

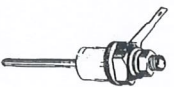
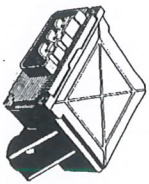
# VDO

## LOW WATER LEVEL WARNING MODULE

### Installation Instructions

Module only P/No. 410.006  
 12V Kit... P/No. 410.007  
 24V Kit... P/No. 410.008

Kits include the following items...



Control Box  
 p/n 410.006  
 Voltage: 11.5 - 29.0VDC  
 Contact: 12/24VDC 3A max

Buzzer  
 p/n 240.021 - 12V  
 p/n 240.022 - 24V

Low Water Probe  
 p/n 230.058 (30mm)  
 p/n 230.059 (90mm)

Warning Light  
 p/n 240.064 12V  
 p/n 240.065 24V

### GENERAL

The water level alarm is designed to give an alarm output when the level in an automotive radiator falls below a predetermined level. The unit operates by measuring a resistance to ground through the water in the radiator and using this output to hold the relay contact open. If radiator level drops below the probe this is read as a high resistance and the relay contact is closed giving an alarm output to ground. Options available on the unit include self-test at switch on, and a pulsing alarm output.

NOTE: This module is designed as a universal unit to suit as many automotive type applications as possible. The manufacturer is not responsible for incorrect fitting or damage caused by or during the fitting of this module.

### FITTING INSTRUCTIONS

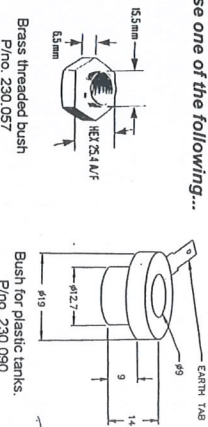
#### TO FIT PROBE



- Determine a satisfactory location for the probe in the top of the radiator tank/header tank. The position should be close to the centre of the tank, with the tip of the probe 30-55 mm below cold fill level. The probe can be mounted in a vertical or horizontal position.
- The probe is suitable for sheet metal tanks and radiators. For plastic tanks, an earth strap, bush p/n 230.090 or probe p/n 230.056, must be inserted into the tank to bring the battery negative (earth) in contact with the coolant.

There are two alternatives to mounting the probe. Choose one of the following...

- Utilising the brass threaded bush, drill a hole to approx.  $\varnothing$  11.5 mm and tap out the hole to M14 x 1.5 mm.
- Screw the bush into the wall ensuring sufficient thread tape is used for sealing.
- Insert probe into the adaptor bush and tighten the nut above the insulation washer to expand the rubber into the adaptor bush. As a guide, two turns of the nut should be sufficient.



### FITTING INSTRUCTIONS ...Cont.

- Brass non-threaded bush
  - Utilising the brass non-threaded bush, drill a hole to approximately  $\varnothing$  12.5 mm.
  - Solder the brass adaptor into the hole and insert the probe into the adaptor, once cool.
  - Tighten the nut above the insulation washer to expand the rubber in the bush. As a guide, two turns of the nut should be sufficient.

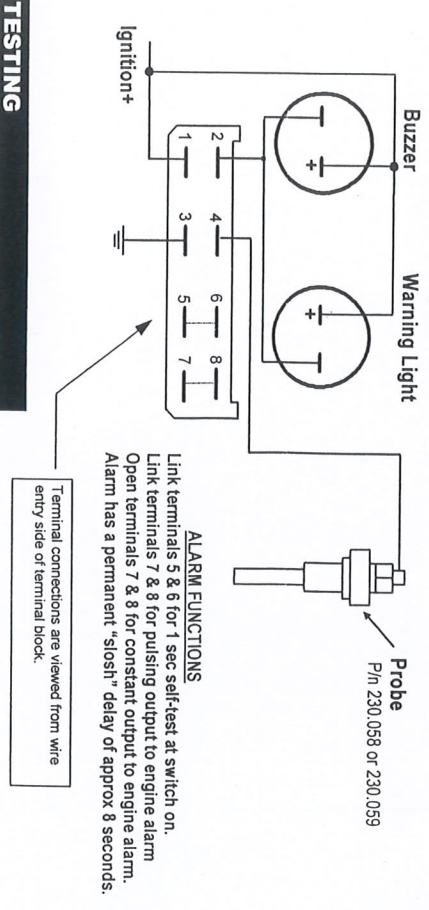
Brass soldering bush  
 P/No. 230.016

#### TO FIT CONTROL BOX, WARNING LIGHT AND BUZZER

- Disconnect the battery
- Fit the electronic control box P/No. 410.006 in a convenient location behind the dash panel with the box terminals facing down to avoid water entering the box.
- Fit warning light in a visible location.
- Fit buzzer
- Connect the control box plug to the various points, per diagram below.
- Check that the radiator core is earthed. Fit an earth strap back to engine earth if necessary.

NOTE: The control box should be fitted within two metres of the low water probe, to avoid electrical interference. For longer distance use a shielded cable between the probe and the control box.

### WIRING DIAGRAM



### TESTING

- Reconnect the battery.
- Turn ignition "On" and the alarm will operate in test mode for a few seconds as normal self-test function (only if pin 5 & 6 are linked on the box).
- With ignition power "On", release some coolant from the radiator to expose the probe and see if the alarm is triggered after a few seconds delay.
- To reset the alarm, switch ignition power "Off" and refill radiator.
- This unit will not work correctly if power supply to it fails, the probe wire is removed or if there are other voltages present on the probe wire. E.g. electrolysis from incorrectly fitted aluminium radiators, high power cables running parallel to the probe wire, etc.

### ROUTINE MAINTENANCE

It is extremely important to repeat the above operation "Testing...4" periodically (Eg. every service) as the different additives and water quality used in radiators may build-up residue on the probe that can cause a malfunction.  
 Clean the probe of any residue.

For any queries, application data or technical information call your supplier or Continental Pty Ltd on 03 9468 1151