

A Guide to the Digital Environ System

Digital Environ is a versatile dimming system that can be tailored to the varying needs of architectural or entertainment applications.

Digital Environ is based on three basic elements:

Cabinet:

The cabinet is a pre-wired enclosure that contains the Power Modules, a control Processor Module, internal wiring and load, supply and control terminations.

Two cabinet sizes are available for either 6 or 12 Power Modules. Each cabinet can provide up to 24 ways of dimming depending on the combination of Power Modules chosen.

Power Modules:

Single, dual and quad Power Modules are available in a variety of ratings for incandescent/inductive (low voltage, neon and cold cathode), fluorescent and non-dim loads. Power Modules can be combined within a cabinet to match differing load sizes and types.

Note: Quad Power Modules are used with the small cabinet only.

All Power Modules have primary circuit breaker protection per dimmer, and either terminal block or branch breaker outputs.

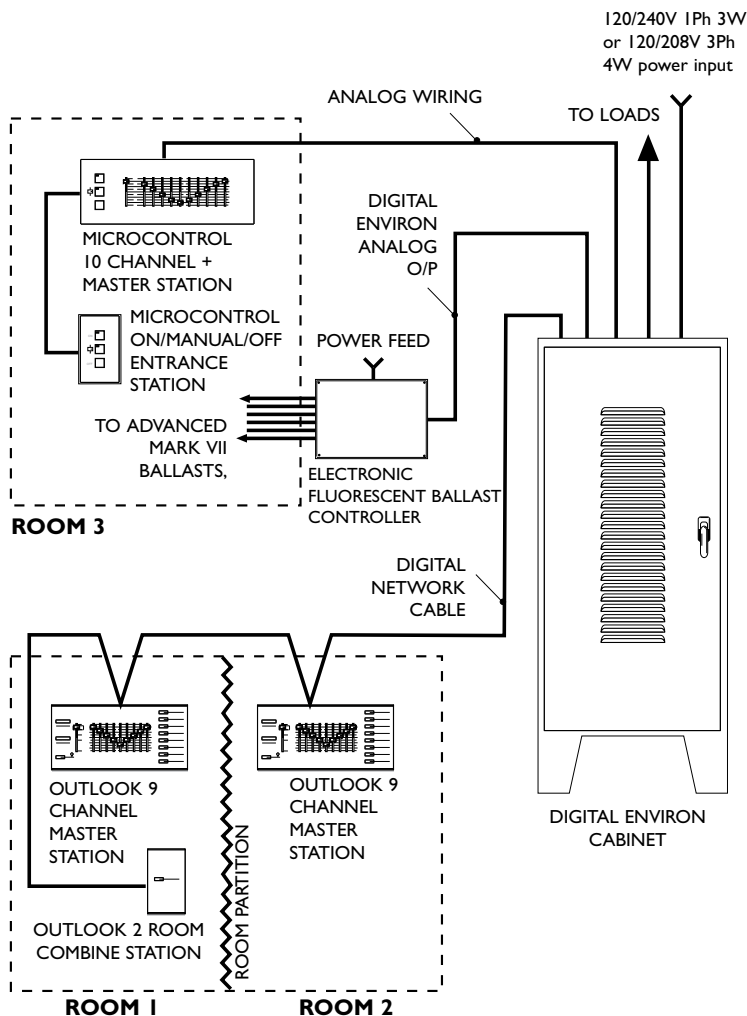
Refer to "Ordering Information" for details.

Processor Module:

The Processor Module forms the heart of the Digital Environ Cabinet. Using digital processing techniques for accuracy and reliability, the processor provides the firing signals for the Power Modules. A membrane keypad and LCD enables the user to program numerous advanced features and options such as dimmer to room assignments, dimmer curves, minimum and maximum levels and many more.

Digital Environ Typical Schematic

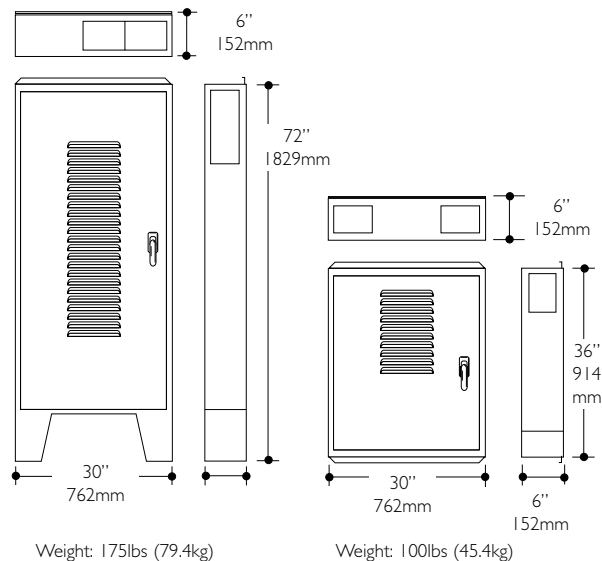
Digital Environ Cabinet shown with both Microcontrol and Outlook Control Systems



7.2.2

ARCHITECTURAL

DIGITAL ENVIRON™ Modular Dimming System



Typical applications include:
Conference and Meeting Rooms, Restaurants, Reception and Lobby Areas, Bars, Schools, Hotels and Entertainment Facilities such as Theatres and Clubs

- Self contained pre-wired digital dimmer cabinet
- Modular construction for added flexibility
- Power Modules suitable for incandescent, fluorescent, low voltage, cold cathode, neon and non-dim loads
- Digital Processor with advanced programmable features
- "Panic" facility for turning selected dimmers to full in an emergency
- Power Modules complete with primary circuit breaker protection
- Branch breaker options available
- Hinged access door for ease of installation
- Accepts both analog and digital control signals
- Compatible with Microcontrol, Outlook and Premiere control systems
- Suitable for Entertainment and Architectural applications
- Offers System Wide Control (SWC) capability
- UL listed and CSA approved



Digital Environ™ Control

ANALOG CONTROL

Digital Environ accepts 0 to +/- 10 volts dc control signals for direct connection to an analog control system such as Strand Lighting's Microcontrol Stations.

DIGITAL NETWORK CONTROL

Outlook Control Stations use a digital communications network to directly access preset lighting scenes stored within Digital Environ. Using this approach, several Digital Environ Cabinets can be connected to distributed Outlook Stations via a common network cable forming an integrated system for controlling up to 16 independent rooms.

During installation and commissioning, each dimmer is assigned to a room (in the range 1 - 16) and a channel number for that room (in the range 1 - 12) using the Processor Module membrane keypad and LCD display. Two analog outputs per processor are similarly assigned, and may be used to control external equipment such as Electronic Fluorescent Ballast Controller (EFBC) units.

MULTIPLEX CONTROL

Digital Environ Cabinets accept DMX 512 control protocol for direct connection to a Premiere architectural system or entertainment console. The multiplex control input operates on a highest level takes precedence basis with the analog and Digital Network control inputs. An optional second multiplex card can be added for when a cabinet is to be controlled from two separate DMX control systems.

Example: Premiere house lighting control and a Mantrix MX stage console. Dimmers and analog outputs are patched to the multiplex control channel numbers during installation, from the keypad.

SYSTEM WIDE CONTROL

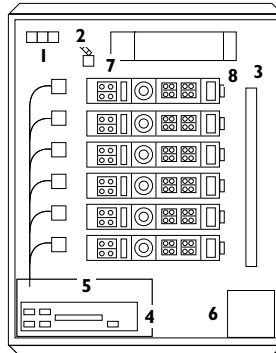
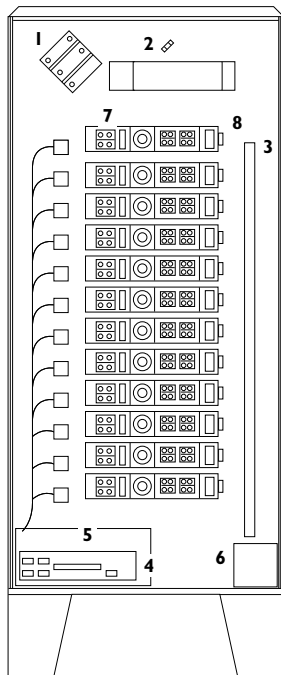
In addition to the presets accessed by the Digital Network, there are 99 programmable presets per cabinet which can be recalled from either the keypad, from System Wide Control 8 and 16 Pushbutton Stations, an LCD Display Station the hand held SWC Programmer or from SV90 Dimmer Supervisory PC. The presets are independent of dimmer to room allocations used with the Digital Network Control. When selected, all dimmers and analog outputs fade to the levels recorded for that preset on a highest level takes precedence basis with all other control inputs.

This facility is intended for general lighting states or back-up cues in entertainment venues when a control console may not be available. Up to 20 Digital Environ Cabinets may be interconnected via a serial link for system wide, individual or grouped control.

Refer to Microcontrol Outlook and Premiere Data Sheets for further information on architectural control systems.

Refer to Strand Lighting for further information on SWC or SV90.

Internal Layout



- 1 Power Feed Lugs (1 or 3 Phase)
- 2 Grounded Lug
- 3 Neutral Lug
- 4 Processor Module
- 5 Control Termination Board
- 6 Power Module
- 7 Power Supply (Outlook/Microcontrol)
- 8 Load Terminals (Terminal Block or Branch Breakers)

Specification

CABINET

MECHANICAL

- 1 The dimensions of the cabinets shall be as follows:
Small: 6" (152mm) deep, 36" (914mm) high and 30" (762mm) wide.
(Height dimension excludes 2" (51mm) mounting flange top and bottom).
Large: 6" (152mm) deep, 72" (1829mm) high and 30" (762mm) wide.
(Height dimension excludes 2" (51mm) mounting flange on top of cabinet).
Cabinets shall be of sheet steel construction of no less than 16 gauge and shall be wall mounted with 0.375" (9.5mm) mounting holes on 16" (410mm) and 24" (610mm) centers.
The large cabinet shall be provided with support legs for floor mounting.
- 2 The cabinet shall be factory pre-wired and dressed. The contractor shall provide and terminate all feed, load and control wiring on screw terminals within the cabinet.
- 3 Cable entry points shall be as follows:
Small Cabinet:
Power feed: 5" (127mm) x 5" (127mm) on the top panel.
Load Cables: 23" (584mm) x 5" (127mm) and 5" (127mm) x 5" (127mm) on the top and right hand side panel respectively.
Control: 5" (127mm) x 5" (127mm) on the left hand side panel.
Large Cabinet:
Power feed: 8" (203mm) x 5" (127mm) on the top panel.
Load Cables: 10" (254mm) x 5" (127mm) and 12" (305mm) x 5" (127mm) on the top and right hand side panel respectively.
Control: 5" (127mm) x 5" (127mm) on the left hand side panel.
- 4 All terminations and internal wiring shall be accessible via a hinged lockable door and removable front cover panel.
The Processor Module shall be accessible for programming only when the door is open.
- 5 The small and large dimmer cabinets shall be cooled by one or two 4.69" (119mm) low noise fans respectively. The fans shall maintain the temperature of all components within the ambient temperature range defined in the Environmental Specification with all Power Modules under full load.
Fans shall automatically be shut off after five minutes, if all Power Modules are Off.
- 6 Over-temperature sensing shall be provided, and will shut down the Power Modules until the temperature falls to within acceptable limits. An over-temperature indicator shall be provided on the front of the Processor Module.
- 7 The power efficiency of the dimmer cabinet shall be greater than 95% at full load.
- 8 The dimmer cabinet shall be finished in powder coat grey paint.

ELECTRICAL

- 1 The small and large cabinet shall be suitable for 90 - 240 Volt 1 phase 3 wire or 3 phase 4 wire 60/50 Hz supply and shall contain any combination of up to 6 or 12 Power Modules of the appropriate supply voltage. The total number of dimmer circuits per cabinet shall not exceed 24.
Note: Quad Power Modules shall only be used with the small Digital Environ Cabinet which shall require a Quad Module Kit Part No. 76807.
- 2 Power feed terminals shall accept the following cable sizes:
Small Cabinet: #2/0 to #12 AWG
Large Cabinet: 400 MCM to #6 AWG
- 3 Digital Environ shall have an internal dual output power supply to support up to 20 Outlook Control Stations (at 24 volts dc) or 20 Microcontrol Stations (at 10.6 volts dc). A Supplementary Power Supply shall also be available. Refer to "Ordering Information".
- 4 A "Panic" facility shall turn selected dimmers full on if the Processor Module is removed or fails. Dimmers are selected from dip switches within the cabinet.
It shall also be possible to select "Panic" as follows:
 - a A momentary switch with LED indicator on the front of the cabinet selects "Panic". A second momentary switch returns the cabinet to "Normal".
 - b Remote latching contact closure.
 - c Two remote momentary contact closures for "Panic" and "Normal" respectively.
- 5 A six pin female XLR chassis mounted connector shall be mounted on the face of the dimmer cabinet for connection of a hand held SWC Programmer or SV90 Supervisory PC.
- 6 The system ground shall be made at a grounding lug in the top of the dimmer cabinet.
- 7 All equipment shall be UL listed and CSA approved.

POWER MODULES

MECHANICAL

- 1 Power Modules shall be factory wired units of similar size and heavy duty metal construction, designed to be installed into the cabinet as a self contained bolt-in assembly. A plastic Power Module chassis shall not be acceptable.
- 2 Power Modules shall be UL recognised and CSA approved.
- 3 The maximum weight of a Power Module shall be 8 lb (3.6Kg)
- 4 Modules shall be finished in powder coat grey paint.

ELECTRICAL

- 1 Power connections shall be made on compression screw terminals. Control signal connections shall be made via plug-in connectors at each module chassis. Load connections shall be via compression screw terminals on a terminal block, or branch breaker assembly. Terminal Block and Branch Breaker Kits shall be available to convert the output format of selected Power Modules.
 - 2 Power Modules as listed shall be suitable for 110/120V or 220/240V, 60 or 50 Hz.
 - 3 Each dimmer shall maintain its output RMS voltage within 2% for changes in load from 100 watts to full rated load at any point on the dimming curve.
 - 4 The power efficiency of each Power Module shall be better than 95% at full load. Adequate heat sinking shall be provided.
 - 5 Module electronics shall be completely solid state using two silicon controlled rectifiers (SCR's) per dimmer in inverse parallel configuration.
 - 6 SCR devices shall be encapsulated in an epoxy filled high impact plastic case with opto isolator, trigger SCR, steering bridge and snubber network. There shall be a minimum of 2500 volts isolation between the ac line and control lines of the SCR sub-assembly.
 - 7 Each dimmer way shall be protected by fully magnetic circuit breaker of the appropriate capacity mounted on the faceplate of the Power Module. This protective device shall have a "must trip" rating of 125% of rated capacity and be rated for a minimum 10,000 Amp interrupting capacity.
 - 8 It shall be possible to use the breaker as a dimmer disconnect device and shall be a UL listed and CSA approved device.
 - 9 Under overload conditions, the breaker will disconnect power to the dimmer to protect the SCR device. Current limiting feedback techniques shall not be acceptable as a means of protecting the main power device.
 - 10 The full load current shall be carried and controlled by the SCR device. Dimmers employing Triacs shall not be acceptable.
 - 11 All Power Modules shall be capable of continuous operation at full rated load. Under no circumstances will modules allowing continued operation with loads substantially in excess of the rated capacity be acceptable.
 - 12 A Linear Power, Square, S-Curve, Non-Dim or Fluorescent response curve shall be assigned from the Processor Module for each dimmer. Each assigned Non-Dim shall have a programmable switching threshold between 1 and 99%. In addition to a default Fluorescent curve, a Magnetic or Electronic Ballast option with programmable top and bottom set levels shall be available to further optimise the curve for each fluorescent dimmer. Under normal circumstances however; Fluorescent Power Modules shall use the default response curve with adjustments via trim pot(s) on the module.
 - 13 At full load under normal operating conditions, voltage insertion loss in the dimmer shall be typically 2 volts, but shall not exceed 4 volts.
 - 14 The maximum output voltage level for each individual dimmer shall be programmable from the keypad to any desired point with automatic re-calculation of the assigned dimmer curve across the permitted voltage range.
 - 15 The dimmer outputs shall be regulated to within 1V for every 20V change in the input voltage at 50% control input, provided that the output voltage is more than 4 volts below the dimmer rack input voltage and that the input voltage is sinusoidal.
- Specific Features of the Incandescent/Inductive Dimmers shall be as follows:**
- 16 Dimmers shall have an integral inductive toroidal filter designed to reduce the rate of rise of current such that the rise time shall be 350 μ s at full load, measured between 10 - 90% of the load current waveform at a 90° conduction angle. Chokes with a higher rise time shall be available to order.
The filter shall limit objectionable harmonics, reduce acoustical noise in incandescent lamps and limit conducted radio frequency interference on the ac line and load wires.
 - 17 The dimmer firing circuitry shall produce an output sine wave that is fully symmetrical to minimise the dc component in the output waveform to within +/- 1 volt dc.
 - 18 It shall be possible to dim low and high voltage transformer fed loads providing the transformer used is approved by the manufacturer for use with phase control dimmers. Refer to Strand Lighting's Fact Sheet "Dimming Transformer Fed Loads" for further information.
 - 19 When dimming cold cathode loads with an Incandescent/Inductive Power Module, a fluorescent dimming curve shall be assigned from the processor keypad to give a bottom set cut-off ensuring the maximum range of stable performance.

Specification

Specific features of the Fluorescent Dimmer Modules shall be as follows:

20 The fluorescent dimmers shall be suitable for dimming conventional 3 wire magnetic ballasts as recommended by Strand Lighting.

Refer to Strand Lighting Fact Sheet "A Guide to Fluorescent Dimming" for further information. For dimming High Frequency Electronic Ballasts refer to the "Electronic Fluorescent Ballast Controller" Data Sheet.

21 A mechanical relay shall be provided for switching on the cathode heater supply when the control level is raised above zero.

22 The fluorescent dimmers shall have a "Bottom Set" to adjust the cut-off point ensuring the maximum range of stable performance for both fluorescent and cold cathode loads. Refer to "Power Module Electrical Specification" item 12.

Specific features of the Constant-On Modules shall be as follows:

23 Constant-On Modules shall allow any circuit to be supplied with constant power through substitution of a Constant-On Module for the Dimmer or Non-Dim Module.

Specific features of the Non-Dim Modules shall be as follows:

24 Non-Dims shall allow any circuit to be switched as a non-dim through substitution of a Non-Dim Module for the Dimmer or Constant-On Module.

25 Non-Dim Modules shall be designed so that they can be used for inductive (transformer-fed) loads. Non-Dim Modules with chokes shall not be acceptable.

26 Non-Dim Modules shall have a threshold adjustment to determine their control voltage switching point. Refer to "Power Module Electrical Specification" item 12.

27 The Terminal Block Kit shall provide all necessary parts to convert branch breaker bussing on the indicated Power Modules, to terminal block output.

28 Branch Breaker Kits shall provide all necessary parts to convert the indicated terminal block output Power Modules for branch circuit breaker protection. Circuit breaker cover plugs shall be provided with each kit.

PROCESSOR MODULE

1 Each Digital Environ Cabinet shall have a number of user programmable parameters and defaults which may be reported and programmed from the Processor Module membrane keypad and 16 character LCD display. All programmable parameters have factory default values.

2 The display shall provide programming messages, prompts and fault reporting.

3 The keypad shall be protected with multiple level security codes to prevent unauthorised access to selected set-up menus.

4 The Processor Module single chip microcontroller shall be protected by watchdog circuitry, providing stability, speed and precise digital control of the Power Modules.

5 Fade resolution shall typically be greater than 1600 steps ensuring smooth fades. Systems with lower resolution shall not be acceptable.

6 All data storage in the dimmer processor shall have security systems to prevent unintentional re-programming or loss of data.

7 User programmed information shall be held in non-volatile memory which retains its data in the event of power switch off or failure. Systems requiring batteries shall not be acceptable.

8 The Processor Module shall be protected by a 2A SS HRC fuse link.

9 Control Inputs

The following control protocols shall be supported by Digital Environ without need for modification to the Cabinet or Processor Module. All control terminations are via screw terminal connectors.

Digital Network Control -

operating on a highest level takes precedence basis with: -

Multiplex Input - DMX 512 or D54 -

operating on a highest level takes precedence basis with: -

Optional 2nd Multiplex Input - DMX 512 -

operating on a highest level takes precedence basis with: -

26 Analog Inputs - 24 for internal dimmers, 2 for external equipment. -

operating on a highest takes precedence basis with: -

Processor Keypad - when recalling Digital Network presets -

operating on a highest takes precedence basis with: -

Processor Keypad - when recalling SWC presets. -

operating on a last action takes precedence basis with: -

SWC Control Stations, SWC hand held Programmer and SV90 Supervisory PC recalling presets - all operating on an override basis with:-

Processor Keypad - Using the "Level" menu option or SWC or SV90 when controlling individual channels.

10 Control Outputs

The Processor Module shall support 24 digital outputs to drive single, dual and quad Power Modules. In addition, two 0 to +10 volt analog outputs (at 1mA maximum) shall be provided for auxiliary control capability (e.g. the Electronic Fluorescent Ballast Controller).

Specification

PROGRAMMABLE FEATURES

- 1 The following options shall be available from the Set-up menu, using a keypad access code:
 - Language: English, French, German
 - Dimmer module assignments: The arrangement of Single, Dual or Quad Power Modules for each module position is programmed. From this information, physical dimmers and both analog outputs are given sequential dimmer numbers to simplify programming of other features.
 - Rack number: 1 - 99. Used for SWC.
 - Max output voltage (per dimmer): 50-250 volts e.g. Set to 105V for extended lamp life.
 - Min level (per dimmer): 0% - 25% e.g. Set to 10% for safety purposes.
 - Reset to factory defaults.
- 2 The following options shall be accessed directly from the membrane keypad buttons:-
 - a Patch
 - Digital Network Control:
 - Each dimmer and analog output shall be patched to a room (between 1 and 16) and channel number (between 1 and 12).
 - Multiplex Control:
 - Each dimmer and analog output shall be patched to any valid DMX or D54 address number for both the standard multiplex input A and optional multiplex input B.
 - Analog Control:
 - Each dimmer and analog output shall automatically be assigned in sequence to one of 26 analog inputs.
 - b Mux Input
 - Select DMX or D54 for Mux Input A.
 - c Non-Dim
 - Individual assignment of dimmers as non-dims with threshold levels programmable between 1%-99%.
 - d Curve
 - Response curve assignment per dimmer: Linear Power, Square, S-Curve and Fluorescent (with top and bottom set levels).
 - e Response Speed
 - Dimmer response: fast (30ms), normal (100ms) or slow (300ms). This shall determine a dimmers rate of response to a change in control level. Slow is usually set for large tungsten loads to reduce filament inrush, medium or fast for small loads.
 - f Preset
 - Architectural:
 - Recall preset 1-8, On and Off for each room.
 - Record presets 1-8 and all programmable fade times for each room or all rooms.
 - Set channel levels for each room.
 - Power-up preset
 - Entertainment:
 - Recall back-up preset 0 - 99.
 - Record presets 1-99 with fade times.
 - Define Preset No. or "Hold" condition on Mux failure.
 - g Level
 - Dimmer control assignment to "Input" (Digital Network, Mux A, Mux B or Analog), or to a fixed level 0% - 99% or "Full".
 - h Cursor and Selection Keys
 - + / Confirm
 - / Cancel
 - < (move cursor to left)
 - > (move cursor to right)
- 3 Service Menus
 - The service menus shall give access to cabinet self tests and provide calibration facilities.
 - The service menu shall be entered via a security code to prevent unauthorised access.
 - Service functions available include:
 - Calibration:
 - Phase A (L1), B (L2), C (L3) voltages.
 - Analog inputs - top set calibrated between 7 and 13 volts.
 - Analog outputs - top set calibrated between 5 and 10 volts.
 - Display; set LCD contrast.

Log:

View Error Log: Errors shall be displayed from the error log as an error number with a text description of the error.

Clear Error log: Clears the log.

4 Processor Module Indicators

The following indicators shall be provided on the processor module:

Phase Indicators: A (L1), B (L2), C (L3).

Note: A (L1) and B (L2) illuminate for 1P/3W supplies.

Mux A ok

Processor ok

Mux B ok

Mux B fitted and ok

Over-temperature (indicated by "processor ok" led flashing)

LCD Display - reporting rack status continuously

5 The Digital Environ Processor shall be immune to mains carried interference

(ripple disturbances) of up to 20 Vpp sinusoidal signals at frequencies above 180Hz.

FLUORESCENT DIMMING

DIMMING USING MAGNETIC BALLASTS

When dimming using approved* 3 wire magnetic dimming ballasts the following loading guidelines shall apply:

Dimmer Rating	No of Tubes (F40 T12 Fluorescent Tubes)	
	Min	Max
15A 120 Volt	8	30
20A 120 Volt	8	40
50A 120 Volt	8	100

* Refer to Strand Lighting Fact Sheet "A Guide to Fluorescent Dimming" for recommendations on approved ballast types.

DIMMING USING ELECTRONIC FLUORESCENT BALLASTS

An Electronic Fluorescent Ballast Controller (EFBC) is available to interface Strand Lighting control systems and the Advance® Mark VII Fluorescent Ballast. Refer to the EFBC Data Sheet for further information.

The EFBC requires an analog control signal and is not connected to a dimmer output. The Digital Environ Processor Module has two assignable analog outputs for independent control of two such EFBC units.

POWER SUPPLY

To supplement the internal Digital Environ Power Supply, an external Power Supply listed under "Ordering Information" can support up to 20 Microcontrol or Outlook Stations, and is supplied complete with an enclosure for wall mounting in the dimmer/distribution room. It is suitable for 90 - 240 volts ac 60 or 50 Hz supplies.

DOCUMENTATION

System riser and connection drawings shall be supplied as specified. Installation Instructions, document part #: 2-450134-010, shall be supplied with each Digital Environ Cabinet.

STANDARDS

The dimmer cabinet assembly shall be UL listed and CSA approved and shall be labelled as such.

ENVIRONMENTAL SPECIFICATION

For Digital Environ and associated equipment, the following recommendations shall apply:

Ambient temperature extremes	32 - 95° Fahrenheit (0° - 35° C)
Relative humidity	10 - 90% non-condensing
General conditions	Office level cleanliness - Interior use only

Ordering Information

Dimmer Cabinets

Part No. Description - Dimmer Cabinets

74016	Digital Environ Cabinet (Small) with Processor 90-240 Volts ac 60/50 Hz
74012	Digital Environ Cabinet (Large) with Processor 90-240 Volts ac 60/50 Hz
79100	Spare Processor Module 90-240 Volts ac 60/50 Hz
76309	Optional Second DMX 512 Input Card

Power Modules - Incandescent/Inductive

Part No.	Description	Kit	Branch Breakers		Terminal Block	
			No.	Type (per dimmer)	Kit	Note
72001	1 x 2.4 kW Inc/Ind 110/120V TB	76801	6	76803 6 76805	-	1
72002	2 x 2.4 kW Inc/Ind 110/120V TB	-	-	-	-	2
72003	2 x 2.4 kW Inc/Ind 110/120V BB	-	3	76803 3 76805	-	4
72004	4 x 1.8 kW Inc/Ind 110/120V TB	-	-	-	-	2,5
72005	1 x 6.0 kW Inc/Ind 110/120V BB	-	6	76803 6 76805	76800	3
72021	1 x 2.2 kW Inc/Ind 220/240V TB	*	6	* 6 *	-	1
72022	2 x 2.2 kW Inc/Ind 220/240V TB	-	-	-	-	2
72023	2 x 2.2 kW Inc/Ind 220/240V BB	-	3	* 3 *	-	4
72025	1 x 5.5 kW Inc/Ind 220/240V BB	-	6	* 6 *	*	3

Power Modules - Non Dim

Part No.	Description	Kit	Branch Breakers		Terminal Block	
			No.	Type (per dimmer)	Kit	Note
72009	1 x 20Amp Non-Dim 110/120V TB	76801	6	76803 6 76805	-	1
72010	2 x 20Amp Non-Dim 110/120V TB	-	-	-	-	2
72011	2 x 20Amp Non-Dim 110/120V BB	-	3	76803 3 76805	-	4
72012	1 x 50Amp Non-Dim 110/120V BB	-	6	76803 6 76805	76800	3
72029	1 x 2.2kW Non-Dim 220/240V TB	*	6	* 6 *	-	1
72030	2 x 2.2kW Non-Dim 220/240V TB	-	-	-	-	2
72031	2 x 2.2kW Non-Dim 220/240V BB	-	3	* 3 *	-	4
72032	1 x 5.5kW Non-Dim 220/240V BB	-	6	* 6 *	76800	3

Power Modules - Fluorescent

Part No.	Description	Kit	Branch Breakers		Terminal Block	
			No.	Type (per dimmer)	Kit	Note
72006	1 x 2.4kW FL 110/120V TB	76802	3	(2P) 76804 3 (2P) 76806	-	1
72007	2 x 2.4kW FL 110/120V TB	-	-	-	-	2
72008	1 x 6.0kW FL 110/120V BB	-	3	(2P) 76804 3 (2P) 76806	-	3
72026	1 x 2.2kW FL 220/240V TB	*	3	(2P) * 3 (2P) *	-	1
72027	2 x 2.2kW FL 220/240V TB	-	-	-	-	2
72008	1 x 5.5kW FL 220/240V BB	-	3	(2P) * 3 (2P) *	-	3

Constant On Modules

Part No.	Description	Kit	Branch Breakers		Terminal Block	
			No.	Type (per dimmer)	Kit	Note
72013	1 x 50Amp Con - On 110/120V BB	-	6	76803 6 76805	76800	3

Circuit Breakers and Mounting Kits

Part No.	Description
76800	Digital Environ Terminal Block Kit
76801	Branch Breaker Kit for 6 x 1 pole breakers
76802	Branch Breaker Kit for 3 x 2 pole breakers
76803	15 Amp 1 pole Breaker (GE THQP115)
76804	15 Amp 2 pole Breaker (GE THQP215)
76805	20 Amp 1 pole Breaker (GE THQP120)
76806	20 Amp 2 pole Breaker (GE THQP220)

Accessories

Part No.	Description
66100	Microcontrol/Outlook Supplementary PSU with Enclosure
76807	Quad Module Kit (Cable Assembly)

* For details on 220/240 volt Branch Breaker Kits, Branch Breakers and Terminal Block Kits, contact Strand Lighting.

- Note:** TB = Terminal Block output format.
BB = Branch Breaker output format.
Branch breakers are not supplied as standard, order separately.
110/120 Volt Power Modules may be used on 100 volt supplies.
- Note 1:** Terminal block output provided as standard. If branch circuit breakers are required, then order mounting kit and listed.
- Note 2:** Primary fully magnetic circuit breaker serves as branch breaker.
- Note 3:** Circuit breaker mounting provided as standard. If a terminal strip output is required, then order the Terminal Block kit listed.
- Note 4:** Up to 3 branch breakers per dimmer.
- Note 5:** 4 x 1.8kW Incandescent module can only be used with the small (6 module) cabinet.
Supplementary control cable assembly is required Part No. 76807.

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Toll Free Tel: 800 487 0175 Toll Free Fax: 800 775 LEKO(5356)

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