









Figure 4 - Remote ON/OFF Input Drive Circuit using an Optocoupler to Maintain the Isolation Barrier from Primary to Secondary

#### 4.6 POWER GOOD Signal

The SIL40C2 modules have a power good indicator output. This output pin uses positive logic and is open-collector. Also, the power good output is able to sink 10 mA.

When the output of the module is within  $\pm 10\%$  of the nominal set point, the power good pin can be pulled high. Note that Power Good should not be pulled higher than the following conditions:

$$V_{pgood\_max} = V_{in}$$

When,

$$V_{in} < 5 \text{ V} \\ \text{or } V_{pgood\_max} = 5 \text{ V}$$

When,

$$V_{in} > 5 \text{ V}$$

## 5. Safety

### 5.1 Safety Standards and Approvals

All models have full international safety approval including EN60950 and UL/cUL60950. Please refer to the datasheet for the numbers.

### 5.2 Fuse Information

In order to comply with safety requirements, the user must provide a fuse in the unearthed input line. This is to prevent earth being disconnected in the event of a failure.

### 5.3 Safety Considerations

The converter must be installed as per guidelines outlined by the various safety agency approvals, if safety agency approval is required for the overall system.

## 6. Use in a Manufacturing Environment

### 6.1 Resistance to Solder Heat

The SIL series converters are intended for PCB mounting. Artesyn Technologies has determined how well the product can resist the temperatures associated with soldering of PTH components without affecting its performance or reliability. The method used to verify this is MIL-STD-202 method 210D. Within this method, two test conditions were specified, Soldering Iron condition A and Wave Solder Condition C.

For the soldering iron test, the UUT was placed on a PCB with the recommended PCB layout pattern shown in Section 7. A soldering iron set to  $350 \text{ }^\circ\text{C} \pm 10 \text{ }^\circ\text{C}$  was applied to each terminal for 5 seconds. The UUT was then removed from the test PCB and examined under a microscope for any reflow of the pin solder or physical change to the terminations. None was found.

For the wave solder test, the UUT was again mounted on a test PCB. The unit was wave soldered using the conditions shown in Table 2. The UUT was inspected after soldering and no physical change was found on the pin terminations.

Temperature	Time	Temperature Ramp
$260 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$	$10 \text{ sec} \pm 1$	Preheat $4 \text{ }^\circ\text{C}/\text{sec}$ to $160 \text{ }^\circ\text{C}$ . 25 mm/sec rate

Table 2 - Wave Solder Test Conditions

### 6.2 ESD Control

SIL units are manufactured in an ESD controlled environment and supplied in conductive packaging to prevent ESD damage occurring before or during shipping. It is essential that they are unpacked and handled using approved ESD control procedures. Failure to do so could affect the lifetime of the converter.

### 6.3 Coplanarity

The SIL40C2 series has a maximum coplanarity as defined by JESD22-B108 of better than  $150 \text{ } \mu\text{m}$  (approximately 0.006 inches). Innovative design, interconnect technology, and specialised manufacturing processes ensure product integrity.





