



E500 REMOTE COMMUNICATION INTERFACE

1. GENERAL

1.1 OVERVIEW

The Communication Interface shall allow a user to access both current and historical information from the Fireeye E100 FLAME-MONITOR™ by using a dumb terminal or IBM compatible PC equipped with Fireeye E700 Communications Software.

1.1.1 The Communication Interface shall be supplied by Fireeye or written approved equal.

1.1.2 The Communication Interface shall comply with FCC and DOC requirements.

1.2 CODES AND STANDARDS

The Communication Interface shall be Underwriters Laboratories Listed, Factory Mutual Approved, and Canadian Standards Associates Certified for its intended purposes.

2. SYSTEM HARDWARE

2.1 COMMUNICATION INTERFACE

The micro-processor based interface shall have the following capabilities:

2.1.1 RS232 Interface for connection to a local dumb terminal or IBM compatible PC. Selectable baud rates of 300, 1200, 4800, and 9600 baud.

2.1.2 Built-in auto answer/auto dial 300/1200 baud modem.

2.1.3 RS485 Interface for communicating with up to 32 E340 Boiler Room Controls connected in a multi-drop configuration. IBM Compatible PC with E720 Software Program required for communicating with the E340 Boiler Room Control.

2.1.4 Parallel communication port(s) for communicating with up to four (4) E100 FLAME-MONITOR controls.

2.1.5 One SPDT relay output (normally open and normally closed contacts) that can be controlled in the following manner:

- Manually commanded (energized/de-energized) from the operator's terminal.
- Controlled via a seven day calendar.
- Controlled via a holiday schedule.
- Controlled based on the status of two built-in digital input terminals (see 2.1.6).

2.1.6 Two independent digital inputs to be used as the following:

- **Counter Function:** Counts input pulses up to a rate of 250 pulses per second. Scale factor and descriptor defined for each pulse. (e.g. each pulse represents .15 gallons)
- **Alarm Function:** Monitors the status of the digital input(s). When the communication interface detects an input closure, it shall dial up to two phone numbers and send a user defined message.



3. SEQUENCE OF OPERATION

- 3.1 The Communication Interface shall respond to ASCII character sequences from a dumb terminal or IBM compatible personal computer operating in the dumb terminal mode. Communicating with the E340 Boiler Room Controls requires the Fireeye E720 Communications Software. An operator shall be able to obtain both current and historical information concerning the operation of the E100 flame safeguard control(s) connected to it. (See 4.1 and 4.2). The user shall also program a number of functions associated with the operation of the Communication Interface itself (See 4.3). A security password can be set to restrict unauthorized access to these command functions.
- 3.2 The Communication Interface shall periodically poll the E100 flame safeguard control(s) and E340 Boiler Room Control(s) connected to it. If any of the E100 or E340 controls are in a safety lockout or alarm condition when polled, the E500 shall either (1) send the lockout information to a dumb terminal or IBM compatible PC connected to its RS232 connector port, or (2) dial via its internal modem a programmed telephone number(s), and upon receiving a carrier tone from an answering modem, send the alarm information.

4. SYSTEM SOFTWARE

- 4.1 The Communication Interface shall provide the following information concerning the operation of the E100 flame safeguard control: Present Burner Status, Present Burner Status Updated Every 8 Seconds, Average Flame Signal Strength during PTFI, Average Flame Signal Strength during MTFI, Present Flame Signal, Type of Programmer Installed, Type of Amplifier Installed.
- 4.2 The Communication Interface shall provide the following historical information concerning the operation of the E100 flame safeguard control: Total Main Burner Hours, Total Burner Cycles, Total Hours Installed, Last Six Lockouts, Total Number of Lockouts, Total Number of Short Circuit Events, Last 23 Lockouts and Reset of each Lockout with a Time and Date Stamp, Last 23 Burner Operating Cycles with a Time and Date Stamp, Last 9 Applications of Line Power.
- 4.3 The Communication Interface shall have the following programmable functions: Establish Security Password, Personal Descriptor for the Communication Interface, Personal Note, Date and Time for Clock, 2 Phone Numbers to dial in the event of Lockout or Alarm Condition, Select 300 or 1200 Baud During Phone Callout, Select Tone or Pulse Dialing, Number of Rings for Incoming Call Pickup, Polling Interval, Operation of SPDT Output Relay (See 2.1.5), Configure the Operation of the Digital Inputs (See 2.1.6), Clear Last 23 Lockout History.



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