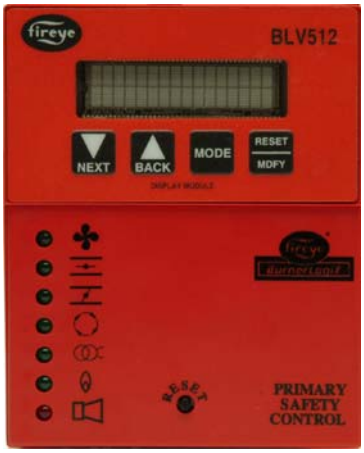
# YB110/YB230 FIREYE BURNERLOGIX™ CONTROL Bulletin BL-1001




The Fireye® BurnerLogix™ System is a microprocessor based burner management control system designed to provide the proper burner sequencing, ignition and flame monitoring protection on automatically ignited oil, gas, and combination fuel burners. In conjunction with limit and operating controls, it programs the burner/blower motor, ignition and fuel valves to provide for proper and safe burner operation. Through SMART LED'S, the control provides current operating status and lockout information in the event of a safety shutdown. Optional VFD and LCD displays are available that may be either plugged in or mounted remotely to give full language descriptors of current status and diagnostic lockout information.

A complete BurnerLogix system includes the YB110 (YB230) chassis equipped with the type of flame amplifier required for the application, appropriate flame detector, plug-in programmer module, wiring base and optional alpha-numeric display. Interchangeable programmer modules allow for complete versatility in selection of function, timing and flame failure response times.

The optional alpha-numeric display is made up of 2 lines by 16 characters per line and is available in either vacuum fluorescent or liquid crystal formats. Both displays contain a fully functional keypad allowing the user to easily scroll through the various menus to view the current operating status, review programmer configuration, and lockout history. An advantage of the BurnerLogix control family is the ability to set many of the operating parameters associated with proper and reliable burner operation allowing inventory of various programmer types to be kept to a minimum.

Interchangeable YP programmer modules allow for complete versatility in selection of control function, timing, and flame scanning means. Functions such as pre-purge time, recycling or non-recycling interlocks, high fire proving interlock and trial for ignition timing of the pilot and main flame are determined by the programmer module. The BurnerLogix system can be used with ultra-violet, auto-check infrared, flame rod, self-check ultra-violet flame scanners or direct coupled integrated scanners by choosing the proper chassis/flame amplifier module.

Wiring bases for the BurnerLogix control are available pre-wired with 4 foot lead wires color coded and marked for easy installation or with an integral terminal block capable of a accepting up to 2 X 14 AWG wires. The wiring base terminal block is available with knockouts for conduit or open ended for cabinet mounting. The pigtail wiring base is 4" X 5" and the terminal block wiring base is 4" X 7".

Additional functions of the BurnerLogix system include:

- A consistent flame signal read-out via display module or 4-20 mA output.
- Read-out of main fuel operational hours and complete cycles via display module.
- Modbus communications via RS485 multi-drop link.
- Proof of fuel valve closure during off cycle.
- Burn-in time of program parameters occurs after 8 hours of main valve on time.
- A run/check switch which allows the operator to stop the program sequence in any of four different positions (Purge, PTFI, MTFI or Auto).
- Remote Display mounting with NEMA 4 protection.
- Remote Reset.
- Revert to pilot can increase burner turn down.

**BurnerLogix Chassis/Flame Amplifier Module**

| PART NUMBER | DESCRIPTION |
|---|---|
| YB110UV | 120 VAC input with UV non self-check amplifier |
| YB110UVSC | 120 VAC input with UV self-check amplifier |

| PART NUMBER | DESCRIPTION |
|---|---|
| YB110IR | 120 VAC input with IR auto-check amplifier |
| YB110IR2 | 120 VAC input with IR auto-check amplifier (special application only -consult factory) |
| YB110FR | 120 VAC input with flame rectification amplifier |
| YB110DC | 120 VAC input with direct coupled amplifier for use with 85UVF4-1QDWR or InSight scanner (with 59-497-020WR cable) |
| YB230UV | 230 VAC input with UV non self-check amplifier |
| YB230UVSC | 230 VAC input with UV self-check amplifier |
| YB230IR | 230 VAC input with IR auto-check amplifier |
| YB230FR | 230 VAC input with flame rectification amplifier |
| YB230DC | 230 VAC input with direct coupled amplifier for use with 85UVF4-1QDWR or InSight scanner (with 59-497-020WR cable) |

**BurnerLogix Programmer Modules**

| PART NUMBER | DESCRIPTION |
|---|---|
| YP100 | Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 4 second FFRT |
| YP102 | Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 2 second FFRT |
| YP138 | Keypad selectable parameters, non-recycle operation, modulation, open damper proving, indefinite pilot hold, revert to pilot from auto, 4 second FFRT |
| YP118 | Keypad selectable parameters, non-recycle operation, modulation, open damper proving, indefinite pilot hold, revert to pilot from auto, 1 second FFRT |
| YP200 | Keypad selectable parameters, recycle operation, modulation, 4 second FFRT |
| YP202 | Keypad selectable parameters, recycle operation, modulation, 2 second FFRT |
| YP300 | Keypad selectable parameters, recycle operation, low fire start, early spark termination, 4 second FFRT |
| YP302 | Keypad selectable parameters, recycle operation, low fire start, early spark termination, 2 second FFRT |
| YP113 | Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 1 second FFRT |

**BurnerLogix Displays**

| PART NUMBER | DESCRIPTION |
|---|---|
| BLV512 | Display, 2 line X 16 characters, VFD, with cable, NEMA 4 |
| BLL510 | Display, 2 line X 16 characters, LCD, with cable, NEMA 4 |

**BurnerLogix Wiring Bases**

| PART NUMBER | DESCRIPTION |
|---|---|
| 60-2810-1 | Pigtail wires, 4 foot long, 4"W x 5"H |
| 60-2812-1 | Closed base with terminal block and knockouts, 4"W x 7"H |
| 60-2814-1 | Open base with terminal block. 4"W x 7"H |

**BurnerLogix Accessories**

| PART NUMBER | DESCRIPTION |
|---|---|
| 129-178-4 | Kit, remote mounting, BurnerLogix display, 4 ft. cable, provides NEMA 4 protection |
| 129-178-8 | Kit, remote mounting, BurnerLogix display, 8 ft. cable, provides NEMA 4 protection |
| BLD500 | Blank display module, included with YB module |
| IT1000 | Alarm annunciation system using wireless technology |
| PPC6000 | Parallel Positioning System |
| 61-5745-3 | Shutter drive assembly for redundant self-check 45UV5-1005 scanners |
| 57YB4-5000 | Tester for use with BurnerLogix YB control, 120 VAC |