



Drum Winch DM4000PM Installation and operations manual

Thank you for purchasing the Smarta-Winch Drum Winch

The Smarta-winch is a Drum winch for recovering the anchor and rode on boats.



Features

- Fast anchor free-fall
- Lock at anchor
- Safety override
- Accidental Deployment Switch

Typical Winch Performance	
Voltage	12V
Maximum Current Draw	250A
Weight	16 kg
Recovery Speed (unloaded) (Smallest-Biggest Diameter)	45-15m/min
Stall(Smallest-Biggest Diameter)	550-160kg
Free-Fall Take Off Weight	1.2kg
Typical Pull	100kg

Included

- Drum winch
- Winch Fastener kit including load spreading plates
- Relay Module including Fasteners.
- Thermal Switch Module including Fasteners.
- Dash Switch Module including Fasteners.

Recommended for Operation

- Spanner/Socket 22mm for mechanical override in case of electrical failure

Required for installation (Not included):-

- **Main Power Wire,**
16.8mm², AWG 5, Multi core, preferably tinned.
Length according to vessel
- **Signal wire between relay control and switch,**
1.31mm²-20.8mm², AWG 16-14, Multi core, preferably tinned.
Length according to vessel
- **Crimp Terminals,**
Size according to Cables

Typical installation tools and equipment

- Silicon Sealant
- Hex key
- Crimping tools
- Cable Ties
- Spanner, various
- Screwdriver, various
- Drill

Installation

A system layout is shown below

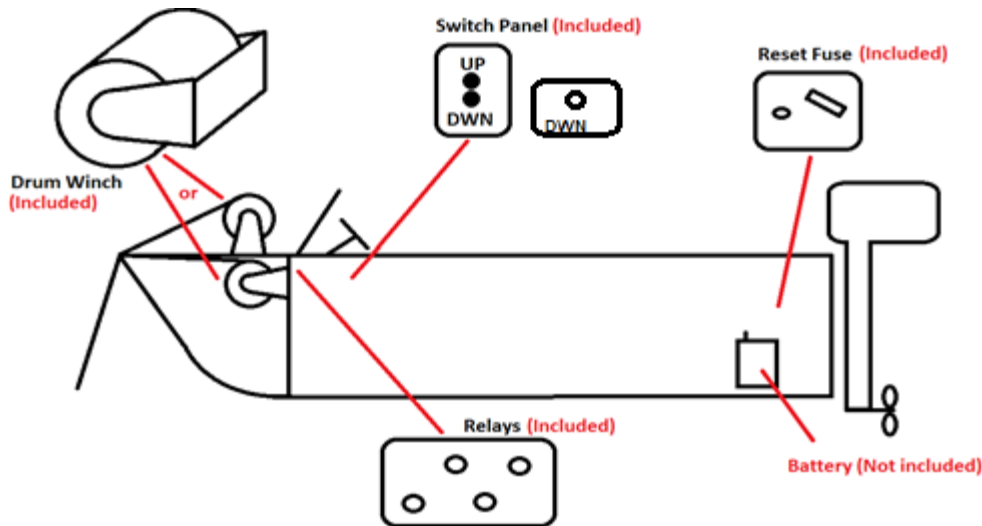


Diagram 1: Typical boat layout

A typical installation will consist of two phases.

- Mechanical fitting of the drum winch
- Electrical fitting including all wires, switches and relays.

Mechanical fitting

The drum winch spools in one direction and unspools in the opposite. By mounting the winch in one orientation the installer sets the position where the rope will spool onto the winch. Either Topside or bottom. Depending on installation there may be advantage in either orientation. See *Diagram 2 Winch Orientation*.

Care should also be taken to increase the distance (L) from the fair lead to a maximum.

This increases the amount of rode that can be stored on the drum by making the rode spool on the outer edges of the drum easier.

Once the orientation is decided, fasten with supplied fasteners and silicon seal between the winch frame and vessel if necessary. See *Diagram 2, Winch Fasteners*.

Diagram 2: Winch Orientation

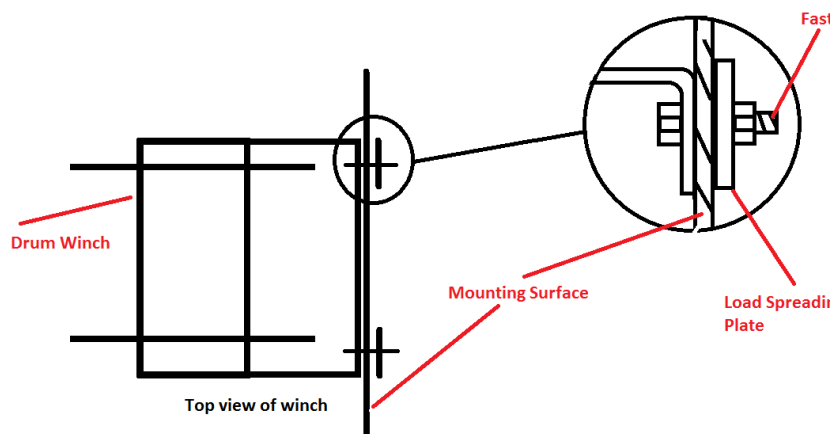
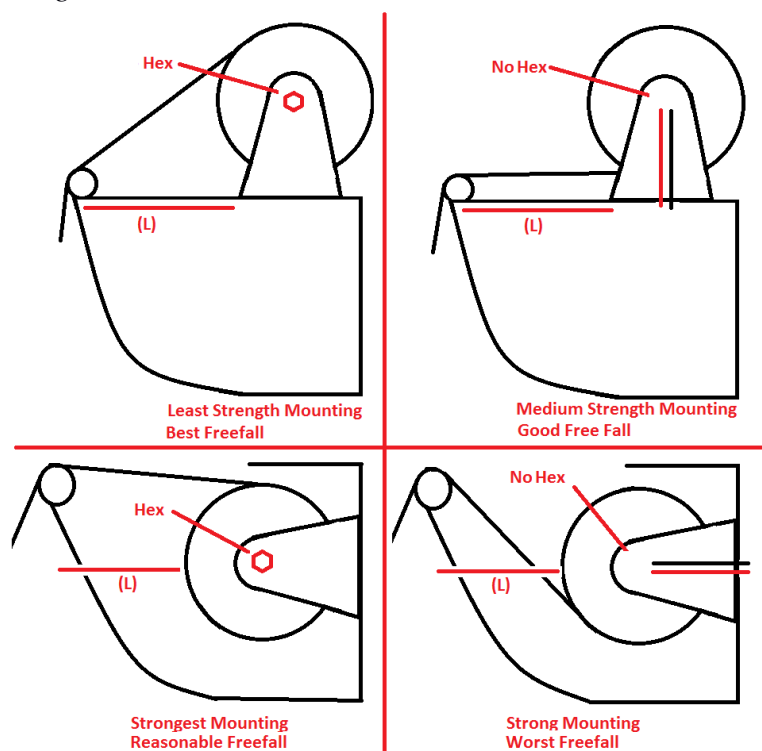
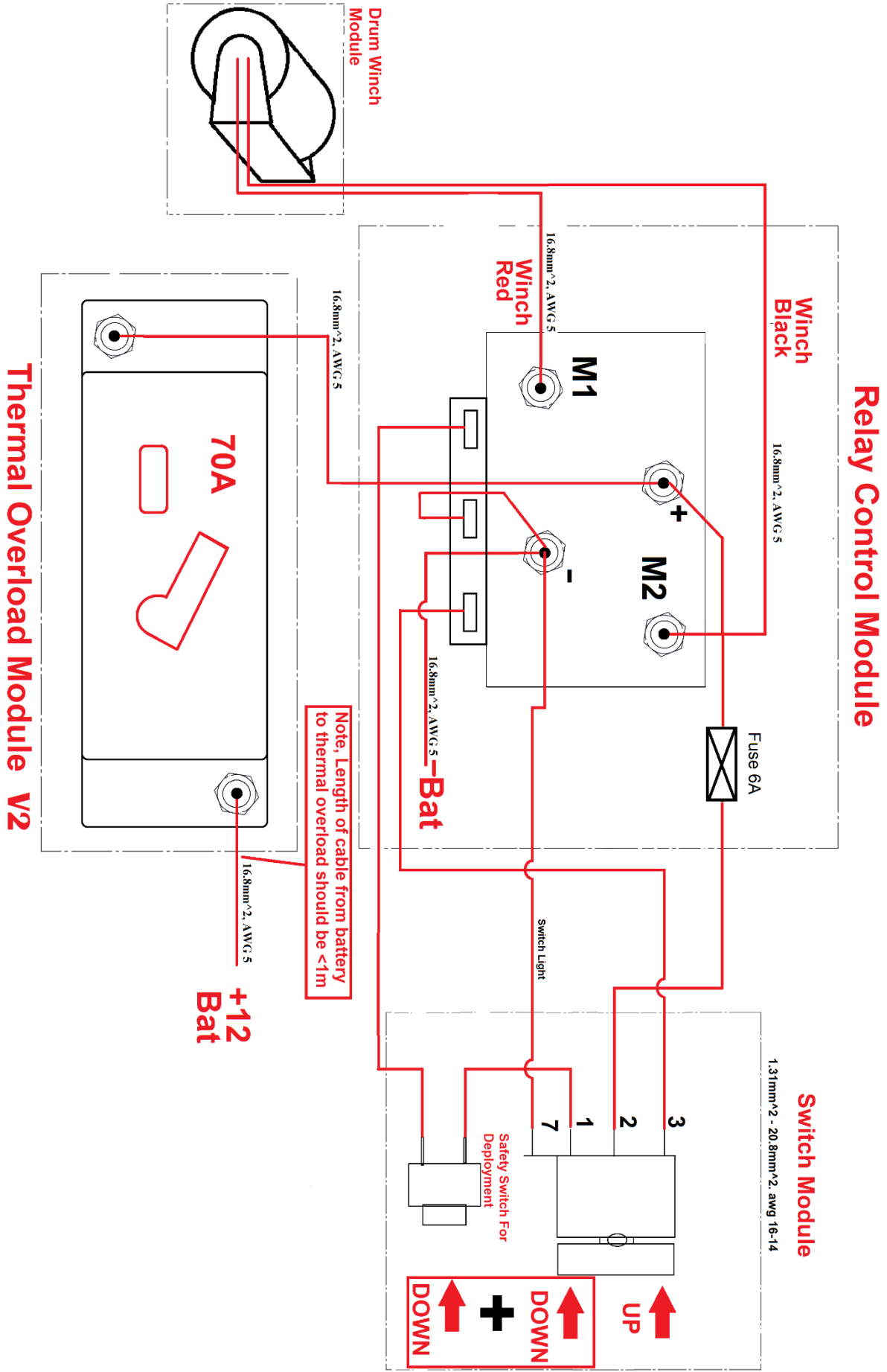


Diagram 3: Winch Fasteners



Service

After use, briefly hose winch using a low pressure fresh water hose to remove salt crust. Wipe grease into the gap between the bushing. This helps maintain the seals. This should be done once every six months or at convenient earlier opportunities.

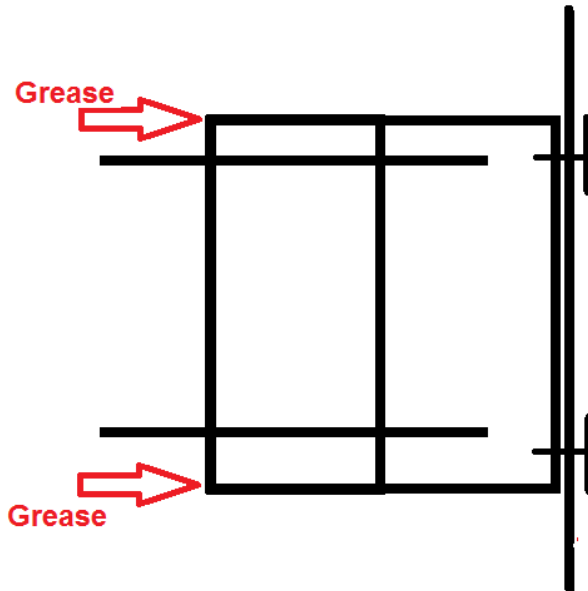
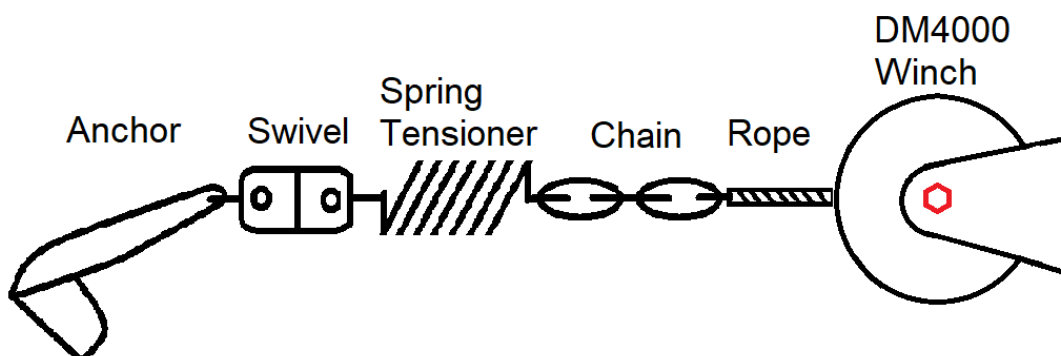
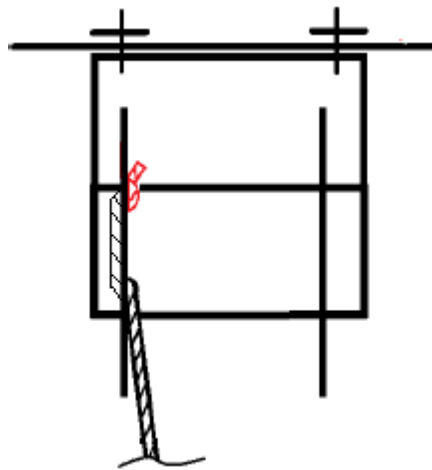
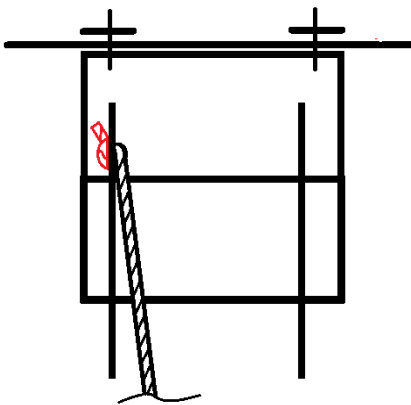
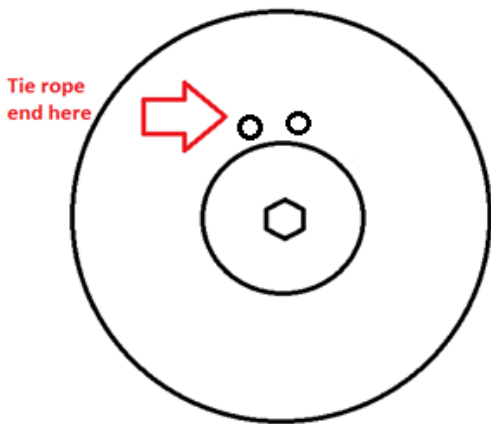


Diagram 4: Winch Maintenance

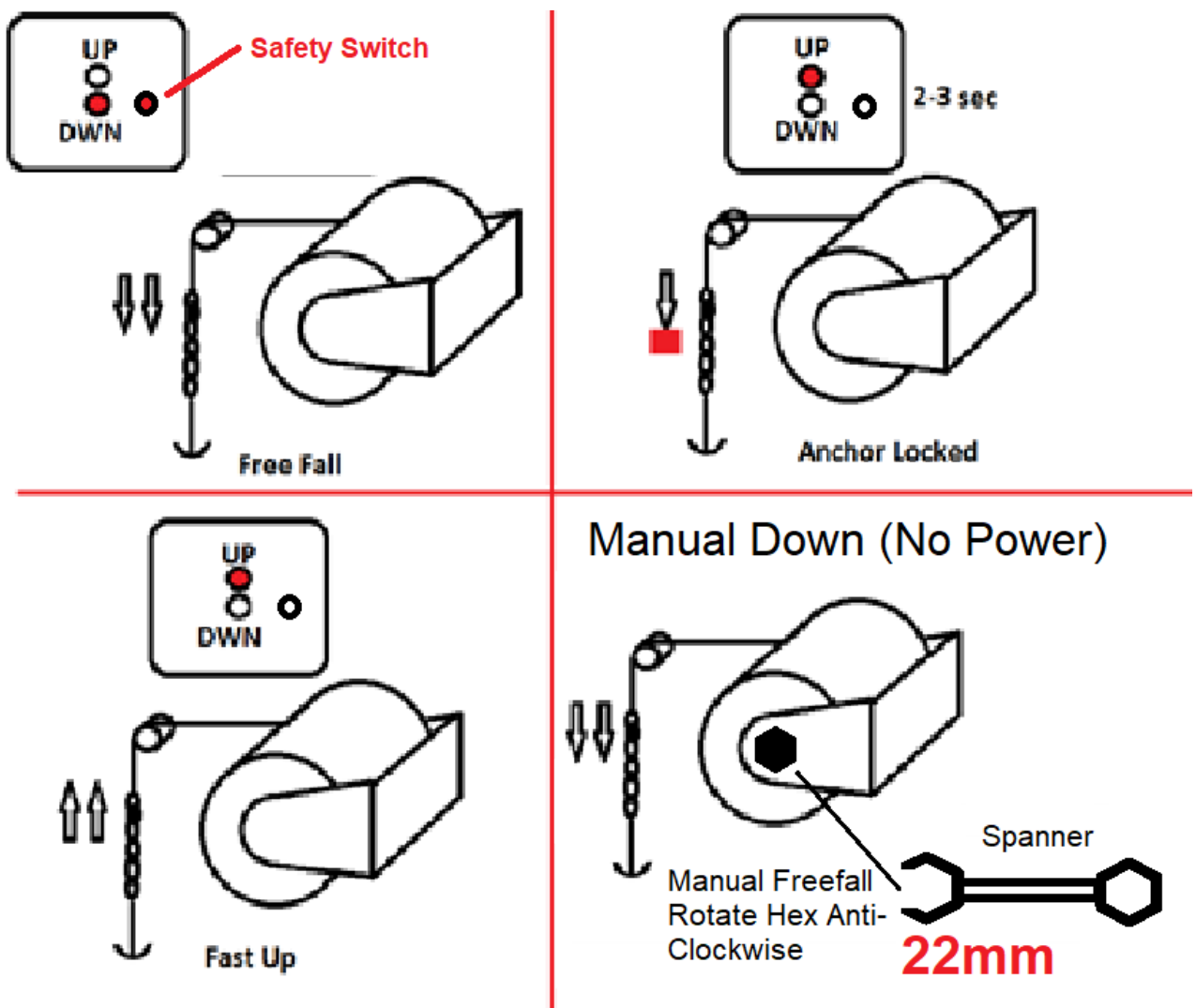
Setting up rope/chain onto winch.

Tie rope between slots. Avoid making the knot large as it can interfere with the frame of the winch when rotating.



Operation of winch

- Please ensure that the operator is fully aware of the correct and safe use of this product.
- This winch is not designed to lift Human/Animal loads and is not rated for overhead loads.
- Do not operate the winch when people are touching the drum or rope.
- Care must also be taken when the winch is in free-fall mode as the drop speed can be high.
- If the winch is operating from the starter battery then start the engine first before raising the anchor.
- If anchoring for long periods tie the anchor rope to a bollard for extra security.
- If under steam it is recommended to secure the anchor and chain to the boat directly via a bollard.
- If the winch is overloaded the thermal overload may be tripped. Reset if necessary.



Problem Diagnosis

Pre-Installation

- The “up” button is pushed however the winch motor runs and the drum is free to spin (unpowered)
Check drum winch motor connections to make sure they are not reversed on solenoid module.
- The winch does not always free-fall even though the clutch disengages into freefall.
The surface that the winch is mounted to needs to be flat. Extra friction may be caused by the frame compressing against the drum. Shim frame as necessary.
- Check that the weight of the anchor is producing enough force to start the drum. Change free-fall setup.

Post Installation

- The winch is installed and previously worked. It now does not respond to buttons.
 - Check the fuse on the relay module is not blown.
 - Check the main breaker module has not tripped.
 - Check the winch is receiving power. A battery isolator may be switched off etc.
 - Check all electrical connections are secured.
 - Contact your nearest Smarta Dealer.
- The winch does not always freefall even though the clutch disengages into freefall.
 - Check the bushings are well lubricated see ‘maintenance’
 - Check the rope is not touching the winch frame.
 - Wash the winch with warm water. See ‘maintenance’.

Smarta-Winch Reserves the right to improve, change or modify equipment and its literature without obligation or prior notice.

While effort is made to keep this manual up to date, Smarta-Winch holds no responsibility for omission or errors within this document

Smartawinches

P.O Box 27054 Garnett Ave

Hamilton

New Zealand

www.smartawinches.com

pbmarriott@xtra.co.nz

Rev 4.1

22-11-2023