



VC-800 VERTICAL INLINE CAPSTAN



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DECK TEMPLATE (PLACED IN THE MANUAL AS A SEPARATE PAGE)	

INTRODUCTION

Thank you for purchasing a Muir Windlass. Muir go to great lengths to develop anchoring systems that not only meet all your performance and safety requirements, but at the same time are designed with a style and finish that enhances the aesthetics of your vessel. With Muir's commitment to quality and the use of superior materials and processes we know you will be pleased with your investment, and rest assured that through the correct installation, operation and maintenance your new Muir Windlass will give you years of reliable performance.

IMPORTANT INFORMATION

To avoid damage to the capstan or vessel when retrieving the anchor, it is a preferred practice to mark the rope/chain at approximately 5-meter intervals from the anchor, to alert the operator to the anchor position.

Under no circumstances should the windlass be operated if it is stalled or overloaded.

SAFE OPERATION

- Ensure that hands, feet, hair and clothing are kept clear of the windlass and other loose gear when in operation.
- The capstan should never be used for lifting people aloft.
- Do not use a capstan as a bollard for mooring, towing or being towed.

INSTALLATION INSTRUCTIONS

Locate the capstan in a suitable position on the deck so there is no interference from other ropes or objects (the rope has a clear lead to the winch), so that there is working room and you can tail the line comfortably.

Ensure that there is sufficient room to run the electrical cables to the winch underneath the deck.

If the deck is angled or curved a suitably shaped mounting block will be required to spread the load evenly over the deck surface and mount the winch on a level and even footing. Depending on the thickness of the deck, a suitable spacer below deck may be required to mount the winch. Place the shaped mounting block (if required) onto the deck. Use the layout template dimensions to mark the hole centres and then drill/cut out the holes.

Apply an appropriate sealant to the base plate and mounting block (if required), taking care to align mounting holes when assembling. For Aluminium or Steel hull vessels, it is important to insulate the capstan with a non-conductive gasket to avoid corrosion. This also applies below deck with the mounting bolts, nuts and washers. Where the deck construction is light or of foam sandwich construction, a plywood stiffener of at least 16mm (5/8") should be fitted to the underside of the deck to spread the load. Install and tighten mounting bolts.

For recommended Electrical installation, please review electrical section.

HANDY HINTS

Ensure sufficient room to run electric cables to the capstan winch. Follow the instructions above including underdeck stiffening, alignment, mounting blocks and sealing procedures.

Position the capstan carefully checking desired rope path before mounting capstan to your deck.

TECHNICAL DETAILS

Motor	600w x 12v Permanent Magnet Motors
Capstan	High tensile bronze, chrome plated
Base Plate	Marine grade hard anodised and sealed aluminium
Gearbox	Two stage balanced epicyclic
Deck studs	Supplied with nuts in stainless steel
Weight	8kg (18lbs)
Rotation	Clockwise or right hand.
Brake	Auto action roller clutch - will not run back
Cable Size	Boats to 11 meters (36ft) use 25 mm ² - 3awg
Accessories	Deck switch with flip top cover Muir circuit breaker
Winch sizing	There are no absolute rules about winch size to boat size. This product is designed for use on typical private pleasure craft. Winch / boat sizes shown are based on installations that have proved satisfactory for many years.

ELECTRICAL

See Wiring Diagrams for wiring instructions.

Circuit breaker (must be fitted to ensure warranty)

If the drum winch is overloaded or stalled the circuit breaker automatically cuts off power to the winch and protects the wiring and motor. The circuit breaker should not be used as an isolating switch, for safety reasons.

Deck Switches are best located to either port or starboard or directly behind the capstan in a position where it can be easily reached with your foot or knee, preferably where you can view the anchor and chain coming aboard.

Isolating Switch should be fitted in an accessible position for safety, ideally close to the battery or switches. The isolating switch is not a circuit breaker.

Batteries are best located as close to the capstan as possible. Larger cables will reduce the voltage drop to the motor and the heat generated when operating the winch. Small diameter cables drop voltage considerably. Use the following table as a guide to your required wire size: (Based on 1500W 12V Motor)

Distance from battery to motor (m)	Cable Size		Cable Core Diameter (mm)
	(mm ²)	AWG	
< 8 (26')	25	3	7 (17/64")
9 – 12 (29' – 39')	35	2	8 (5/16")
13 – 18 (42' – 60')	50	1/0	9 (23/64")

Solenoid Installation

We recommend that the solenoid is installed in an upright position, where it has no exposure to sea water and in close proximity to the electric motor of the winch.

For wiring information, please refer to the wiring diagram/schematic.

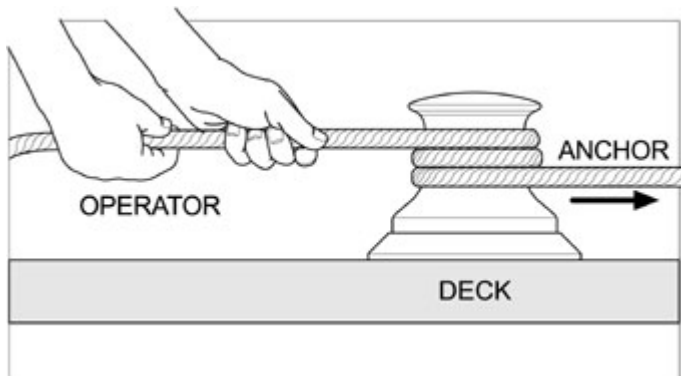
WINCH MODEL	MOTOR SIZE	MOTOR TYPE
VC800	600W	2 POLE

OPERATING INSTRUCTIONS

It is advisable to "mark" the anchor end of the chain/rope at 2 and 5 metre (6.5' & 16.5') intervals which will enable the operator to judge when the anchor is almost up.

Anchoring: Lower the anchor as you reverse the boat, this allows the anchor and chain to layout properly on the sea bed. Lower the anchor until the rope is slack and/or you are in the right position, once there it is recommended to tie off the rope to a cleat or bollard, or use a snubber.

To retrieve/raise the anchor, stand or kneel behind the winch and simply wind up to three turns (maximum) of line or sheet around the drum in a clockwise direction. Maintain a light "tailing" pull onto the free end and start the capstan. As the capstan rotates, lightly pull the line hand over hand keeping up with the speed of the winch. The capstan does all the hard work for you. Stop and hold at any time. **Do not use your hands or feet on the anchor side of the capstan drum to adjust the rope as it may become caught and entangled in the winch drum.**



When recovering your anchor, first start the engine. In strong winds, tides, currents or in deep water, use a little engine power to come up over the anchor as the capstan is used. Never stall the capstan and do not run it at low speed for any extended time. Use one continuous and smooth recovery and do not repeatedly start/stop. If the anchor is stuck, use a little engine power and the weight of the boat to break it free.

Also take care not to run over the anchor rope and entangle it in your prop or rudder. Go gently with the last two metres of retrieving the anchor, rather than waiting for the anchor to fly up over the roller and bang tight, putting excessive load onto the bow roller, winch and fore deck. When the weather is rough, anchoring overnight or traveling, it is not recommended to use the capstan as a mooring bollard!! Secure the rope around a cleat or bollard, or use a snubber to take the load.

MAINTENANCE AND SERVICING

Servicing

Every 6 months, remove centre screw from top of the capstan drum and lift drum off.

Lightly grease the synthetic bearings under the drum.

Smear a little grease on the O ring seal in the top outer cap, assemble and tighten firmly.

The motor is made of steel and may corrode if the paint system is damaged.

Check the motor regularly and keep dry and clean.

In "dry" installations, spray the motor regularly with a water repellent (CRC or WD40).

In damp or "wet" installations, including situations where a lot of condensation takes place, treat the motor and terminals regularly with CRC "soft seal" or similar.

Check all terminals in the system and protect as described above.

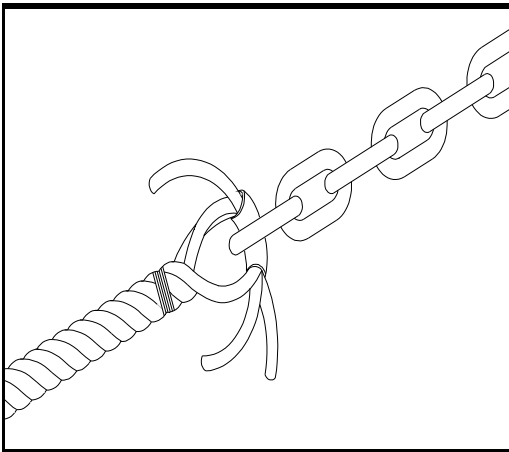
In the case of Work and Charter Vesels we suggest it is carried out more frequently.

Line Care

Muir winches are designed to run on 3-strand nylon line (supplied by Muir) which has been specially treated with fabric softener to prevent it from hardening. It is recommended to soak your rope in fresh water containing fabric softener every 3 months.

Rope/Chain Splice.

1. To stop rope unravelling, seize rope 400mm(16") from end with whipping twine. Unlay strands.



2. After placing 20mm (3/4") of heat shrink sleeve tubing through the last link of chain, pass one strand of rope through sleeve and chain from one side and the other two strands of rope from the opposite side. (See illustration).
3. While pulling all three strands tight, shrink the sleeve tightly onto the rope using a hairdryer / fan heater or by immersing in boiling water.

4. Remove seizing and complete back splice in normal manner for two full tucks. With a hot knife pare down the three strands by 1/3 and insert two further tucks. Pare down by another 1/3 and finish with two tucks. Cut any remaining tails.

CORROSION PROTECTION - for long life (general notes for all winches).

The motor and some underdeck parts of your winch are manufactured from materials that require protection from the marine environment. Paint and other protection systems are applied at time of manufacturer, but additional protection and regular inspection is necessary after installation.

Immediately after installation we recommend that the winch is tested. Reversing winches should be run in forward, reverse and manual modes. Rope only winches will only run one way unless ordered otherwise. Observe polarity indicated by +/- labels on motor. Check all terminals and fastenings are firmly secured. Coat all underdeck surfaces and terminals with CRC 'Softseal', automotive underseal or similar. Control equipment should never be installed in damp positions such as the chain locker, but, if necessary, control equipment will need protection too.

Service checks. Check motors and underdeck parts regularly for signs of corrosion and take necessary action immediately. Above deck items need maintenance too, including cleaning, greasing/oiling per instructions issued with the winch. If cone clutches (where fitted) are found to stick, release clutch nut and give one of the gypsy teeth a smart rap with a hard wood or brass drift. When the clutches free up, a very light spray with CRC / WD40 will help prevent further sticking.

WARNING. Motor, brake, gearbox assembly should never be removed or fastenings loosened during installation. Some fastenings are sealed with a locking compound and warranty may be void if any seal is broken. If a fault is suspected during the warranty period DO NOT remove any parts or attempt a repair. Return the complete unit to the factory via supplier with evidence of purchase and detail of problem experienced.

FAILURE or DAMAGE due to improper maintenance is not covered by warranty.

ATTENTION !

VC800 Capstan will ONLY work in clockwise direction.

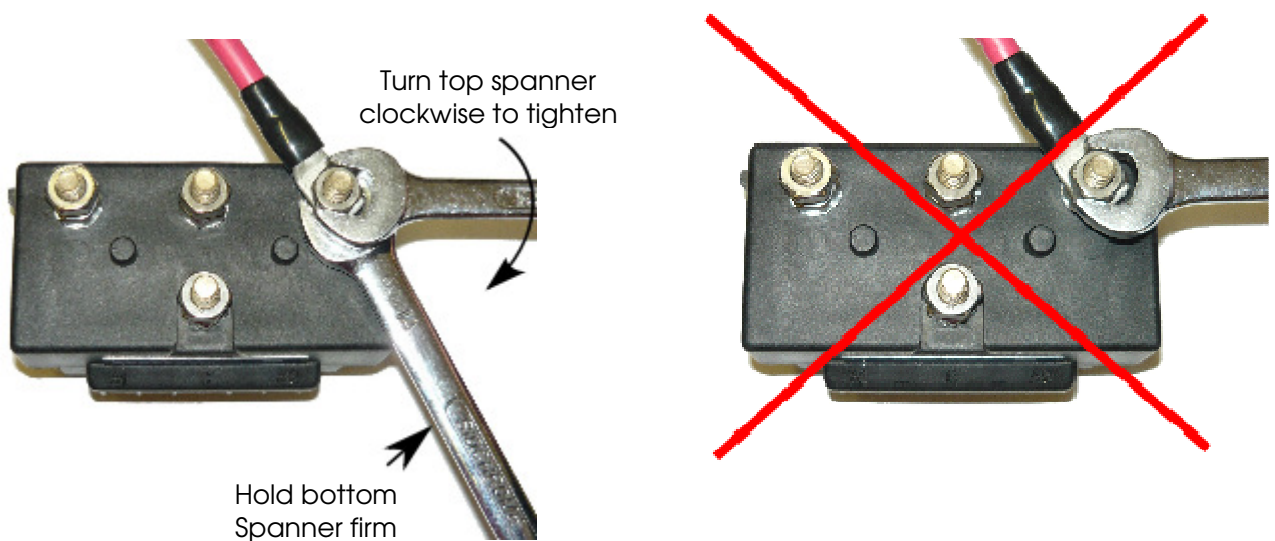
Always connect Positive (+) Terminal on the Battery to the Positive (+) Terminal on VC800 Electric Motor.
Always connect negative (-) Terminal on the Battery to the negative (-) Terminal on VC800 Electric Motor.

If wired incorrectly it will damage
the Electric Motor and VOID the Warranty

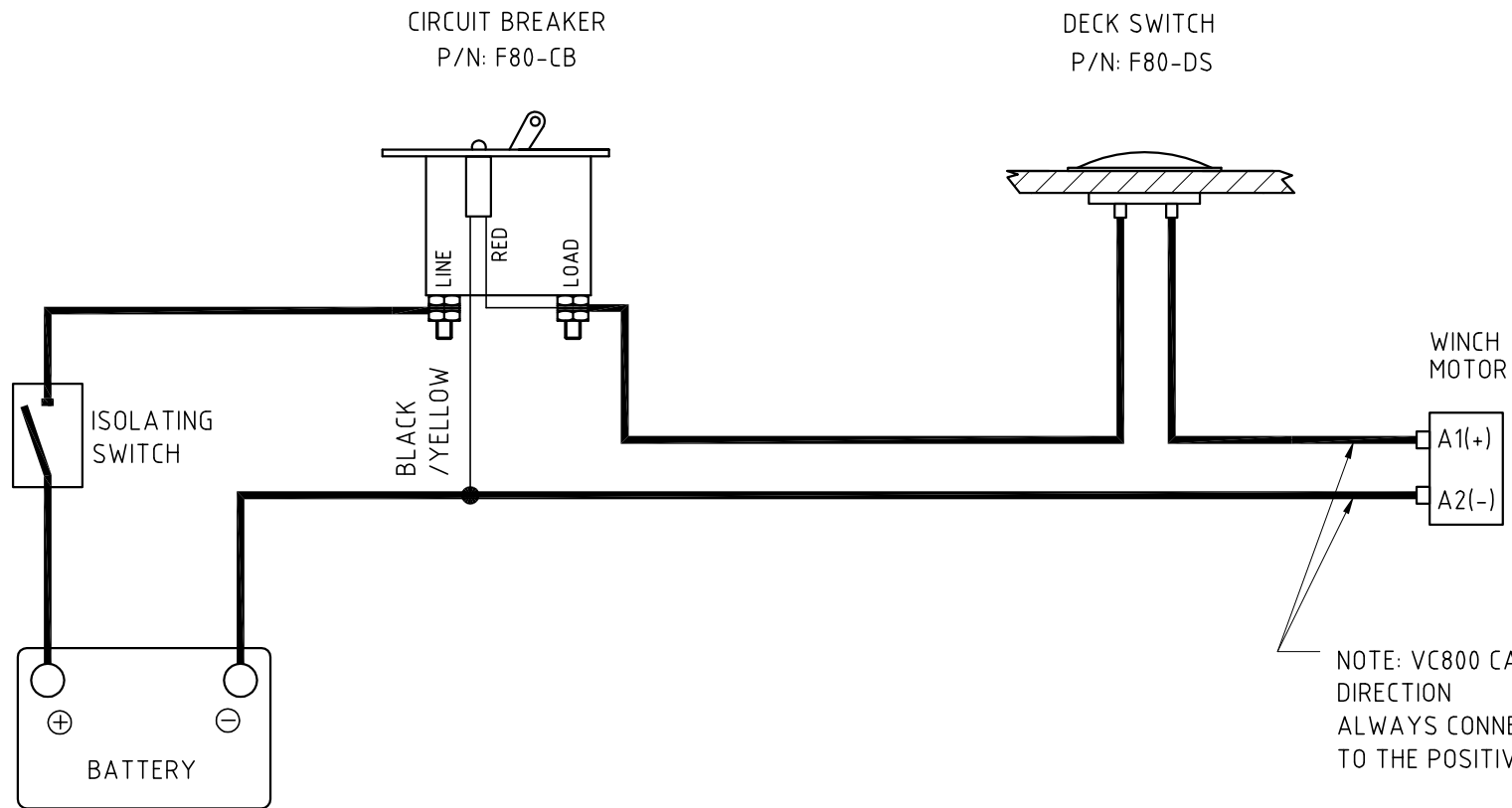
WARNING

Do not over tighten terminal nuts.
It may cause internal damage.
Ensure bottom nut is held with a spanner
when tightening top nut.

Please apply this method to all
solenoids, circuit breakers
and motor terminals.



Correct method using 2 spanners. Incorrect method using 1 spanner.



NOTE: VC800 CAPSTAN WILL ONLY WORK IN CLOCKWISE DIRECTION
 ALWAYS CONNECT POSITIVE (+) TERMINAL ON BATTERY TO THE POSITIVE (+) TERMINAL ON THE MOTOR.

ALWAYS CONNECT NEGATIVE (-) TERMINAL ON BATTERY TO THE NEGATIVE (-) TERMINAL ON THE MOTOR.

IF WIRED INCORRECTLY IT WILL DAMAGE THE MOTOR AND VOID THE WARRANTY

FOR OTHER CAPSTANS: FOR ANTI-CLOCKWISE OPERATION REVERSE THE WIRES GOING TO THE 'A1' & 'A2' TERMINALS

WARNING !!
 DO NOT ACTIVATE THE UP & DOWN DECK SWITCHES AT THE SAME TIME. REFER TO MANUAL FOR MORE INFORMATION

— REFER TO MANUAL FOR WIRING INDICATED BY HEAVY LINES
 — LIGHTER LINES INDICATE LIGHT WIRING.

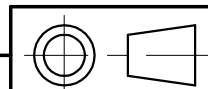
NORMALLY APPLIES TO THESE WINCHES AND MOTORS

MOTOR 12/24V	200W	600W
WINCH MODEL	VC 500	VC 650/VC800

MUIR WINDLASSES AUSTRALIA

TITLE TWO TERMINAL MOTOR (SINGLE DIRECTION) WIRING DIAGRAM (SINGLE DECK SWITCH)			
PART No.			
DRN SA	DATE 24/03/95	DRG No. WIRE0006	
SCALE NTS	APP1	APP2	SIZE A4

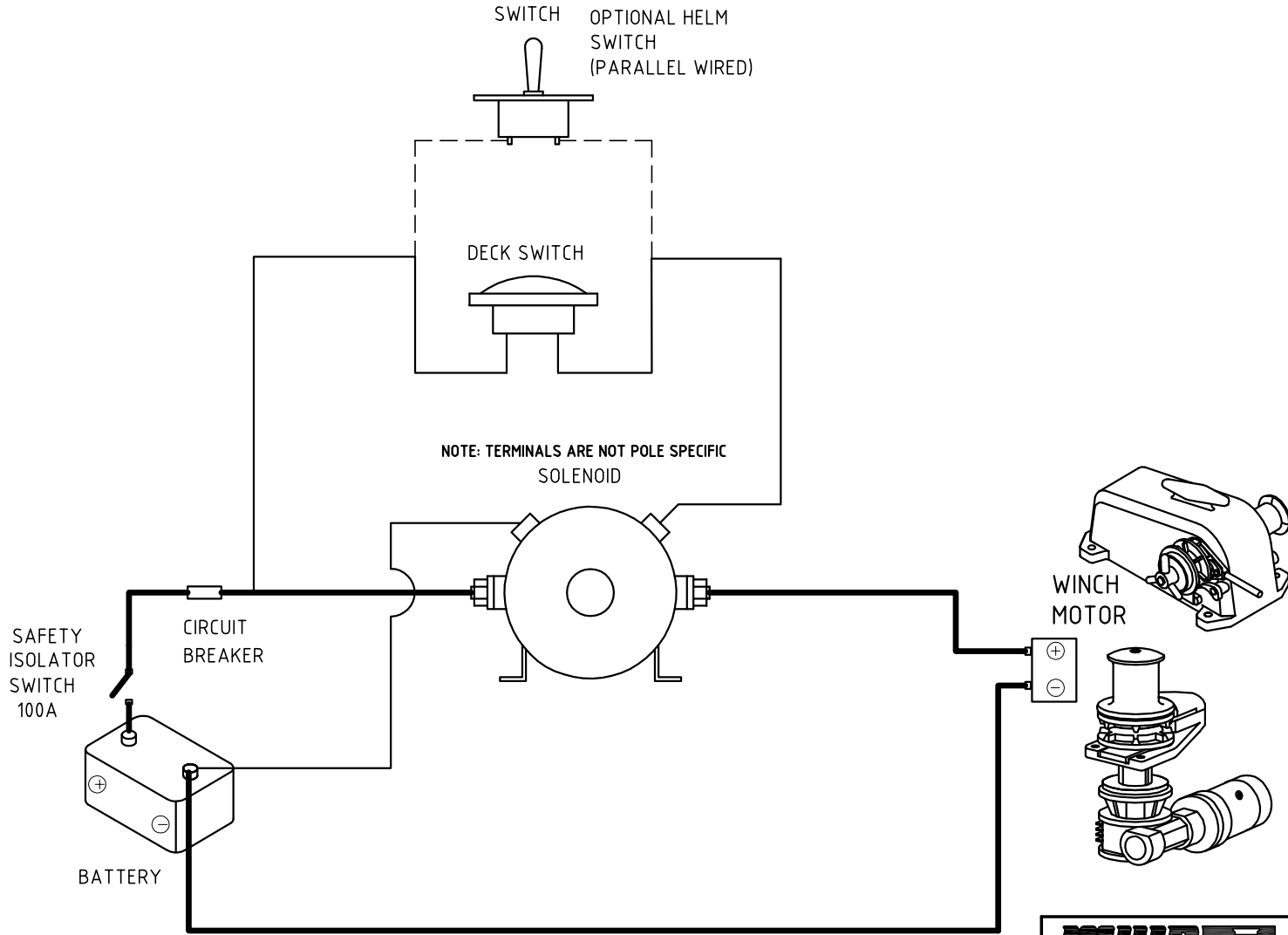
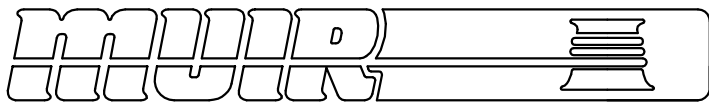
TOLERANCES (mm)	
X.	±
X.X	±
X.XX	±
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	



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 DNV Certification Pty Ltd
 Quality Assured
 ISO9001

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×HEAVY LINES INDICATE BATTERY CABLE. (HIGH AMP)
 LIGHTER LINES INDICATE WIRING. (LOW AMP)
 DASHED LINES INDICATE OPTIONAL WIRING

TOLERANCES (mm)	
X.	± 0.5
X.X	± 0.1
X.XX	± 0.025

UNLESS OTHERWISE SPECIFIED

MATERIAL

FINISH



TITLE
 SINGLE SOLENOID, SINGLE DIRECTION, SINGLE SWITCH
 (POSITIVE ACTIVATING)

PART No. WIRE0007 PAGE 1 OF 2

DRN SA	DATE 22/05/95	DRG No. WIRE0007
SCALE NTS	APP1	APP2
		SIZE A4

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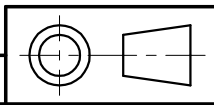
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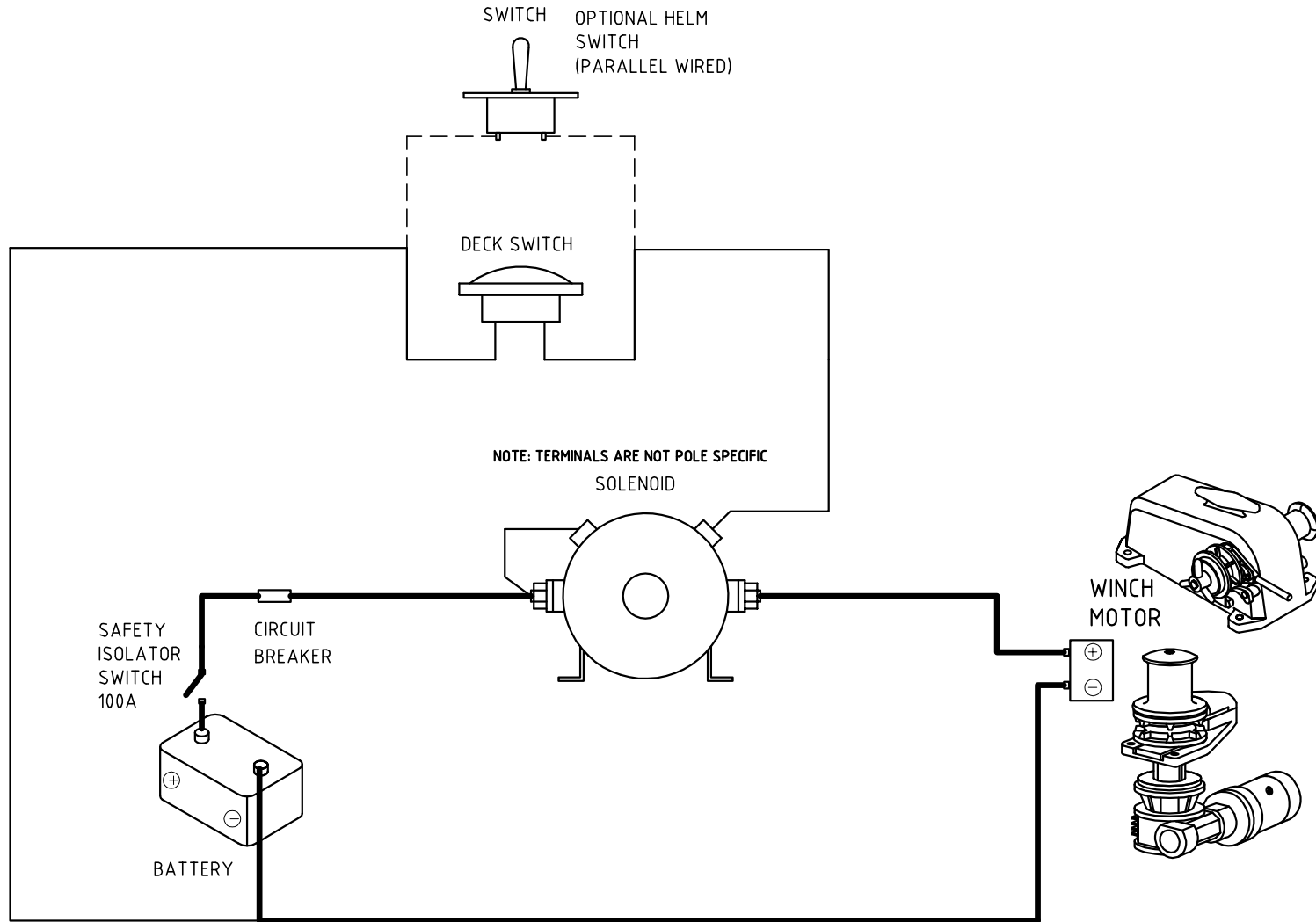
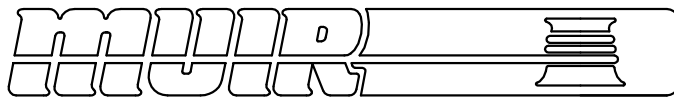
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REV No. 1	DESC. TABLES REMOVED
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BY. PG DATE. 18/11/2013





×HEAVY LINES INDICATE BATTERY CABLE. (HIGH AMP)
 LIGHTER LINES INDICATE WIRING. (LOW AMP)
 DASHED LINES INDICATE OPTIONAL WIRING



TITLE
 SINGLE SOLENOID, SINGLE DIRECTION, SINGLE SWITCH
 (NEGATIVE ACTIVATING)

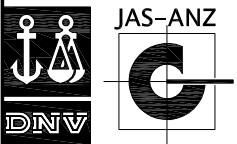
PART No. WIRE0007 PAGE 2 OF 2

TOLERANCES (mm)	
X.	± 0.5
X.X	± 0.1
X.XX	± 0.025
UNLESS OTHERWISE SPECIFIED	
MATERIAL	
FINISH	

DRN SA	DATE 22/05/95	DRG No. WIRE0007
SCALE NTS	APP1	APP2
		SIZE A4

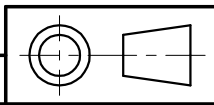
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 ISO9001

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Warranty
Limited for period of Three years (First Owner)

We warrant each new product manufactured by us to be free from defects in material and workmanship for a period of 3 years (first Owner).

This warranty shall become effective only upon receipt of a completed warranty registration, which shall identify the product so registered by serial number. This warranty shall remain in effect for a period of three (3) years from the date of purchase. For vessels in charter or hire the warranty is one (1) year due to various operators and overloading which may occur.

Conditions

While this warranty applies to defects in material and workmanship, it does not apply to:

- Normal worn parts or to damage caused by neglect, lack of maintenance, accident or improper service/installation or service by persons other than an authorised Muir representative.
- Muir shall not be responsible for failures due to products being used in applications that they are not intended for, or exceed the products performance specifications.
- For warranty claim, defective product must be returned to Muir for inspection.
- Muir will not be responsible for freight charges, removal or installation labour on warranty claims.
- Damage due to unsatisfactory storage or use of equipment prior to installation in the approved/intended manner.

Exclusions

Warranty is limited to twelve months for:

- Electric motors / controls / equipment
- Hydraulic pumps / controls /valves
- Weather seals
- Use on charter/hire/commercial boats

All incidental and/or consequential damages are excluded from this warranty. Warranties of merchantability and fitness are excluded from this warranty. Implied warranties are limited to the life of this warranty. Some countries do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

We reserve the right to improve the design or materials used on any product without assuming any obligation to modify any product previously manufactured or used.

Liability

Muir Engineering liability under this warranty shall be to the exclusion of all other warranties or liabilities (to the extent permitted by law). In particular (but without limitation):

Muir Engineering shall not be liable for:

Any indirect or consequential loss including (without limitation) any loss of anticipated profits, damage to reputation or goodwill, loss of expected future business, damages, costs or expenses payable to any third party or any other indirect losses. Any damage to yachts or equipment. Death or personal injury (unless caused by Muir Engineering negligence).



WARRANTY REGISTRATION CARD

Return To

MUIR ENGINEERING PTY. LTD.
100 Browns Rd, Kingston
Tasmania, Australia, 7050

Customer / Company Name:
Contact (if Company):
Address:
Phone / Email:

WARRANTY VOID UNLESS CIRCUIT BREAKER OR RELIEF VALVE FITTED

Winch Model: <div style="text-align: center; font-size: 24px; font-weight: bold;">VC800</div>
Serial Number:
Purchase Date: <div style="text-align: center; font-size: 24px; color: gray;">dd / mm / yyyy</div>
Purchased From:
Invoice Number / Receipt Number / Proof of Purchase:

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Head Office:

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Kingston, Tasmania, 7050
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SERIAL NUMBER:

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