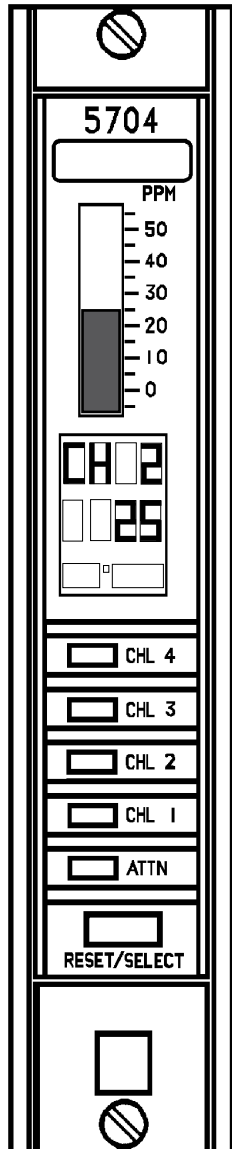

CHAPTER 2 - SYSTEM DESCRIPTION

4. FOUR CHANNEL CONTROL CARDS

4.1 General



The 5704 Four Channel Control Card provides control, display and alarm facilities for up to four connected gas detectors. The front panel backlit display indicates the gas reading, channel status and channel number while LEDs are used for alarms. A push-button is provided for resetting the alarms and selecting the card for use with the Engineering Card.

The operation of the control card is microprocessor controlled and is fully definable for a wide range of connected gas detectors and application requirements. The software configuration setup is stored in an EEPROM.

There are two types of control card depending on the type of gas detector being fitted to the system:

- a. Four Channel Control Card Catalytic Input
Part Number 05704-A-0144.
- b. Four Channel Control Card 4 - 20mA Input
Part Number 05704-A-0145.

Optional Analogue Output Modules which provide a remote output of the channel card readings can be plugged into the Four Channel Control Card. One module is required per channel and different module types are available to permit either current source or current sink as required.

CHAPTER 2 - SYSTEM DESCRIPTION

4.2 Control Functions

The Four Channel Control Card carries out the control functions for up to four loops of gas detection as follows:

- a. Provides the necessary voltages and currents to drive the connected sensors.
- b. Processes the incoming sensor signals.
- c. Displays the signal levels, one at a time, on the front panel liquid crystal display.
- d. Compares each channel signal level with pre-defined alarm limits.
- e. When the pre-defined alarm limits are exceeded, raises the alarms by lighting up front panel LEDs and operating connected relays.
- f. Informs other cards with the alarm status information.
- g. Self validates the operation of its circuit components, software operation and the condition of the sensor.

4.3 Analogue Output Module

Optional Analogue Output Modules may be factory fitted to the Four Channel Control Card and are used on each channel of gas detection to provide a current loop output which follows the sensor signal level. This may be set electronically to produce a 0 - 20mA output or a 4 - 20mA output and can be used to operate a chart recorder, data logger, PLC, etc. Two versions are available:

- a. Analogue Output Module, Current Sink
Part Number 04200-A-0145
- b. Analogue Output Module, Current Source
Part Number 04200-A-0146

CHAPTER 2 - SYSTEM DESCRIPTION

4.4 Physical Layout

The physical layout of the Four Channel Control Card is shown below. Analogue Output Modules, when fitted, plug into channel sockets as shown:

