LOW VOLTAGE CONTROLLER
for MedMaster Envela MEP Series
LVC SERIES

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)  Low Voltage Circuits Operating Voltage 5 VDC
50/60 Hertz
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.
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)

<table>
<thead>
<tr>
<th>LV Input</th>
<th>Loads</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A &amp; B</td>
<td>A, B, A+B, OFF</td>
</tr>
<tr>
<td>2*</td>
<td>A</td>
<td>ON, OFF</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
<td>ON, OFF</td>
</tr>
</tbody>
</table>

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.

### Control Questionnaire  
Select Loads and Control Mode [Input luminaire codes]*

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

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

#### Sequential Mode Configurations

<table>
<thead>
<tr>
<th>Configuration Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-7107</td>
<td>A+E/-/-/DN</td>
</tr>
<tr>
<td>F-7617</td>
<td>A+E/-/NL/DN</td>
</tr>
</tbody>
</table>

**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.**
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)

Table 1: Individual Mode Switching

<table>
<thead>
<tr>
<th>LV Input</th>
<th>Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>[Load A]</th>
<th>[Load B]</th>
<th>[Load C]</th>
<th>[UP]</th>
<th>Configuration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>A</td>
<td>/</td>
<td>R</td>
<td>/</td>
</tr>
</tbody>
</table>

Control Questionnaire
Select Loads and Control Mode [Input luminaire codes]*

- Load A Luminaire (required)
- Load B Luminaire
- Load C Luminaire

<table>
<thead>
<tr>
<th>Description</th>
<th>Load</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Light</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Chart Light</td>
<td>CL</td>
<td></td>
</tr>
<tr>
<td>Exam Light</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>Night Light</td>
<td>NL</td>
<td></td>
</tr>
<tr>
<td>Reading Light</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>Individual Mode</td>
<td>UP</td>
<td></td>
</tr>
</tbody>
</table>

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]

<table>
<thead>
<tr>
<th>Configuration Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-3335</td>
<td>A / - / - / UP</td>
</tr>
<tr>
<td>F-3340</td>
<td>R / - / - / UP</td>
</tr>
<tr>
<td>F-3342</td>
<td>A / E / - / UP</td>
</tr>
<tr>
<td>F-3345</td>
<td>A / R / - / UP</td>
</tr>
<tr>
<td>F-3366</td>
<td>R / A / - / UP</td>
</tr>
<tr>
<td>F-3388</td>
<td>R / E / A / UP</td>
</tr>
<tr>
<td>F-3414</td>
<td>A / R / E / UP</td>
</tr>
<tr>
<td>F-3427</td>
<td>R / A / E / UP</td>
</tr>
<tr>
<td>F-3472</td>
<td>A / E / R / UP</td>
</tr>
</tbody>
</table>

Signature: __________________________________________

Name: ___________________________ Date: ____________

PO#: ___________________________ Fixture Type: ____________

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LOW VOLTAGE CONTROLLER
LVC SERIES

MOMENTARY CONTACT WIRE (6 VOLT SUPPLY) HOOK-UP

<table>
<thead>
<tr>
<th>RETURN (BLUE)</th>
<th>SUPPLY (BLUE)</th>
<th>RETURN (YELLOW)</th>
<th>SUPPLY (YELLOW)</th>
<th>RETURN (RED)</th>
<th>SUPPLY (RED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-2</td>
<td>3-1</td>
<td>2-2</td>
<td>2-1</td>
<td>1-2</td>
<td>1-1</td>
</tr>
</tbody>
</table>

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

LOW VOLTAGE WIRING SECTION

Program Mode:
- DOWN (SEQUENTIAL)
- UP (ON/OFF)

LEGEND KEY

<table>
<thead>
<tr>
<th>PS</th>
<th>WALL SWITCH (AT THE BED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS</td>
<td>N.O. MOMENTARY CONTACT</td>
</tr>
</tbody>
</table>

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

NEUTRAL WHITE
120-277Vac

LOAD A
- AMBIENT
- CHART LIGHT
- EXAM
- NIGHT LIGHT
- OTHER
- READING LIGHT

*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         |

F-3335
041510
LOW VOLTAGE CONTROLLER
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Control Questionnaire
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Diagram Listing
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Sequential Mode Configurations
NOTE: For custom configurations, consult factory.

Signature: __________________________

Name: ___________________________ Date: ____________

PO#: _____________________________ Fixture Type: ____________

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LVC SERIES

LOW VOLTAGE WIRING SECTION

LOAD A
- AMBIENT,
- CHART LIGHT,
- NIGHT LIGHT,
- OTHER,
- READING LIGHT

LOAD B
- AMBIENT,
- CHART LIGHT,
- NIGHT LIGHT,
- OTHER,
- READING LIGHT

LOAD C
- CHART LIGHT,
- EXAM,
- NIGHT LIGHT,
- OTHER

*SEQUENTIAL

120-277Vac

NEUTRAL WHITE

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

X

1-12-13-1 1-22-23-2

WS

120-277Vac 120-277Vac

WS

PS

WS

*WS - OPTIONAL

A+R/A/E/DN

F-3562

LVCMEP-110619