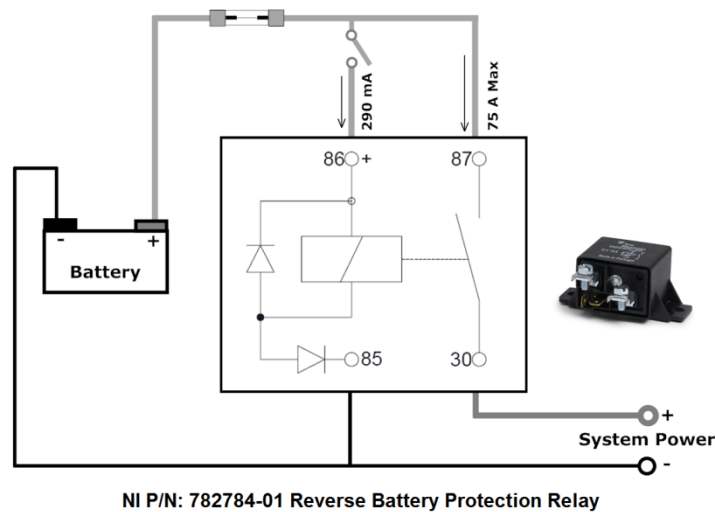


## Reverse Battery Advisory

NI Powertrain Control Modules for NI CompactRIO are not internally protected against reverse battery polarity. Do not reverse the battery polarity or damage will occur. This event is not covered under warranty.

All NI Powertrain Control Modules for NI CompactRIO with a 10-pin screw terminal block have identical external power and ground connections. Please take necessary precautions to ensure that BATT (0) and GND (9) are not connected in reverse polarity. The BATT (0) terminal will accept positive 7-32VDC with respect to the GND (9) terminal. Please refer to the user manual for details.

To provide system-level protection against reverse battery polarity, implement the following simple external main-power-relay circuit:



### Notes:

1. Terminals 30 and 87 are screw terminals and should be connected with soldered ring terminals.
2. Terminals 85 and 86 are 0.250 X 0.031 inch (6.3 X 0.8 mm) push-on terminals.
3. A fuse appropriate for the powered system is recommended between the battery and relay.
4. An optional switch may be placed in series with relay terminal 86.
5. Simply placing a high-current-capacity diode in series with the system power is not an acceptable method of reverse battery protection because it will not allow the modules to perform current recirculation while switching inductive loads.
6. The relay is currently available from [www.ni.com](http://www.ni.com).