® fireye

YP100, YP102, YP112
YP113, YP115,YP118
YP120, YP138, YP183
YP200,YP202, YP300

YP302

PROGRAMMER MODULES
FOR USE WITH THE FIREYE®

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DESCRIPTION

The Fireye YP100, YP102, YP112, YP113, YP115, YP118, YP120, YP183, YP200, YP300, YP302 and YP138 Programmer Modules are used with the Fireye 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 (YB230) or ZB110 (ZB230) 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

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⚠ **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 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 or BLZ-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.**

⚠ WARNING: WHEN PROGRAMMER MODULE IS MATED TO AN INFRARED (IR) BASED BURNERLOGIX CONTROL, PRIOR TO VERSION 12, IT IS HIGHLY RECOMMENDED THAT AN "IR LEARN" OPERATION BE PERFORMED TO GUARANTEE RELIABLE OPERATION. CONSULT BULLETIN BL-1001 or BLZ-1001 FOR INFORMATION CONCERNING IR LEARN.

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
YP118	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, indefinite pilot hold, revert to pilot from auto, 1 second FFRT
YP183	Same as YP138, except, removal of voltage on terminal 16 will suspend pilot hold during lightoff sequence. Terminal W used for purge complete.
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
YP112	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 2 second FFRT
YP113	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 1 second FFRT
YP115	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 1 second FFRT
YP120	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, 1 second FFRT

> ⚠ **CAUTION: Ensure that electric power is turned off.**
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> **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 (YB230) or ZB110 (ZB230) chassis modules and can only be installed in one direction. DO NOT ATTEMPT TO FORCE THE YP PRO-GRAMMER 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
SETTINGS SHOWN ARE FACTORY DEFAULT					
YP100	30	YES	YES	INTRP	NO
YP102	30	YES	YES	INTRP	NO
YP138	30	YES	YES	INTRP	NO
YP118	30	YES	YES	INTRP	NO
YP183	30	YES	YES	INTRP	NO
YP112	30	YES	YES	INTRP	NO
YP113	30	YES	YES	INTRP	NO
YP115	30	YES	YES	INTRP	NO
YP200	30	NO	YES	INTRP	NO
YP202	30	NO	YES	INTRP	NO
YP300	30	NO	YES	INTMT	YES
YP302	30	NO	YES	INTMT	YES

FIREYE PART NUMBER	PTFI (5/6)	PTFI (W/6)	PILOT PROVING 6 Only	MTFI (5/6)	MTFI (W/6)	Running Interlock (3-P)	[1]Flame Fail Time (Seconds)	Firing Rate Motor
SETTINGS SHOWN ARE FACTORY DEFAULT								
YP100	10/10		-	10/15		Non-recycle	4	YES
YP102	10/10		-	10/15		Non-recycle	2	YES
YP138[3]	10/10		-	10/15		Non-recycle	4	YES
YP118[3]	10/10		-	10/15		Non-recycle	1	YES
YP183[3]	10/10		-	10/15		Non-recycle	4	YES
YP112[2]	-	5/5	10	-	0/5	Non-recycle	2	YES
YP113[2]	-	5/5	10	-	0/5	Non-recycle	1	YES
YP115[2]	-	5/5	10	-	0/5	Non-recycle	1	YES
YP200	10/10		-	10/15		Recycle	4	YES
YP202	10/10		-	10/15		Recycle	2	YES
YP300	10/10		-	10/intmt		Recycle	4	NO
YP302	10/10		-	10/intmt		Recycle	2	NO

[1]FFRT with YB110DC or YB230DC is 0.2 seconds.

[2]Terminal W is igniter, terminal 6 is pilot valve. (**Terminal 5 is not intended for use**)
Note additional 10 second proving time during PTFI.

[3] Revert to pilot models.

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 interr~~upted 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	0:00s – 60:00m, 1 second increments. 0:00s-60:00m, YP113 0:00s-60:00m, YP115 (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 Note: 0 sec purge requires a display with Engr code 9 or higher and chassis Engr code of 11 or higher
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	0:00s - 4:00m*, 1 second increments.	Selects Post Purge time * code 8 or above display required

Parameter	Factory Default	Range	Description
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, 38400*	Sets communication baud rate, * code 8 or above display required
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.

Note: Shaded parameters not affected by 8 hour burn-in or LOCK SETTINGS.

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 or BLZ-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 replacement 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.