



MBPS-1001
SEPTEMBER 7, 2005



MBPS-100R, MBPS-200R, MBHPS-100D, MBHPS-200D, MBLPS-100D, MBLPS-200D RACK MOUNT and DIN RAIL MOUNT POWER SUPPLIES for FlameWorx™ MODULES



DESCRIPTION

Fireye offers two versions (rack mount and DIN rail mount) of power supplies to provide power for the Fireye FlameWorx™ modules and associated flame scanners. Power supplies are available to operate on 120VAC (MBPS-100R, MBHPS-100D, MBLPS-100D) or 230VAC (MBPS-200R, MBHPS-200D, MBLPS-200D) input power. The power supplies provide sufficient power to accommodate up to ten (10) FlameWorx modules and twenty (20) flame scanners (UV, UV self check, infra-red, flame rod, and/or photo cells—see Note below). A single rack mount power supply (MBPS-100R, -200R) provides power for both the FlameWorx modules and associated flame scanners. The DIN rail design requires two (2) power supplies: MBLPS-100D, -200D to provide 24 VDC power for up to ten (10) FlameWorx modules, and MBHPS-100D, -200D to provide power for twenty (20) associated flame scanners (UV, UV self check, flame rod, and/or photo cells). A green LED on the power supply provides indication of system status (power on).

The infra-red version of the DIN rail FlameWorx modules (MBIR-100R, MBIR-100D) does not require the MBHPS-100D or MBHPS-200D power supply. Power for the infra-red scanners is provided by the FlameWorx module and the MBPS-100R, -200R or MBLPS-100D, -200D power supply.

MOUNTING

The rack mount version (MBPS-100R), -200R plugs into an available slot on the full (60-2535-2) or half (60-2535-1) mounting rack. The MBPS-100R, -200R is approximately 2 inches (10 HP) wide. The full and half racks are set up with a rack guide in position #3 to accept the MBPS-100R, -200R power supply. The DIN rail mount versions (MBHPS-100D, -200D and MBLPS-100D, -200D) snap onto Fireye's standard DIN mounting rail (60-2539-12, -24, -36).

CONNECTOR

The MBPS-100R, -200R rack mount power supply uses a straight style sixteen (16) screw terminal connector (P/N 60-2536-2) that accepts 22-14 AWG (0.5 - 1.5 mm²) wire. The connector is ordered separately.

The 60-2536-2 connector is similar in appearance to the connector used with the rack mount FlameWorx modules (60-2536-1), but is keyed differently to prevent a FlameWorx module from being incorrectly plugged into a power supply connector.

WIRING BASES

The MBHPS-100D, -200D and MBLPS-100D, -200D power supplies use a wiring base (P/N 60-2538) twelve (12) screw connector terminal strip that will accept 22 to 14 AWG (0.5 - 1.5 mm²) wire. The wiring base is ordered separately.



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
MBPS-100R	Power supply (120 VAC input power) for FlameWorx modules and flame scanners - 19" rack mount.
MBLPS-100D	Power supply (120 VAC input power) for FlameWorx modules - DIN rail mount.
MBHPS-100D	Power supply (120 VAC input power) for flame rods, UV and UV Self Check flame scanners - DIN rail mount.
MBPS-200R	Power supply (230 VAC input power) for FlameWorx modules and flame scanners - 19" rack mount.
MBLPS-200D	Power supply (230 VAC input power) for FlameWorx modules - DIN rail mount.
MBHPS-200D	Power supply (230 VAC input power) for flame rods, UV and UV Self Check flame scanners - DIN rail mount.
Connector	
60-2536-2	Connector with sixteen (16) straight style screw terminals (22-14 AWG, 0.5 - 1.5 mm ²) for rack mount power supply (MBPS-100R, -200R).
Wiring Base	
60-2538	Wiring base with twelve (12) straight style screw terminals (22-14 AWG, 0.5 - 1.5 mm ²) for DIN rail mount power supplies (MBHPS-100D, -200D and MBLPS-100D, -200D)
Mounting Racks	
60-2535-1	Half rack for use with MBPS-100R, -200R power supply and FlameWorx modules.
60-2535-2	Full rack for use with MBPS-100R, -200R power supply and FlameWorx modules.
Mounting Rails	
60-2539-12	DIN style mounting rail - 12 inches for use with MBHPS-100D, -200D and MBLPS-100D, -200D.
60-2539-24	DIN style mounting rail - 24 inches for use with MBHPS-100D, -200D and MBLPS-100D, -200D.
60-2539-36	DIN style mounting rail - 36 inches for use with MBHPS-100D, -200D and MBLPS-100D, -200D.
Replacement Fuses	
23-184	Replacement fuse for MBPS-100R, -200R, MBHPS-100D, -200D and MBLPS-100D, -200D power supplies.

Note: Connector and wiring bases for power supply modules must be ordered separately.

PRODUCT SPECIFICATIONS

ELECTRICAL

Input Power:

MBPS-100R, MBHPS-100D, MBLPS-100D
120 VAC (+10%, -15%), 50/60 Hz (Fused @ 1.6 A).

MBPS-200R, MBHPS-200D, MBLPS-200D
230 VAC (+10, -15%) 50/60 Hz.

Maximum current output:

MBPS-100R, -200R 1.4A @ 24 VDC (Will power up to 10 flame switch modules).
25mA @ 600 VAC (Will power up to 20 flame scanners).
Required for UV, UV Self Check scanners and Flame Rods.

MBLPS-100D, -200D 1.4A @ 24 VDC (Will power up to 10 flame switch modules).

MBHPS-100D, -200D 25mA @ 600 VAC (Will power up to 20 flame scanners).
Required for UV, UV Self Check scanners and Flame Rods.

ENVIRONMENTAL

Operating Temperature: - 40∇F to 140∇F (- 40∇C to 60∇C)

Storage Temperature: - 40∇F to 176∇F (- 40∇C to 80∇C)

Humidity: 85% RH (max), non-condensing.

Agency Approvals: Underwriters Laboratories (UL)

Factory Mutual (FM)

Canadian Standards Association (CSA)

Note: UL Approval DOES NOT APPLY to MBPS-200R, MBHPS-200D and MBLPS-200D.

Shipping Weight: MBPS-100R, -200R 2 Lbs

MBLPS-100D, -200D 2 Lbs

MBHPS-100D, -200D 2 Lbs

FIGURE 1. DIMENSIONS OF DIN RAIL MOUNT POWER SUPPLIES (MBHPS-100D, -200D/MBLPS-100D, -200D) AND WIRING BASES (60-2538). INCH (MM)

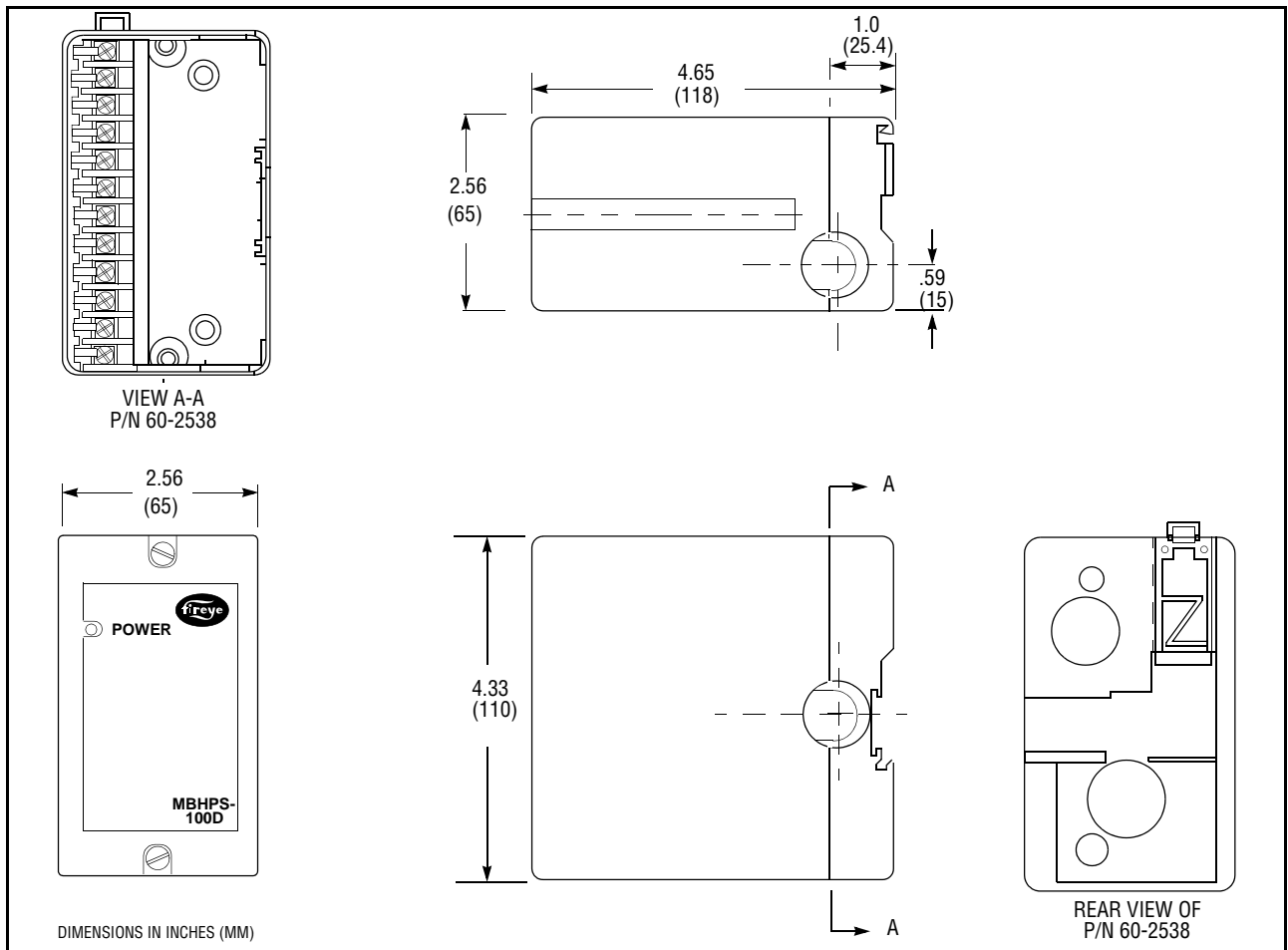
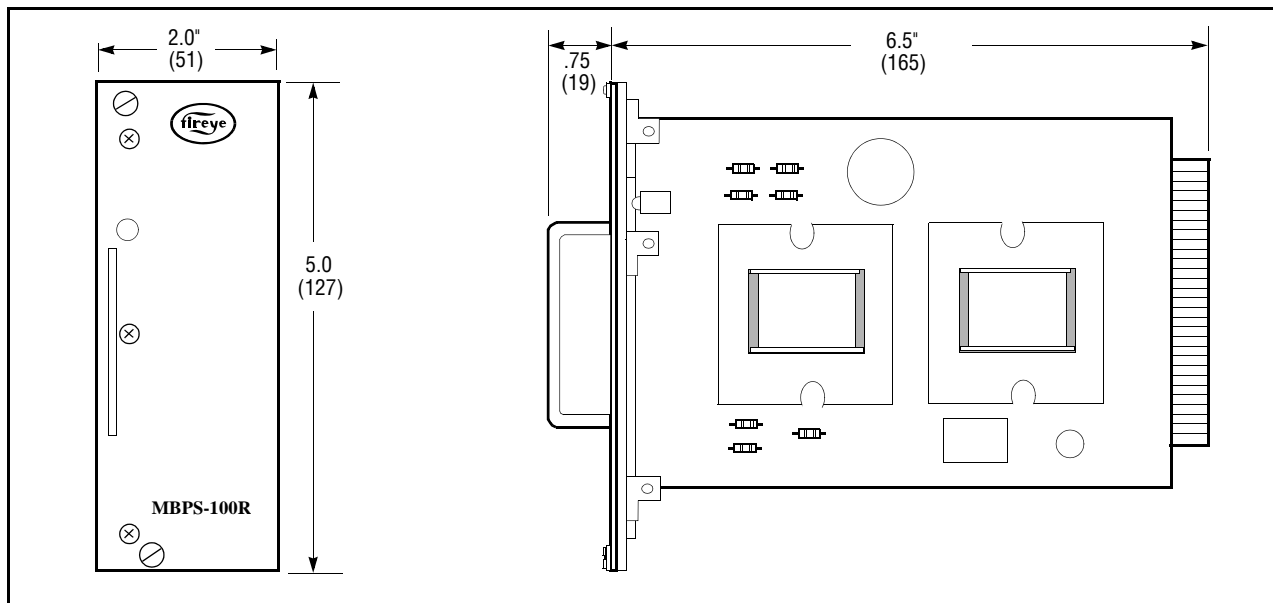


FIGURE 2. DIMENSIONS OF RACK MOUNT POWER SUPPLY (MBPS-100R, -200R)



INSTALLATION OF RACK MOUNT POWER SUPPLY (MBPS-100R, -200R)

The Half Rack (60-2535-1) and Full Rack (60-2535-2) are shipped with the rack guides in positions 3, 7, and then spaced 6 positions apart. The rack guides are set up so the power supply (MBPS-100R, -200R) can mount in position 3, and the rack mount FlameWorx modules in the remaining positions. Screw the power supply connector (60-2536-2) into position 3 on the rear of the rack. Observe position of key in connector. See Note below. Then slide the power supply module into the connector and secure with the top and bottom retaining screws. To install the power supply in a different position, mount the connector (60-2536-2) in the same position as the centerline of the appropriate rack guide. Filler plates are provided to close any openings.

***Note:** The connector for the power supply (60-2536-2) is similar to the connector for the FlameWorx modules (60-2536-1). The connectors are keyed differently to prevent a FlameWorx module from being incorrectly plugged into a power supply connector. When mounting the connector for the power supply (60-2536-2), position the connector so that the key is closer to the bottom of the rack.*

***Note:** The half rack and full rack include one 60-2436-1 connector screwed into position 37 and 79 respectively. These connectors are used for the FlameWorx modules.*

INSTALLATION OF DIN RAIL MOUNT POWER SUPPLIES

The wiring bases (60-2538) for the high voltage (MBHPS-100D, -200D) and low voltage (MBLPS-100D, -200D) power supplies mount onto the DIN mounting rails (60-2539-12, -24, -36).

To mount the wiring base onto the DIN mounting rail:

1. Position the bottom edge of the DIN mounting rail into the slot on the bottom of the 60-2538 wiring base.
2. Insert a small screw driver into the slot of the white plastic retainer on the top rear section of the wiring base.
3. Lift up the white plastic retainer and press the upper half of the wiring base against the DIN mounting rail until it snaps into place.



To mount the power supply onto the wiring base:

1. Align the flame switch module with its wiring base and insert the edge of the flame switch module into the connector on the wiring base.
2. Using a medium slotted screw driver with a 4 inch shaft (minimum), tighten down the two retaining screws on the power supply.

To remove the wiring base from the DIN mounting rail:

1. Insert a small screw driver into the slot of the white plastic retainer on the top rear section of the wiring base.
2. Lift up the white plastic retainer and pull the flame switch module / wiring base forward.
3. Slide the bottom of the wiring base off of the DIN mounting rail.

WIRING CONNECTIONS FOR MBPS-100R, -200R POWER SUPPLY (RACK MOUNT)	
Terminal(s)	Function
1, 7	Power for UV scanners (UV1A, 45UV5, UV2, UV8A). Connect to terminals 1 and 2 of MBUV-100R and/or MBUVS-100R.
2, 4	Power for flame rods and photocells. Connect to terminals 1 and 2 of MBFR-100R.
9, 10	"24 VDC Power" for FlameWorx modules. Connect to terminal 13 of FlameWorx Modules.
11, 12	"24 VDC Common" for FlameWorx modules. Connect to terminal 14 of FlameWorx modules.
14, 15	Incoming line power (120 VAC for MBPS-100R, 230 VAC for MBPS-200R).
16	Earth Ground.
Terminals designations refer to the 60-2536-2 connector.	

WIRING CONNECTIONS FOR MBHPS-100D, -200D POWER SUPPLY (DIN RAIL MOUNT)	
Terminal(s)	Function
1, 7	Power for UV scanners (UV1A, 45UV5, UV2, UV8A). Connect to terminals 1 and 2 of MBUV-100D and/or MBUVS-100D.
2, 4	Power for flame rods and photocells. Connect to terminals 1 and 2 of MBFR-100D.
10, 11	Incoming line power (120 VAC for MBHPS-100D, 230 VAC for MBHPS-200D).
12	Earth Ground
Terminals designations refer to the 60-2538 wiring base.	

WIRING CONNECTIONS FOR MBLPS-100D, -200D POWER SUPPLY (DIN RAIL MOUNT)	
Terminal(s)	Function
3, 4	"24 VDC Power" for FlameWorx modules. Connect to terminal 13 of Flame Worx Modules.
5, 6	"24 VDC Common" for FlameWorx modules. Connect to terminal 14 of FlameWorx modules.
10, 11	Incoming line power (120 VAC for MBLPS-100D, 230 VAC for MBLPS-200D).
12	Earth Ground
Terminals designations refer to the 60-2538 wiring base.	

FIGURE 3. SCANNER WIRING DIAGRAM FOR MBPS-100R POWER SUPPLY AND MBUV-100R, MBUVS-100R, MBFR-100R, AND MBIR-100R FLAMEWORX MODULES AND THEIR ASSOCIATED SCANNERS.

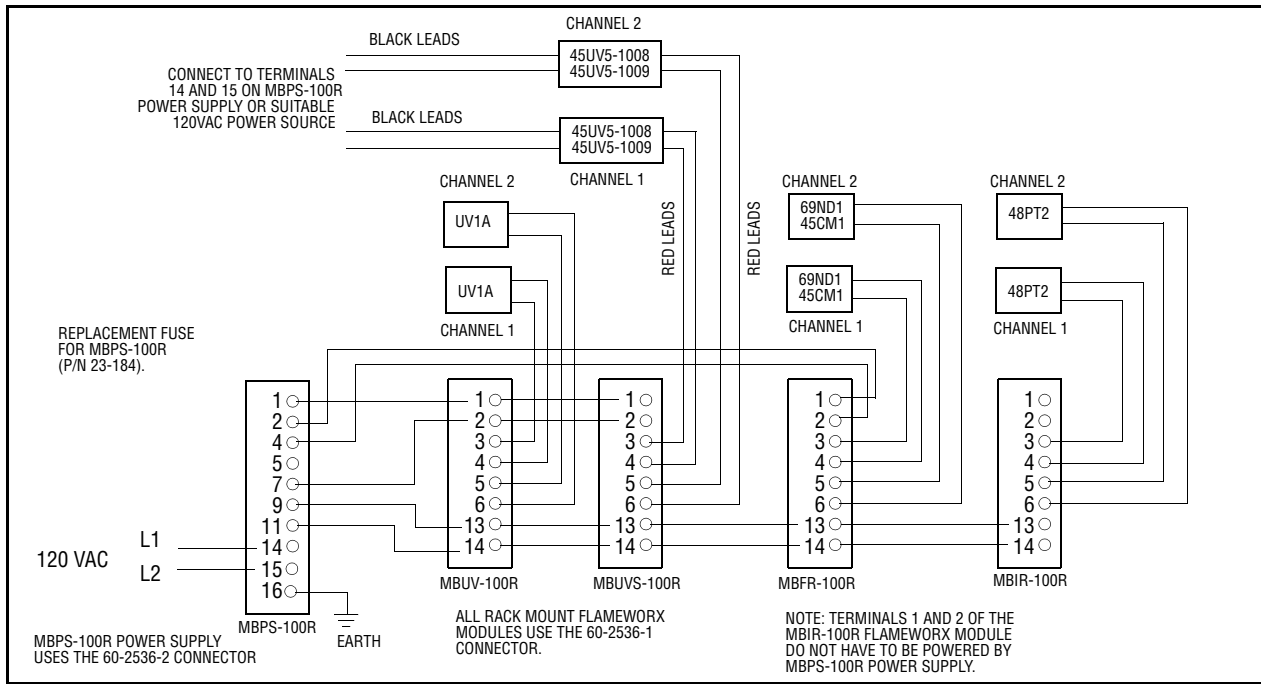


FIGURE 4. MBHPS-100D/MBLPS-100D POWER SUPPLIES AND MBUV-100D, MBUVS-100D, MBFR-100D, AND MBIR-100D FlameWorx MODULES AND THEIR ASSOCIATED SCANNERS.

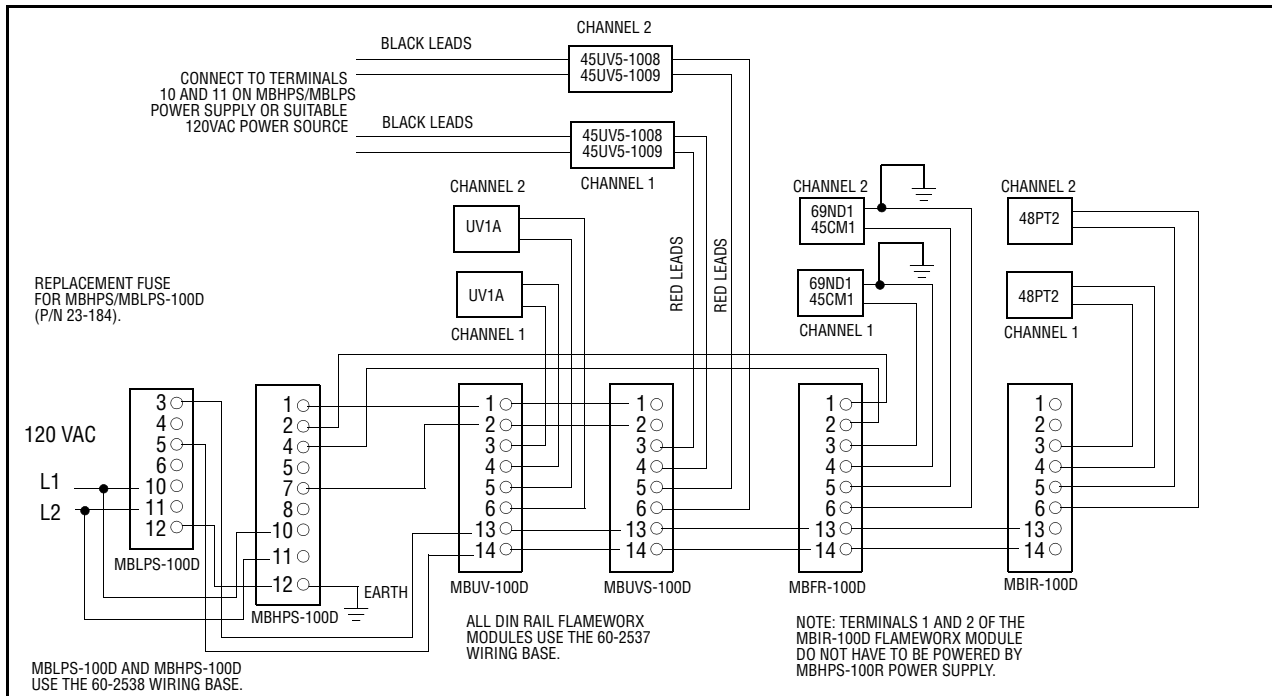


FIGURE 5. SCANNER WIRING DIAGRAM FOR MBPS-200R POWER SUPPLY AND MBUV-100R, MBUVS-100R, MBFR-100R, AND MBIR-100R FLAMEWORX MODULES AND THEIR ASSOCIATED SCANNERS.

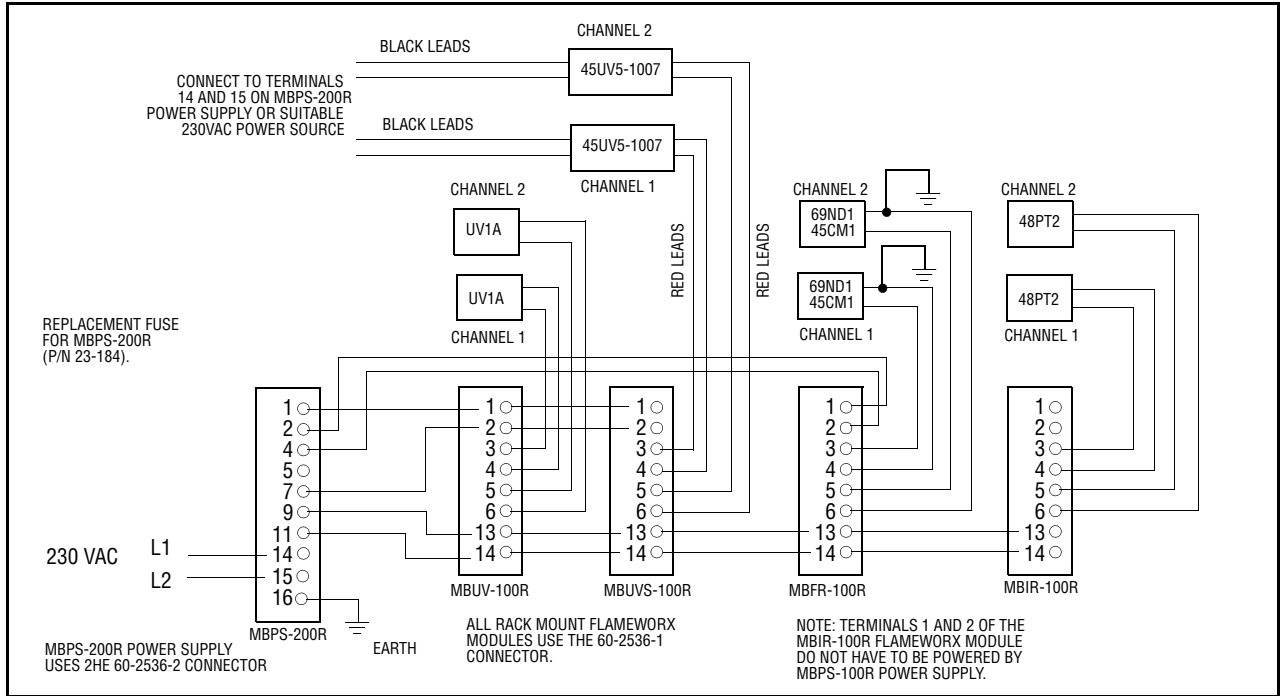
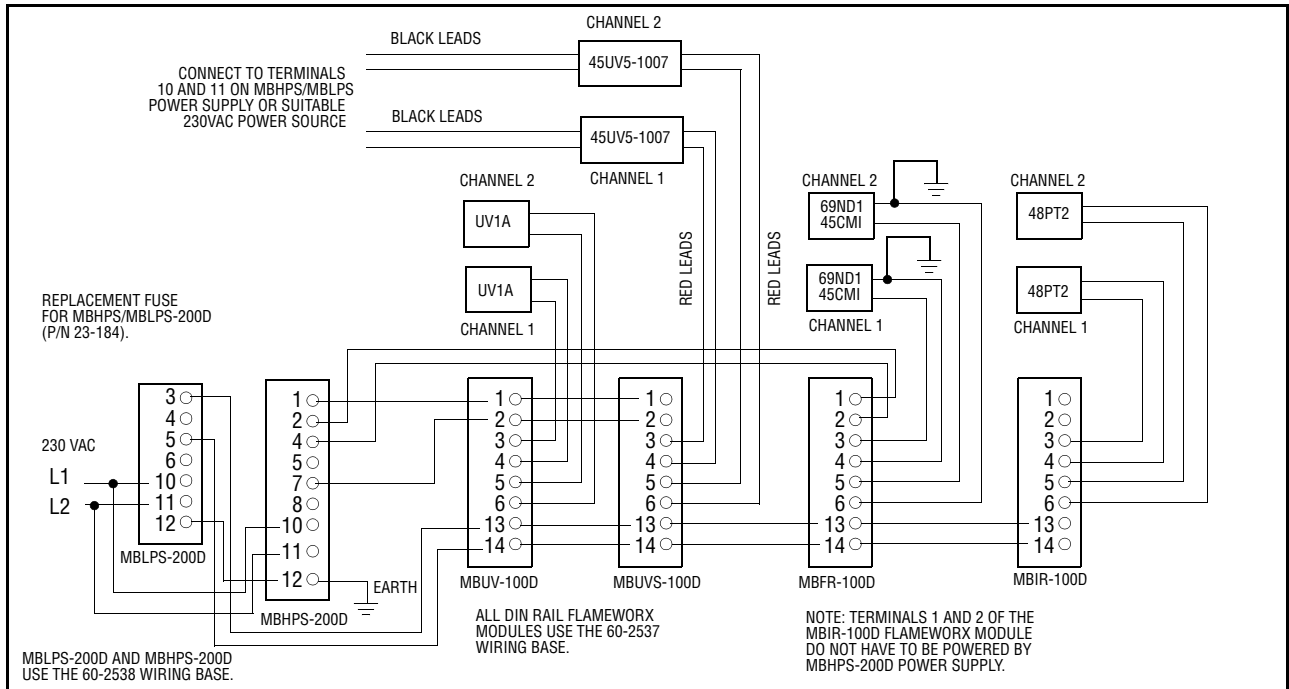


FIGURE 6. MBHPS-200D/MBLPS-200D POWER SUPPLIES AND MBUV-200D, MBUVS-200D, MBFR-200D, AND MBIR-200D FLAME SWITCH MODULES AND THEIR ASSOCIATED SCANNERS.





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 and Conditions of Sale, pertains only to the Fireeye 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 Fireeye shall be limited exclusively to the right to replacement or repair as above provided. In no event shall Fireeye be liable for consequential or special damages of any nature that may arise in connection with such product or part.



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