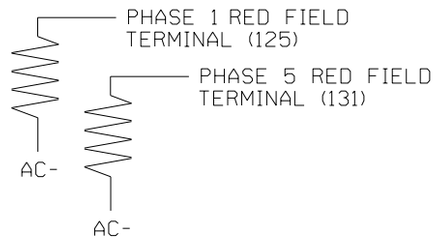
Load Resistor Installation Detail

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

ACCEPTABLE VALUES

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



NOTE: The purpose of these resistors is to load the channel red monitor inputs in order for the Signal Sequence Monitor to use the full signal sequence monitoring capability on channels that do not use the red display in the field.

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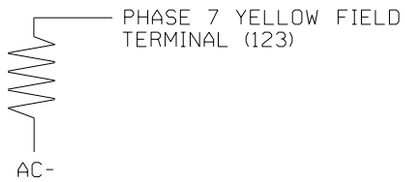

In all traffic signal installations, the signal head displays are switched 'ON' and 'OFF' by solid state load switches. These load switches take a logic level input from the controller and switch AC power to the signal heads through a triac device. The triac is protected from transient voltages by a snubber circuit. In the 'OFF' condition there is a small leakage current through the snubber circuit. As long as there is a load across the circuit, such as a bulb or LED module, this leakage current goes unnoticed. If there is no load, however, the conflict monitor will see an 'OFF' condition as an active signal, resulting in either a false conflict or a dual indication fault.

If there is not a field indication for each of the three outputs on a given load switch, a load resistor needs to be installed. The load resistor takes the place of a bulb or LED indication and provides a load for the channel red or yellow monitor input, preventing the problems with unwarranted faults.

If only the green and yellow indications of the load switch are used (common with 5-section heads on protected/permissive left turns), a resistor needs to be installed on the red field terminal, as shown above left.

If only the green arrow indication is used, the resistor should be installed on the yellow field terminal as shown lower left. This situation can occur when a 4-section head is used to display a left turn that is only used during a preemption, or when a 4-section flashing yellow arrow head is used to display a protected left turn. In either case, no resistor is needed on the red terminal as the signal sequence monitoring capability is not used. See STDS. NO. 3.0 and 7.0 for more information.