CG series

CMOS IC Time Delay Relay

- Repeatability to .05%
- Choice of timing modes
  - – Delay on operate
  - – Delay on release
  - – Interval on
- Knob adjustable
- 10A output relay with DPDT contacts
- Various models time from 0.5 sec. to 100 min.



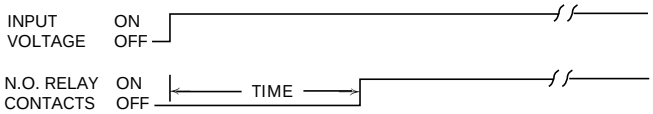
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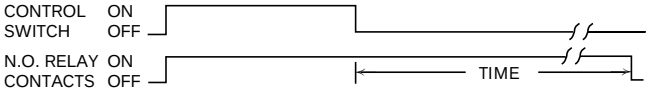
Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Timing Modes

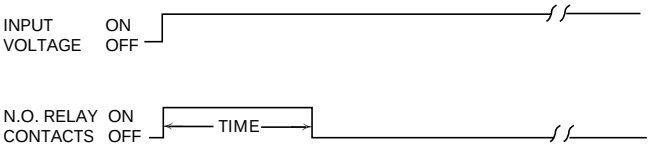
Delay on operate – Delay period begins when input voltage is applied. At the end of the delay period, the relay will operate and will not release until input voltage is removed. Reset occurs when input voltage is reapplied.



Delay on release – Input voltage must be applied continuously to operate the internal relay. When the control switch is closed, the relay energizes. When the control switch is opened, timing begins. When timing is complete, the relay will de-energize. Time may be reset to zero during timing by closing the control switch.



Interval on – The relay energizes and timing begins when input voltage is applied. At the end of the time delay period the relay will de-energize. Reset is accomplished by removing, then reapplying, the input voltage.



Timing Specifications

Timing Ranges: From 0.5 to 5.0 sec. through 10 to 100 min.
Timing Adjustment: Knob adjustable.
Tolerance (for AC units add ±1/2 cycle 60 Hz.):
Knob Adj. Types:–0, +10% of max. specified at high end of timing range; +0, –10% of min. specified at low end.
Delta Time (for AC units add ±1 cycle 60 Hz.): ±2%, typ.; ±5%, max.
Repeatability (including first cycle of operation):
AC: ±0.1%, typ.; ±0.5%, max.; but not less than ±16 ms.
DC: ±0.05% typ.; ±0.1% max.; but not less than ±3 ms.
Release Time: 30 ms, typ.; 45 ms, max.
Recycle Time: **AC:** 40 ms, typ.; 60 ms, max.
DC: 30 ms, typ.; 45 ms, max.

Contact Data @ 25°C

Arrangements: 2 Form C (DPDT).
Material: Silver-cadmium oxide alloy.
Rating: 10A @ 30VDC or 277VAC, resistive; 1/2 HP @ 250VAC; 1/3 HP @ 120VAC.
Expected Mechanical Life: 10 million operations.
Expected Electrical Life: 100,000 operations, min., at rated load.

Initial Dielectric Strength

Between Open Contacts: 500V rms, 60 Hz.
Between All Other Conductors: 500V rms, 60 Hz.

Input Data @ 25°C

Voltage: 120VAC and 24VDC.
Power Requirement: **AC Types:** Typically less than 3 VA.
DC Types: Typically less than 3 W.
Transient Protection: Yes.
Reverse Voltage Protection: Yes.

Input Voltages & Limits @25°C

Voltage Type	Nominal Voltage	Minimum Voltage	Maximum Voltage
AC	120	105	130
DC	24	20	32

Note: DC voltage must be filtered (5% p-p ripple max. at nom. voltage).
AC models will operate on 50 or 60 Hz.

Environmental Data

Temperature Range: **Storage:** -40°C to +85°C.
Operating: -10°C to +55°C.

Mechanical Data

Termination: 8- or 11-pin octal style plug.
Enclosure: Yellow plastic case. Knob adjustable types have dial scale for reference only.
Sockets: Models with 8-pin base fit either 27E122 or 27E891 (snap-on) screw terminal sockets. 11-pin types fit either 27E123 or 27E892 (snap-on) screw terminal sockets.
Weight: 8 oz. (227g) approximately.

Ordering Information – Authorized distributors are more likely to stock boldface items listed below.

Delay on Operate Models

Voltage	Time	Adjustment	Wiring Dia.	Part Number
120VAC	0.5 to 5 Min.	Knob	1	CGB-38-70005M
	1 to 10 Min.			**CGB-38-70010M**
	5 to 50 Min.			**CGB-38-70050M**
	10 to 100 Min.			CGB-38-70100M
24VDC	5 to 50 Min.	Knob	1	CGD-38-30050M

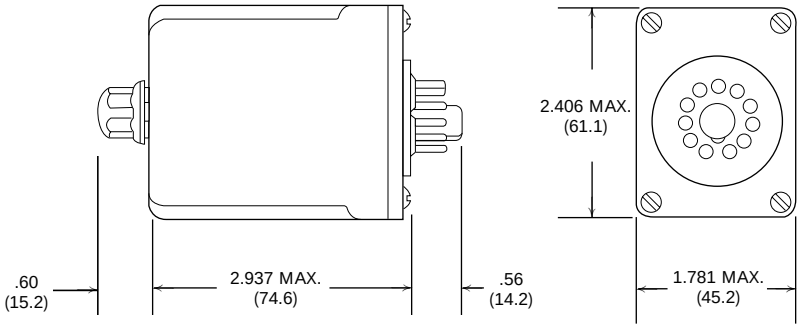
Delay on Release Models

Voltage	Time	Adjustment	Wiring Dia.	Part Number
120VAC	1 to 10 Min.	Knob	2	**CGB-38-78010M**
	5 to 50 Min.			**CGB-38-78050M**

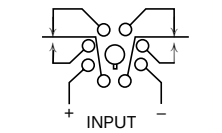
Interval on Models

Voltage	Time	Adjustment	Wiring Dia.	Part Number
120VAC	0.5 to 5 Sec.	Knob	1	CGB-38-79005S
	1 to 10 Min.			**CGB-38-79010M**
24VDC	1 to 10 Min.	Knob	1	**CGD-38-39010M**

Outline Dimensions

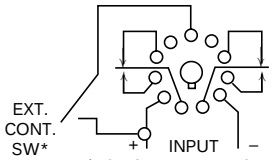


Wiring Diagrams – Bottom Views (pins numbered clockwise from keyway)



(DC POLARITY INDICATED)

Fig.1
8 Pin



(DC POLARITY INDICATED)

Fig.2
11 Pin

* If control switch is closed when power is applied, relay will immediately energize. A 50 millisecond minimum switch closure is required. IMPORTANT: a dry circuit switch is recommemded. A "dry circuit" switch is one rated to reliably switch currents of less than 50mA. Use of a switch rated for other than dry circuit may result in failure of the time delay relay to function properly.
** **Note:** input polarity for DC operation. For most reliable operation on AC, connect high side to "+" and low side to "–".