

DESCRIPTION

The DE4643-001 Module is designed to be installed in the R9005P, R9105P and R9107A Flame Controllers to provide an optional 4 to 20 milliampere current output for the system. Burner management systems that are ordered with the 4 to 20 milliampere option have the DE4643-001 Module installed at the factory, however, the DE4643-001 can be ordered and installed in the field.

The R9005P has a standard 0 to 10 vdc output (terminal 7 - ground and terminal 12 - positive). With the optional DE4643-001 Module installed, the R9005P also has a 4 to 20 milliampere output (terminal 7 and terminal 8).

The R9105P and R9107A have a standard 0 to 10 vdc output (terminal 17 - ground and terminal 21 - positive). With the optional DE4643-001 Module installed on these controllers, only the 4 to 20 milliampere output is available (terminals 13 and 21).

SPECIFICATIONS

OUTPUT TYPE—

Isolated two-wire current loop.

POWER REQUIREMENTS—

External dc power supply with an output voltage between 12.1 and 40 vdc.

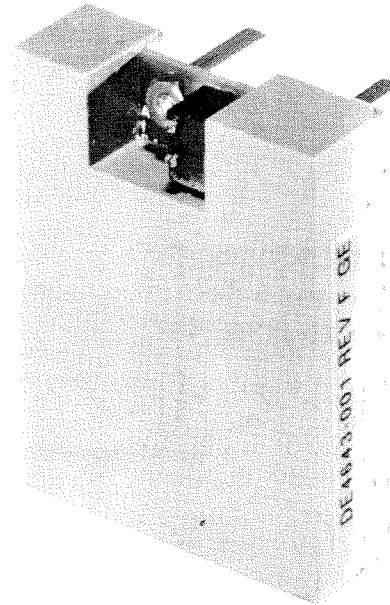
LOOP RESISTANCE —

The maximum loop resistance that can be driven is a function of the power supply output voltage and can be calculated by the following formula:

$$R_{\max} = \frac{V_{\text{ps}} - 12.1}{0.02}$$

Where

R_{\max} = maximum loop resistance
 V_{ps} = power supply output voltage



INSTALLATION

The DE4643-001 includes the 4 to 20 milliampere module and a retaining screw, nut, and spacer. Follow the instructions below to install the module.

1. Plug the 4 to 20 Milliampere Module into the socket on the controller. On the R9005P Controller, this is located in the upper right corner of the unit as viewed from the front with the cover removed. On the R9105P Controller, this is located in the upper right corner of the unit as viewed from the component side of the circuit board with the faceplate on the left.
2. Install the screw through the mounting holes on the controller and tighten the screw to the 4 to 20 milliampere module.

JUMPERS

On the R9105P and R9107A Controllers, ensure that jumpers W4 and W8 are removed, and that jumper W6 is installed.

On the R9005P Controller, no jumper installation or removal is required for the 4 to 20 milliampere output option.

WIRING

Wire the DE4643-001 4 to 20 Milliampere Output Module as specified below.

R9005P Controller

The R9005P has a standard 0 to 10 vdc output (terminal 7 - ground and terminal 12 - positive). With the optional DE4643-001 Module installed, the R9005P also has a 4 to 20 milliampere output (terminal 6 - positive and terminal 8 - negative). See Figure 1.

R9105P and R9107A Controllers

The R9105P and R9107A have a standard 0 to 10 vdc output (terminal 17 - ground and terminal 21 - positive). With the optional DE4643-001 Module installed, these controllers have a 4 to 20 milliampere output (terminal 13 - negative and terminal 21 - positive), and no 0 to 10 vdc output. See Figure 2 for the R9105P and Figure 3 for the R9107A.

If the Gain Select input (terminals 13, 14 - neutral and terminals 15, 16 - Hot) is being used, ensure that the hot side of the ac input is connected to terminals 15, 16.

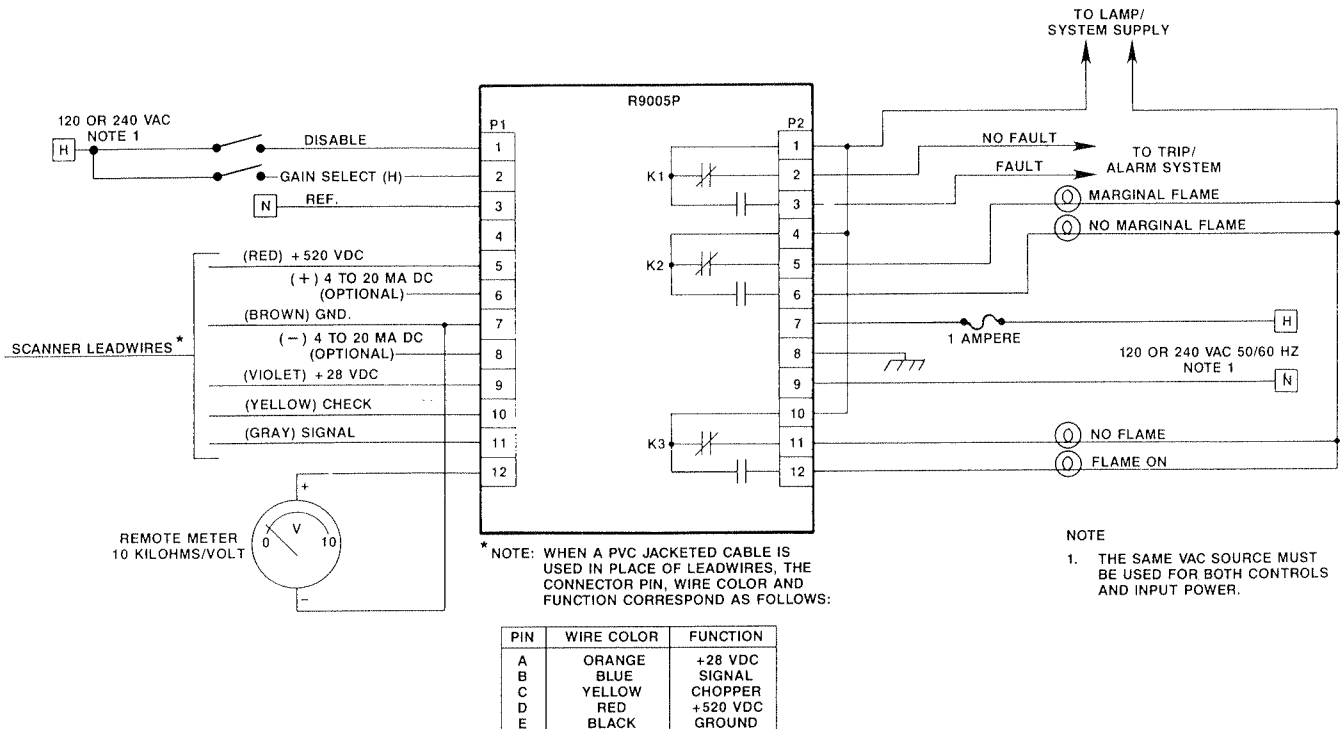


Figure 1—R9005P Electrical Connections

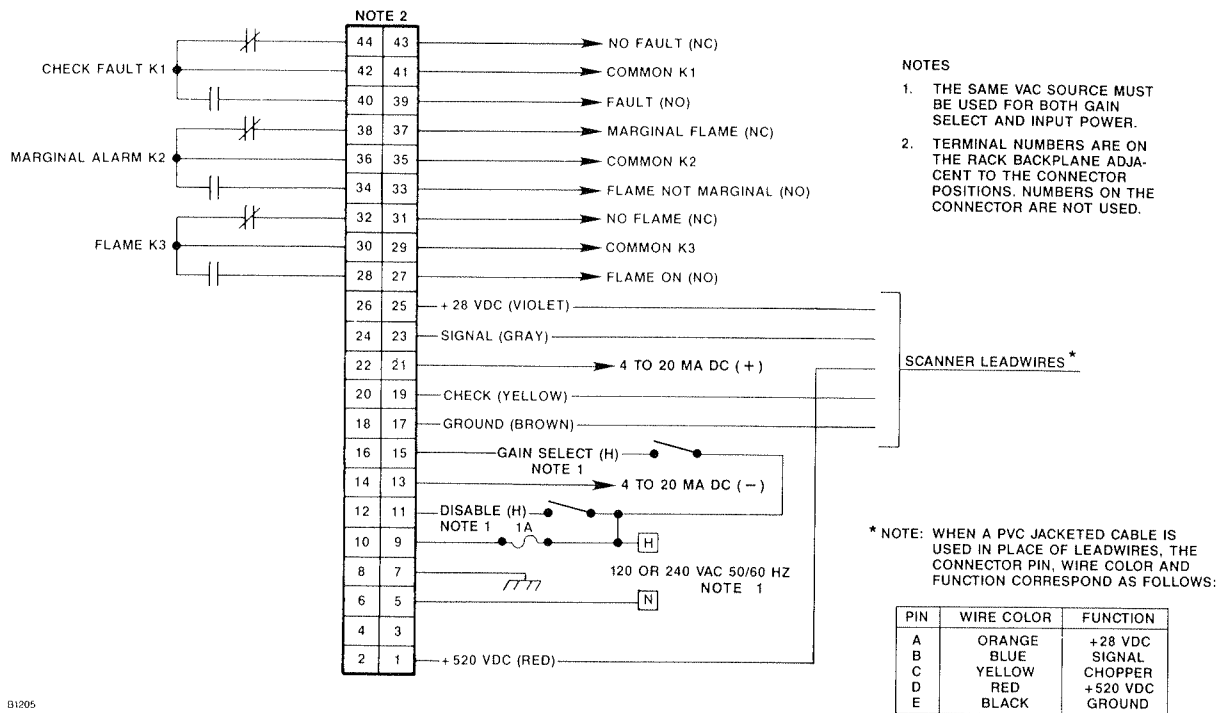


Figure 2—R9105P Electrical Connections with 4 to 20 Milliamper Module

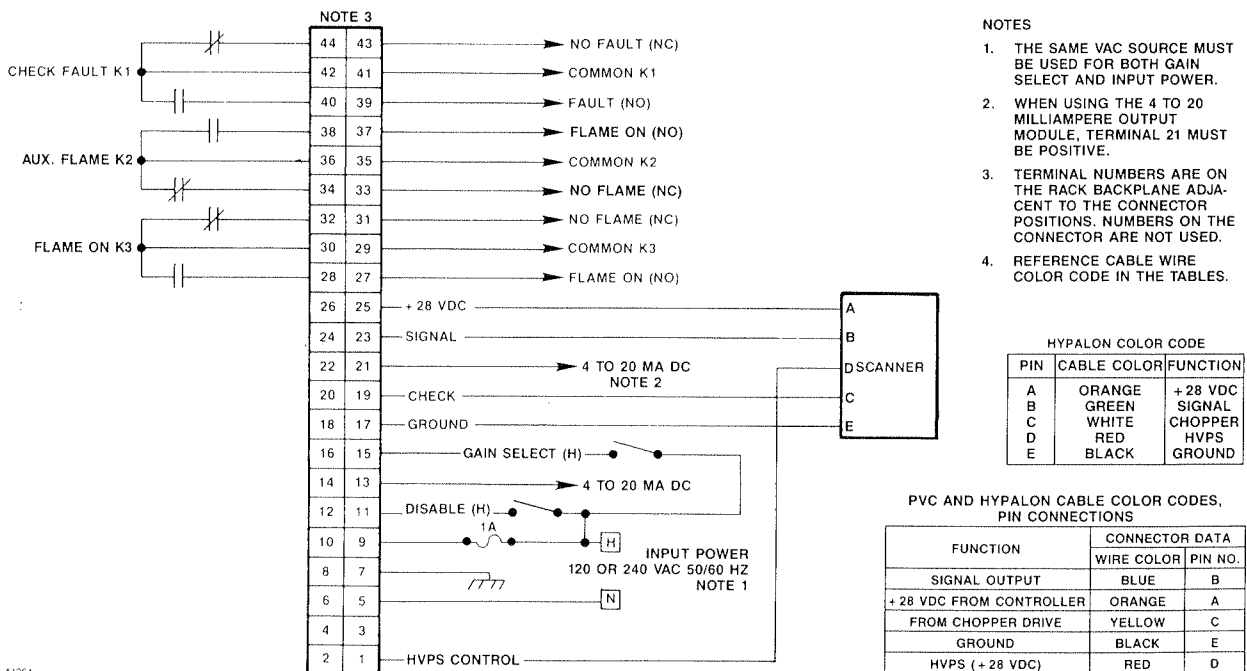


Figure 3—R9107A Electrical Connections with 4 to 20 Milliamper Module

ORDERING INFORMATION

When ordering, specify:

DE4643-001 4 to 20 Milliampere Module Assembly.

Order from one of the offices listed below:

Detector Electronics Corporation
6901 West 110th Street
Minneapolis, Minnesota 55438 USA
Telephone (612) 941-5665 or (800) 765-FIRE
Telex 6879043 DETEL UW
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Facsimile 431-52236

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