

Typical applications for reversing switch

This reversing switch changes polarity to the DC-motor, which makes the motor/pump running in both directions. For this purpose you use a special switch with jumper terminals. Switching polarity means running a flexible rubber impeller pump in reversed direction and also flow in reversed direction.

• Ballast application

Together with pumptype F4B-11, Ultra Ballast Pump It will pump water into ballast tanks. When reversed it will also pump water out of them.

• Oil exchange in marine engines or other machines.

The reversing switch can be used in combination with any of Johnson FDC series pumps in sizes from F2 up to F4. In this application the pump suck oil out of engine and after switching polarity you can fill engine up with fresh oil. Switching polarity means running pump in reversed direction and also flow in reversed direction.

Switch specifications.

Body: Polyester plastic
Contact rating: 20 amps 4-14 V
 15 amps 15-28V
Terminals: 1/4" (6,3 mm) Quick Connect terminations

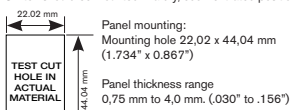
Actuator travel: 3 position.

Environmental: IP 67 in accordance with IEC 529, BS 5490, DIN 40050 and NFC 20010

Operating temp: -40°C to +85°C

Installation and maintenance

Installation
 Switch should be mounted in a dry, cool ventilated position.



Electrical installation

For marine applications the electrical installation should be done according to ISO 10133 (Small craft - Electrical system - Extra low voltage DC installation for continuous current). **Note:** The fuse must be ignition protected. Fuse size choice should be related to recommendation given for pump.

Connect wires to four terminals of the switch. See the wiring table for correct installation. Choose wire size in accordance with total wire length, see table in Instruction Manual for your pump.

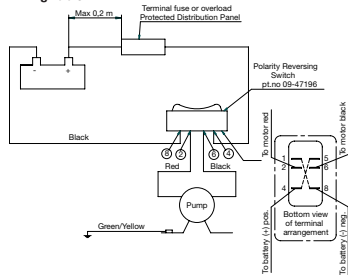
The wire connections must be sealed. Use Quick Connect receptacle matching wire size, included in kit. For avoiding short hazard, use two of the remaining receptacles for the two open (unconnected) terminals.

Read and understand this manual prior to operating or servicing this product.

IB-411 R01 (0903)

Note: Before installation with electrical control systems, check that equipment to be used is of sufficient rated capacity to accept ampere draw of motor.

Wiring Table.



Operation Ultra Ballast pump.

The Ultra Ballast pump is reversible so it can both add liquid ballast and then pump it overboard when needed. As an alternative you may pump liquid ballast from one tank to another and reversed.

At need for adding ballast you flip the switch to fill position and watch for indicators that tank is full, then switch pump off.

To reduce ballast, flip switch to drain position. The pump will reverse to pump ballast back over board. Watch indicator for an empty tank and switch pump off.

The same operation is used for ballast transfer between two tanks.

Dry running

Do not run Flexible rubber Impeller pumps dry for more than 30 seconds. Lack of liquid will burn the impeller and damage the seals.



Caution. Explosion Hazard.

Do not pump gasoline, solvents, thinners or other flammable liquids. Do not handle highly concentrated or organic acids

Waste handling / material recycling

At the product's end of life please dispose of the product according to applicable law. Where applicable please disassemble the product and recycle the parts material.



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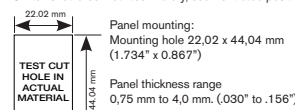
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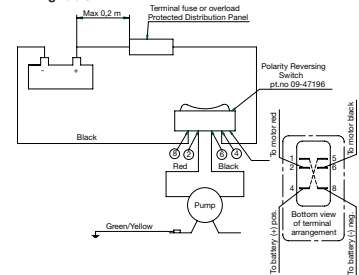
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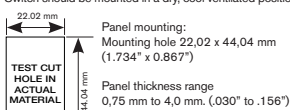
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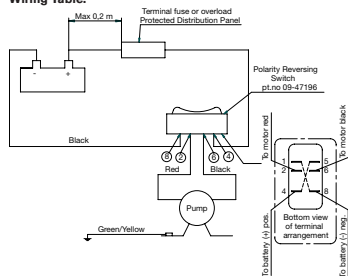
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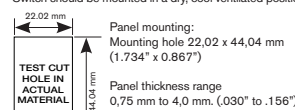
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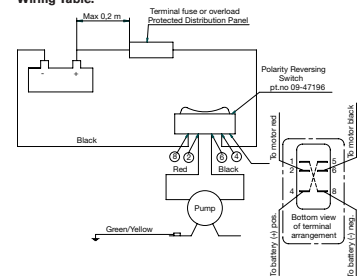
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