AUTO XL
PARLOUR FEEDER CONTROL

Version - March 2010
For Software Version V1.05

Part Number - 39-0010

AUTO XL PARLOUR FEEDER CONTROL: **INDEX**

GOOD PRACTICE: Mains Supply.

- A separate mains supply and earth running directly from the consumer meter 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.
- Terminate in a sealed, fused, double pole switched outlet fitted with a 13Amp (Type 1362) fuse or trip. A 3-pin ring main socket is not suitable in parlour conditions. All mains cabling must be contained in a firmly secured durable conduit.

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 Supplies: Output Voltages.

- ATL power supply outputs are factory set and should not be adjusted.

4pt, 8pt and 12pt PSU	Control PSU	396 Watt 12vDC PSU	60 Watt 12vDC PSU
Input: 230vAC.	*Input: 230vAC.*	*Input: 100 - 240vAC.*	*Input: 100 - 240vAC*
Feeder Supply: 13.6vDC.	*Control Supply: 14-18vDC.*	*Output: Nominal 12vDC.*	*Output: Nominal 12vDC.*
Control Supply: 14-18vDC.			

- On 4pt, 8pt and 12ptpower supplies, the feeder supply is fused at either 20 or 30Amps depending upon the type, and the control supply at 2Amps. Additionally, there is a thermal cutout associated with the feeder supply which will remove power from the feeders in the event of an overload. It may take several minutes for the supply to be restored if the cutout does operate.
- The 396 Watt 12vDC and 60 Watt 12vDC power supplies have a thermal cutout and overload protection which removes power from the outputs in the event of an overload.
- There are two indicators fitted to the base of the power supply casing; red indicates that the mains is present and green that the output supply is available.

Control and Feeder Cables and Conduit.

- Cables must be kept as short as possible running directly from point to point. Cut out any excess cable rather than leaving it coiled.
- Wherever possible cables should be contained in a waterproof conduit using the correct csa cable specified in the diagrams.
- Entries must be made into the bottom of power supply or control casings but never into the top. This will invalidate the warranty.
- Strip existing cables back to bright copper before connection.
- 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 Sheets Included: Datasheet 16A-B - 'M' Type Feeder Connections and Datasheet 17A-B - 'M' Type Feeder Connections.

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Use with caution - deletes setting permanently.

AUTO XL PARLOUR FEEDER CONTROL: **1**

Current Functions in Software V1.05:

Below is the complete list of functions for easy reference:

Use with caution - deletes settings permanently.

AUTO XL PARLOUR FEEDER CONTROL: **2A**

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.

AUTO XL PARLOUR FEEDER CONTROL: **2B**

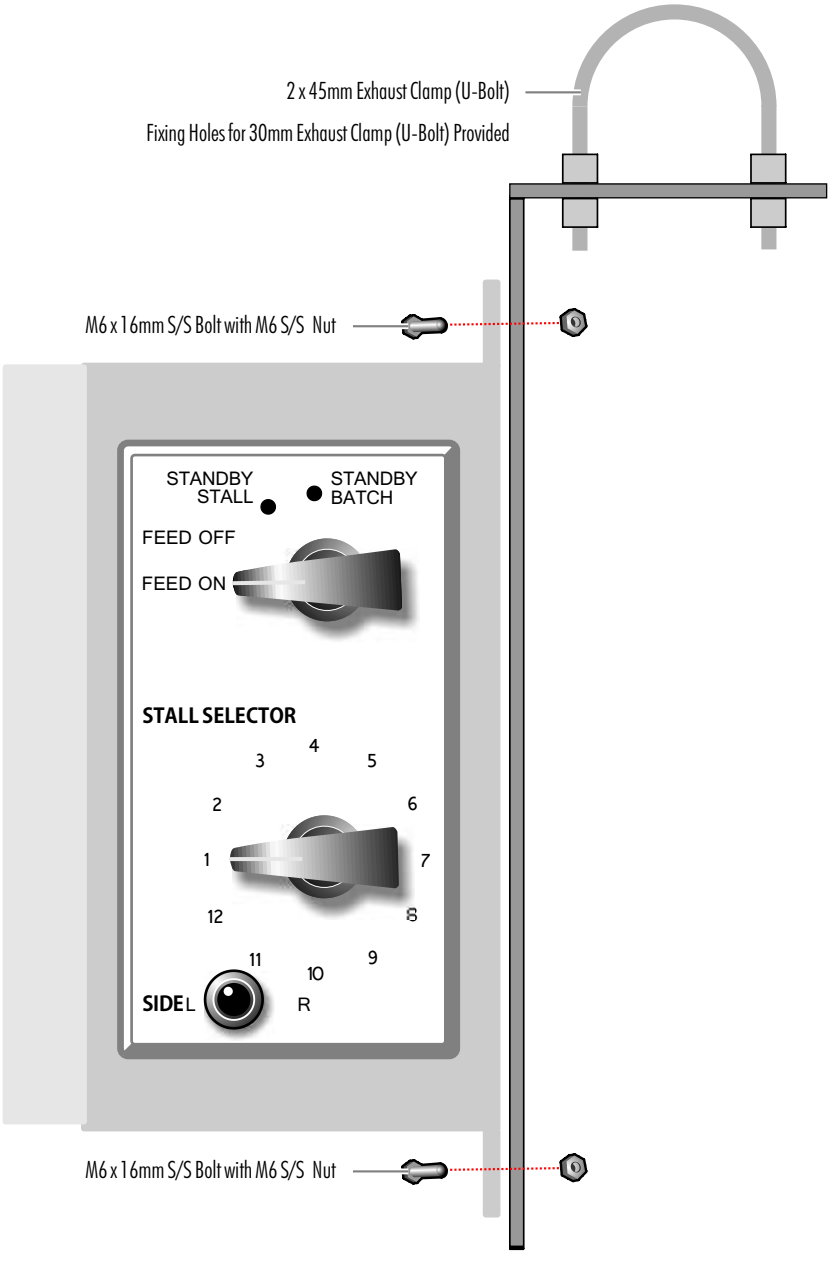
AutoXL Siting and Mounting:

The AutoXL comes with a bracket and fixing kit. This should be used to mount the control onto a crossover in the milking parlour pit.

- It is recommended that the control is mounted at the entry end of the pit, with the control face facing the collecting yard.

IMPORTANT - Feeder Relay Extension boxes should be mounted as close to the AutoXL as possible to facilitate the operation of the stand-by feeding.

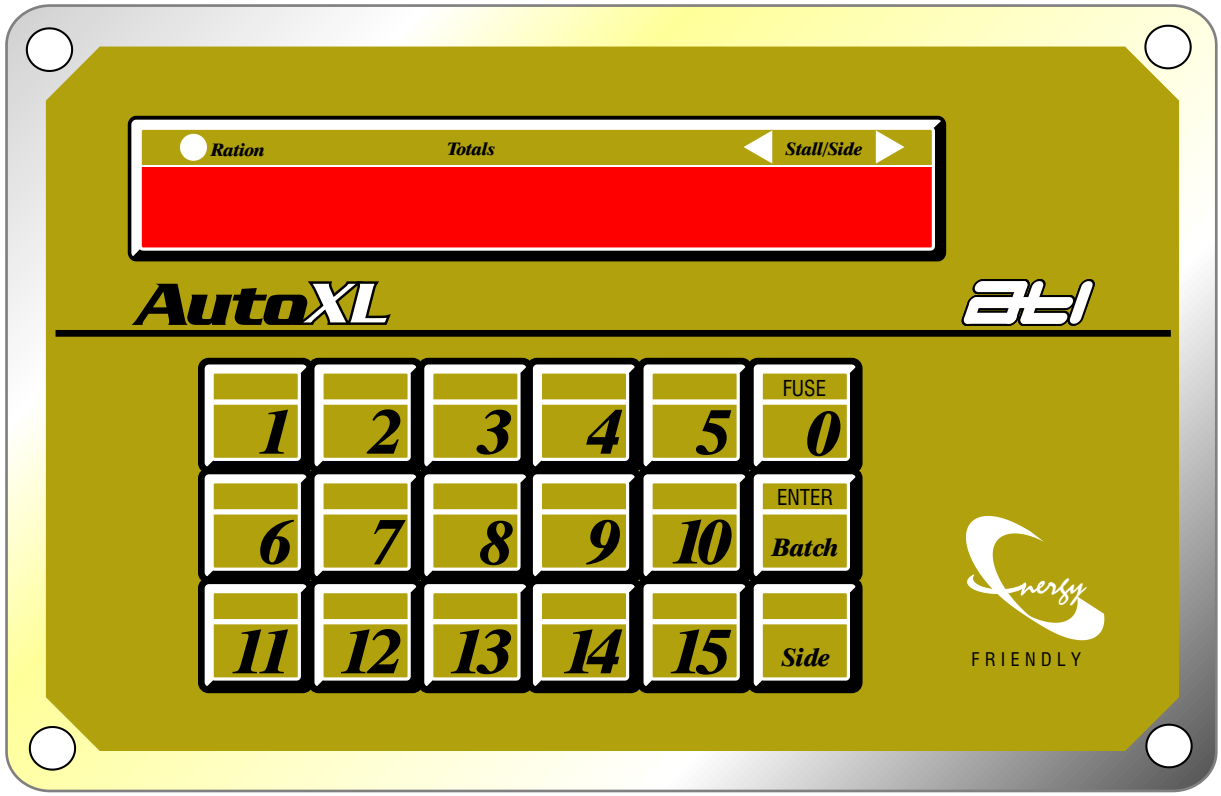
Mounting the Feeder Relay Extension boxes away from the milking pit and AutoXL control will make stand-by feeding difficult and should be avoided.



AUTO XL PARLOUR FEEDER CONTROL: **2C**

The AutoXL Feeder Control

The AutoXL is a simple and easy-to-use ration feeder control for herringbone or abreast parlours. The keys and display are shown in the illustration below:

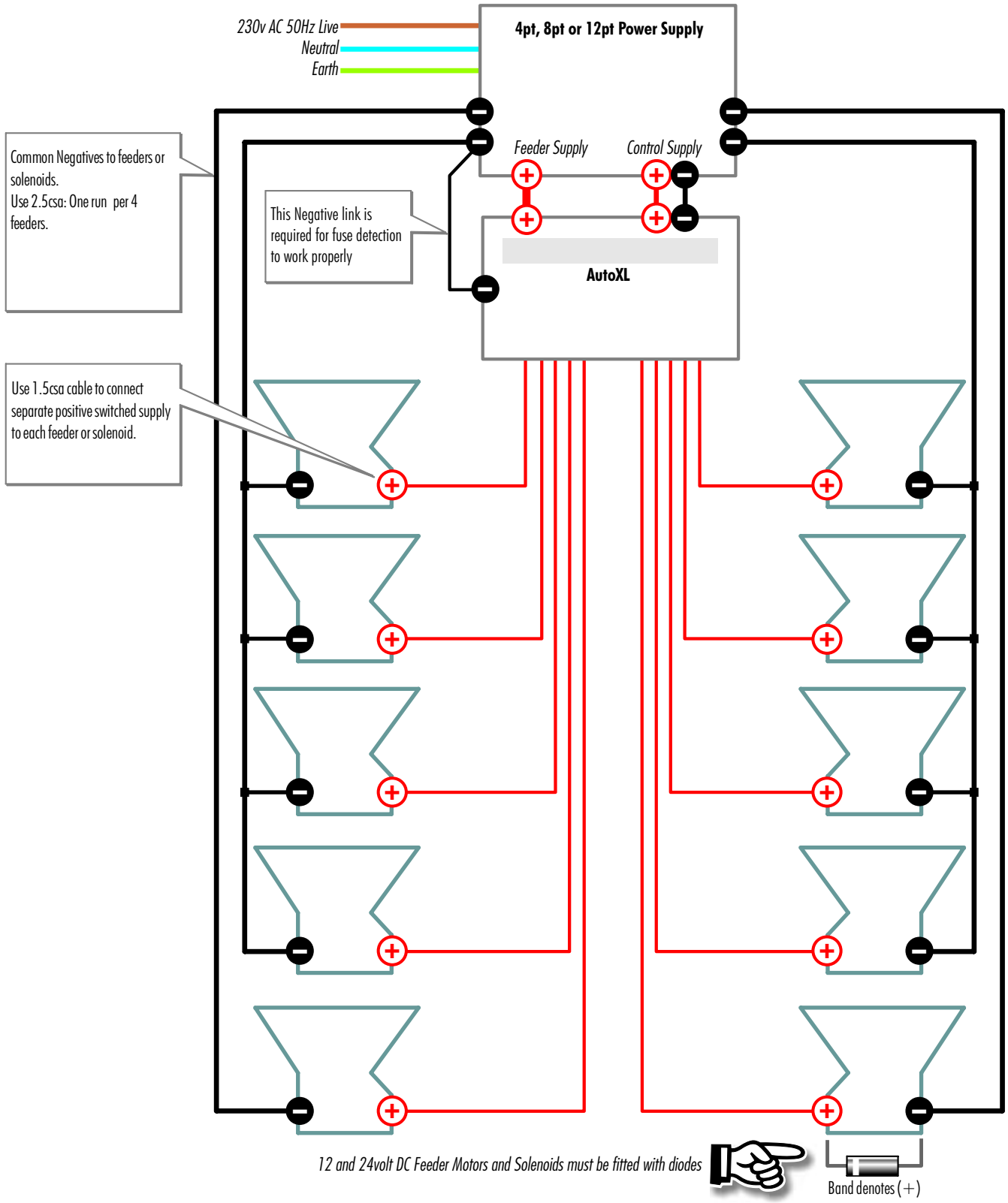


AutoXL Feeder Control Features:

- Individual and global feeder calibration.
- Built-in stand-by feeding.
- Automatic resettable fuses.
- Easy-to-use batch feeding feature.
- 15 farm settable ration keys configured from the keyboard.
- Maximum parlour size - 38pts
- Standard feeder switching voltage - +/-12-24vDC
- Electric or vacuum feeder options.
- Pulsed or timed feeder options.
- Electronic fuse detection with power supply failure warning.
- Sequential and stored feeding modes.
- Individual or batch feeding.
- Batch feed total.
- Number of cows fed total.

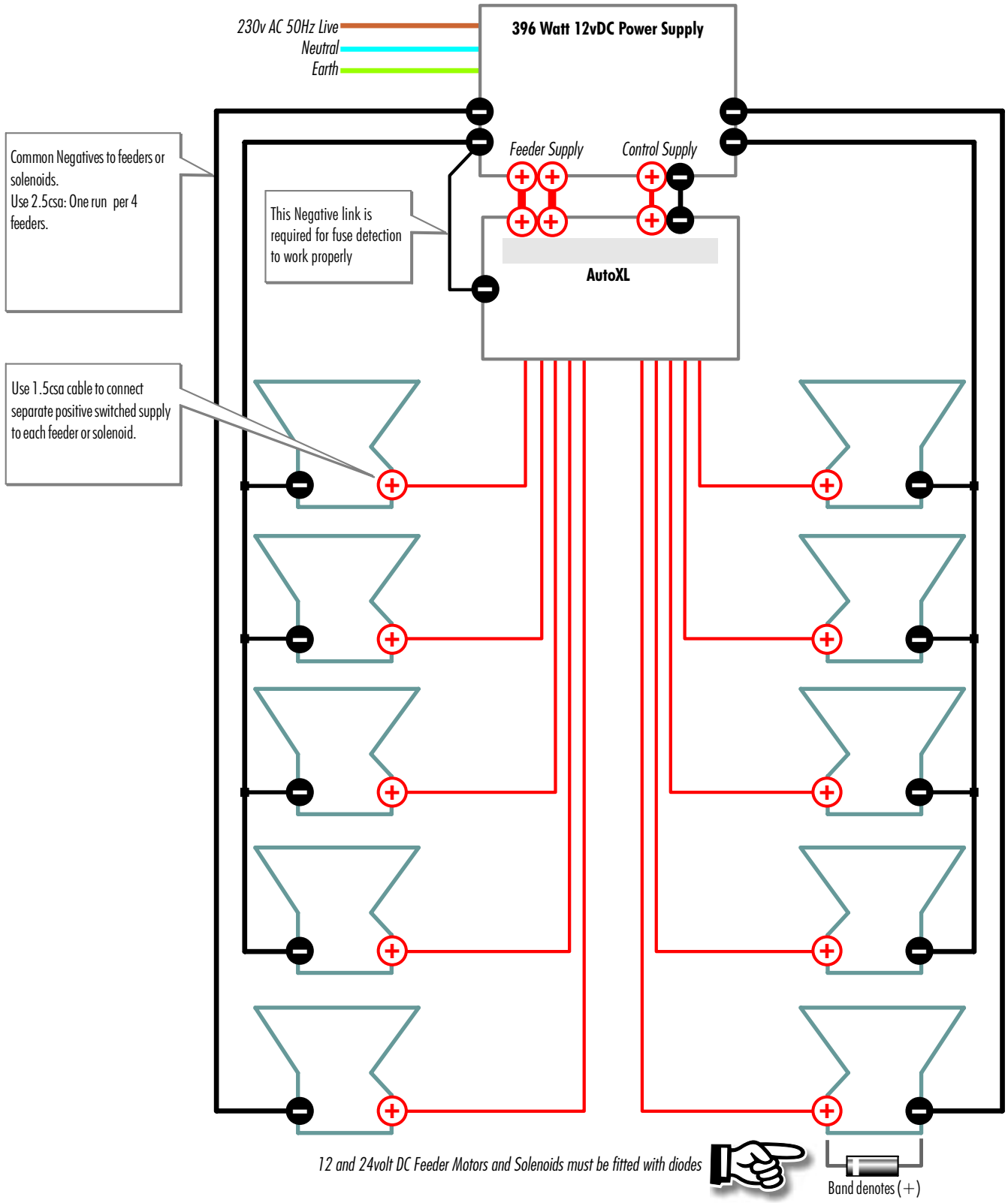
AUTO XL PARLOUR FEEDER CONTROL: **3A**

4pt, 8pt or 12pt Power Supply, AutoXL and Feeder Connections: Up to 24pts



AUTO XL PARLOUR FEEDER CONTROL: **3B**

396 Watt 12vDC Power Supply, AutoXL and Feeder Connections: Up to 24pts

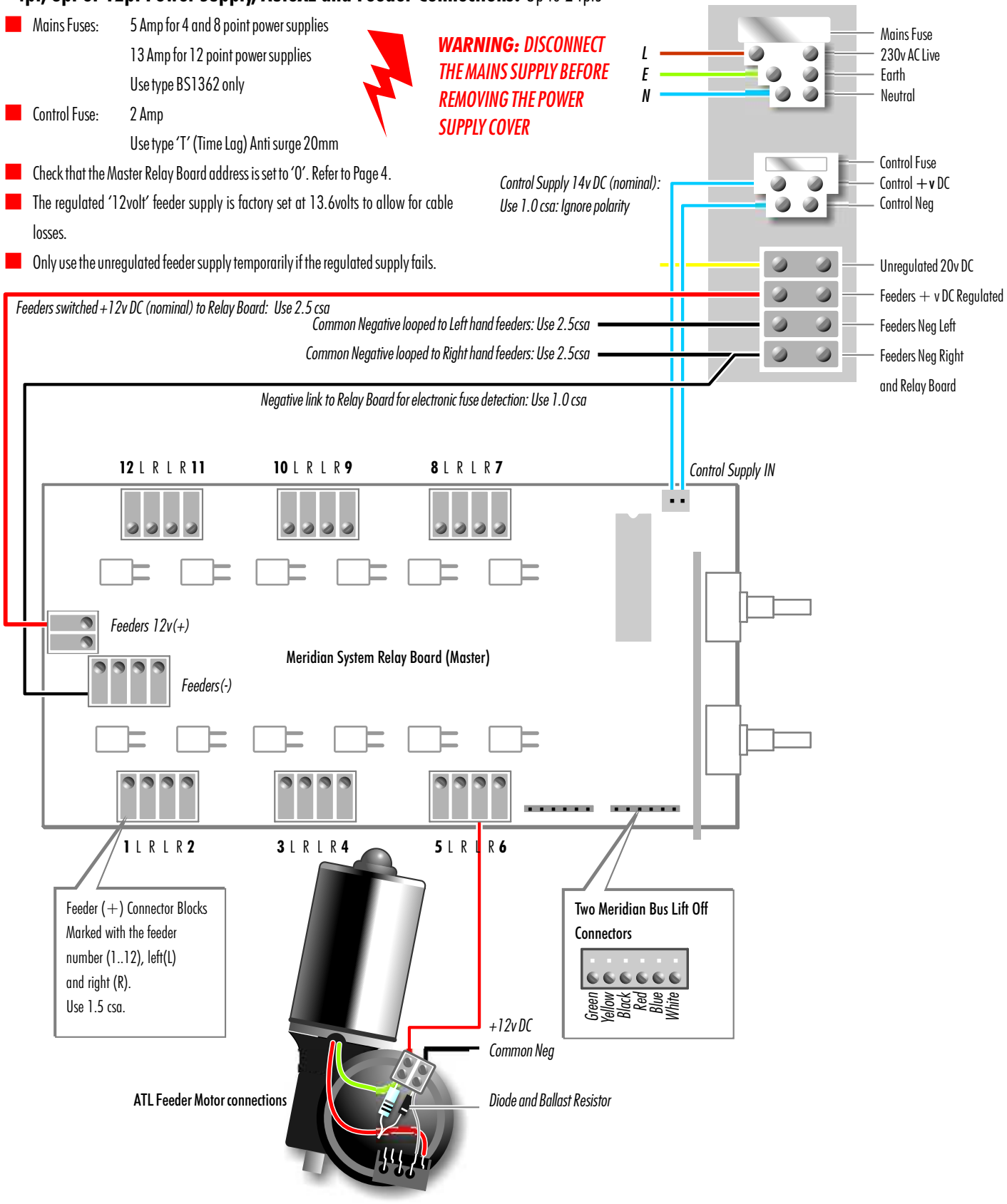


AUTO XL PARLOUR FEEDER CONTROL: **3C**

4pt, 8pt or 12pt Power Supply, AutoXL and Feeder Connections: Up to 24pts

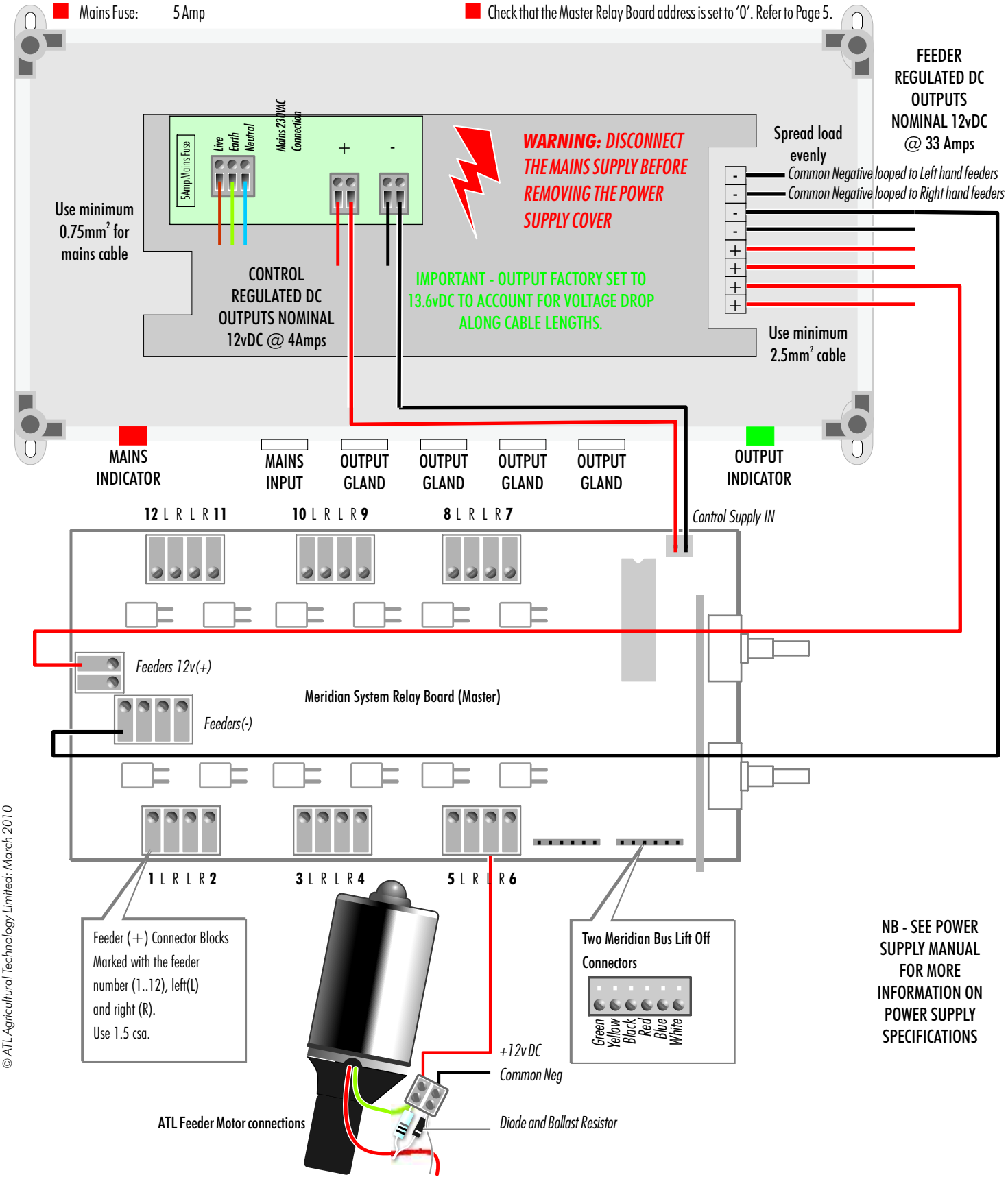
- Mains Fuses: 5 Amp for 4 and 8 point power supplies
  13 Amp for 12 point power supplies
  Use type BS1362 only
- Control Fuse: 2 Amp
  Use type 'T' (Time Lag) Anti surge 20mm
- Check that the Master Relay Board address is set to '0'. Refer to Page 4.
- The regulated '12volt' feeder supply is factory set at 13.6volts to allow for cable losses.
- Only use the unregulated feeder supply temporarily if the regulated supply fails.

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



AUTO XL PARLOUR FEEDER CONTROL: **3D**

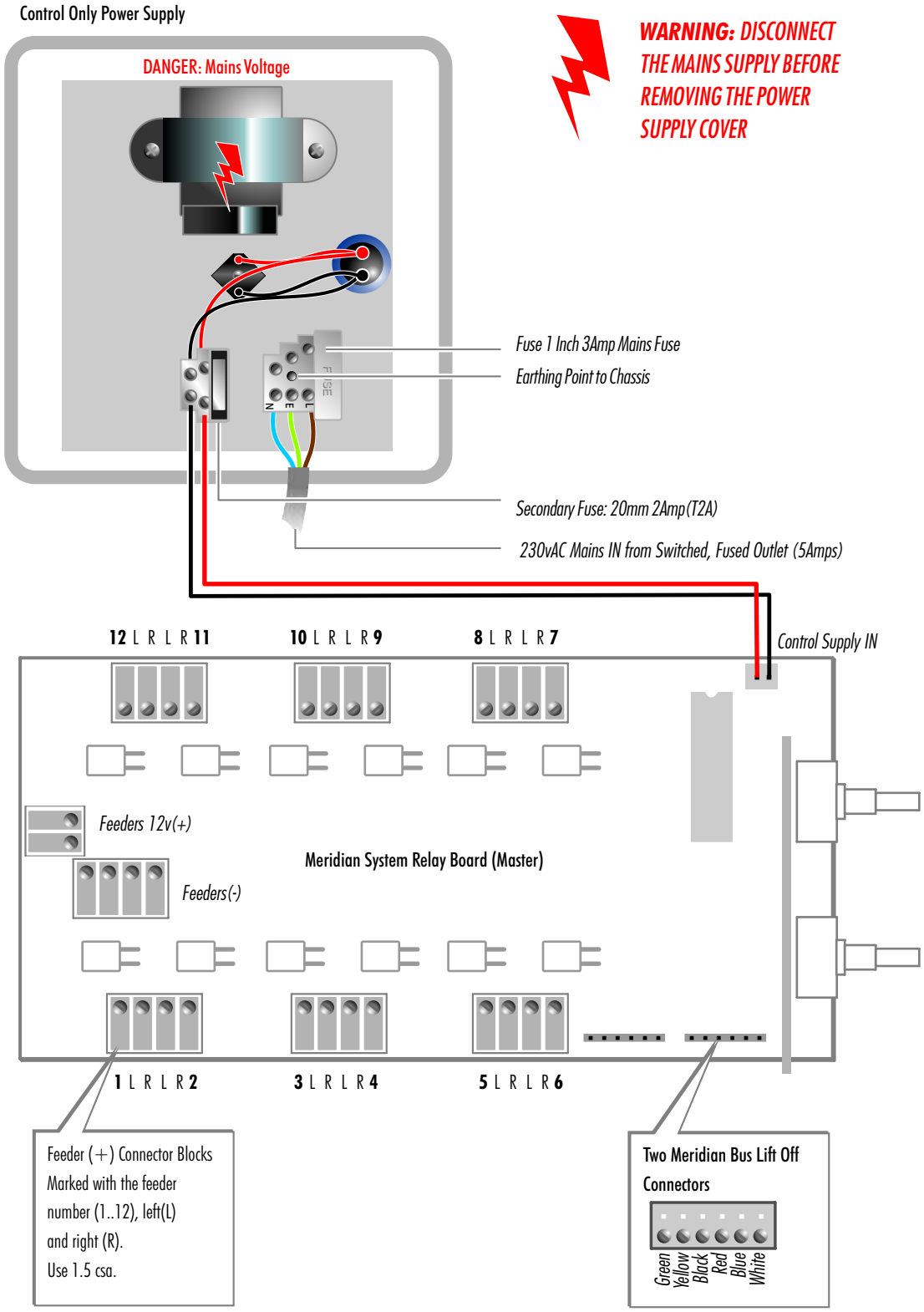
396 Watt 12vDC Power Supply, AutoXL and Feeder Connections: Up to 24pts



NB - SEE POWER SUPPLY MANUAL FOR MORE INFORMATION ON POWER SUPPLY SPECIFICATIONS

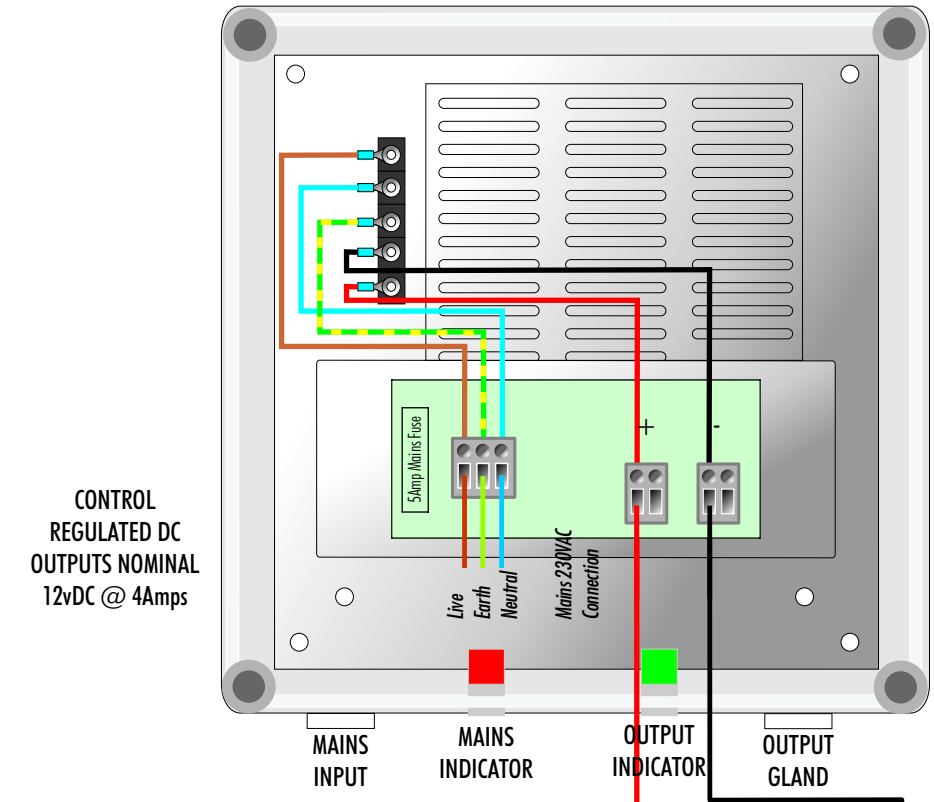
AUTO XL PARLOUR FEEDER CONTROL: **3E**

Auto/Micro Control Only Power Supply Connections:



AUTO XL PARLOUR FEEDER CONTROL: **3F**

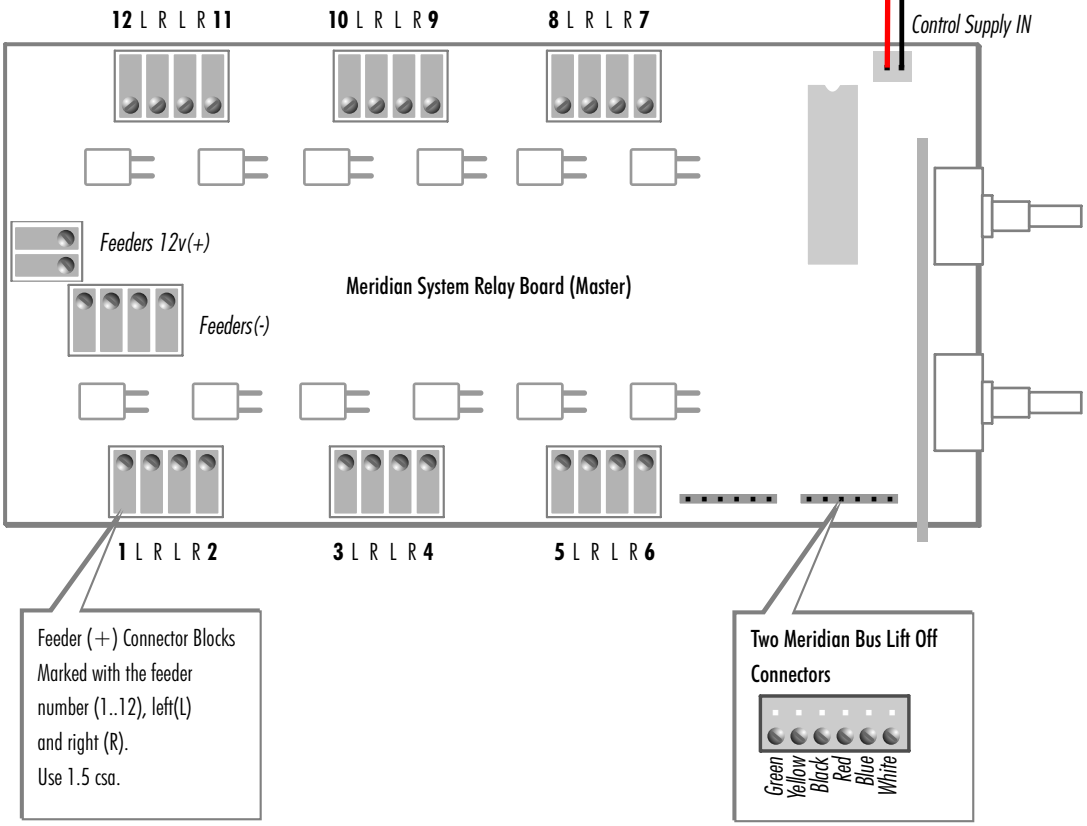
60 Watt 12vDC Power Supply Connections:



CONTROL REGULATED DC OUTPUTS NOMINAL 12vDC @ 4Amps

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

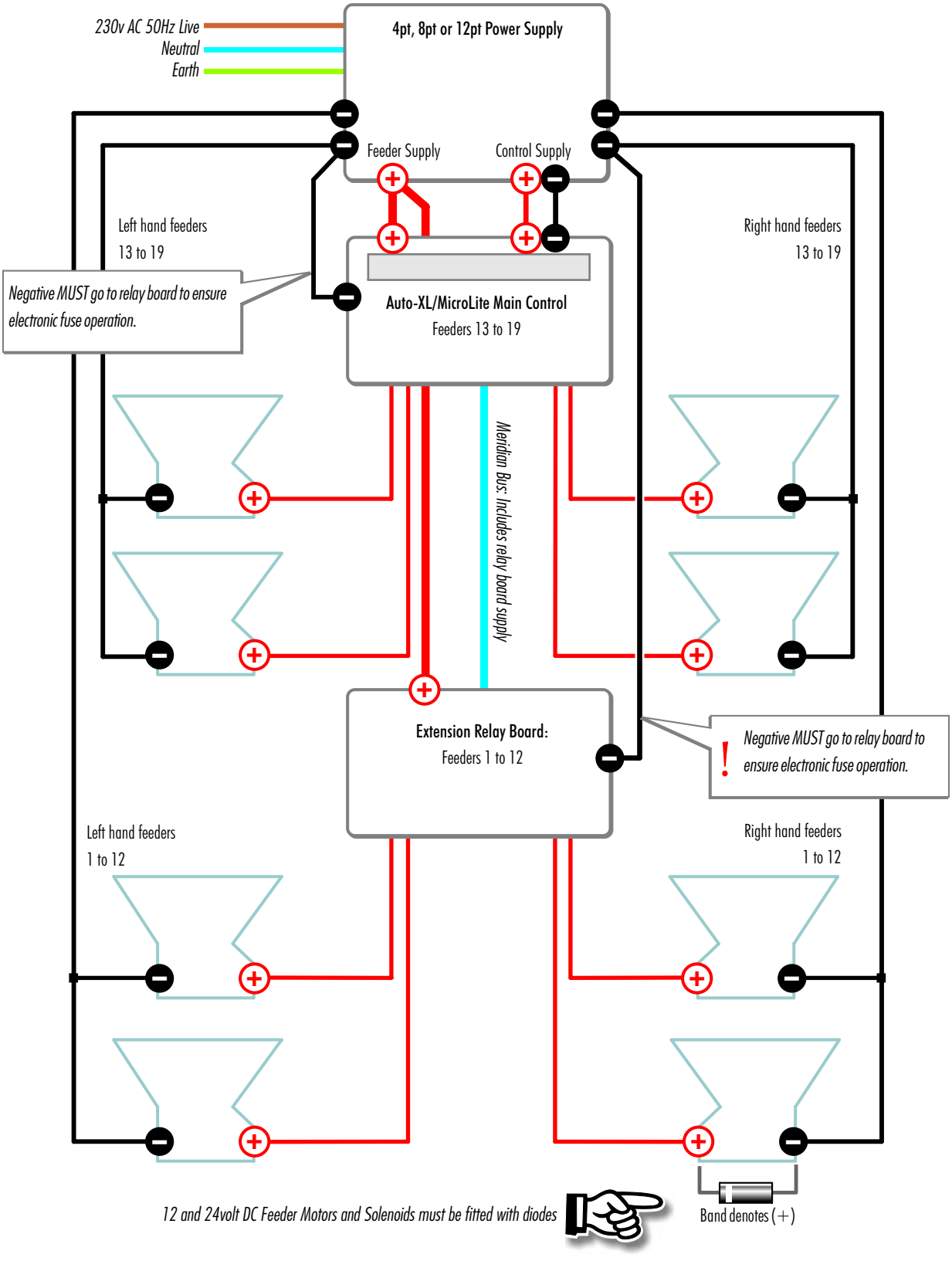
IMPORTANT - OUTPUT FACTORY SET TO 14vDC TO ACCOUNT FOR VOLTAGE DROP ALONG CABLE LENGTHS.



NB - SEE POWER SUPPLY MANUAL FOR MORE INFORMATION ON POWER SUPPLY SPECIFICATIONS

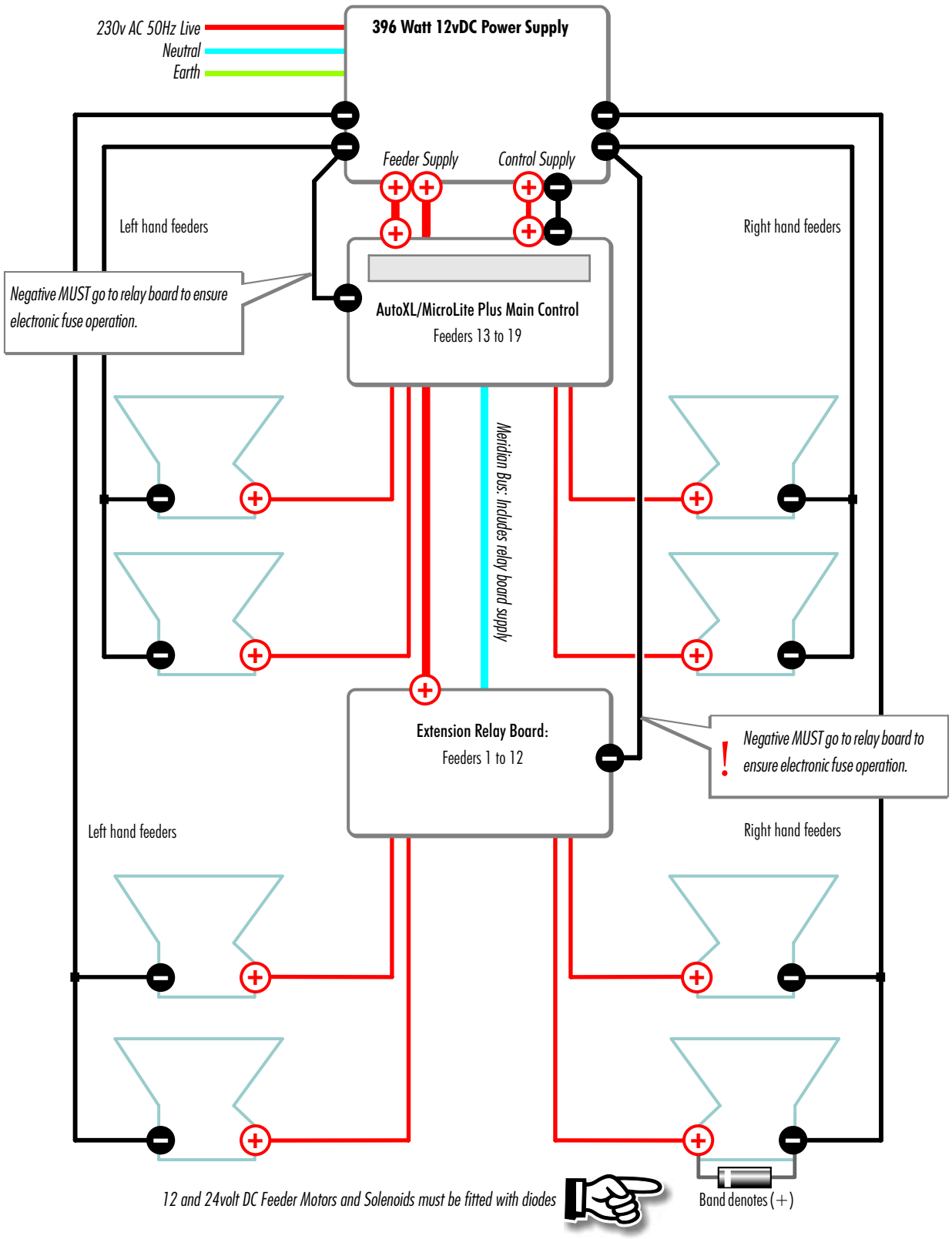
AUTO XL PARLOUR FEEDER CONTROL: **4A**

4pt, 8pt or 12pt Power Supply, AutoXL and Feeder connections: Up to 38pts



AUTO XL PARLOUR FEEDER CONTROL: **4B**

396 Watt 12vDC Power Supply, AutoXL and Feeder connections: To 38pts



AUTO XL PARLOUR FEEDER CONTROL: **4C**

4pt, 8pt or 12pt Power Supply, AutoXL and Feeder Connections: To 38pts (2 Relay Boards)

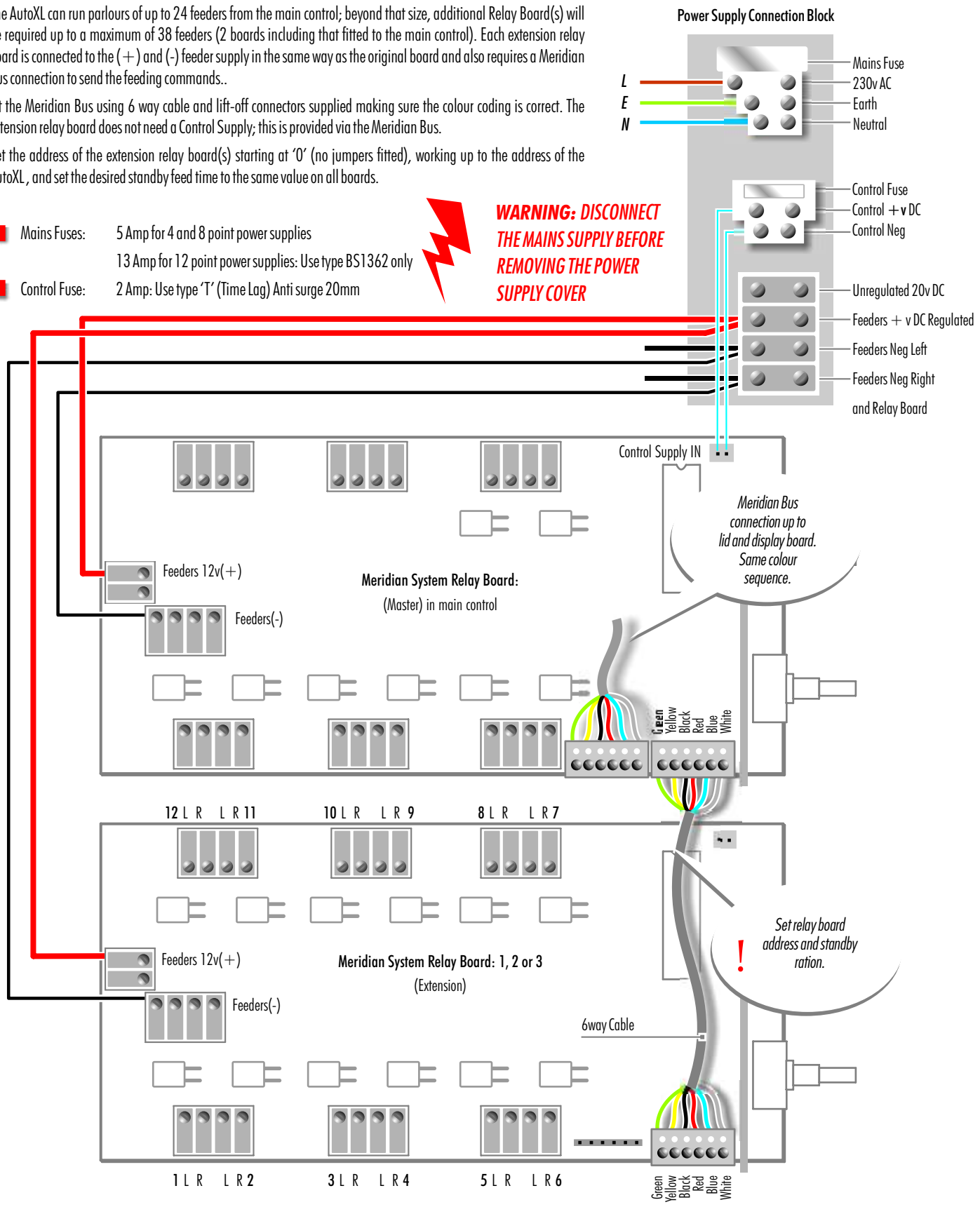
The AutoXL can run parlours of up to 24 feeders from the main control; beyond that size, additional Relay Board(s) will be required up to a maximum of 38 feeders (2 boards including that fitted to the main control). Each extension relay board is connected to the (+) and (-) feeder supply in the same way as the original board and also requires a Meridian Bus connection to send the feeding commands..

Fit the Meridian Bus using 6 way cable and lift-off connectors supplied making sure the colour coding is correct. The extension relay board does not need a Control Supply; this is provided via the Meridian Bus.

Set the address of the extension relay board(s) starting at '0' (no jumpers fitted), working up to the address of the AutoXL, and set the desired standby feed time to the same value on all boards.

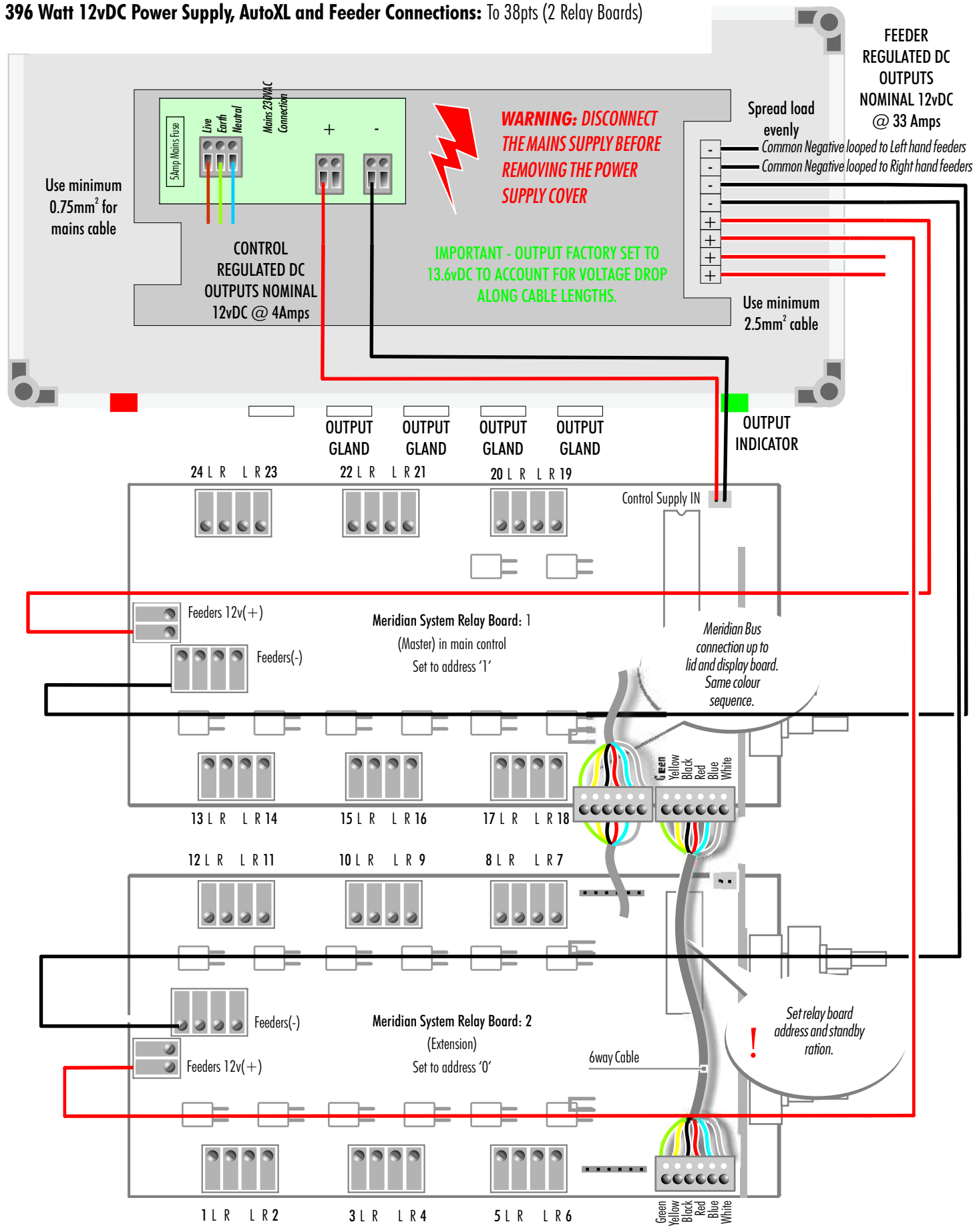
- Mains Fuses: 5 Amp for 4 and 8 point power supplies
  13 Amp for 12 point power supplies: Use type BS1362 only
- Control Fuse: 2 Amp: Use type 'T' (Time Lag) Anti surge 20mm

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



AUTO XL PARLOUR FEEDER CONTROL: **4D**

396 Watt 12vDC Power Supply, AutoXL and Feeder Connections: To 38pts (2 Relay Boards)



AUTO XL PARLOUR FEEDER CONTROL: *5*

Relay Board Address and Standby Feeder Running Time.

Each relay board on a feeding system has a unique number known as an 'address' which is set up by fitting jumpers to a pin array located at the top right hand of the relay board.

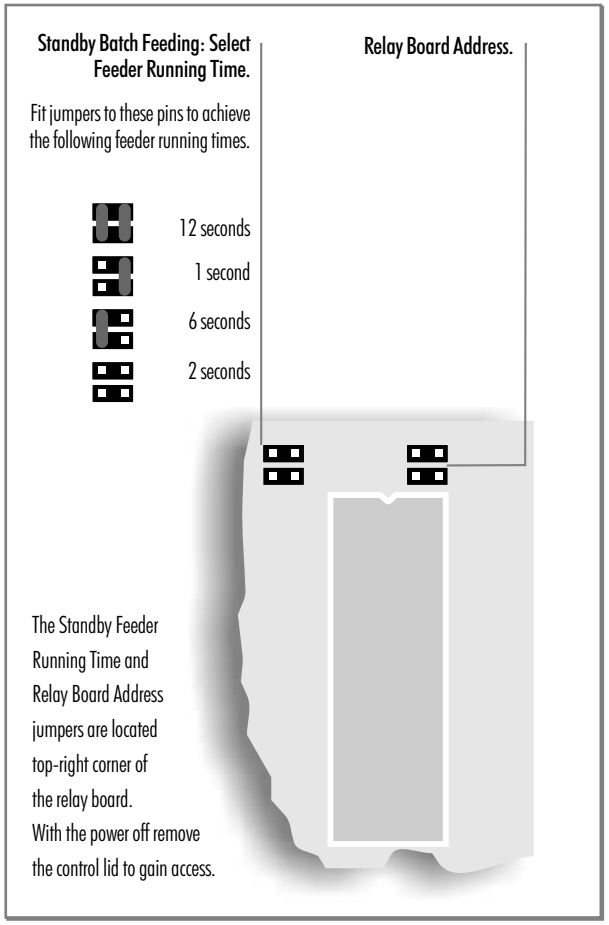
For systems up to 24pts, the relay board inside the control should NOT have any jumpers fitted.

For systems larger than 24pts, the additional relay board should NOT have any jumpers fitted and the relay board inside the control should have a single jumper as shown below. NB - The AutoXL can run a maximum of 38 feeding points.

In standby batch mode the feeders will run for a pre-determined time- either 1, 2, 6 or 12 seconds- depending upon the settings of the running time jumpers. The default time is 2 seconds (no jumpers fitted). Set the jumpers to suit your feeders according to the diagram opposite.

	Relay Boards Address	
	Control Relay Board	Additional Relay Board
No larger than 24pts		*N/A*
Larger than 24pts		

The additional relay board runs feeders at the first 24 feeding points (feeders 1-12 left and 1-12 right) and should be filled completely before wiring the feeders into the 'control' relay board.



STANDBY: VARIABLE RATION TO INDIVIDUAL STALLS

Turn the Mode Selector to STANDBY STALL.

Turn the Stall Selector to the required stall.

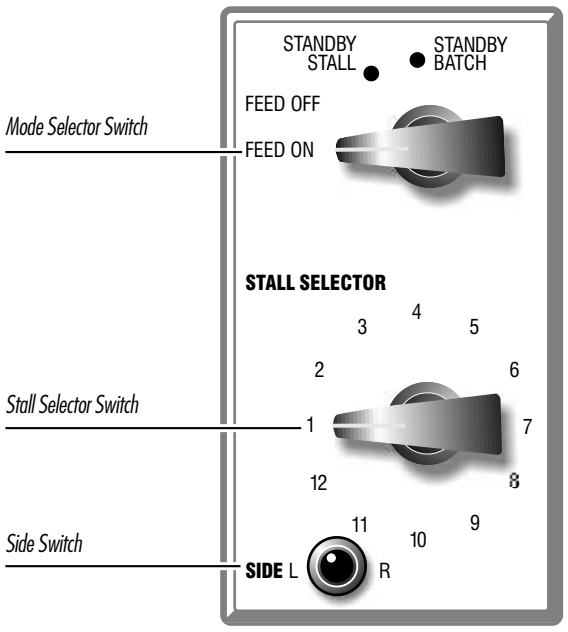
Press the SIDE Switch to the required side- L or R. Cake will be delivered to the selected stall for as long as the switch is held over.

STANDBY: BATCH RATION TO ALL STALLS.

Turn the Mode Selector to STANDBY BATCH.

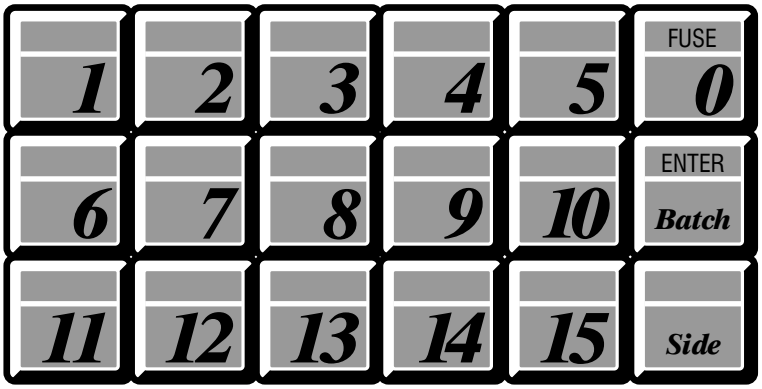
Press the SIDE Switch to the required side - L or R. The feeders will run for the time set up on the jumpers (see above) but to prevent overloading the power supply, will start in blocks of four.

Release SIDE Switch after feeders have stopped.



AUTO XL PARLOUR FEEDER CONTROL: **6**

KEYS AND DISPLAY.



There are 18 keys on the keypad:

15 are for rations,

'0'(FUSE) is a zero ration providing a stall step function and electronic fuse reset,

Batch(ENTER) is also a dual function key allowing batch feeding and data entry

the Side key changes the parlour side, resetting to Stall(1).

The keypad is constructed from a tough membrane overlaying individual key switches. This is a proven, reliable construction which will last for many years provided it is cleaned only with warm soapy water and not hosed down at high pressure.

The display area comprises three windows:

The Ration window shows the ration that has been keyed.

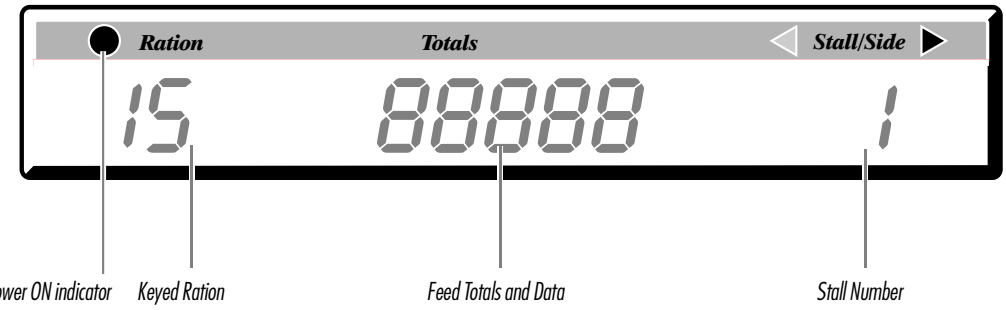
The Totals window shows the feed dispensed or cows fed during the current milking, the total feed consumed to date and various values during the setup procedure. In the diagrams the display is shown slightly enlarged for clarity.

In the Stall/Side window the current stall number is displayed together with the parlour side indicator- either left or right.

The Power ON indicator is next to the Ration label.

The AutoXL is very energy efficient; power saving was an important element of the design criteria. If a key is not pressed for about 30 minutes, the display will shut down but can be re-illuminated by pressing any key.

We recommend leaving the Auto-XL powered up all of the time. The gentle warmth generated by the electronics helps to keep condensation to a minimum.



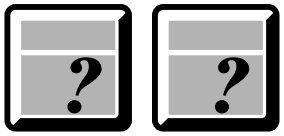
THE FUNCTION MODE SEQUENCE.

During the setup process, it is necessary to enter and modify data. Before this can be achieved, the AutoXL has to be put into Function Mode using this key sequence:

Press the Side Key.

Press the Batch(ENTER) key.

Press the 0(FUSE) key.



Key the Function Number (explained in a later section)

Press the Batch(ENTER) key.

Depending upon the function running, data may now be entered or changed.

AUTO XL PARLOUR FEEDER CONTROL: **7**

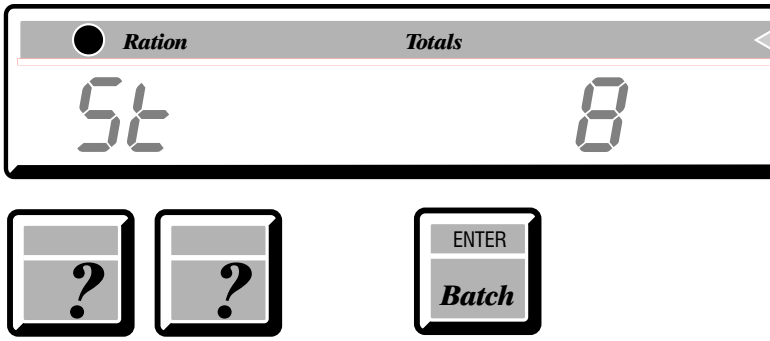
SET THE NUMBER OF FEEDERS PER SIDE: Function 82.

The AutoXL needs to 'know' how many feeders/stalls there are along the parlour side. Set the number as follows:

Key the Function Mode sequence using '82' as the Function number. The message 'St' will appear in the Ration window with the current number in the Totals window.

Key the number of Stalls. The maximum is 12 per side or 19 if an extension relay board is fitted.

Press Enter. The display will clear and the new value will be stored.



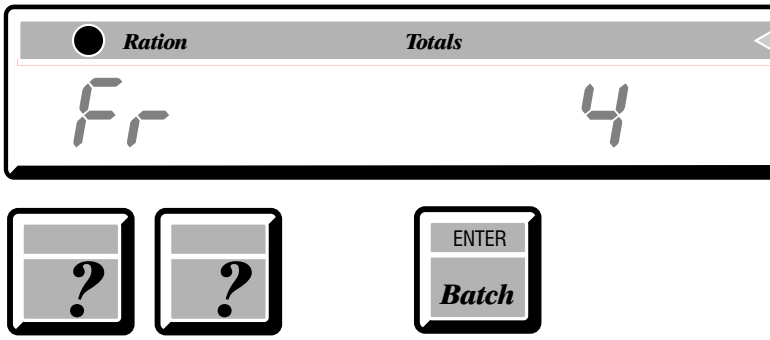
SET THE NUMBER OF FEEDERS TO RUN: Function 83.

To avoid stressing the power supply if too many feeders start and run simultaneously, the number of feeders that can be operating at any one time can be restricted using this function. The actual number depends upon the power supply, but a 'safe' value is 4. If in doubt consult your dealer.

Key the Function Mode sequence using '83' as the Function number. The message 'Fr' will appear in the Ration window with the current number in the Totals window.

Key the number of Feeders to run simultaneously. The maximum is 19.

Press Enter. The display will clear and the new value will be stored.



IMPORTANT - Selecting too high a value may overload feeder power supply and / or cabling.

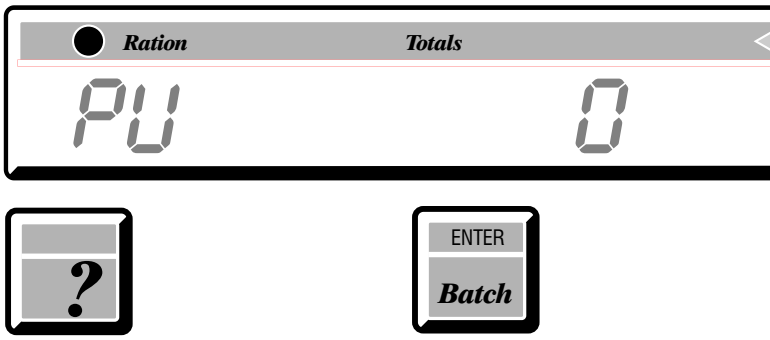
SET THE TYPE OF FEEDER: Function 84.

Five feeder options are available: Timed electric and 1, 2, 3 and 4 pulse. Select the feeder type as follows:

Key the Function Mode sequence using '84' as the Function number. The message 'PU' will appear in the Ration window with the current setting in the Totals window.

Key the Feeder type. Key '0' for Timed Electric. Key 1, 2, 3 or 4 as the number of pulses for the appropriate Pulsed feeder.

Press Enter. The display will clear and the new value will be stored.



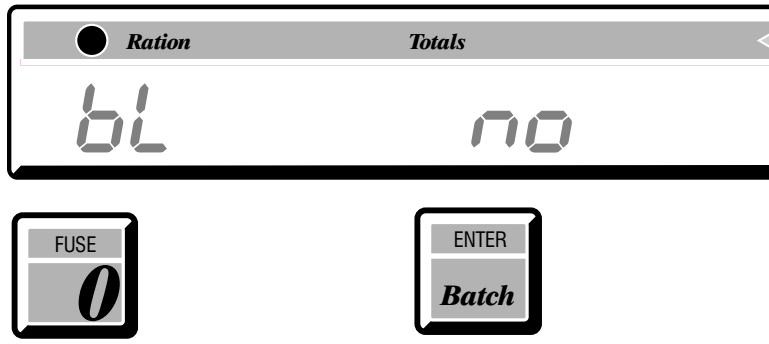
BLEEP ENABLE/DISABLE: Function 89.

Enable or disable the keypress 'bleep' by running this function.

Key the Function sequence using '89' as the function number. The message 'bL' will appear with the current setting- 'no' or 'YES' (Off or On).

Press key 0(FUSE) to toggle the setting.

Press Enter to store the setting.



AUTO XL PARLOUR FEEDER CONTROL: **8**

SELECT THE FEEDING MODE: Function 81.

Two feeding modes are available on the AutoXL:

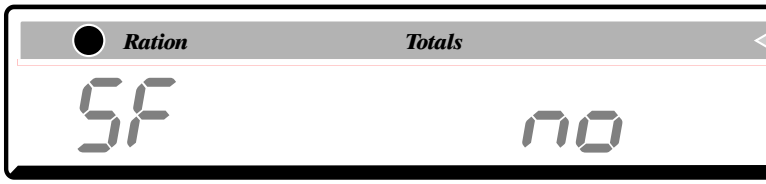
Sequential mode in which feed is delivered to the stalls as each cow passes the control point, and

Stored mode in which each ration is 'stored' and the feed withheld until the parlour side is fully occupied. The last ration entry triggers the feeding.

Run the Function Mode key sequence using '81' as the function number. The message 'SF' will appear in the Ration window with the current setting in the Totals window. 'no' means that stored feeding is off and by implication sequential feeding is enabled, and 'YES' indicates that stored feeding is enabled.

Press key 0(FUSE) to toggle between 'no' and 'YES'.

Press Enter to store the setting and Side to reset the stall/side.



! *During feeding in stored mode, when the last ration key is pressed the AutoXL will 'beep' and the message 'FEEd' will flash in the totals window. Press the Batch(ENTER) key to start the feeding process.*

SET DEFAULT TOTAL DISPLAY: Function 85 and 86.

Two totals are available for display during milking:

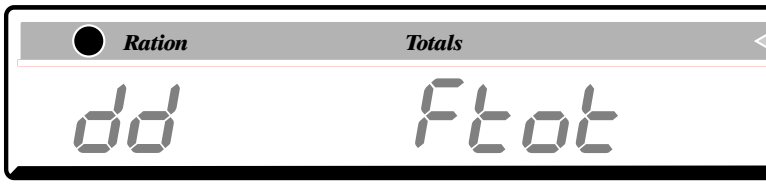
Total Cumulative Feed dispensed (Function 85) and

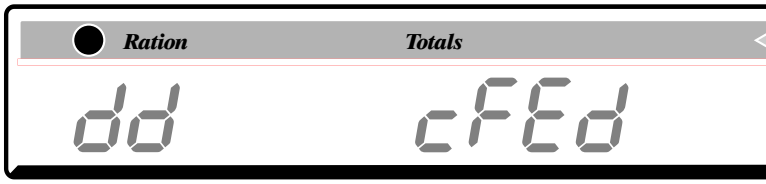
Cows fed during this milking (Function 86).

Run the Function Mode key sequence using '85' as the function number to make Cumulative Feed the default total, or '86' to make Cows Fed the default.

For Cumulative Feed the message 'dd Ftot' is displayed; for Cows Fed the message 'dd cFed' appears.

Press Enter to store the setting and the Side to reset the stall/side.





! *When 'Cows Fed' is displayed, the number is preceded by the letter 'c' to distinguish it from 'Feed Total'*

SETTING UP THE FEEDERS.

The portion of cake delivered by a feeder depends upon the time that the feeder is running or being pulsed. With ATL regulated power supplies and precision feeders, the AutoXL will consistently deliver accurate rations.

Two factors affect the feeder accuracy:

The Feeder Run Time which is a broad time adjustment, and

Calibration which 'fine tunes' the feeders as a group.

There are 4 simple stages to setting up the feeders:

1: Calibration Reset to ensure the value = 100

2: Setting the Feeder Run Time.

3: Applying the Feeder Run Time, either to individual feeders or all at once.

4: Calibration (Fine Tuning).

(Continued on the following page)

AUTO XL PARLOUR FEEDER CONTROL: **9**

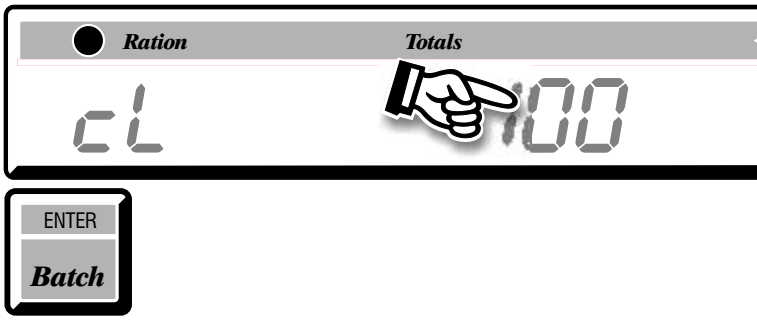
SETTING UP THE FEEDERS: 1: Calibration Reset: Function 1.

The Calibration setting represents a percentage (%) of the Feeder Run Time and must be set to '100' before adjusting the Run Time.

Run the Function Mode key sequence using '1' as the function number. The message 'cL' will appear in the Ration window with the current setting under Totals.

If the current setting is NOT '100'- key '100'.

Press Enter. Calibrate now = 100.



SETTING UP THE FEEDERS: 2: Selecting the Feeder Run Time: Function 87.

The Run Time determines how long the feeder will operate and therefore, how much cake will be delivered. The aim of this function is to get feeder (1) on the default parlour side delivering a single portion of cake weighing 500grams. To achieve this, a Run Time value is entered, the feeder is operated and the delivered cake weighed. Variations in the target weight are corrected by adjusting the Run Time and re-weighing.

Start the calibration process by placing a suitable container- a plastic carrier bag is ideal- beneath the down pipe of feeder (1).

Run the Function Mode key sequence using '87' as the function number. The existing run time value will appear in the Totals window and the message 'Fc' in the Ration window. The stall number will be reset to '1' on the right side.

Press key '15'. Feeder (1) will deliver a portion of cake.

Weigh the cake. If it weighs acceptably close to 500grams (about 1 pound):

Press the Side key and proceed to Step 3.

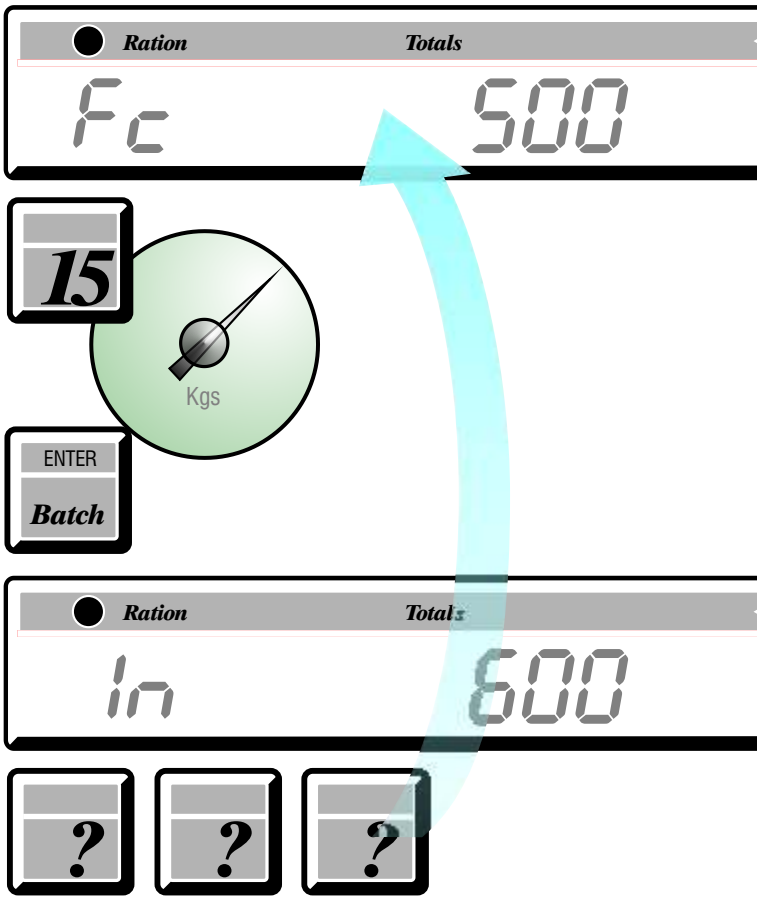
If the ration is too large or too small:

Press Enter. The message will change to 'In' but the run time value will remain.

Key the new run time value. See the chart below for guide values.

Press Enter. The message will change back to 'Fc'.

Repeat the FEED procedure (above) until the ration weighs 500grams.



Make	*Type*	*Run Time*
ATL	Timed	200
Ration Master	Pulsed	100
Hosier	Timed	100
Alfa Laval 2	Pulsed	200
Simplex Alum	Timed	200
Westfalia EZ	Timed	1200
Westfalia M	Pulsed	200
Westfalia EP	Pulsed	200
Auger Master	Timed	1100
Orby	Pulsed	100
Surge	Timed	1200
Gascoigne	Timed	600
Simplex Galv	Timed	600
E.B.	Timed	1200
Somerset	Pulsed	100
Alfa Laval 4	Pulsed	200
Alfa Laval 24	Timed	2500

Feeder Run Time.
The length of time that a feeder is set to deliver a constant, pre-set ration is called the Run Time. It is measured in 0.01seconds (1/100sec) with a maximum allowable value of 99.99seconds.
When the run time is entered during Function 87, *the trailing zeros are important* and must be entered. For example, a required run time of 2seconds must be entered as:

200.

The Feeder Run Times shown opposite are a starting guide only; actual values depend upon the feeder condition and the power supply.

SETTING UP THE FEEDERS: 3: Applying the Feeder Run Time:

With the delivered cake portion within the desired weight limits, the Run Time setting has to be applied to the remaining feeders. There are two ways of achieving this:

A: Set the Run Time for each feeder individually by repeating the process described on the previous page- the preferred option if the feeders are old and worn, or

B: Applying the selected Run Time to all the feeders *simultaneously*-the preferred method if they are new and in good condition.

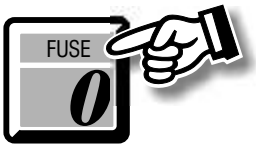
3A: Setting the run time for each feeder individually.

Run the Function Mode key sequence using '87'.

Press key '0' to step to the next stall.

Proceed as described on the previous page.

Loop around in this fashion using key '0' to select the feeders until all of the feeder Run Times are set.



3B: Setting the run time for all feeders simultaneously.

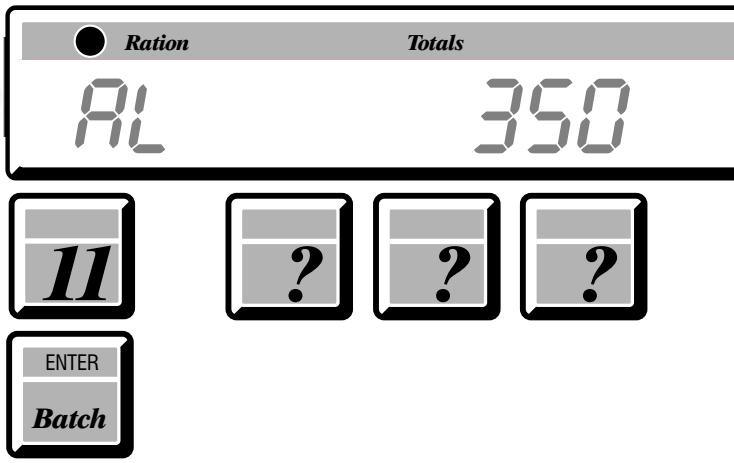
Run the Function Mode key sequence using '87'

Press key '11'. The message 'AL' (ALL) will appear in the Ration window with the current Run Time value for feeder-1 in the Totals window as a reminder.

Key the Run Time value again.

Press Enter. The value is applied to all of the feeders.

Press Side to clear the display.



SETTING UP THE FEEDERS: 4: Fine Tuning using Calibration: Function 1.

The Calibration value represents a percentage (%) of the feeder Run Time. Set to 100% the feeders will run for precisely their Run Time value. If the calibration value is set to 200 then the feeders will run for twice the length of the Run Time- 200%. In a similar fashion the feeder running time may be reduced by setting the value to less than 100.

Calibration affects *all* the feeders as a group simultaneously.

The Calibration feature allows the amount of cake delivered by all of the feeders to be fine tuned; it is of particular value for adjusting rations after cake deliveries (when mix and density tend to change) without having to alter the Run Time for each of them.

Place a suitable container beneath feeder(1) on the right or default side.

Run the Function Mode key sequence using '1' as the function number. The message 'cL' will appear with current Calibration setting.

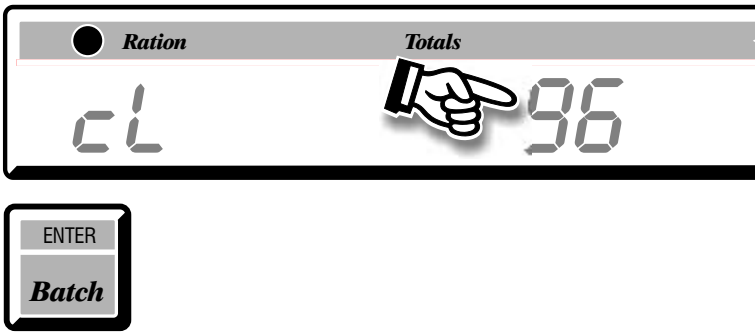
Key a new value. If the last weighing was *lower* than 500grams, increase the value; if it was *higher,* decrease the value. The range is 1 to 200.

Press Enter to store the new value and exit the function.

Now Check the ration weight:

Press Side to reset the stall number to '1' on the right.

Press key '1'. Feeder(1) will deliver a single ration of cake.



Weigh the dispensed ration. If it is as close to 500grams as you require, press the Side key to clear the display and finish. If fine tuning is still required, repeat the process until the delivered weight is acceptable.

AUTO XL PARLOUR FEEDER CONTROL: **11**

FEEDING:

The feeder Run Time and Calibration value have been set to deliver 1 basic portion of feed. Pressing key '1' will deliver just that amount to the current stall. Each key- 1 through 15- represents a multiple of the basic portion, so if the basic portion has been set to 500grams, pressing key '7' for example will deliver 7 x 500g (3.5kg: about 7 pounds).

Each time a key is pressed, the ration is added to the Cumulative Feed Total and the Milking Feed Total, and the stall number is incremented. The AutoXL also keeps count of the number of cows fed during the current milking.

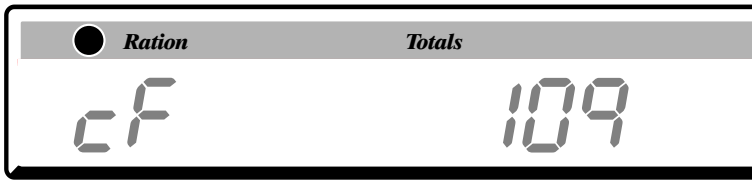
At about 30 minutes after milking, the display will clear with only the power indicator lit. This is the automatic power down mode to save energy; press the Side key to 'wakeup' the machine. When power down occurs, the cows fed and feed dispensed totals for the last milking are cleared. There are functions for clearing these totals manually and also for displaying the totals. These are all listed below.

DISPLAY COWS FED DURING THIS MILKING: Function 3.

The number of cows fed will be displayed using this function. The total *includes* those cows that have been 'stepped over'- in effect given a 'zero' ration:

Run the Function Mode key sequence using '3' as the function number. The message 'cF' will appear in the Ration window and the cow count in the Totals window.

Press Side to clear the display.



To clear the cows fed total:

Run the Function Mode key sequence using '13' as the function number. The message 'cF' will appear and the total will be cleared to zero.

Press Side to clear the display and reset the stall/side.

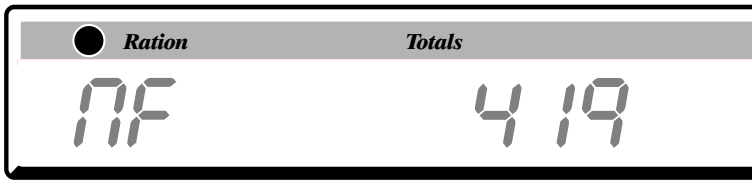
NB - To enter 13 as the function, press No. key '1' then '3'.

DISPLAY FEED DISPENSED DURING THIS MILKING: Function 4

The amount of feed, as a total of basic portions, will be displayed using this function:

Run the Function Mode key sequence using '4' as the function number. The message 'MF' will appear in the Ration window and the feed count in the Totals window.

Press Side to clear the display and reset the stall/side.



To clear the feed dispensed during this milking total:

Run the Function Mode key sequence using '14' as the function number. The message 'MF' will appear and the total will be cleared to zero.

Press Side to clear the display and reset the stall/side.

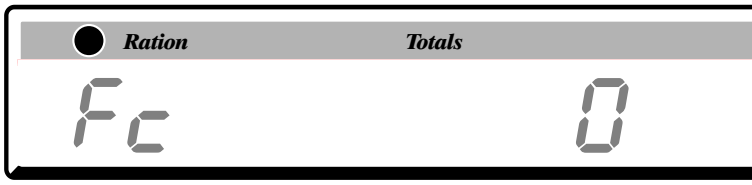
NB - To enter 14 as the function, press No. key '1' then '4'.

CLEAR THE CUMULATIVE FEED COUNTER: Function 15.

The cumulative feed counter will continue to increment until it reaches 99999; then it will rollover to zero. The counter is used as a 'memo' for feed re-ordering and after a delivery may be cleared as follows:

Run the Function Mode key sequence using '15' as the function number. The message 'Fc' will appear in the Ration window with a zero in the Totals window. This indicates that the counter has been reset.

Press Side to clear the display and reset the stall/side.



NB - To enter 15 as the function, press No. key '1' then '5'.

AUTO XL PARLOUR FEEDER CONTROL: **12**

BATCH FEEDING.

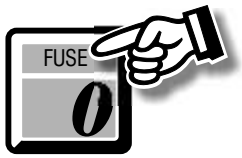
Feeding the same ration to all of the cows along a parlour side is fast and simple. Stalls may be skipped by pressing the '0' key until the desired stall is reached. Batch will feed from the displayed stall number up to the highest stall number.

Press the Batch(ENTER) key. The message 'bAtcH' appears in the Totals window.

Press the required ration key. Each of the cows from the displayed stall number upward will be fed the batch ration.

AUTOMATIC FUSES.

The automatic electronic fuses will trip and cut off the power to a feeder motor or solenoid if it draws too much current. The warning 'bleep' will sound and the stall number will flash. Similarly, if there is a fault with the power supply- a bad connection or overload- the message 'PS FAIL' will flash in the window.



Reset the fuse by pressing the '0(FUSE) key.

Locate and rectify the fault before proceeding.

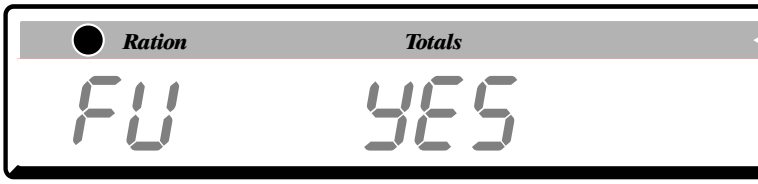
FEEDER FUSE WARNING BUZZER: ENABLE/DISABLE: Function 75

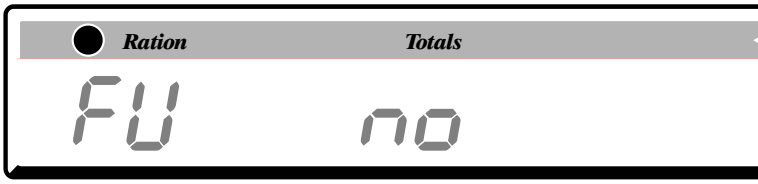
An audible buzzer can sound when a feeder fuse is tripped and can be turned on or off using this function.

Run the Function Mode key sequence using '75'.

The Keyboard Test display is 'FU' followed by 'YES' for on or 'no' for off.

Press Side to clear the display and reset the stall/side.





AUTO XL PARLOUR FEEDER CONTROL: **13**

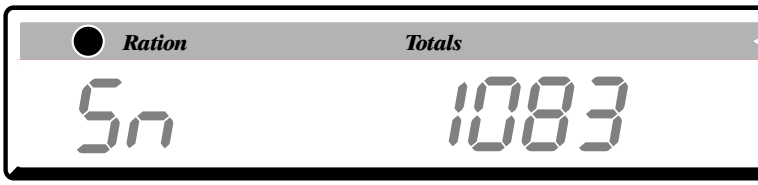
DISPLAY SERIAL NUMBER : Function 77

The Serial Number will be displayed by running this function.

Run the Function Mode key sequence using '77'.

The Serial Number display is 'Sn' followed by a 4-digit number.

Press Side to clear the display and reset the stall/side.



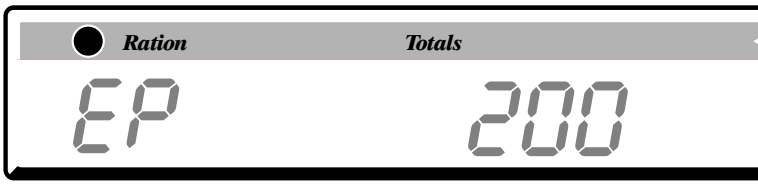
DISPLAY BOARD SOFTWARE VERSION : Function 2

The Software Version will be displayed by running this function .

Run the Function Mode key sequence using '2'.

The Software Version display is 'EP' followed by a 3-digit number.

Press Side to clear the display and reset the stall/side.



KEYBOARD TEST: Function 60

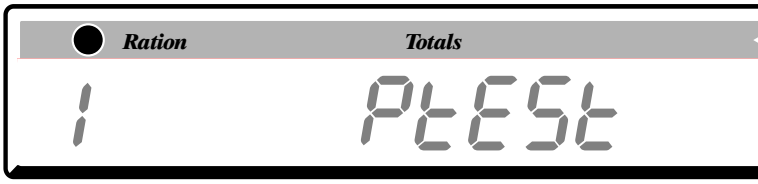
The keyboard can be tested by running this function.

Run the Function Mode key sequence using '60'.

The Keyboard Test display is '1' followed by 'Ptest'.

Pressing each key in turn shows that keys matrix number on the display.

Press Side to clear the display and reset the stall/side.



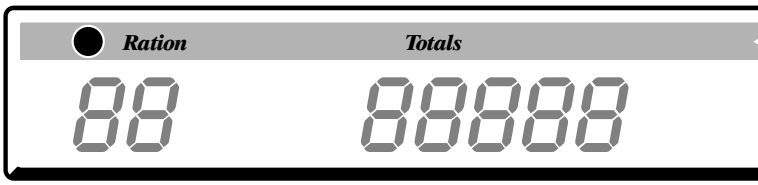
DISPLAY TEST: Function 61

The display can be tested by running this function.

Run the Function Mode key sequence using '61'.

The Keyboard Test display is '88' followed by '88888'.

Press Side to clear the display and reset the stall/side.



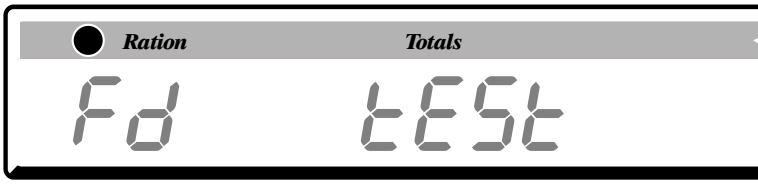
FEEDER OUTPUT TEST: Function 62

The feeder outputs can be tested by running this function - please note that one unit of feed will be dropped by each feeder in turn and is a continuous cycle.

Run the Function Mode key sequence using '62'.

The Feeder Output Test display is 'Fd' followed by 'tESt'.

Press Side to clear the display and reset the stall/side.



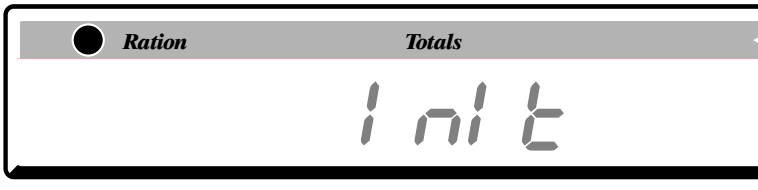
RESTORE FACTORY SETTING: Function 88

Factory settings can be restored by running this function. This function clears ALL of the settings. The data is lost and is not recoverable so use with caution.

Run the Function Mode key sequence using '88'.

The Restore Factory Settings display is 'init'.

Press Side to clear the display and reset the stall/side.



DISPLAY RELAY BOARD SOFTWARE VERSION AND TEST COMMUNICATION: Function 68

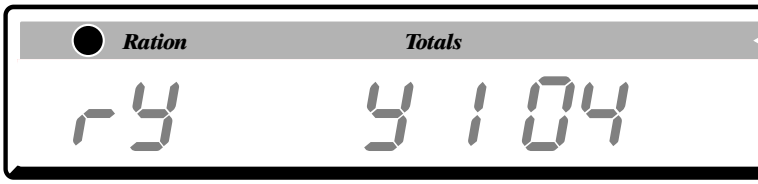
The relay board software version can be displayed and communication between the display board and relay board can be tested by running this function.

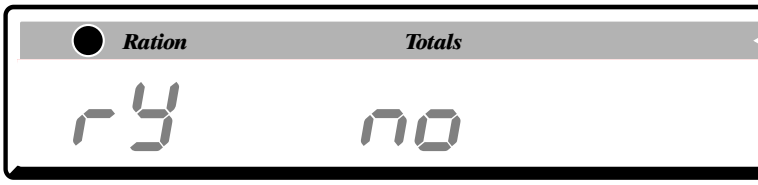
Run the Function Mode key sequence using '68'.

If the boards are communicating the display will show 'rY' followed by 'y104'.

If there is a fault with the communication, the display will show 'rY' followed by 'no'.

Press Side to clear the display and reset the stall/side.





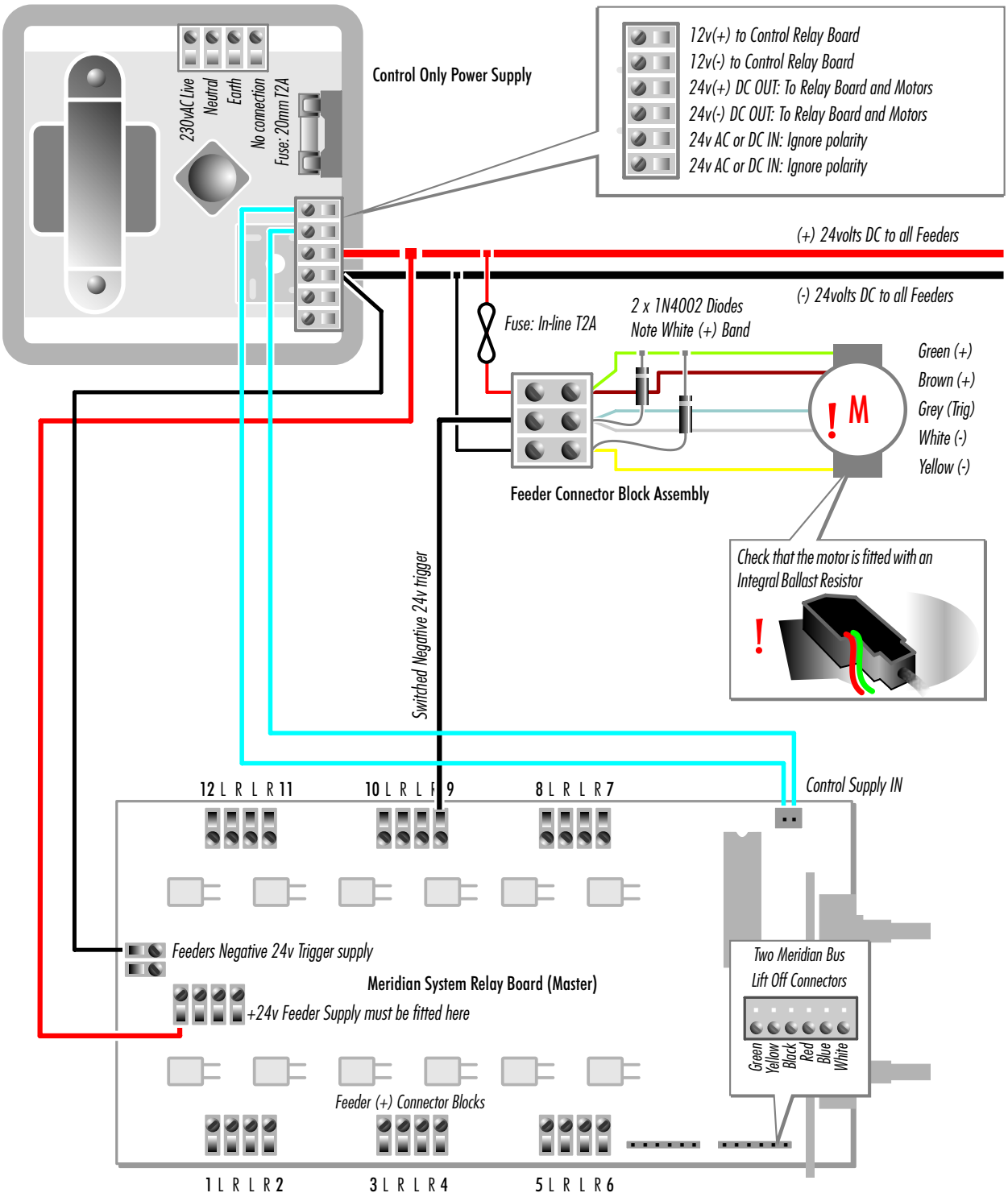
AUTO XL PARLOUR FEEDER CONTROL: **15**

The Auto XL Fault Finding Scheme

Auto XL Faults		
Symptom	**Possible Cause**	**Solution**
No feed being dispensed	No feeder voltage	Check green light on power supply
		Check power supply feeder voltage
	Standby switch in wrong position	Place switch into feed on position
	Stored feeding mode (Function 81)	Will not feed until all rations are entered
Stalls not feeding or feeding incorrect amount	Corrupted run times	Set the run times using Function 87
	Corrupted number of stalls	Set number of stalls using Function 82
	Corrupted feeders to run	Set number of feeders to run using Function 83
No Display	No control voltage	Check power supply control voltage
		Check control supply fuse
	Communication Loom Fault	Check connection on communication loom

DATA SHEET: **16A** 'M' TYPE FEEDER CONNECTIONS

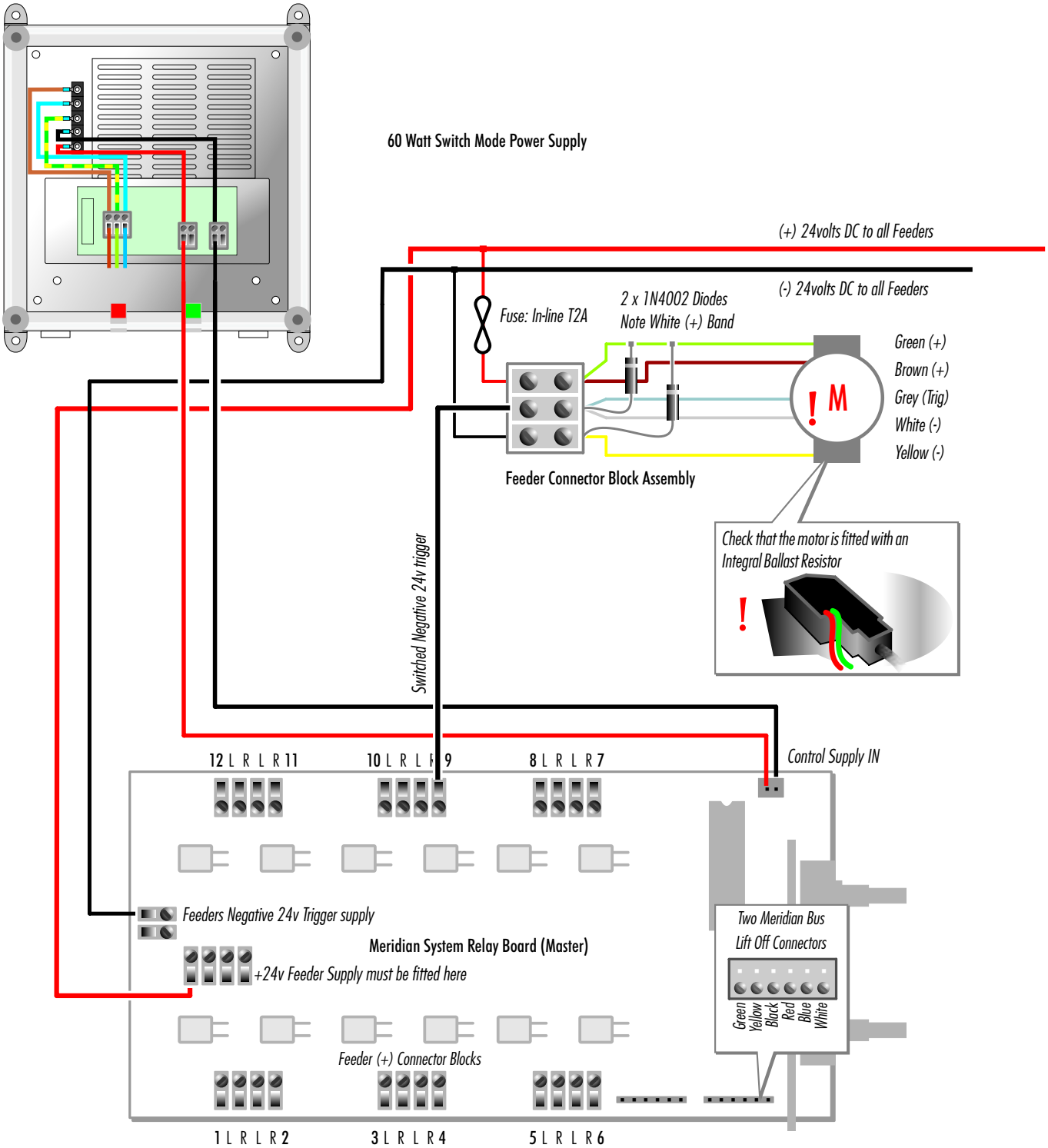
'M' Type Feeders WITH Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections



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

DATA SHEET: **16B**
'M' TYPE FEEDER CONNECTIONS

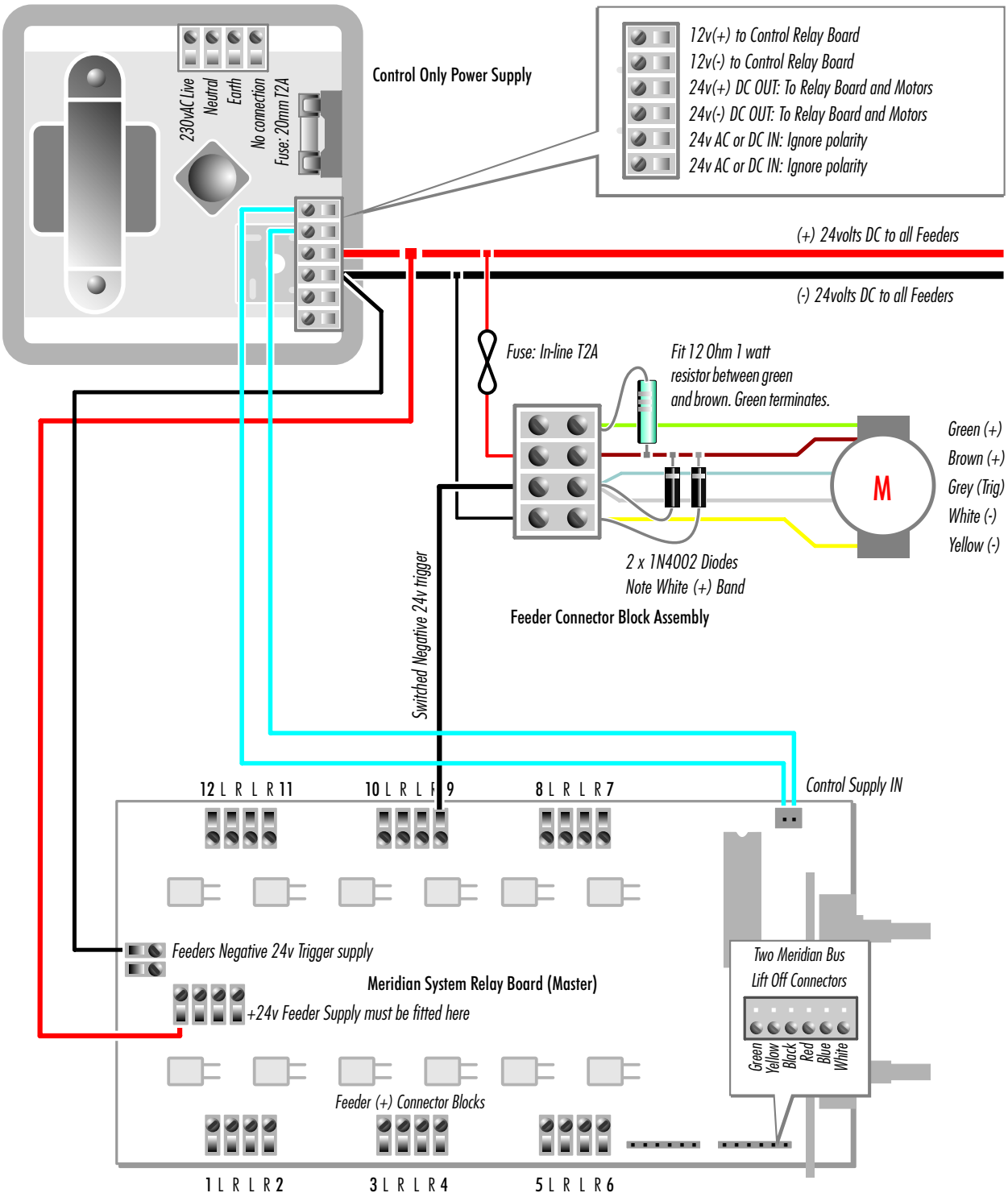
'M' Type Feeders WITH Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections



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

DATA SHEET: **17A** 'M' TYPE FEEDER CONNECTIONS

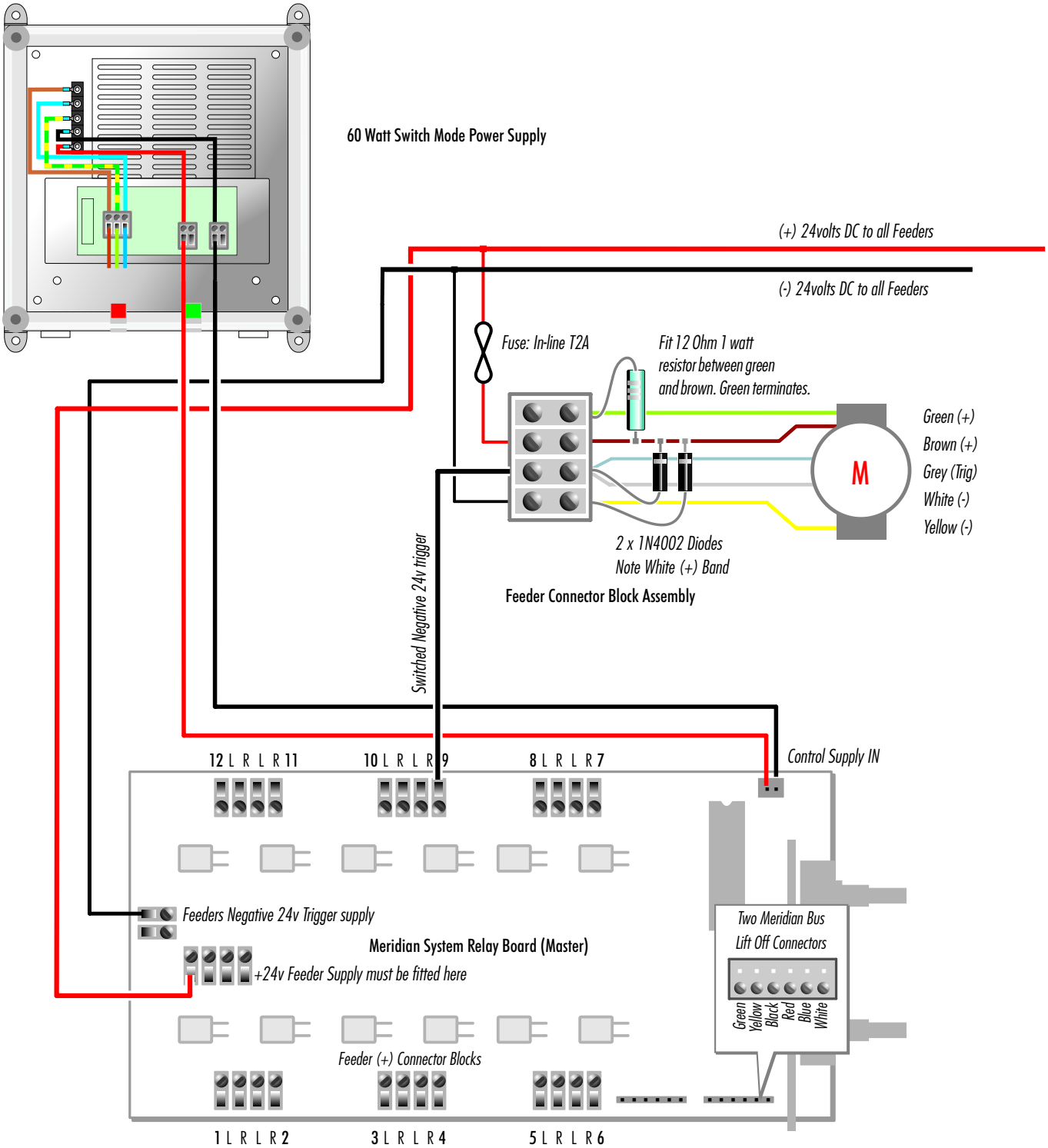
'M' Type Feeders **WITHOUT** Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections



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

DATA SHEET: **17B**
'M' TYPE FEEDER CONNECTIONS

'M' Type Feeders **WITHOUT** Integral Ballast Resistor: In Parlour Feeder Control Relay Board and Feeder Connections



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