Electronically Protected Modules (1746-OB6EI and 1746-OB16E)

The electronic protection of the 1746-OB6EI and 1746-OB16E modules have been designed to provide protection for the modules from short circuit and overload current conditions. The protection is based on a thermal cut-out principle. In the event of a short circuit or overload current condition on an output channel, that channel will limit current within milliseconds after its thermal cut-out temperature has been reached. All other channels continue to operate as directed by the CPU (processor) module.

IMPORTANT The modules do not provide protection against reverse polarity wiring or wiring to ac power sources. Electronic protection is not intended to replace fuses, circuit breakers, or other code-required wiring protection devices.

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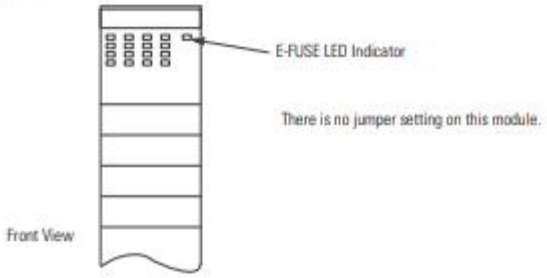
E-FUSE LED Indicator



Auto Reset Operation

IMPORTANT The 1746-OB6EI and 1746-OB16E modules perform auto-reset under overload conditions. When an output channel overload occurs, that channel will limit current within milliseconds after its thermal cut-out temperature has been reached. While in current limit, the output channel can cool below the thermal cut-out temperature allowing the module to auto-reset and resume control of the output channel as directed by the processor until the thermal cut-out temperature is again reached.

Removing power from an overloaded output channel would also allow the output channel to cool below the thermal cut-out temperature, allowing auto-reset to occur when power is restored. The output channel would operate as directed by the processor until the thermal cut-out temperature is again reached.

To avoid auto-reset of an output channel under overload conditions, an external mechanical fuse can be used to open the circuit when overloaded.

Short Circuit/Overload Current Diagnostics

If a short circuit or overload current condition occurs on an output channel:

- the E-FUSE LED indicator will illuminate provided that power is applied to the module. Power required: 5V DC via backplane and load power via an external supply.
- all other channels continue to operate as directed by the CPU (processor) module.

1746-OB8, 1746-OBP8, 1746-OB16, 1746-OB16E, 1746-OBP16