

# Electrical System

## General

The electrical installation must be planned very carefully and installed with the greatest of care. Strive for simplicity when designing the electrical system.

Cables and connectors used in the installation must be approved for marine use. The cables must be run in conduits and securely fastened.

Be careful not to run cables too close to engine hot spots or close to other heat sources. The cables must not be subjected to mechanical wear. Where necessary, run cables through conduits.

Strive to minimize the number of joints in the system. Make sure that the cables and particularly the joints are accessible for inspection and repair.

There must be a circuit diagram in the boat covering the entire system. This will considerably simplify fault tracing and the installation of further equipment.

**NOTICE!** Make sure that all components used are suitable for marine environments. Take care to ensure that no joints in the engine compartment are located far down. All joints must be located higher than the alternator.

### **IMPORTANT!**

Supply cables – batteries, alternators, distributors, starter motors and heavy loads must be installed separate from the EVC buss cable.

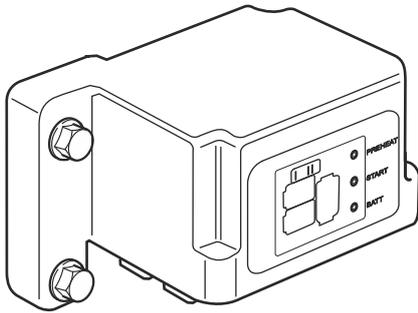
Positive (+) and negative cables (-) must be secured adjacent to one another, not separately.

## Power supply

### **IMPORTANT!**

Large power consumers such as bow thrusters, capstans etc. must be connected to a separate auxiliary battery and not to the start batteries.

## MDI

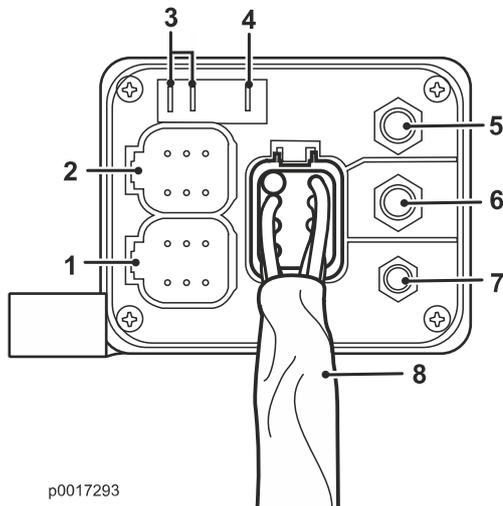


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## Connecting the instruments

The MDI is mounted on the engine and connected to engine components such as sensors, the control panel and instruments.

A data link (CAN bus) links the MDI to the tachometer, displays and other auxiliary equipment such as NMEA 2000, instrumentation connections and multisensor.

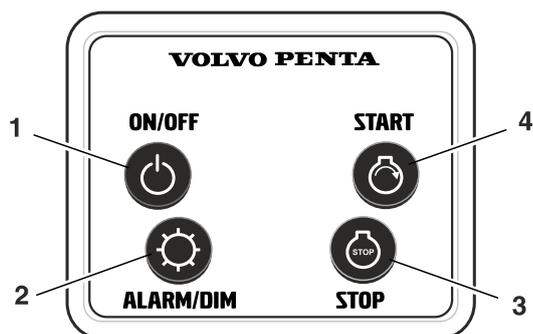


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### NOTICE! Engine harness connection to MDI

- 1 Multilink
- 2 Keypad
- 3 Fuel tank
- 4 Extra input, alarm
- 5 Preheat
- 6 Battery +
- 7 Start
- 8 Engine harness

## Control panel



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### 1 On / Off button

Press the button to switch the system on or off.

### 2 Multifunction button

- Acknowledgment of alarm
- Dimmer (backlight)
- Contrast (tachometer LCD)

### 3 Stop button

When the button is pressed the engine stops.

### 4 Start button

When the button is pressed the preheat function is activated and the start motor engaged.

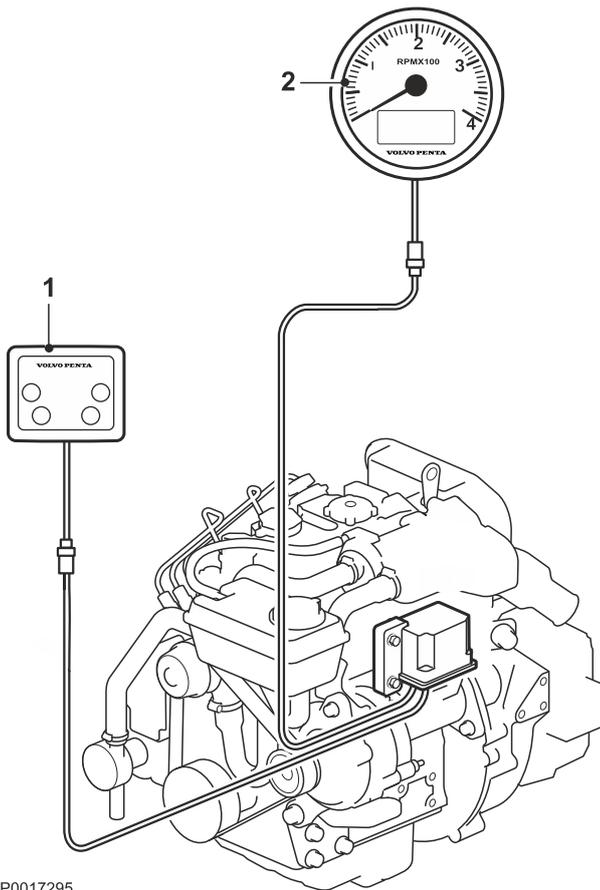
**NOTICE!** Never switch off the control panel while the engine is running.

## Multilink system

The illustration shows the minimum installation requirements for a tachometer and keypad.

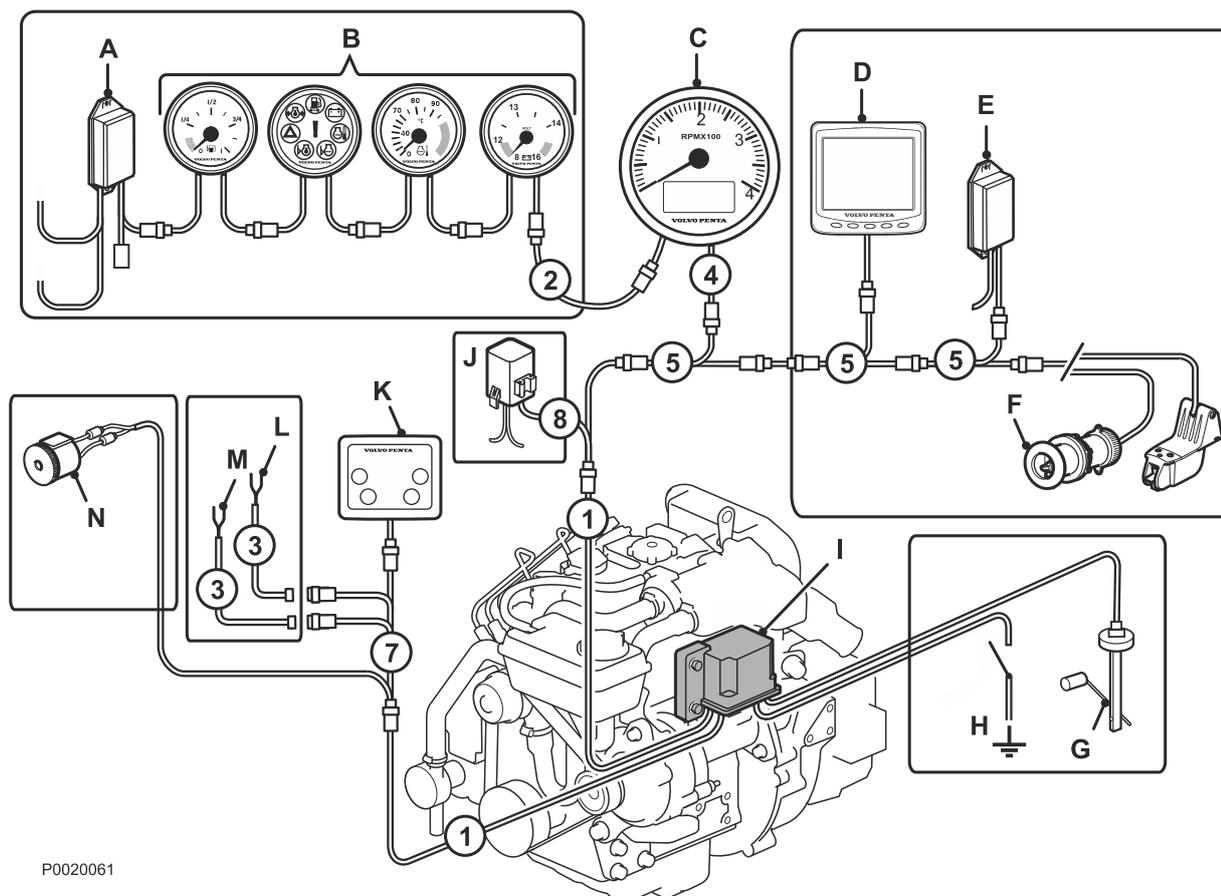
- 1 Keypad
- 2 Multilink tachometer

**NOTICE!** The MDI system allows a maximum of one Multilink system tachometer and/or one Multilink/EVC system display.



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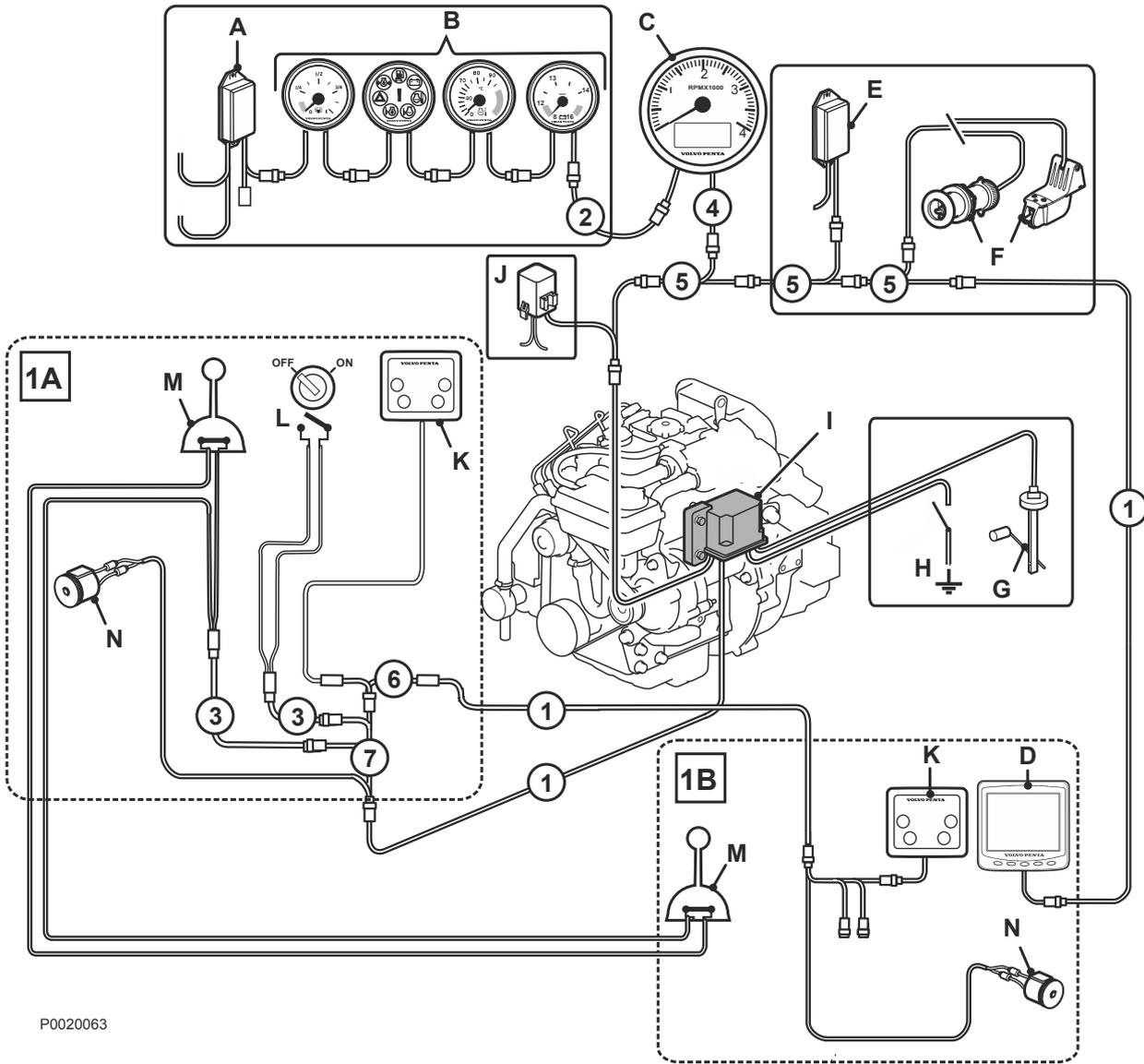
### Auxiliary instrumentation (accessory)



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- |   |                              |   |   |
|---|------------------------------|---|---|
| A | ADU                          | 1 | Extension cable, 6 pole                                 |
| B | Instruments                  | 2 | Extension cable, 3 pole for easylink instrument (gauge) |
| C | Multilink tachometer         | 3 | Connection cable, 2 pole                                |
| D | Multilink/EVC system display | 4 | Tachometer cable, 6 pole for tachometer and multilink   |
| E | NMEA interface               | 5 | Y-split multilink, 6 pole                               |
| F | Multisensor                  | 6 | Y connector, 6 pole                                     |
| G | Fuel level sensor            | 7 | Harness for neutral switch, ignition switch and buzzer  |
| H | Input, alarm switch          | 8 | Cable, accessory relay                                  |
| I | MDI main connection          |   |   |
| J | Accessory relay              |   |   |
| K | Keypad                       |   |   |
| L | To ignition switch           |   |   |
| M | To neutral switch            |   |   |
| N | Signal buzzer                |   |   |

Installation example — Two helm stations



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1A Main helm station

1B Secondary helm station

A	ADU	1	Extension cable, 6 pole
B	Instruments	2	Extension cable, 3 pole for easylink instrument (gauge)
C	Multilink tachometer	3	Connection cable, 2 pole
D	Multilink/EVC system display	4	Tachometer cable, 6 pole for tachometer and multilink
E	NMEA interface	5	Y-split multilink, 6 pole
F	Multisensor	6	Y connector, 6 pole
G	Fuel level sensor	7	Harness for neutral switch, ignition switch and buzzer
H	Input, alarm switch	8	Cable, accessory relay
I	MDI main connection		
J	Accessory relay		
K	Keypad		
L	To ignition switch		
M	To neutral switch		
N	Signal buzzer		

**NOTICE!** The mechanical interface to the reverse gear is not shown in this layout.

**NOTICE!** Only one signal for the neutral switch and ignition switch must be connected to the MDI. The neutral switches must be connected in series to both helm stations/controls for full functionality.

**NOTICE!** The neutral switch cable, ignition switch and the buzzer must be connected between the Y-connector and the engine at the main helm station.

6 and 3-pole extension cables are available for order in different lengths.