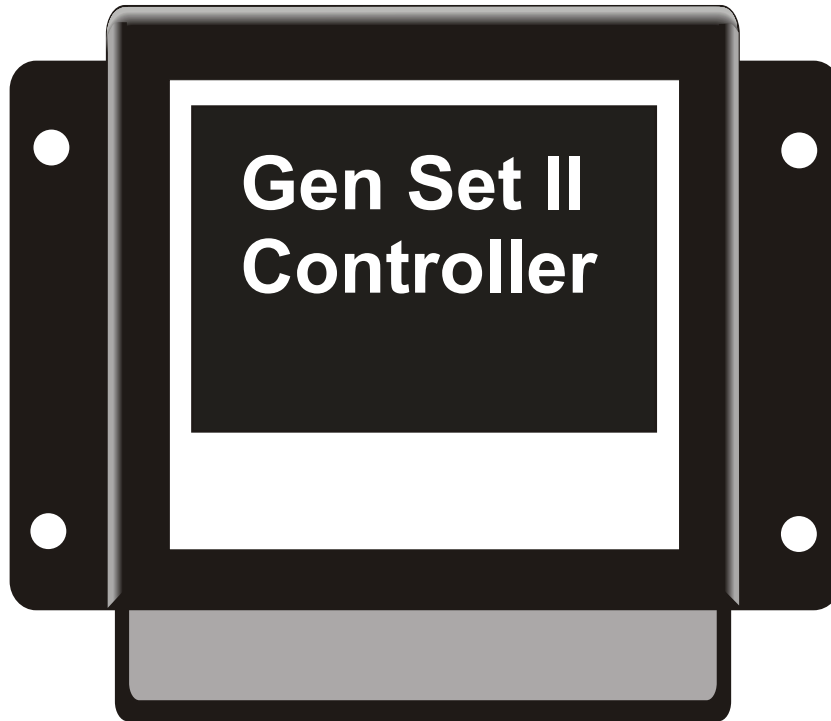


MONOPLEX SYSTEM

GEN-SET CONTROLLER 2

SERVICE MANUAL



P/N 00-00192-000

The Gen-Set Controller II is an electronic circuit which functions as a remotely controlled starting and stopping switch. The controller allows starting and stopping of the gen-set from a remote location with a single momentary switch. When the gen-set is off, the switch is a starter button. Approximately 10 seconds after gen-set is running, the switch becomes a "touch and let go" to stop button.

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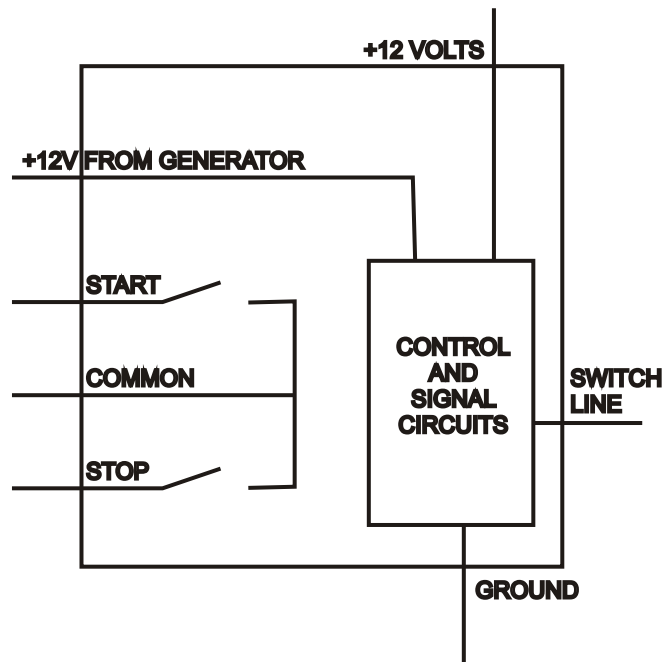
SERVICE MANUAL

Gen-Set Controller II is designed to work with gen-sets that use a SPST, center off switch. Such as an Onan, Kohler, Generac and Honda. It provides two sets of floating contacts that can carry up to 10 Amps. The controller is interfaced to the different gen-sets by use of a different interconnect cable, which use plugs that match the particular gen-set.

The switch portions consist of heavy duty, automotive style relays, which provide the isolated, floating contacts. Through the use of these relays, the controller can interface to practically any gen-set used by the industry. The remainder of the circuitry is designed for minimum standby current draw of less than 2 milliamps.

In a normal application, it is located near the gen-set to minimize the length of the multi-conductor interconnect cable. A light gauge wire is run from this unit to as many switches as desired to control the gen-set. These switches can be one of Intellitecs' Monoplex™ style, or any single pole momentary contact type. This system allows wiring of switches in locations that would have been impractical with conventional wiring techniques.

EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS

(Supply Voltage = 13.0 volts, no load on signal line.)

<u>PARAMETER</u>	<u>CONDITION</u>	<u>MIN.</u>	<u>TYPICAL</u>	<u>MAX</u>
Supply Current (milliamps)	OFF State * ON State *	1.25 1.30	1.50 1.55	1.70 1.75
Signal Line Voltage	OFF State * ON State *	2.40 7.20	2.50 7.30	2.60 7.40
Signal Line Current (milliamps)	Ooutput Grounded	26.0	29.1	32.3
Signal Line Threshold voltages	Low High	1.00 1.35	1.10 1.40	1.20 1.55
Generator Stop Hold Time (sec.)	After 12 volts from Gen-set is gone.	8	10	12

* ON and OFF "states" refer to the condition of the gen-set.

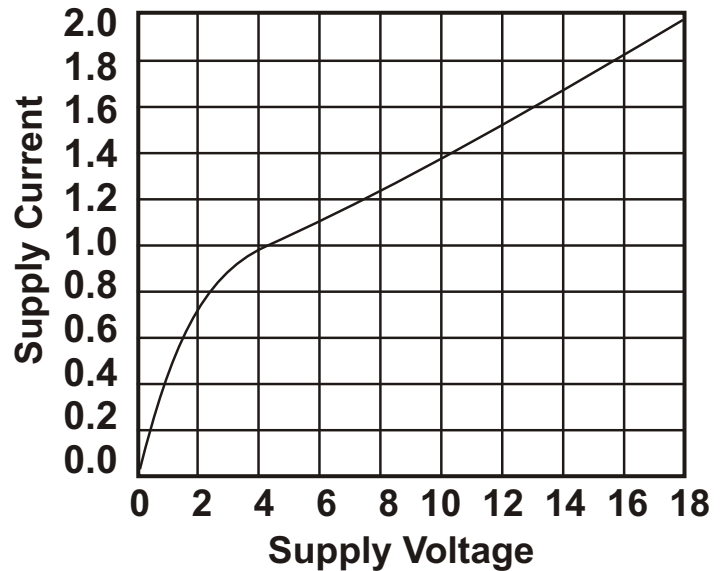
MONOPLEX SYSTEM

GEN-SET CONTROLLER 2

SERVICE MANUAL

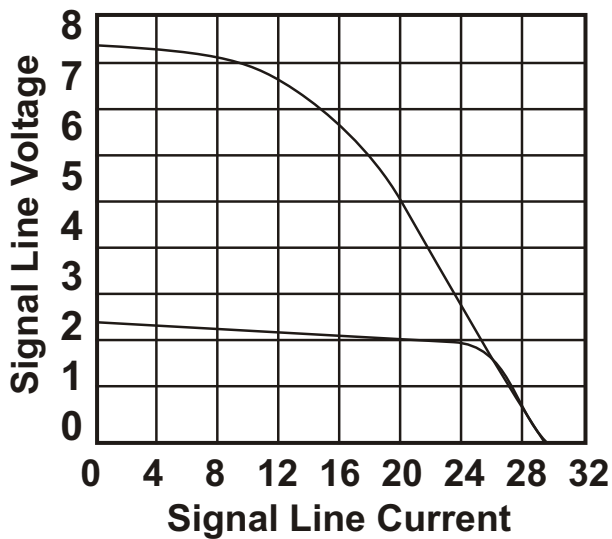
TYPICAL PERFORMANCE CHARACTERISTICS (Characteristics measured at 25 degrees C)

Supply Current vs. Supply Voltage



Supply current draw measured with no load. Signal line voltage measured with supply voltage set at 13.0 volts, no load on switch line.

**Supply Line Voltage vs. Current
ON and OFF**



Gen-Set Controller II has been designed to operate generators that use remote start/stop switches that are SPST, center off types. It has two independent sets of contacts that are connected together to a common line. These contacts “float” in the controller and therefore can be in any configuration needed by the gen-set. It will operate all the gen sets that a Gen-Set 1 controller is used on and others that do not use a common ground connection.

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GEN-SET CONTROLLER 2

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The controller switching function operated by sensing the voltage of the control line to ground at the unit. The voltage of this line must fall below the low voltage threshold of 1.1 volts, when a switch is pressed and to above the high threshold of 1.4 volts when the switches are released. If the ground wire that the remote switch is returned to, has sufficient drop due to other loads, it may not drop the voltage below the 1.1 volt threshold and cause problems. The voltage of the sense line with the switch depressed, must be measured between the sense line and its ground, at the controller.

ADVANTAGES

Allows multi-point starting and stopping with a single wire

Gen-Set RUNNING signal available on the same single wire

Uses simple, single pole momentary switches

Simplifies wiring

Can be interfaced with hour meter

FEATURES

Simple, single button operation

“Touch and Let Go” to stop

Wide temperature range -40°C to +85° C (-40° to + 185°F)

Wide operation voltage range, 10 to 16 volts

Low controller current draw, less than 2 milliamps

Built-in, supply line spike protection

Reverse polarity protection

Generator model selectable by inter-connect cable

MAXIMUM RATINGS

Supply Voltage

+18 volts DC

Spike Protection

+150 volts for 100 micro-seconds
+25 volts for 0.25 seconds
-150 volts

Operating Temperature

-40°C to +85° C (-40° to + 185°F)

Storage Temperature

-65°C to +125° C (-85° to + 257°F)

Maximum Current Carrying

10 Amps, each contact

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