

GB5 Installation Notes for AC controlled relays and contactors

GB5 versions meant for use with AC controlled contractors or mercury relays have internal AC solid-state relays capable of handling up to 1 Amp, 20--260 volts AC.

This internal relays are optimized for reliable control of contactors, relays, and solenoids; it completely isolates the external voltage from the rest of the GB5 circuitry. Because the control voltage is AC, there is no difference between the two top terminals --- they are symmetric. You should not think of one of them as "in" and the other as "out".

It should be noted that in order to provide the utmost flexibility, the control voltage is not supplied by the GB5 but must be provided as part of the installation. The control terminals do not supply any power or voltage; they are only a switch. This means you can use, say, a 24 volt, a 36 volt, a 120 volt, or a 240 volt relay without having to make any changes whatsoever to the GB5. Whether 24, 120, or 240 Volts, etc, is used depends on the requirements of the relay or solenoid and is not determined by the GB5 itself. It is up to the installer to provide the appropriate voltage. The most frequent problem in installing a GB5 is to assume that it supplies ac power directly to the relay,

We repeat:

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We cannot stress this too strongly: it is the cause of much confusion during installation.

The minimum load necessary to actuate the output relay is about 10 milliamps. Note that a typical two-pole mercury contactor draws around 100--300 milliamps, which is very comfortably within the range of the GB5's specifications.

It is essential to have a switch or circuit breaker in the circuit of the main heating element of the oven. This allows the independent shutdown of the oven in case of a malfunction or stuck contactor.

The GB5 output channels are fused internally. With a separate fuse for each oven To check or replace a fuse, you must remove the front cover of the GB5.