

## S870 READER

### TECHNICAL DESCRIPTION OF OPERATION

The S870 HID Proximity Reader's intended purpose is to read identification codes programmed into passive transponders, accept PINs through a keypad and display a response on one of three banks of LEDs. The maximum read range is about 5.5". The unit is intended to be connected by cable to a range of Access Control Controllers which provide the necessary power and control/interface signals.

The circuitry is contained on a single PCB which is mounted in a plastic enclosure (112mm x 85mm x 20mm approx). A cable from the terminal block exits through a large hole in the back of the unit.

The power supply is a nominal 12V DC and linear regulators are used to provide 5V and 3V3 internal supply rails.

The antenna is a printed coil that emits a 125KHz magnetic field. The field 'powers up' a passive transponder which is brought into the vicinity of the antenna. When powered this operates as a field disturbance device allowing two-way communication to take place between the reader and the card. The field is pulsed continuously and a dedicated device that is manufactured by the HID corporation for the purpose carries out modulation of the field.

The control processor handles communications between the reader and the controller, responding to commands received and passing card data and status information back to the controller. The control processor also carries out housekeeping tasks such as scanning the keypad and monitoring the tamper switch.