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Wiper Switch

For one Exalto H.D. wiper



Cat. no. 2210341

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Exalto
Quality Marine Equipment

Contents

1 General	4
1.1 Functions	5
1.2 General description	5
1.3 Power supply	5
1.4 Technical specifications	5
1.5 Declaration of conformity	5
2 Installation	6
2.1 Dimensions	6
2.2 Installation	6
3 Electric connections	7
3.1 General lay out	7
3.2 Wiring diagram	8
4 Operation	9
4.1 Functions of the push buttons	9
4.2 ON/OFF switching	9
4.3 Signal mode	9
4.4 Wipe/wash program	10
5 Failure	11
5.1 Continuous flashing signal	11

1 General

1.1 Functions

Brief explanation of buttons and LED's.

Please see section 4 for complete operating instructions.



Pos.	Function
1	Main ON/OFF switch.
2	Increase speed/decrease time between strokes.
3	Decrease speed/increase time between strokes.

1.2 General description

The 210341 is a micro-controller based intelligent switch for operating one Exalto H.D. wiper motor. It provides all the functions for a proper windscreen cleaning. It consists of a touch pad with 45 cm (17") connection cable.

This wiper control offers:

- two continuous speeds
- three intermittent speeds
- perfect self parking due to dynamic brake
- wipe/wash program
- dimmer input

Visual indications for:

- ON
- continuous and intermittent modes

1.3 Power supply

This wiper control is available to operate under a power supply of 12 or 24V DC. Check the power supply of the unit supplied, before connecting it to the ship's electric system.

1.4 Technical specifications

Power supply:	10 - 30V DC
Internal fuse:	4A PTC
Stand-by current:	less than 20mA
Motor output current:	single or double speed – 4A max.
Working temperature:	-10 to +50°C
Storage temperature:	-20 to +70°C
Inputs:	1 parking signal, open in park pos.
Outputs:	1 slow speed
	1 high speed
	1 wash pump/solenoid, positive pole

1.5 Declaration of conformity

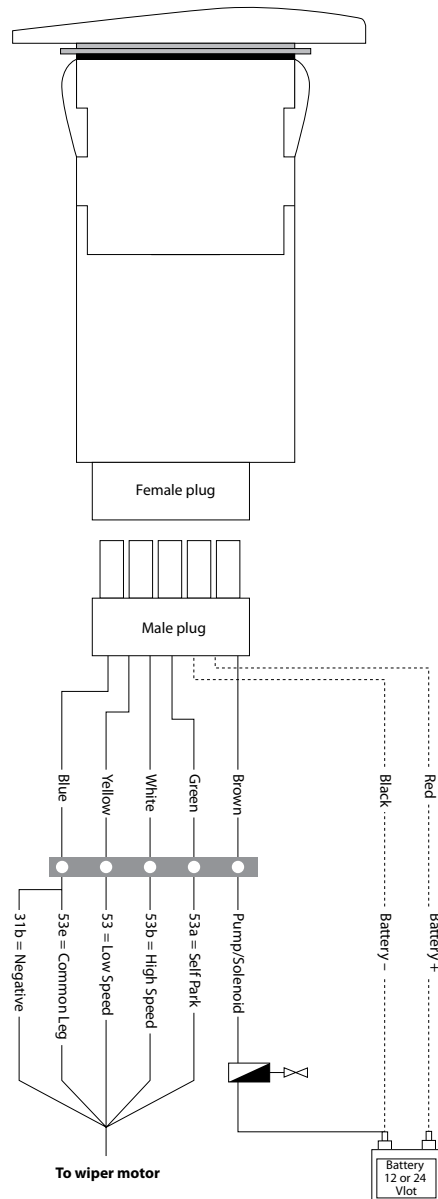
This wiper control complies with the European requirements for electromagnetic compatibility, as required from 89/366/EEC, 73/23/EEC and EN60945 directives.

3.2 Wiring diagram

Colour code and connection of wiring coming from the 210341 controller:

- **Green** is to be connected to the Self Park (53a) of the motor wire.
- **Blue** is to be connected to the Negative (31b) and Common leg (53e) of the motor wire.
- **Yellow** is to be connected to the Low Speed (53) of the motor wire.
- **White** is to be connected to the High Speed (53B) of the motor wire.
- **Brown** is to be connected to a pump or solenoid.

Always refer to the User Manual as supplied with the Exalto Wiper before connecting the Exalto wiper to the wiper switch.



4 Operation

4.1 Functions of the push buttons

All push buttons have a double function as described in the chart (see paragraph 4.3).

4.2 ON/OFF switching

By pressing button 1 or 2, the wiper can be switched on. By pressing button 1, the wiper will stop; in the park position.

4.3 Signals mode

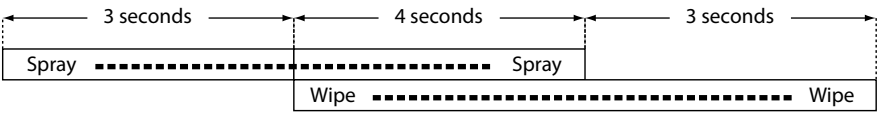
The three LED's shows the controller operation setting. By pressing any button, the mode will change and the LED's:

- will flash as many times as the delay times (in seconds) between the wiper strokes. (If 4 seconds is the delay times between the wiper strokes, the LED will flash 4 times.)
- will have a light flash – slowly if Slow speed is selected and quickly if Fast speed is selected.

Mode	LED (☐ = on)	Signal
FAST speed	☐ ☐ ☐	Fast slight blink
SLOW speed	☐ ☐ ☒	Slow slight blink
2 sec. delay	☒ ☒ ☐	2 slow blink
4 sec. delay	☒ ☐ ☒	4 slow blink
8 sec. delay	☐ ☒ ☒	8 slow blink
OFF	☒ ☒ ☒	LED's OFF
Wipe/wash	☐ ☒ ☐	
Failure	Asymm.	Continuous

4.4 Wipe/wash program

This wiper control has a built-in 'smart' wipe/wash program. The program is as shown below.



Change settings: to increase wash time or the spray/wipe time, keep button 1 or 2 pressed.

After the wash program has ended, the wiper will return to the wipe setting that was previously used.

5 Failure

5.1 Continuous flashing signal

A continuous flashing signal indicates that the 210341 does not receive a parking switch signal. This may occur if:

- parking switch is damaged or disconnected;
- motor does not run (damaged or disconnected);
- 10-pin connector has been inserted after power supply and control works as with one speed motor.