Description of Normal Operation for the Sign’s Internal Power Supply
Diagnostic LEDs are included on the internal power supply to aid in verifying that input power is present and is being transferred to the sign face through the output connectors.

**V Out LED**
This LED illuminates Green when 12-24VDC power is applied to the internal power supply’s input power pigtail.  
*Note: The transformer on the power supply converts 12-24VDC power to +12V.*

**Output Connectors**
These connectors transfer power from the internal power supply to the sign face to illuminate the individual message(s).

For signs with one message and one power supply, the V Out LED should illuminate green when the message is powered. For signs with multiple message and/or multiple power supplies, the V Out LED on each power supply of the energized message should illuminate.  
*Note: A longer single message may require multiple power supplies to illuminate the entire message.*

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**Single Message with Multiple Power Supply Example**

![Diagram of a single message with multiple power supplies](image)
Problem: Dark band or area when message is illuminated

SBL(F) Series 12-24VDC

There is a dark band or dark area when message is illuminated

Do some areas of the sign face appear dark when illuminated?

YES

Entire Sign needs replaced

Contact sales with the serial number of the sign

Please refer to the diagrams on page 1.
Problem: A message is lit that shouldn’t be

SBL(F) Series 12-24VDC

A message is lit that should not be

- Do the wires run parallel to other high power devices?
  - YES: Run wires in separate conduit
  - NO: Is there incoming voltage on that channel?
    - YES: Recheck all connections to switches or controlling system
    - NO: Replace power supply

Contact sales with the serial number of the sign

Please refer to the diagrams on page 1.
Problem: Display is flickering

SBL(F) Series 12-24VDC

1. Display is flickering
   
2. Is the V Out LED illuminated steady?
   - NO: External power source may be AC or it may not have adequate current capacity to accommodate the sign’s power supply inrush current
   - YES: Is the output connector secure?
     - YES: Supply is defective and needs replaced
     - NO: Re-attach connector

Please refer to the diagrams on page 1.
Problem: Entire display is out

SBL(F) Series 12-24VDC

Entire display is out

Is the V Out LED illuminated?

YES

Is the output LED for the affected message illuminated?

YES

Is the output connector secure?

YES

Check switches and wiring

NO

Supply is defective and needs replaced

NO

Contact sales with the serial number of the sign

YES

Re-attach connector

NO

Are the input connectors and pigtail secure?

YES

Contact sales with the serial number of the sign

NO

Can you measure the correct incoming voltage at the sign?

YES

Is the input polarity correct?

NO

NO

Please refer to the diagrams on page 1.