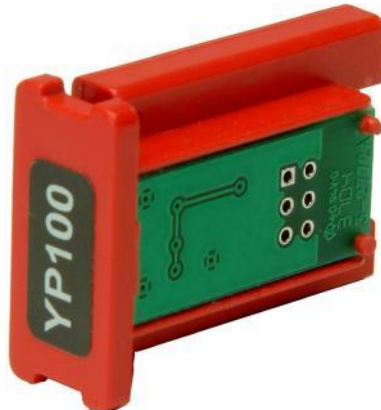




YP-1001

August 28, 2023



**YP100, YP102, YP112,
YP113, YP115, YP118,
YP120, YP138, YP148,
YP183, YP184, YP200,
YP202, YP300, YP302**

**PROGRAMMER MODULES
FOR USE WITH THE FIREYE**



DESCRIPTION

The Fireeye YP100, YP102, YP112, YP113, YP115, YP118, YP120, YP183, YP200, YP300, YP302 YP138, YP148 and YP184 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, fuel selection switch, valve proving, low gas pressure check, Burner On/Off through Keypad 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



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 ensure 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 light off 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
YP148	Keypad selectable parameters, non-recycle operation, modulation, open damper proving, fuel selection switch, valve proving, low gas pressure check (active high), Burner On/Off through Keypad, 4 second FFRT.
YP184	Same as YP148, except, low gas pressure check (active low).



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 (YB230) or ZB110 (ZB230) chassis modules 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)	Pilot, Interrupted or Intermittent	Early Spark Termination	ValveProve Pre-Check Time (Seconds)	ValveProve Evacuation Time (Seconds)	ValveProve Pressurization Time (Seconds)
SETTINGS SHOWN ARE FACTORY DEFAULT – KEYPAD SELECTABLE								
YP100 ¹	30	YES	YES	INTRP	NO	-	-	-
YP102 ¹	30	YES	YES	INTRP	NO	-	-	-
YP138 ¹	30	YES	YES	INTRP	NO	-	-	-
YP118 ¹	30	YES	YES	INTRP	NO	-	-	-
YP183 ¹	30	YES	YES	INTRP	NO	-	-	-
YP112 ¹	30	YES	YES	INTRP	NO	-	-	-
YP113 ¹	30	YES	YES	INTRP	NO	-	-	-
YP115 ¹	30	YES	YES	INTRP	NO	-	-	-
YP200 ¹	30	NO	YES	INTRP	NO	-	-	-
YP202 ¹	30	NO	YES	INTRP	NO	-	-	-
YP300 ¹	30	NO	YES	INTMT	YES	-	-	-
YP302 ¹	30	NO	YES	INTMT	YES	-	-	-
YP148 ²	30	YES	YES	INTRP	NO	5	3	3
YP184 ²	30	YES	YES	INTRP	NO	5	3	3

¹Terminal 6 is Pilot.

²Terminal 5 is Pilot.



FIREYE PART NUMBER	PTFI (5/6)	PTFI (W/6)	PTFI (W/5)	PILOT PROVING 6 Only	MTFI (5/6)	MTFI (W/6)	MTFI (W/5)	Running Interlock ⁵ (3-P)	¹ Flame Fail Time (Seconds)	Firing Rate Motor
YP100 ¹	10/10	-	-	-	10/15	-	-	Non-recycle	4	YES
YP102 ¹	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 ¹	10/10	-	-	-	10/15	-	-	Recycle	4	YES
YP202 ¹	10/10	-	-	-	10/15	-	-	Recycle	2	YES
YP300 ¹	10/10	-	-	-	10/intmt	-	-	Recycle	4	NO
YP302 ¹	10/10	-	-	-	10/intmt	-	-	Recycle	2	NO
YP148 ⁴	-	-	10/10	-	-	-	10/10	Non-recycle ⁵	4	YES
YP184 ⁴	-	-	10/10	-	-	-	10/10	Non-recycle ⁵	4	YES

¹FFRT with YB110DC or YB230DC is 0.3 seconds.

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

³Terminal 5 is igniter, terminal 6 is pilot valve. Revert to pilot models.

⁴Terminal W is igniter, terminal 5 is pilot valve.

⁵For YP148/YP184 programmers, Running Interlock is L1-P.
For other programmers, Running Interlock is 3-P.



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 W for YP148/YP184 Programmer)	Term 6 (Term 5 for YP148/YP184 Programmer)	Term 5 (Term W for YP148/YP184 Programmer)	Term 6 (Term 5 for YP148/YP184 Programmer)	
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	

Note: For YP148 and YP184 programmers, the above table applies to terminals W(Igniter) and 5(Pilot) operation during PTFI and MTFI.

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, YP148, YP184 = 10/10*10/10	See Table 2	Applies to terminals 5 and 6 operation during PTFI and MTFI. Applies to terminals W and 5 operation during PTFI and MTFI in YP148 and YP184 programmers.
Terminal 6 interrupted or intermittent	INTRP	INTRP, INTMT	Provide interrupted or intermittent operation on terminal 6. Provide interrupted or intermittent operation on terminal 5 in YP148 and YP184 programmers.
Prove M-8 open	NO	YES, NO	If YES, M-8 must be open at start of open damper purge period. (YP1XX Series only).



Parameter	Factory Default	Range	Description
Prove M-D open	NO	YES, NO	If YES, M-D must be open at end of open damperpurge period. Does not apply to YP3XX Series.
Post purge	0:15s	0:00s - 4:00m*, 1 second increments.	Selects Post Purge time. * Code 8 or above display required
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. YP148 and YP184 programmers does not support this feature.
Valve Prove	Disable	Enable/Disable	Applies to YP148 and YP184 programmers only. Select Enable to execute the Valve Proving during sequencing. Note: Requires a display with Engr code 17 or higher
VP Position	Pre-Purge	Pre-Purge/Post-purge	Applies to YP148 and YP184 programmers only. Select Pre-Purge to execute valve proving prior to pre-purge timing. Select Post-Purge to execute valve proving after the post-purge is complete, before returning to standby. When VP at Post-Purge is selected, VP at Pre-Purge is executed once upon every first power-on cycle. Note: Requires a display with Engr code 17 or higher
VP Test Time 1	00:20s	5 - 120 seconds	Applies to YP148 and YP184 programmers only. Time to verify leakage in upstream valve (MV1) during valve proving evacuation test. Can be set in 5 second increments. Note: Requires a display with Engr code 17 or higher
VP Test Time 2	00:20s	5 - 120 seconds	Applies to YP148 and YP184 programmers only. Time to verify leakage in downstream valve (MV2) during valve proving pressurization test. Can be set in 5 second increments. Note: Requires a display with Engr code 17 or higher
LGP	Disable	Enable/Disable	Applies to YP148 and YP184 programmers only. Select enable to monitor the gas pressure switch after the downstream gas valve opens to detect the low gas pressure in fuel train. Note: Requires a display with Engr code 17 or higher
BNR CTRL EN	NO	YES, NO	Applies to YP148 and YP184 programmers only. Select YES to enable Burner control ON/OFF operation. NOTE: Selecting BRNR CNTRL EN as "NO" shall make BURNER parameter as non-modifiable (read-only) Note: Requires a display with Engr code 17 or higher
BURNER	OFF	ON, OFF	Applies to YP148 and YP184 programmers only. Select ON to turn ON the Burner control. Select OFF to turn OFF the Burner control. Note: Requires a display with Engr code 17 or higher



Note:

- 1. Shaded parameters not affected by 8-hour burn-in or LOCK SETTINGS for YP100, YP102, YP112, YP113, YP115, YP118, YP120, YP183, YP200, YP300, YP302, YP138 programmers.*
- 2. For YP148 and YP184, the 8-hour burn-in or LOCK SETTINGS feature is not applicable for any of the parameters.*

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 any time 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.

This feature is not applicable for YP148 and YP184 programmers.

Refer to Bulletin BL-1001 or BLZ-1001 for complete information



NOTICE

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

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Fireeye guarantees for one year from the date of installation or 18 months from the date of manufacture, whichever occurs first, to replace, or at its option, to repair any product or part thereof which Fireeye, in its sole discretion, deems to be defective in material or workmanship or which otherwise fails to conform to the description of the product on the face of its sales order. Fireeye's obligations pursuant to this warranty do not extend to any products or parts thereof which Fireeye determines to have been installed, operated, maintained, repaired, or altered improperly or otherwise than in conformity to Fireeye's applicable instructions, or which have been subject to misuse, accident, or neglect.

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