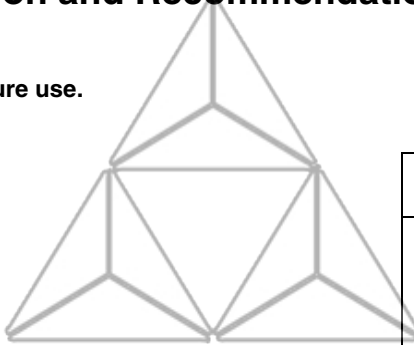


## SE Cooling Fan Monitoring Switch Kit (SE40FAN) Notification and Recommendations For SED364000 Circuit Breakers

Retain for future use.

### NOTICE



### ▲ WARNING

#### POTENTIAL PRODUCT NON CONFORMANCE

Some SE 4000 A circuit breaker trip units may develop a metering error under certain conditions. This metering error can lead to an unwarranted trip of the device. Read this instruction bulletin thoroughly.

**Failure to follow this instruction may cause unintentional power outage.**

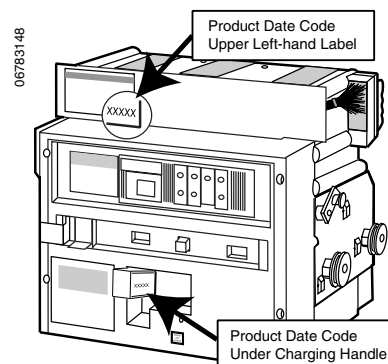
### CIRCUMSTANCES

The cause of the metering error is related to a circuit element in the trip system that is inadvertently triggered by system noise generated in the fan cooling circuit.

In order for the problem to occur, the following conditions must be met:

1. The breaker must be a 4000 A model, drawout construction, and within the **date code range from 98011 to 05515** (Manufactured from January 1st, 1998 through December 25, 2005). The date code can be found on the product as indicated in Figure 1.
2. The temperature and current load must be high enough to cause the cooling fans to cycle. Typically this is above 3200 A but to be safe any breaker operating above 3000 A should be considered.

**Figure 1: Date Code Locations on SE 4000 A Circuit Breakers**



### KNOWN INCIDENCE OF PROBLEM

To date, there have been two confirmed instances of the problem occurring in customer installations. Not all circuit breakers are affected by this condition and if you have evidence that your system has worked properly while operating as described above, it is unlikely that any action is needed on your part. Customers most at risk would be those considering adding additional loads to their system or have recently added additional loads to their system that would cause the nominal load current through a subject breaker to be above 3000 A. In that scenario, a circuit breaker that has consistently performed correctly could begin to incorrectly meter current and potentially experience an unwarranted trip.

**REMEDY**

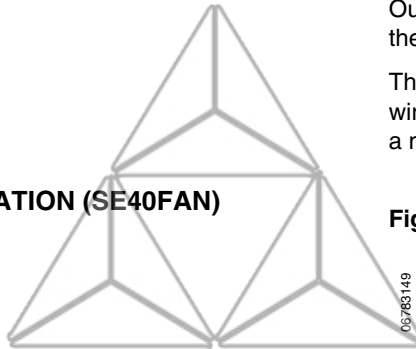
For systems that:

1. Have not previously been run at more than 3000 A and,
2. Will likely be run at more than 3000 A in the future.

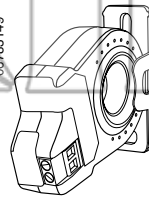
Our recommendation is to modify the wiring for the cooling fan by following the **Kit Installation (SE40FAN)** procedures outlined below.

The modification shunts the fan currents around the circuit breaker control wiring harness for continuous fan operation. This modification also provides a means for indicating the status of the fan circuit.

**KIT INSTALLATION (SE40FAN)**



**Figure 2: Kit Contents (Current Switch)**



Veris® Part Number  
H800HV

*NOTE: The current switch contacts are closed when the fan circuit is energized.*

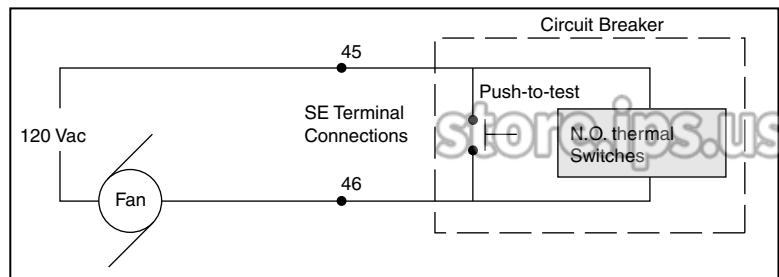
**Recommended Cooling Fan Wiring**

**⚠ DANGER**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

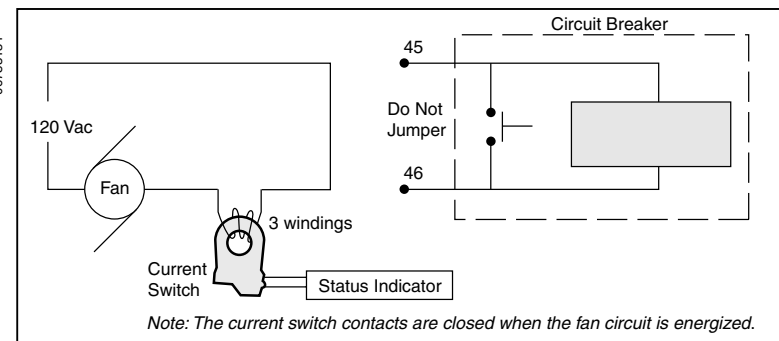
**Failure to follow these instructions will result in death or serious injury.**

**Figure 3: Original Wiring**



1. Disconnect the fan circuit from terminals 45 and 46 of circuit breaker.  
*NOTE: Do not jumper terminals 45 and 46.*
2. Install current switch (supplied) into the cooling fan circuit as shown in Figure 4. The cooling fan should be energized for continuous operation.
3. Install a fan circuit status indicator to the current switch contacts.  
*NOTE: The current switch contacts are closed when the fan circuit is energized.*

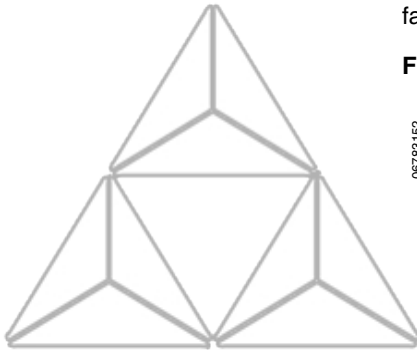
**Figure 4: Recommended Wiring**



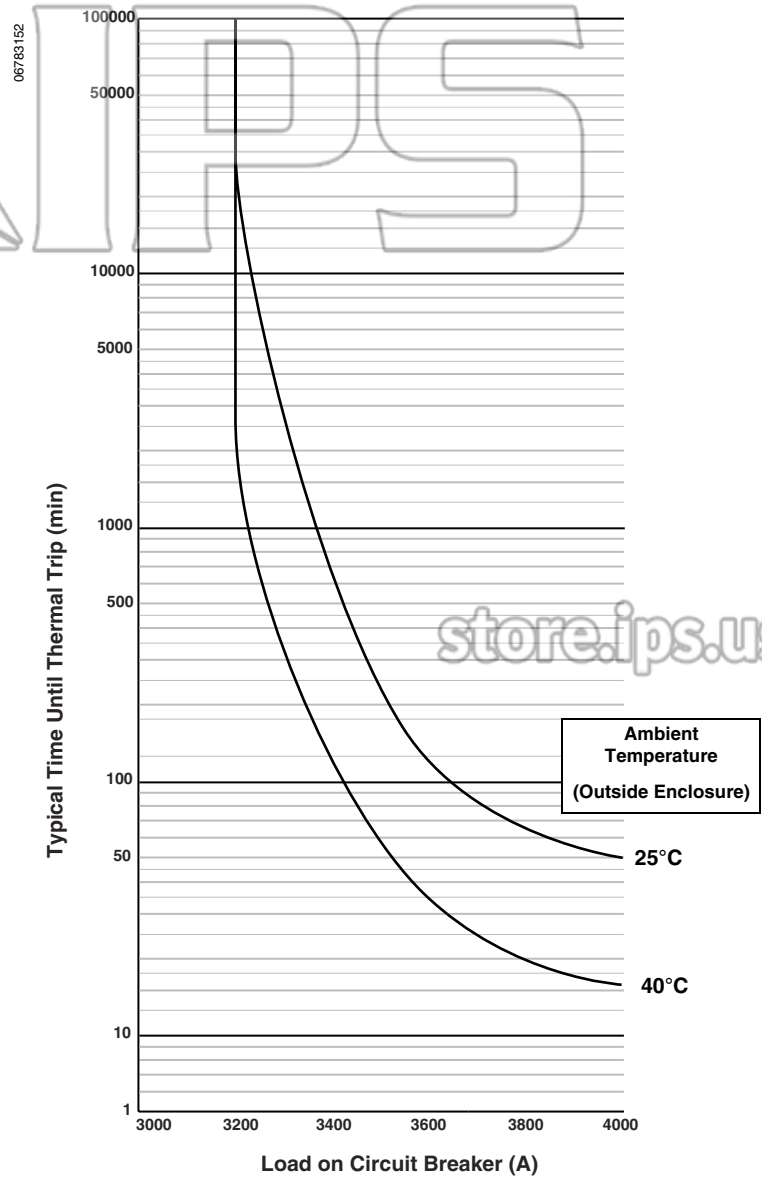
### Fan Operation

The expected operational life of the fan is approximately a minimum of five years with continuous operation.

Upon fan failure, and under certain circumstances (See Page 1), the circuit breaker will thermal trip. The time that a thermal trip can be expected after fan failure can be determined from the trip curve in Figure 5.



**Figure 5: SED4000 Fan Failure Thermal Trip Curve**





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