

Wiper Switch

For two Exalto H.D. wipers



Cat. no. 210342

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1 General

1.1 Functions

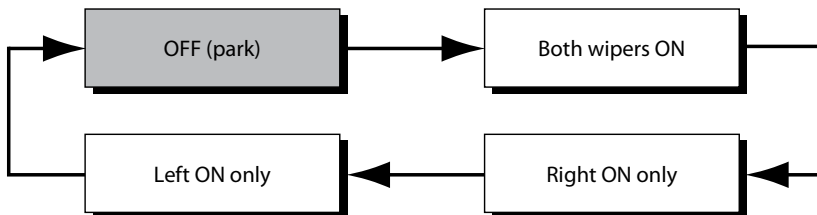
Brief explanation of buttons and LED's.

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 210342 is a micro-controller based intelligent switch for operating two 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
- activating/deactivating each wiper one by one
- synchronisation in each selected mode
- 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

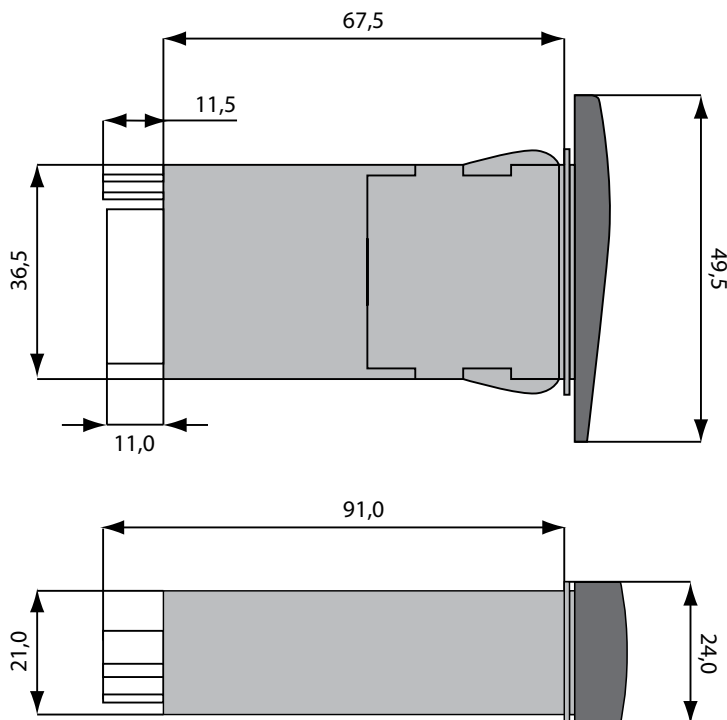
| | |
|-----------------------|---|
| Power supply: | 10 - 30V DC |
| Internal fuse: | 4A PTC |
| Stand-by current: | less than 20mA |
| Motor output current: | single or double speed – 4A max. |
| Working temperature: | -10 to +50°C |
| Storage temperature: | -20 to +70°C |
| Inputs: | 2 parking signal, open in park pos. |
| Outputs: | 2 slow speed 2 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.

2 Installation

2.1 Dimensions



All dimensions in mm.

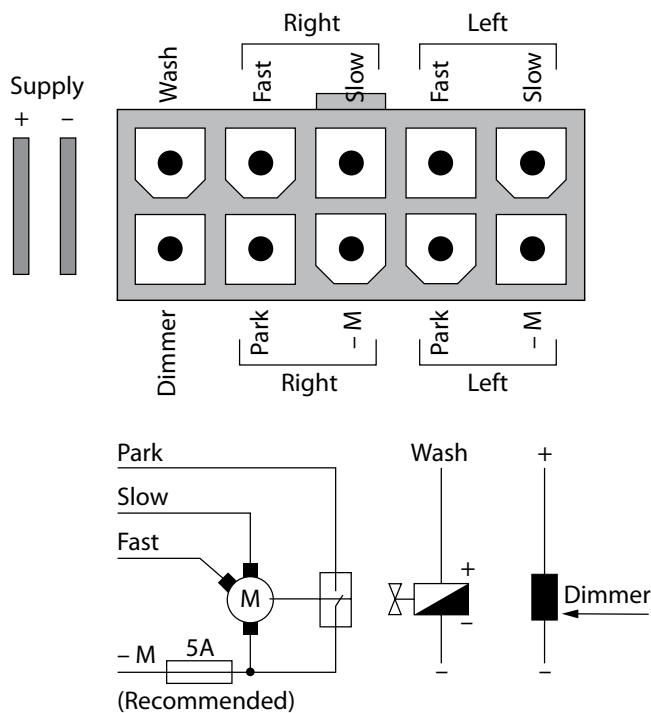
2.2 Installation

The touch pad is to be fitted at a location that is within reach of the helmsman, allowing ease of operation. Make sure that sufficient room is available for the cables and the connectors. The required mounting hole for the touch pad is 36.5 x 21 mm. There should be at least 100 mm space available under the front of the touch pad for the connection cable and plug.

Please make sure you insert the connector (linked to the wiper motor) before connecting the power supply!

3 Electric connections

3.1 General lay out

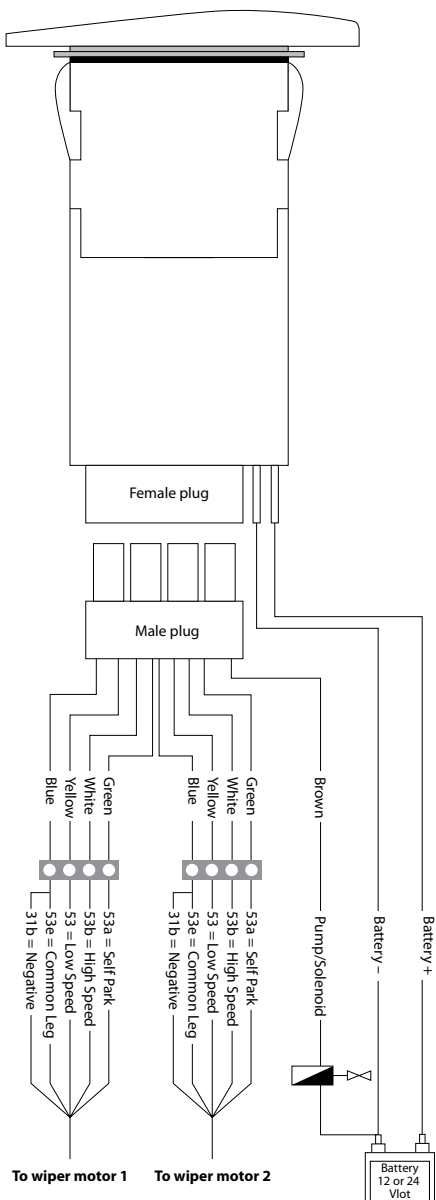


3.2 Wiring diagram

Colour code and connection of wiring coming from the 210342 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 a fast blinking LED will indicate the new wiper selection as in following chart:

| Wiper selection | 2 seconds long blinking | | | |
|------------------|---|---|---|---------------|
| Both wipers ON |  |  |  | Fast blinking |
| Right wiper only |  |  |  | Fast blinking |
| Left wiper only |  |  |  | Fast blinking |
| Both wipers OFF |  |  |  | LED's OFF |























By pressing button 1 or 2, both wipers will start in SLOW speed mode.

By pressing button 1 as many times as required, the wiper motors will stop in the PARK position. Or keep button 3 pressed for more than 1 second.

4.3 Signals mode

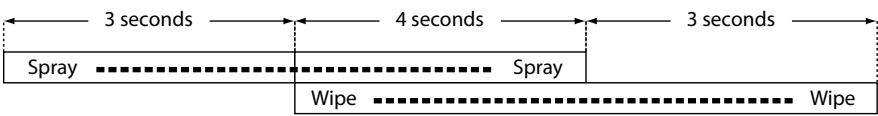
The three LED's shows the controller operation setting. By pressing any button, the mode will change and the LED's:

- 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 210342 does not receive one or both parking switch signals or it is not possible to reach synchronism. This may occur if:

- one (or both) parking switch(es) is (are) damaged or disconnected;
- one (or both) wiper motor(s) does not run (damaged or disconnected);
- one (or both) wiper motor(s) does not run in fast or slow speed;
- wiper motors run at too much different speeds and it is not possible to reach synchronism;
- 10-pin connector has been inserted after power supply and control works as with one speed motor.

Exalto B.V.

- P.O. Box 40
3370 AA Hardinxveld-Giessendam
The Netherlands
- **T** +31 (0)184 615 800
- **F** +31 (0)184 618 200
- **E** wipers@exalto.com
- **I** www.exaltowipers.com