



YP100, YP102, YP138, YP113 YP200, YP202, YP300, YP302

PROGRAMMER MODULES FOR USE WITH THE FIREYE®

BurnerLogix™ CONTROL SYSTEM



DESCRIPTION

The Fireeye YP100, YP102, YP200, YP300, and YP138 Programmer Modules are used with the Fireeye BurnerLogix control. The operational characteristics of the control are determined by the selection of the programmer module (e.g. modulation, recycle, non-recycle, fixed firing, flame failure response time, etc.). The programmer module incorporates a plug-in design for easy installation.

A complete BurnerLogix system includes the YB110 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.



WARNING: THE INAPPROPRIATE SELECTION OR APPLICATION OF A PROGRAMMER MODULE COULD RESULT IN AN UNSAFE CONDITION HAZARDOUS TO LIFE AND PROPERTY. The various programmer modules (YP100, YP138, YP200, YP300 and YP113) are interchangeable because they plug into a common YB chassis. Many parameters are configurable through the keypad display. Care should be taken to insure the proper parameters are set. Refer to bulletin BL-1001 for a complete description of the BurnerLogix system. Selection of the programmer module and setting the various parameters for a particular application should be made by a competent professional, such as a Boiler/Burner technician licensed by a state or government agency, engineering personnel of the burner, boiler or furnace manufacturer (OEM) or in the performance of duties based on the information from the OEM.

PROGRAMMER MODULE SELECTION

| | |
|-------|---|
| 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 |
| 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 |



CAUTION: Ensure that electric power is turned off.

Be aware that power to some interlocks (operating controls, air flow switches, modulating circuits, etc.) may be derived from sources other than what is controlling the BurnerLogix.

INSTALLING THE YP PROGRAMMER MODULE

The YP programmer module plugs into the side of the YB110 chassis module and can only be installed in one direction. DO NOT ATTEMPT TO FORCE THE YP PROGRAMMER INTO THE CHASSIS. Referring to the illustration on the right, align the holes in the YP programmer housing with the posts located within the YB chassis. Push the YP module into the chassis until the YP module is flush with the YB housing.

If it is necessary to remove the YP programmer module from the YB chassis, 2 slots are provided on the top and bottom of the YP housing. A small screwdriver can be used to 'pop' the programmer from the chassis.



WARNING: Selection of this control for a particular application should be made by a competent professional, licensed by a state or other government agency. Inappropriate application of this product could result in an unsafe condition hazardous to life and property. Installation should not be considered complete until pilot turndown and other appropriate performance tests have been successfully completed.

| FIREYE PART NUMBER | Pre-purge Programming (Seconds) | Proven High Fire Interlock (M-8) | Proven Low Fire Interlock (M-D) | Terminal 6, Interrupted or Intermittent | Early Spark Termination | PTFI (5/6) | MTFI (5/6) | Running Interlock (3-P) | Flame Fail Time (Seconds) | Firing Rate Motor |
|---|---------------------------------|----------------------------------|---------------------------------|---|-------------------------|------------|------------|-------------------------|---------------------------|-------------------|
| SETTINGS SHOWN ARE FACTORY DEFAULT | | | | | | | | | | |
| YP100 | 30 | YES | YES | INTRP | NO | 10/10 | 10/15 | Non-recycle | 4 | YES |
| YP102 | 30 | YES | YES | INTRP | NO | 10/10 | 10/15 | Non-recycle | 2 | YES |
| YP138 | 30 | YES | YES | INTRP | NO | 10/10 | 10/15 | Non-recycle | 4 | YES |
| YP113 | 30 | YES | YES | INTRP | NO | 5/5 | 3/5 | Non-recycle | 1 | YES |
| YP200 | 30 | NO | YES | INTRP | NO | 10/10 | 10/15 | Recycle | 4 | YES |
| YP202 | 30 | NO | YES | INTRP | NO | 10/10 | 10/15 | Recycle | 2 | YES |
| YP300 | 30 | NO | YES | INTMT | YES | 10/10 | 10/intmt | Recycle | 4 | NO |
| YP302 | 30 | NO | YES | INTMT | YES | 10/10 | 10/intmt | Recycle | 2 | NO |

PTFI*MTFI TIMINGS

The BurnerLogix system provides keypad selectable timings for both PTFI and MTFI. The selections offered can provide 5 or 10 second timing for terminal 5 and 6 or a shortened time for terminal 5, allowing for early spark termination. BurnerLogix also provides selectable interrupted or intermittent operation for terminal 6.



The selections provided for PTFI*MTFI timings are:

Table 2:

| SELECTION | PTFI | | MTFI | | COMMENT |
|-------------|--------|--------|--------|--------|-------------------------|
| | Term 5 | Term 6 | Term 5 | Term 6 | |
| 10/10*10/15 | 10 | 10 | 10 | 15 | |
| 5/5*0/10 | 5 | 5 | 0 | 10 | NO SPARK DURING MTFI |
| 5/5*0/5 | 5 | 5 | 0 | 5 | NO SPARK DURING MTFI |
| 5/5*10/15 | 5 | 5 | 10 | 15 | SHORTENED PTFI |
| 5/5*10/10 | 5 | 5 | 10 | 10 | |
| 5/10*0/15 | 5 | 10 | 0 | 15 | EARLY SPARK TERMINATION |
| 5/10*0/10 | 5 | 10 | 0 | 10 | EARLY SPARK TERMINATION |
| 10/10*0/10 | 10 | 10 | 0 | 10 | NO SPARK DURING MTFI |
| 10/10*0/5 | 10 | 10 | 0 | 5 | NO SPARK DURING MTFI |
| 10/10*10/10 | 10 | 10 | 10 | 10 | |

SETTING PROGRAMMER PARAMETERS

In order to change the factory default parameters stored in the programmer module an optional keypad/ display (BLV512 or BLL510) is required. All configurable parameters are stored within the PROGRAM SETUP sub-menu. The keypad/display module provides tactile feedback keys that are used to access the sub-menus inherent in the BurnerLogix system.

Modifiable parameters located in PROGRAM SETUP sub menu

| Parameter | Factory Default | Range | Description |
|--|--------------------------------|--|--|
| Purge time | 00:30s | 0:30s – 60:00m, 15 second increments. (0:00s - 60:00m in YP3XX) | Applies to open damper purge time in YP1XX and YP2XX programmers and to low fire start time in YP3XX programmers |
| Count method | DOWN | UP, DOWN | Time counts UP to final value or DOWN to zero from starting value. This setting will apply to all timer values. |
| Prove 3-P open at start | NO | YES, NO | Prevents jumped terminals. Requires the 3-P circuit to be open at the start of a cycle. |
| PTFI*MTFI timing | 10/10*10/15 YP113 = 5/5*3/5 | See Table 2 | Applies to terminals 5 and 6 operation during PTFI and MTFI. |
| Terminal 6 interrupted or intermittent | INTRP | INTRP, INTMT | Provide interrupted or intermittent operation on terminal 6. |
| Prove M-8 open | NO | YES, NO | If YES, M-8 must be open at start of open damper purge period. (YP1XX Series only). |
| Prove M-D open | NO | YES, NO | If YES, M-D must be open at end of open damper purge period. Does not apply to YP3XX Series. |
| Post purge | 0:15 | 0:15s - 1:00m, 5 second increments. | Selects Post Purge time |
| 3-P Recycle | YES | YES, NO | Applies to YP3XX series only. Allows non-recycle operation of 3-P circuit. |
| M-D WAIT 10m | YES | YES, NO | Select YES for lockout on M-D open for 10 minutes. Select NO for indefinite wait for M-D to close. This wait time applies prior to pilot trial for ignition. |
| PROVE M-D TFI | NO | YES, NO | Select YES to force lockout on M-D opening during PTFI and MTFI |
| Baud rate | 9600 | 4800, 9600, 19200 | Sets communication rate |
| Unit address | 00 | 00-31 | Multi-drop requires unique addressing. Lowest address allowed for modbus is 01 |
| Lock Settings | NO | YES, NO | Parameters can be stored to memory before automatic 8 hour store. |



TO VIEW AND MODIFY A PROGRAMMABLE PARAMETER:

On display module BLV512 or BLL510, use the NEXT or BACK key to scroll to PROGRAM SETUP. Press the MODE key to enter the submenu showing all program setup parameters. Pressing the MODE key while in the sub-menu will exit the sub-menu, and the next main menu item will be displayed. While in the sub-menu, pressing the NEXT key will scroll forward through the sub-menu. Pressing the BACK key will scroll backward through the sub-menu. When a modifiable parameter is displayed, pressing the RESET/MDFY key will allow the displayed parameter to be modified. Use the NEXT or BACK keys to select the value to suit the application and when done, press the RESET/MDFY to save the value to memory.



All programmed settings become permanent if the BurnerLogix system has been powered continuously and 8 hours of main burner (terminal 7) on time has been accumulated. If the AC power is removed prior to accumulating 8 hours of main burner on time, the system burn-in time clock will be reset to zero. It is not necessary for the main burner on time to be continuous. The BurnerLogix accumulates burner on time in seconds. For example, assume power has been applied for 10 hours and the main burner has been on for 4 hours. If the AC power is removed and then restored the accumulated main burner on time will be reset to 0. If necessary, the programmed settings can be made to become permanent anytime before the required 8 hours of main burner on time through the use of the optional keypad and the LOCK SETTINGS option under the PROGRAM SETUP sub menu.

Refer to Bulletin BL-1001 for complete information

NOTICE

When Fireye products are combined with equipment manufactured by others and/or integrated into systems designed or manufactured by others, the Fireye warranty, as stated in its General Terms and Conditions of Sale, pertains only to the Fireye products and not to any other equipment or to the combined system or its overall performance.

WARRANTIES

FIREYE guarantees for *one year from the date of installation or 18 months from date of manufacture* of its products to replace, or, at its option, to repair any product or part thereof (except lamps, electronic tubes and photocells) which is found defective in material or workmanship or which otherwise fails to conform to the description of the product on the face of its sales order. **THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES AND FIREYE MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.** Except as specifically stated in these general terms and conditions of sale, remedies with respect to any product or part number manufactured or sold by Fireye shall be limited exclusively to the right to replace or repair as above provided. In no event shall Fireye be liable for consequential or special damages of any nature that may arise in connection with such product or part.



The content on or accessible through CombustionDepot.com, (including, but not limited to) text, graphics and other materials, are provided by CombustionDepot.com, for informational purposes only. CombustionDepot.com does not claim ownership to any of the photos, images, or pictures of products on the site. These depictions are solely for information purposes and may not be an exact replication of the related product available for sale. All PDF and specification pages are gathered from the OEM web sites or publicly available information. CombustionDepot.com does not claim responsibility for any of the information found on these bulletins, documents, literature, specification charts, etc. and such information is subject to change without notice.