

LOW VOLTAGE CONTROLLER for MedMaster Envela MEP Series LVC SERIES

PROJECT INFORMATION

Job Name _____

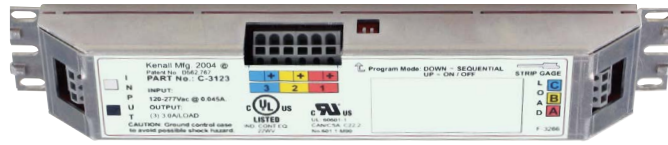
Fixture Type _____

Catalog Number _____

Approved by _____

PRODUCT FEATURES:

- » Allows low voltage control of line voltage luminaries
- » Individual or sequential control modes
- » Designed to operate up to three separate loads by the closure of low voltage momentary contact switches
- » Can be controlled via patient hand held pillow device, bed side rails, or wall-mounted device



SPECIFICATIONS

ELECTRICAL:

INPUT VOLTAGE:

Range: 120 through 277 VAC ± 10% (3 amps max per load)
50/60 Hertz

Low Voltage Circuits Operating Voltage
5 VDC

Loads: 3 Load Max

Operating Temperature Range
32-176° F / 0-80° C

CONTROL MODES: Kenall's low-voltage controller (LVC) for the MedMaster Envela MEP Series is configured for SEQUENTIAL control in all LED-based versions. Linear fluorescent products can be configured for both INDIVIDUAL and SEQUENTIAL control modes. The 2 control modes are set using dip switches located next to the low voltage terminals. Both dip switches in the UP position (toward the label) will put the LVC in INDIVIDUAL MODE. Both dip switches in the DOWN position will be SEQUENTIAL MODE.

INSTALLATION: The LVC accepts a single universal voltage input of 120v through 277V. When the LVC is pre-installed into a Kenall light fixture, the ballasts/driver will be pre-wired to the LVC outputs. The contractor will be responsible for connecting the incoming AC power to the LVC and connecting the low voltage wiring (Class 2) to the LVC in an isolated conduit. A low voltage wiring diagram will be supplied with the fixture and will match the specified control sequence.

PATENT: U.S. Patent No. D562,767

LISTINGS: UL/CUL Recognized Component Medical/Dental 60601-1. UL Listed Industrial Control Device 22WV.



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LOW VOLTAGE CONTROLLER
for MedMaster Envela MEP Series - LED
LVC SERIES

Sequential Mode - LED

Sequential mode allows control of 2 loads with 1 common low voltage switch and control of 1 additional load with a 2nd switch. (See Table 2)

LV Input	Loads	Sequence
1	A & B	A, B, A+B, OFF
2*	A	ON, OFF
3	C	ON, OFF

Table 2: Sequential Mode Switching

* In sequential mode LV Input 2 provides an override control for Load A.

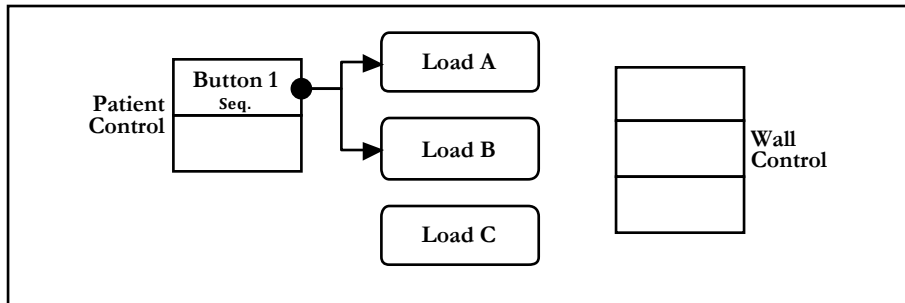


Figure 3: Sequential Load, One – Button Patient Control and No Wall Control

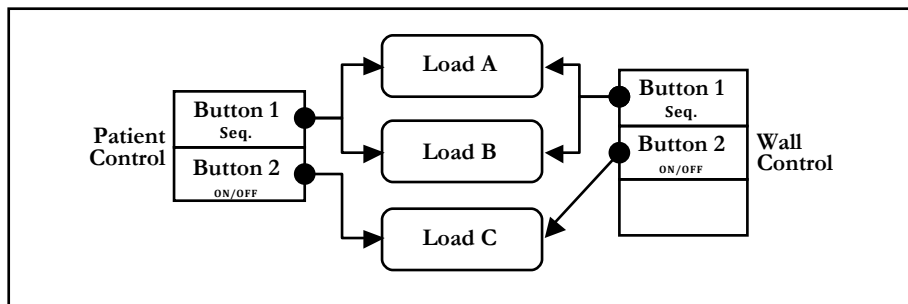


Figure 4: Sequential Load, Two – Button Patient Control and Two – Button Wall Control

LOW VOLTAGE CONTROLLER
for MedMaster Envela MEP Series - LED
LVC SERIES

Configuration Example

The LVC configuration description lists the luminaire(s) controlled by each of the three LVC switches and the program mode (DN). In other words, the first position corresponds to the first wire pair, the second position to the second and so on. The final position describes the program mode. See the table below for luminaire description codes. Locate the corresponding configuration number and add this number to the end of the luminaire catalog number.

	[Load A + Load B]	[Load A]	[Load C]	[DN]	Configuration Number
Sequential	A + E	—	—	DN	F-7107

Control Questionnaire

Select Loads and Control Mode [Input luminaire codes]*

- A Load A Luminaire (required)
- E Load B Luminaire (required)
- Load C Luminaire
- DN Sequential Mode [DN] (required)

A	Ambient Light
E	Exam Light

NL	Night Light
DN	Sequential Mode

Diagram Listing

This table lists each of the possible configurations of the Kenall LVC with the corresponding part number for the wiring diagram.

Description: [SW1] / [SW2] / [SW3] / [UP/DN]

Sequential Mode Configurations

Configuration Number	Description
F-7107	A+E / - / - / DN
F-7617	A+E / - / NL / DN

Signature: _____

Name: _____ Date: _____

PO#: _____ Fixture Type: _____

****By signing this, the signee gives approval of the above configuration for the LVC driver. The order will not be processed unless signed.**



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LVC SERIES

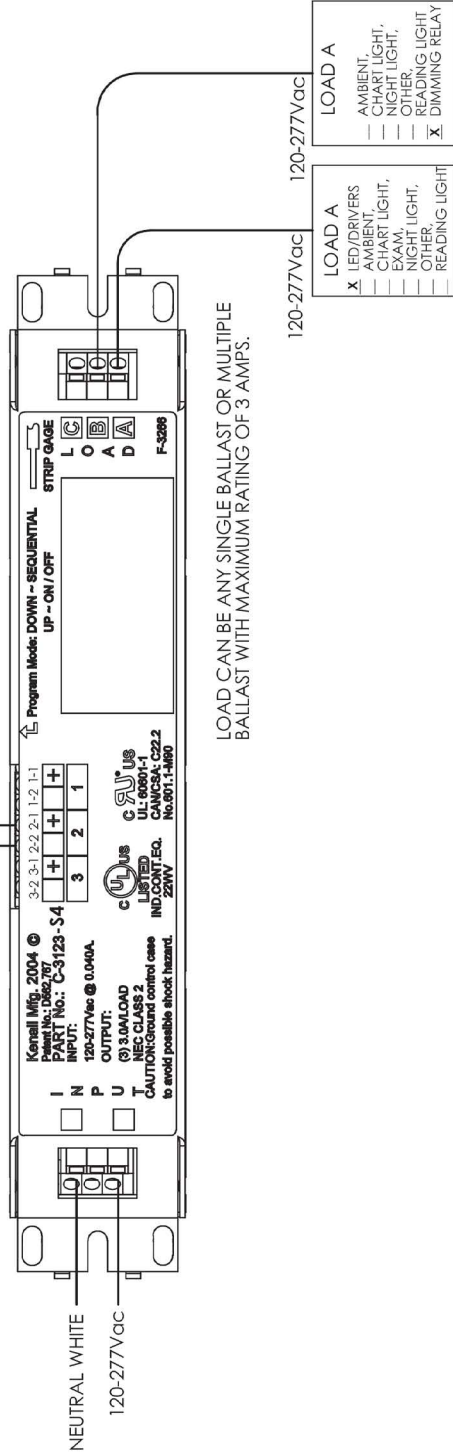
LEGEND KEY	
PS	PATIENT SWITCH (AT THE BED) N.O. MOMENTARY CONTACT
WS	WALL SWITCH N.O. MOMENTARY CONTACT
PROGRAM MODE:	
X	DOWN (SEQUENTIAL)
	UP (ON/OFF)

MOMENTARY CONTACT WIRE (5 VOLT SUPPLY) HOOK-UP			
3-2	RETURN (BLUE)	↓	
2-2	SUPPLY RETURN (YELLOW)	↑	
1-2	SUPPLY (RED)	↑	
1-1	SUPPLY (RED)	↑	

LOW VOLTAGE WIRING SECTION

*WS - OPTIONAL

ALL NEUTRAL WIRES NEED TO BE TIED INTO THE SAME CIRCUIT.



LOAD CAN BE ANY SINGLE BALLAST OR MULTIPLE BALLAST WITH MAXIMUM RATING OF 3 AMPS.

*SEQUENTIAL

SWITCH POSITION SEQUENCE	WS #2 (2-1, 2-2)		
	LOAD A	LOAD B	LIGHT OUTPUT
1	ON	OFF	50%
2	ON	ON	100%
3	OFF	OFF	0%

F-7107



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LOW VOLTAGE CONTROLLER
 for MedMaster Envela MEP Series - Fluorescent
LVC SERIES

Individual Mode - Fluorescent

Individual mode allows control of 3 loads with 3 independent low voltage switches. (See Table 1)

LV Input	Loads
1	A
2	B
3	C

Table 1: Individual Mode Switching

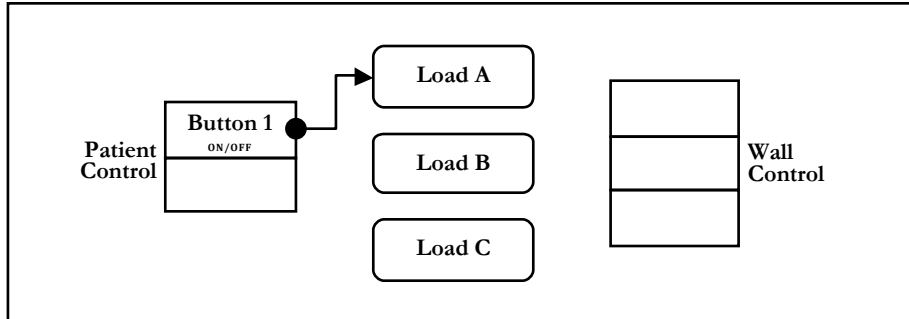


Figure 1: Individual Load, Single Button Patient Control and No Wall Control

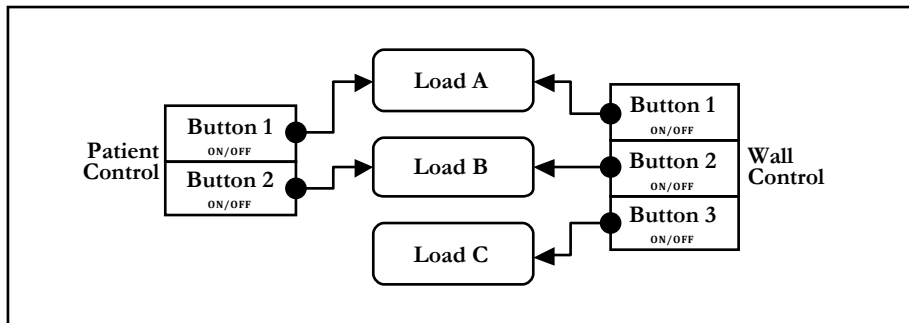


Figure 2: Individual Load, Two – Button Patient Control and Three Button Wall Control

LOW VOLTAGE CONTROLLER
for MedMaster Envela MEP Series - Fluorescent
LVC SERIES

Configuration Example

The LVC configuration description lists the luminaire(s) controlled by each of the three LVC switches and the program mode (UP). In other words, the first position corresponds to the first wire pair, the second position to the second and so on. The final position describes the program mode. See the table below for luminaire description codes. Locate the corresponding configuration number and add this number to the end of the luminaire catalog number.

	[Load A]		[Load B]		[Load C]		[UP]	Configuration Number
Individual	A	/	R	/	—	/	UP	F-3345

Control Questionnaire

Select Loads and Control Mode [Input luminaire codes]*

- Load A Luminaire (required)
- Load B Luminaire
- Load C Luminaire
- Individual Mode[UP] (required)

A	Ambient Light
CL	Chart Light
E	Exam Light

NL	Night Light
R	Reading Light
UP	Individual Mode

Diagram Listing

This table lists each of the possible configurations of the Kenall LVC with the corresponding part number for the wiring diagram.

Description: [SW1] / [SW2] / [SW3] / [UP/DN]

Individual Mode Configurations

NOTE: For custom configurations, consult factory.

Configuration Number	Description
F-3335	A / - / - / UP
F-3340	R / - / - / UP
F-3342	A / E / - / UP
F-3345	A / R / - / UP
F-3366	R / A / - / UP
F-3388	R / E / A / UP
F-3414	A / R / E / UP
F-3427	R / A / E / UP
F-3472	A / E / R / UP

Signature: _____

Name: _____ Date: _____

PO#: _____ Fixture Type: _____

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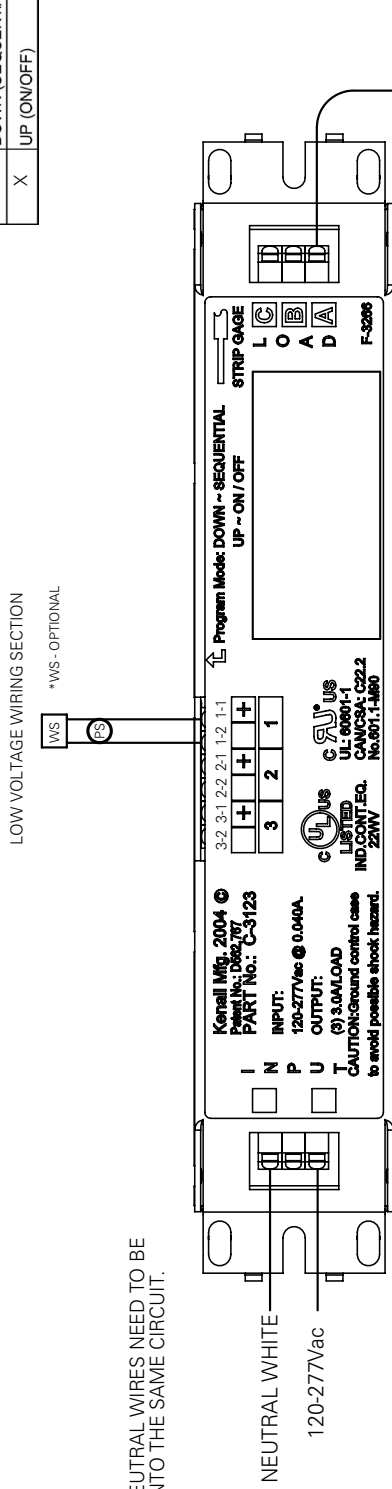
LOW VOLTAGE CONTROLLER

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LVC SERIES

MOMENTARY CONTACT WIRE (5 VOLT SUPPLY) HOOK-UP			
3-2	3-1	2-2	1-1
RETURN (BLUE)	SUPPLY (BLUE)	RETURN (YELLOW)	SUPPLY (RED)
↓	↑	↓	↑

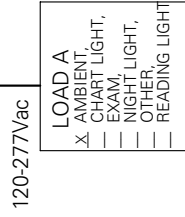
LEGEND KEY	
PS	PATIENT SWITCH (AT THE BED) N.O. MOMENTARY CONTACT
WS	WALL SWITCH N.O. MOMENTARY CONTACT

PROGRAM MODE:	
	DOWN (SEQUENTIAL)
X	UP (ON/OFF)



ALL NEUTRAL WIRES NEED TO BE TIED INTO THE SAME CIRCUIT.

LOAD CAN BE ANY SINGLE BALLAST OR MULTIPLE BALLAST WITH MAXIMUM RATING OF 3 AMPS.



*TOGGLE ON/OFF

SW POS.	WS #1 (1-1, 1-2)
SEQUENCE	PS #1 (1-1, 1-2)
1	LOAD A ON
2	OFF
3	
4	



A/-/UP
F-3335
041510



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Sequential Mode - Fluorescent

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1	A & B	A, B, A+B, OFF
2*	A	ON, OFF
3	C	ON, OFF

Table 2: Sequential Mode Switching

* In sequential mode LV Input 2 provides an override control for Load A.

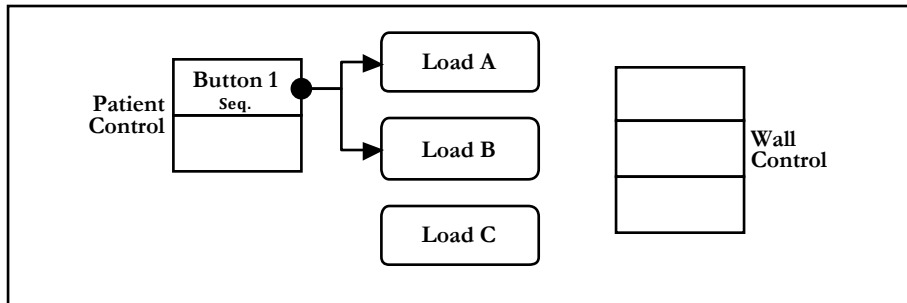


Figure 3: Sequential Load, One – Button Patient Control and No Wall Control

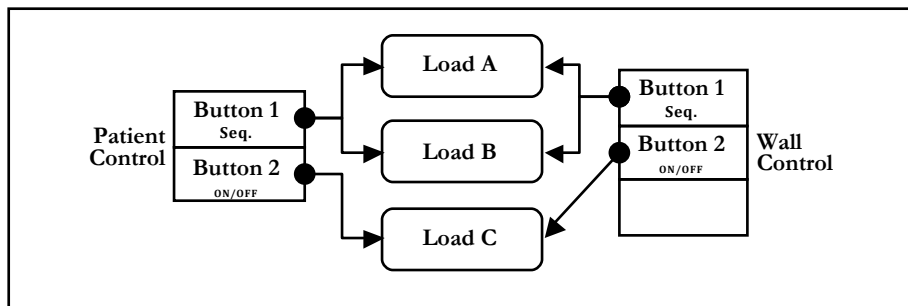


Figure 4: Sequential Load, Two – Button Patient Control and Two – Button Wall Control



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LVC SERIES

Configuration Example

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	[Load A + Load B]	[Load A]	[Load C]	[DN]	Configuration Number
Sequential	A + R	—	—	DN	F-3494

Control Questionnaire

Select Loads and Control Mode [Input luminaire codes]*

Load A Luminaire (required)

Load B Luminaire

Load C Luminaire

Sequential Mode [DN] (required)

A	Ambient Light
CL	Chart Light
E	Exam Light

NL	Night Light
R	Reading Light
DN	Sequential Mode

Diagram Listing

This table lists each of the possible configurations of the Kenall LVC with the corresponding part number for the wiring diagram.

Description: [SW1] / [SW2] / [SW3] / [UP/DN]

Sequential Mode Configurations

NOTE: For custom configurations, consult factory.

Configuration Number	Description
F-3494	A+R / - / - / DN
F-3507	R+A / - / - / DN
F-3546	A+E / - / - / DN
F-3562	A+R / A / E / DN
F-3650	A+R / - / E / DN

Signature: _____

Name: _____ Date: _____

PO#: _____ Fixture Type: _____

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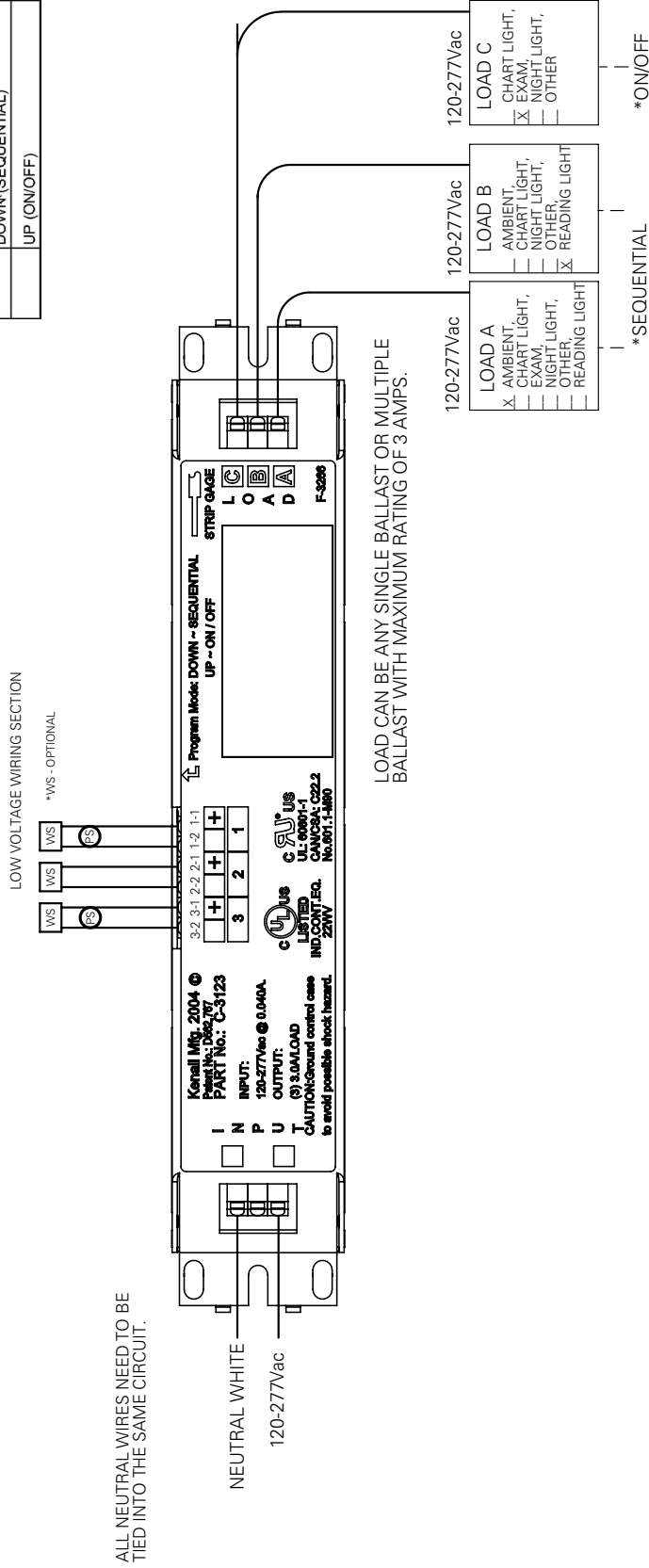
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LVC SERIES

MOMENTARY CONTACT WIRE (6 VOLT SUPPLY) HOOK-UP			
3-2	3-1	2-2	1-1
RETURN (BLUE)	SUPPLY (BLUE)	RETURN (YELLOW)	SUPPLY (RED)
↑	↑	↓	↑

LEGEND KEY	
PS	PATIENT SWITCH (AT THE BED) N.O. MOMENTARY CONTACT
WS	WALL SWITCH N.O. MOMENTARY CONTACT

PROGRAM MODE:	
DOWN	(SEQUENTIAL)
UP	(ON/OFF)



SW POS.	WS #1 (1-1, 1-2)	WS #2 (2-1, 2-2)	WS #3 (3-1, 3-2)
SEQUENCE	PS #1 (1-1, 1-2)	PS #2 (2-1, 2-2)	PS #3 (3-1, 3-2)
	LOAD A	LOAD B	LOAD C
1	ON	OFF	ON
2	OFF	ON	OFF
3	ON	ON	ON
4	OFF	OFF	OFF

KENALL
A+ R/A/E/DN
F-3562
041510

