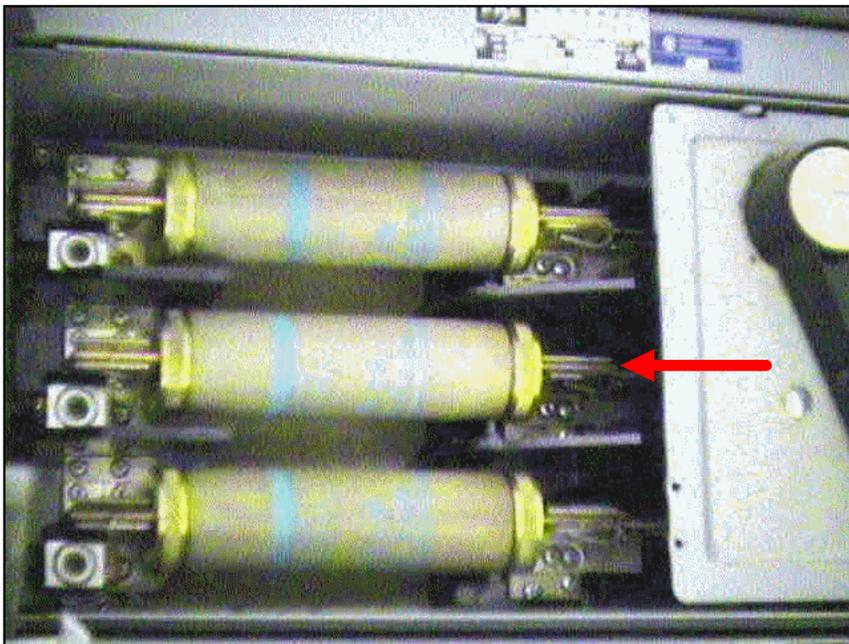
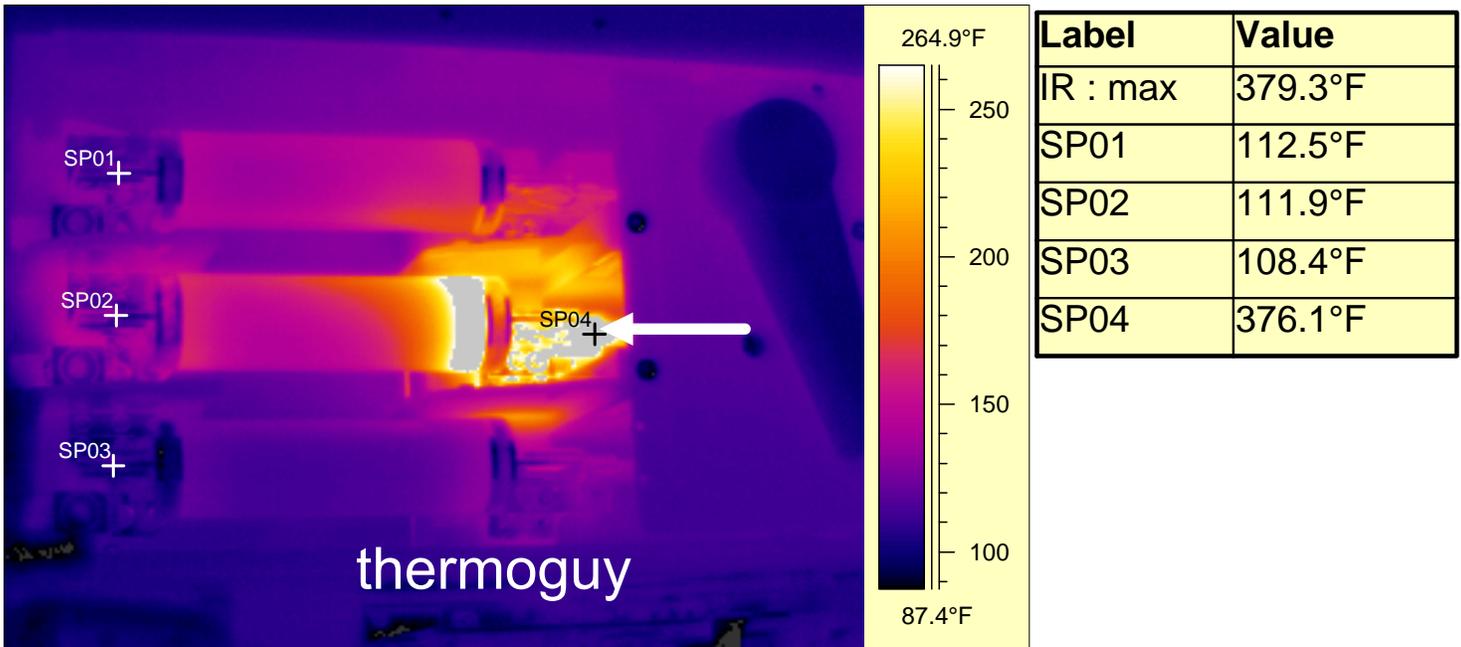




## Smart Meter Fires & Stab Connections



To the left is a thermal image and a reference picture. Use the scale to the right of the thermal image for color/temperature reference.

This is a heavy industrial process inspected **yearly** for the industry as well as the insurer. Catching electrical failure before it happens prevents explosions, fires, injury, loss of life, production/economic losses.

Meter Bases are never maintained and the electrical equipment can be fragile.

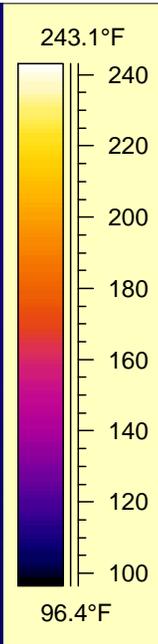
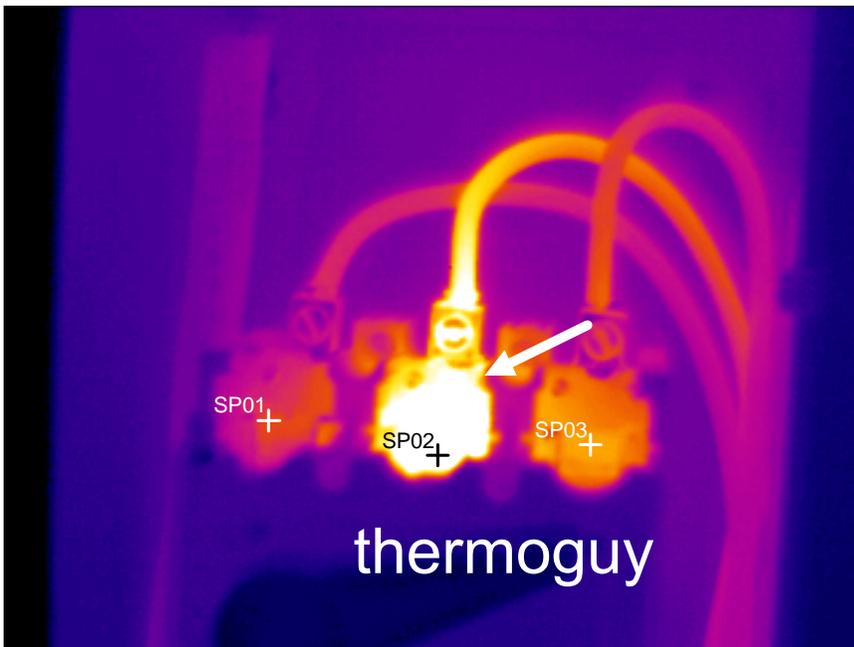
Part of our job as Thermal Radiation Consultants over the last 35 years includes trouble shooting electrical distribution under load to isolate problems for oil, gas, refinery, power plants, lumber, mills, mines, many manufacturing process, buildings, their insurers and the list goes on.

Loose or corroded connections are the biggest problem with electrical equipment. It is a thermal reality with electrical load cycles. Seeing heat at molecular levels allows isolation of electrical problems so the industry's electrical professionals can address the problem.

The fused disconnect above highlights stab connection failure and to educate people that meter bases as well as the existing meter have stab connections that have never been maintained. Note the connection at the arrow is 265 deg. F warmer than the other connections. More electrical load will accelerate the chance for failure or fire.



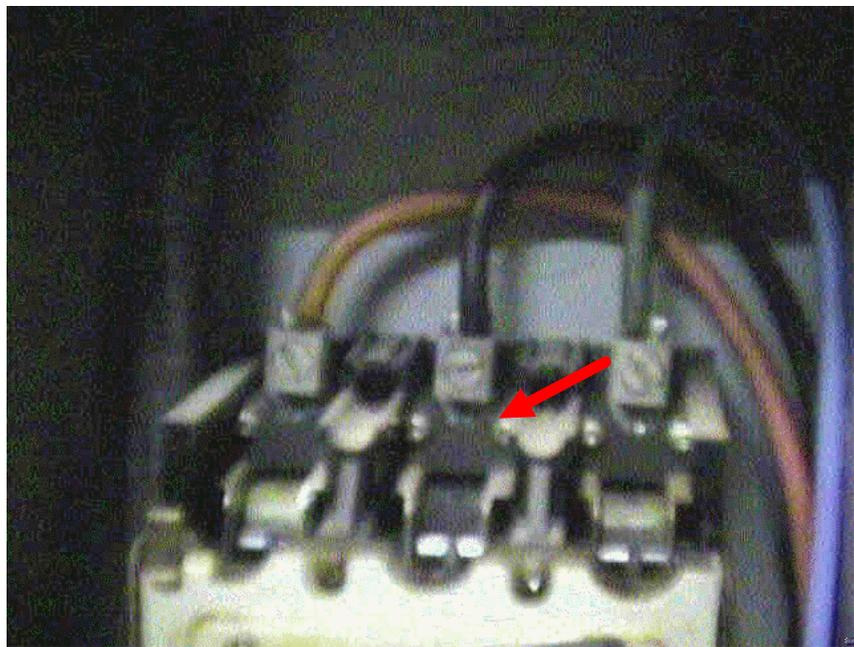
## Smart Meter Fires & Wired Connections



Use the temperature scale to the right of the thermal image for color/temperature reference.

Use the zoom feature to magnify areas of interest.

The Result Table below contains information related to the thermal image.

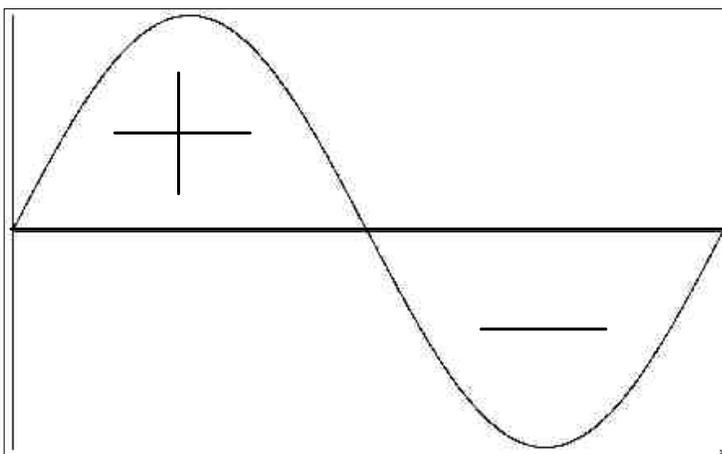
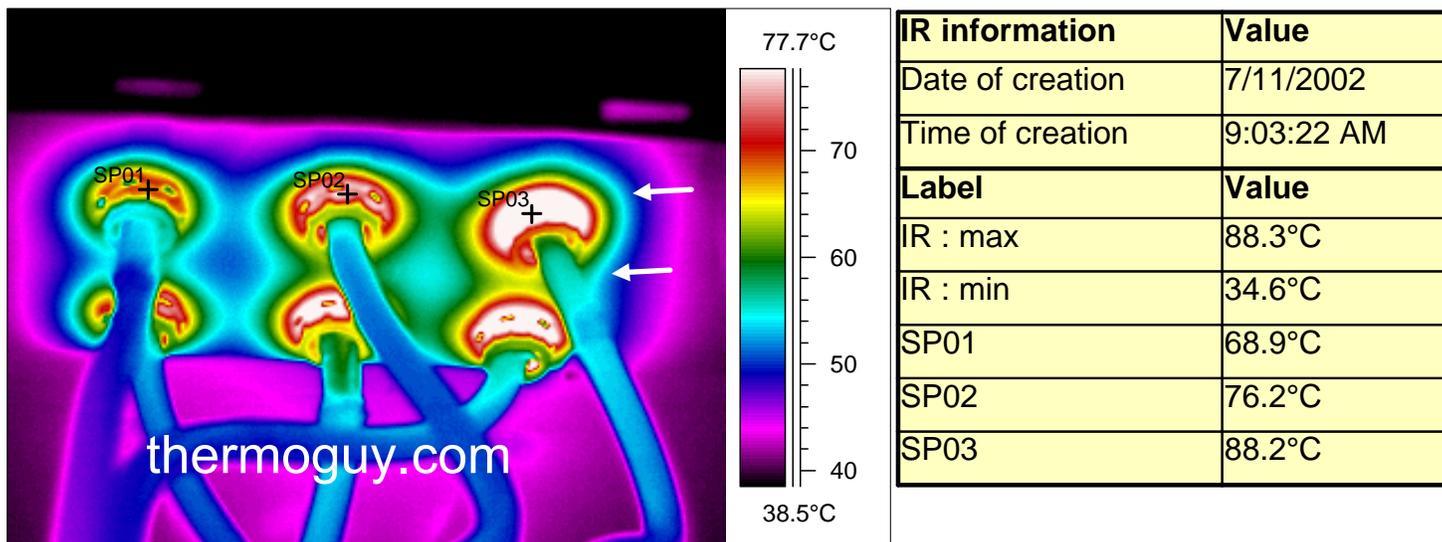


IR information	Value
Date of creation	4/23/2001
Time of creation	1:35:39 PM
Label	Value
IR : max	313.7°F
IR : min	88.4°F
SP01	169.6°F
SP02	313.7°F
SP03	202.5°F

Electrical Meter Bases have wired connections as well as stabs. Qualified electrical professionals would check ALL connections when the meter is pulled.(safely and working with the home owner) Before installing the new meter any electrical problems would be identified and repaired, even replacing the meter based if required. There are no compromises electrically or there will be failurewith consequences that include fires that may happen immediately or later.

In the electrical example above, a faulty wired connection welded in a closed position so they couldn't turn the switch off. It required changing the disconnect live or there would have been electrical failure resulting in explosion, fire or both.

Meter bases on buildings decades old will have fragile electrical components and unqualified contractors create a dangerous environment changing the meters under load.



1 cycle of a 60 Hz Frequency

### Example of Extremely Low Frequency (60 Hz) Causing Electrical Failure

Infrared electrical inspections for oil, gas, energy, petrochemical, manufacturing, lumber, mines, insurers, etc are to isolate electrical problems before they fail. Failure can cause explosions, fire, injury, loss of life, production and economic losses.

The IR image above are called parallel feeds, big wires feeding a Motor Control Centre in a lumber mill. Electrical professionals accommodate the EMFs around **each** conductor using a non magnetizing insulating board. This installation didn't use the Mica board so the 60 Hz EMFs induce currents and cause the molecules of affected metal cabinet to change direction at twice the frequency. Metal doesn't change direction easily and heat is a byproduct. The wire insulation is rated for 90 deg. C. and close to being exceeded. Breakdown in insulation would result in a groundfault and violent explosion. This is with extremely low frequencies.

Natural frequencies like solar EMFs can cause buildings to grossly exceed building code by causing excitation of absorbent versus reflective exteriors. This is a link to a time-lapsed infrared video of solar EMFs interacting with development right after sunrise. IR images were taken every 60 seconds without expectations. <http://youtu.be/dKGHKtkqeMc>

Wi-Fi, smart meters or RF EMFs going through walls is causing structural components, fire separations, etc to vibrate 1.8 to 10 billion times per second. That affects building code compliance.