MICRO MILK METER
INSTALLATION

Version - February 2013

For Milk Meter Display Software
Version V3.14.00 or above
For Wash Box Software Version
V2.05.00 or above

Part Number - 39-0060

GOOD PRACTICE: Mains Supply.

■ A separate mains supply and earth running directly from the customers distribution board is essential.

■ Avoid routing the mains cable to the power supply close to other supplies especially those providing intermittent current- motors that are starting and stopping continually or high power heaters with thermostatic control.

■ All mains work should be referred to a Qualified Electrician.

Power Supply: Siting.

■ Fix the power supply to a wall or suitable brackets in a well ventilated area sufficiently high to avoid physical contact or damage, leaving a gap of at least 250mm (10") between the top of the power supply casing and the ceiling.

■ Position the power supply so that the output (low DC voltage) cables are as short as possible even if this means extending the mains supply.

ATL Power Supply: Output Voltages.

■ ATL power supply outputs are factory set and should not be adjusted. For a 230volt mains supply the DC outputs should be:

  Milk Meter Display Unit Control Supply: Nominal 12volts.

  Connections Box Supply: Nominal 12volts

  Solenoid Box Supply: Nominal 12volts

  Micro Wash Control Supply: Nominal 12volts

■ There are two indicators fitted to the base of the power supply casing; red indicates that the mains is present and green that the supply is available.

Control, Cables and Conduit.

■ Cables are supplied pre-cut, with all connectors and glands.

■ Entries must be made into the bottom of power supply or control casings but never into the top. This will invalidate the warranty.

■ Keep multicore cables away from other cables especially those carrying mains or heavy currents. Cross only at 90° where necessary and do not enclose in conduit with other cables.

Data Cable.

The data cable supplied is a twisted pair configuration especially designed for communications. No other cables should be used as replacements. Ensure it is connected exactly as shown in the diagrams and keep the cable run as short as possible.

■ Do not run near or parallel to, or cross over AC mains supplies or wires carrying switched current- milk pumps for example.

■ Generally, avoid flourescent lighting or radio wave sources.

■ Data cable should be run through suitable conduit by itself, especially if it is exposed to the weather. Sharing conduit with mains or low power, pulsator and/or feeder motor cables invariably corrupts data.
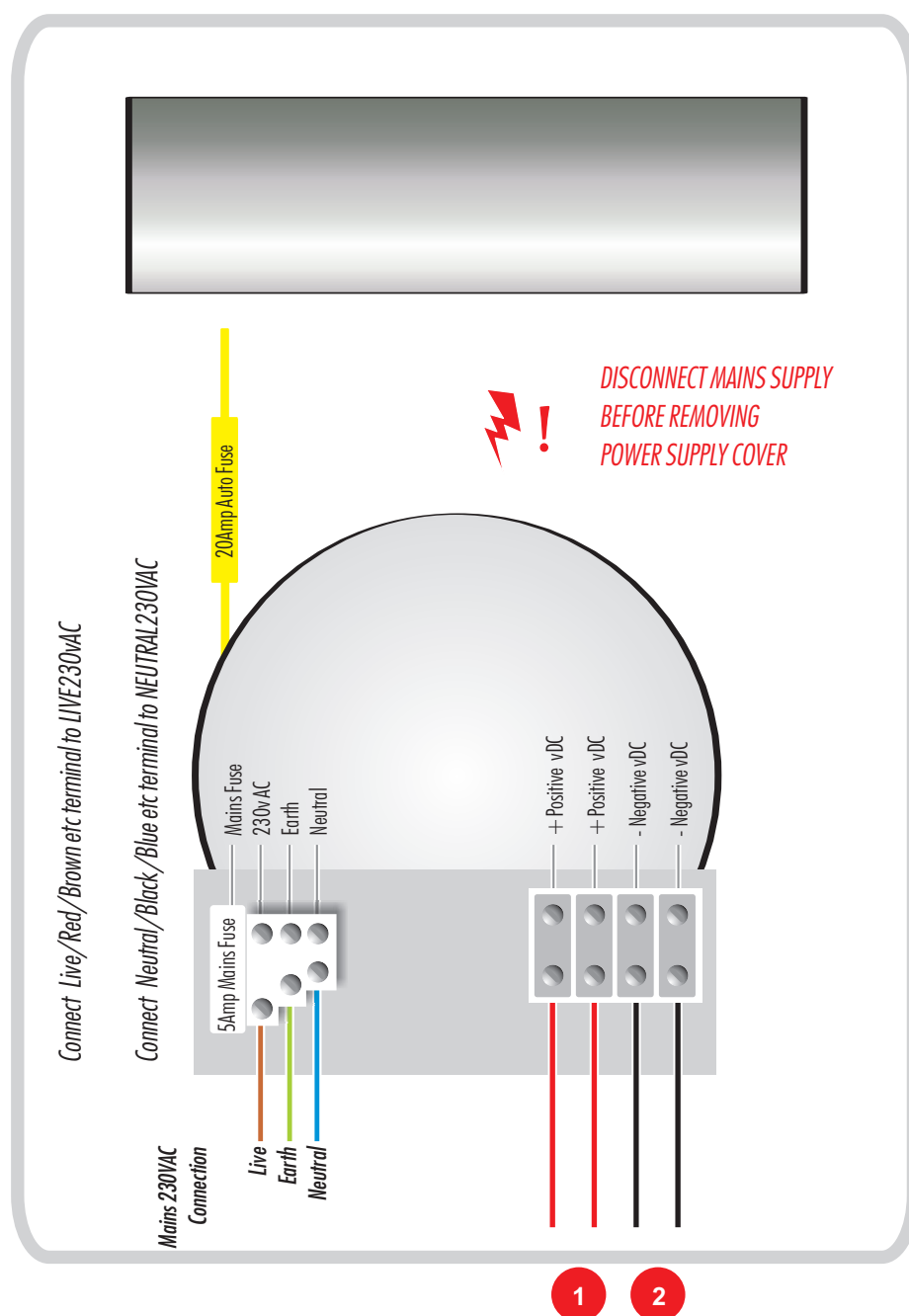
Good Installation Practice: Adopting good engineering practice during installation will avoid most problems with electronic control systems.

- Check the existing wiring carefully. Do not assume that it will be up to the required standard. It may have been extended with thinner wire and be unable to carry the current without a volt drop.

- Termination of cables in enclosures. Do not coil excess cable in enclosures. Loops are good transmitters of interference.

- Do not use a single aperture gland for several cables. Moisture can migrate through the gaps between the cables and cause damage to internal electronic components. Moisture damage caused in this way is not covered under warranty.

- Never run cables which are connected to ATL control units alongside mains cables. Even if they have been disconnected, they can still be carrying and transmitting interference.

- Do not place data or coaxial cables connected to ATL control units within existing conduits with other cables connected to other systems; especially unsmoothed power cables. This is a prime source of interference especially if connected to pulsators or feeder motors without diodes installed. NB - When a solenoid coil is switched off the reverse voltage is generally 10 times the peak supply voltage, with a 24vDC supply, this can be in excess of 300 volts.

- Interference is most likely on mains systems which exhibit volt drops when the parlour load is switched on.

- Variable speed drives are becoming very common. Make sure that they are installed to the manufacturers instructions. Screened cable must be used between the drive and any motors, if not electronic systems can be affected.

- RFID antennas are looking for signals around 130Khz. Variable speed drives often operate at frequencies around this value. Good installation of the variable speed drive circuit is essential to prevent interference.

- Mains earth supplies can be a source of interference. Check the voltage between the mains earth and the neutral. If there is a voltage above 3-4volts, there is a possibility that interference will be present. Earth problems of this nature can usually be avoided by fitting earth trips and separate earth electrode, which is isolated from the mains earth system.

Linear Power Supply Installation - Pre-March 2010

- Mains Voltage: 230volt AC
- Output Voltage: Nominal 12volt DC
- Mains Fuse: 5 Amp - Use 1 Inch type conforming to BS1362 only
- Control Fuse: 20 Amp - Auto Fuse
- Maximum Number Of Milk Meters With Interpuls CV20 ACR Valve: 12

- Ensure the loading on each power supply is as even as possible (i.e. If a milk meter system has a total of 20 meters, 2 power supplies will be supplied and each should be set to run 10 milk meter points.

- Recommended ACR Solenoid Spec: 12volt DC Continuous Operation Normally Closed with power rating up to 5 watts.

DISCONNECT MAINS SUPPLY
BEFORE REMOVING
POWER SUPPLY COVER

20Amp Auto Fuse

Connect Live /Red /Brown etc terminal to LIVE230vAC

Connect Neutral /Black /Blue etc terminal to NEUTRAL230VAC

Mains Fuse

230v AC

Earth

Neutral

+ Positive vDC

+ Positive vDC

- Negative vDC

- Negative vDC

5Amp Mains Fuse

Mains 230VAC Connection

Live

Earth

Neutral

1

2

Switch Mode Power Supply Installation - Post March 2010

- Mains Voltage: 100-240volt AC
- Output Voltage: Nominal 13.6volt DC
- Mains Fuse: 5 Amp
- Automatic Over Current Protection
- Maximum Number Of Milk Meters With Interpuls CV20 ACR Valve: 24

  NB - Maximum number of milk meters with ACR will depend upon ACR control valve solenoid specifications - if unsure please contact ATL.

- Ensure the loading on each power supply is as even as possible (i.e. If a milk meter system has a total of 40 meters, 2 power supplies will be supplied and each should be set to run 20 milk meter points).
- Recommended ACR Solenoid Spec: 12volt DC Continuous Operation Normally Closed with power rating up to 5 watts.
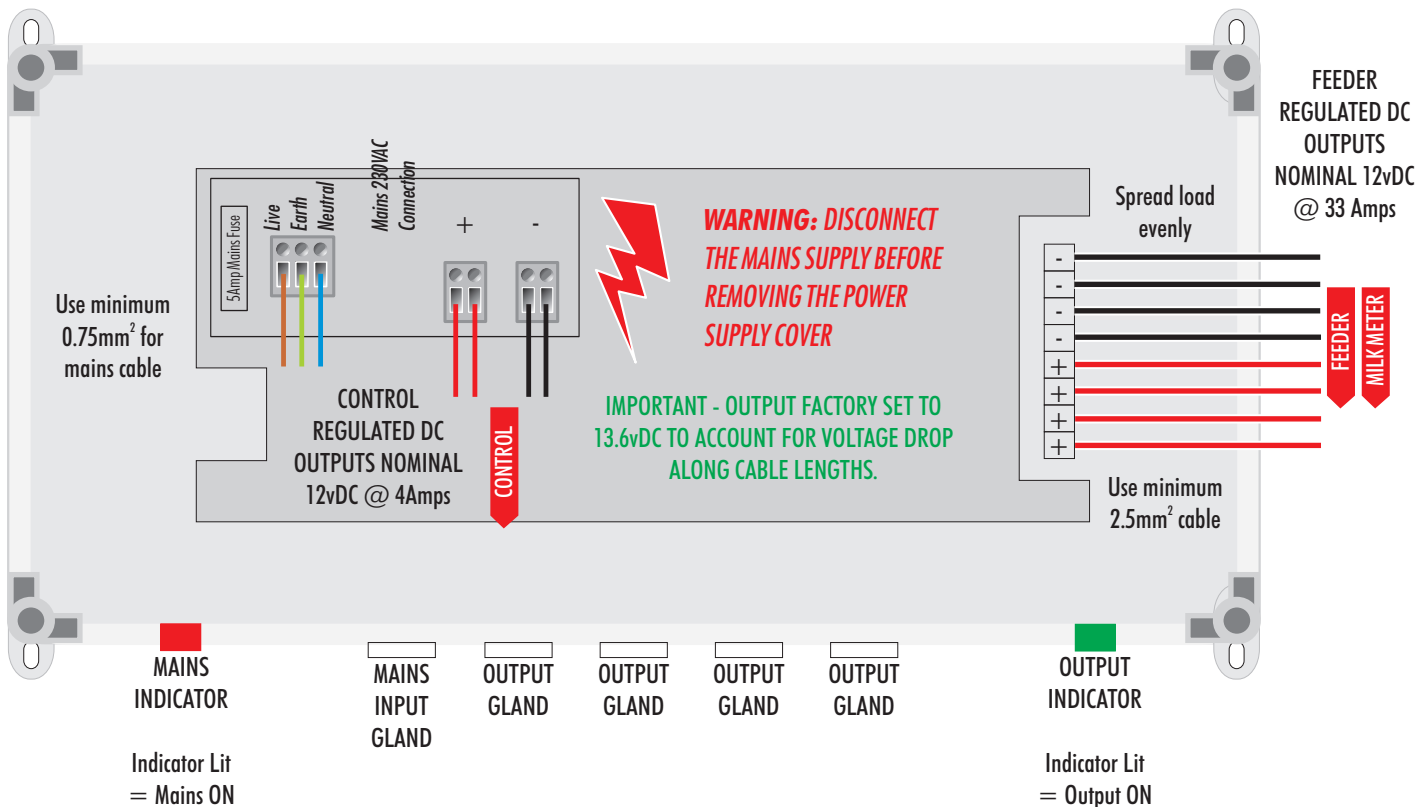

FEEDER REGULATED DC OUTPUTS NOMINAL 12vDC @ 33 Amps

Spread load evenly

5Amp Mains Fuse

Live Earth Neutral

Mains 230VAC Connection

+   -

Use minimum 0.75mm² for mains cable

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

IMPORTANT - OUTPUT FACTORY SET TO 13.6vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.

CONTROL REGULATED DC OUTPUTS NOMINAL 12vDC @ 4Amps

CONTROL

FEEDER   MILK METER

Use minimum 2.5mm² cable

MAINS INDICATOR

Indicator Lit = Mains ON

MAINS INPUT GLAND

OUTPUT GLAND

OUTPUT GLAND

OUTPUT GLAND

OUTPUT GLAND

OUTPUT INDICATOR

Indicator Lit = Output ON

CONTROL

Connect the AutoXL, MicroLite Plus, MicroMarque3S controls and the control supply on the Out of Parlour Interface (NB - Do not connect Out of Parlour Interface feeder supply) to this output.

Output Specification: Nominal 12vDC @ 4 Amps

IMPORTANT - DO NOT CONNECT DIGITAL CONTROLS, FEEDERS OR MILK METERS TO THIS OUTPUT AS NOT RATED FOR CURRENTS ASSOCIATED WITH THESE PRODUCTS.

FEEDER
MILK METER

Connect abreast feeders, herringbone feeders, digital controls, milk meters and the feeder supply on the Out of Parlour Interface to this output.

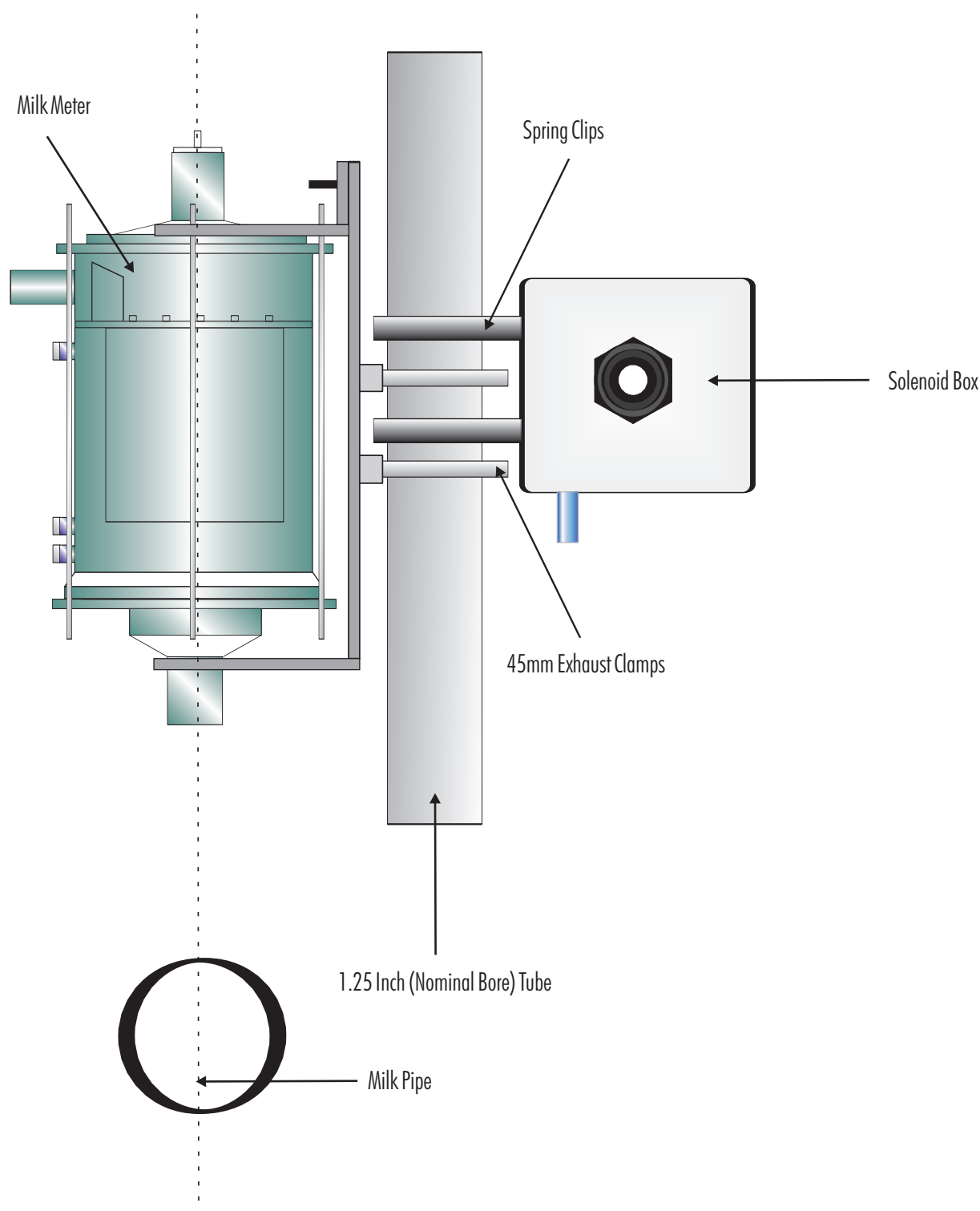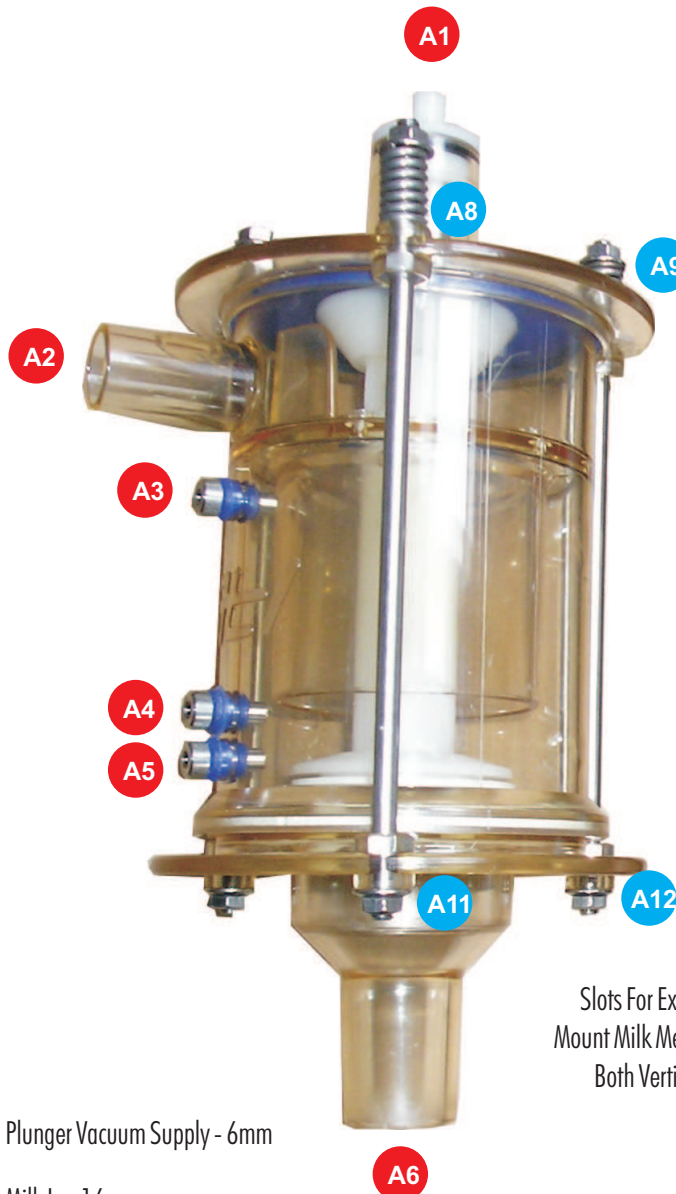**Output Specification:**   Nominal 12vDC @ 33 Amps

Milk Meter Installation 1

The milk meter and the solenoid box are mounted on the same 1.25 nominal bore tube. The diagram below shows the preferred mounting arrangement.

Milk Meter

Spring Clips

Solenoid Box

45mm Exhaust Clamps

1.25 Inch (Nominal Bore) Tube

Milk Pipe

Milk Meter Installation 2

The milk meter is despatched from ATL with the top bracket attached and milk inlet to right-hand side. Fit the milk meter onto the main bracket by releasing the M6 wing nut and slotting the top bracket onto the M6 stud. Locate the M5 flange nuts on the base of the milk meter into the 2 holes in the base of the main bracket. Make sure it is seated properly and tighten the wing nut.

IMPORTANT

■ The milk meter should be mounted above the milk pipe.

■ Do not leave any dip in the milk out pipe - an air lock may form and performance of the milk meter may be affected if the milk meter cannot drain easily.

Top Bracket

Main Bracket

M6 Stud

Slots For Exhaust Clamps To Mount Milk Meter - Slots Allow Both Vertical & Horizontal Mounting

Slots Designed To Accommodate 35-45mm Exhaust Clamps

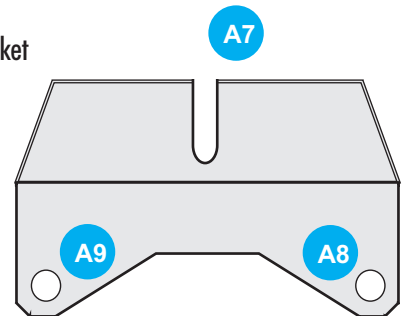ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

M5 Holes

A1 Plunger Vacuum Supply - 6mm

A2 Milk In - 16mm

A3 Top Probe

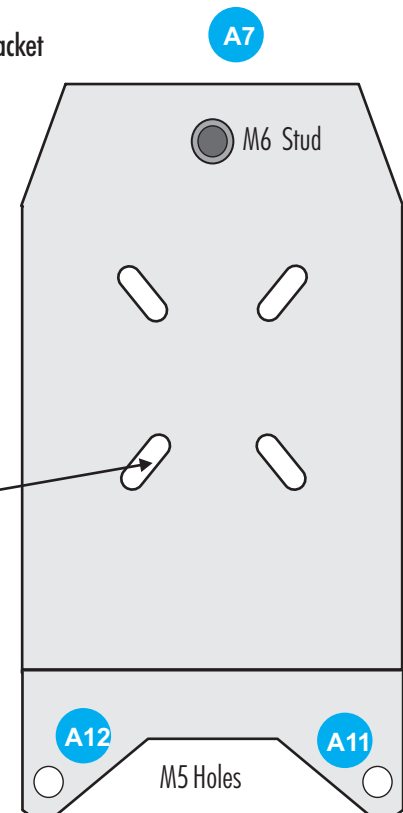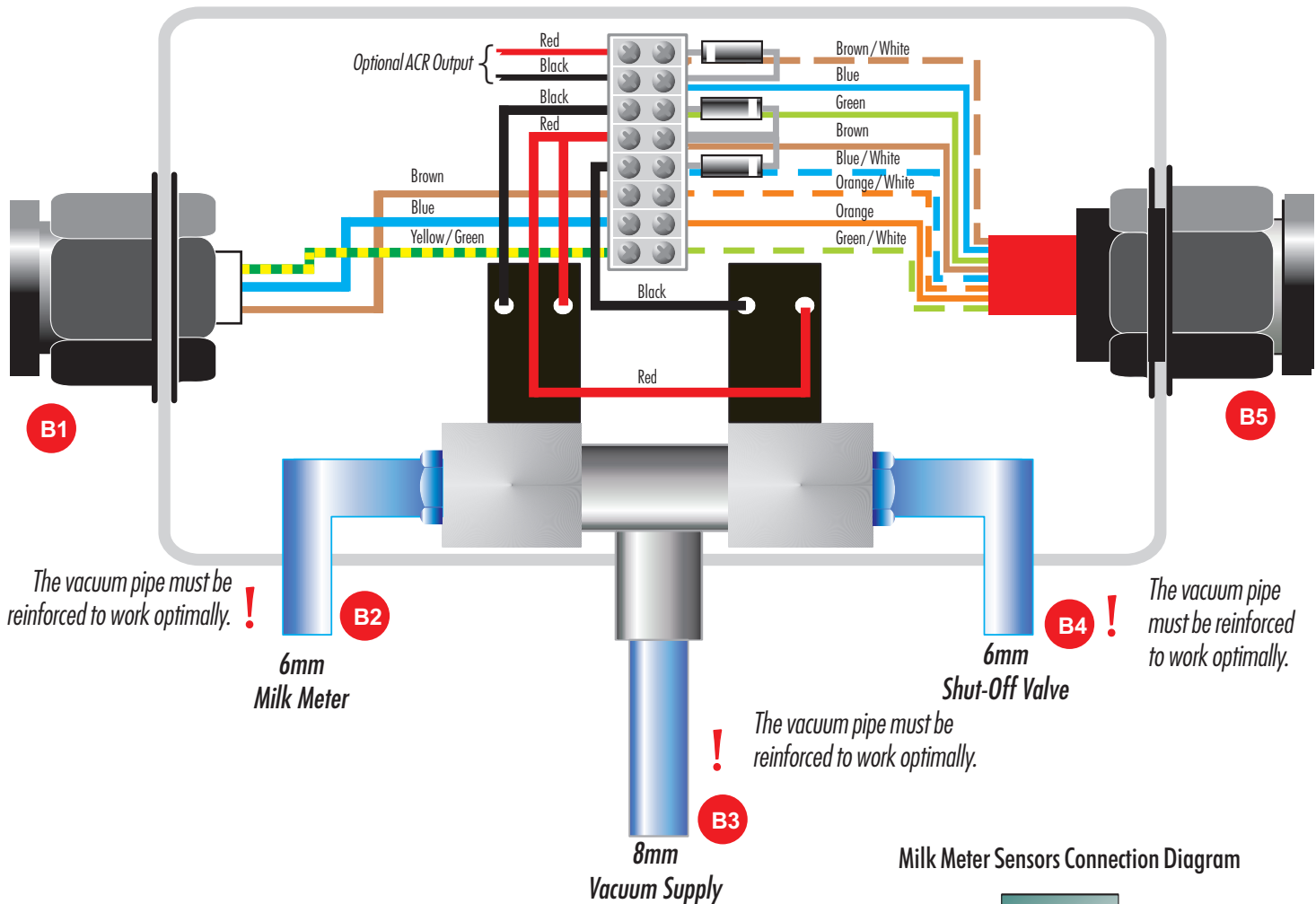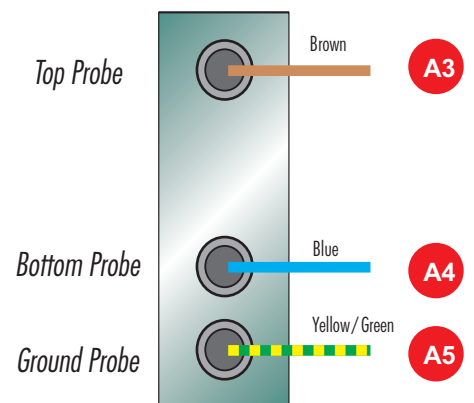**A4** Bottom Probe

A5 Ground Probe

A6 Milk Out - 19mm

Solenoid Box Installation (without PCB - with optional ACR Connection)

The solenoid box contains two solenoids, one is used to operate the milk meter plunger, the other the shut-off valve. The box is fitted with two spring clips to enable easy installation to a 1.25 inch (nominal bore) tube. The solenoid box is delivered pre-wired.

Optional ACR Output {
Red
Black
Black
Red
Brown
Blue
Yellow / Green
Black
Red

Brown / White
Blue
Green
Brown
Blue / White
Orange / White
Orange
Green / White

B1

B5

The vacuum pipe must be reinforced to work optimally. !

B2

6mm
Milk Meter

The vacuum pipe must be reinforced to work optimally.

B4 !

The vacuum pipe must be reinforced to work optimally.

6mm
Shut-Off Valve

!

B3

8mm
Vacuum Supply

B1 Connect into the milk meter sensors (A3, A4, A5); see diagram on right.

B2 Connect a piece of 6mm vacuum pipe to the milk meter (A1).

B3 Connect a piece of 8mm vacuum pipe to the vacuum source.

B4 Connect a piece of 6mm vacuum pipe to the shut-off valve.

B5 Connect into the milk meter display; see diagrams on pages 5A and 5B.

Milk Meter Sensors Connection Diagram

Top Probe — Brown — **A3**

Bottom Probe — Blue — **A4**

Ground Probe — Yellow / Green — **A5**

Solenoid Box Installation (with PCB)

The solenoid box contains two solenoids, one is used to operate the milk meter plunger, the other the shut-off valve. The box is fitted with two spring clips to enable easy installation to a 1.25 inch (nominal bore) tube. The solenoid box is delivered pre-wired.


B5

B1

The vacuum pipe must be reinforced to work optimally. !

B2

6mm Milk Meter

B4 !

The vacuum pipe must be reinforced to work optimally.

6mm Shut-Off Valve

! *The vacuum pipe must be reinforced to work optimally.*

B3

8mm Vacuum Supply

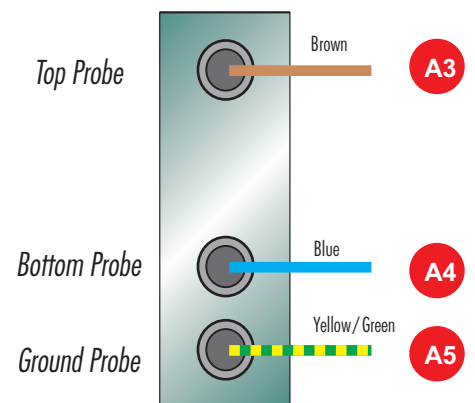Com++   Shut-Off-   Comm++   Drop Bar- Comm++   Meter- Comm++   ACR-   Gn/Yw   Brown   Blue

B1   Connect into the milk meter sensors (A3, A4, A5); see diagram on right.

B2   Connect a piece of 6mm vacuum pipe to the milk meter (A1).

B3   Connect a piece of 8mm vacuum pipe to the vacuum source.

B4   Connect a piece of 6mm vacuum pipe to the shut-off valve.

B5   Connect into the milk meter display; see diagrams on page 5B.

Milk Meter Sensors Connection Diagram

Top Probe   Brown   **A3**

Bottom Probe   Blue   **A4**

Ground Probe   Yellow / Green   **A5**
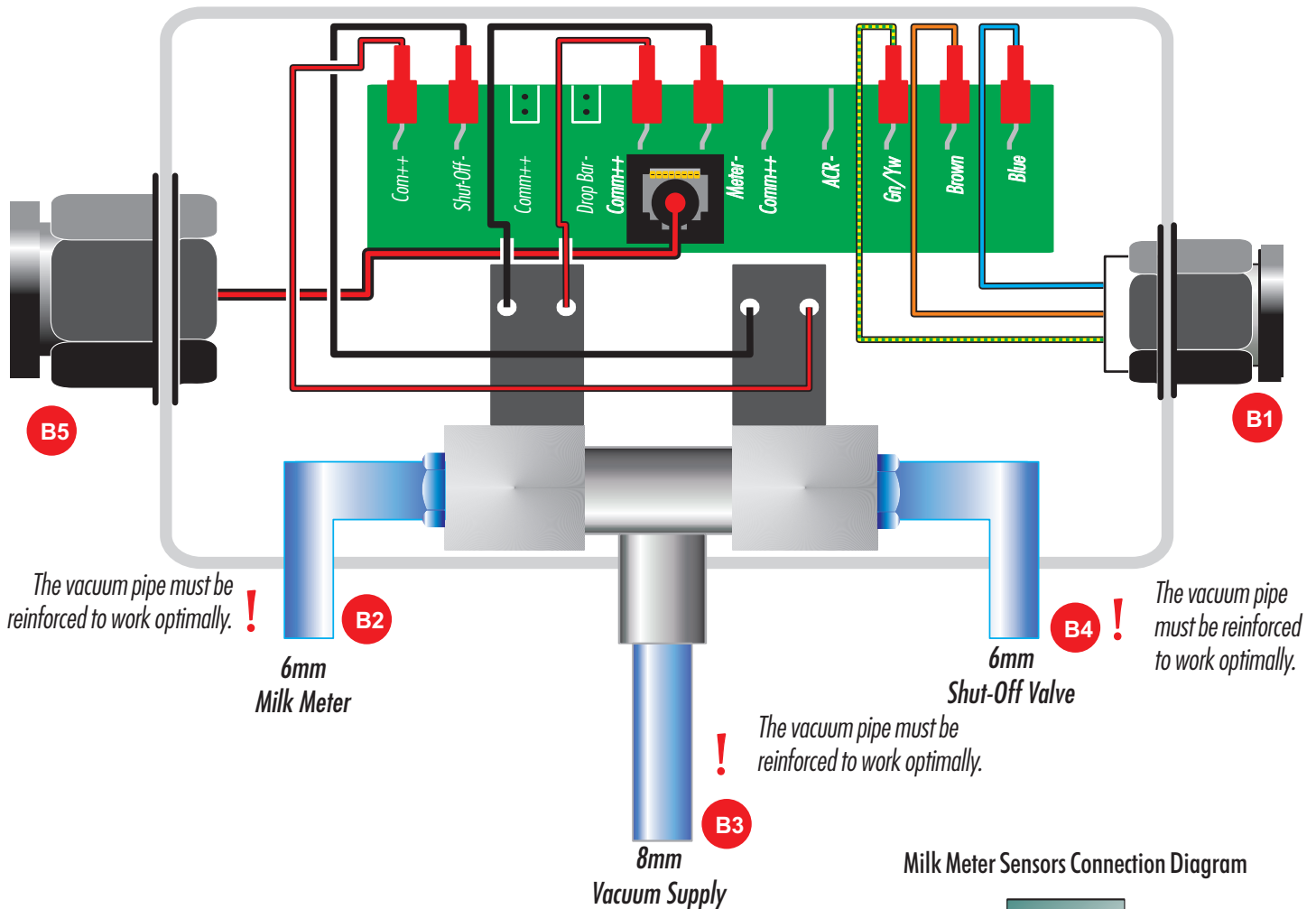
Solenoid Box Installation (without PCB and optional ACR connection)

The solenoid box contains two solenoids, one is used to operate the milk meter plunger, the other the shut-off valve. The box is fitted with two spring clips to enable easy installation to a 1.25 inch (nominal bore) tube. The solenoid box is delivered pre-wired.
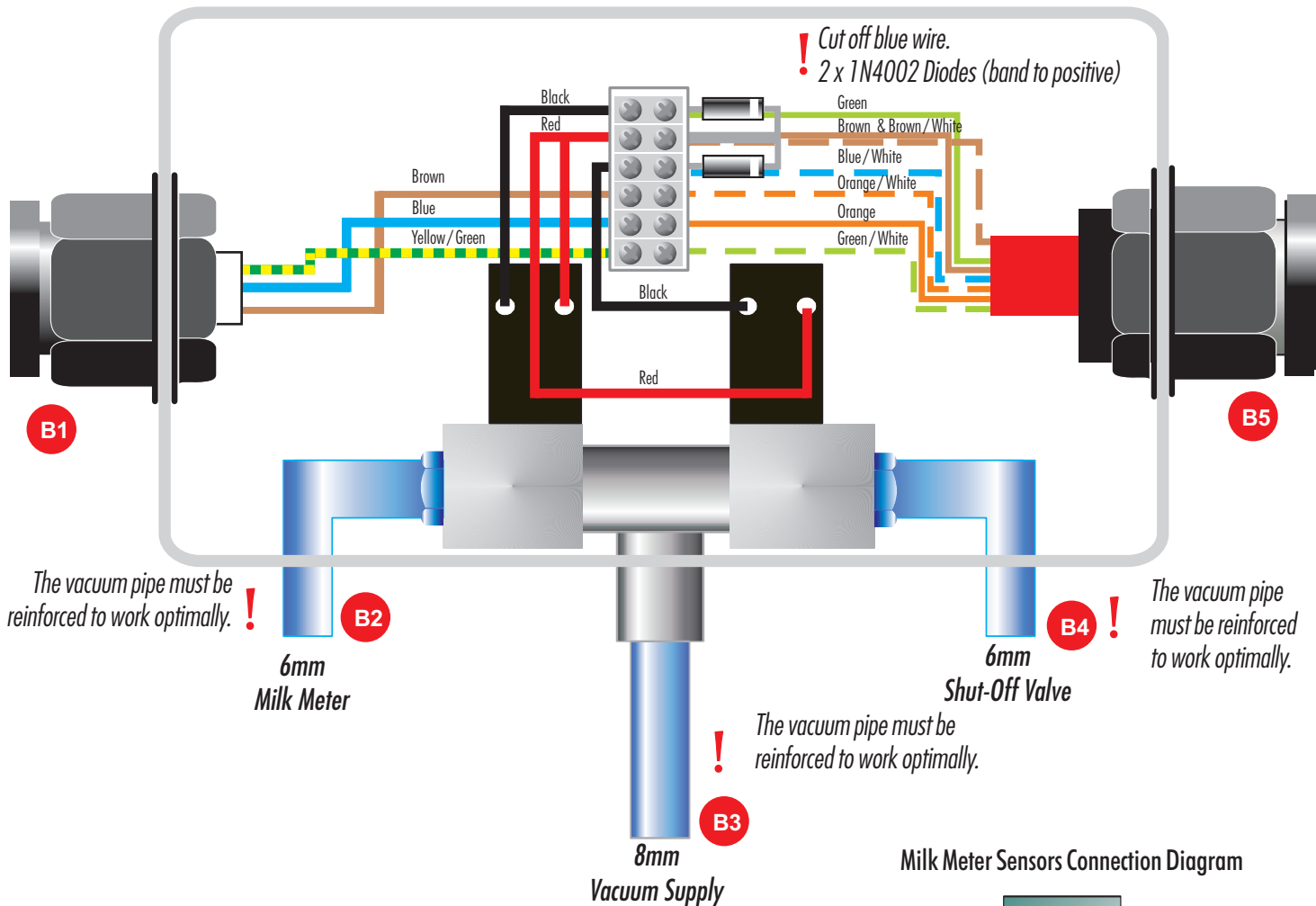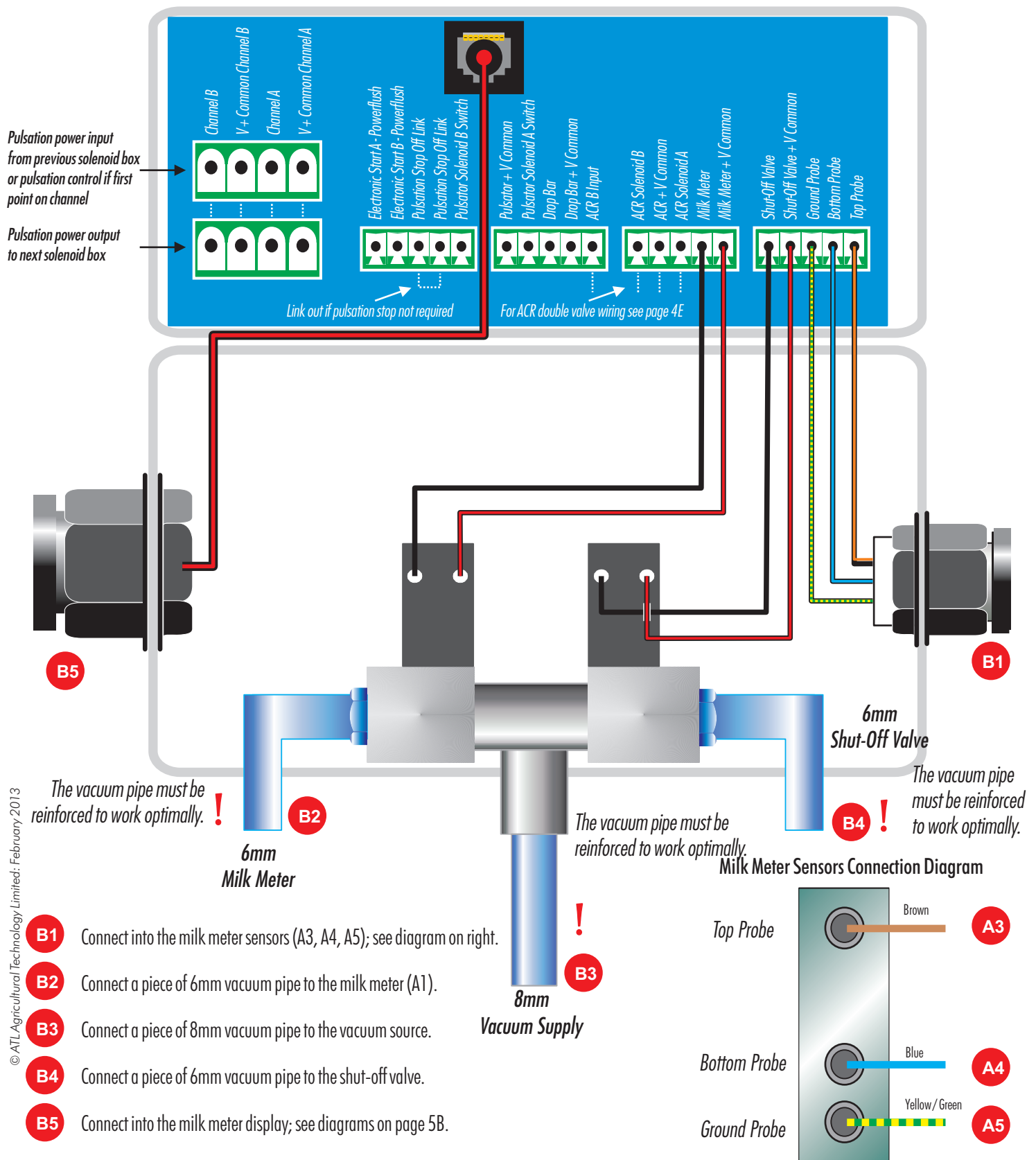

Cut off blue wire.
2 x 1N4002 Diodes (band to positive)

Black
Red
Green
Brown & Brown/White
Brown
Blue/White
Blue
Orange/White
Yellow/Green
Orange
Green/White
Black
Red

B1
B5

The vacuum pipe must be reinforced to work optimally.

B2

6mm
Milk Meter

B4

The vacuum pipe must be reinforced to work optimally.

6mm
Shut-Off Valve

The vacuum pipe must be reinforced to work optimally.

B3

8mm
Vacuum Supply

Milk Meter Sensors Connection Diagram

Top Probe — Brown — **A3**

Bottom Probe — Blue — **A4**

Ground Probe — Yellow/Green — **A5**

B1 Connect into the milk meter sensors (A3, A4, A5); see diagram on right.

B2 Connect a piece of 6mm vacuum pipe to the milk meter (A1).

B3 Connect a piece of 8mm vacuum pipe to the vacuum source.

B4 Connect a piece of 6mm vacuum pipe to the shut-off valve.

B5 Connect into the milk meter display; see diagrams on pages 5A and 5B.

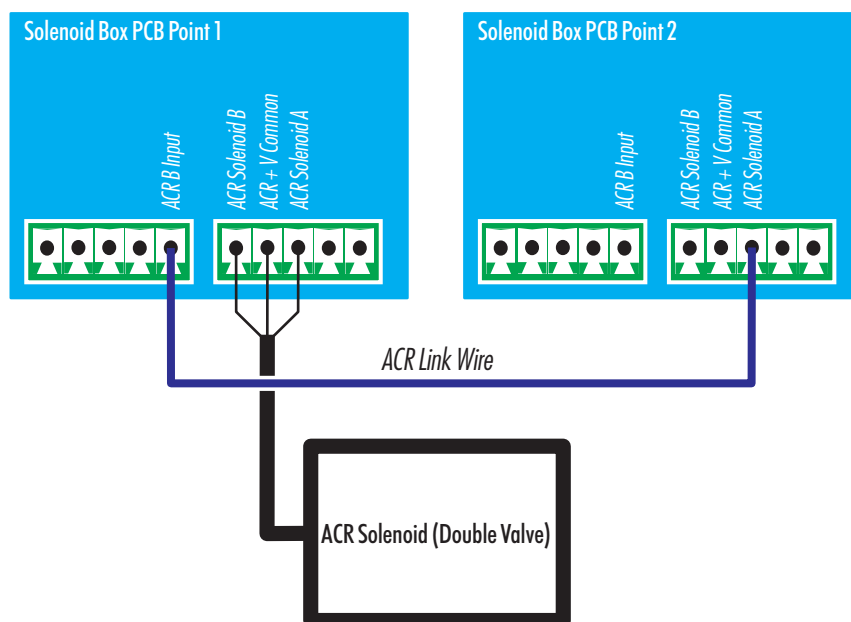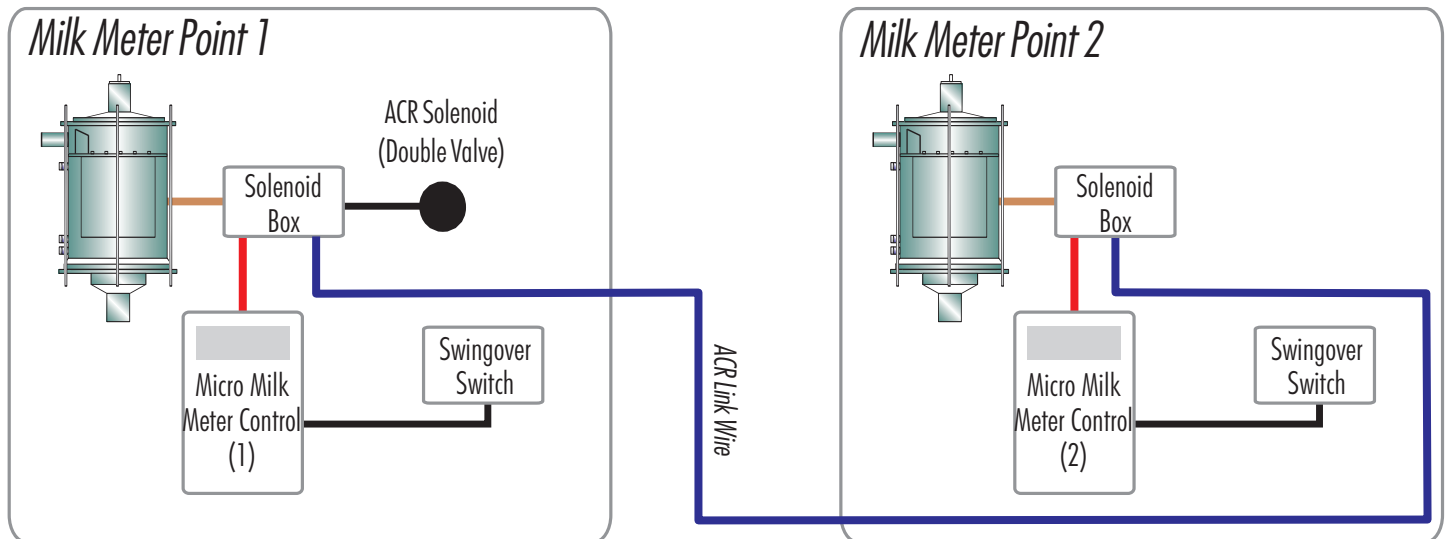## Solenoid Box Installation (with Pulsation Stop - PCB CON218 Issue B)

The solenoid box contains two solenoids, one is used to operate the milk meter plunger, the other the shut-off valve. The box is fitted with two spring clips to enable easy installation to a 1.25 inch (nominal bore) tube. The solenoid box is delivered pre-wired.

Pulsation power input from previous solenoid box or pulsation control if first point on channel

Pulsation power output to next solenoid box

Channel B
V + Common Channel B
Channel A
V + Common Channel A

Electronic Start A - Powerflush
Electronic Start B - Powerflush
Pulsation Stop Off Link
Pulsation Stop Off Link
Pulsator Solenoid B Switch

Pulsator + V Common
Pulsator Solenoid A Switch
Drop Bar
Drop Bar + V Common
ACR B Input

ACR Solenoid B
ACR + V Common
ACR Solenoid A
Milk Meter
Milk Meter + V Common

Shut-Off Valve
Shut-Off Valve + V Common
Ground Probe
Bottom Probe
Top Probe

Link out if pulsation stop not required

For ACR double valve wiring see page 4E

B5

B1

6mm
Shut-Off Valve

The vacuum pipe must be reinforced to work optimally. **!**

B2

6mm
Milk Meter

The vacuum pipe must be reinforced to work optimally.

B4 **!**

The vacuum pipe must be reinforced to work optimally.

!

B3

8mm
Vacuum Supply

B1 Connect into the milk meter sensors (A3, A4, A5); see diagram on right.

B2 Connect a piece of 6mm vacuum pipe to the milk meter (A1).

B3 Connect a piece of 8mm vacuum pipe to the vacuum source.

B4 Connect a piece of 6mm vacuum pipe to the shut-off valve.

B5 Connect into the milk meter display; see diagrams on page 5B.

Milk Meter Sensors Connection Diagram

Top Probe
Brown
A3

Bottom Probe
Blue
A4

Ground Probe
Yellow / Green
A5

Solenoid Box ACR Wiring using PCB CON218 Issue B

Milk Meter Point 1

ACR Solenoid
(Double Valve)

Solenoid
Box

Micro Milk
Meter Control
(1)

Swingover
Switch

ACR Link Wire

Milk Meter Point 2

Solenoid
Box

Micro Milk
Meter Control
(2)

Swingover
Switch

Solenoid Box PCB Point 1

ACR B Input

ACR Solenoid B
ACR + V Common
ACR Solenoid A

Solenoid Box PCB Point 2

ACR B Input

ACR Solenoid B
ACR + V Common
ACR Solenoid A

ACR Link Wire

ACR Solenoid (Double Valve)

Control Box Installation - Multi-core cable version

The Micro Milk Meter Control Box has a large character backlit LCD display and 6 button keypad to access real-time and historical (must be connected to MicroMarque3S control) milk yield and cow information

C6

Top Probe
Bottom Probe
Ground

LCD Screen Contrast

Left/Right Input
Left/Right Ground

C5

Kick-Off Input
Kick-Off Input
Not Connected
Start Input
Start Input

C4

Power Negative -
Not Connected
Meridian Bus Ground
Meridian Bus
Meridian Bus
Power Positive +

C2

Shut-Off Solenoid Output
+ Solenoid Common
Milk Meter Solenoid Output
Not Connected
ACR Solenoid Output
Not Connected

C3

18 core cable enters through 25mm IP67-rated gland in rear of box

C1
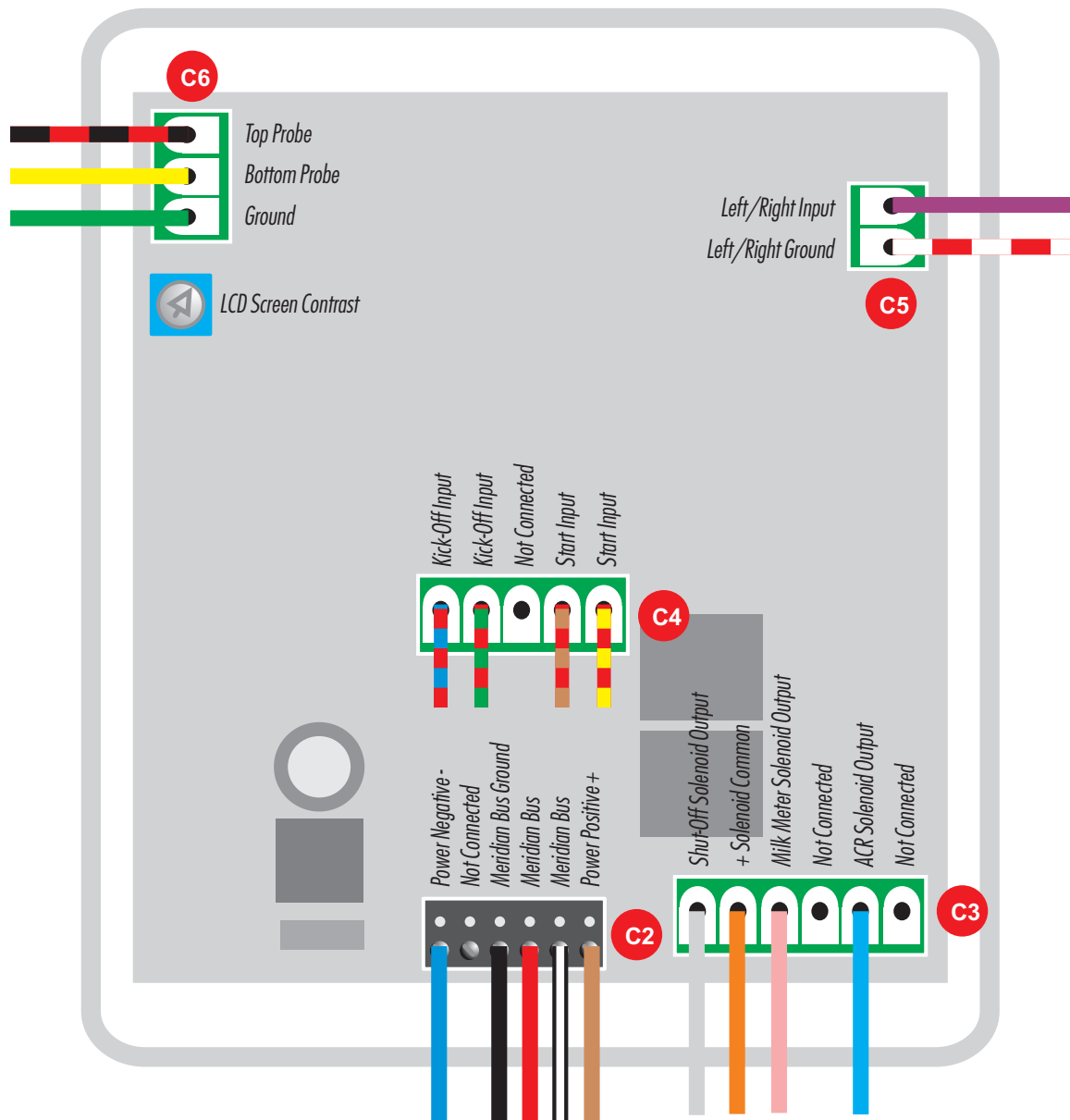
Control Box Installation - Cat5e cable version

The Micro Milk Meter Control Box has a large character backlit LCD display and 6 button keypad to access real-time and historical (must be connected to MicroMarque3S control) milk yield and cow information

Left/Right Input

Left/Right Ground

C5

LCD Screen Contrast

Solenoid cable connector

C4

Communications cable connector

C3

Communications cable

Solenoid cable

Both Cat5e cables enters through 25mm IP67-rated gland in rear of box

C1

C2
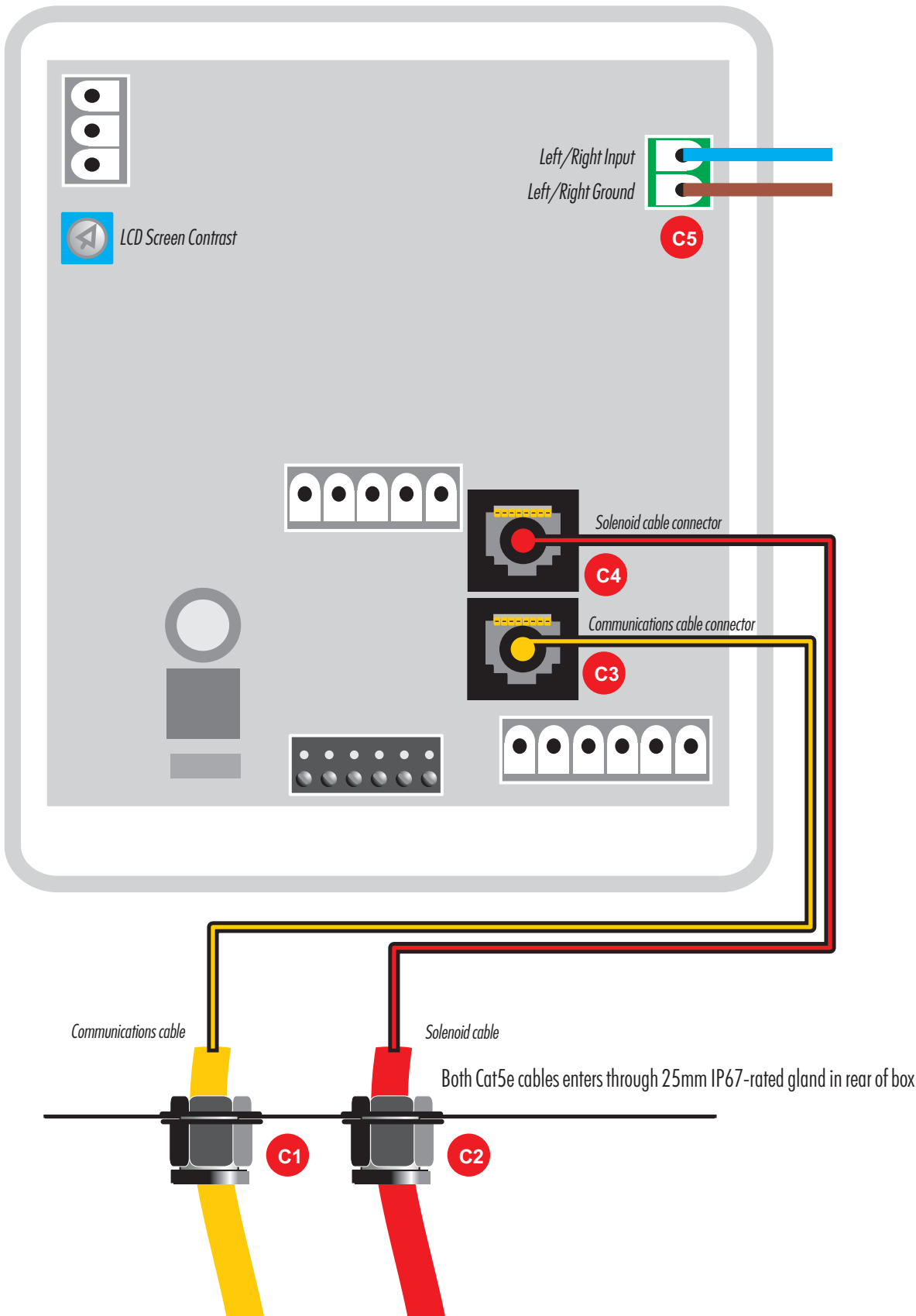
Control Box Installation Continued - Pre-March 2010

The Control Box comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket

Optional Swing-to-start gland entry
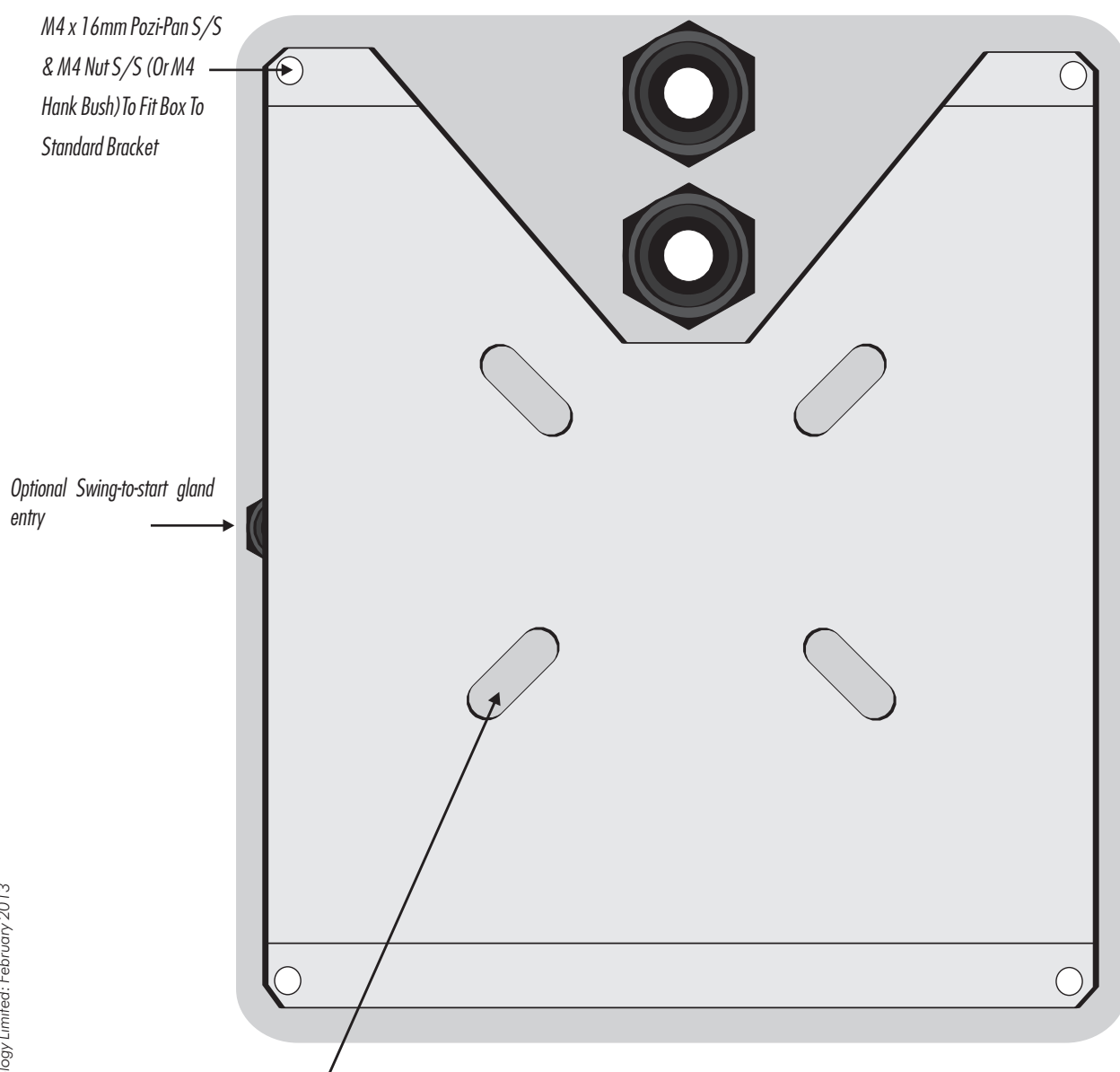
Slots For Exhaust Clamps To Mount Micro Milk Meter Control Box - Slots Allow Both Vertical & Horizontal Mounting
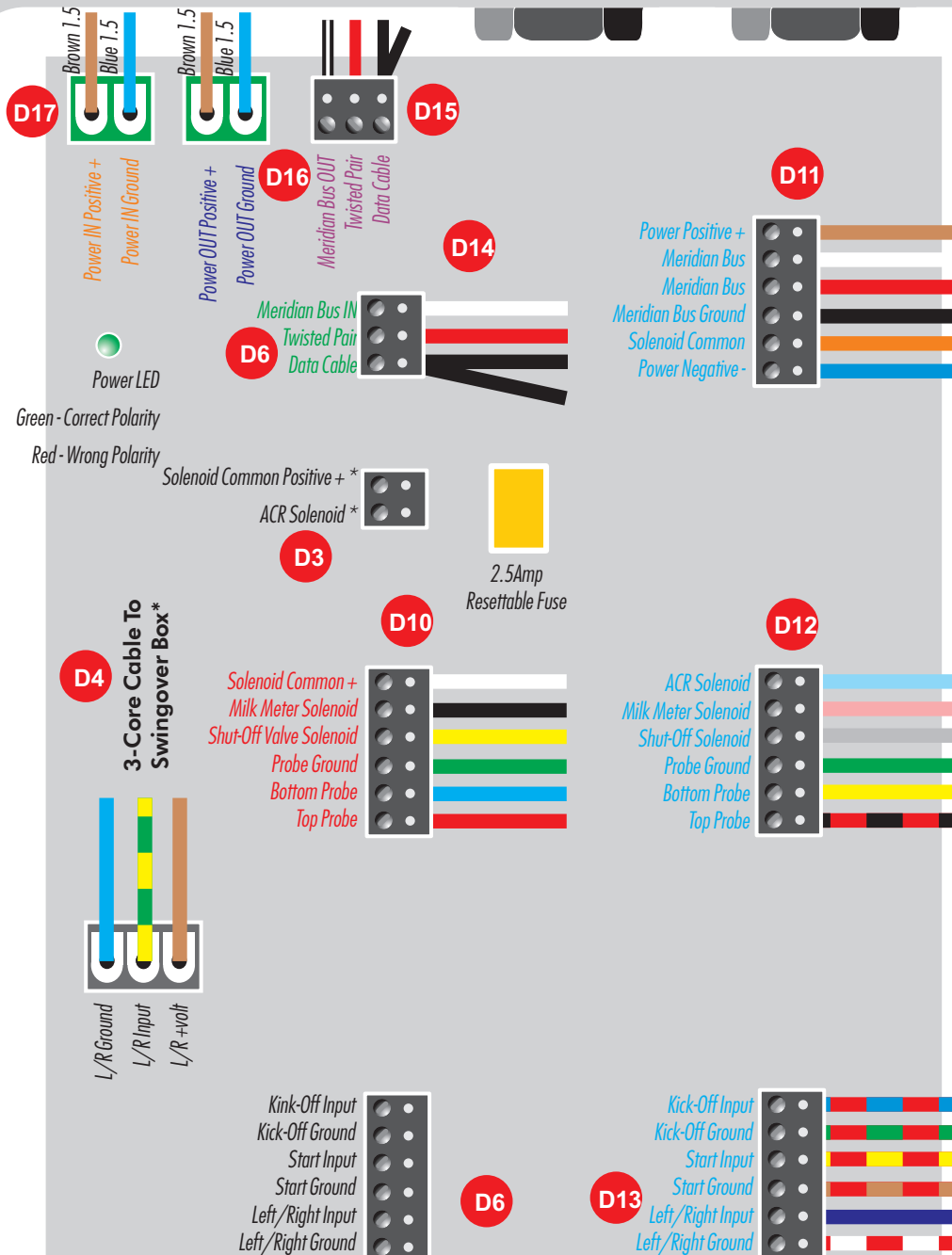
Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

Control Box Installation Continued - Post March 2010

The Control Box comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket
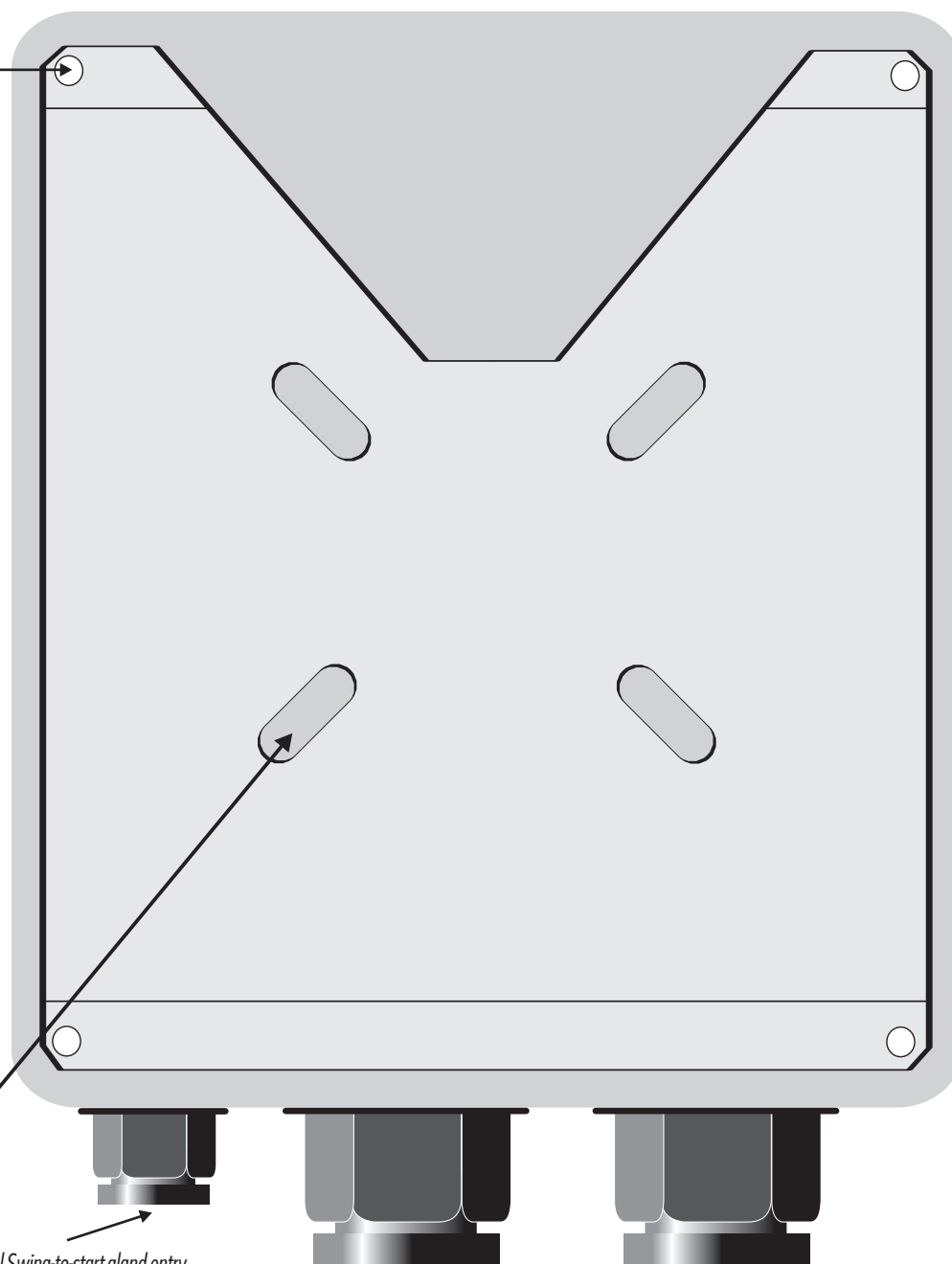
Optional Swing-to-start gland entry

Slots For Exhaust Clamps To Mount Micro Milk Meter Control Box - Slots Allow Both Vertical & Horizontal Mounting

Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

Control Box Installation Continued - Post January 2011

The Control Box comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket

4 cable entry gland - please block any cable entry s that are not being used
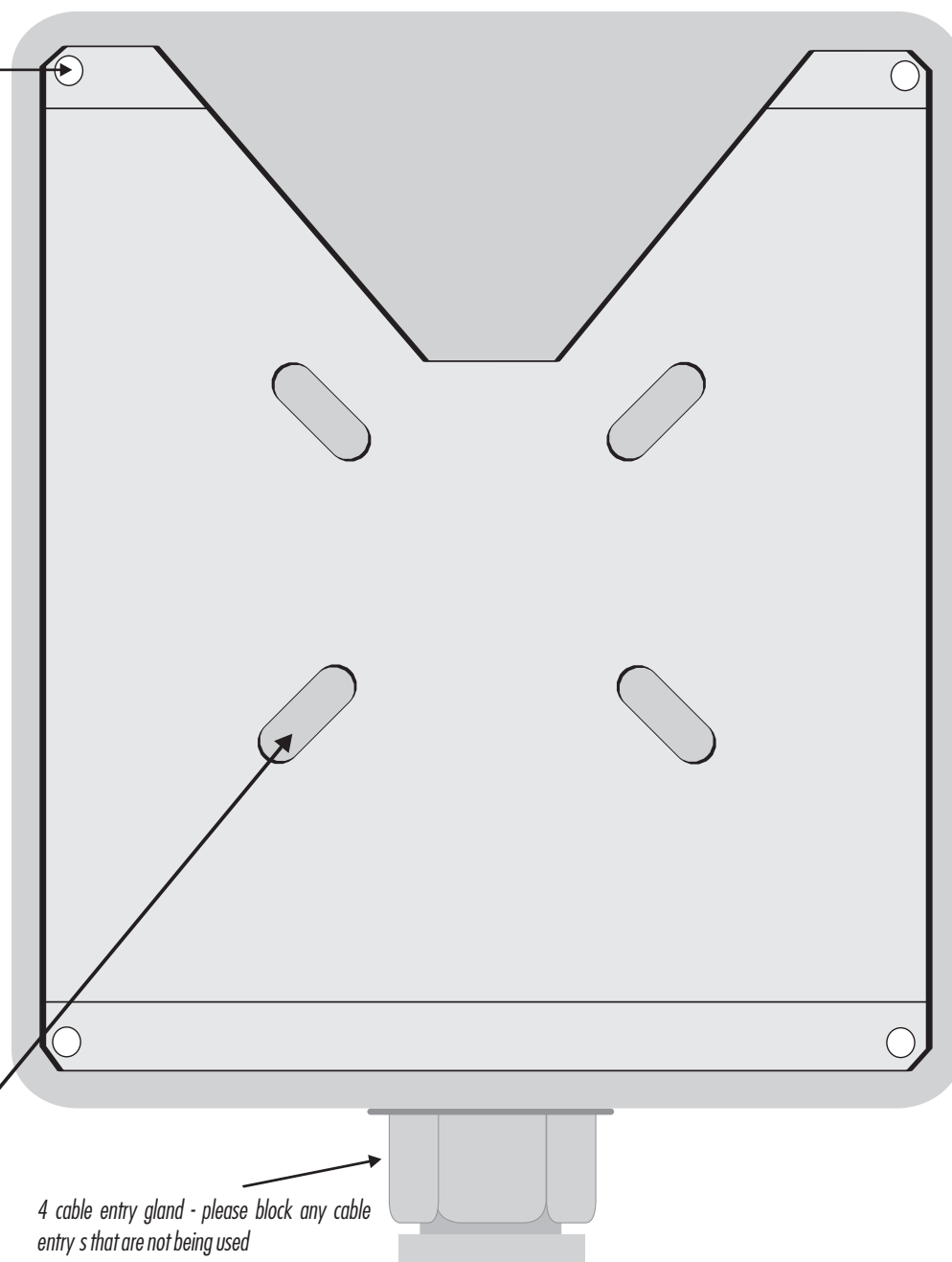
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Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

Connection Box Installation - Multi-core Version

2-Core Cable Power OUT To Next Connection Box **D1**

D2 **4-Core Cable Meridian Bus OUT To Next Connection Box**

D17 Brown 1.5 Blue 1.5

Power IN Positive +   Power IN Ground

D16 Brown 1.5 Blue 1.5

Power OUT Positive +   Power OUT Ground

D15 Meridian Bus OUT Twisted Pair Data Cable

D14

D11

Power Positive +
Meridian Bus
Meridian Bus
Meridian Bus Ground
Solenoid Common
Power Negative -

!

*The cables for connections D3 and D4 are only supplied on request.

Meridian Bus IN Twisted Pair Data Cable **D6**

Power LED

Green - Correct Polarity

Red - Wrong Polarity

Solenoid Common Positive + *

ACR Solenoid *

D3

2.5Amp Resettable Fuse

The connection box is mounted on a 1.25 inch (nominal bore) tube by the two spring clips supplied.

3-Core Cable To Swingover Box*

D4

D10

Solenoid Common +
Milk Meter Solenoid
Shut-Off Valve Solenoid
Probe Ground
Bottom Probe
Top Probe

D12

ACR Solenoid
Milk Meter Solenoid
Shut-Off Solenoid
Probe Ground
Bottom Probe
Top Probe

6-Core Cable To Solenoid Box

D5

L/R Ground   L/R Input   L/R +volt

Kink-Off Input
Kick-Off Ground
Start Input
Start Ground
Left/Right Input
Left/Right Ground

D6

Kick-Off Input
Kick-Off Ground
Start Input
Start Ground
Left/Right Input
Left/Right Ground

D13

18-Core Cable To Control Box

D7

2-Core Cable Power IN From Previous Connection Box **D8**

D9 **4-Core Cable Meridian Bus IN From Previous Connection Box**

Connection Box Installation - Cat5e Version

Cat5e Cable
OUT To
Next Connection Box

D1

D2

D3

Auxiliary Gland

Cat5e Cable To
Milk Meter Display 6

Cat5e Cable To
Milk Meter Display 5

Power LED

Green - Correct Polarity

Red - Wrong Polarity

Brown 1.5 — Spare Power Positive +

Blue 1.5 — Spare Power Ground

Brown 1.5 — Power IN Positive +

Blue 1.5 — Power IN Ground

D14

D20

2.5Amp
Resettable Fuse

D4

D19

2.5Amp
Resettable Fuse

Cat5e Cable To
Milk Meter Display 4

The connection box is
mounted on a 1.25 inch
(nominal bore) tube by
the two spring clips
(supplied fitted).

D18

2.5Amp
Resettable Fuse

D5

D17

2.5Amp
Resettable Fuse

Cat5e Cable To
Milk Meter Display 3

D6

D13

Cat5e Meridian
OUT

D16

2.5Amp
Resettable Fuse

Cat5e Cable To
Milk Meter Display 2

D12

Cat5e Meridian
IN

D15

2.5Amp
Resettable Fuse

D7

D11

*Auxiliary Meridian
Bus To Micro
Control*

Cat5e Comm's
Cable IN
From Previous
Connection Box

D10

D9

Power Cable IN
From PSU

Cat5e Cable To
Milk Meter
Display 1

D8

Micro Milk Meter System Wiring Overview - Multi-core Version
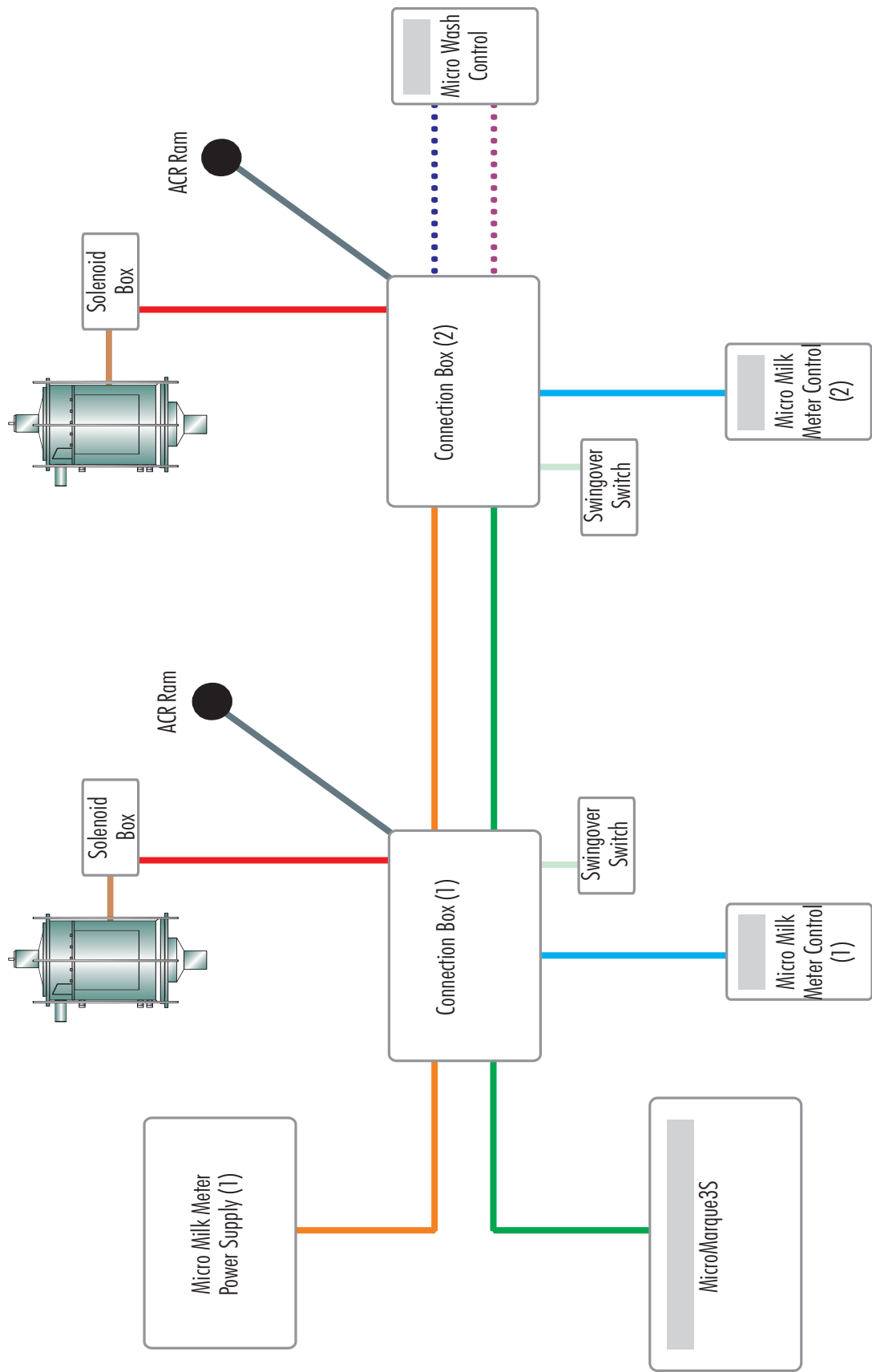
Micro Milk Meter System Wiring Overview - Cat5e Version
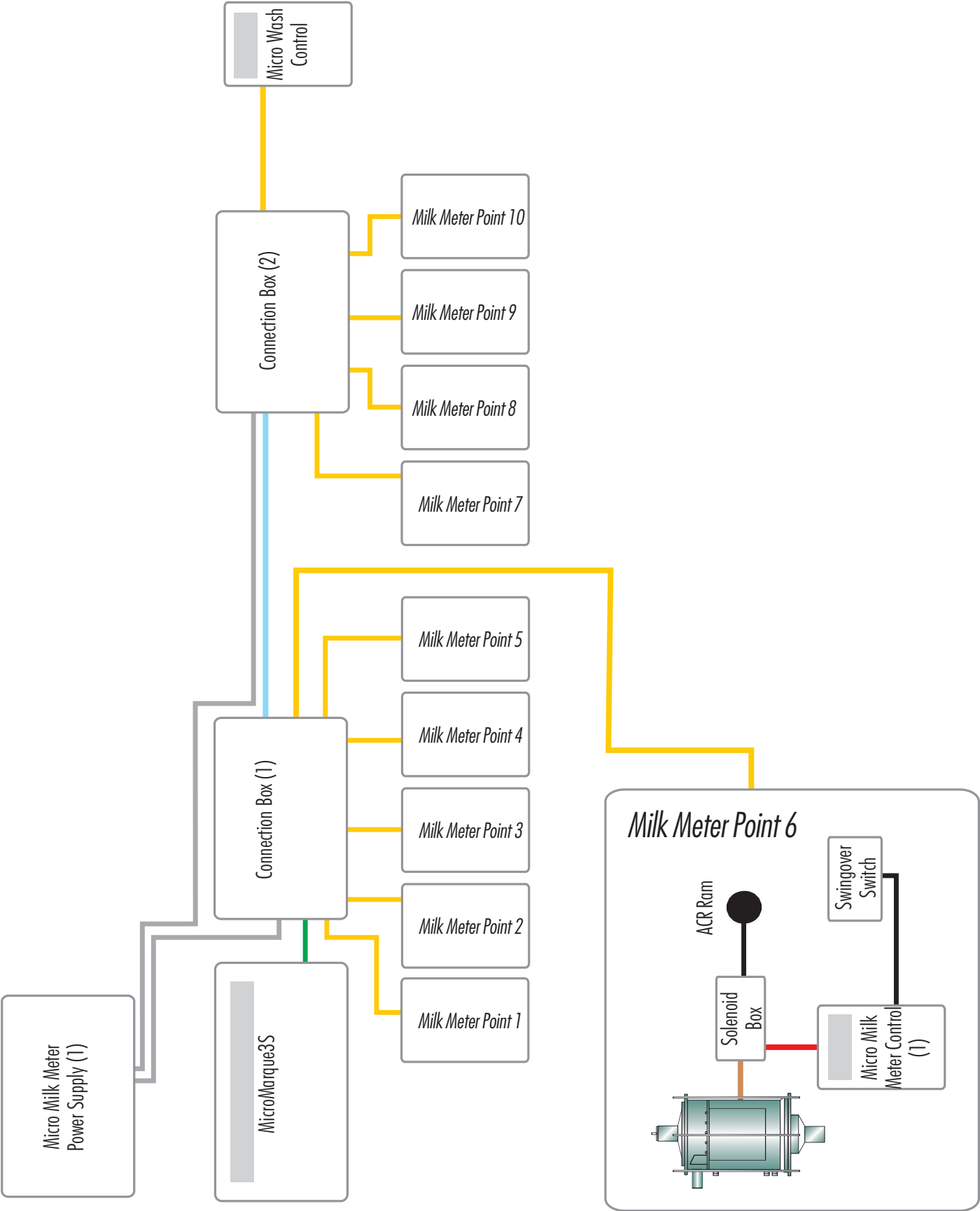
Interpuls ACR Ram and Cv20 Control Valve Connections to Solenoid Box

Solenoid Box

Solenoid Box

NB - Diodes included within solenoid box

Connect moulded 3-pin connector into Cv20 control
valve and crimped connectors onto respective solenoid boxes.

1 2 3
**Interpuls CV20
Solenoid Valve**

1 - Brown - Solenoid 1
2 - Black or Green/Yellow - Common Positive ($+$)
3 - Blue - Solenoid 2

Interpuls
ACR Ram

Interpuls
ACR Ram

Com++ Shut-Off- Comm++ Drop Bar- **Comm++** Meter- **Comm++** ACR- Grn/Yw Brown Blue

Interpuls ACR Ram and Cv20 Solenoid Valve Connections to Milk Meter Display

(IMPORTANT - Only connect to milk meter display on low level milking parlours**)**

IMPORTANT - Diodes not included within milk meter control so should be installed on CV20 solenoid valve - see diagram below

Common Positive (+) 12volts

Diode 1N4002 across terminals. Observe banding to (+) terminal.

Negative (-) Switched:

Negative (-) Switched:

Micro Milk Meter Control

+ Brown

- Blue

+ Brown

- Blue

Micro Milk Meter Control

Connect moulded 3-pin connector into Cv20 control valve and crimped connectors onto respective solenoid boxes.

1 2 3
Interpuls CV20 Solenoid Valve

1 - Brown - Solenoid 1
2 - Black or Green/Yellow - Common Positive (+)
3 - Blue - Solenoid 2

Interpuls ACR Ram

Interpuls ACR Ram

From Interpuls

CV20 Solenoid Valve

- +
ACR
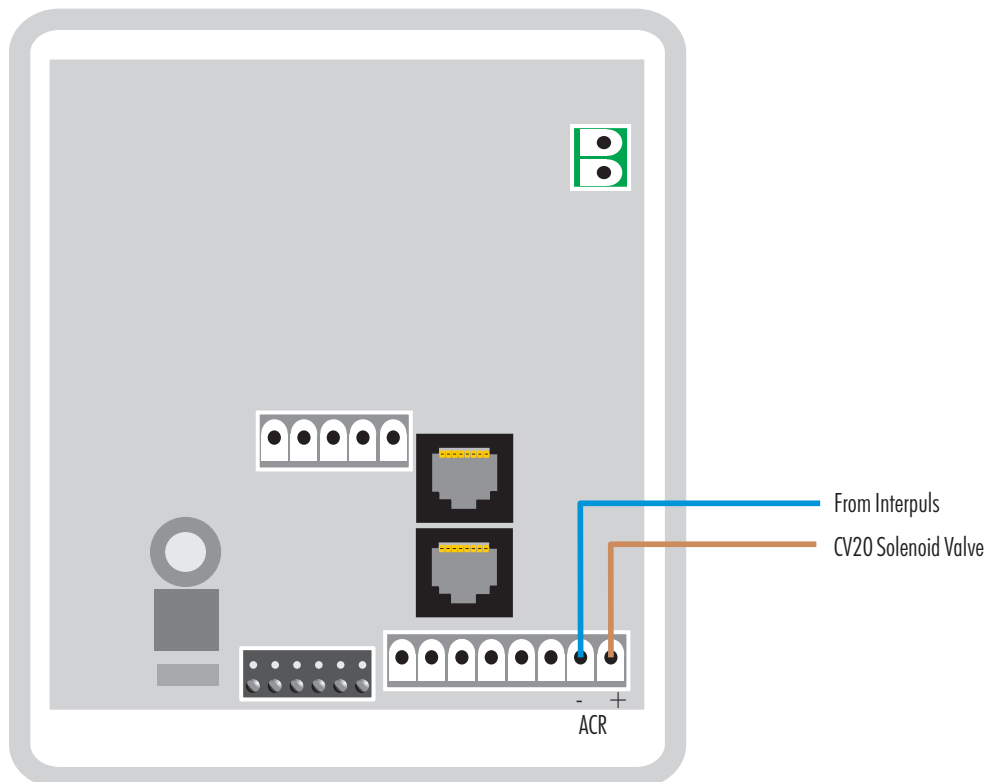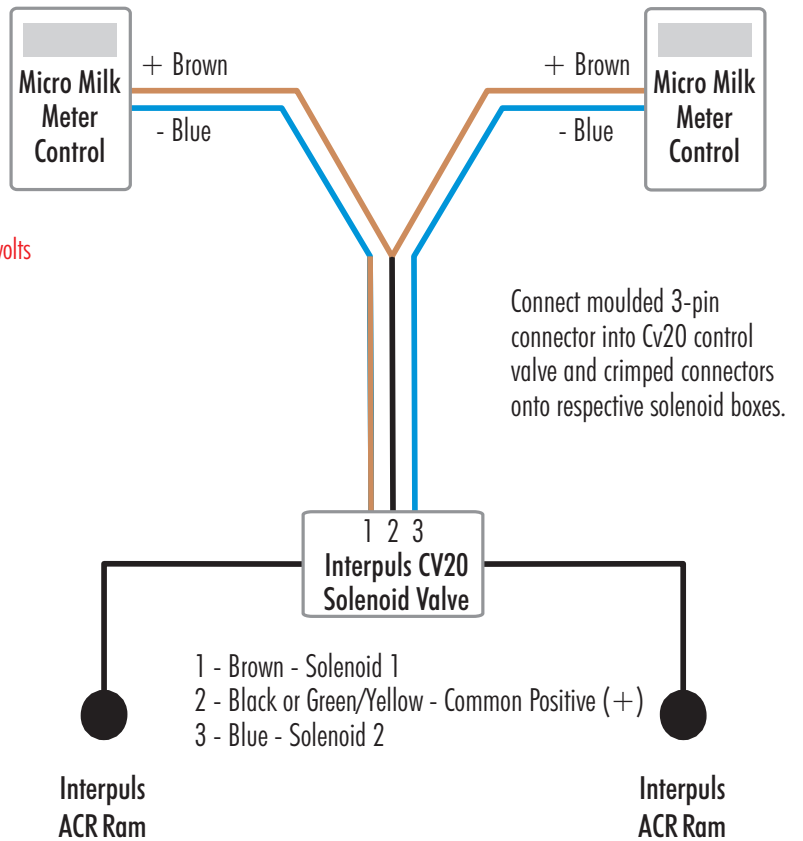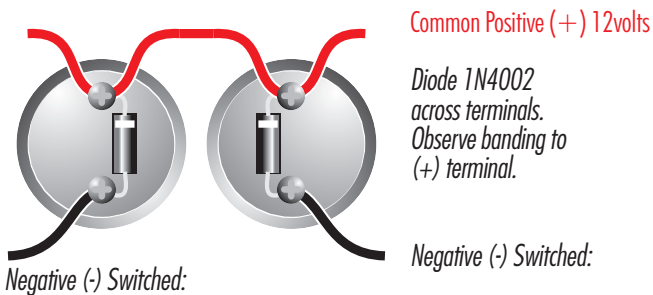
24vAC or 24vDC ACR Ram and Solenoid Connections

IMPORTANT - Diodes not included within milk meter control so should be installed on CV20 solenoid valve - see diagram below

1N4002 Diode

Solenoid Box

Common Positive (+) 12volts

Diode 1N4002 across terminals. Observe banding to (+) terminal.

Automotive Relay

Negative (-) Switched:

Negative (-) Switched:

+24v AC/DC

1N4002 Diode

ACR
Solenoid Valve

0v

87

87A

86   30   85

ACR Ram
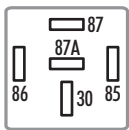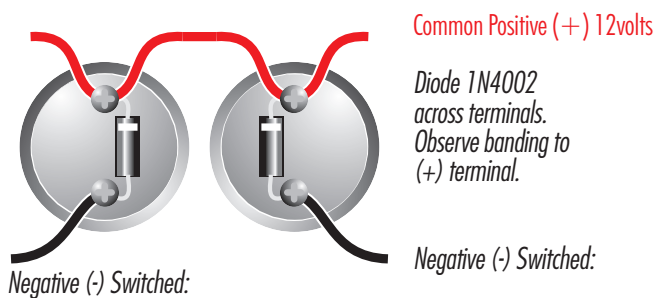
87 - Normally Open

87A - Normally Closed

30 - Common

Com++   Shut-Off-   Comm++   Drop Bar-
Comm++   Meter-   Comm++   ACR-   Grn/Yw   Brown   Blue
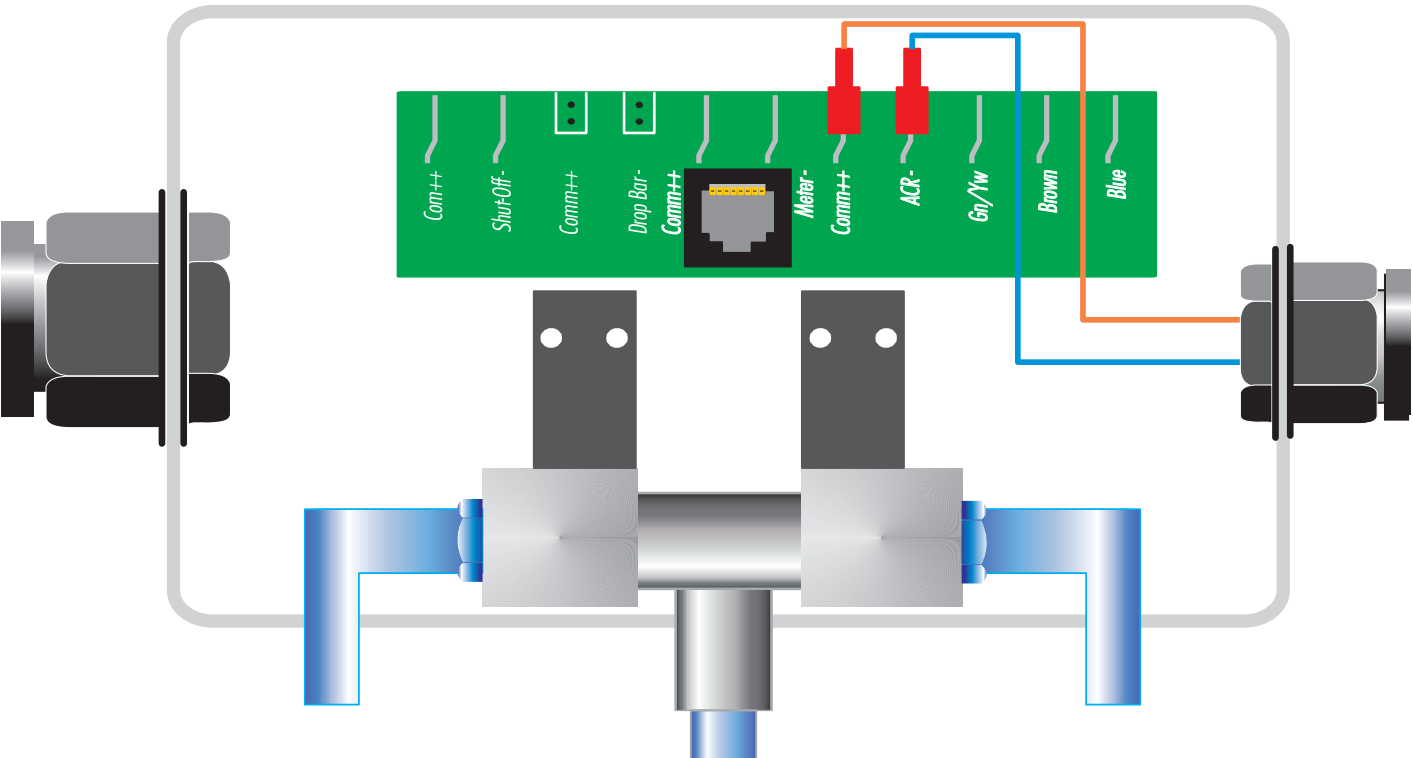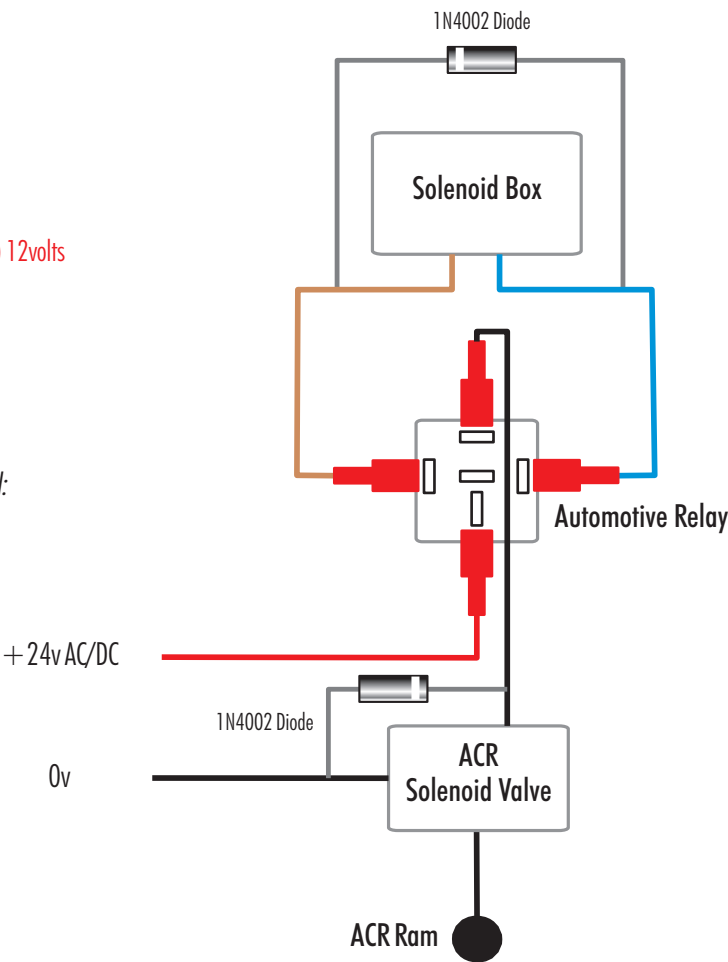
Setting Up The Micro Milk Meter System

Before it can be used, the Micro Milk Meter System must be setup. This is outlined in the following pages.

The Parlour Type Setting (Post V2.14 Software)

This setting selects the type of parlour the milk meter control is being installed on. The setting allows for doubled-up (via LHS and RHS settings), swingover and rotary parlours.

NB - Control address should be setup even if stand-alone to enable cumulative milk yield function.

To Select the Address:

Press and hold the HAND, TICK, FLAG and UP arrow keys:

Release the keys:

How select the parlour type by using the UP and DOWN keys:

NB - For doubled-up parlours, use LHS for milk meter controls on the left-hand side and RHS for the right-hand side respectively.

With the correct parlour type selected press the TICK key to store the data:

The Control Address Setting is now displayed.

NB - Only available with Micro Milk Meter software version 2.14.00 or above.
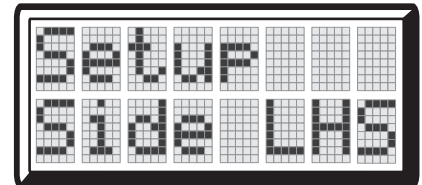
The Control Address Setting

This setting is the unique control address. Each milk meter control must have a unique address number.

Pre V2.14 Software: For doubled-up parlours, each side is numbered separately. The left side is numbered from 001 for the first stall and the right side from 065 for the first stall. All other parlour types should have the stall number entered in this setting.

V2.14 Software or above: For all parlour types, each stall should have the same number as its stall number and the parlour type setting (the previous setting) should be set accordingly.

To Select the Address:

Press and hold the HAND, TICK, FLAG and UP arrow keys:

Release the keys:

Now select the unique control address by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct address selected press the TICK key to store the data:

The Micro Setting is now displayed.
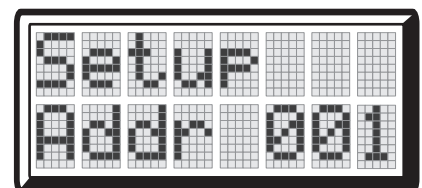
The Micro Setting

The Micro setting is a simple ON/OFF function. When enabled the meter will expect communications from an ATL Micro control, Enable this setting if the Milk Meter is connected to a Micro control.

To Alter the Micro value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data:

The Drop value Setting is now displayed.
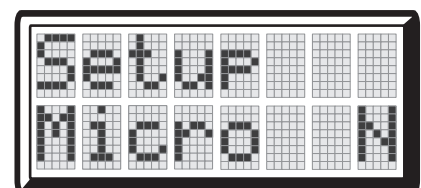
Setting Up The Micro Milk Meter System Continued

The Drop Value Setting

The drop value is the calibration setting for the milk meter dump value. It is the meter chamber volume in millilires. It can be changed to take up any minor variations in chamber size, trigger point or milk conductivity value. For more information on this setup function please see page 12.

Factory Defaults: Cow = 200ml, goat = 55ml and sheep = 55ml

Press the TICK key to store the data. The ACR setting is now displayed.
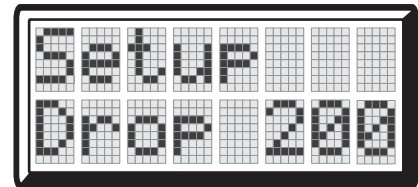
Automatic Cluster Removal Setting

The ACR setting does not come into operation until after the first two minutes of the milking have elapsed. Then, if the flow rate reaches or drops below this value, the end-of-milking procedure is initiated. The setting is in millilitres per minute. If the cow is being over milked this value should be raised, if under-milked, it should be lowered.

To Alter the ACR Setting:

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct setting selected press the TICK key to store the data:

The ACR hold off setting is now displayed.
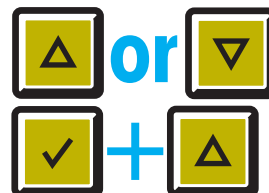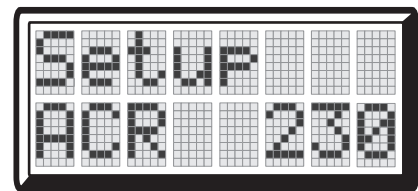
Factory Defaults: Cow = 230ml/min, goat = 180ml/min and sheep = 180ml/min

The ACR Hold Off Setting

The ACR hold off setting lets the user specify the length of time before the ACR becomes active after the start of milking. The range is from 30 to 250 seconds.

To Alter the ACR Hold Off Setting:

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct setting selected press the TICK key to store the data:

The vacuum delay setting is now displayed.
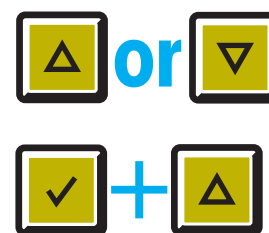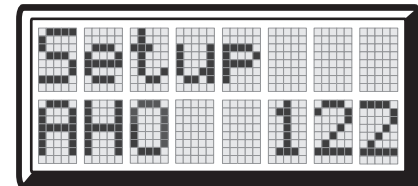
Factory Defaults: Cow = 122 seconds, goats = 30 seconds and sheep = 61 seconds

The Vacuum Delay Setting

This setting allows a delay to be set between the operation of the shut-off valve closing to shut off the vacuum and the ACR operating. It can be set to 0, 1, 2, 3, or 4 seconds of delay and defaults to 3 seconds. It should be set to a value that ensures that as the shut-off valve operates at the end of milking, the vacuum decays to a point when the cluster is just about to fall before the ACR operates. If the cluster is pulled up too early, the value needs to be increased and if the cluster drops from the udder, the value needs to be decreased.

To Set the VDEL:

Select the VDEL value by using the UP and DOWN arrow keys:

When the correct value has been selected press the TICK key to store the data:

The purge setting is now displayed.
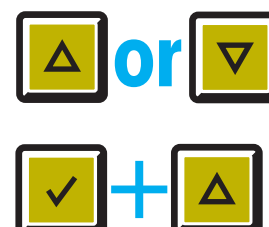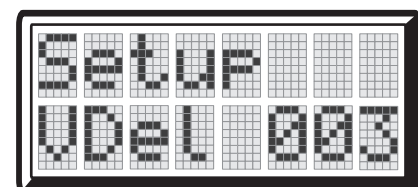
## Setting Up The Micro Milk Meter System Continued

The Purge Setting

The purge setting is a simple ON/OFF function. When the ACR operates and the ram pulls the cluster, setting purge ON makes the shut-off valve momentarily open to allow a blast of air to enter the line and purge any milk residues through the milk line.

To Alter the PURG value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data, the key delay setting is shown.
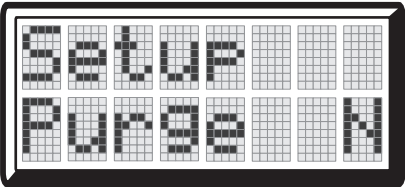
The Purge Hold Off Setting

This setting is only displayed if the purge setting is ON. It allows a delay to be set between the ACR operating and the purge activating. It is for installations with flushing systems. It can be set to between 4 and 30 seconds.

To Alter the Purge Hold Off value:

Select the PHO value by using the UP and DOWN arrow keys:

Press the TICK key to store the data.
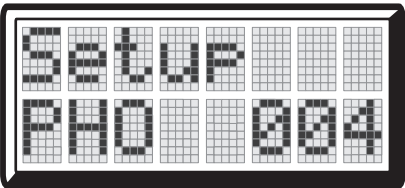
The Swing to Start Setting

This setting will only be displayed if the Micro setting is ON. It should only be used on MicroMarque3S systems using version 3 communications or MicroMarque4 systems. It is not required otherwise.

To Alter the Swing to Start Setting:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the setting.
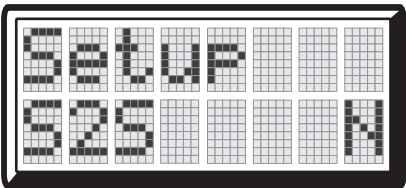
## Setting Up The Micro Milk Meter System Continued

The Key Delay Enable Setting

The key delay enable setting lets the user specify a length of time for a key to be pressed before it will activate. This setting is recommended for parlours where the cows can flick their tails to hit the control key pad.

To Alter the Key Delay Enable value:

Select either Y or N by using the UP and DOWN arrow keys:

Press the TICK key to store the data.
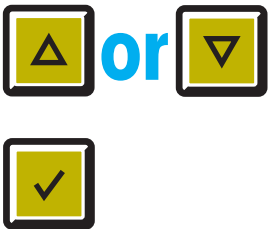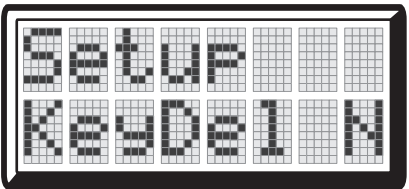
The Key Delay Value Setting

If the Key Delay Enable is set to Y then the next setting displayed is the key delay value. This is the length of delay until a key press is considered valid.
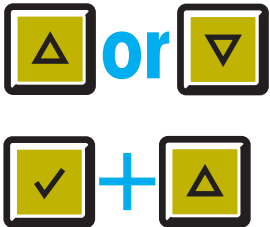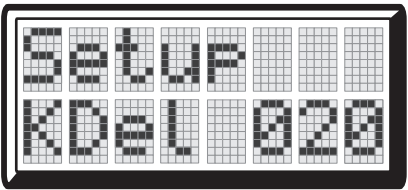
To Alter the Key Delay Enable value:

Select by using the UP and DOWN arrow keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct address selected press the TICK key to store the data:

The setting is now saved and the setup routine will exit.

MicroMarque3S Setup

If the Micro Milk Meter system is linked to a MicroMarque3S, the following setup needs to take place.

IMPORTANT - For these subroutines to be available the software in the MicroMarque3S control needs to be:

MAIN PCB - V4.23 or greater

Have Subroutine 331 enabled (see next page)

SET MICRO MILK METER SYSTEM: Subroutine 311

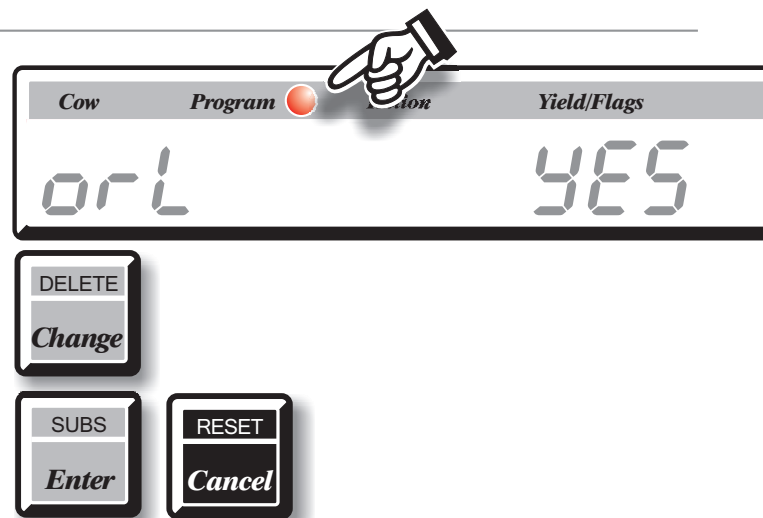This subroutine turns the link to the Micro Milk Meter system on or off.

Check that Program Mode is selected.

Run the subroutine. The message orL is displayed with yES or no in the Yield/Flags window.

Press Change to toggle between yES and no .

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

Cow	Program	Ration	Yield/Flags
orL			YES

DELETE
Change

SUBS
Enter

RESET
Cancel

SET SWING OVER PARLOUR TYPE: Subroutine 312

This subroutine sets the parlour type; no equals doubled-up; yES equals swingover.

Check that Program Mode is selected.

Run the subroutine. The message SO is displayed with yES or no in the Yield/Flags window.

Press Change to toggle between yES and no .

Press Enter to store the new setting.

Press Cancel to exit the subroutine.

Cow	Program	Ration	Yield/Flags
SO			YES

DELETE
Change

SUBS
Enter

RESET
Cancel
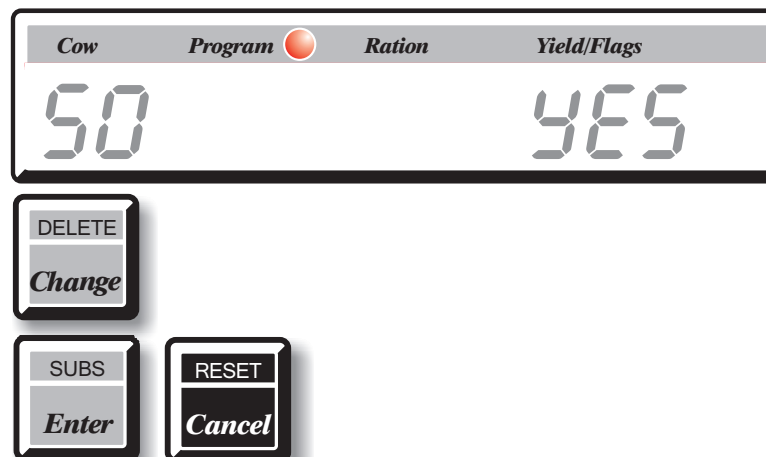
### ENABLE/DISABLE MILK METER INTERFACE: Subroutine 301: Default = NO(OFF)

If milk meters are attached to the system, the interface- the electronic device that converts the output from the milk meters to information that the MicroMarque3S can understand - has to be enabled.

Check that Program mode is selected.

Run subroutine 301. The message MMIF will be displayed with the current setting - YES or no .

Use the Change key to toggle between YES (Interface ON) or no (Interface OFF).

Press Enter to store the setting.

Cow	Program	Ration	Yield/Flags
MMIF	YES		

DELETE
Change

SUBS
Enter
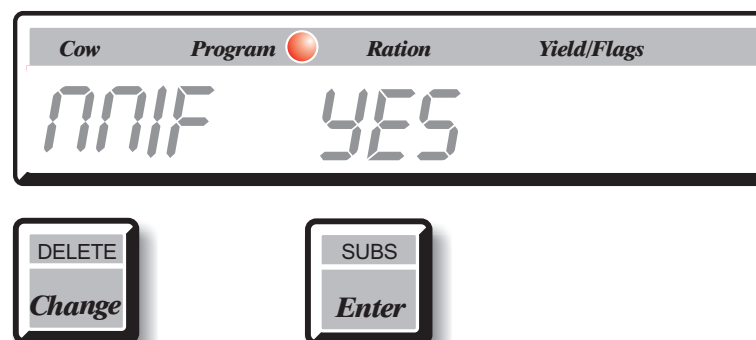
MicroMarque3S Setup Continued

SET VERSION 2 MILK METER SYSTEM: Subroutine 331

This subroutine tells the micro control to communicate using version 2 protocols.

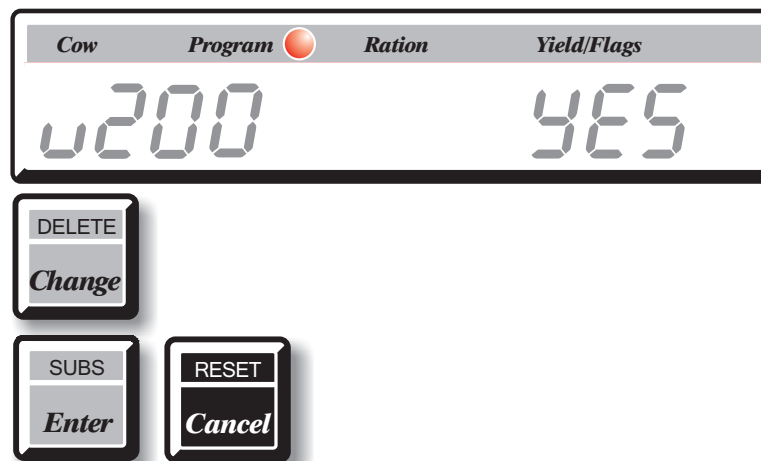> Check that Program Mode is selected.
>
> Run the subroutine. The message v200 is displayed with yES or no in the Yield/Flags window.
>
> Press Change to toggle between yES and no .
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.
>
> **NB** - ATL Micro Milk Meter software display versions V2.01.00 and above require this - please refer to the Micro Milk Meter manual.

Cow	Program ●	Ration	Yield/Flags
u200			YES

DELETE
Change

SUBS
Enter

RESET
Cancel

ENABLE/DISABLE METER LOCKOUT : Subroutine 317 : DEFAULT = NO(OFF)

This routine enables or disables the meter lockout function, this function will lockout a milk meter if a cow has the selected warnings from subroutine 318.

> Check that Program Mode is selected.
>
> Run the subroutine. The message ENLK is displayed with yES or no in the Yield/Flags window.
>
> Press Change to toggle between yES and no .
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

💣 *Use with caution; milk meter lockout is not a fool proof method of preventing cross infection or milking of cows treated with antibiotics!*

ENABLE/DISABLE METER LOCKOUT FLAGS: Subroutine 318: Default = ALL

The lockout flags setting enables which flags will lockup the meter if they are selected against a cow.

> Check that Program mode is selected.
>
> Run subroutine 318. The message OLCK will be displayed with the current flags show in the flags area of the display.
>
> Use the corresponding number keys to toggle the flags as you would for a cow.
>
> Press Enter to store the setting.

ENABLE/DISABLE METER SWING-TO-START : Subroutine 319 : DEFAULT = NO(OFF)

This routine enables or disables the meter swing-to-start function, where by the meter will automatically start milking when the side is changed in a swing over parlour.

> Check that Program Mode is selected.
>
> Run the subroutine. The message OS2S is displayed with yES or no in the Yield/Flags window.
>
> Press Change to toggle between yES and no .
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

WASH MODE IDLE/WASH : Subroutine 313

This routine provides a backup to the wash control, enabling the user to select either idle or wash mode from the MicroMarque3S.

> Check that Program Mode is selected.
>
> Run the subroutine. The messages IdLE or wASh are displayed depending on the current mode of the Micro Milk Meter System, with NEt in the Yield/Flags window.
>
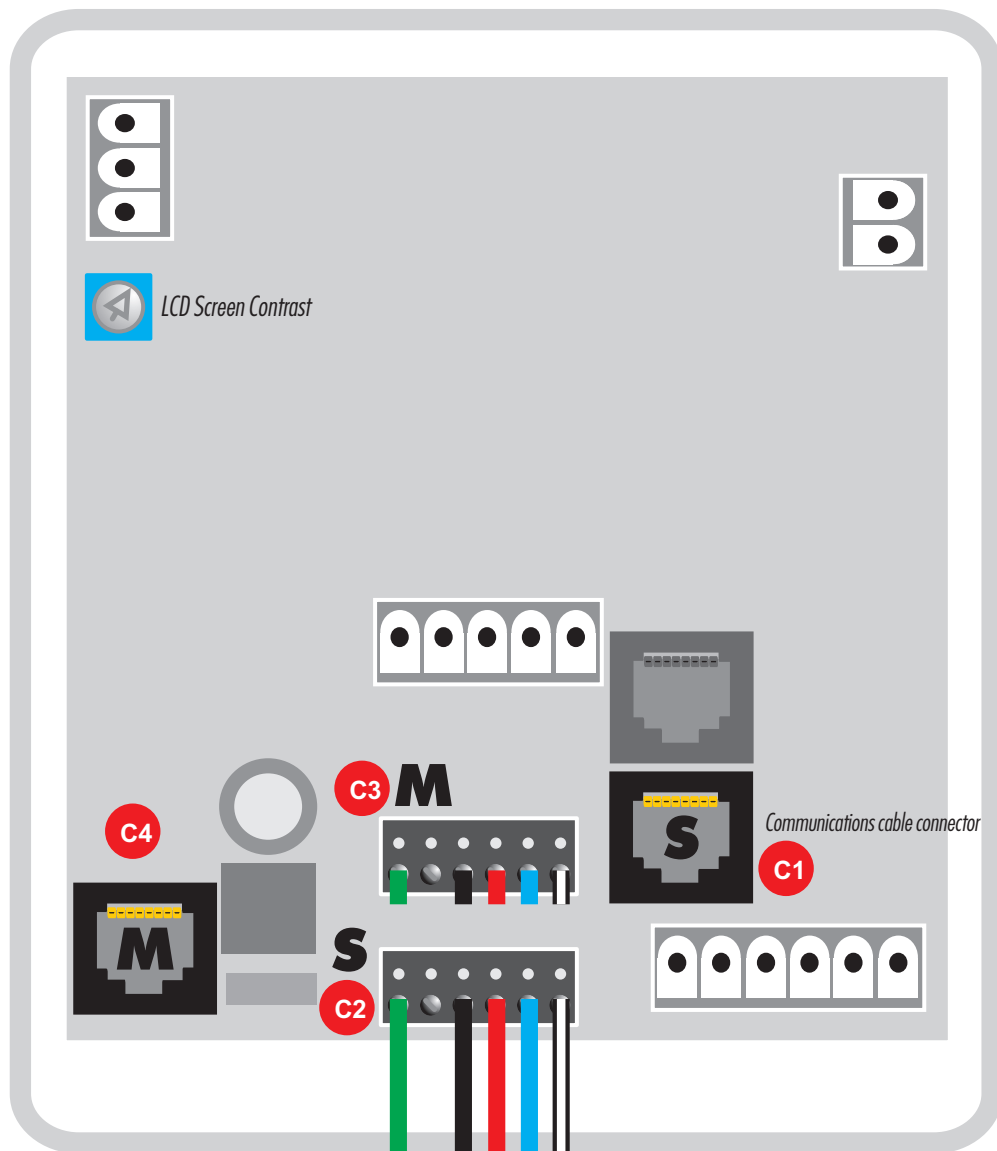> Press Change to toggle between IdLE and wASh .
>
> Press Enter to store the new setting.
>
> Press Cancel to exit the subroutine.

MicroMarque3S Micro Wash Control Installation

The Micro Wash Control has a large character backlit LCD display and 6 button keypad to set the parlour into wash, idle or milking modes.

For Stand - Alone mode wire into Meridian Master connections (Connections marked M), for all other modes wire into slave connections (Connections marked S).

LCD Screen Contrast

C3 **M**

C4

Communications cable connector

S

C1

M

S

C2

Power Negative -
Not Connected
Meridian Bus Ground
Meridian Bus
Meridian Bus
Power Positive +

C1 Slave Meridian Cat5e Connection

C2 Slave Meridian Old-Style Connection

C3 Master Meridian Old - Style Connection

C4 Master Meridian Cat5e Connection

6 core cable Or Cat5e enters through 20mm IP65-rated gland in rear of box
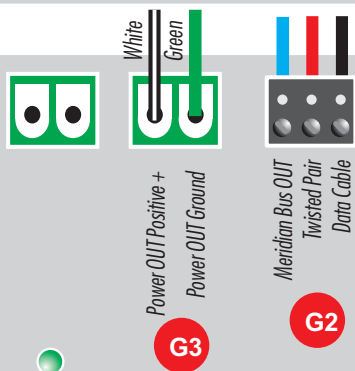Connects To G1 on connection box

E1

Micro Wash Control to Connection Box Installation

6-Core Cable OUT To Micro Wash Control
Connects To E1

G1

White
Green

Power OUT Positive +
Power OUT Ground

Meridian Bus OUT
Twisted Pair
Data Cable

G2

G3

Power LED

Green - Correct Polarity
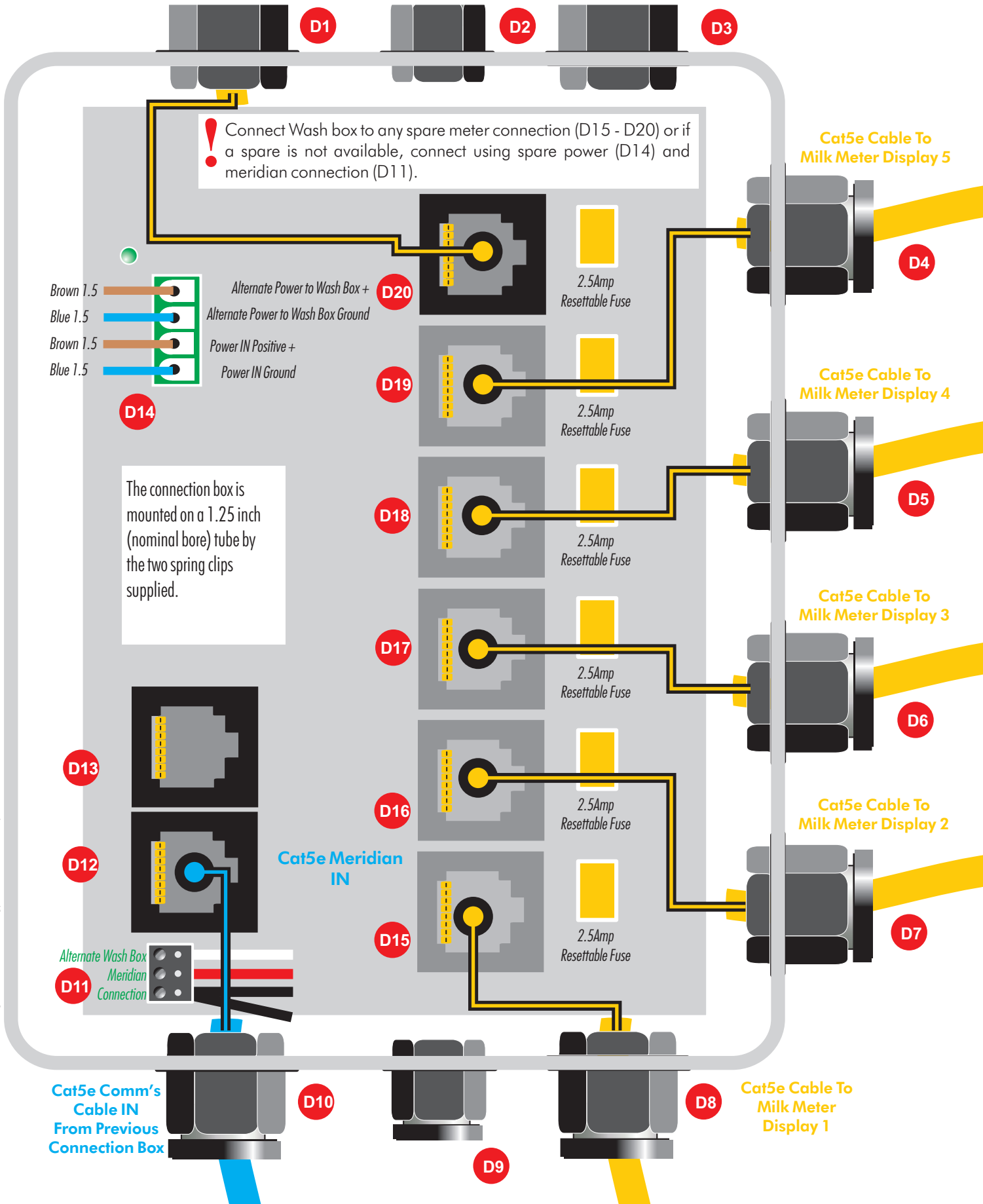
Red - Wrong Polarity

The connections to Micro Wash Control from connection box at the end of the parlour nearest to the Micro Wash Control.

The connection box is mounted on a 1.25 inch (nominal bore) tube by the two spring clips supplied.
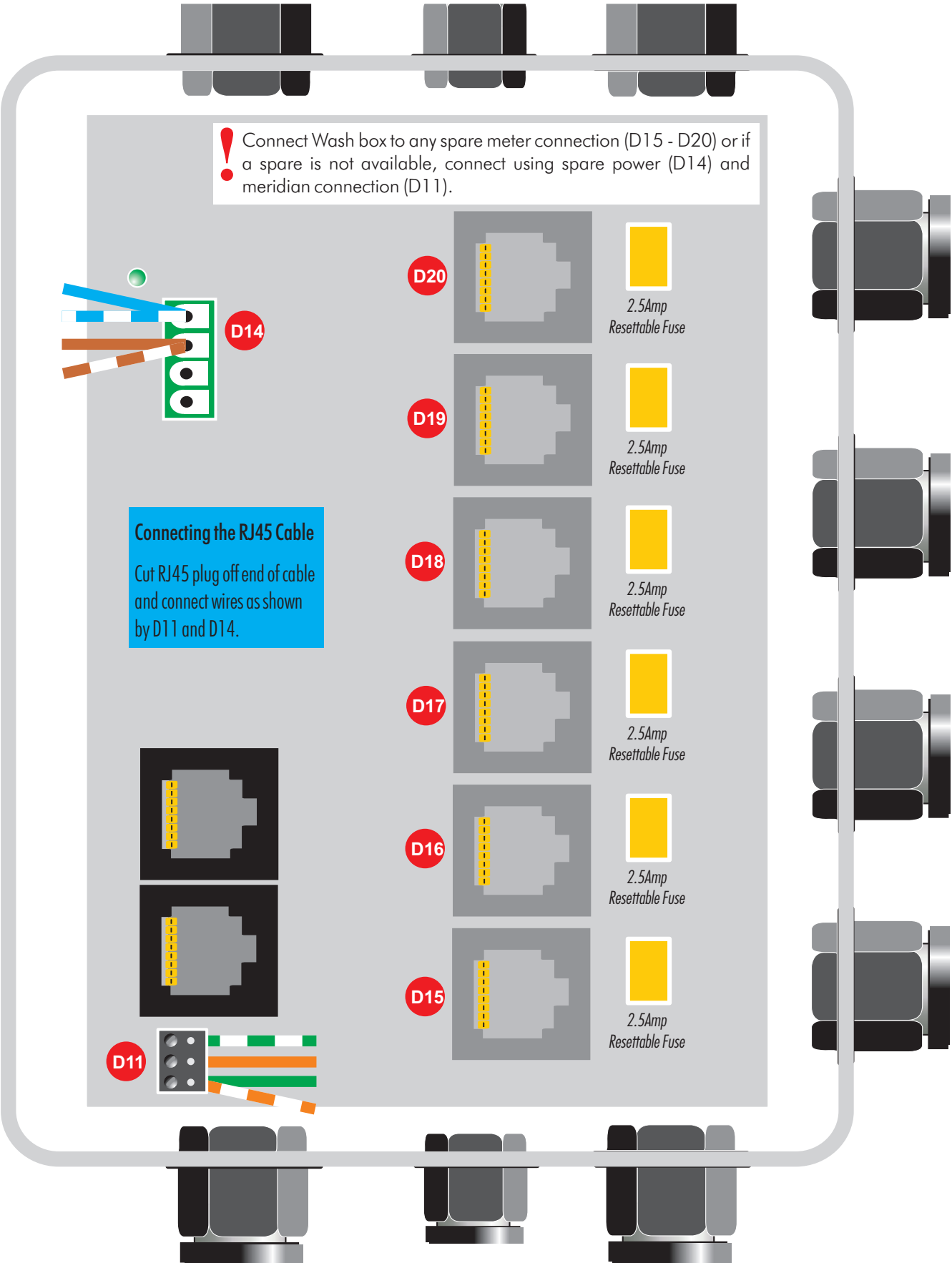
Micro Wash Control to Connection Box Installation - *Cat5e Version*

! Connect Wash box to any spare meter connection (D15 - D20) or if a spare is not available, connect using spare power (D14) and meridian connection (D11).

D1
D2
D3

Cat5e Cable To Milk Meter Display 5

D4

2.5Amp Resettable Fuse

Brown 1.5 — *Alternate Power to Wash Box +*
Blue 1.5 — *Alternate Power to Wash Box Ground*
Brown 1.5 — *Power IN Positive +*
Blue 1.5 — *Power IN Ground*

D20
D14

D19

2.5Amp Resettable Fuse

Cat5e Cable To Milk Meter Display 4

D5

The connection box is mounted on a 1.25 inch (nominal bore) tube by the two spring clips supplied.

D18

2.5Amp Resettable Fuse

Cat5e Cable To Milk Meter Display 3

D6

D17

2.5Amp Resettable Fuse

D13

D16

2.5Amp Resettable Fuse

Cat5e Cable To Milk Meter Display 2

D12

Cat5e Meridian IN

D15

2.5Amp Resettable Fuse

D7

Alternate Wash Box Meridian Connection
D11

Cat5e Comm's Cable IN From Previous Connection Box

D10

D9

Cat5e Cable To Milk Meter Display 1

D8

Micro Wash Control to Connection Box Installation - Cat5e Version - If No Spare Cat5e Sockets Available (Hard-Wired)

! Connect Wash box to any spare meter connection (D15 - D20) or if a spare is not available, connect using spare power (D14) and meridian connection (D11).

D14

D20

2.5Amp
Resettable Fuse

D19

2.5Amp
Resettable Fuse

Connecting the RJ45 Cable

Cut RJ45 plug off end of cable and connect wires as shown by D11 and D14.

D18

2.5Amp
Resettable Fuse

D17

2.5Amp
Resettable Fuse

D16

2.5Amp
Resettable Fuse

D15

2.5Amp
Resettable Fuse

D11

Micro Wash Control Bracket Installation - Pre-March 2010

The Micro Wash Control comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket
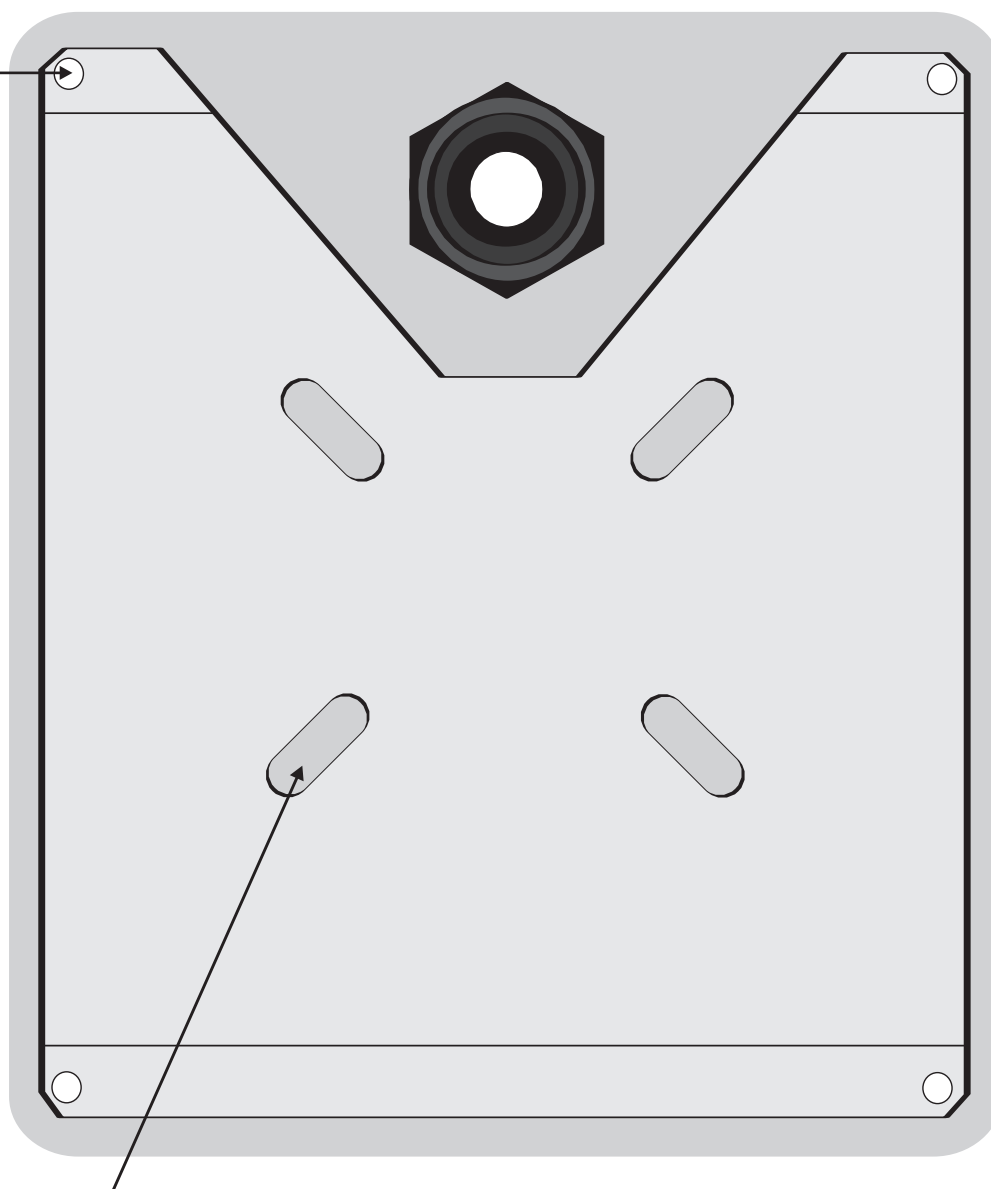
Slots For Exhaust Clamps To Mount Micro Wash Control- Slots Allow Both Vertical & Horizontal Mounting

Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube
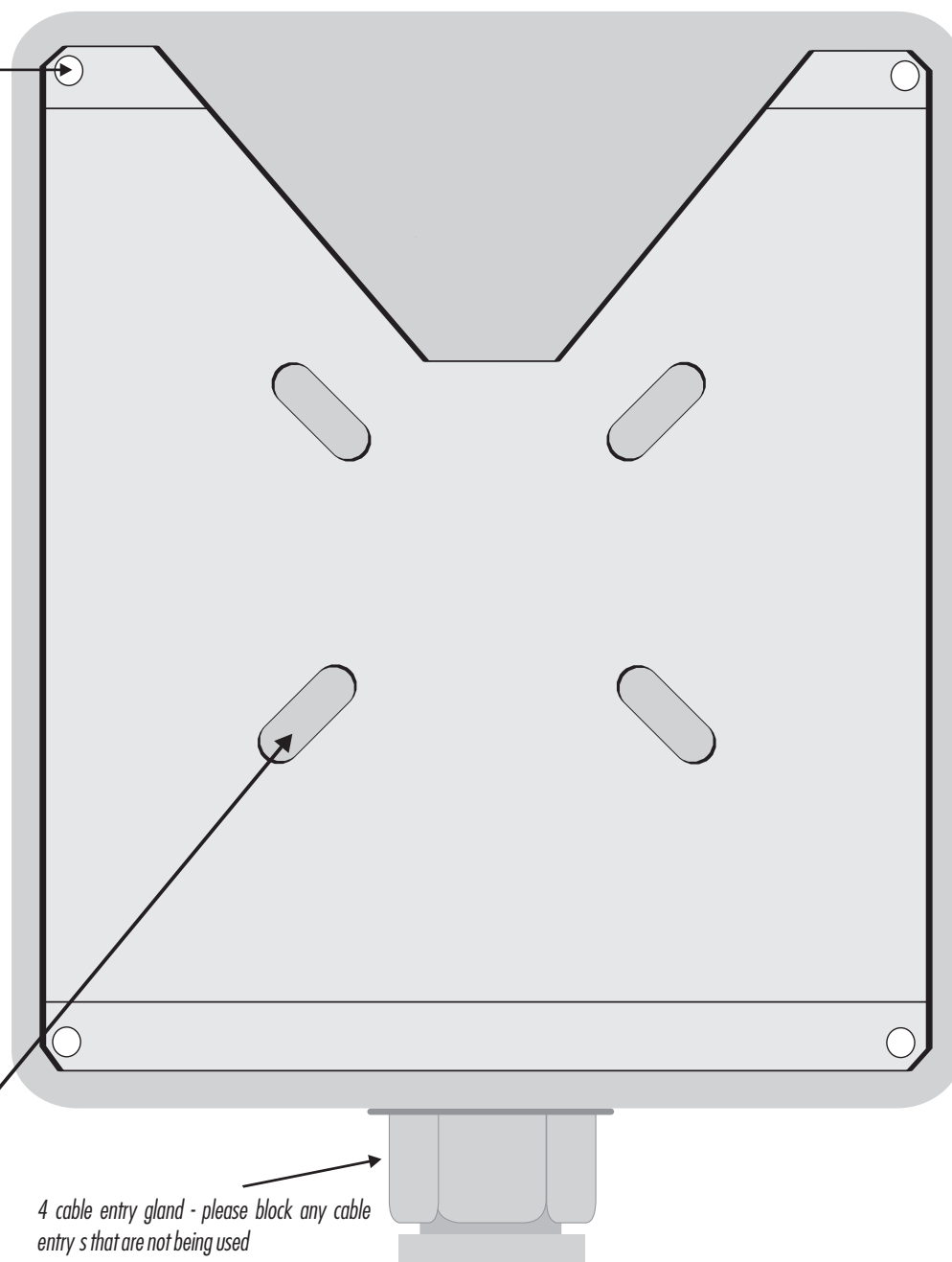
Micro Wash Control Bracket Installation - Post March 2010

The Micro Wash Control comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket

Slots For Exhaust Clamps To Mount Micro Milk Meter Control Box - Slots Allow Both Vertical & Horizontal Mounting

Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

Micro Wash Control Bracket Installation - Post January 2011

The Micro Wash Control comes with a standard bracket which allows mounting on a 1.25 inch (nominal bore) tube either vertically or horizontally using exhaust clamps.

M4 x 16mm Pozi-Pan S/S & M4 Nut S/S (Or M4 Hank Bush) To Fit Box To Standard Bracket

4 cable entry gland - please block any cable entry s that are not being used

Slots For Exhaust Clamps To Mount Micro Milk Meter Control Box - Slots Allow Both Vertical & Horizontal Mounting

Slots Designed To Accommodate 35-45mm Exhaust Clamps

ATL Supplies 45mm Exhaust Clamps As Standard - These Fix To 1.25 Inch (Nominal Bore) Tube

Setting Up The Micro Wash Control

The Wash Time

This sets the wash time for the Micro Milk Meter system.

To Set the Wash Time:

Press and hold the HAND, TICK, FLAG and UP arrow keys:

Release the keys:

Now select the wash time by using the UP and DOWN arrows keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct wash time selected press the TICK key to store the data:

The system type setting is now displayed.

```
Setup
Wash 070
```
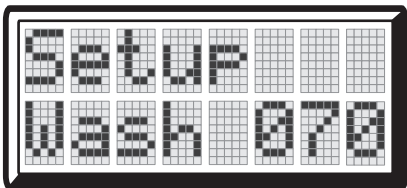
The Type Of Micro Milk Meter System

This setting determines whether the Micro Milk Meter system is connected to a MicroMarque3S control.

To Select the Type of System:

Select N (NO - for stand-alone systems) or Y (YES - for systems linked to a MicroMarque3S):

Press the TICK key to store the setting:

If the system is set to Y the wash box setup is now complete.

If the system is set to N, the number of stalls setting will be displayed.

```
Setup
Micro   N
```
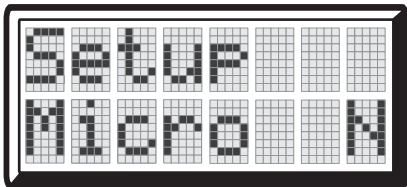
Setting Up The Micro Wash Control Continued

Setting the Number Of Milking Points on a Stand-Alone System
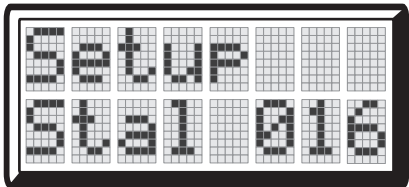
This sets the number of milking points on a stand-alone Micro Milk Meter system.

To Set the Number of Milking Points:

Select the number of stalls by using the UP and DOWN arrows keys:

NB If the TICK key is held down with the UP or DOWN arrow keys the numbers increment or decrement by 10:

With the correct number of stalls selected press the TICK key to store the data:

Setting the Cumulative Milk Yield to Automatically Zero on a Stand-Alone System

This automatically sets the milk yield totaliser to zero. NB - This is only available in software versions v2.05.00 Wash Box and v2.16.00 Micro Milk Meter or above.

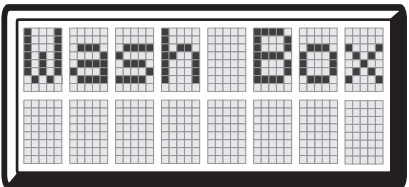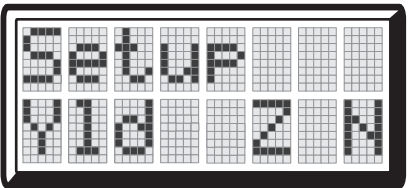**To Set the Cumulative Milk Yield Automatic Zero On or Off:**

Select Yes (Y) or No (N) by using the UP and DOWN arrows keys:

N = Do not clear cumulative milk yield on entering Milking Mode.

Y = Clear cumulative milk yield on entering Milking Mode.

When the correct setting is displayed, press the TICK key to store the data:

System setup is now complete.

Wash Box Test Routines

Testing the Milk Meter Communications (IDS) on a Stand-Alone System

The communications between each milk meter can be tested using this routine. NB - This routine is only available on stand-alone systems.

To Test the Milk Meter Communications:

Press and hold the IDLE, TICK, WASH and UP keys:

Step through all the milk meter points using the UP and DOWN arrow keys:

Press the IDLE key to swap sides on doubled-up parlours:

NB - The display will report OK if the communications are functioning correctly. ERR will be displayed if the communications are not functioning correctly. Please note that ERR will also be reported if no milk meter displays   are connected at the address.

Press the TICK key to exit the routine.
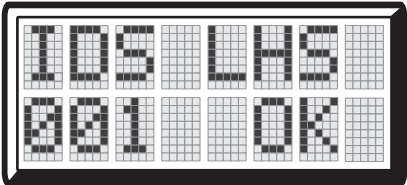
Calibrating the Micro Milk Meter System - Method 1

To ensure accurate performance each Micro Milk Meter requires calibrating before use. This procedure may be carried out between milkings using milk or a hypochlorite solution. The calibration equipment required is as follows:

- 15 litres of milk or 3% Hypochlorite solution.

- 1 metre length of 16mm stainless steel pipe with 1mm hole in the end

- Milking/dump bucket

- Bucket for milk or Hypochlorite solution

- Weighing scales accurate to within 50 grams

Before undertaking the calibration procedure, the drop value for each milk meter must be checked. For all new installations this value will have been factory set to 200, but for systems that have already been calibrated, the settings may be determined using the following procedure.
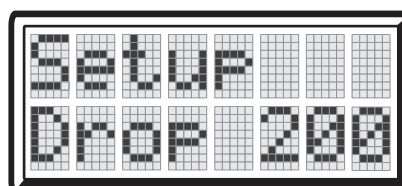
To access the drop value press and hold the following sequence of keys:

Then press the tick key to go to the drop value:

The LCD display will then show the drop value:

Calibrating the Micro Milk Meter System Continued

Press the TICK [✓] key to confirm drop value and press it further times to step to the end of the setup routine.

- Note the drop value from the milk meter control onto the calibration chart (NB factory default figure is 200) (photocopy chart on next page).

- Set the receiving dump bucket with all the hoses connected on the scales and weigh. This weight is the tare weight.

- Connect a 1 metre length of 16mm stainless steel pipe with a 1mm hole in the end furthest from the liquid and connect this to the long milk tube.

- Put approximately 15 litres of milk or 3% hypo solution into a bucket (NB milk is more accurate).

- Place the long milk tube into the calibration liquid, start the milk meter in manual mode and suck the calibration liquid through the milk meter into the dump bucket.

- When approximately 10 litres of liquid is recorded on the milk meter control, stop the milk meter.

- Note the weight of the dump bucket and then deduct the tare weight; this is the WEIGHT of liquid that has gone through the milk meter.

- To convert to litres divide the weight by 1.04 (NB 12.5 kilograms divided by 1.04 = 12 litres).

- Enter these figures onto the calibration chart along with the milk meter control displayed milk yield figures and repeat procedure twice more.

- Add the 3 weighed literages together.

- Add the 3 milk meter control figures together.

     For example, weighed totals added together equals 35.8 litres; milk meter control totals added together equals 33.4 litres.

- Divide the 35.8 by 33.4 equals 1.07; this equates to a 7% error.

- To find the new calibration value multiply the milk meter control drop value by 1.07.

     For example, 200 multiplied by 1.07 equals 214. This is the new drop value to be entered into the control.

Entering The New Drop Value

To enter the new drop value follow the procedure outlined on page 10.

The new drop value can be entered by pressing the UP [△] or DOWN [▽] arrow keys.

Holding down the TICK key and pressing the UP or DOWN arrows allows the values to be changed in tens.

[✓] + [△]

Press the TICK [✓] key to confirm drop value and press it further times to step through the setup routines.

Micro Milk Meter Calibration Form - SAMPLE

Milk Meter No.			Original Drop Value	
Reading No.	**Scales - Kilogram**	**Scales - Litres***	**Control - Litres**	——
1	**12.5**	**12.0**	**11.2**	——
2	**12.3**	**11.8**	**11.0**	——
3	**12.5**	**12.0**	**11.2**	——
Total	**37.3**	**35.8**	**33.4**	——

A = Total Weighing Scale Readings (litres)

B = Total Control Readings (litres)

C = Ratio of A to B

D = Milk Meter Drop Value During Test

E = New Calculated Drop Value

A	B	C
35.8 divided by 33.4 equals 1.07		
C	**D**	**E**
1.07 multiplied by 200 equals 214		

* To convert the kilogram reading on the scales into litres please use the following formula:
Litres = Kilogram / 1.04

Micro Milk Meter Calibration Form - PLEASE COPY AND USE

Milk Meter No.			Original Drop Value	
Reading No.	**Scales - Kilogram**	**Scales - Litres***	**Control - Litres**	——
1				——
2				——
3				——
Total				——

A = Total Weighing Scale Readings (litres)

B = Total Control Readings (litres)

C = Ratio of A to B

D = Milk Meter Drop Value During Test

E = New Calculated Drop Value

A	B	C
divided by equals		
C	**D**	**E**
times by equals		

* To convert the kilogram reading on the scales into litres please use the following formula:
Litres = Kilogram / 1.04

Checking the Calibration of the Micro Milk Meter System

It is recommended that a Calibration Check is carried out on each Micro Milk Meter annually.

To check the calibration follow the instructions on calibrating the milk meter on page 21.

The resulting relative error should be not more than $+/-5\%$; if the error is more than this it will be necessary to re-calibrate the Micro Milk Meter.

Micro Milk Meter Calibration Check Form - SAMPLE

Milk Meter No.			Original Drop Value	
Reading No.	Scales - Kilogram	Scales - Litres*	Control - Litres	——
1	12.5	12.0	11.2	——
2	12.3	11.8	11.0	——
3	12.5	12.0	11.2	——
Total	37.3	35.8	33.4	——

A = Total Weighing Scale Readings (litres)

B = Total Control Readings (litres)

C = Ratio of A to B

D = Milk Meter Drop Value During Test

E = New Calculated Drop Value

A	B	C
35.8 divided by	33.4 equals	1.07
C	**D**	**E**
1.07 multiplied by 200	equals	214

* To convert the kilogram reading on the scales into litres please use the following formula:
Litres = Kilogram / 1.04

Micro Milk Meter Calibration Check Form - PLEASE COPY AND USE

Milk Meter No.			Original Drop Value	
Reading No.	Scales - Kilogram	Scales - Litres*	Control - Litres	——
1				——
2				——
3				——
Total				——

A = Total Weighing Scale Readings (litres)

B = Total Control Readings (litres)

C = Ratio of A to B

D = Milk Meter Drop Value During Test

E = New Calculated Drop Value

A	B	C
divided by	equals	
C	**D**	**E**
times by	equals	

* To convert the kilogram reading on the scales into litres please use the following formula:
Litres = Kilogram / 1.04

Calibrating the Micro Milk Meter System - Method 2

Another method for calibrating the Micro Milk Meter system is by comparing the daily milk yield total in either the Micro Wash Control on stand-alone systems or the MicroMarque3S on integrated systems to the bulk tank total.

Set the drop value to 200 (this is the factory default). It is best to milk the cows for a few days through the milk meters before calibrating as this allows the meters to settle down and the diaphragm to stretch etc. Please note that the drop value does not accurately reflect the true value of the milk measured each time the milk meter operates. This value is computed from the volume measured each time the meter operates plus an amount calculated from the flow rate to allow for the milk flowing through the meter when it is emptying.

Stand-Alone Milk Meter Systems

After a few days make a note of the Total Yield on the Micro Wash Control.

Milking 1547L **or** T.Yield 1547L

When the Micro Milk Meter System is in milking mode, the total number of litres that the cows have yielded in displayed (i.e. 1500L equals 1500 litres). If the Micro Wash Control is not in milking mode, press the UP key to display the Total Yield.

The Total Yield will have to manually zeroed each time the bulk tank is emptied in order for the Total Yield to match and cover the same period.

Compare the Total Yield to the bulk tank printout.

Therefore, to calibrate the milk meters, do the following calculation:

Bulk Tank Printout   10-05-2009

Total Amount Collected   1624 litres

$1547 \div 1624 \times 100 = \underline{95.26\%}$

Milk meters out by <u>4.74%</u>

Therefore, if drop value is set at 200, the drop value should be changed to:

$200 \div 100 \times 104.74 = \underline{209.48}$

Therefore, the milk meter drop values should be changed to 209.

NB - Ensure that the drop value is changed on all milk meter controls.

Re-check this again after a few more days and change if required.

Calibrating Milk Meter Systems integrated with the MicroMarque3S

After a few days make a note of the Daily Milk Yield Total on the MicroMarque3S.

The Daily Milk Yield Total is stored under the Herd Totals. The Daily Milk Yield Total is calculated during the 11:00am automatic housekeeping routine. The automatic housekeeping times need to correspond to the milk collection times. Please refer to the MicroMarque3S Operation manual for information on how to change the automatic housekeeping times. NB - This is only available on MicroMarque3S software v4.27 or above. Please run subroutine 2 to check. To access these press the Totals key on the MicroMarque3S.

Cow	Program ◯	Ration	Yield/Flags	◁ Stall/Side ▷
dAYY				1

Cumulative Totals
1547
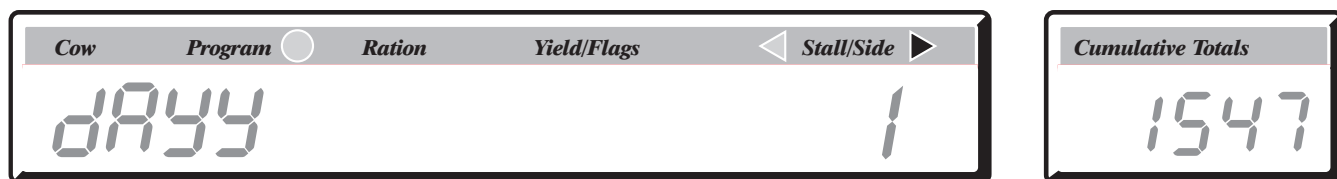
There are 7 totals available. Each press of the Totals key displays a new category. The categories available are:

cFEd*   Cows Fed during this milking

dAYF*   Daily Consumed Feed Total

dAYY*   Daily Milk Yield Total

nLKY*   Total Milk Yield during this milking (software v4.29 or above)

totF   Total Feed Consumed to Date

totY   Total Milk Yield to Date

bAtF   Total Feed dispensed using Batch Mode

Totals

Press the Totals key until the MicroMarque3S display shows dAYY. The cumulative totals window will show the total milk yield for the current day.

Compare the Total Yield to the bulk tank printout.

Therefore, to calibrate the milk meters, do the following calculation:

Bulk Tank Printout   10-05-2009

Total Amount Collected   1624 litres

$1547 \div 1624 \times 100 = \underline{95.26\%}$

Milk meters out by $\underline{4.74\%}$

Therefore, if drop value is set at 200, the drop value should be changed to:

$200 \div 100 \times 104.74 = \underline{209.48}$

Therefore, all milk meter drop values should be changed to 209.

NB - Ensure that the drop value is changed on all milk meter controls.

Re-check this again after a few more days and change if required.