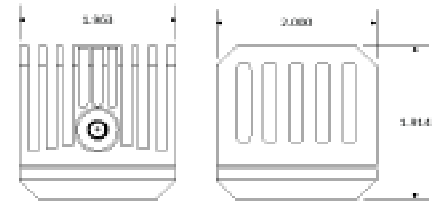




## Thermal Energy Harvester

Wireless sensors offer great promise for cost savings and downtime avoidance, but battery replacement can affect the value proposition in locations that are inaccessible or where batteries are precluded. KCF Technologies' Thermal Energy Harvester (TH-1) provides a reliable solution for these cases.

TH-1 eliminates the need to change batteries by harvesting electrical energy from the temperature differential between a surface and surrounding air. The Thermal Energy Harvester uses a Bismuth Telluride (Bi<sub>2</sub>Te<sub>3</sub>) thermoelectric generator and a proprietary heat sink to tolerate harsh industrial environments and reliably harvest energy from temperature differentials as small as 15°F.



### Thermal Energy Harvester Specifications

Dimensions	49.9mm x 50.8mm x 48.5mm 1.96in x 2.00in x 1.91in
Cables	<ul style="list-style-type: none"> <li>• 18 in and 3 ft options available</li> <li>• RG-174 coaxial cable</li> </ul>
Operating Temperature	-40 to 85C
Weight	182.8g 6.45oz
Enclosure Material	Aluminum
Output Power	Peak output power depends on the sensor electrical load and the thermal environment.
Output Voltage (Regulated)	3.3 Volts
Storage Capacitance	9.8mF

### Applications

- Industrial machinery that is 15 degrees Fahrenheit above or below ambient temperatures
- Motors, compressors and generators in the power and process industries.
- Pipes and fluid connectors
- HVAC equipment, including compressors, chillers, water pumps and pipework, ductwork and fans.
- Machinery in the paper and metal processing industries, including rolling mills

### Features & Benefits

- Compact 2-inch cube that is robust and suited to industrial applications
- Low temperature differential operation
- Integrated harvesting circuitry with battery-like output, extending battery life or eliminating batteries altogether



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