR

A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2

Drawing by

TuM

10.10.2019

PN

B2: NOT MODIFIED.

Sheet rev.

2

Date of modification

Modified by

Description

Project rev.

B

NAVIX

designed solutions

Copyright by

Axopar

Boat

37 MY20

Boat model

Sub-product code

29611

BATTERY BOX

INVERTER CABLE SET

Title

Product code

HL

Loc

Project ID

120 / 149

Sheet

1

2

3

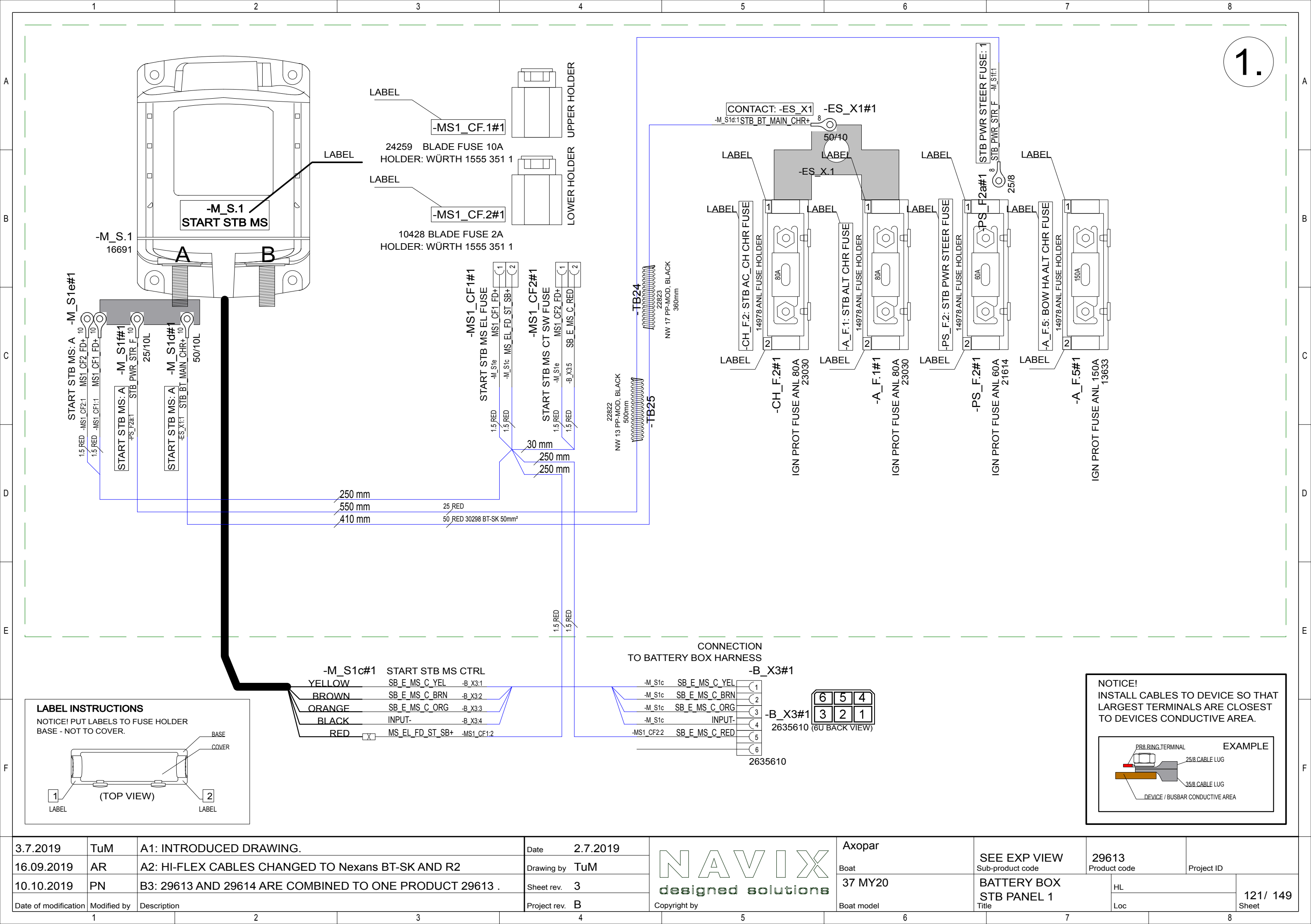
4

5

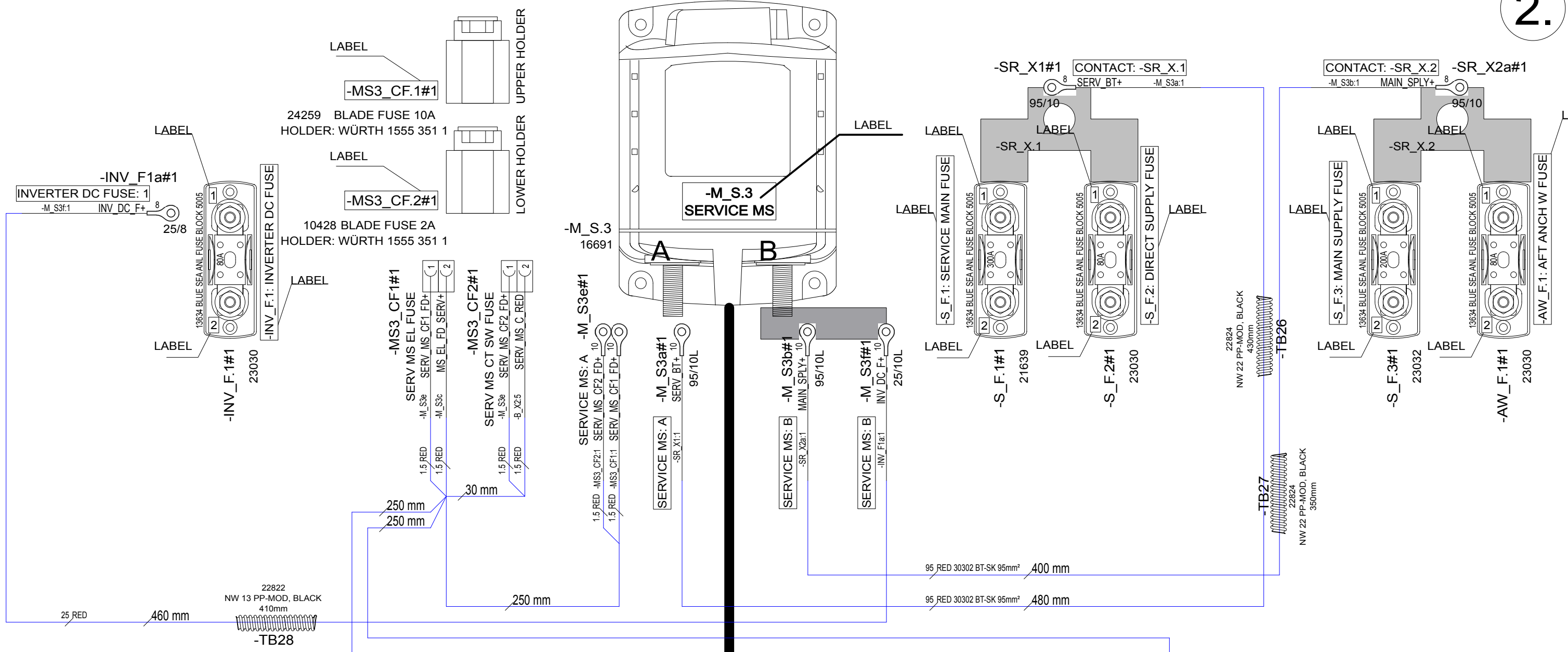
6

7

8



3.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	2.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29613	Project ID	
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK AND R2	Drawing by	TuM		Boat	Sub-product code	Product code		
10.10.2019	PN	B3: 29613 AND 29614 ARE COMBINED TO ONE PRODUCT 29613 .	Sheet rev.	3		37 MY20	BATTERY BOX	HL	121/ 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	STB PANEL 1	Loc		



LABEL INSTRUCTIONS
NOTICE! PUT LABELS TO FUSE HOLDER BASE - NOT TO COVER.

(TOP VIEW)
(without cover)

NOTICE!
INSTALL CABLES TO DEVICE SO THAT LARGEST TERMINALS ARE CLOSEST TO DEVICES CONDUCTIVE AREA.

EXAMPLE
PR8 RING TERMINAL
25/8 CABLE LUG
35/8 CABLE LUG
DEVICE / BUSBAR CONDUCTIVE AREA

CONNECTION TO BATTERY BOX HARNESS

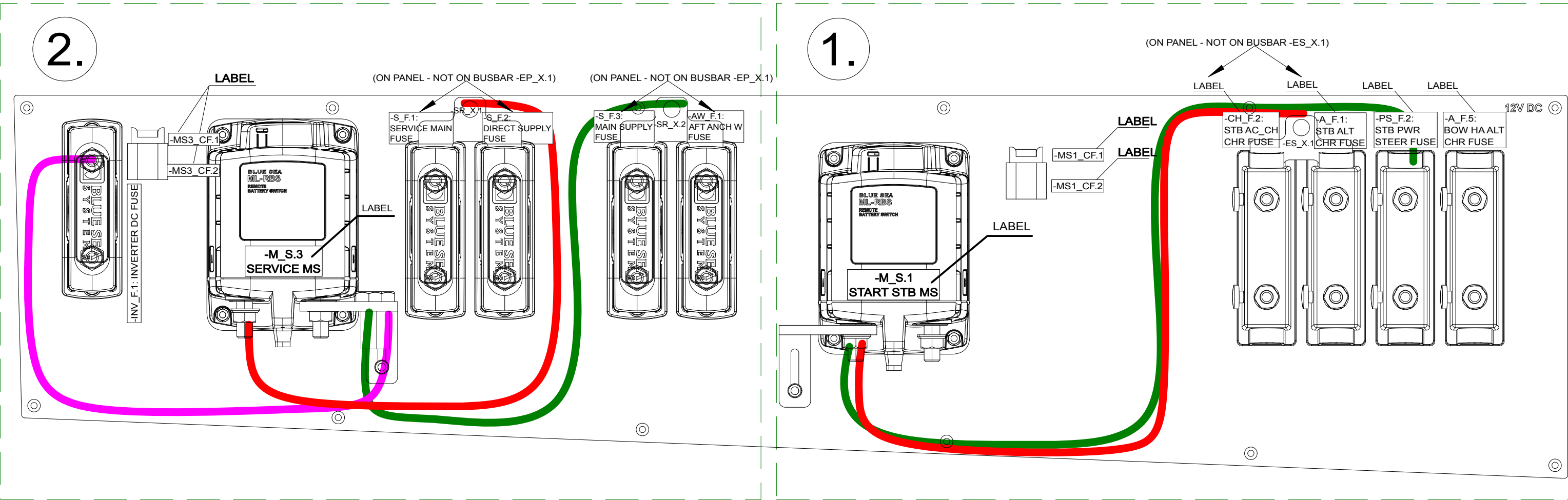
WIRE COLOR	WIRE ID	FUNCTION
YELLOW	-M_S3c#1	SERVICE MS CTRL
BROWN	SERV_MS_C_YEL -B_X2:1	
ORANGE	SERV_MS_C_ORG-B_X2:3	
BLACK	INPUT- -B_X2:4	
RED	MS_EL_FD_SERV+MS3_CF1:2	

-B_X2#1
2635610 (6U BACK VIEW)

WIRE ID	FUNCTION
-M_S3c	SERV_MS_C_YEL
-M_S3c	SERV_MS_C_BRN
-M_S3c	SERV_MS_C_ORG
-M_S3c	INPUT-
-MS3_CF2:2	SERV_MS_C_RED

3.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	3.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29613	Project ID
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code	
10.10.2019	PN	B3: 29613 AND 29614 ARE COMBINED TO ONE PRODUCT 29613 .	Sheet rev.	3		37 MY20	BATTERY BOX	HL	
Date of modification	Modified by	Description	Project rev.	B		Boat model	STB PANEL 1	Loc	122 / 149 Sheet

GENERAL LAYOUT/ LABELS / CABLE ROUTING



NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES, BLACK WIRES AND HI-FLEX CABLES
THIS MARKING IS NOT NEEDED.

MARKING

CABLE

EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

NOTICE! CABLES WITH STICKER

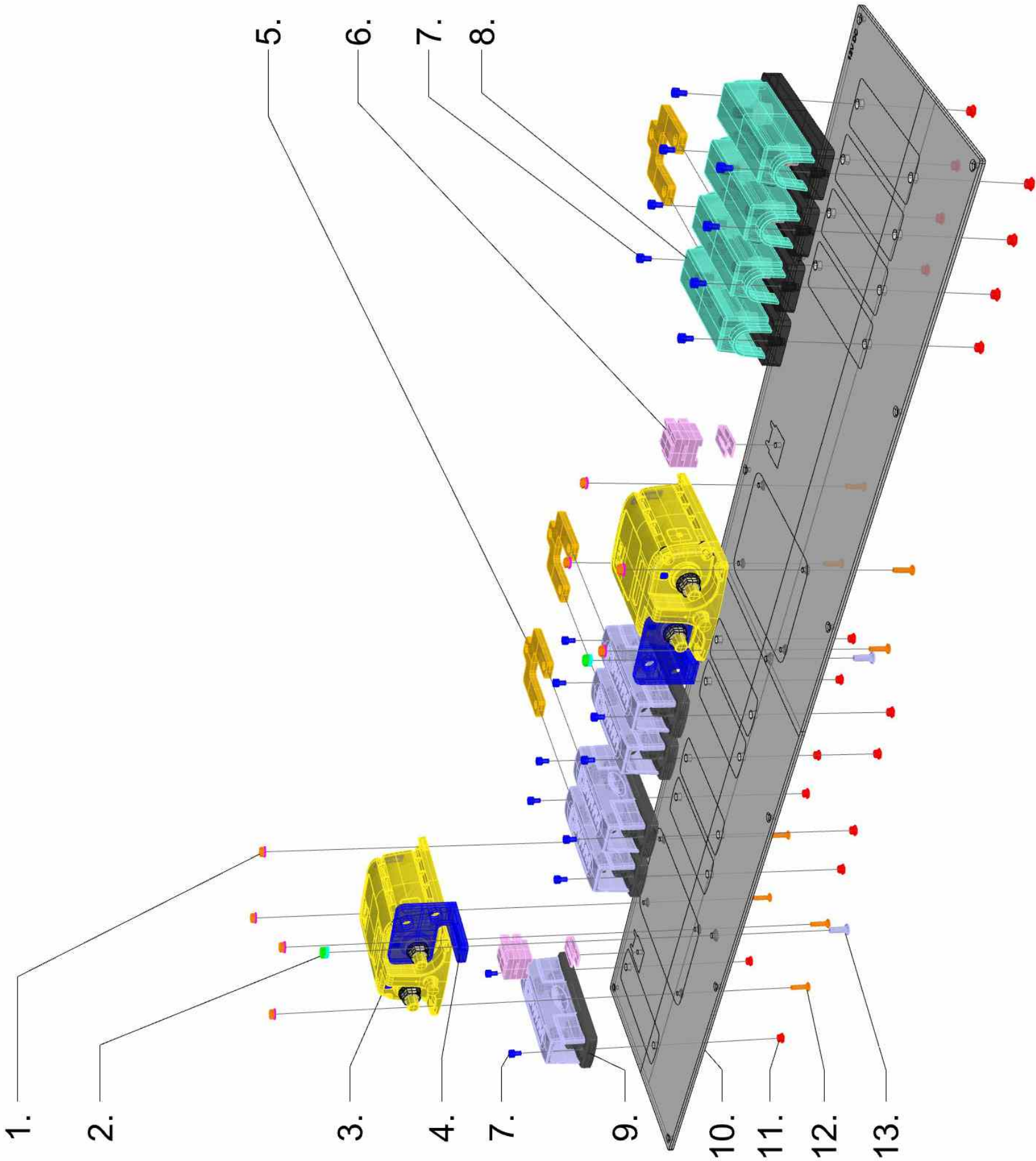
FOR EXAMPLE

HEAVY AMP: POWER+

3.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	3.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW		29613	Project ID
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code		
10.10.2019	PN	B3: 29613 AND 29614 ARE COMBINED TO ONE PRODUCT 29613 .	Sheet rev.	3		37 MY20	BATTERY BOX	HL	123 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	STB PANEL 1	Loc		Sheet

EXP VIEW

29613_AXOPAR_37_MY20_BATTERY_BOX_STB_PANEL_1

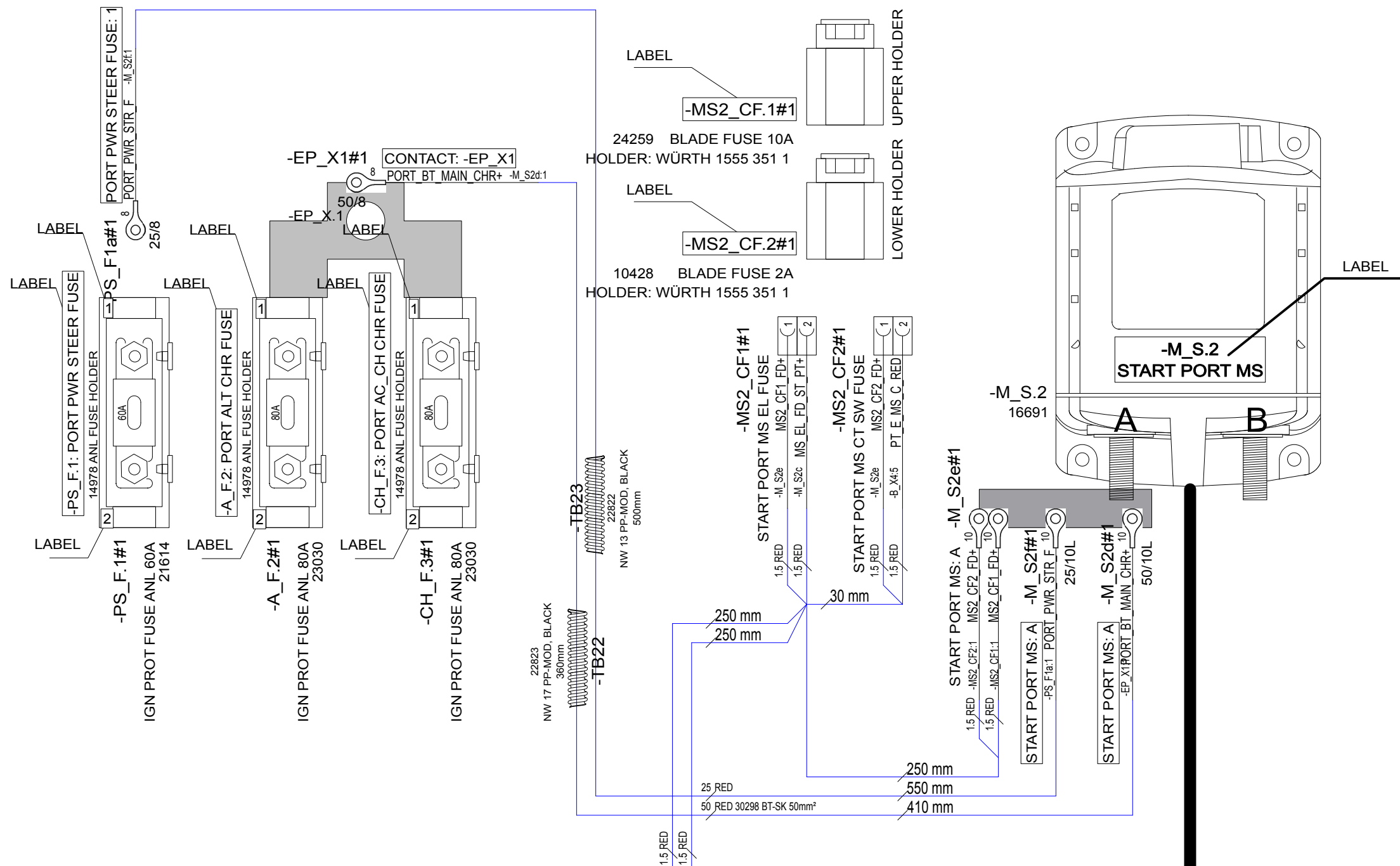


29613_AXOPAR_37_MY20_BATTERY_BOX_STB_PANEL_1

- 1. 8 PCS M4 NUT A4
- 8 PCS M4 SPRING WASHER
- 2. 2 PCS M5 NUT
- 2 PCS M5 SPRING WASHER
- 3. 2 PCS BLUE SEA
- 4. 2 PCS 30141_VIRTAKISKO_L_BLUE_SEA_ML_THREE_SPOT_LONG
- 5. 3 PCS 30142_ANL_CONNECTION_BAR_DOUBLE
- 6. 4 PCS FUSE HOLDERS
- 2 PC AL RIVET 4 X 10
- 7. 18 PCS M4 X 6 BH HEX BOLT A4
- 8. 4 PCS 14978_ANL_FUSE HOLDER
- 9. 5 PCS Blue Sea 5005 ANL FUSE BLOCK 35A to 300A
- 10. 1 PC 29896_AXOPAR_37_MY20_BATTERY_BOX_STB_PANEL_1(WOC)
- 11. 18 PCS EMHART M4
- 12. 8 PCS M4 L16 CS HEX BOLTS A4
- 13. 2 PCS M5 L16 CS HEX BOLTS A4

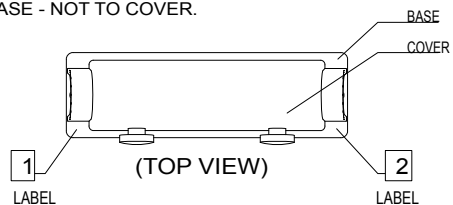
TE 28.06.-19
TE 30.09.-19

3.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	3.7.2019	Axopar		SEE EXP VIEW		29613			
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM	Boat		Sub-product code		Product code		Project ID	
10.10.2019	PN	B3: 29613 AND 29614 ARE COMBINED TO ONE PRODUCT 29613 .	Sheet rev.	3	37 MY20		BATTERY BOX		HL		124 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		STB PANEL 1		Loc		Sheet	

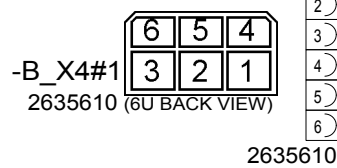


LABEL INSTRUCTIONS

NOTICE! PUT LABELS TO FUSE HOLDER BASE - NOT TO COVER.

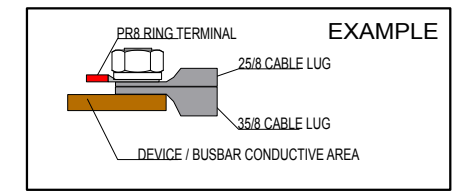


CONNECTION TO BATTERY BOX HARNESS
-B_X4#1

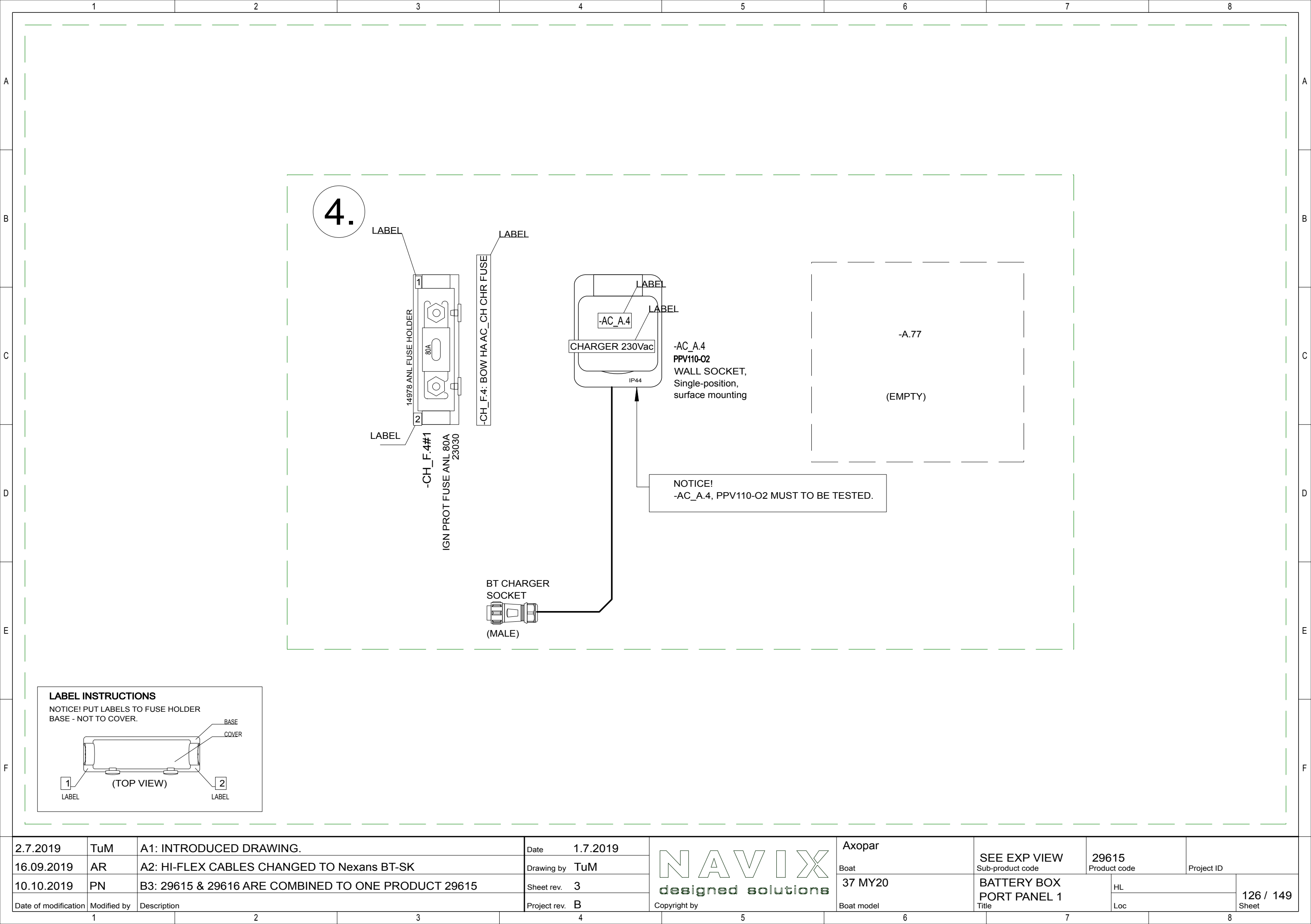


START PORT MS CTRL -M_S2c#1		
-B_X4:1	PT E MS C_YEL	YELLOW
-B_X4:2	PT E MS C_BRN	BROWN
-B_X4:3	PT E MS C_ORG	ORANGE
-B_X4:4	INPUT-	BLACK
-MS2_CF1:2	MS_EL_FD_ST_PT+	RED

NOTICE!
INSTALL CABLES TO DEVICE SO THAT LARGEST TERMINALS ARE CLOSEST TO DEVICES CONDUCTIVE AREA.

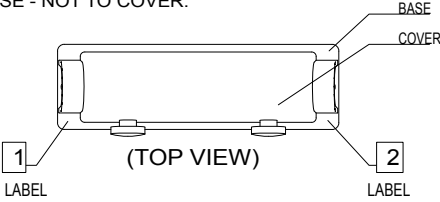


2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019	Axopar		SEE EXP VIEW		29615		
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM	Boat		Sub-product code		Product code	Project ID	
10.10.2019	PN	B3: 29615 & 29616 ARE COMBINED TO ONE PRODUCT 29615	Sheet rev.	3	37 MY20		BATTERY BOX		HL	125 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		PORT PANEL 1		Loc	Sheet	



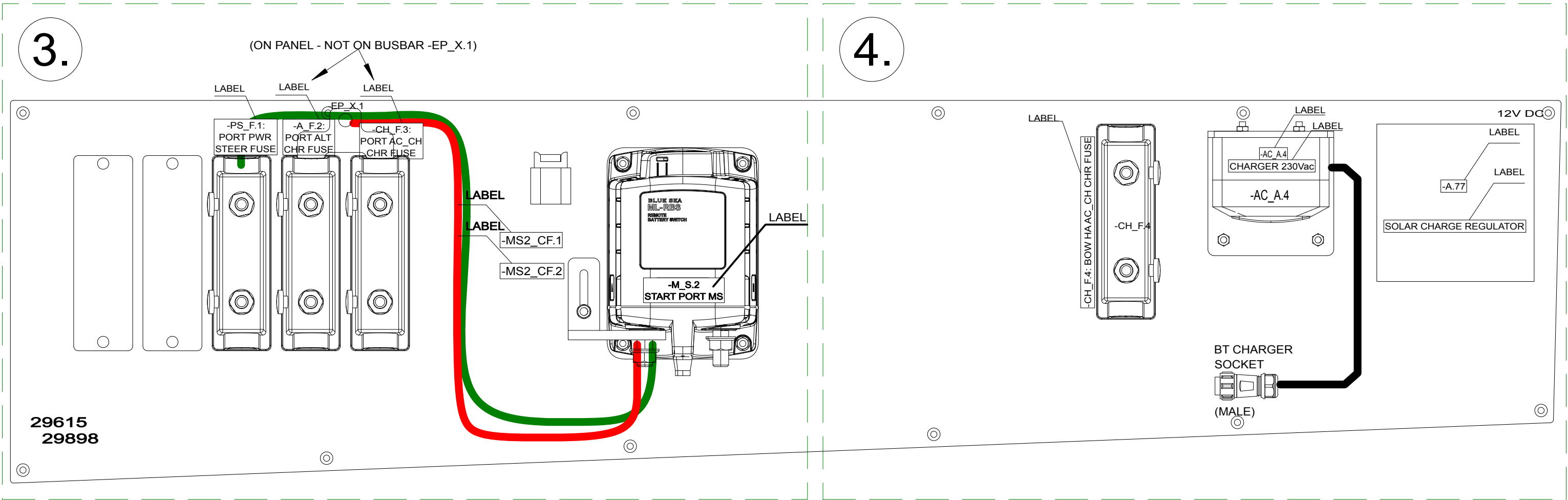
LABEL INSTRUCTIONS

NOTICE! PUT LABELS TO FUSE HOLDER
BASE - NOT TO COVER.



2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW		29615		Project ID	
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code				
10.10.2019	PN	B3: 29615 & 29616 ARE COMBINED TO ONE PRODUCT 29615	Sheet rev.	3		37 MY20	BATTERY BOX	HL		126 / 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	PORT PANEL 1	Loc				

GENERAL LAYOUT/ LABELS/ CABLE ROUTINGS



NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL <500mm WIRES, BLACK WIRES AND HI-FLEX CABLES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG16 +100 C

EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

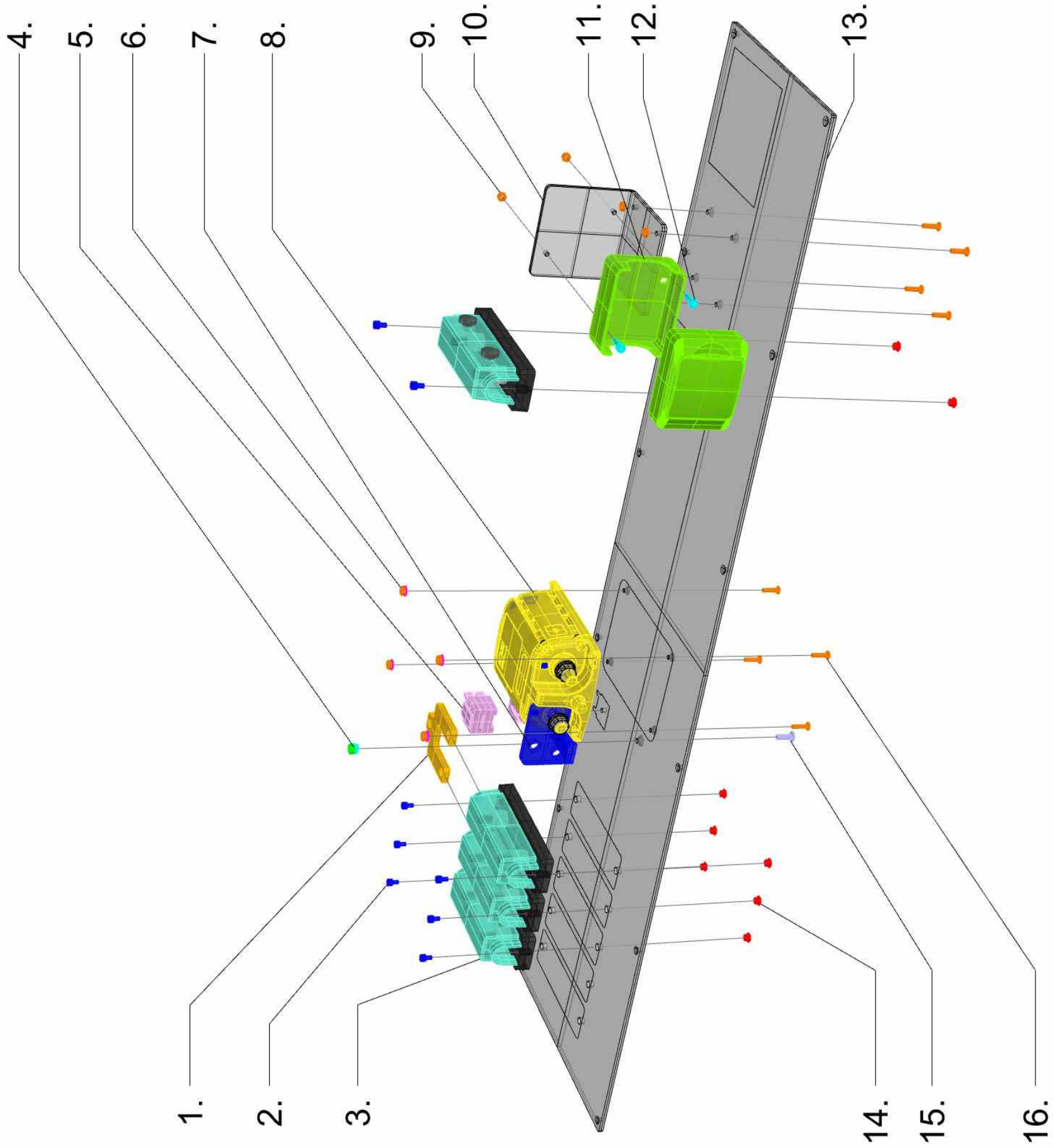
NOTICE! CABLES WITH STICKER

FOR EXAMPLE
HEAVY AMP: POWER+

2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019	Axopar		SEE EXP VIEW		29615			
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM	Boat		Sub-product code		Product code		Project ID	
10.10.2019	PN	B3: 29615 & 29616 ARE COMBINED TO ONE PRODUCT 29615	Sheet rev.	3	37 MY20		BATTERY BOX		HL		127 / 149	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc		Sheet	

EXP VIEW

29615_AXOPAR_37_MY20_BATTERY_BOX_PORT_PANEL_1



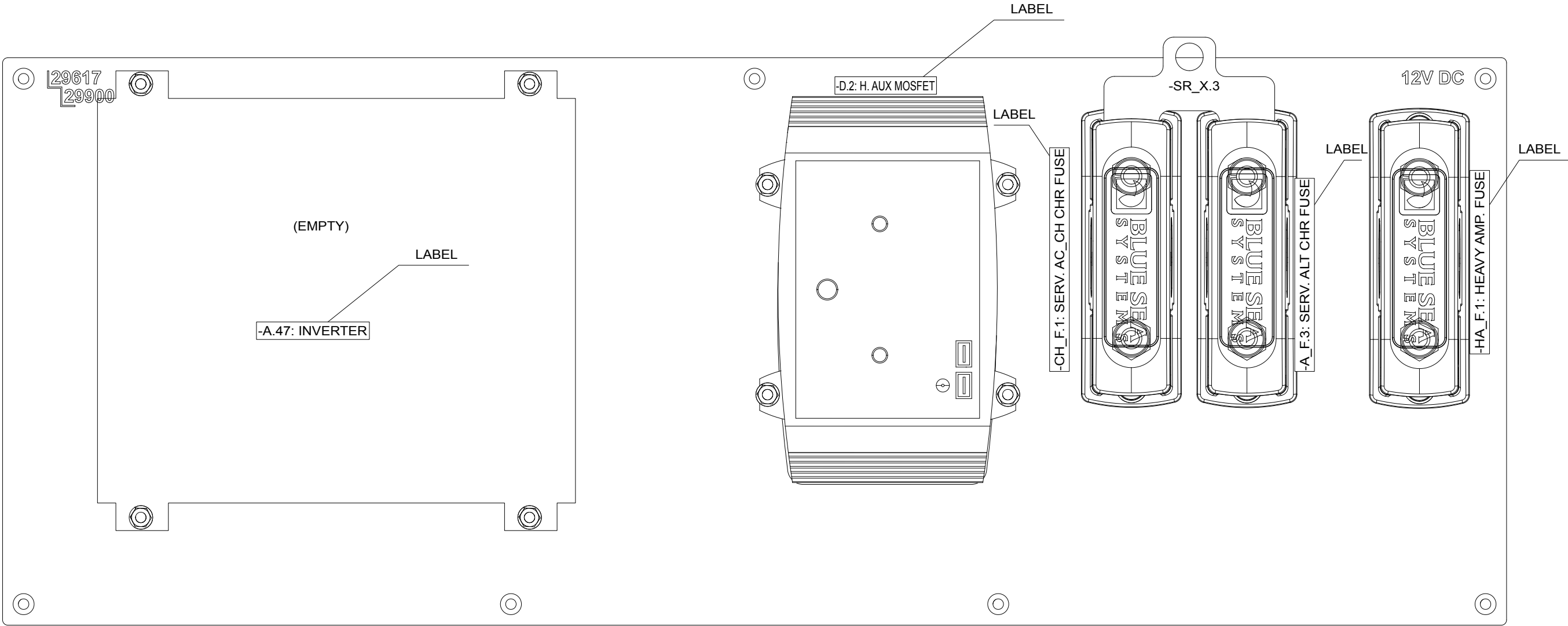
29615_AXOPAR_37_MY20_BATTERY_BOX_PORT_PANEL_1

- 1. 1 PC 30142_ANL_CONNECTION_BAR_DOUBLE
- 2. 8 PCS M4 X 6 BH HEX BOLT A4
- 3. 4 PCS 14978_ANL_FUSE HOLDER
- 4. 1 PC M5 NUT
- 1 PC M5 SPRING WASHER
- 2 PCS FUSE HOLDERS
- 1 PC AL RIVET 4 X 10
- 4 PCS M4 NUT A4
- 4 PCS M4 SPRING WASHER
- 7. 1 PC 30141_VIRTAKISKO_L_BLUE_SEA_ML_THREE_SPOT_LONG
- 8. 1 PC BLUE SEA
- 9. 6 PCS M4 NUT A4
- 10. 1 PC 30137_NAVIX_LINE_SOCKET_PPV110-O2_BRACKET_(WOC)
- 11. 1 PCS PISTORASIA PPV110-O2
- 12. 2 PCS M4 X 12 BH HEX BOLT A4
- 13. 1 PC 29898_AXOPAR_37_MY20_BATTERY_BOX_PORT_PANEL_1_(WOC)
- 14. 8 PCS EMHART M4
- 15. 1 PC M5 L16 CS HEX BOLTS A4
- 16. 8 PCS M4 L16 CS HEX BOLTS A4

TE 28.06.-19
TE 11.10.-19

2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW		29615		Project ID	
16.09.2019	AR	A2: HI-FLEX CABLES CHANGED TO Nexans BT-SK	Drawing by	TuM		Boat	Sub-product code	Product code				
10.10.2019	PN	B3: 29615 & 29616 ARE COMBINED TO ONE PRODUCT 29615	Sheet rev.	3		37 MY20	BATTERY BOX	HL		128 / 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	PORT PANEL 1	Loc			Sheet	

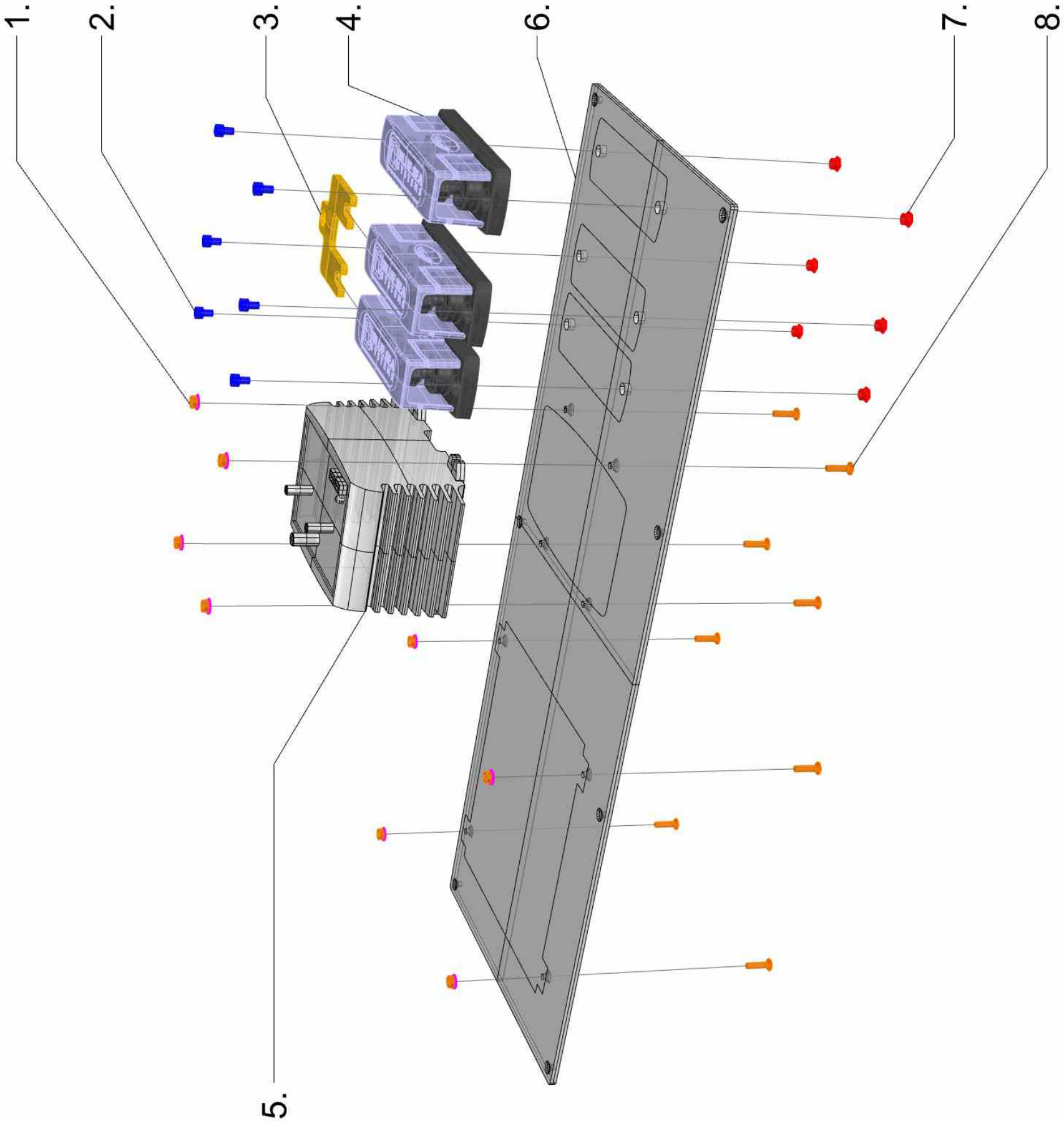
GENERAL LAYOUT/ LABELS



2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019	Axopar		SEE EXP VIEW		29617			
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM								
			Sheet rev.	1	37 MY20		BATTERY BOX		HL		130 / 149	
			Project rev.	B								
Date of modification	Modified by	Description	Project rev.	B	Copyright by	Boat model	FWD WALL PANEL		Loc		Sheet	
1		2		3	4	5	6	7			8	

EXP VIEW

29617_AXOPAR_37_MY20_BATTERY_BOX_FWD_WALL_PANEL



- 29617_AXOPAR_37_MY20_BATTERY_BOX_FWD_WALL_PANEL
- 1. 4 PCS M4 NUT A4
 - 2. 4 PCS M4 SPRING WASHER
 - 3. 1 PC 30142_ANL_CONNECTION_BAR_DOUBLE
 - 4. 4 PCS Blue Sea 5005 ANL FUSE BLOCK 35A to 300A
 - 5. 1 PC CHR ISOLATOR
 - 6. 1 PC 29900_AXOPAR_37_MY20_BATTERY_BOX_FWD_WALL_PANEL_(WOC)
 - 7. 6 PCS EMHART M4
 - 8. 4 PCS M4 L16 CS HEX BOLTS A4

ASSEMBLE FOR INVERTER

- 4 PCS M4 NUT A4
- 4 PCS M4 SPRING WASHER
- 4 PCS M4 L16 CS HEX BOLTS A4

TE 28.06.-19

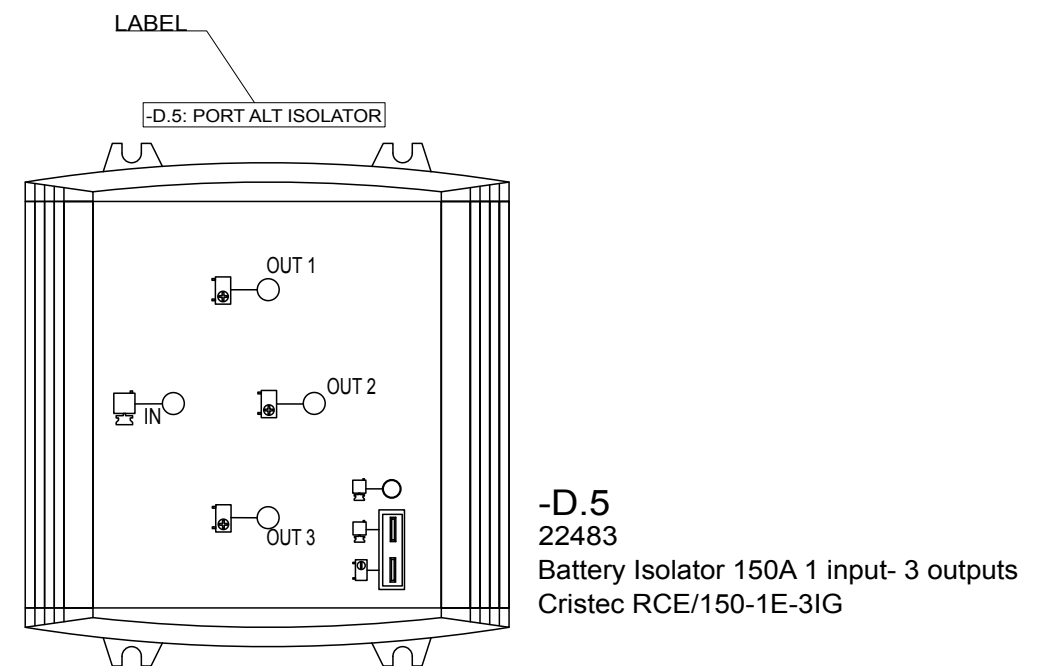
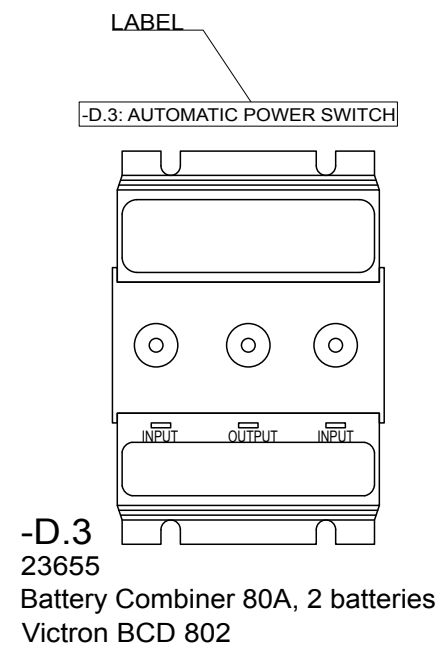
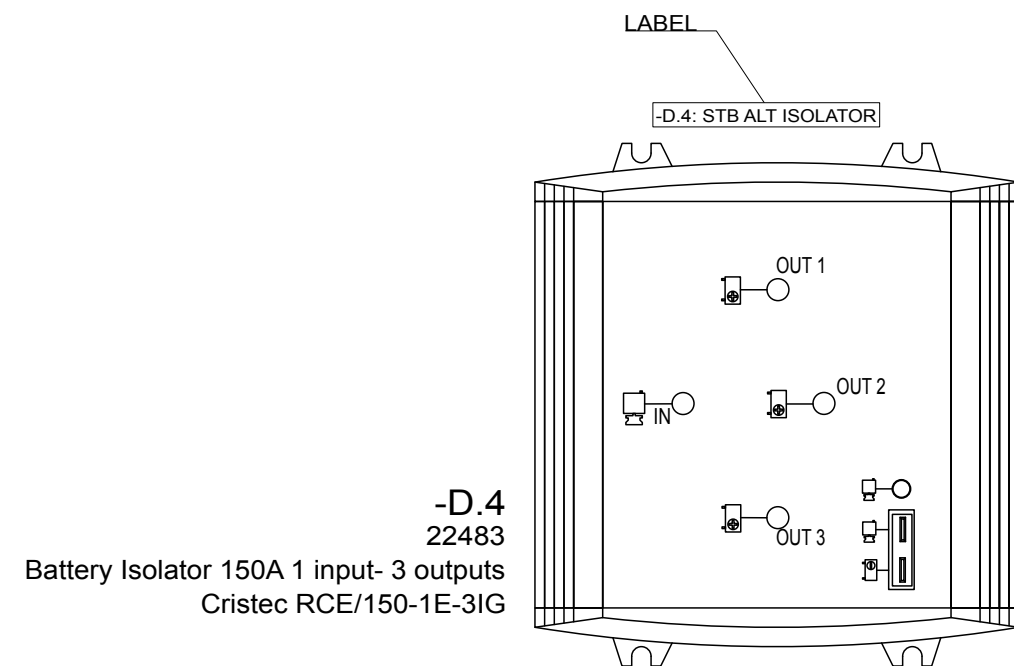
2.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	1.7.2019
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM
			Sheet rev.	1
Date of modification	Modified by	Description	Project rev.	B

NAVIX

designed solutions

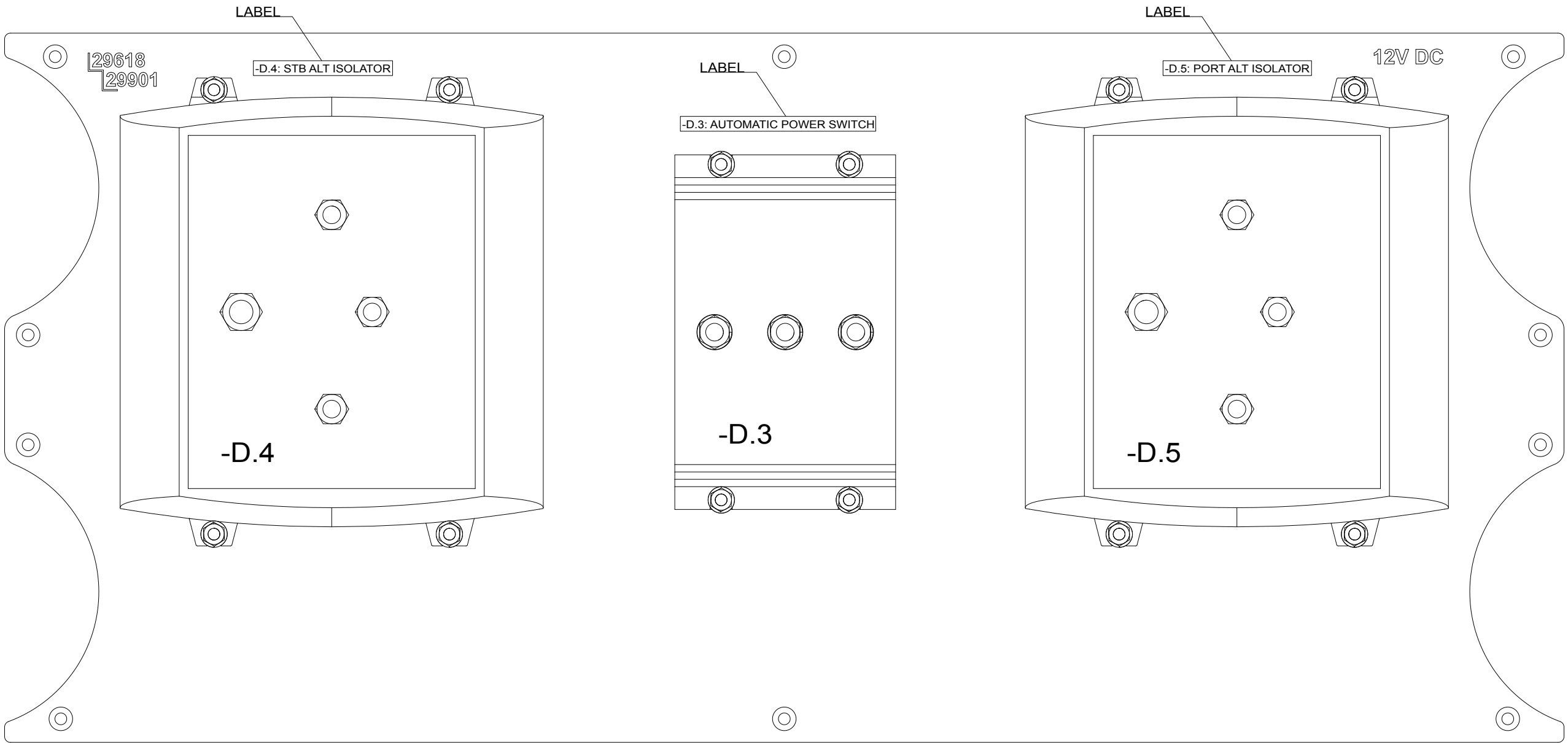
Copyright by

Axopar	SEE EXP VIEW	29617		
Boat	Sub-product code	Product code	Project ID	
37 MY20	BATTERY BOX	HL		
Boat model	FWD WALL PANEL	Loc	131/ 149	
	Title		Sheet	



27.6.2019	TuM	A1: INTRODUCED DRAWING.				Date	27.6.2019		Axopar	SEE EXP. VIEW Sub-product code	29618 Product code	Project ID	
10.10.2019	PN	B2: DESIGN MODIFIED.				Drawing by	TuM		Boat				
						Sheet rev.	2		37 MY20				
Date of modification	Modified by	Description				Project rev.	B	Copyright by	Boat model	BATTERY BOX AFT WALL PANEL Title		HL	132 / 149 Sheet
1		2	3		4		5	6	7	8			

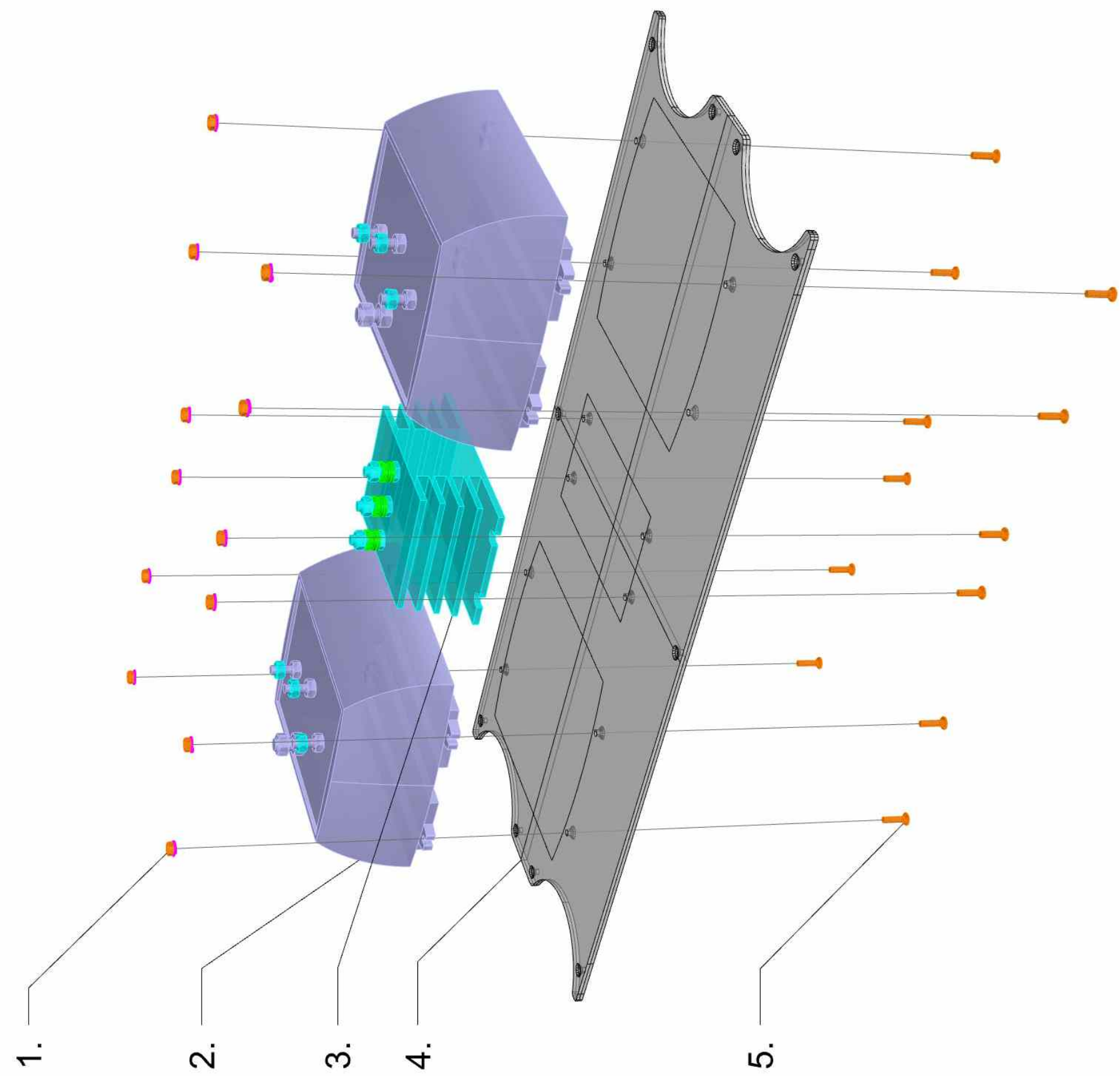
GENERAL LAYOUT/ LABELS



27.6.2019	TuM	A1: INTRODUCED DRAWING.	Date	27.6.2019	Axopar		SEE EXP. VIEW		29618			
10.10.2019	PN	B2: DESIGN MODIFIED.	Drawing by	TuM								
			Sheet rev.	2	37 MY20		BATTERY BOX		HL		133 / 149	
Date of modification	Modified by	Description	Project rev.	B								
1		2	4	5	6	7	8					

EXP VIEW

29618_AXOPAR_37_MY20_BATTERY_BOX_AFT_WALL_PANEL



- 29618_AXOPAR_37_MY20_BATTERY_BOX_AFT_WALL_PANEL
- 1. 12 PCS M4 NUT A4
 - 12 PCS M4 SPRING WASHER
 - 2. 2 PCS 22483 CRISTEC RCE/ISO-1E-3IG BATTERY ISOLATOR
 - 3. 1 PC 23655 VICTOR BCD 802 SOURCE COMBINER
 - 4. 1 PC 29901_AXOPAR_37_MY20_BATTERY_BOX_AFT_WALL_PANEL_(WOC)
 - 5. 12 PCS M4 L16 CS HEX BOLTS A4

TE 28.06.-19
TE 07.10.-19

27.6.2019	TuM	A1: INTRODUCED DRAWING.	Date	27.6.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP. VIEW	29618	Project ID	
10.10.2019	PN	B2: DESIGN MODIFIED.	Drawing by	TuM		Boat				
			Sheet rev.	2		37 MY20	BATTERY BOX	HL	134 / 149	
Date of modification	Modified by	Description	Project rev.	B		Boat model	AFT WALL PANEL	Loc		Sheet

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.

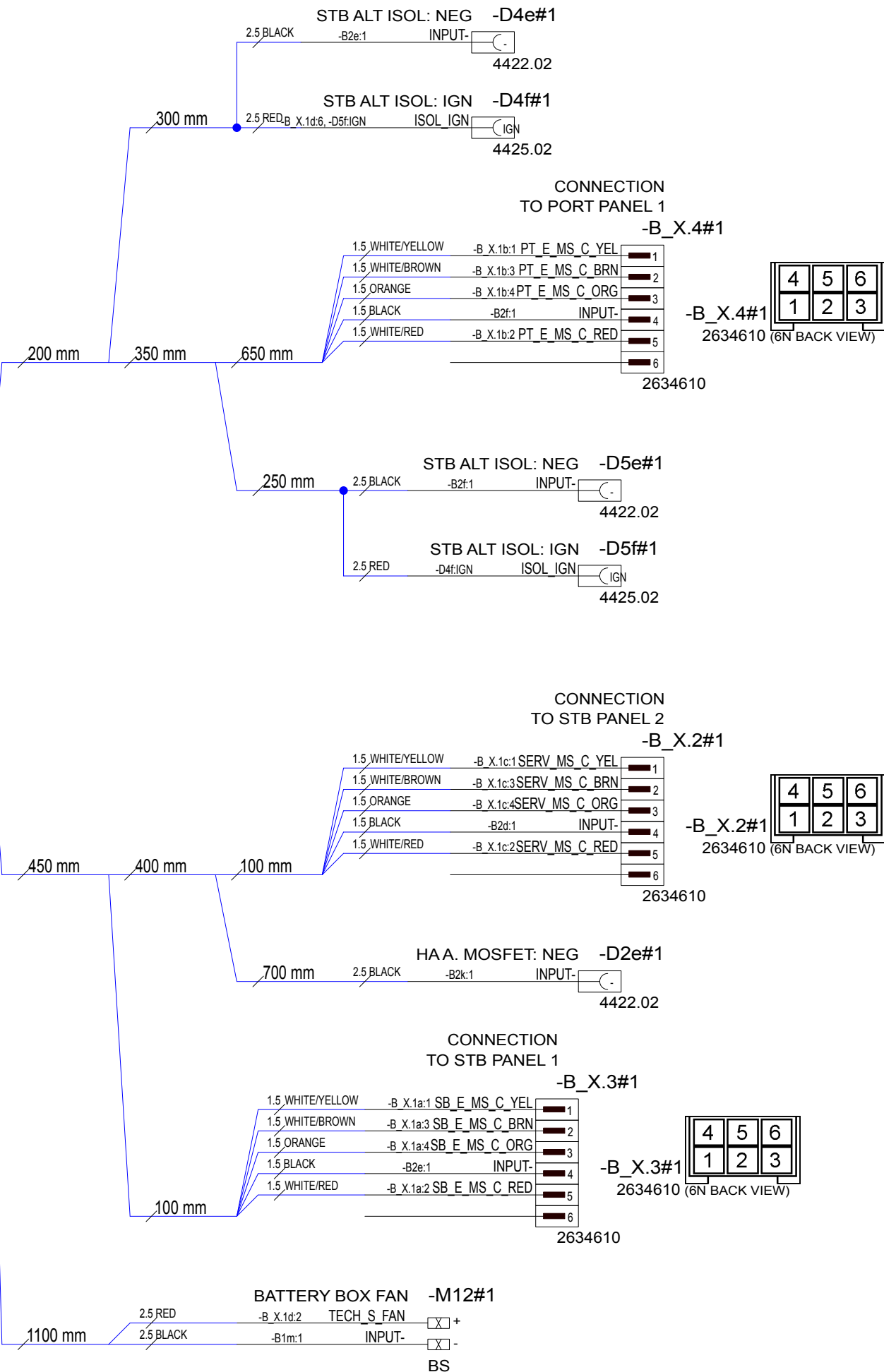
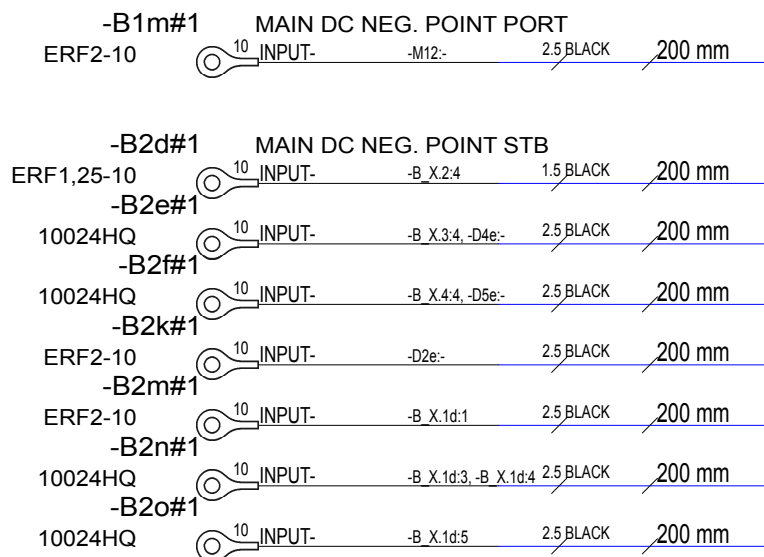
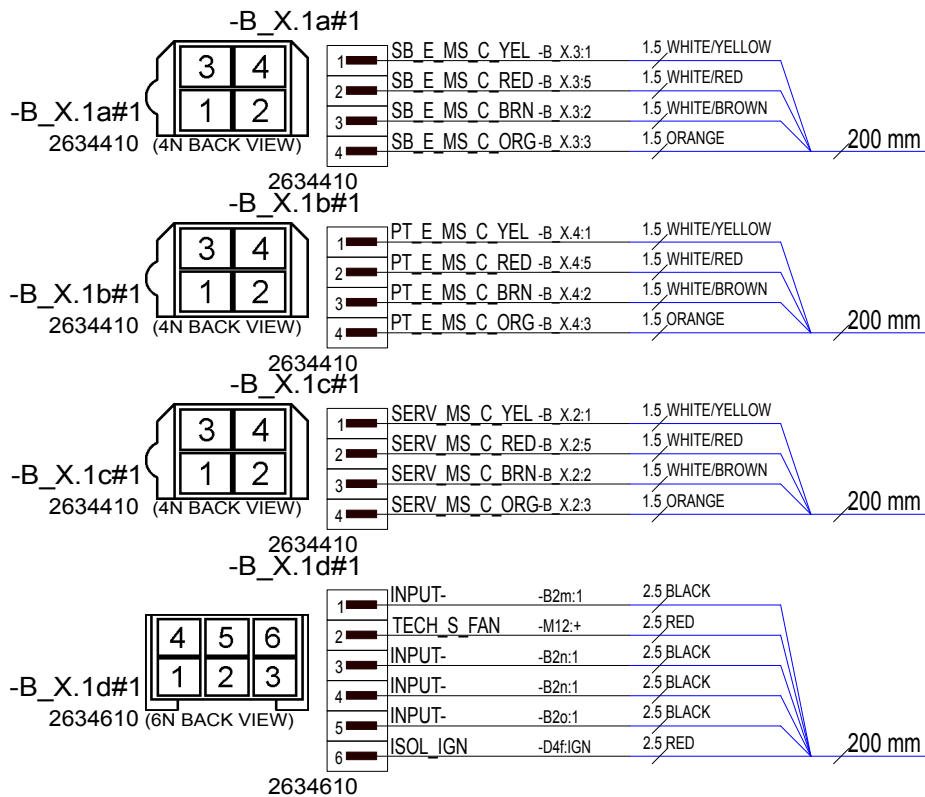
EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG16 +100 C
EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

MARKING

CABLE

CONNECTION
TO HULL HARNESS



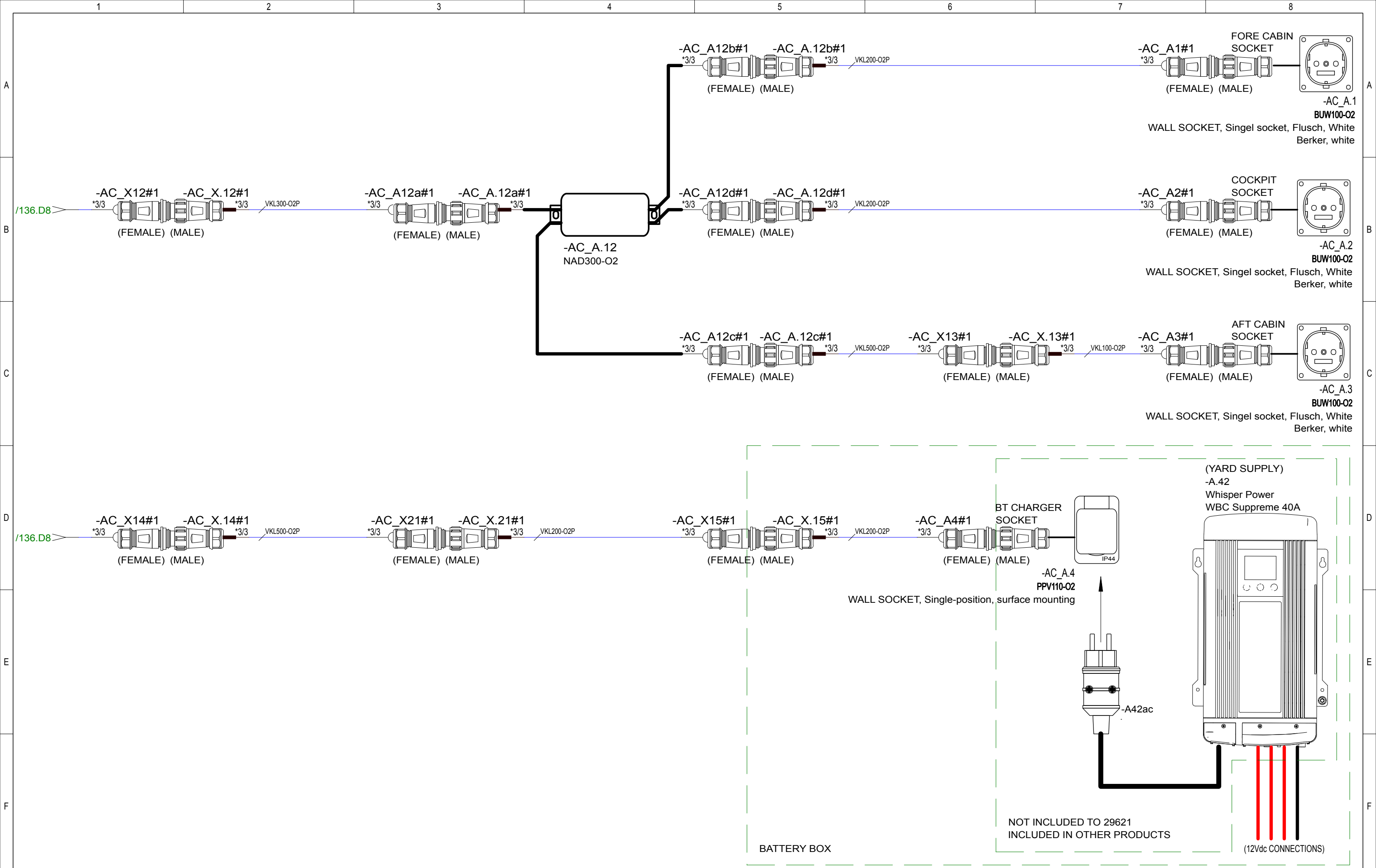
9.7.2019	TuM	A1: INTRODUCED DRAWING.
10.10.2019	PN	B1: NOT MODIFIED.
Date of modification	Modified by	Description

Date	8.7.2019
Drawing by	TuM
Sheet rev.	1
Project rev.	B

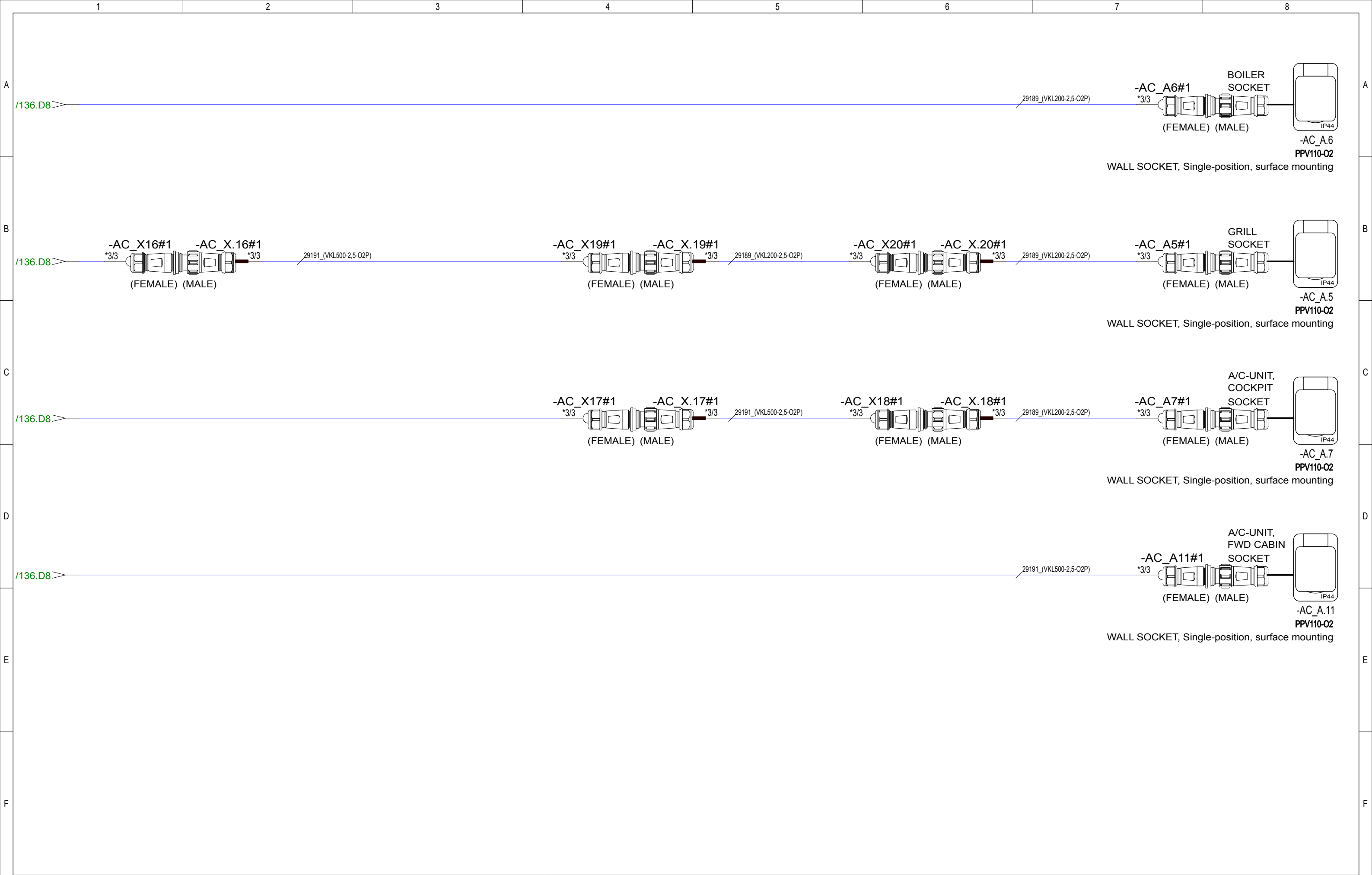
NAVIX
designed solutions

Copyright by

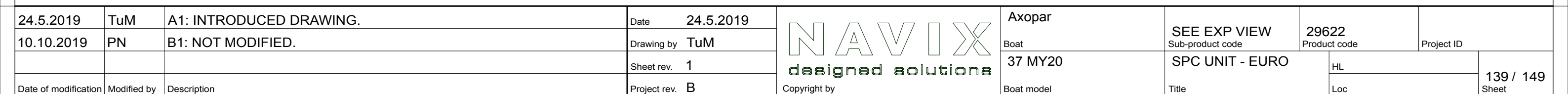
Axopar	29620	
Boat	Product code	Project ID
37 MY20		
Boat model	BATTERY BOX HARNESS	HL
	Title	Loc
		135 / 149
		Sheet



24.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	24.5.2019	NAVIX designed solutions		Axopar		29621			
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM			Boat		Sub-product code	Product code	Project ID	
			Sheet rev.	1			37 MY20		SHORE POWER SYSTEM	HL		
Date of modification	Modified by	Description	Project rev.	B	Copyright by		Boat model		- EURO	Loc	137 / 149	
1		2		3	4	5	6	7			8	Sheet



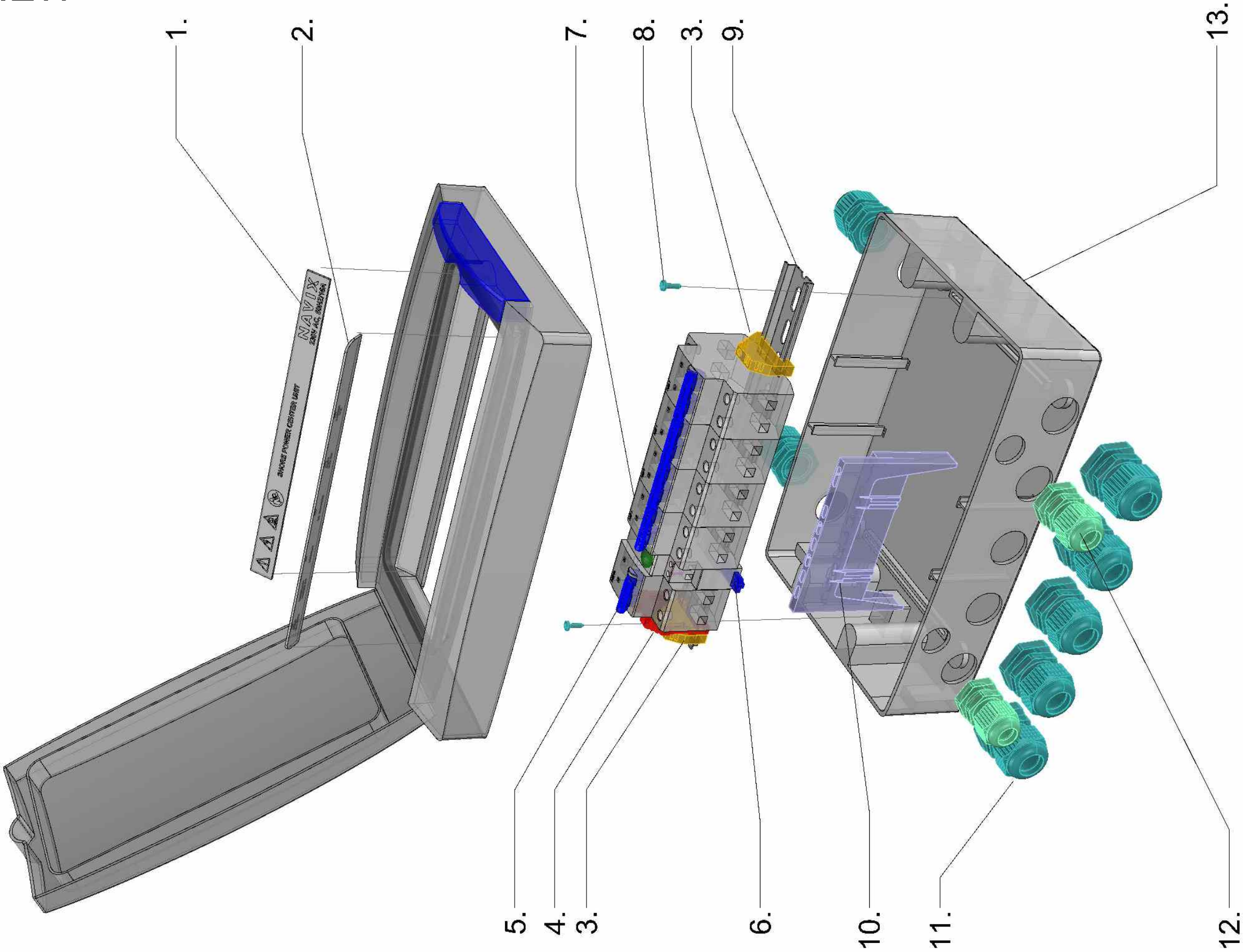
24.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	24.5.2019	NAVIX designed solutions Copyright by	Axopar				29621			
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code		Product code		Project ID		
			Sheet rev.	1		37 MY20	SHORE POWER SYSTEM		HL		138 / 149		
Date of modification	Modified by	Description	Project rev.	B		Boat model	- EURO		Loc				



	1	2	3	4	5	6	7	8
A								
B								
C								
D								
E								
F								
	INSTRUCTIONS FOR FIRST PAGE. NOTICE! CABLES WITH STICKER FOR EXAMPLE BOW CAB. SOCKET 22821 NW10 PP-MOD BLACK 970mm TUBE OUT OF BOX APPROX. 950mm TUBE THROUGH PG PG16: Approx. 30mm WIRE OUT OF BOX APPROX. 1000mm 22822 NW13 PP-MOD BLACK 150mm 22980 (FEMALE) 22981 (MALE) TUBE OUT OF BOX APPROX. 100mm TUBE THROUGH PG PG21: Approx. 50mm WIRE OUT OF BOX APPROX. 100mm							
	24.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	24.5.2019	Axopar	SEE EXP VIEW	29622
	10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM	Boat	Sub-product code	Product code
				Sheet rev.	1	37 MY20	SPC UNIT - EURO	Project ID
	Date of modification	Modified by	Description	Project rev.	B	Boat model	Title	HL
	1		2	4	5	6	7	140 / 149
			3					Sheet

EXP VIEW

29622_AXOPAR_37_MY20_SCP_UNIT-EURO



- 1. 1PC 30208_AXOPAR_37_MY20_SCP_UNIT-EURO_SIGN_LABEL_(WOC)_V1
- 2. 1PC 30207_AXOPAR_37_MY20_SCP_UNIT-EURO_TEXT_LABEL_(WOC)_V1
- 3. 2PCS 2005.2
- 4. 1PC 1001.2
- 5. 1PC CHINT_WIDE NB1L-C16 (AS IN DIAGRAM)
- 6. 1PC CHINT_NARROW ND91G230V(AS IN DIAGRAM)
- 7. 4PCS CHINT_WIDE NB1 (AS IN DIAGRAM)
- 8. 2PCS M3.5 L13 LEVYRUUVI KUPUKANTA
- 9. 1PC DIN_RAIL_300mm
- 10. 1PC 28717_GROUNDING_BUSBAR (FAMATEL SPTA-12)
- 11. 7PC PG21
- 12. 2PC PG16
- 13. 1PC 30206_AXOPAR_37_MY20_SCP_UNIT-EURO_BOX_(WOC)_V1

TE 10.07.2019

11.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.7.2019
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM
			Sheet rev.	1
Date of modification	Modified by	Description	Project rev.	B

NAVIX
designed solutions
Copyright by

Axopar	SEE EXP VIEW	29622	
Boat	Sub-product code	Product code	Project ID
37 MY20	SPC UNIT - EURO	HL	141/ 149
Boat model	Title	Loc	Sheet

1	2	3	4	5	6	7	8																																									
A	SPC TARKASTUSPÖYTÄKIRJA SPC INSPECTION SHEET							A																																								
B	TUOTE TARRA / PRODUCT LABEL							B																																								
C	* PPKKVV-JÄRJESTYSNUMERO / DDMMYY-RUNNING NUMBER (Esim. 11. maaliskuuta 2013 tehty tuote on sarjanumeroltaan 110313-01, seuraava on 110313-02 jne.)							C																																								
D	SARJANUMERO* / SERIAL NUMBER*																																															
	JOHDOT KIINNI OIKEIN / CORRECT CONNECTIONS																																															
	MAADOITUS TULEVAT JA LÄHTEVÄT / GROUND CONNECTION IN AND OUT																																															
	VVS JA TOTSIT I-ASENNOSSA / RCBO AND CIRCUIT BREAKERS IN I-POSITION																																															
	ERISTYSVASTUS (mA) max lukema ** / ISOLATION RESISTOR (mA) max **																																															
E	MAAPIIRI 10A (Ohm) max lukema ** / GROUND CIRCUIT 10A (Ohm) max **																																															
	TOIMINNALLINEN JA VVS TESTAUS / FUNCTIONAL AND RCBO TEST																																															
	SARJANUMERO TARRA / SERIAL NUMBER STICKER																																															
F	PVM / DATE																																															
	TESTASI / TESTED BY																																															
Tehty CENELEC EN 50106 mukaan / Made according to CENELEC EN 50106																																																
**ERISTYSVASTUS JA MAAPIIRI TESTATTAVA JOKAISEEN SISÄÄNTULOON JA ULOSMENOON / ISOLATION RESISTOR AND GROUND CIRCUIT SHOULD BE TESTED FOR EVERY IN AND OUT																																																
RAJA-ARVOT / LIMITS: ERISTYSVASTUS / ISOLATING RESISTOR 1000V = <20mA MAAPIIRI / GROUND CIRCUIT 10A = <0,2 Ohm																																																
<table><tr><td>11.7.2019</td><td>TuM</td><td>A1: INTRODUCED DRAWING.</td><td>Date</td><td>11.7.2019</td><td rowspan="4">NAVIX designed solutions Copyright by</td><td>Axopar</td><td>SEE EXP VIEW</td><td>29622</td><td colspan="2"></td></tr><tr><td>10.10.2019</td><td>PN</td><td>B1: NOT MODIFIED.</td><td>Drawing by</td><td>TuM</td><td>Boat</td><td>Sub-product code</td><td>Product code</td><td colspan="2">Project ID</td></tr><tr><td></td><td></td><td></td><td>Sheet rev.</td><td>1</td><td>37 MY20</td><td>INSPECTION SHEET</td><td>HL</td><td colspan="2"></td></tr><tr><td>Date of modification</td><td>Modified by</td><td>Description</td><td>Project rev.</td><td>B</td><td>Boat model</td><td>Title</td><td>Loc</td><td colspan="2">142 / 149 Sheet</td></tr></table>								11.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29622			10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM	Boat	Sub-product code	Product code	Project ID					Sheet rev.	1	37 MY20	INSPECTION SHEET	HL			Date of modification	Modified by	Description	Project rev.	B	Boat model	Title	Loc	142 / 149 Sheet	
11.7.2019	TuM	A1: INTRODUCED DRAWING.	Date	11.7.2019	NAVIX designed solutions Copyright by	Axopar	SEE EXP VIEW	29622																																								
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM		Boat	Sub-product code	Product code	Project ID																																							
			Sheet rev.	1		37 MY20	INSPECTION SHEET	HL																																								
Date of modification	Modified by	Description	Project rev.	B		Boat model	Title	Loc	142 / 149 Sheet																																							
1	2	3	4	5	6	7	8																																									

NOTICE!
VERIFY THAT ALL CABLES HAVE MARKINGS
SHOWN IN EXAMPLE BELOW.
EXEMPTION:
ALL <500mm WIRES AND BLACK WIRES
THIS MARKING IS NOT NEEDED.

R2 ISO 6722 100V AWG16 +100 C
EXAMPLE: RED 1,5mm2 WIRE MARKINGS.

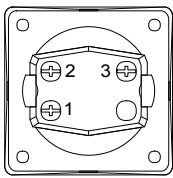
MARKING

CABLE

-A81
BE0918272505

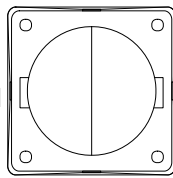
PIN ORDER

-L_S.1



(BACK VIEW)

-L_S.1
BE0936552505

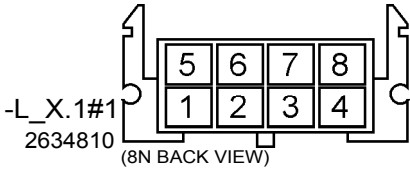


-L_S1#1 FWD CABIN LT SW

1	FWD_CAB_LT+	-L_X1:1	2,5 RED
2	FC_RF_LT	-L_X1:2	1,5 YELLOW/BLACK
3	FC_INDIR_LT	-L_X1:4	1,5 YELLOW/RED

CONNECTION
TO FWD CABIN HARNESS

-L_X.1#1



-L_X.1#1
2634810

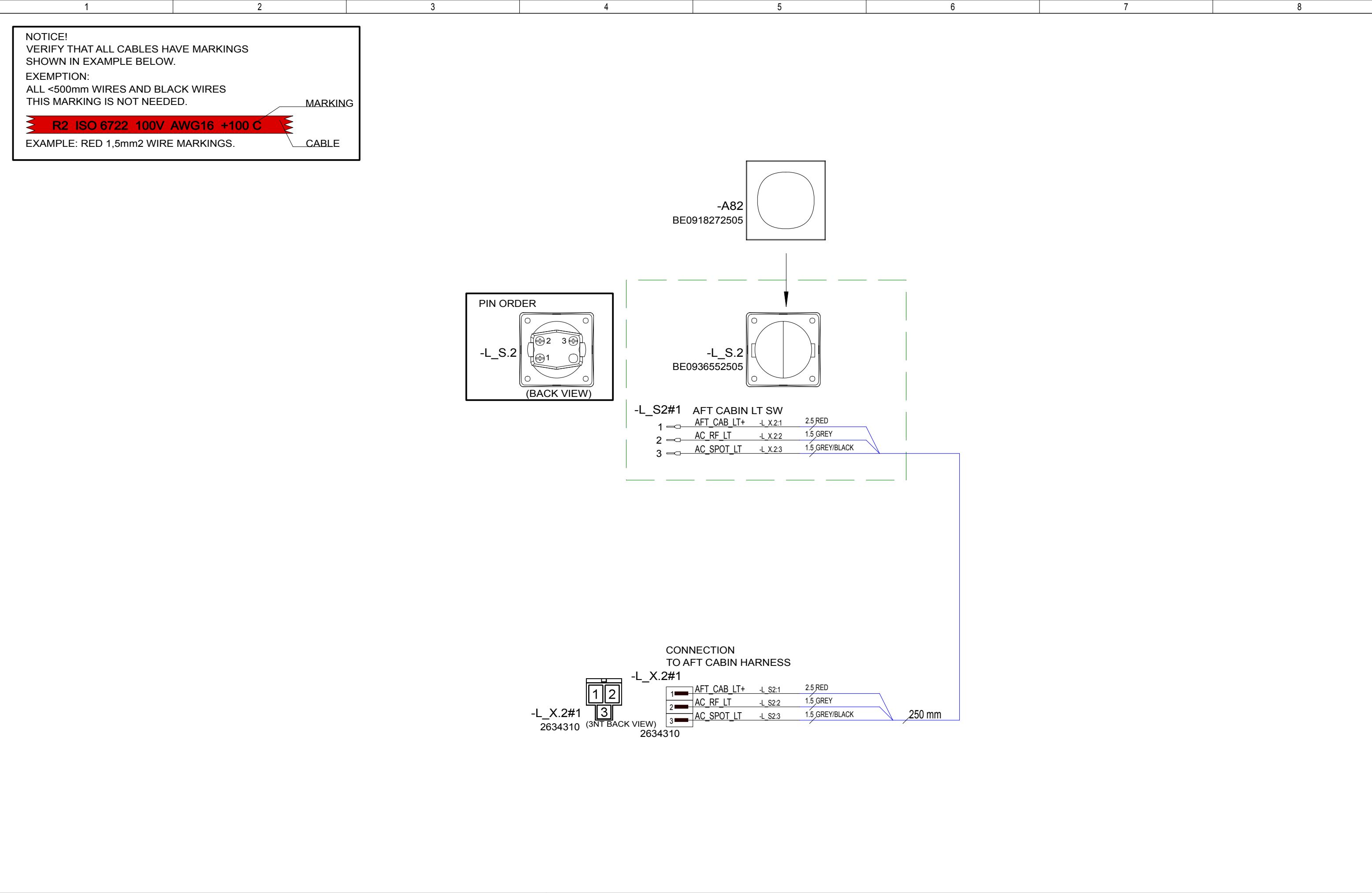
(8N BACK VIEW)

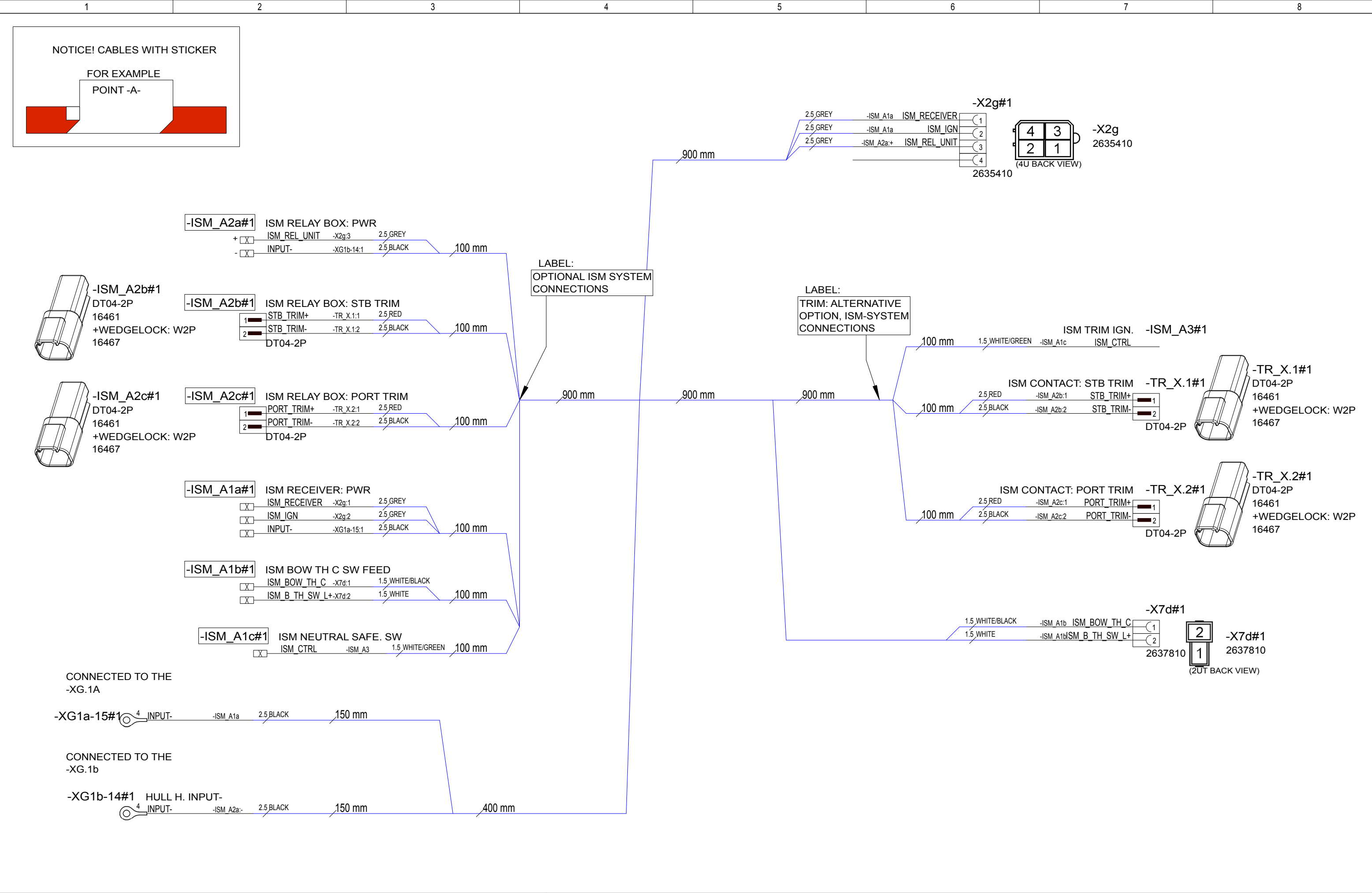
1	FWD_CAB_LT+	-L_S1:1	2,5 RED
2	FC_RF_LT	-L_S1:2, -L_X1:3	1,5 YELLOW/BLACK
3	FC_RF_LT	-L_X1:2	1,5 YELLOW/BLACK
4	FC_INDIR_LT	-L_S1:3, -L_X1:5	1,5 YELLOW/RED
5	FC_INDIR_LT	-L_X1:4, -L_X1:6	1,5 YELLOW/RED
6	FC_INDIR_LT	-L_X1:5, -L_X1:7	1,5 YELLOW/RED
7	FC_INDIR_LT	-L_X1:6	1,5 YELLOW/RED
8			

2634810

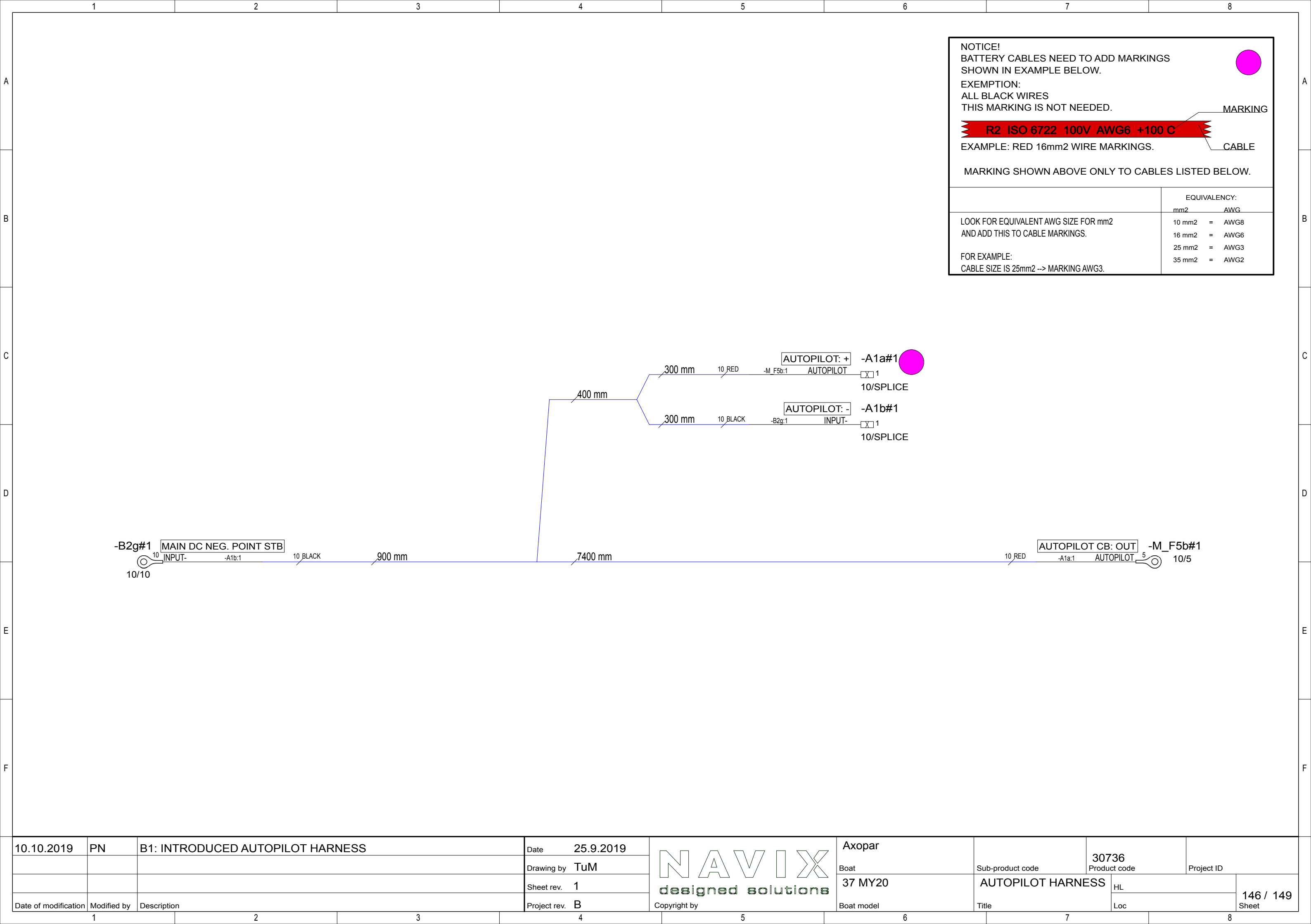
250 mm

22.5.2019	TuM	A1: INTRODUCED DRAWING.	Date	22.5.2019	Axopar					
10.10.2019	PN	B1: NOT MODIFIED.	Drawing by	TuM	Boat		Sub-product code	29635	Product code	Project ID
1.11-2019	TT	B2: SWITCH AND FRAME CHANGED	Sheet rev.	2	37 MY20		FWD CABIN		HL	143 / 149
Date of modification	Modified by	Description	Project rev.	B	Boat model		LIGH SWITCH		Loc	

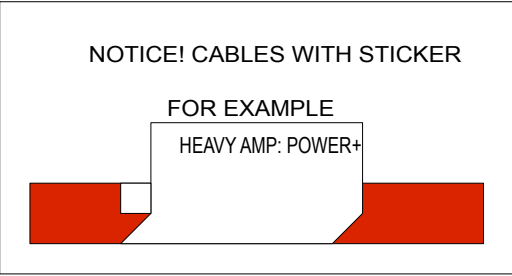




10.10.2019	PN	B1: INTRODUCED ISM HARNESS	Date	25.9.2019	NAVIX	Axopar		30735	
			Drawing by	TuM	designed solutions	Boat	Sub-product code	Product code	Project ID
			Sheet rev.	1		37 MY20	ISM HARNESS	HL	145 / 149
Date of modification	Modified by	Description	Project rev.	B	Copyright by	Boat model	Title	Loc	Sheet
1		2	4	5	6	7	8		

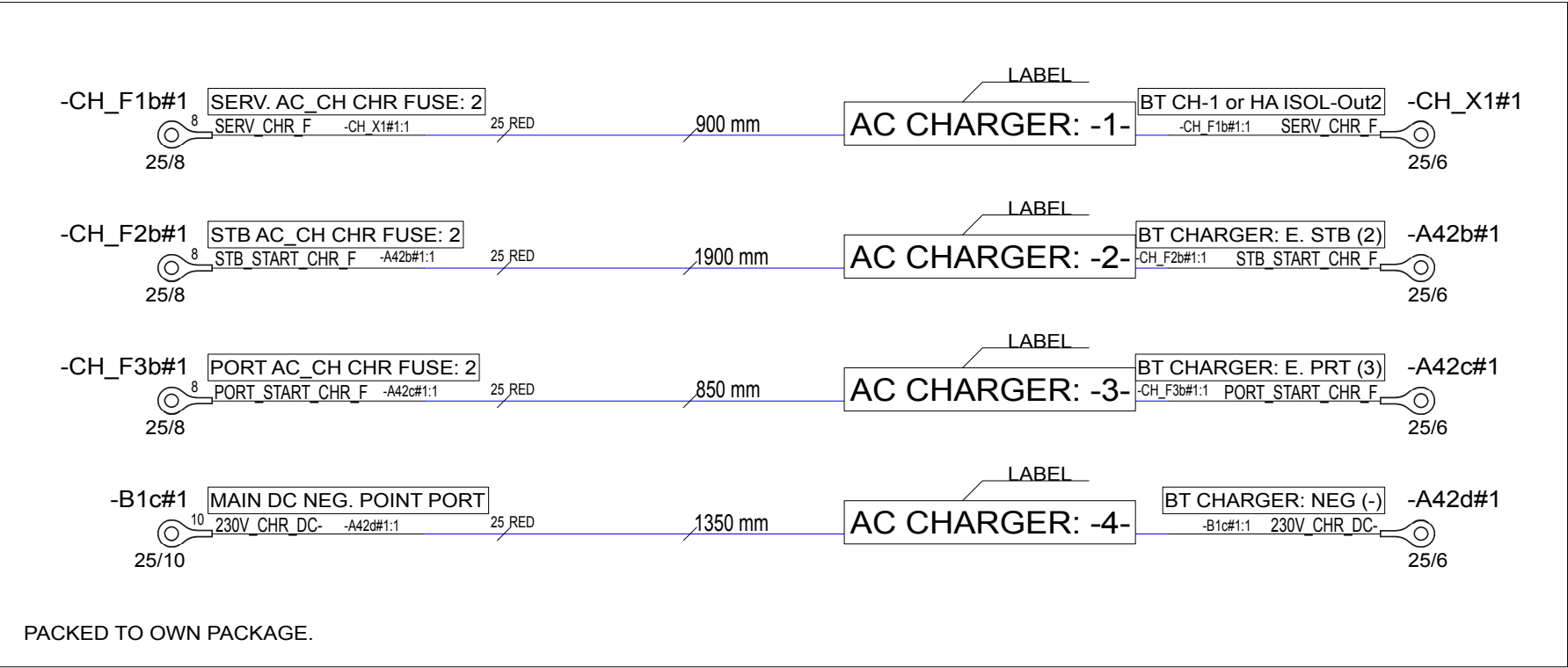


10.10.2019	PN	B1: INTRODUCED AUTOPILOT HARNESS	Date	25.9.2019	Axopar		30736			
			Drawing by	TuM	Boat		Sub-product code		Product code	
			Sheet rev.	1	37 MY20		AUTOPILOT HARNESS		HL	
Date of modification	Modified by	Description	Project rev.	B	Boat model		Title		Loc	
1		2	4		5	6	7		8	146 / 149 Sheet



AC CHARGER CABLES

(TO TOP OF PACKAGE)



NOTICE!
BATTERY CABLES NEED TO ADD MARKINGS
SHOWN IN EXAMPLE BELOW.

EXEMPTION:
ALL BLACK WIRES
THIS MARKING IS NOT NEEDED.

MARKING

R2 ISO 6722 100V AWG6 +100 C

CABLE

EXAMPLE: RED 16mm2 WIRE MARKINGS.

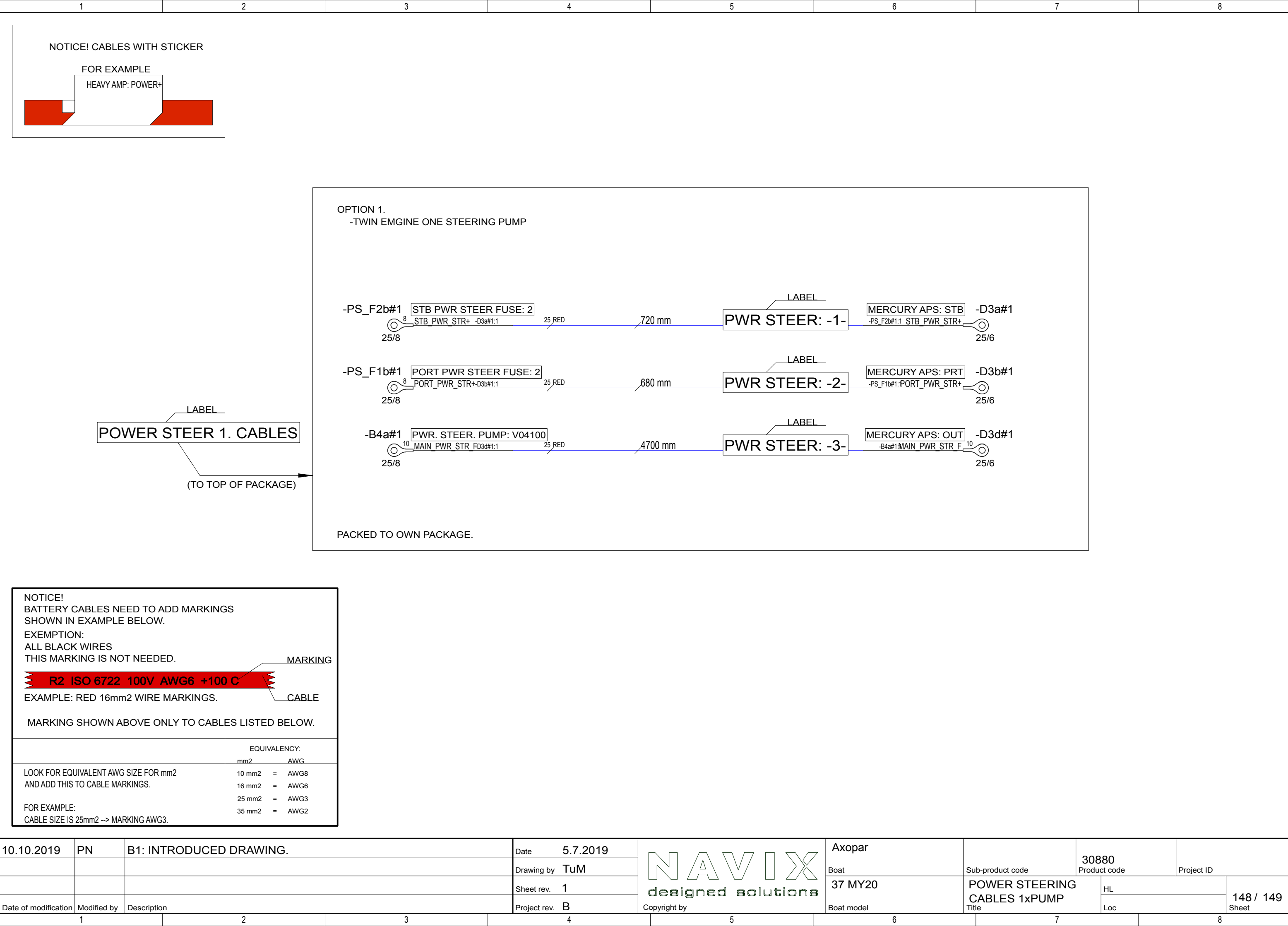
MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

EQUIVALENCY:	
mm2	AWG
10 mm2	= AWG8
16 mm2	= AWG6
25 mm2	= AWG3
35 mm2	= AWG2

LOOK FOR EQUIVALENT AWG SIZE FOR mm2
AND ADD THIS TO CABLE MARKINGS.

FOR EXAMPLE:
CABLE SIZE IS 25mm2 --> MARKING AWG3.

10.10.2019	PN	B1: INTRODUCED CHARGER CABLES PRODUCT	Date	26.9.2019	NAVIX designed solutions	Axopar		30737	
			Drawing by	TuM		Boat	Sub-product code	Product code	Project ID
			Sheet rev.	1		37 MY20			
Date of modification	Modified by	Description	Project rev.	B	Copyright by	Boat model	BATTERY BOX CHARGER CABLES	HL	147 / 149
							Title	Loc	Sheet



POWER STEER 1. CABLES

(TO TOP OF PACKAGE)

PACKED TO OWN PACKAGE.

NOTICE!

BATTERY CABLES NEED TO ADD MARKINGS

SHOWN IN EXAMPLE BELOW.

EXEMPTION:

ALL BLACK WIRES

THIS MARKING IS NOT NEEDED.

MARKING

R2 ISO 6722 100V AWG6 +100 C

CABLE

EXAMPLE: RED 16mm2 WIRE MARKINGS.

MARKING SHOWN ABOVE ONLY TO CABLES LISTED BELOW.

EQUIVALENCY:

mm2

AWG

10 mm2

=

AWG8

16 mm2

=

AWG6

25 mm2

=

AWG3

35 mm2

=

AWG2

LOOK FOR EQUIVALENT AWG SIZE FOR mm2

AND ADD THIS TO CABLE MARKINGS.

FOR EXAMPLE:

CABLE SIZE IS 25mm2 --> MARKING AWG3.

10.10.2019

PN

B1: INTRODUCED DRAWING.

Date

5.7.2019

Drawing by

TuM

Sheet rev.

1

Project rev.

B

NAVIX

designed solutions

Copyright by

Axopar

Boat

37 MY20

Boat model

Sub-product code

POWER STEERING

CABLES 1xPUMP

Title

30880

Product code

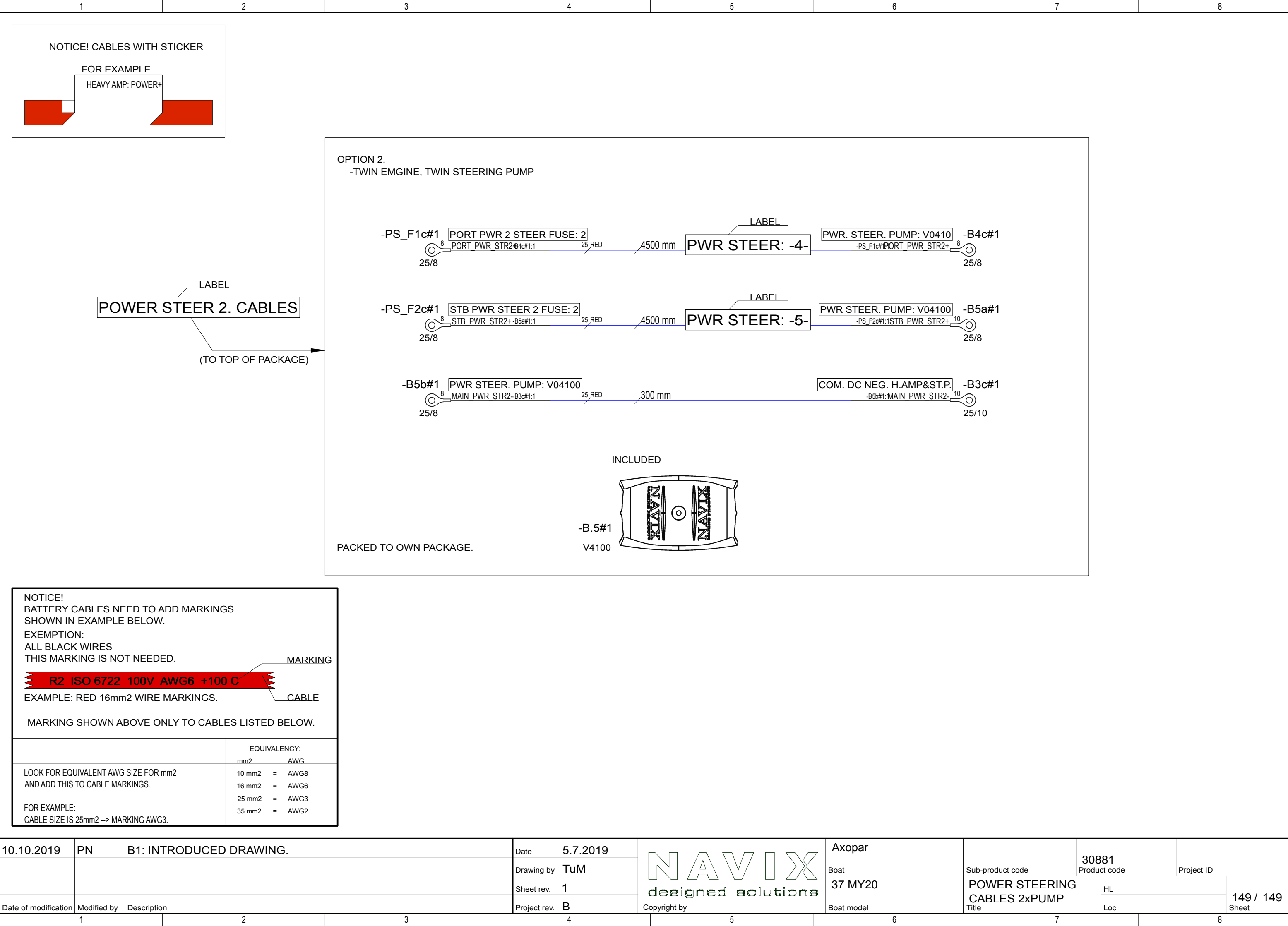
HL

Loc

Project ID

148 / 149

Sheet



12 Appendix IV: AIS Decontamination – North America

According to

ABYC T-32 Design and Construction in Consideration of Aquatic Invasive Species 7/21

© 2021 American Boat & Yacht Council, Inc

Table of Contents

1 Decontamination criteria based on UMPS III, Table 3.....	3
2 Example of AIS Owner's Manual Information.....	4
3 Additional boat-specific recommendations.....	6

1 Decontamination criteria based on UMPS III, Table 3

The table is a summary of scientific research indicating the lethal water temperature at point of contact and duration for decontamination. Information is grouped by the location of the boat that is targeted and the life form of Dreissenid mussel targeted (e.g., adult mussel or veliger). Please refer to the *Student Training Curriculum for Watercraft Inspectors and Decontaminators to Prevent and Contain the Spread of Aquatic Invasive Species in the USA* for complete step by step procedures.

	Boat part/ location	Water temperature	Duration ¹⁾ (sec)	Type of application	Target life stage
Exterior	Hull	140°F	10	High pressure spray ²⁾	Adult
	Trailer	140°F	70	Low pressure spray ³⁾	Adult
	PFDs, anchor, paddle	140°F	10	Low pressure spray	Adult or Veliger
Propulsion system	Gimbal	140°F	132	Low pressure spray	Adult
	Engine	140°F ^{5), 6)}	See note ⁷⁾ .	Flush ⁶⁾	Veliger
Interior	Ballast tanks	120°F	130	Low risk – Flush ⁴⁾	Veliger
				High risk – Fill and flush	
	Live well/bait well	120°F	130	Low pressure spray or flush	Veliger
	Bilge	120°F	130	Flush or low pressure spray	Veliger

1) The times listed are the minimum times necessary to achieve mortality.

2) High pressure = 3000 psi.

3) Low pressure = using the pressure from the decontamination unit with no nozzle, not to exceed 60 psi (essentially a garden hose flow).

4) Flush = adding water to a compartment of a boat to treat or force the water out.

5) These temperatures denote the exit temperature (i.e., temperature of water exiting the boat not exiting the wand or flush attachment).

6) When flushing engines with a dedicated connection (not muffs), the pressure should be limited to less than 60 psi to prevent internal engine damage. The maximum input temperature during flushing should not exceed 140°F.

7) NOTE: Engine flushing relies on the exit temperature as a guideline for decontamination duration.

2 Example of AIS Owner's Manual Information

Aquatic invasive species

Aquatic invasive species (AIS) are plants and animals that occur in waters in which they are not native and whose introduction causes or is likely to cause economic or environmental damage or harm to human health. AIS have a negative impact on the waterway, its native species, and recreational and commercial uses of the waterway.

As responsible boaters and citizens, each boat owner should do their part to prevent the spread of these aquatic hitchhikers. In many cases, it is also required by law. Check local regulations for any waterway where you will boat.

After each boating trip, follow these three simple steps before you leave the water access to stop the spread of AIS: Clean, Drain, and Dry. This is the boater's way to help protect the environment from the damage that AIS can cause.



Clean

Inspect and remove all aquatic plants, animals, mud, and debris from the boat, engine, trailer, anchor, and any watersports equipment.

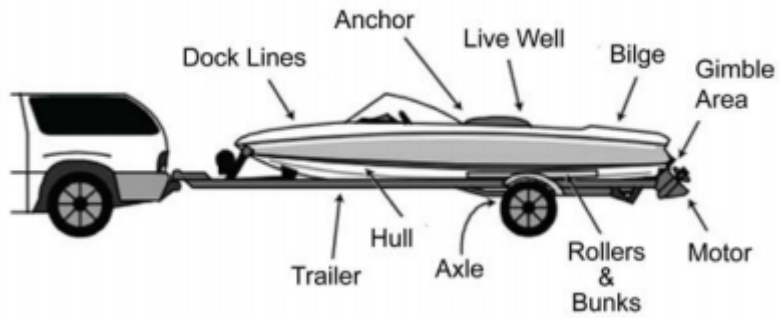
- Rinse, scrub or wash, as appropriate, away from storm drains, ditches, or waterways.
- Rinse watercraft, trailer, and equipment with hot water, when possible.
- Flush motor according to owner's manual.

Drain

Completely drain all water from the boat and its compartments, including but not limited to the bilge, wells, lockers, ballast tanks or bags, bait containers, engines, and outdrives.

Dry

Allow the boat to completely dry before visiting any other bodies of water.



NOTE: Some localities may require inspection or decontamination before and/or after launching. Check state and local laws and regulations for requirements prior to traveling to go boating.

3 Additional boat-specific recommendations

Nonmotorized watercraft

Canoes, rafts, kayaks, rowboats, paddleboats, inflatables, sculls, and other nonmotorized recreational watercraft also require proper treatment.

- **Clean** straps, gear, paddles, floats, ropes, anchors, dip nets, and trailer before leaving the water body.
- **Dry** everything completely between each use and before storing.
- **Wear** quick-dry footwear or bring a second pair of footwear with you when portaging between waterbodies.

Sailboats

- **Clean** centerboard, bilge board, wells, rudderpost, trailer, and other equipment before leaving the water body.
- **Drain** water from boat, motor, bilge, ballast, wells, and portable bait containers before leaving the water body.

Motorized watercraft

- **Inspect** and **clean** motor or engine, including the gimbal area; trailer, including axles, bunkers, and rollers; anchors; dock lines; and equipment before leaving the water body.
- **Drain** live wells, bait containers, ballast and bilge tanks, and engine cooling systems.

Jet boats and personal watercraft (PWCs)

- **Inspect** and **clean** hull, trailer, intake grate, and steering nozzle, etc.
- **Clean** hull, trailer, intake grate, and steering nozzle, etc before leaving the water access.
- **Run** engine 5-10 sec to blow out excess water and vegetation from internal drive before leaving the waterbody.