



## WIRING HARNESS for 45FS1 and 45UVFS1 *SIGNATURE SCANNER™* 61-6671-3, -10, -15, -20, -30, -40

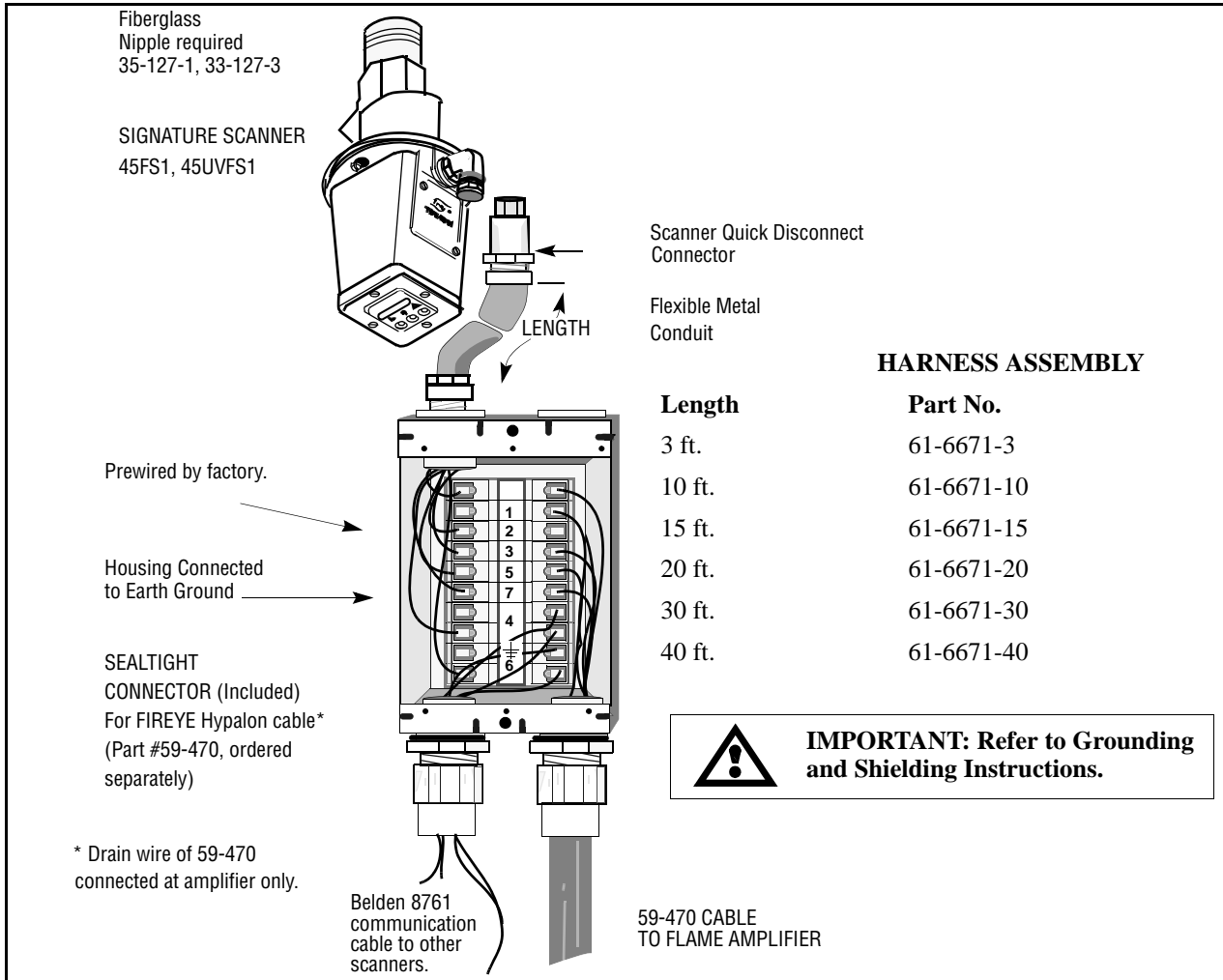
### USING FIREYE WIRING HARNESS

To provide an easy method to wire the Signature Scanners in a “Multi-drop” wiring configuration for remote communications, Fireye offers a wiring harness in 6 different lengths (3', 10', 15', 20', 30' and 40'). The harness has a pre-wired female quick disconnect to plug into the male quick disconnect on the scanner. The other end of the wiring harness has a conduit box with a 18 connector terminal strip. Eight (8) connectors are pre-wired to the female quick disconnect. The remaining ten (10) connectors are used for wiring the Fireye 6 conductor cable (59-470) back to the flame amplifier (for +24 VDC Power, Self-check, Common, Flame Signal, Remote File Select 1 & 2), and to multi-drop the 2 conductor Belden cable (#8761) between scanners and finally back to the communication source to complete the “Multi-drop” wiring configuration.

The terminal strip uses push-type cage clamp connectors. Use a small screwdriver or similar device to depress the slot beside the connector to open the connector and then insert the wire. Remove the screwdriver to secure the wire. The connector will accept up to 14-gauge wire. The terminal strip should be wired in the following manner:

| Cable       | Color  | Function     | Wiring Harness                  | Wire cable                          |
|-------------|--------|--------------|---------------------------------|-------------------------------------|
|             | Black  | +24VDC       | 1                               |                                     |
|             | Red    | Shutter      | 2                               |                                     |
| 59-470      | White  | Common       | $\underline{\underline{\quad}}$ | To Flame Amplifier                  |
| Cable       | Green  | Flame Signal | 3                               |                                     |
|             | Blue   | RFS1         | 5                               |                                     |
|             | Yellow | RFS2         | 7                               |                                     |
| Belden 8451 | Red    | RS485 COMA   | 4                               | To next flame scanner harness       |
|             | Black  | RS485 COM B  | 6                               |                                     |
| Belden 8451 | Red    | RS485 COM A  | 4                               | From previous flame scanner harness |
|             | Black  | RS485 COM B  | 6                               |                                     |

SEE WIRING DIAGRAM ON PAGE 4.



## GROUNDING AND SHIELDING INSTRUCTIONS

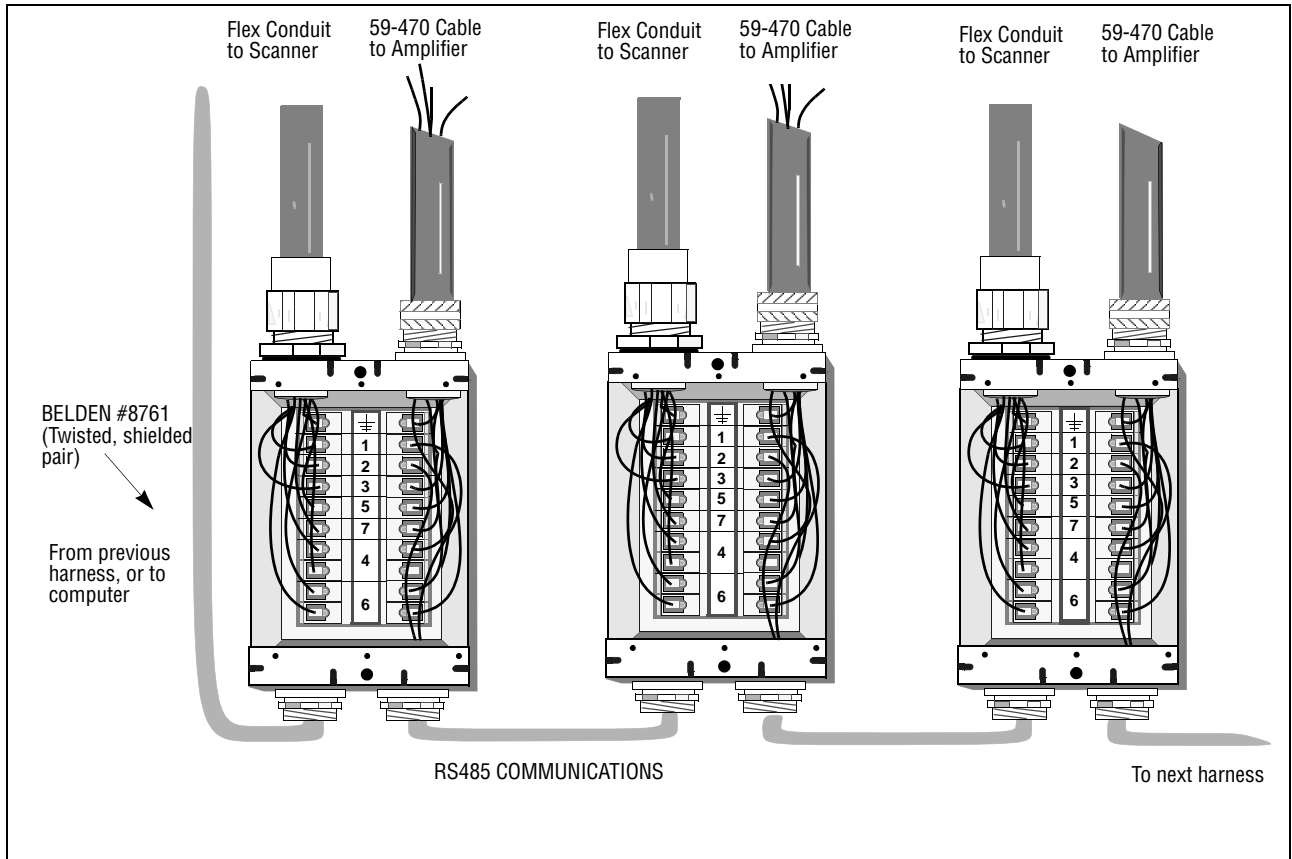
### A. ALL INSTALLATIONS

1. Electrically isolate the scanner from the burner using a heat insulating nipple (P/N 35-127-1 or 35-127-3).
2. If purge air is required, purge air piping must be electrically isolated from the scanner (e.g. isolated with short rubber hose).
3. The shield of the 59-470 scanner cable (harness assembly to flame amplifier) should be connected at the amplifier end only. Refer to amplifier bulletin for details.
4. The shield of the 59-471 cable (factory wired within the harness) is connected to a ground screw within the harness junction box. If electrical interference occurs, you may remove this ground screw connection and tie the 59-471 shield to the 59-470 shield. Isolate this connection from ground within the junction box.
5. The shields of the RS485 communication cables should be tied together within the harness junction boxes and grounded at one end only (usually at the computer end).

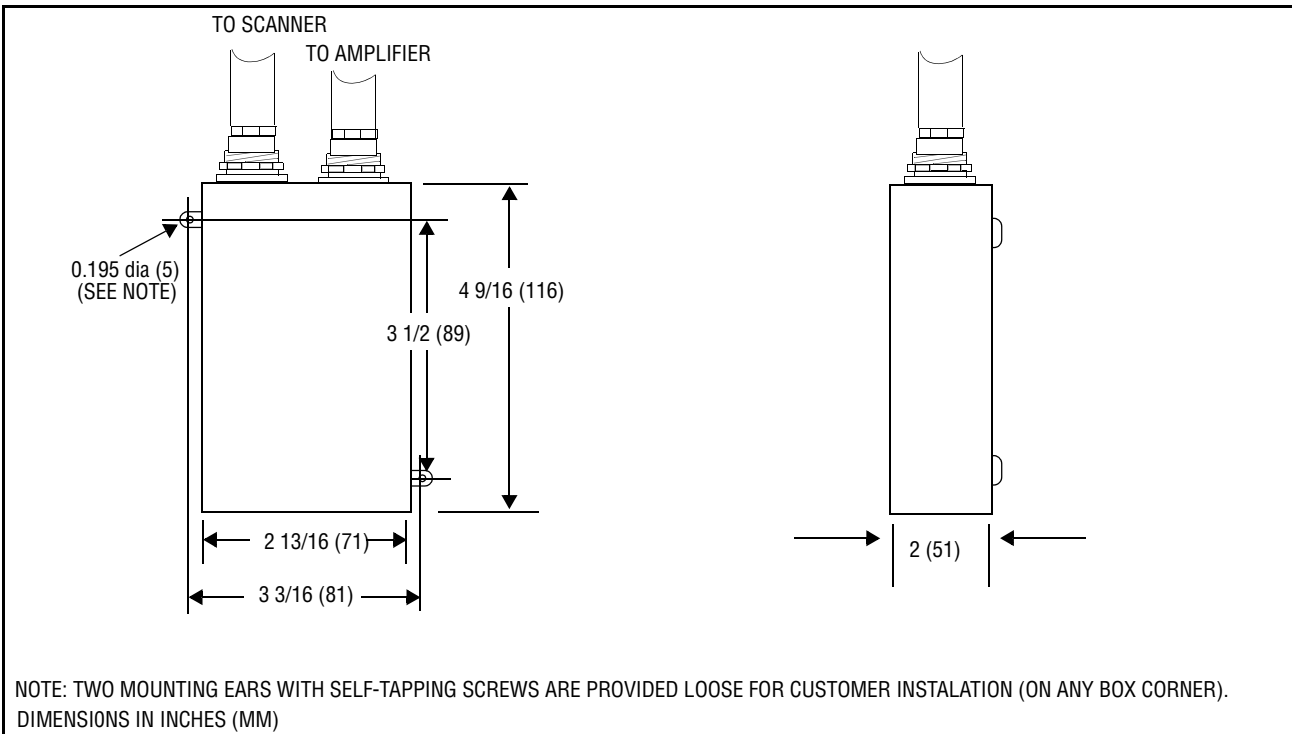
### B. FOR USE ON SCANNERS OR SCANNER CABLE LOCATED WITHIN 12" OF A HIGH ENERGY OR HIGH VOLTAGE SOURCE.

1. The scanner and scanner cable (preferably within flexible conduit) MUST be located at least one foot (1') from the ignition source.
2. Run a ground wire from the ignition transformer chassis to the ignitor assembly.
3. Replace all frayed, cracked, or dirty (oily) ignition wire. Ignition wire must be in good working condition.

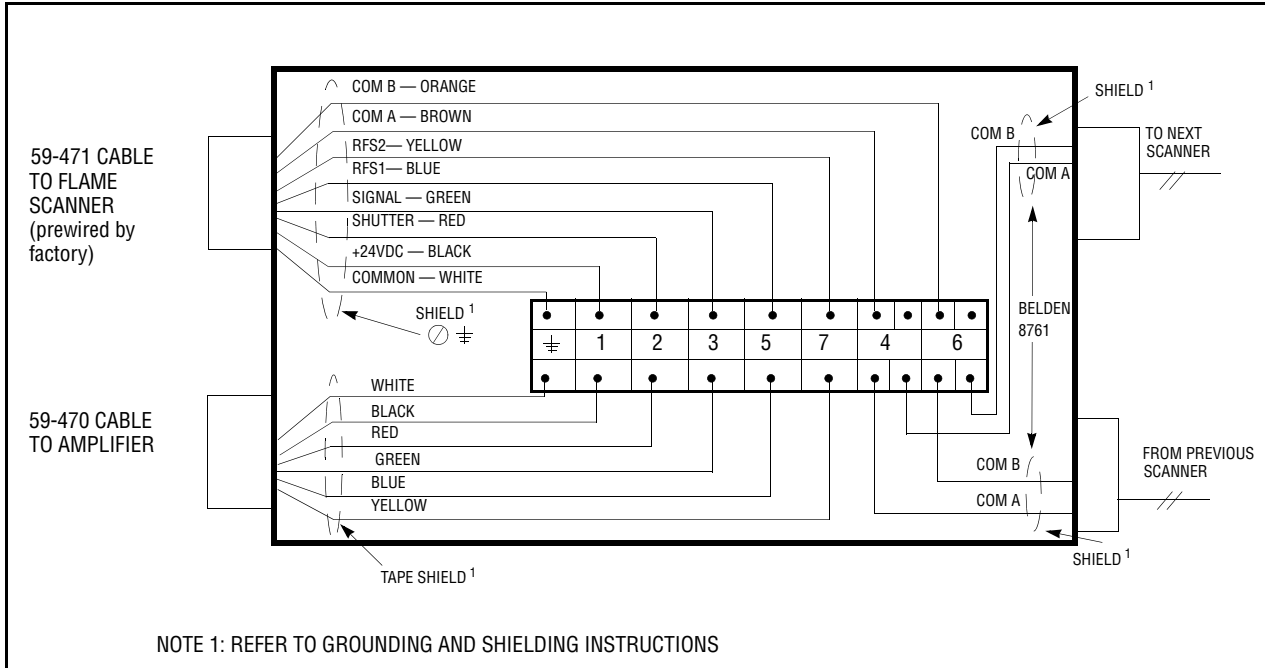
### SUGGESTED WIRING FOR 45FS1, 45UVFS1 COMMUNICATIONS



### MOUNTING DIMENSIONS



## WIRING DIAGRAM FOR WIRING HARNESS



## NOTICE

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## 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.



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