LIQUID LEVEL DUO INSTALLATION & SETTING UP

Version - March 2010

Part Number - 39-0030

LIQUID LEVEL DUO INSTALLATION & SETTING UP: **1**

The ATL Liquid Level DUO comprises:

Receiving vessel Milk Level detection utilising probe or float switch and

Plate Cooler Delay unit to ensure that the cold water flow is maintained through the cooler after the milk pump has stopped.

Both facilities have separate controls to 'fine tune' the timing. Level detection devices-probes or float switches- are NOT supplied with the control.

Milk Level Sensors (Supplied on site):

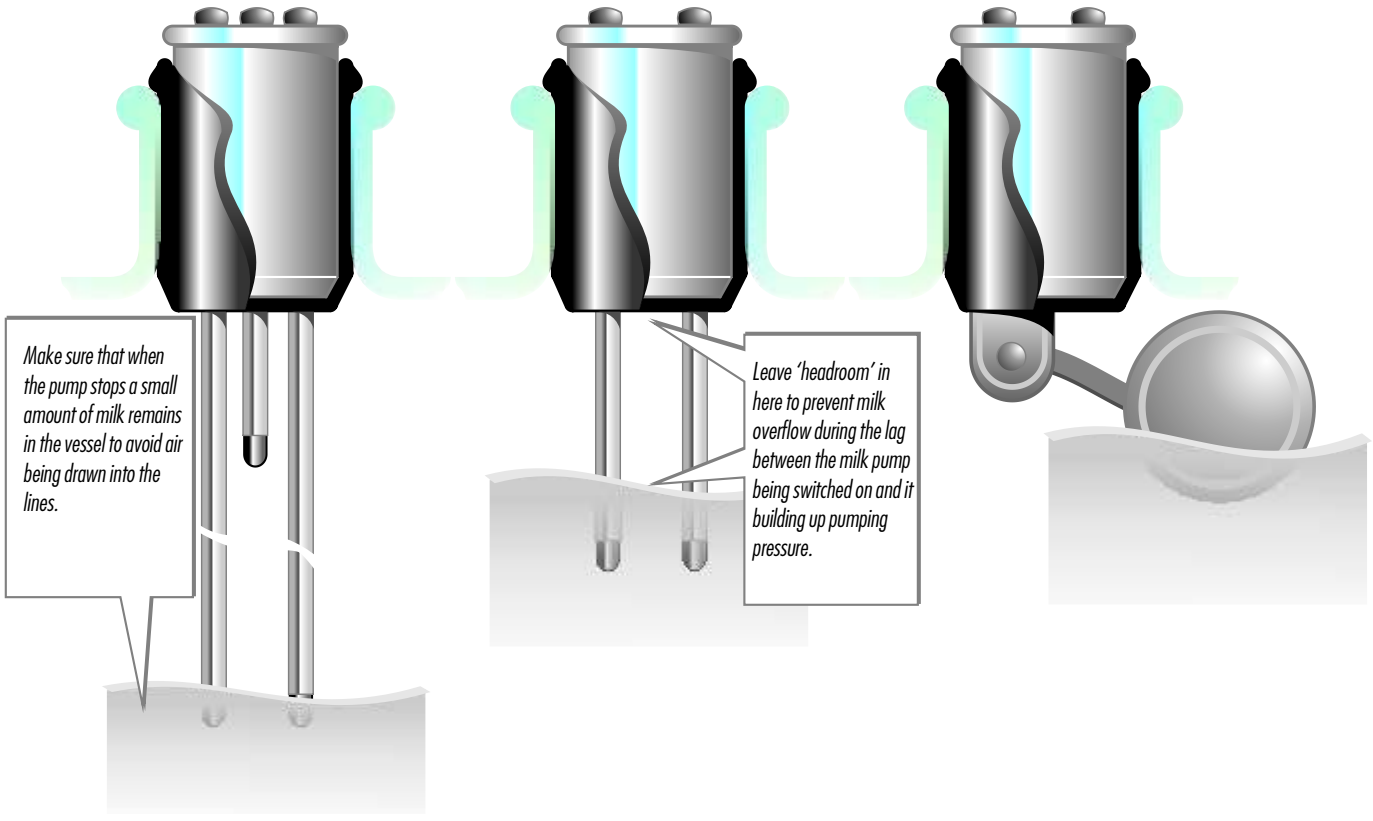
The 'high' milk level is detected when it electrically 'shorts' the two Sensor probes. There is no danger of electric shock since the voltages and currents involved are extremely low. Stock 'off-the-shelf' 2 or 3 probe sensors or float switches (make when level high) may be used.

The Sensor may be fitted to glass or stainless steel vessels proving a suitable opening exists. Refer to the diagrams for details of probe positions. Fit a rubber bung to the vessel opening and push in the Level Sensor making sure there is a good seal between the vessel/bung and the bung/Sensor. Sealing compounds must conform to food use regulations.

Fitting the Control:

Mount the DUO on a vertical wall close to a 230vAC switched and fused (10Amp) mains outlet (a 13Amp socket is NOT suitable) and close to the receiving vessel and milk pump. Mounting lugs are fitted to the casing.

The DUO must be within easy reach because a Pump Overload Trip is fitted to the bottom of the casing and requires resetting manually if an overload occurs.



Three Probe Sensor:

Use only the shortest and the longest probes (or one of the longest if they are both the same length). Connect the short probe to 'Signal' and the long probe to 'Ground'.

Two Probe Sensor:

Cut the probes with a hacksaw making sure that the sleeving is trimmed cleanly and all metal particles are removed. Either probe may be connected to 'Ground' or 'Signal'

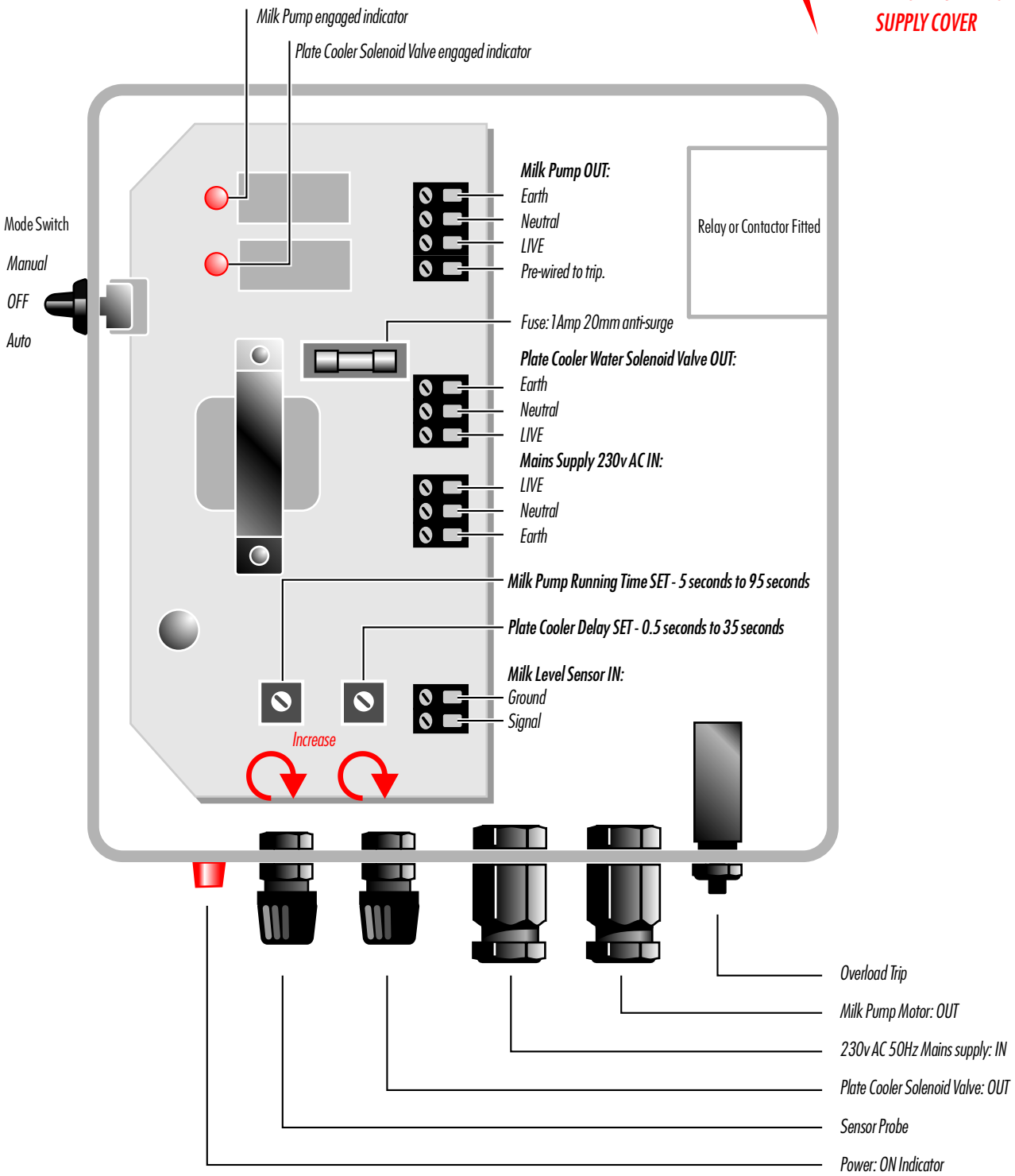
Float Sensors:

Various makes but most comprise a simple micro-switch operated by a float. Refer to manufacturers instructions for connections.

LIQUID LEVEL DUO INSTALLATION & SETTING UP: **2**

Liquid Level Control with integral Plate Cooler Delay: *Wiring Connections*

***WARNING:** DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THE POWER SUPPLY COVER*



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CAUTION:

Adjustments are made to controls on the circuit board which has connections at mains potential. Disconnect the mains supply before removing the cover.

Setting Up:

Before switching on the unit for the first time:

- *Turn both the Milk Pump Running Time and Plate Cooler Delay Time controls to their mid-way positions.*
- *Turn on the unit and switch the mode switch to the 'Auto' position.*
- *Manually fill the receiving vessel with washing fluid until the milk pump turns on. Allow it to pump out until it stops automatically.*
- *Check the fluid level in the vessel; there should be sufficient remaining to just cover the outlet and prevent air being drawn into the lines. For jars this is simple to assess but for stainless tanks it may be necessary to remove the vacuum line and use a dipstick to get a reading.*
- *If there is too much or too little fluid remaining, turn off the mains supply, remove the cover and adjust the pump running time control- clockwise for too much remaining; anti-clockwise for too little remaining. Repeat the operation until the level is satisfactory.*

Plate Cooler Delay:

After the pumping time has been set, run the process again but this time check that the plate cooler solenoid valve stays open after the milk pump has stopped.

If the plate cooler delay is too short- milk remaining in the lines is not cooled properly

- *Turn off the mains supply, remove the cover and increase the delay by turning the Plate Cooler Delay control clockwise.*
- *If the cooler runs for too long and wastes water, decrease the time by turning the control anti-clockwise.*

Fuse and Overload Trip:

The DUO control is protected by an on-board fuse (1 Amp anti-surge 20mm) which is also in circuit with the plate cooler relay and milk pump contactor/relay. The mains supply MUST be turned off before the fuse is replaced.

The milk pump supply is protected by a thermal Overload Trip (rated at 8Amps) fitted to the bottom of the casing. If a current surge occurs, the trip will disconnect the supply to the pump and a small button in the centre of the trip will drop down.

Find and correct the cause of the fault, then press in and hold the button until it latches. This is a thermal device and will need to cool for some time before it can be reset.

Specifications:

Supply:	*230vAC 50Hz fused 10Amps*
Milk Pump:	*230vAC single phase: 1.8kW max. (8Amps max.)*
Water Valve:	*Plate cooler solenoid 230v AC: 500mA max. (100watts max.)*

Liquid Level DUO supplied in two versions; contactor and relay.

Relay:	*Basic version.*
Contactor:	*Single phase fitted as standard: For three phase operation please contact ATL for details.*

For parlours where receiving vessels is smaller and milk pump will be switching on/off at a higher rate is recommended that a contactor version is used.