

## PLF Partial Load Failure Detection Board



- Detects Failure of an Individual Heater
- Prevents Unexpected Process Interruptions
- Reduces Process Scrap
- Allows for Scheduled Maintenance
- Up to 9 Heating Elements per Circuit, Single or Three Phase
- Accepts Vdc, Vac, and Contact Closure Input
- Compatible with Analog Input 7800 Series SCRs
- Output up to 1 Amp (120Vac) Electronic Switch Normally Open or Normally Closed

### Description

The 5604-32100 Partial Load Failure Detection Board (PLF) will detect a heater failure in single or three phase delta circuits with up to 9 elements. This product is essential for processes where the loss of more than one heating element can cause loss of product or expensive unscheduled maintenance.

The unit can be used with any ON/OFF SCR or contactor using the following inputs:

- 12Vac Isolated
- 120Vac
- Contact Closure
- 3-32Vdc
- Analog input, zero-fire SCR packages, Chromalox models 7810-3, 7820-3, or 7830-3.

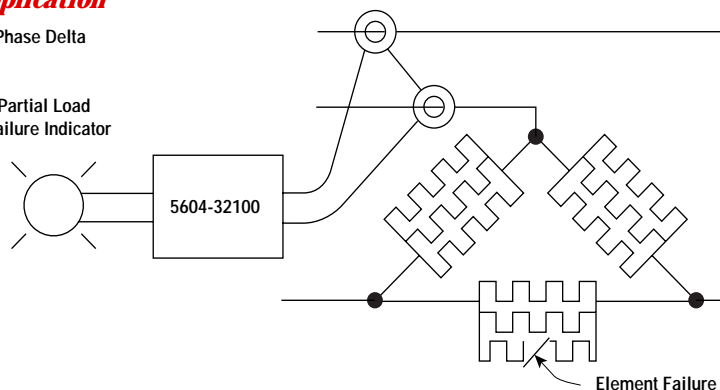
### Theory of Operation

The PLF board with the appropriate current transformer (CT) operates by monitoring the current each time the heaters are energized. The signal is compared to a setpoint that represents full load current. If a heating element fails open, the current will decrease and a partial load failure will be detected.

### Application

3-Phase Delta

Partial Load Failure Indicator



### Ordering Information

Model	Description	Single Phase Max Current	Three Phase * Max Current
5604-32100	Partial Load Failure Board (PLF)		
0005-12158	Current Transformer 30:0.1	30A	17A
0005-12159	Current Transformer 50:0.1	50A	29A
0005-12160	Current Transformer 75:0.1	75A	43A
0005-12157	Current Transformer 100:0.1	100A	57A
0005-12161	Current Transformer 125:0.1	125A	72A
0005-12162	Current Transformer 150:0.1	150A	86A
0005-12164	Current Transformer 200:0.1	200A	115A
0005-12165	Current Transformer 250:0.1	250A	144A
0005-12166	Current Transformer 300:0.1	300A	173A
0005-12167	Current Transformer 400:0.1	400A	231A

\* Use this current rating when using a single PLF board and two CT's