

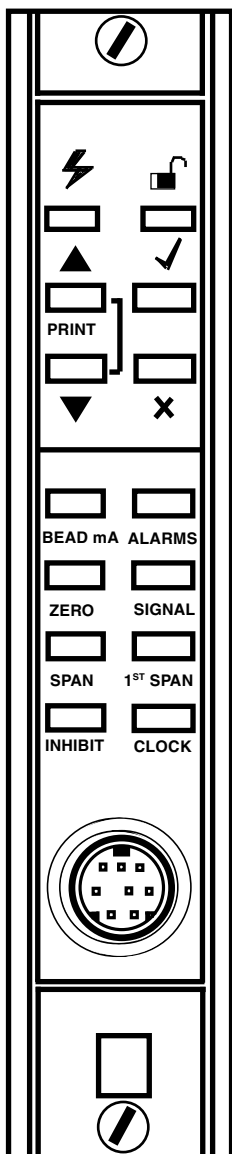
# CHAPTER 2 - SYSTEM DESCRIPTION

## 6. ENGINEERING CARD PART NUMBER (05701-A-0361)

The Engineering Card is used on a System 57 rack to provide a common interface that enables the user to perform all the required functions to commission and operate each fitted control card.

The front panel is fitted with a series of tactile push-buttons for the operation of various functions, LEDs to provide rack power and communications status and a mini DIN socket for the connection of a serial printer, computer or an engineering key. The Engineering Key is used to unlock functions that can alter the operation of a control card.

The Engineering Card is always fitted into the right-hand slot of the rack and provides:



- a. Routing of the 24V dc input from the DC Input Card to the backplane of the rack.
- b. A backplane serial communications controller and monitor.
- c. A time and date reference.
- d. An RS232 external engineering interface.
- e. Depending upon the security level, the operation of the following rack facilities:
  - Catalytic sensor head current monitoring and adjustment.
  - Alarm set point checking, adjustment and testing.
  - Sensor signal zero adjustment.
  - Sensor signal span adjustment and setting of sensor life monitoring values.
  - Sensor line monitoring.
  - Enabling of control card alarm inhibit.
  - Checking and adjustment of the system clock.
- f. Self validation of the operation of its circuit components, software operation and the backplane communications.
- g. A socket for the addition of special modules that expand the System 57 capabilities.

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One of four optional modules may be fitted to the Engineering Card:

a. Master Alarm Update Module

This facility provides an indication when a new alarm occurs on any channel in the rack, even if a previous alarm condition already exists.

b. Event Printing Module

This facility provides time stamped reporting of alarm and fault events as they occur and system status at predetermined regular intervals.

c. Modbus Interface Module RS422/485

This facility provides for digital communication between the System 57 Control System and an external computer system using the RS422/485 serial data format and the Modbus communication protocol.

d. Modbus Interface Module RS232

This facility provides for digital communication between the System 57 Control System and an external computer system using the RS232 serial data format and the Modbus communication protocol.