

Keep this
manual onboard!



User Manual

Including Installation For
Windlass Control Unit



DOCUMENT ID: 1473

REVISION: 14

DATE: 2024

LANGUAGE: EN



Contents

User Manual

General Operation Considerations and Precautions Guidelines.....	3
Features	4
Operations.....	4
Technical Specifications	4
Operations.....	5
Configuring Windlass Type.....	6
Fault codes.....	6
Troubleshooting.....	7

Installation Manual

Warnings and safety.....	8
Responsibility of the Installer.....	8
Measurements	9
Windlass Control Unit Installation	10
Windlass Electrical Installation	11
Visual Wiring Diagram	12 - 13

Service and Support.....	14
Product Spare Parts and Additional Resources.....	14
Warranty Statement.....	14

Failure to follow any considerations and precautions can lead to serious personal injury, death and/or damage your product.
Failure to follow any considerations and precautions will render all warranties given by Sleipner Motor as VOID.

MC_0411

General Operation Consideration and Precaution Guidelines

MC_0444

For the operation of windlass control unit

MC_0429

- Follow the fault codes to identify issues during operation.
- Use the windlass user manual for the operation guide for how to use the system.

- Automatic detection of 12V or 24V system.
- Programmable windlass type (Mini/Midi/Maxi/Maxi Chain)
- LEDs Power for program/failure/end stop indication.
- PWM speed control.
- Over-current limiting and motor overheat protecting algorithm protects motor from damage. Note that there is no physical temperature sensor in the motor.
- Motor Soft Start.
- Reduced speed and force limit after first end stop detection.
- Two end stop points can be detected (detected by metal wire spun around the rope at user selected positions). Maxi Chain windlass does not include the end stop function.
- Power relays disconnect motor power when the windlass is not in use or if a fault has been detected.
- Delayed start on operation "OUT" to safeguard against unwanted operation.
- Physically separated terminals reduce risk of short circuits.

Operations

Sleipner Windlass Control Unit is designed to control the Sleipner Mini, Midi and Maxi windlasses. These windlasses are equipped with a "Free fall" system allowing the anchor rope to wind out freely for a quick anchor drop and easy mooring bow/stern against pier or land. The free fall is initiated by pushing the "Down" bottom on your panel or remote control. The anchor weight and fitting of the anchor bracket must be selected so the anchor will drop/fall out when released.

The Sleipner Windlass Control Unit is compatible with Sleipner control panels and remote control systems. Special care have been taken to simplify installation, improve usability and the inherent features of this control unit. Additionally this controller has a range of new security features. Still, be aware that anchor loads may be very high, this equipment must be operated wisely, and only by responsible crew knowing how the system works.

IMPORTANT

This manual contains information you need to know before installing the windlass. Please read it carefully.

- Keep your distance to the windlass, the anchor line, anchor and anchor brackets during operation.
- Keep the anchor line rope/chain under observation during anchor handling.
- Make sure anyone using the windlass knows how to operate it.
- Be aware when the anchor are raised as it can bring unwanted debris up from the bottom, potentially damaging your boat.
- If the windlass is straining as the anchor are raised, stop for a few seconds and let the boat pick up momentum before continuing the raise.
- If the anchor is stuck, release some rope/chain and attach it to a cleat before using the boat to pull the anchor free. The windlass is not designed for loads beyond the specified pull capabilities.
- The anchor must always be secured to the boat while sailing. Use the security line or other means to prevent unintentional anchor drop.
- Turn off the power to the windlass when not in use.
- Children must not operate the windlass.
- Careless use can cause damage or injury!
- Make sure to have good battery capacity, and keep the engine running windlass operation.
- Sleipner is not responsible for injury caused by the use of our windlass systems.

Technical Specifications

Description	Value
Supply	8-31 VDC/ max 7 Watts
Operating temperature	-20°C to +70°C [-4°F to +158°F]
Storage temperature	-40°C to +85°C [-40°F to +176°F]
IP Rating	IP20
Weight	800 g [1.8 lb]
Maximum motor current	350A
Terminal connections control/ endstop	0.2 to 1.5 mm ² [16 to 24 AWG] Cage clamp
Terminal connections motor/ battery	M6 bolt terminals

OPERATIONS AND FUNCTIONS OF THE WINDLASS CONTROL UNIT 150800			
Operation/operation Down = Out and Up = Inn	Incident	Description	Limitation
Main power to the windlass control unit is turned on	Check powerup. Fan runs 1 sec. Possibly, previously selected windlass mode will still be enabled. Error codes reset.	Normal situation by anchoring for transit or departure after anchoring.	Form is covering both chain and rope windlasses. Where there is a difference this is described
"Out" is pressed. Or "out" is pressed and held	Rope windlass: Freefall activated (you can hear the windlass motor run for 1 sec). Motor stops after 1 sec whether "out" held in. Chain windlass: "Out" is held as long as you want to run out anchor.	Rope is released and anchor can drop to the bottom. When the anchor reaches the bottom, the rope is still disengaged. The function is completed profundity of 'out' button is pressed or held down.	Since windlass control unit do not remember where the anchor is located, will a normal "inn"/pulling of anchor run not be possible after powerup. "Do not press ""up"" before anchor has reached the bottom. NB! Motor always has a straight flow shift resting time of 1 second."
"inn" is pressed briefly	Anchor pulled slightly in. Rope is no longer disengaged.	Used to adjust the anchor or to lock the rope.	Caution! When setting anchor, it may be difficult to control applied load. Low drift when releasing the rope (boat and rope is not in line) can also cause heavy loads on the anchor rollers and fastenings. Use a suitable mounting point on the boat. Especially under rough conditions.
"inn" is pressed and held	The windlass starts pulling the anchor	The windlass goes from 0-100% speed in 3 sec and continues until the button is released or first end stop is activated.	Long and heavy run on motor or short nearly blocked run can cause the protection device to stop the windlass. Other recorded errors can also cause stops. (Error Codes is shown under the cover on the control unit, see manual for more information).
First end stop is detected (NB end stop detected during run)	Windlass stop	Windlass stops. From this point the anchor can be released again or pulled up (windlass will be running at reduced speed if you continue running towards second end top)	Continue pulling inn: Maximum allowed power consumption is limited to protect fittings, brackets, platform and windlass.
Second end stop is detected (NB end stop detected during run)	Windlass stop	From this point it is only possible to drop anchor if the main power is cut. (Control unit is reset)	Not possible to pull inn.
Double-tap, with hold on second press 2	(2) Up slowly / anchor inn (1) Normal inn	Windlass runs with 40% speed (approximately 8 m / min)	Reduced power consumption. Maximum running time on reduced speed = 30sec.
	(1)Firmware version 1.007		
	(2)Firmware version 1.008		

1. Press and hold “Config” button for 3 seconds, until Power and Fault LED starts blinking.
2. Press “Config” button to cycle through types, until the Mode LEDs show the correct pattern.
3. The controller returns to normal operation after 3 seconds of inactivity.
4. Verify that the pattern shown is correct. This description can also be found on the back of the terminal covers.

Mode LED	NOT SET	MINI ROPE	MIDI ROPE	MAXI ROPE	MAXI CHAIN	MHPP ROPE	MIDI COMBI
1							
2							
3							

MG_0860

NOT SET

Press and hold “Config” button for 3 seconds, until Power and Fault LED starts blinking.

MINI ROPE

Configuration set for using a MINI windlass utilizing a rope anchor lead.

MIDI ROPE

Configuration set for using a MIDI windlass utilizing a rope anchor lead.

MAXI ROPE

Configuration set for using a MAXI windlass utilizing a rope anchor lead.

MAXI CHAIN

Configuration set for using a MAXI windlass utilizing a chain anchor lead.

MHPP ROPE

Configuration set for using a MHPP designed for specific installations.

NOTE: If not required, the MHPP configuration can damage the windlass system.

MIDI COMBI

Configuration set for using a MIDI COMBI 301 windlass utilizing a chain anchor lead or a combination of chain and rope anchor lead. This configuration requires controller firmware V1.013 or newer.

Fault codes

“Fault” LED is lit:

The last fault condition detected by the controller is indicated by the “Mode” LEDs, visible when the terminal cover is removed. Some faults will inhibit operation, while others allow continued use. See Troubleshooting table.

Mode LED	Low Voltage	Motor Overload	Controller Overtemp	Motor Overtemp	Controller Overload	Runtime Exceeded
1						
2						
3						

MG_0862

IMPORTANT

Main switch/ braker must be disconnected whenever working on the windlass mechanical parts

FAULT SYMPTOM	FAULT CODES/STATUS	SOLUTION
Windlass does not operate	"Power" LED not lit	Check: Main switch/breaker is engaged. Check battery fuses. Visually inspect cables and verify that terminals are tight. Measure battery voltage.
	"Power" LED lit	Turn on panel / remote control (see user manual) See below:
Windlass does not operate after installation	"Controller Overload"	Current limitation has triggered. If motor is not turning and you can hear a relay inside the controller clicking in and out when you try to operate the windlass, check wiring A1, A2, D1 & D2 between motor and controller.
Windlass only runs for 0,5 seconds when pressing "IN"	None	Check control panel connections. Signals for "IN" and "OUT" might be swapped.
When pressing "OUT" free fall is not engaged. Or: When pressing "IN", motor is running but gypsy is not turning	None	Swap motor cables D1 and D2 on the control unit
Windlass has poor performance	"Low voltage"	Voltage has dropped below 9V Check batteries.
	None	Measure battery voltage while operating the windlass. I voltage measure below 11V/22V, allow batteries to charge. If the battery voltage is acceptable, measure voltage on the motor terminals, cable voltage drop should be less than 1V when motor is running.
Windlass releases anchor, but do not wind in	None	Check that end stop sensor is not active (Indicated by "End Stop" LED on control unit or LED built into the sensor.) Check sensor connections on the control unit. Sensor LED should not be lit if no metal object is present in front of it.
Windlass wind past endstop	None	Check that the end stop wire wound around the rope is intact. Pull the rope with end stop wire over the end stop sensor and verify that («End Stop» LED light up) Adjust sensor closer to the rope if necessary.
Windlass releases anchor, but stops immediatly when pressing "IN"	None or "Low voltage"	If the battery is in poor condition it might measure 12/24V when windlass is not in use and still experince a significant voltage drop when the motor starts (such voltage dips might be difficult to measure) This type of voltage drops can lead to false triggering of the end stop sensor.
Windlass stops during operation	"Motor Overload"	Current limitation has triggered. This means that the windlass is overloaded. Try again with reduced load. If this fault is triggered while the windlass is lightly loaded, it might indicate a mechanical failure.
	"Controller Overtemp"	The control unit temperature sensor is too warm. Let the controller cool down, and try again.
	"Motor Overtemp"	The motor is too hot. The windlass controller calculates motor temperature depending on load an run time. Let the windlass cool down.
	"Controller Overload"	This fault indicates that the internal protection of the controller has triggered. This can be caused by excessive surrounding temperature and high load
	"Runtime Exceeded"	Signal "OUT" or "IN" have been continuous for more than 5 minutes. This is a protection against possible faulty control signals. Re-activation is possible.
Abnormal noise during operation		The windlass must be serviced.
Windlass operates, but rope is not wound in		The rope can slip in the gypsy if the windlass is mounted incorrectly.
Anchor is not released		The anchor might not release from the bracket if mounted incorrectly.

IMPORTANT

If the windlass still does not work normally after you have tried these procedures, the fault is in the windlass itself. Contact your nearest dealer.

Warnings and Safety

MC_0800

It is essential to follow all instructions within this document to avoid potential personal injury, death, or damage to existing products in the vessel, the vessel's hull integrity, and including this product during installation or operation. Failure to follow instructions within this document will render all warranties given by Sleipner Motor as VOID.

Warnings and situations requiring extra caution are outlined in the documentation. Take extra consideration when warnings are outlined.



WARNING

Indicate a potentially hazardous situation that, if not avoided, could result in death or severe injury.



CAUTION

Indicates a potentially hazardous situation that could result in minor or moderate injury or critical damage to vessel integrity if not avoided.

Failure to follow any considerations and precautions can lead to serious personal injury, death and/or damage your product. Failure to follow any considerations and precautions will render all warranties given by Sleipner Motor as VOID.

MC_0411

Responsibility of the installer

MC_0038

General:

- The installer must read this document to ensure necessary familiarity with the product before installation.
- Directions outlined in this document cannot be guaranteed to comply with all international and national regulations, including but not limited to health and safety procedures. It is the installer's responsibility to adhere to all applicable international and national regulations when installing Sleipner products.
- This document contains general installation guidelines intended to support experienced installers. Contact professional installers familiar with the vessel and applicable regulations if assistance is required.
- If local regulation requires any electrical work to be performed by a licensed professional, seek a licensed professional.
- When planning the installation of Sleipner products, ensure easy access to the products for future service and inspection requirements.

Responsibility of the installer

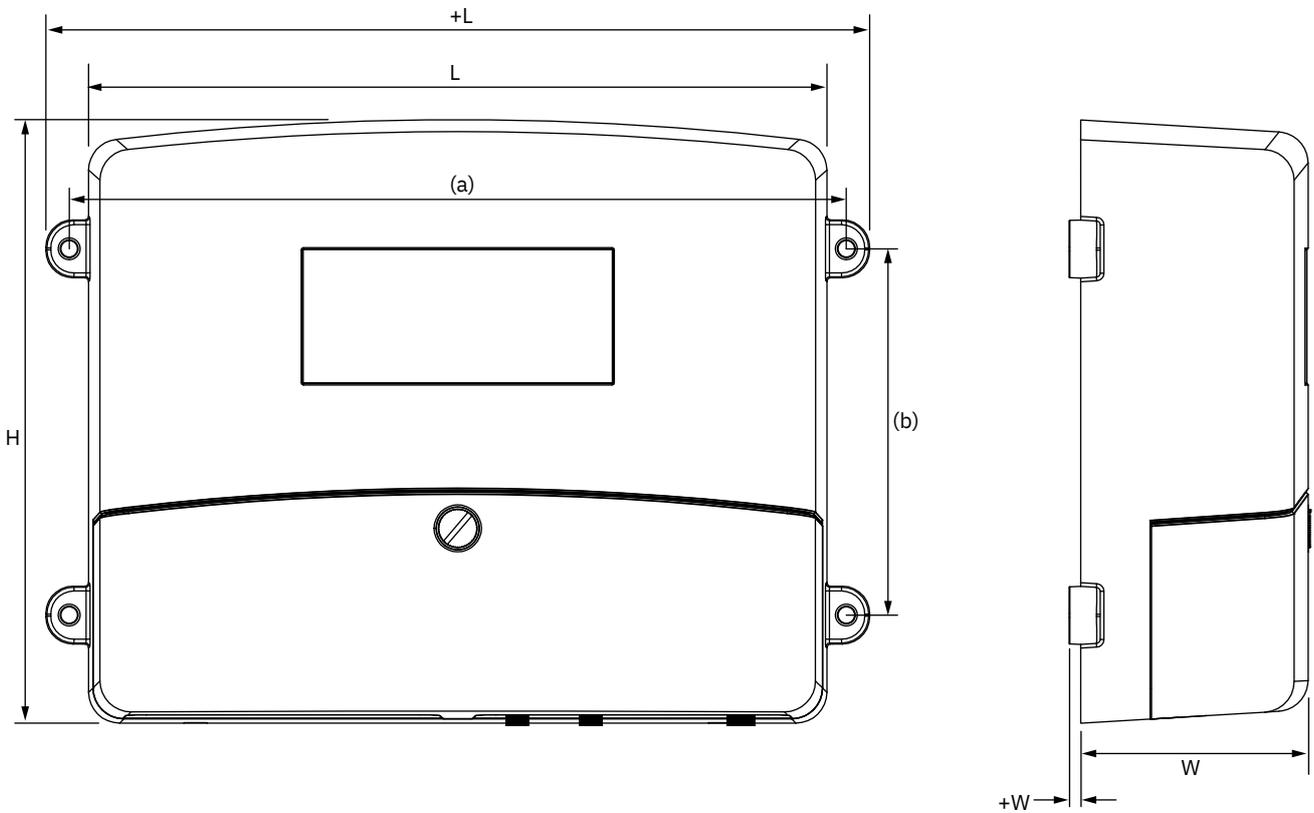
MC_0404

For the windlass control unit

MC_0403

- Do not mount windlass control unit in hazardous environments (I.e. flammable fumes or gasses).
- The control unit is NOT protected from water ingress, therefore it must be installed in a dry area and not exposed for water.

Measurement code	Measurement description	mm	inch
L	WCU Length	190	7.48
+L	Additional WCU Length	212	8.35
H	WCU Height	167	6.6
W	WCU Width	59	2.3
+W	Additional WCU Width	5	0.2
(a)	Distance of attachment holes (width)	200	7.87
(b)	Distance of attachment holes (height)	95	3.74

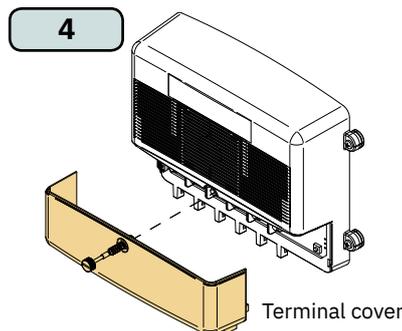
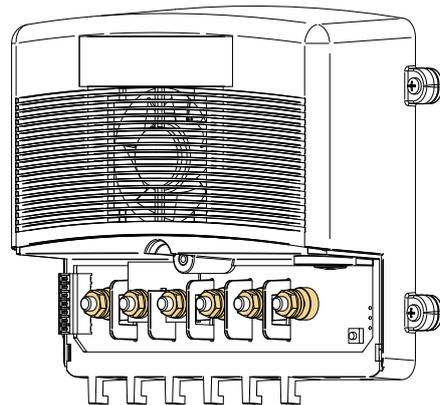
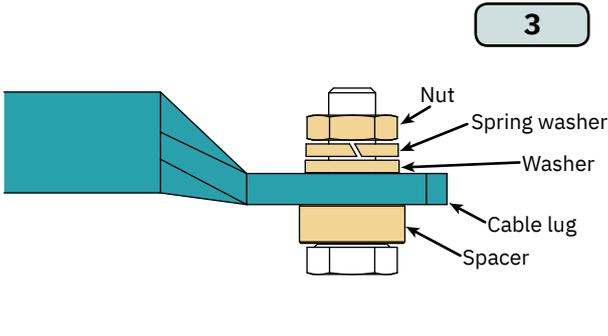
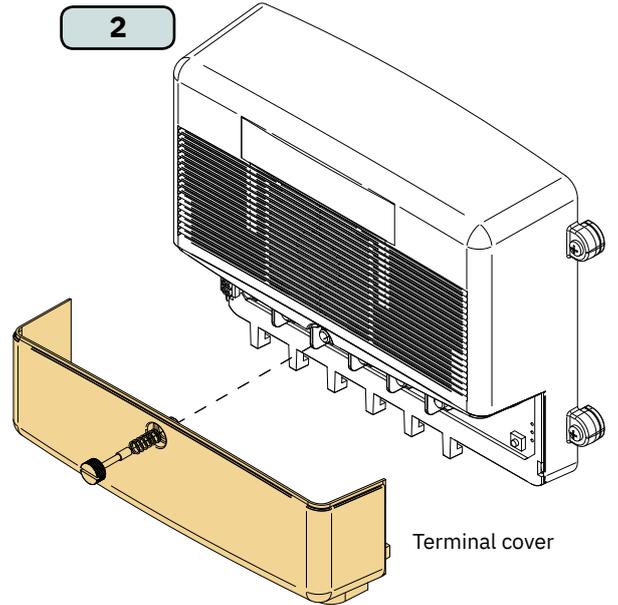
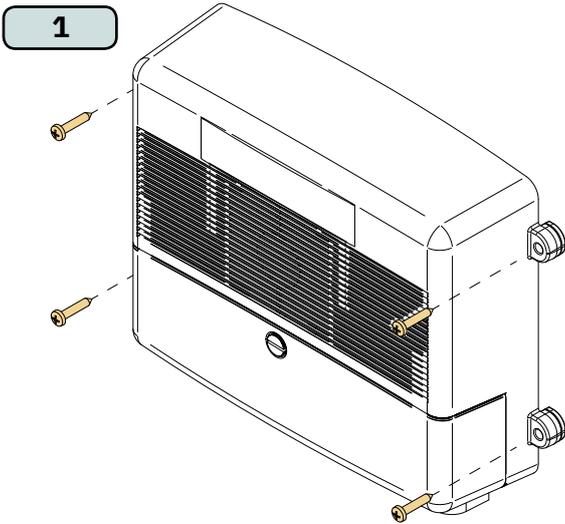


MG_0330

Pre Installation check

- The control unit is not water resistance and must be placed in a dry area close to the windlass motor.
- Use ring terminals of good quality with the correct size for the selected battery cables. Bolt hole should be 6mm.
- The control unit must be mounted with the the cables protruding downwards.

1. Mount the control unit to a dry surface area. Ensure attached cables will protrude downwards. **(NB: The control unit has mounts that ensures space between the control unit and it's mounting surface. This to avoid condensation to enter the unit. It also ensures proper ventilation of the enclosure.)**
2. Remove the cable terminal cover.
3. Attached cables. Pay attention to assemble the terminal spacers and washers in the correct order. Tighten the terminals to maximum 8 Nm.
4. Remount the cable terminal cover.



! Please refer to the graphic for special considerations relating to your model !

All kind of wiring and electrical fixing must be done with Main switch/ miniature circuit breaker turned OFF and no battery cables attached.

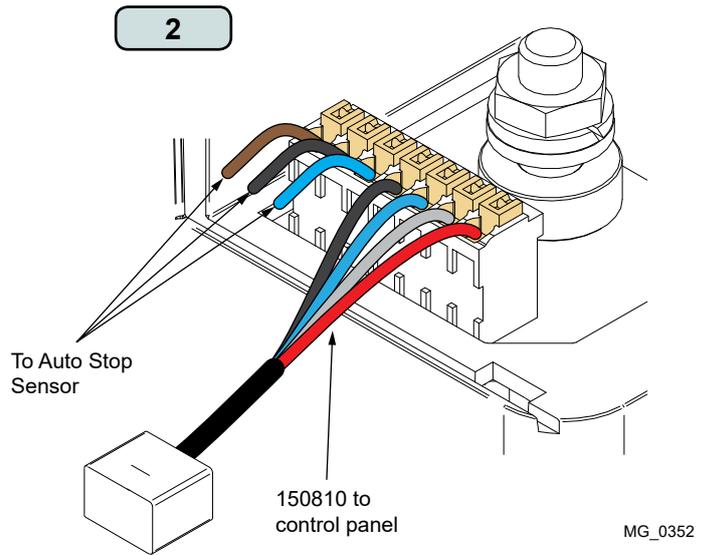
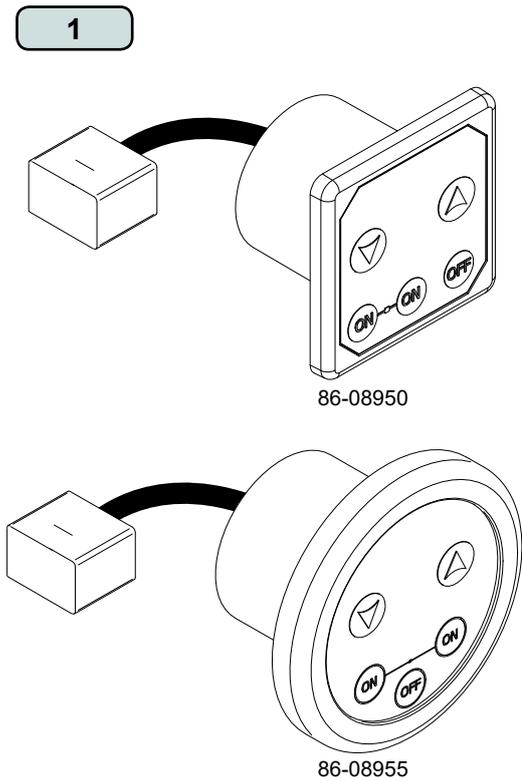
1. Connecting switch panel 86-08950 or 86-08955

- 4-way Sleipner cable come in various lengths.
- 4-way Sleipner cable are easy attached to contacts on control box unit (150810).
- The cable must be attached to 150810 contact unit.
- See wiring diagram or control panel manuals for more details.
- Multiple panels can be fixed to the same control unit.

2. Connecting the auto stop sensor

Cables are connected like this:

- : Brown (BN)
- : Black (BK)
- : Blue (BU)



Visual Wiring Diagram

Cable size A, B and C:

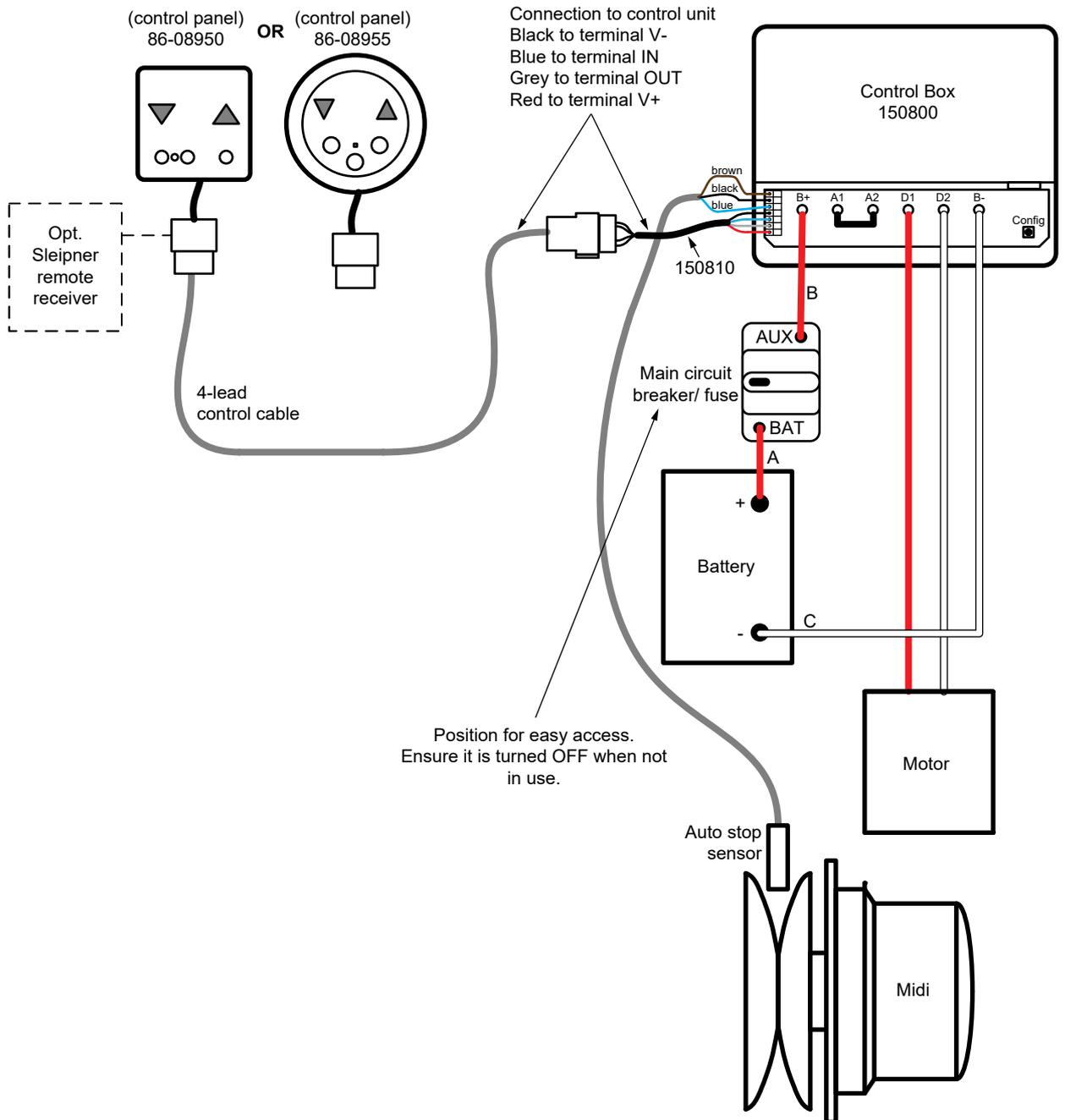
if total length

A+B+C <10m: 25mm²

A+B+C >10m: 35mm²

To change motor direction:

Change cables D1 and D2 in control unit



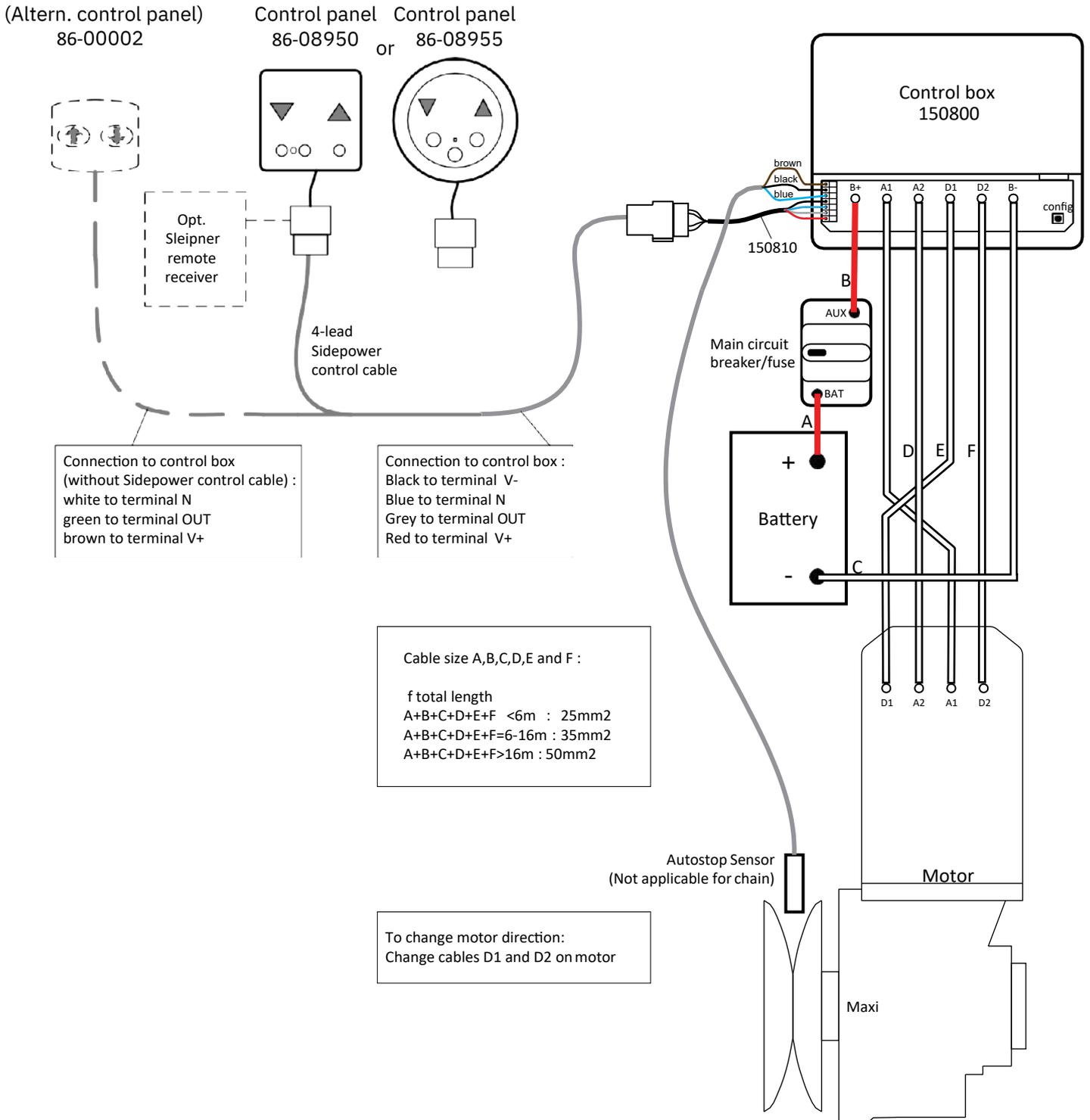
Visual Wiring Diagram

Connecting the motor and battery cables on Maxi windlass

- Connect the four motor cables to the terminals masked A1/A2/D1/D2.
- Connect supply cable from battery negative to the terminal marked B-.
- Connect supply cable from breaker/fuse to the terminal marked B+.
- Connect beaker/fuse to battery main switch.
- Tighten all terminals properly, with a maximum torque of 5Nm. Over-tightening may damage the terminals.
- Leave breaker/fuse disconnected until the installation is completed.

IMPORTANT

If motor runs in the wrong direction, swap cable D1 and D2 on the control unit.



Find your local professional dealer from our certified worldwide network for expert service and support. visit our website www.sleipnergrouper.com/support

Product Spare Parts and Additional Resources

For additional supporting documentation, we advise you to visit our website www.sleipnergrouper.com and find your Sleipner product.

Warranty Statement

1. Sleipner Motor AS (The “Warrantor”) warrants that the equipment (parts, materials, and embedded software of products) manufactured by the Warrantor is free from defects in workmanship and materials for purpose for which the equipment is intended and under normal use and maintenance service (the “Warranty”).
2. This Warranty is in effect for two years (Leisure Use) or one year (Commercial and other Non-leisure Use) from the date of delivery/purchase by the end user, with the following exceptions;
 - (a) For demonstration vessels, or vessels kept on the water, the dealer is considered as the end user from 6 months after their launch of the vessel;
 - (b) The warranty period starts no later than 18 months after the first launch of the vessel.
 Please note that the boat manufacturer and dealer must pay particular attention to correct maintenance and service both by the products manuals as well as general good practice for the location the boat is kept in the period the boat is in their care. In cases where the 6 and 18 months grace periods for boat builders and dealers are passed, it is possible to obtain a full warranty upon inspection and approval of the warrantor or such representative.
3. Certain parts, classified as wearable or service parts, are not covered by the warranty. A failure to follow the required maintenance and service work as described in the product manual render all warranty on parts or components directly or indirectly affected by this void. Please also note that for some parts, time is also a factor separately from actual operational hours.
4. This Warranty is transferable and covers the equipment for the specified warranty period.
5. The warranty does not apply to defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion except for equipment specifically designed as waterproof.
6. In case the equipment seems to be defective, the warranty holder (the “Claimant”) must do the following to make a claim:
 - (a) Contact the dealer or service centre where the equipment was purchased and make the claim. Alternatively, the Claimant can make the claim to a dealer or service centre found at www.sleipnergrouper.com. The Claimant must present a detailed written statement of the nature and circumstances of the defect, to the best of the Claimant’s knowledge, including product identification and serial nbr., the date and place of purchase and the name and address of the installer. Proof of purchase date should be included with the claim, to verify that the warranty period has not expired;
 - (b) Make the equipment available for troubleshooting and repair, with direct and workable access, including dismantling of furnishings or similar, if any, either at the premises of the Warrantor or an authorised service representative approved by the Warrantor. Equipment can only be returned to the Warrantor or an authorised service representative for repair following a pre-approval by the Warrantor’s Help Desk and if so, with the Return Authorisation Number visible postage/shipping prepaid and at the expense of the Claimant.
7. Examination and handling of the warranty claim:
 - (a) If upon the Warrantor’s or authorised service Representative’s examination, the defect is determined to result from defective material or workmanship in the warranty period, the equipment will be repaired or replaced at the Warrantor’s option without charge, and returned to the Purchaser at the Warrantor’s expense. If, on the other hand, the claim is determined to result from circumstances such as described in section 4 above or a result of wear and tear exceeding that for which the equipment is intended (e.g. commercial use of equipment intended for leisure use), the costs for the troubleshooting and repair shall be borne by the Claimant;
 - (b) No refund of the purchase price will be granted to the Claimant, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. In the event that attempts to remedy the defect have failed, the Claimant may claim a refund of the purchase price, provided that the Claimant submits a statement in writing from a professional boating equipment supplier that the installation instructions of the Installation and Operation Manual have been complied with and that the defect remains.
8. Warranty service shall be performed only by the Warrantor, or an authorised service representative, and any attempt to remedy the defect by anyone else shall render this warranty void.
9. No other warranty is given beyond those described above, implied or otherwise, including any implied warranty of merchantability, fitness for a particular purpose other than the purpose for which the equipment is intended, and any other obligations on the part of the Warrantor or its employees and representatives.
10. There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives based on this Warranty for injury to any person or persons, or damage to property, loss of income or profit, or any other incidental, consequential or resulting damage or cost claimed to have been incurred through the use or sale of the equipment, including any possible failure or malfunction of the equipment or damages arising from collision with other vessels or objects.
11. This warranty gives you specific legal rights, and you may also have other rights which vary from country to country.

Patents

At Sleipner we continually reinvest to develop and offer the latest technology in marine advancements. To see the many unique designs we have patented visit our website www.sleipnergrouper.com/patents

© **Sleipner Group**, All rights reserved
The information given in the document was right at the time it was published. However, Sleipner Group cannot accept liability for any inaccuracies or omissions it may contain. Continuous product improvement may change the product specifications without notice. Therefore, Sleipner Group cannot accept liability for any possible differences between product and document.

Learn more about our products at
www.sleipnergroun.com



SLEIPNER MOTOR AS

P.O. Box 519

N-1612 Fredrikstad

Norway

www.sleipnergroun.com

Made in Norway