

# Topics 19 & 20 Electronic sensors

## Summary

- Sensing devices are used to detect changes in the environment or the properties of a body.
- In general, the change being monitored causes a change in an electrical property of the sensor.
- Frequently-used sensors include the light-dependent resistor (LDR), the thermistor, the piezo-electric transducer and the strain gauge.
- The resistance of an LDR decreases as the light intensity on it increases.
- The resistance of a negative temperature coefficient thermistor decreases with increasing temperature.
- A piezo-electric transducer converts variations in pressure (such as due to a sound wave) into variations in voltage.
- The strain on a metal wire strain gauge is proportional to its change in resistance.
- A potential divider may be used to convert the change in resistance of the sensor into a change in potential difference.