

S711 MIFARE PROXIMITY READER WITH KEYPAD 8000-5244
TECHNICAL DESCRIPTION OF OPERATION

The S671 Proximity Reader's intended purpose is to read identification codes programmed into passive mifare cards, accept PINs through a keypad and display a response on a LCD. The maximum read range is about 1". The unit is connected by cable to a Multinode-2 controller which provides the necessary power and control/interface signals.

The circuitry is contained on three PCBs and these are mounted in a plastic enclosure (125mm x 100mm x 45mm or 5" x 4" x 1.5" approx.). The PCB nearest the keypad forms the antenna, with the r.f. circuitry and the LCD control on the middle PCB, while the remainder of the circuitry including the terminal block for power and signals is on the final PCB. The cable from the terminal block exits through the large hole in the back of the unit. A second terminal block is provided to allow connection with a hand geometry unit but the function is not supported in the current reader firmware.

The power supply operating range is 9V - 14V d.c. which is used to power the current loop comms to the controller. A 5V regulator powers the remainder of the circuit including the antenna drive.

The antenna is a printed coil that emits a 13.56MHz magnetic field. The field 'powers up' a passive transponder or tag which is brought into the vicinity of the antenna. The transponder, when powered, operates as a field disturbance device allowing two-way communication to take place between the reader and the card. The field is switched on continuously and modulation of the field is carried out by a dedicated device that is manufactured by Philips for the purpose.

The control processor handles the bi-directional 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.

The unit has a second serial port for use with a remote door control unit. The data to and from this port is processed by the control processor.