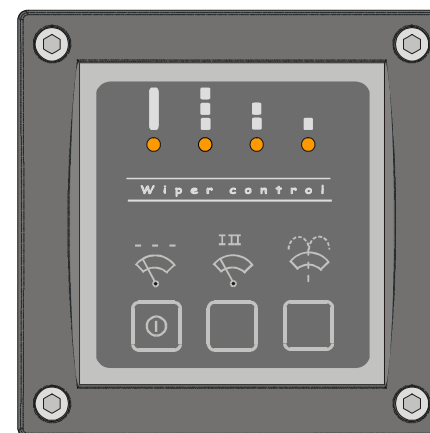




**Users manual for
Wiper Control**

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Part No.: EX210604

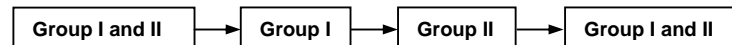
Release: 01-03

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4.3 Switching between groups



By multiple pressing of this button, a choice between the two groups can be made.

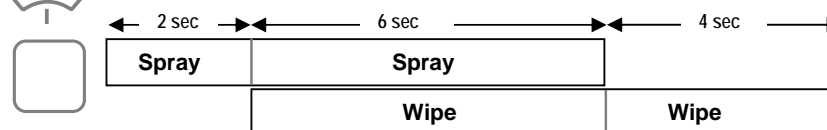


Group I controls wiper no. 1 and 2; group II controls wiper no. 3 and 4.

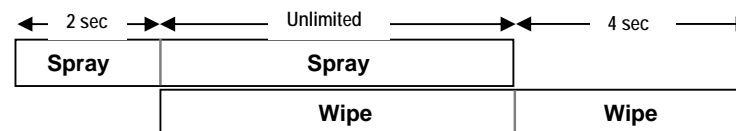
4.4 Wipe/wash



To start the **standard** program: press button once.



To start the **personalized** program: keep button pressed.



4.5 Synchronized operation

With the exception of the high speed mode, all wipers run synchronized in each setting.

4.6 Self park

The wipers will park in the corner of the screen, providing the wiper motors are equipped with a self park function.

4 Operation

4.0 ON/OFF switching



With this button, the wipers can be switched ON and OFF. By pressing this button once, the wipers will start; by keeping this button pressed for 1 sec, the wipers will stop and park. This button also allows cycling through the three selections of choice of operation by multiple pressing.

4.1 High speed mode

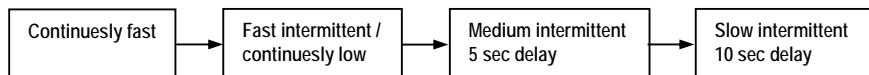
In this mode, the wipers will run continuously and in the high speed mode; the left LED will illuminate.

4.2 Intermittent modes

In the first mode after the high speed mode, the wipers have a very short delay. This mode can be considered continuously low speed; the second LED will illuminate.

By pressing the button again, the wipers will run in the medium intermittent mode. In this mode, the delay between strokes is 5 seconds and the third LED will illuminate.

By pressing the button again, the wipers will run in the slow intermittent mode. In this mode, the delay between strokes is 10 seconds and the fourth LED will illuminate.



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4 Operation

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General

1.0 Description

This wiper control is suitable for **ROCA, SPEICH, TMC** and **American Bosch** wipers and is capable of operating one to four wipers in two groups. Above mentioned wipers should be equipped for the self park function. In order to guarantee satisfactory performance, all wipers connected to the wiper control should be identical. The housing is made of UV-safe grey ABS plastic. The electric connections are located at the back of the panel.

1.1 Power supply

This wiper control will operate off a power supply of 10 – 30V DC.

1.2 Internal power consumption

The internal power consumption is max. 2W.

1.3 Output

The maximum output per wiper connection is 3A. The maximum output for the wash contact is 3A.

1.4 Default settings

When the wipers are switched on, they will run in the setting that was last used.

3.3 Choice of operation

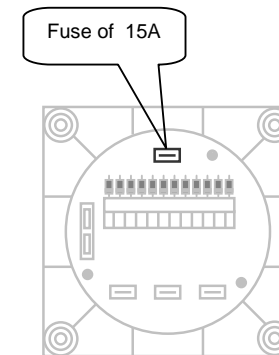
In the wiring diagrams as shown before, the three intermittent modes are connected to the low speed connector on the wiper motor. The continues mode is connected to the high speed connector on the wiper motor.

In case the wiper motor(s) have only one speed, the “SLOW” and “FAST” connectors at the back of the panel are to be connected to eachother.

Should in the continues mode the low speed be preferred in stead of the high speed, the “SLOW” and “FAST” connectors at the back of the panel are to be connected to eachother.

In this case, with wiper motors with two speeds, the high speed connector on the wiper motor should **not** be connected.

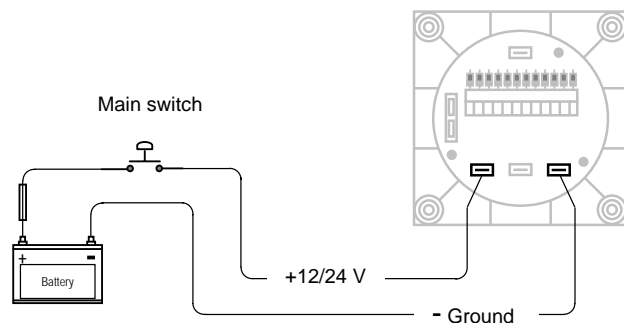
3.4 Fuse (external)



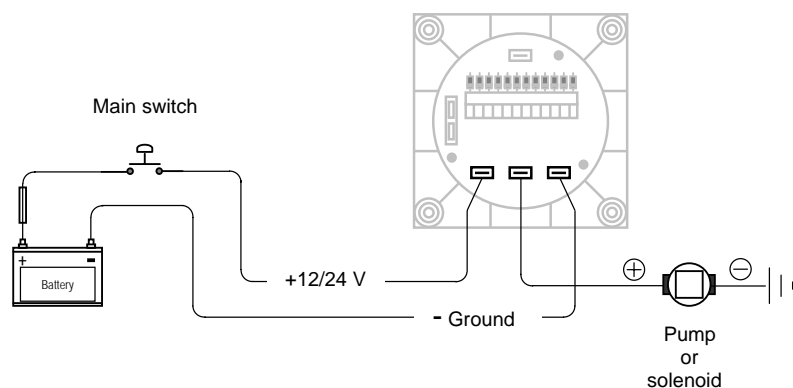
To replace the fuse:

- Remove the old fuse by pulling it out of the holder, in a straight movement
- Check the new fuse before placing it
- Place the new fuse by pressing it firmly into the holder, until the plastic grip of the fuse touches the metal of the fuse holder

3.1 Connections power supply



3.2 Connections pump/solenoid



2 Installation

2.0 Overall dimensions

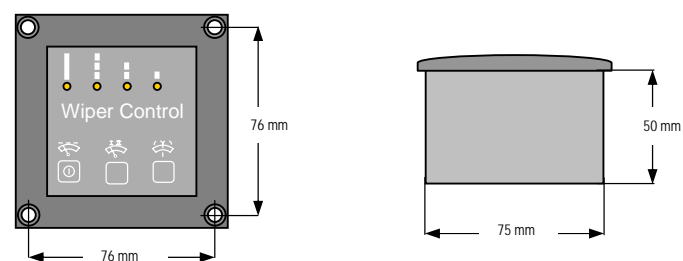
The overall dimensions of the panel are (l x w) 90 x 90 mm. Depth of the panel under the flange is 50 mm.

2.1 Spigot sizes

The spigot diameter is Ø75 mm and the required depth under the flange is 50 mm. The extra depth under the flange, required for the connection cables is not included.

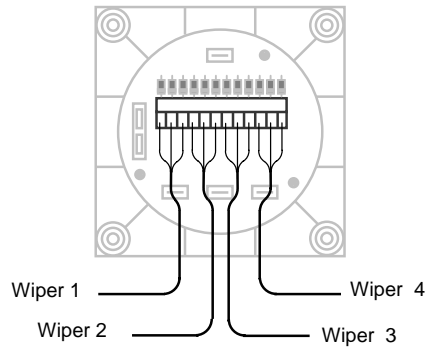
2.2 Installation

The panel is to be fitted at a location that is within reach of the helmsman, allowing ease of operation. The required mounting hole is easily made with a standard hole saw. The flange of the panel has 4 recessed mounting holes with a diameter of 4 mm. The panel can quickly and easily be fitted using stainless steel screws or bolts and nuts.

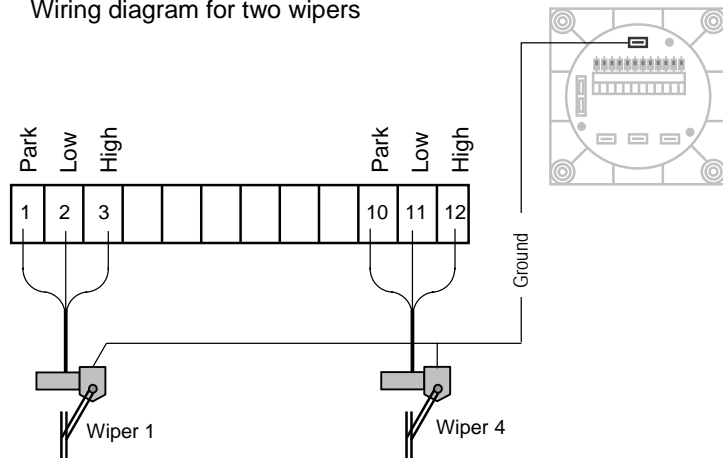


3 Electric connections

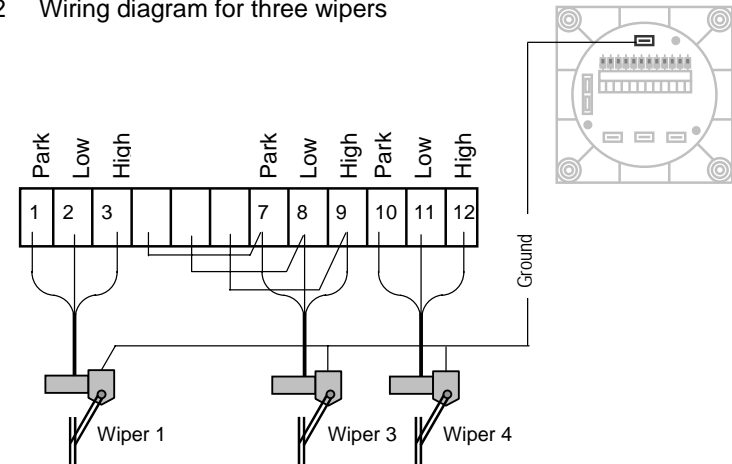
3.0 Connection of wipers



3.0.1 Wiring diagram for two wipers



3.0.2 Wiring diagram for three wipers



3.0.3 Wiring diagram for four wipers

