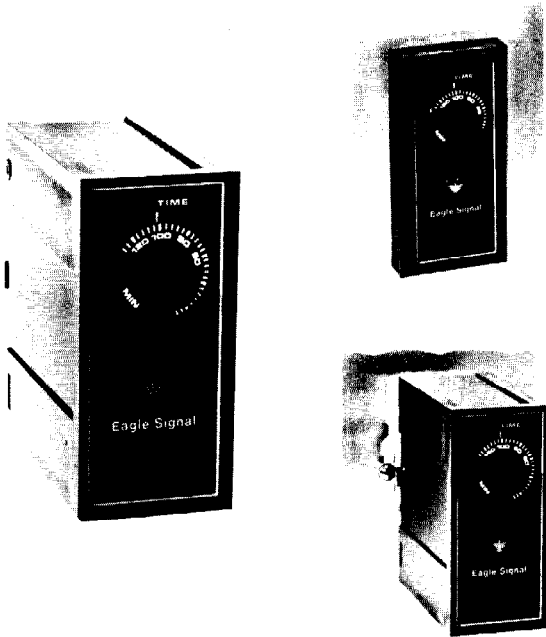


**DG100 MINIFLEX® SERIES
SOLID-STATE TIMER**

SPECIFICATIONS



The DG100 is a solid-state timer housed in a 1/8 DIN, molded NORYL® case. The timer uses CMOS integrated circuits for the timing function. The DG100 Series Timer is available in 16 time ranges from 3.5 seconds to 30 hours. Time is set with a knob referenced to a graduated scale. A pilot light on the front of the unit indicates when the unit is timing.

All connections to the DG100 Series Timer are made through a standard square base relay socket. Accessories are available to convert the standard surface mounted unit into a panel mounted configuration, including a version with plug-in capability.

The standard unit functions as an on-delay timer in a sustained start mode. Outputs are controlled by a single relay with an isolated double pole - double throw relay contact. Timer operation can be configured into various other forms not available with many timers of this class. Factory assembly options allow the timer to be ordered as: An interval output timer with momentary start; a repeat cycle timer with a pulse output; or, a repeat cycle timer with equal ON and OFF periods. These features are more fully described in OPERATIONAL MODES.

OPERATION

The timing base for the DG100 Series Timer is generated by an internal oscillator set by a precision capacitor and a dial adjustable potentiometer. This technology allows accurate control over long time ranges.

The unit times as long as power is applied to the control input terminal. The output contacts change state at the completion of the timing period. The unit resets when power is removed from the control input. Specific status details are found in the operational mode section of the product bulletin.

Time Ranges

CATALOG SYMBOL	DIAL RANGE	MINIMUM SETTING	CATALOG SYMBOL	DIAL RANGE	MINIMUM SETTING
01	3.5 sec.	.35 sec.	09	15 min.	1.5 min.
02	7 sec.	.7 sec.	10	30 min.	3.0 min.
03	15 sec.	1.5 sec.	11	60 min.	6.0 min.
04	30 sec.	3.0 sec.	12	120 min.	12.0 min.
05	60 sec.	6.0 sec.	13	4 hr.	.4 hr.
06	120 sec.	12.0 sec.	14	8 hr.	.8 hr.
07	4 min.	.4 min.	15	15 hr.	1.5 hr.
08	8 min.	.8 min.	16	30 hr.	3.0 hr.

Setting Accuracy

Within $\pm 10\%$ of Maximum Range

Repeatability (Constant Voltage & Temperature)

$\pm .1\%$ of setting or 25 ms, whichever is larger

Repeatability (Voltage & Temperature Variation)

Variable Voltage $\pm 1\%$ of setting

Variable Temperature $\pm 2\%$ of setting

Variable Voltage and Temperature $\pm 3\%$ of setting

Reset Time

50 ms

Cycle Progress

Pilot light during timing

Voltage/Frequency

120 VAC (+10 -15%) 50/60 Hz or 120 VDC (+10 -15%)

240 VAC (+10 -15%) 50/60 Hz or 240 VDC (+10 -15%)

24 VAC (+10 -15%) 50/60 Hz or 24 VDC (+10 -15%)

Burden

120 VAC or DC

240 VAC or DC

24 VAC or DC

OFF Time

.8 VA Max.

1.8 VA Max.

1.5 VA Max.

ON Time

4.8 VA Max.

4.8 VA Max.

2.9 VA Max.

Output Rating

Relay - 10 amp steady state, 120 VAC

Mechanical Lifetime - Over 20 million operations

Electrical Lifetime - Contingent on load characteristics

Power Interruption

Line voltage interruptions of 20 ms or less will not reset unit

Power On Response

30 ms Max. after application of line voltage to pins A and B.

Operating Temperature

0° - 60° C (+32° - +140° F)

Transient Voltage Immunity

Unaffected by 50 microseconds, 600 V peak transients superimposed on the line input

Vibration

Unaffected by 2.5G sinusoidal vibration magnitudes in both directions of three perpendicular mounting axes imposed from 10 to 1000 Hz

Laboratory Testing

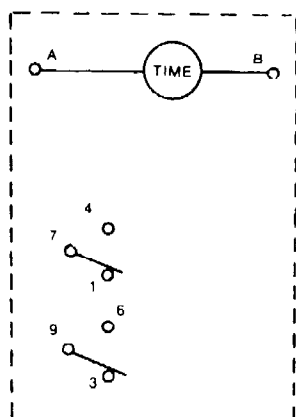
U.L. Recognition E96337

C.S.A. Certification L26861

F.M. Approved J10C8A4.AF



DG100 TERMINAL ASSIGNMENTS



OPERATIONAL MODES

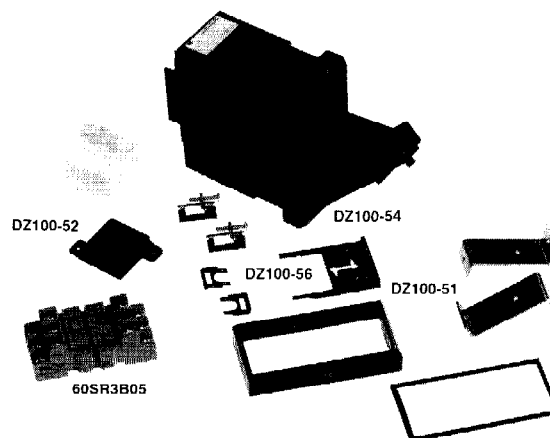
Operation of the DG100 Series Timer is determined by the selected mode of operation. Three factory assembly options are available.

ON DELAY - The unit starts timing when voltage is applied to terminals A and B. When the dial setting is reached, the output relay energizes and remains in the energized state as long as voltage is applied to terminals A and B. Removal of voltage from terminals A and B resets the unit.

INTERVAL - The unit starts timing with the output relay in the energized state when voltage is applied to terminals A and B. When the dial setting is reached, the output relay de-energizes and remains in that state until voltage is re-applied to terminals A and B. Removal of voltage from terminals A and B resets the unit.

OO[X] REPEAT CYCLE PULSE OUTPUT - The unit starts timing when voltage is applied to terminals A and B. The output relay is de-energized during timing. When the dial setting is reached, the output is energized for 200ms typical. After the pulse, the unit starts timing for the next cycle. The cycle continues until voltage is removed from terminals A and B.

ACCESSORIES



DZ100-51 BEZEL KIT for panel mounting. Kit includes bezel, bezel gasket, brackets and mounting hardware.

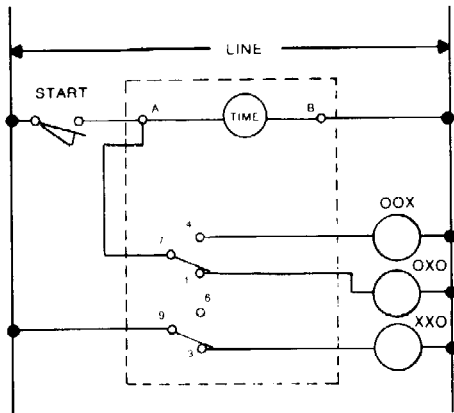
DZ100-52 STRAIN RELIEF KIT provides cable connection to panel mounted unit. Includes H11496 strain relief and 4270-0621 socket and hardware.

DZ100-54 PLUG-IN HOUSING for panel mounting units with plug-in convenience. Kit includes housing and mounting brackets.

DZ100-56 LATCH AND LATCH RELEASE KIT for surface mounting. Kit includes latch, spacer, latch release and mounting hardware (Use with 60SR3B05 Relay Socket).

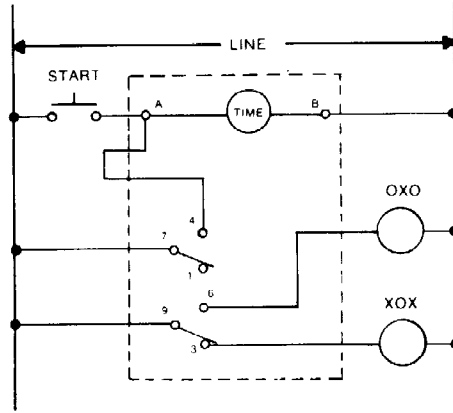
60SR3B05 SQUARE BASE RELAY SOCKET

WIRING DIAGRAMS



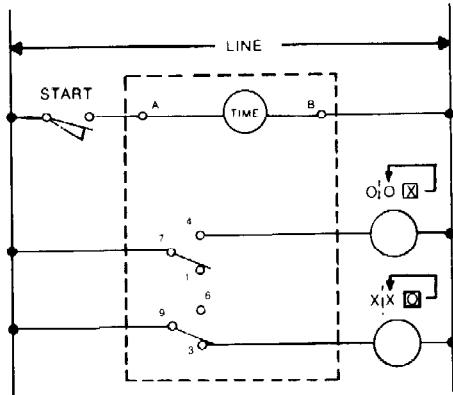
"00" FEATURE

Close switch to start timing; open to reset. Relay contacts provide delay output (OOX, XXO).



"02" FEATURE

Interval Timing — One Shot. Momentary or Maintained start switch. Close switch to start timing. Resets automatically using momentary start. Relay contacts provide interval sequence (OXO, XO). Contacts 4-7 must be wired as shown for timer control.

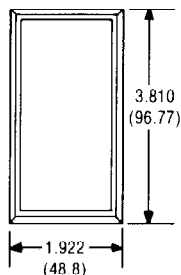
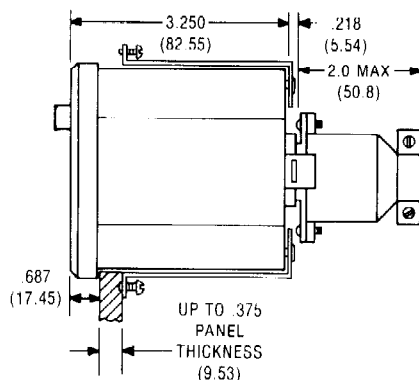


"03" FEATURE

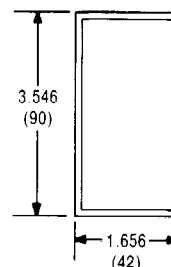
Repeat Cycle Mode - Pulse Output. Output contacts transfer for approximately 200ms at the end of each timing period. Timing cycles continue as long as start switch is closed. A dashed line separates the output status during RESET from the status during TIMING.

MOUNTING DIMENSIONS

Panel Mount

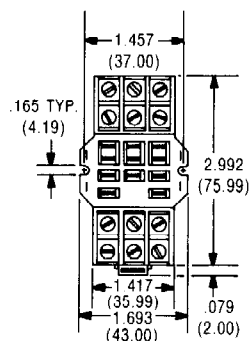
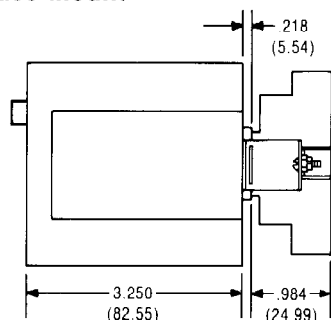


BEZEL

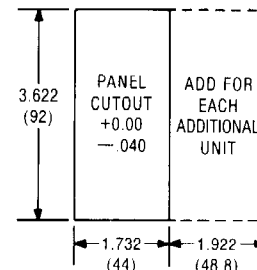


FRONT DIMENSIONS

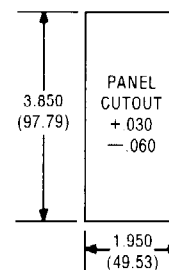
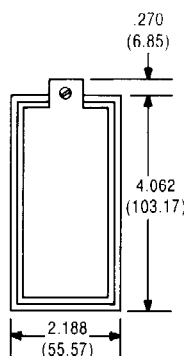
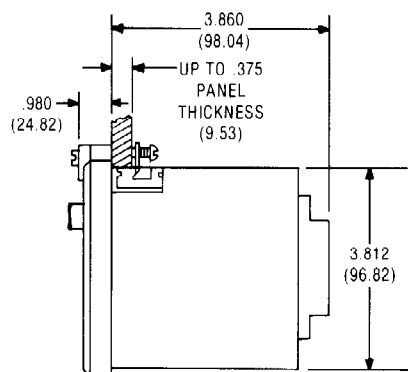
Surface Mount



RELAY SOCKET

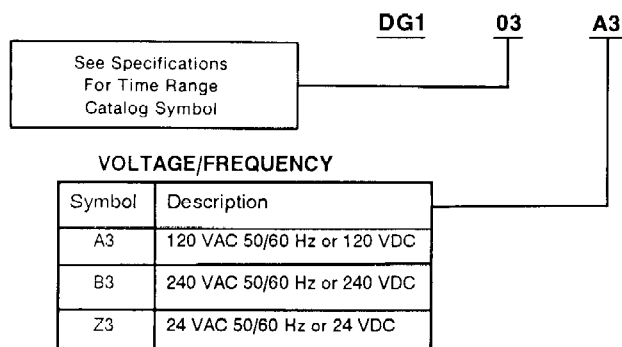


Plug-In Mount



NOTE: PANELS THICKER THAN .140" REQUIRE ENLARGEMENT OF CORNERS TO ALLOW POSITIONING OF CORNER MOUNTING BRACKETS.

ORDERING INFORMATION



FEATURES

Symbol	Description
(Blank)	Standard, On Delay, DPDT Relay Output
02	Interval Timing (Momentary start)

Dynapar, Veeder Root, and Eagle Signal Brands:

Sales, Repair, and Application Support:

1675 Delany Rd.

Gurnee, IL. 60031

847-662-4150 Sales/Order Entry Fax

847-782-5277 Applications Support Fax

800-873-8731 Sales/Order Entry

800-234-8731 Applications Support

NorthStar Brand:

Sales, Repair, and Application Support:

1675 Delany Rd.

Gurnee, IL. 60031

847-782-5288 Sales/Order Entry Fax

847-782-5277 Applications Support Fax

800-326-6216 Sales/Order Entry

800-326-6216 Applications Support

Partlow, West, Rustrak, and LFE Brands:

Sales, Repair, and Application Support:

1675 Delany Rd.

Gurnee, IL. 60031

847-662-4150 Sales/Order Entry Fax

847-782-5277 Applications Support Fax

800-873-8731 Sales/Order Entry

800-866-6659 Applications Support

Please disregard all phone numbers and addresses in this manual. The phone numbers and address on this page are the correct phone number and addresses to use for sales, repair, and application support.