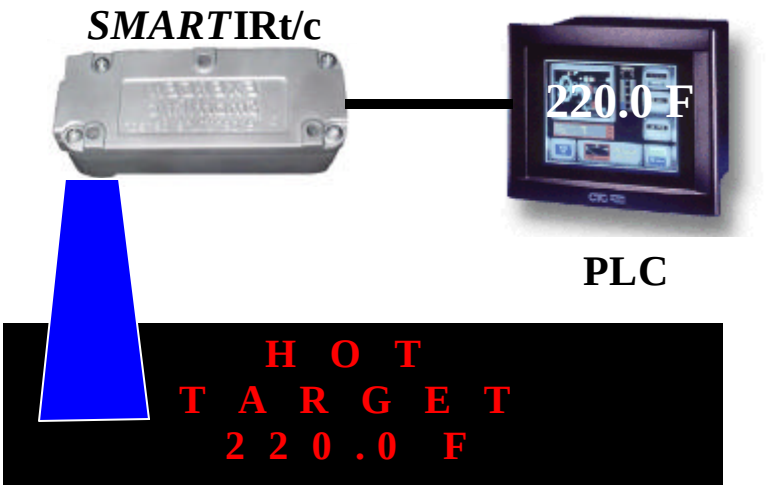
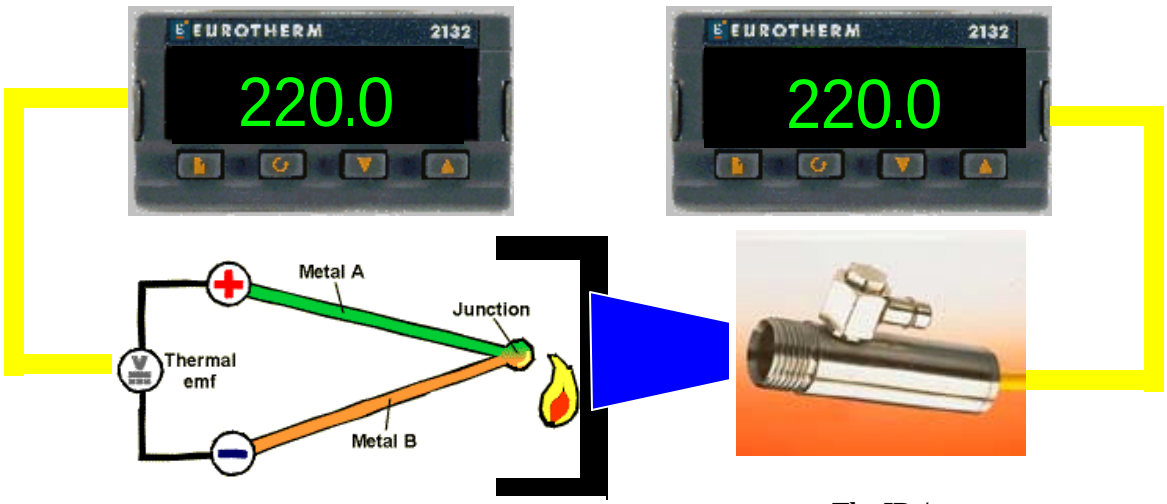
PRINCIPLES OF OPERATION

SMARTIRT/C VS, IRT/C



1. Hot target emits energy
2. The SmartIRt/c's detection system collects that energy.
3. The Smart IRt/c's microprocessor linearizes the signal, and scales it appropriately (i.e. 0 –5VDC, from 0-250C).
4. The scaling set up on PLC is set up to match the scaling of the SmartIRt/c.
5. Gain adjustments are made to calibrate for emissivity.
6. Correct temperature is displayed over the full temperature range.

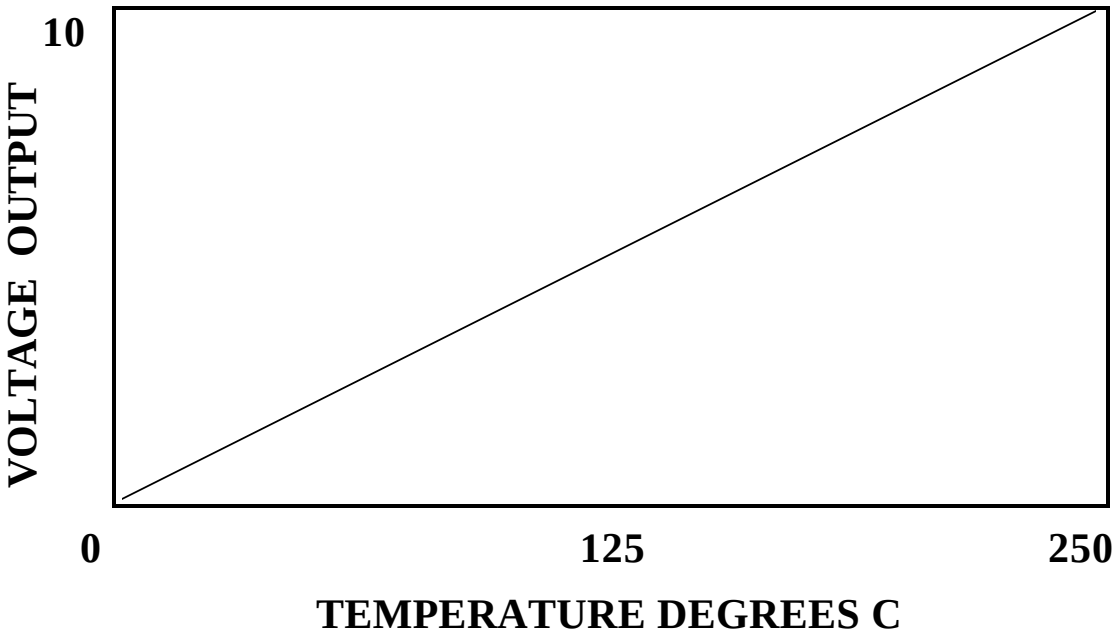


CONVENTIONAL THERMOCOUPLE

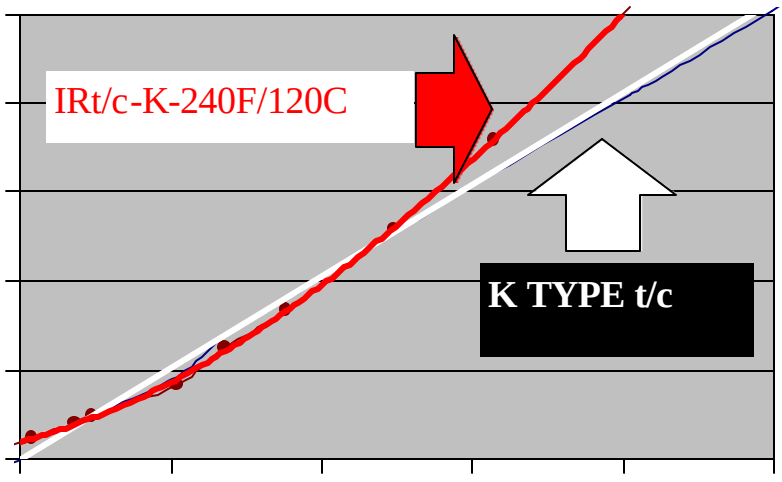
The IRt/c
INFRARED THERMOCOUPLE

1. Hot target emits energy.
2. The IRt/c's detection system collects that energy.
3. The IRt/c has been factory calibrated to match a conventional t/c within a specific temperature range.
4. The self powered infrared thermocouple is wired into any conventional thermocouple input device, just like a t/c.
5. Gain adjustments are made to calibrate for emissivity.
6. True temperature is displayed in temperature ranges close to the calibration point

EXAMPLE OF SMART IRT/C OUTPUT



EXAMPLE OF IRT/C VS T/C OUTPUT



IRt/c-K-240F/120C
2% LINEAR RANGE

80 –120 C