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# User Manual

Including installation guide for  
8730 B S-Link™ interface, bow thruster  
8730 S S-Link™ interface, stern thruster



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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.

## General Operation Consideration and Precaution Guidelines

### For the operation of Sleipner thrusters systems:

- When not in use or when leaving the boat, turn the control device off.
- When leaving the boat, always turn off the main power switch for the thruster.
- Never run the thruster while out of water.
- Stop running the thruster and turn it off if the thruster stops giving thrust while running. Running the thruster for more than a few seconds without resistance from the propeller can cause severe damage to the thruster drive components.
- The thruster will not run if two conflicting directions are input in two control panels simultaneously.
- If you notice any faults with the thruster, switch it off to avoid further damage.
- The purpose of the thruster is to manoeuvre or dock the vessel. Forward or reverse speed must not exceed 4 knots when operated.



### WARNING

Never use thrusters close to objects, persons, or animals in the water. The thruster will draw objects into the tunnel, as well as the rotating propellers. Contact with the rotating propellers will cause severe injuries and damage to the thruster.

Turn off the main power switch before touching any part of the thruster. An incidental start while touching moving parts can cause serious injuries.

Always plan on how to avoid damage to persons or other objects if the thruster stops giving thrust for while manoeuvring.



### WARNING

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.

**S-Link interface, bow and stern thruster.**

The 8730 interface enables control of S-Link thrusters with ON/OFF control devices. Such control devices could be foot switches or other normally open switches, Sleipner ON/OFF control panels or Sleipner RCR-2x Remote Control Receiver.

In an installation with both bow and stern thrusters two 8730 are required. To ease the installation Sleipner offers two models of 8730:

- 8730 B S-Link™ interface, bow thruster –Preprogrammed to control S-Link bow thruster
- 8730 S S-Link™ interface, stern thruster –Preprogrammed to control S-Link stern thruster

Both models can be reconfigured to operate either bow or stern thrusters. Configuration must be done by a Sleipner S-Link control panel supporting 8730 or the configuration tool S-Link Programmer running on a computer.

When the switch input of 8730 is activated a request is sent on the S-Link bus to run thrusters at a fixed level of thrust. If both Port and Starboard switch input is activated at the same time no commands are sent on the S-Link bus to run the thrusters. The thrust level is by default 70% and can be configured. See the Configuration chapter in this user manual, for more information on configuration.

The 8730 supports RAMP mode which enables variable thrust control when using ON/OFF control devices.

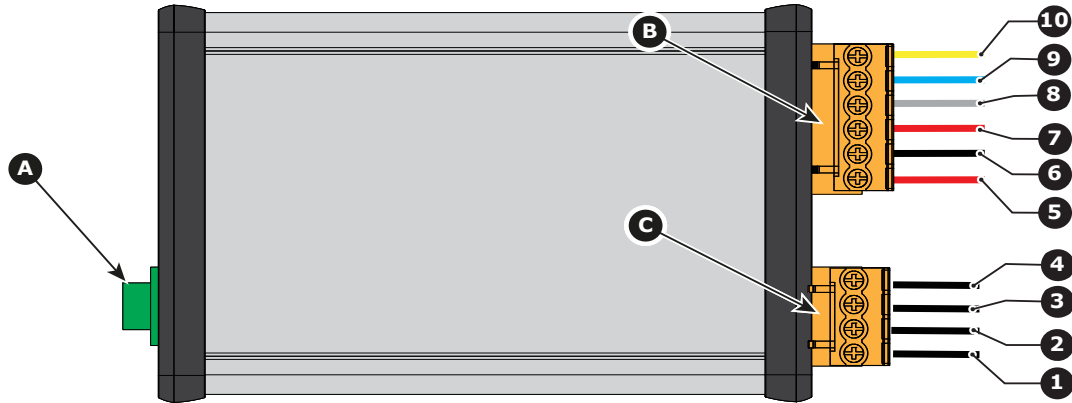
8730 is powered through the S-Link connector.

**Connectors:**

S-Link™ connector - Communication on S-Link bus and power supply to 8730. **(Reference A)**.

Sleipner 5-wire ON/OFF control cable interface – For connection to Sleipner ON/OFF control panel or Sleipner Remote Control Receiver. **(Reference B)**.

Port and starboard switch input – For connection to normally open control device. **(Reference C)**.



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**Pinout description of Port and Starboard Switch Input Connector**

Pin no.	Pin name	Description
1	Vout	Same voltage as S-Link supply voltage
2	Port Input	Starts running thruster in port direction at configured thrust if connected to Vout and Enable Input is also connected to Vout.
3	Vout	Same voltage as S-Link supply voltage.
4	Starboard Input	Starts running thruster in starboard direction at configured thrust if connected to Vout and Enable Input is also connected to Vout.

**Pinout description of Sleipner 5-wire ON/OFF Control Cable Connector**

Pin No.	Pin name	Description
5	Vout	Same voltage as S-Link supply voltage
6	GND	GND
7	Vout	Same voltage as S-Link supply voltage
8	Port Input	Starts running thruster in port direction at configured thrust if connected to Vout
9	Starboard Input	Starts running thruster in starboard direction at configured thrust if connected to Vout
10	Enable Input	Must be connected to Vout to enable Port and Starboard Input.

**Enable Input**

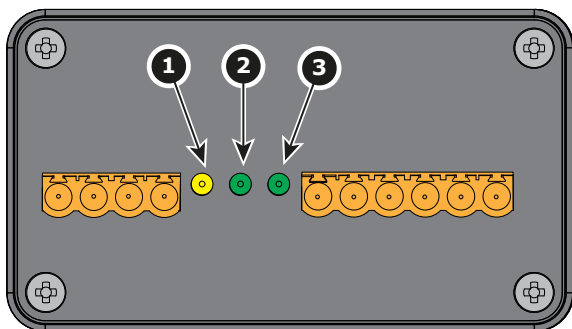
The Enable Input must be connected to Vout to enable the 8730. Once the 8730 is enabled it will start sending thruster commands on the S-Link bus based on the status of Port and Starboard Input signal.

Once enabled 8730 will also activate S-Link AMS and deploy retract thrusters if installed. 8730 B will only activate AMS and retract controllers with the Location parameter configured to Bow. Similar 8730 S will only activate AMS and retract controllers with the Location parameter configured to Stern.

If the Enable Input is connected to the yellow wire from a Sleipner ON/OFF control panel or a Sleipner Remote Control Receiver, 8730 will be enabled if the control panel or Remote Control is turned on.

To avoid unintentional operation if foot switches or other normally open control device are connected to 8730 it is recommended to connect a switch to the Enable Input signal to allow for manual activation of 8730. Especially if 8730 controls a retractable thruster it is important to be able to control the Enable Input signal since the thruster will be deployed as long as 8730 is activated.

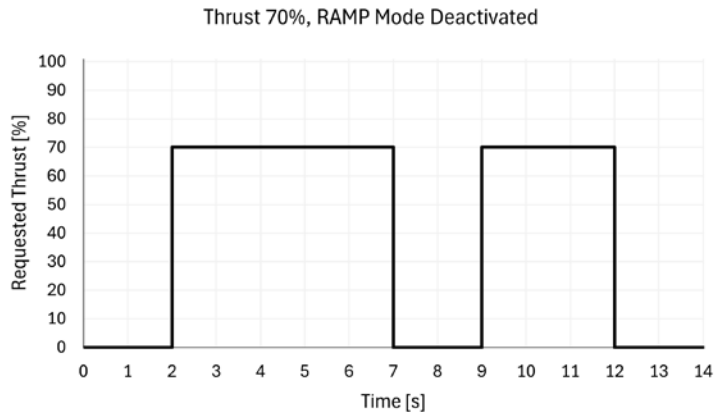
**Indicator LED's**



LED	Color when active	Status
1	Yellow	Enable Input activated
2	Green	Starboard Input activated
3	Green	Port Input activated

RAMP mode enables variable thrust control when using ON/OFF control devices. Parameter configuration for RAMP mode is described in chapter Configuration.

When RAMP mode is disabled a fixed thrust level is request by 8730 when the Port or Starboard Input Switch is activated. The graph below shows an example where the input switch is activated for 5 seconds, then deactivated for 2 seconds then reactivated for 3 seconds. For this example Thrust is configured to 70%.

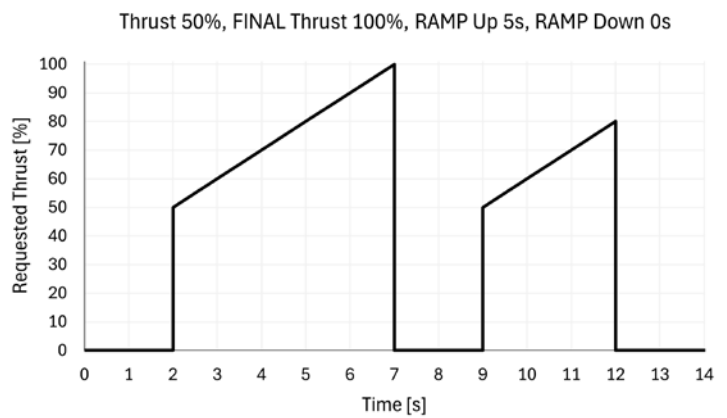


RAMP mode is enabled by configuring a value for Final Thrust that is larger than the configured Thrust value, and specifying a RAMP Up time. It is recommended to reduce the Thrust value below the default value of 70% to ensure a better user experience when the RAMP mode is enabled.

When RAMP mode is enabled trust equal to the configured value of the Thrust parameter will immediately be requested when the input is activated. Then the requested thrust will linearly increase to the configured value of the Final Thrust parameter during the time configured by the RAMP Up parameter.

Note that due to the acceleration time of thruster motors there will be a small ramp time even if the RAMP mode is disabled. The graphs in this chapter describe the timing of the requested thrust from 8730, not the actual thrust of the thruster.

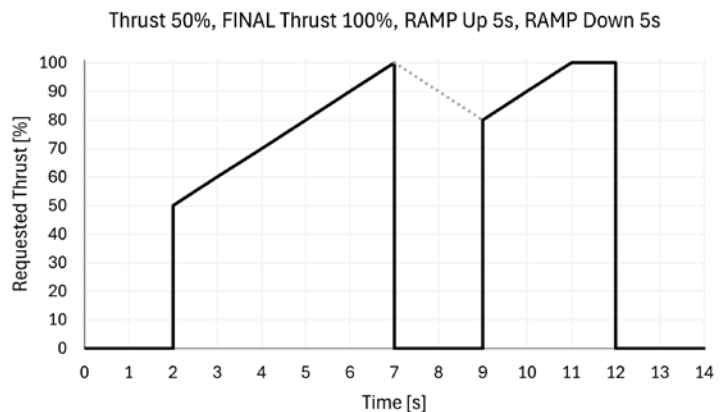
The graph below shows an example where the input switch is activated for 5 seconds, then deactivated for 2 seconds then reactivated for 3 seconds. For this example Thrust is configured to 50%, Final Thrust to 100% and RAMP Up time to 5 seconds.



The RAMP Down parameter can be used to control the thrust level when reactivating the input of 8730. This is typically applicable when pulsing the input ON and OFF. The reactivation level will be linearly decreased from the thrust value used when the input is disabled and down to the configured Thrust value. Thus if the time span before reactivating the thruster is longer than the RAMP Down time, the reactivation level will be equal to the configured Thrust value.

The reactivation level will be similar even if the direction of thrust is changed.

The graph below shows an example where the input switch is activated for 5 seconds, then deactivated for 2 seconds then reactivated for 3 seconds. For this example Thrust is configured to 50%, Final Thrust to 100%, RAMP Up to 5 seconds and RAMP Down to 5 seconds.



## Responsibility of the installer

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### 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 installers 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, Sleipner products 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.

### For Sleipner S-Link™ systems:

MC\_0105

- When installing an S-Link™ system, connect ONLY original Sleipner S-Link™ products or other authorized control equipment directly to the S-Link™ bus. When connecting non-authorized third-party equipment, it must always be connected through a Sleipner-supplied interface product.
- Any attempt to directly control or connect to the S-Link™ control system without a designated and approved interface from Sleipner will void all warranties and responsibilities of the connected Sleipner products. If you interface the S-Link™ bus by agreement with Sleipner through a designated Sleipner-supplied interface, you are still required to install at least one original Sleipner control panel to enable efficient troubleshooting if necessary.

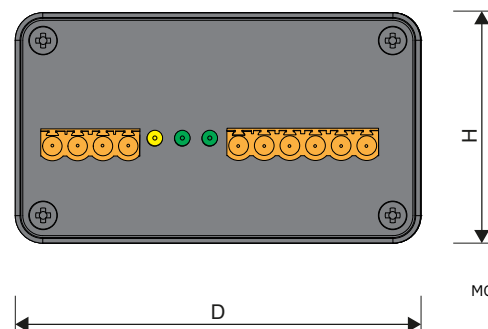
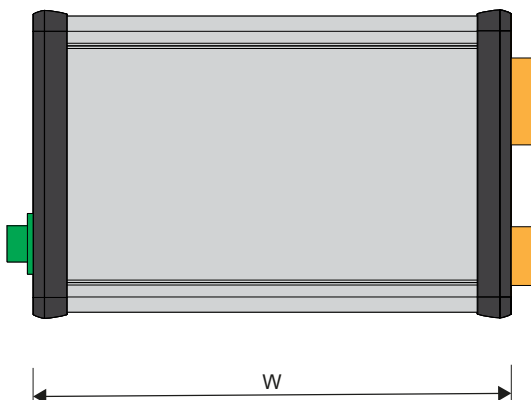
## Technical specifications

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Parameter	Specification		
	Min	Typical	Max
Supply voltage S-Link connector	9VDC	12VDC / 24VDC	31VDC
Max input current S-Link connector	220mA at 24VDC		
Max total output current on Vout pins	200mA		
Ambient operating temperature	-25°C to +70°C		
Weight	240g		

## Dimensions

Dimension code	Description	mm	Inch
H	Height	46.1	1.8
W	Width	125.8	4.9
D	Depth	81.1	3.2



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8730 can be interfaced with ON/OFF control devices to enable control of S-Link thrusters. Such control devices could be foot switches or other normally open switches, Sleipner ON/OFF control panels or Sleipner RCR-2x Remote Control Receiver. 8730 can be interfaced with one or several of the above mentioned control devices. Two 8730 boxes are required, if both bow and stern thrusters are to be controlled.

Mount the 8730 unit in a place where it will be protected from ingress by direct and condensed water. Use cable ties or other suitable means of mounting.

Choose a S-Link spur cable with sufficient length to reach the nearest Backbone T-connector. Connect the spur cable between the S-Link connector on 8730 and the T-connector.

Ensure that S-Link Power cable and S-Link terminators are installed. See S-Link System Description chapter for detailed information on installation of additional S-Link components.

Follow the instructions below that are relevant for the control device to be connected.

**Installation of foot switches or other normally open switches.**

Connect the foot switches or other normally open switches according to chapter *Wiring diagram – Foot switches or other normally open switches*.

To manually enable and disable thruster operation by the 8730 unit, a switch should be installed on the Enable Input signal. This should especially be considered if retractable thrusters are operated by 8730. See detailed information about Enable Input signal in chapter *Layout and functions*.

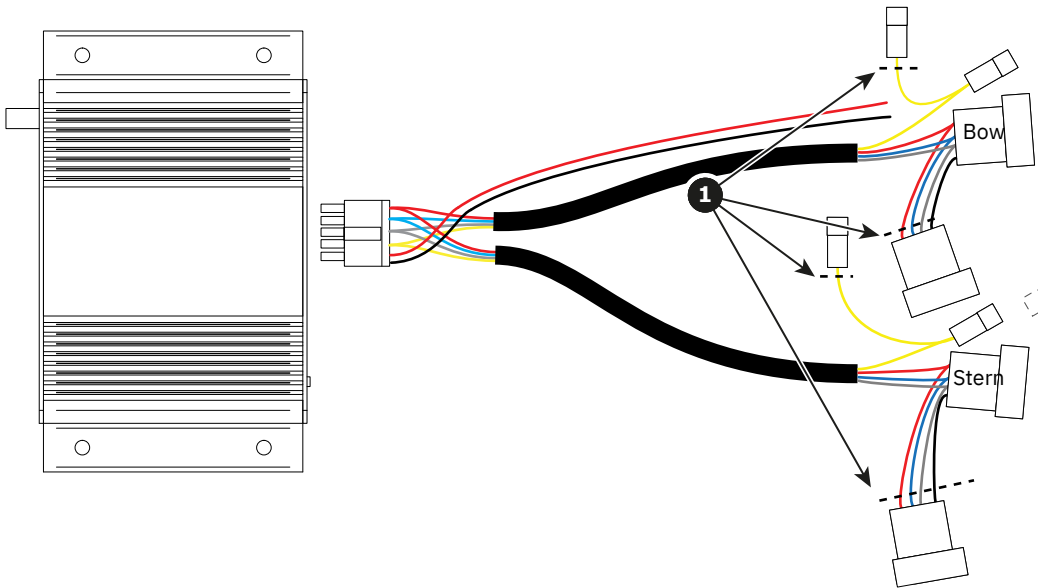
**Installation of Sleipner RCR-2x Remote Control Receiver.**

If the remote control receiver is to be installed in close proximity to 8730 the remote control receiver cable can be cut as indicated below (**Reference 1**) to allow for direct connection of wires into 8730 connector. By cutting the indicated wires one spare connector will still be available in the harness for connection of additional equipment, see section *Installation of more than one control device below*.

An option is to cut off both connectors and connect the harness directly to the 8730. Alternatively, crimp terminals with appropriately wire length can be used to connect to the connector terminals, preventing cable cutting.

If remote control receiver is to be installed far away from 8730, extension cable 6 1278-xxM can be used between the remote control receiver and 8730. One end of the extension cable could be cut to interface 8730 or crimp terminals could be used.

Connect the wires from remote control receiver according to chapter *Wiring diagram – Sleipner RCR-2x Remote Control Receiver*.



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**Installation of Sleipner ON/OFF control panels.**

If the wires from the ON/OFF control panel does not reach the location of 8730, extension cable 6 1278-xxM can be used. One end of the extension cable could be cut to interface 8730 or crimp terminals could be used.

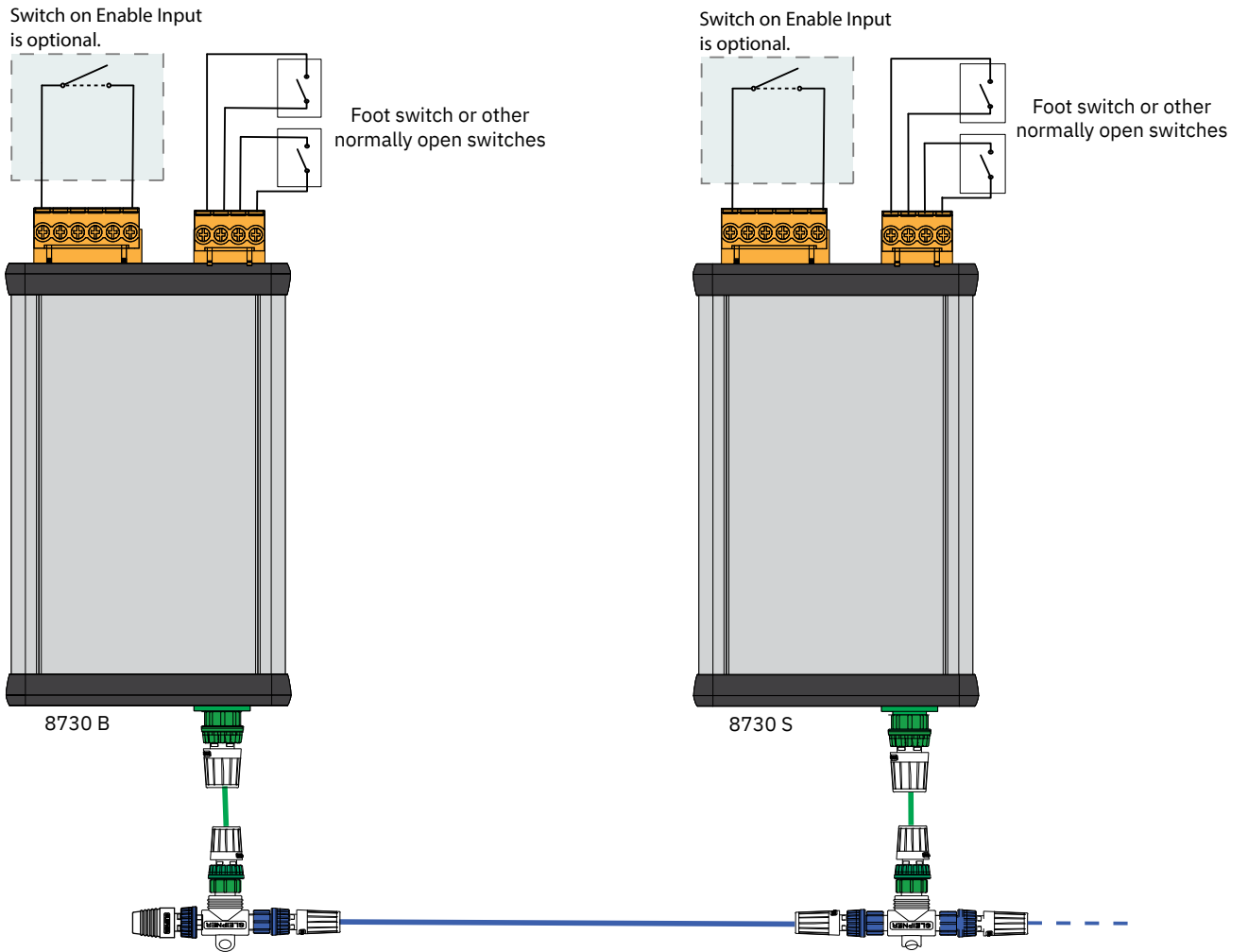
Connect the ON/OFF control panel according to chapter *Wiring diagram –Sleipner ON/OFF control panels*.

**Installation of more than one control device.**

For connection of more than one ON/OFF control devices to one 8730 follow the instructions in above sections and chapter *Wiring diagram – Combining multiple devices for ON/OFF control*.

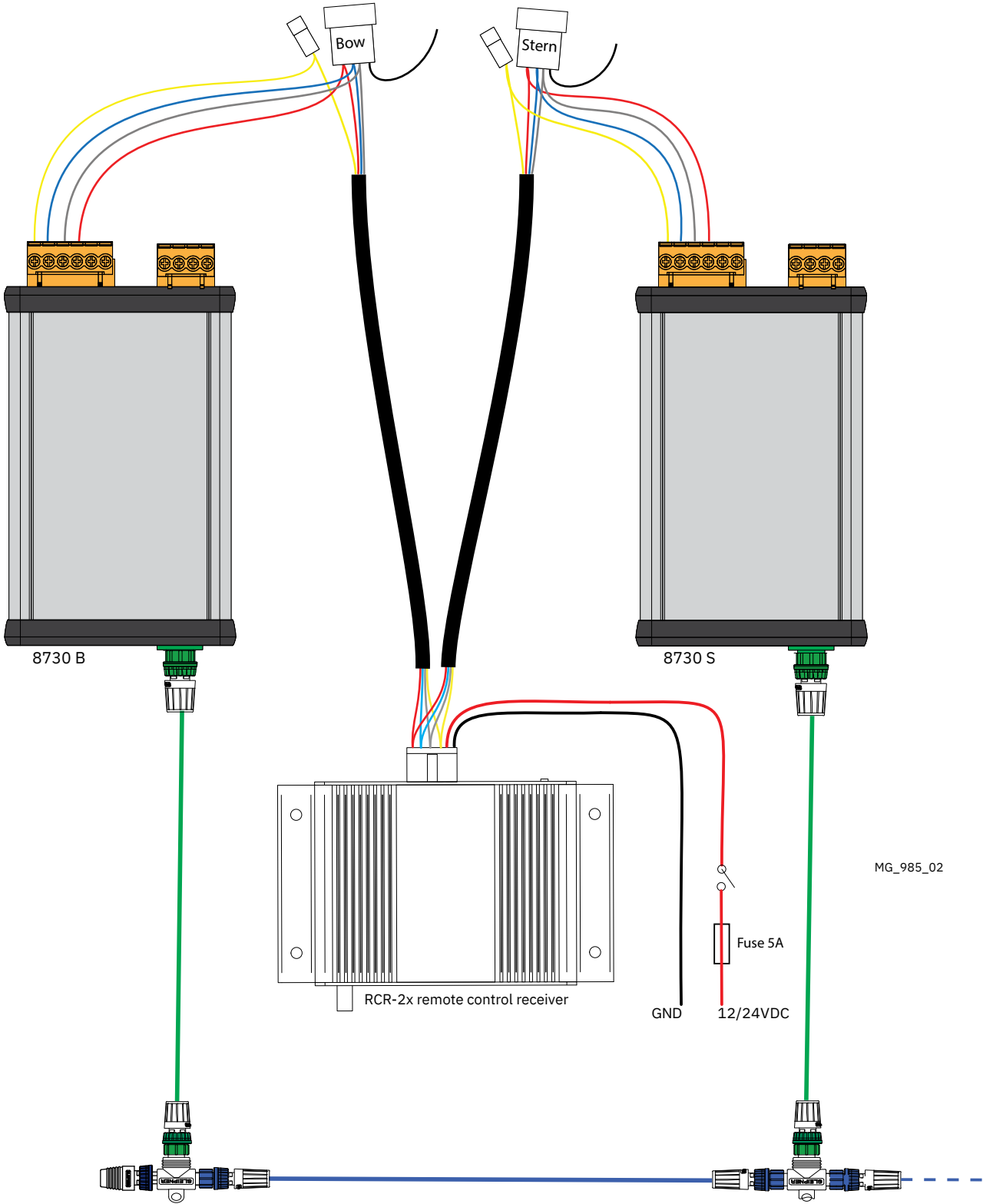


# Wiring diagram - foot switches or other normally open switches

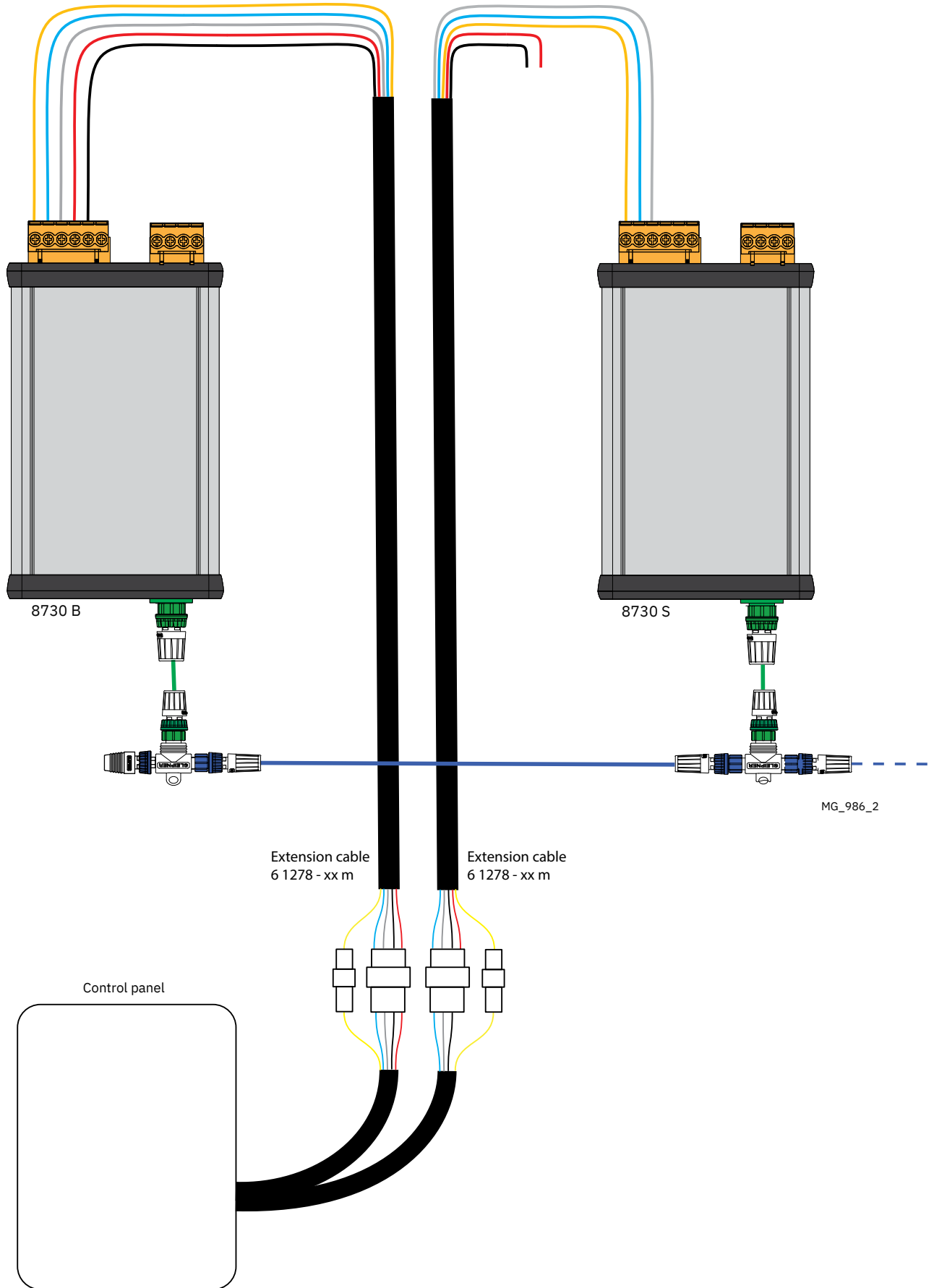


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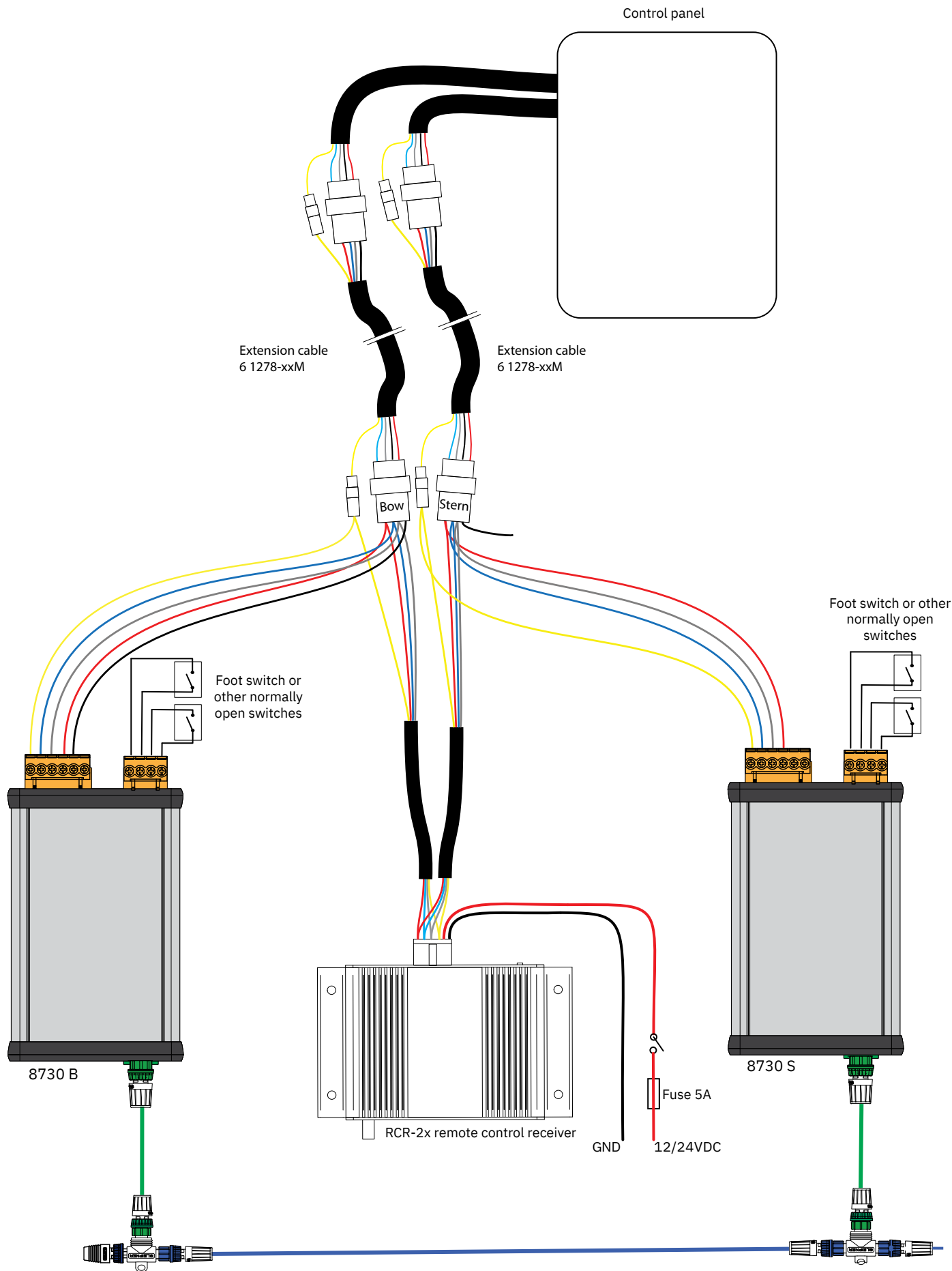
Wiring diagram - Sleipner RCR-2x remote control receiver



# Wiring diagram Sleipner ON/OFF control panels



# Wiring diagram - combining multiple devices for ON/OFF control



MG\_1002\_2

S-Link is a CAN-based control system used for communication between Sleipner products installed on a vessel. The system uses BACKBONE Cables as a common power and communication bus with separate SPUR Cables to each connected unit. Only one S-Link POWER cable shall be connected to the BACKBONE Cable. Units with low power consumption are powered directly from the S-Link bus.

**Main advantages of S-Link system:**

- Compact and waterproof plugs.
- BACKBONE and SPUR Cables have different colour coding and keying to ensure correct and easy installation. BACKBONE Cables have blue connectors and SPUR Cables have green connectors.
- Different cable lengths and BACKBONE Extenders make the system scalable and flexible to install.

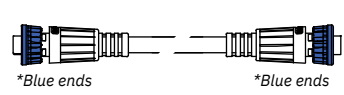
**Installation of S-Link cables:**

Select appropriate cables to keep the length of BACKBONE- and SPUR Cables to a minimum. In case of planned installation with total BACKBONE Cable length exceeding 100 meters please consult your local distributor. The S-Link cables should be properly fastened when installed to avoid sharp bend radius, cable chafing and undesired strain on connectors. Locking mechanism on connectors must be fully closed. To ensure long lifetime, cables, T-Connectors and Extenders should not be located so that they are permanently immersed in water or other fluids. It is recommended to install cables in such a way that water and condensation do not flow along the cables into the connectors. This can be done for example by introducing a u-shape bend before the cable enters the product connector.

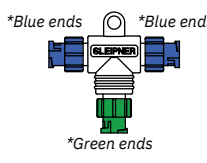
Ideally, the POWER Cable should be connected to the middle of the BACKBONE bus to ensure an equal voltage drop at both ends of the BACKBONE Cable. The yellow and black wire in the POWER Cable shall be connected to GND and the red wire connected to +12VDC or +24VDC.

To reduce the risk of interference, avoid routing the S-Link cables close to equipment such as radio transmitters, antennas or high voltage cables. The backbone must be terminated at each end with the END Terminator.

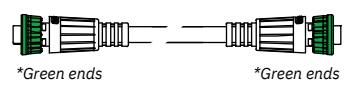
SPUR cables can be left unterminated to prepare for the installation of future additional equipment. In such cases, ensure to protect open connectors from water and moisture to avoid corrosion in the connectors.



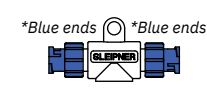
**BACKBONE Cable**  
Forms the communication and power bus throughout a vessel. Available in different standard lengths.



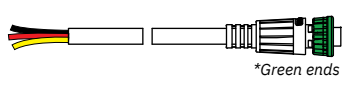
**T-Connector**  
Used for connection of SPUR or POWER Cable to the BACKBONE Cable. One T-Connector for each connected cable.



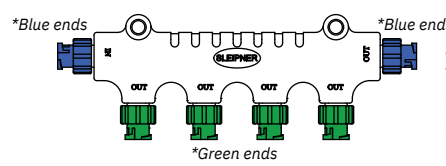
**SPUR Cable**  
Used to connect S-Link compliant products to the backbone cable. One SPUR Cable must be used for each connected component, with no exceptions. Recommended to be as short as practically possible. Available in different standard lengths.



**BACKBONE Extender**  
Connects two BACKBONE Cables to extend the length.

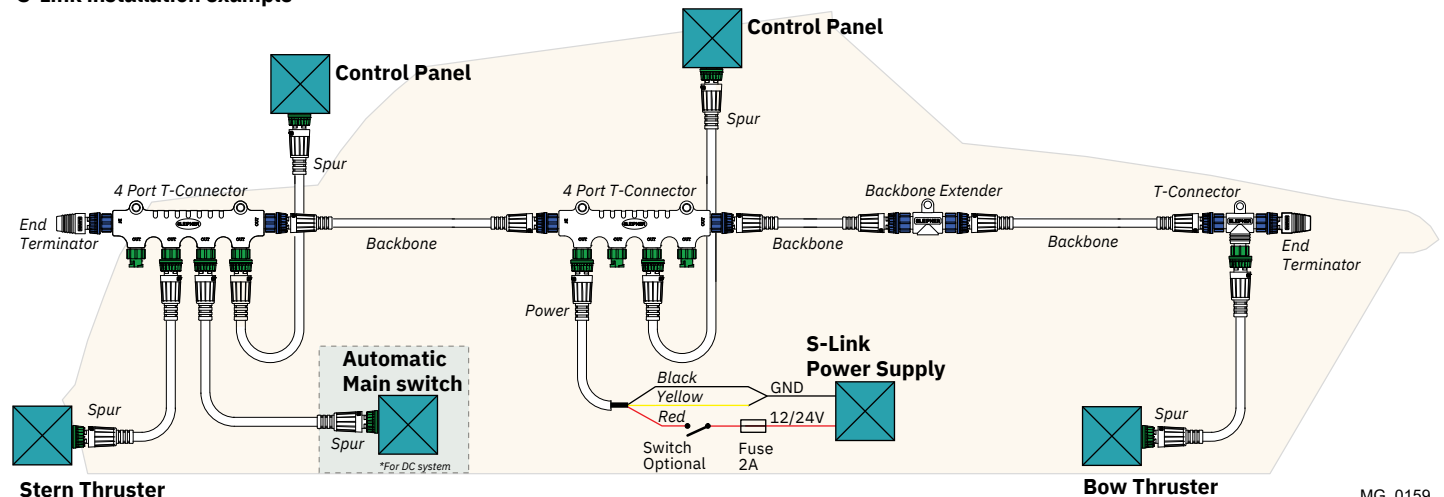


**POWER Cable**  
Required in all installations for connection of BACKBONE Cable to a power supply and should be protected with a 2A fuse.



**4-Port T-Connector**  
The 4-PORT T-connector allows multiple SPUR Cables to be connected. The 4-PORT T-connector comes with two sealing caps to protect unused ports.

**S-Link installation example**



**Introduction:**

At Sleipner Group, we prioritize sustainability and encourage the repair and re-manufacturing of products to extend their life cycles. If disposal is necessary, please follow these guidelines to recycle and manage waste responsibly, ensuring our efforts align with environmental protection efforts.

**Electric Motors and Electronics:**

- Disconnect from any power sources and dismantle them carefully.
- Recycle components through certified e-waste recycling centers that can adequately handle and recover electronic materials.
- Dispose of any non-recyclable electronic parts according to local environmental regulations.

**Metals:**

- Collect and sort metal parts for recycling as scrap metal.
- To increase recycling efficiency, ensure that metals are clean and free from non-metal attachments.

**Plastics:**

- Identify recyclable plastics based on local recycling guidelines.
- Remove any non-plastic components and clean them before recycling to improve the quality of the recycled material.

**Hazardous Materials:**

- Correctly identify any hazardous substances within components, such as batteries or capacitors etc.
- Follow local regulations for the safe disposal of hazardous materials to prevent pollution and protect environmental health.

**General Disposal Instructions:**

- Consult local recycling programs to determine the acceptability of various materials.
- Use authorized disposal services to ensure compliance with environmental standards.

**Safe Disposal Practices:**

- Adhere to local laws and regulations for waste management to minimize environmental impact and ensure community safety.

This guide is designed to help reduce our products' environmental footprint through responsible end-of-life management. Please contact your local waste management supplier or our support team for more specific disposal information or further assistance.

**Find your local professional dealer from our certified worldwide network for expert service and support. visit our website [www.sleipnergrou.com/support](http://www.sleipnergrou.com/support)**

## Product spare parts and additional resources

**For additional supporting documentation, we advise you to visit our website [www.sleipnergrou.com](http://www.sleipnergrou.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.sleipnergrou.com](http://www.sleipnergrou.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.sleipnergrou.com/patents](http://www.sleipnergrou.com/patents)

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**[www.sleipnergroun.com](http://www.sleipnergroun.com)**



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