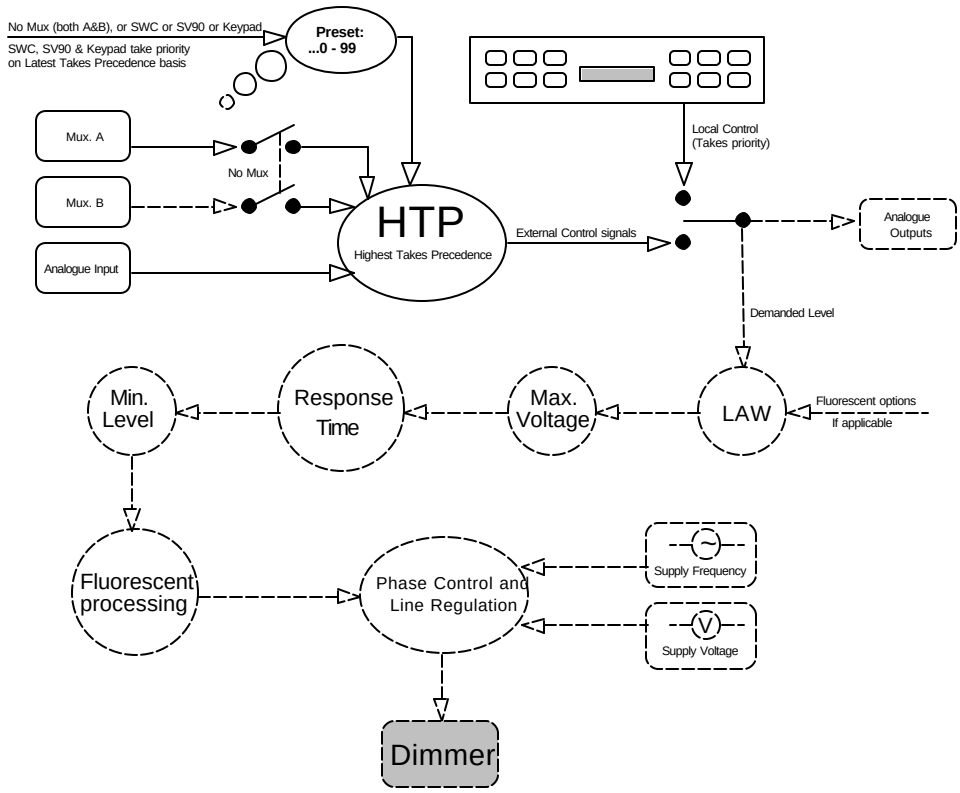
Appendix

This appendix contains information on:

- The Control Signal Path Diagram.
- A Summary of LD90 Parameters.
- The fluorescent dimmer relay connections.
- The wiring for the Power Blocks.

Control Signal Path Diagram

The following diagram illustrates the control signal flow throughout the LD90 dimmer. It is included to show how each of the programmable settings interrelates.



There are several important features of the above diagram:

1. The relationship between the Mux A, Mux B, analogue inputs and Presets. Note particularly the precedence between the preset selected by NoMux, and that selected by the SWC or SV90
2. The local rack keypad overrides all external control signals.
3. The Analogue outputs are independent of the law, max. voltage, response time, min level, and fluorescent functions. It is assumed that the external dimmer will perform these functions.

4. The Cycle-by-cycle voltage and frequency compensation built into the system software.

Summary of LD90 Parameters

The following describes the format of the various LD90 system parameters and user-programmable functions, and gives allowable limits and default settings.

Feature	Range - Min.	Range - Max.	Default
Busbar Current		100A/Phase, 300A Single Phase	
Dimmer Law	Linear Square S-Law Fluorescent		Square
Dimmer Name	00000	ZZZZZ	= mux address
Dimmer Response	Fast (30mS)	Slow (300mS)	Medium (100mS)
Error Number	1	99999	
Input Voltage (D54 Input)	4V	6V	5V
Input Voltage (Analogue inputs)	+/-7V	+/-13V	+/-10V
Input Impedance (Analogue inputs)	-5%	+5%	100kΩ
Load Connection sizes	1.5mm^2	6mm^2 / 2.5kW, 6mm^2 / 5kW, 16mm^2 via kit.	As application requires
Language	English French German		English
Maximum dimmer O/P voltage	50V	250V	230V
Mux Protocol A	DMX512 SMX (all baud rates) D54		DMX512
Mux Protocol B	DMX512 SMX (all baud rates)		DMX512
Non-Dim threshold	1%	90%	Disabled
Output Voltage (Analogue Outputs)	+5V	+10V	+10V
Output Impedance (Analogue Outputs)	-5%	+5%	1kΩ, in series with diode
Phase Type	A	C	A
Presets	0	99	0
Preset Fade Time	0.01 seconds	9.59 minutes	5 seconds
Rack Number	1	99	1

Mechanical Data

Rack Size:	1050 x 995 x 150 mm
Contracting panel:	505 x 135mm
Conduit Entry:	1 x 50mm and 1 x 25mm

Typical Weights

Rack, empty:	42kg
Rack, with Power Blocks:	76kg
Rack, Packed and crated:	135kg

Fluorescent Relay Drive output connection details

PL5 on the Processor Unit PCB has 12 open-collector outputs and an unregulated supply connection. Each output is capable of sinking 5mA for an electronic relay or similar and output 1 corresponds with the first dimmer in the rack. These outputs are driven when MAGNETIC fluorescent control mode is selected (see *Rack Setup Procedure* for details)

The connector is a 20 pin IDC (ribbon) style.

Pin	Function	Pin	Function
1	Relay drive 1	11	Relay drive 7
2	GND	12	GND
3	Relay drive 2	13	Relay drive 8
4	GND	14	GND
5	Relay drive 3	15	Relay drive 9
6	Relay drive 4	16	Relay drive 10
7	Relay drive 5	17	Relay drive 11
8	Relay drive 6	18	Relay drive 12
9	+8V unregulated (do not short circuit	19	+8V unregulated (do not short circuit
10	No connection	20	No connection