DG56T Series
Automotive Timer Relays

- Mini-ISO Miniature delay on or delay off timer
- Industry standard terminal layout
- Made using UL94-V0 approved plastics
- Engine ECU shut down timing
- Heated rear windows, sunroof motors, alarms
- High continuous DC current capacity

RoHS Compliant ✓

Contacts

Contact arrangement	DC1	SPST-NO, SPDT
Contact material		$AgSnO_2$
Rated current	DC1	30A 13.5VDC / 20A 24VDC
Max. switching voltage		145VDC
Max. breaking current		30A
Max. switching power		840W
Initial contact resistance		≤ 100mΩ at 0.1A, 6VDC

Coil

Nominal coil voltage	DC	12V, 24V
Rated power consumption		>1W

Insulation

Insulation resistance		>100 MΩ at 500VDC, 50%RH, 25°C
Dielectric strength	coil to contact	750Vrms, 1min
	open contacts	500Vrms, 1min

General Data

Timer function		Delay-on, Delay-off on Signal - see Fig. 1
Electrical life at full rated load	Ops	1×10^5
Mechanical life	Ops	1×10^6

Environmental

Environmental protection		IP54 or IP67
Ambient temperature	operating	-30 to +85°C
	storage	-40 to +125°C
Mechanical shock		20g (200m/s²)
Vibration resistance		5g (49m/s²), 10Hz-500Hz
Relative humidity		20% ~ 90%
Dimensions	L x W x H	30 x 30 x 30mm (excluding terminals)
Weight	approx.	34g

Ordering Code

D G 5 6 T - 7 0 1 1 - 7 6 - 1 0 1 2 - D 0 0 2 - Y

Series

Coil code:
See table 1

Contact material
70: $AgSnO_2$

Contact configuration
11: SPDT function D only
21: SPST-NO

Mounting & terminations
36: IP67 Plug in, 6.35mm blades
76: IP54 Plug in, 6.35mm blades

Timer function [1]
D: Delay - ON
F: Delay - OFF - On signal (SPST-NO only)

Time range (in seconds)
001 to 999 (e.g. 002 = 2 seconds)

Alternative terminal configuration (function D only)
Blank: standard configuration
Y: alternate configuration (fig. 2)

[1] Functionality

Delay on: 12VDC (or 24VDC)[2] is applied to terminals 85 & 86. After the preset time interval has expired, the contacts change state.

Delay off: 12VDC (or 24VDC)[2] is applied to terminals 2 & 4 constantly. Applying 12VDC (or 24VDC)[2] to terminal 1 causes the contact to close immediately. Removing the voltage applied to terminal 1 starts the preset time period. After the time period has elapsed, the contacts open.

([2] ensure the applied voltage is the same as the coil voltage (table 1) or damage may occur.)

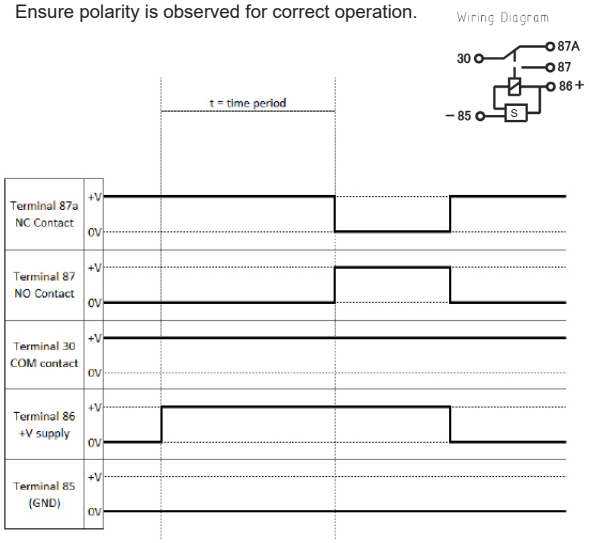
DC Coil Data — Table 1

Coil code	Nominal voltage (VDC)	Operating voltage range (VDC)	Must operate voltage max. (VDC@ 20°C)	Must release voltage min. (VDC)
1012	12	9 ~ 15	9.0	1.2
1024	24	20 ~ 28	20.0	2.4

Timer Functions — Fig 1

SPDT, Function D

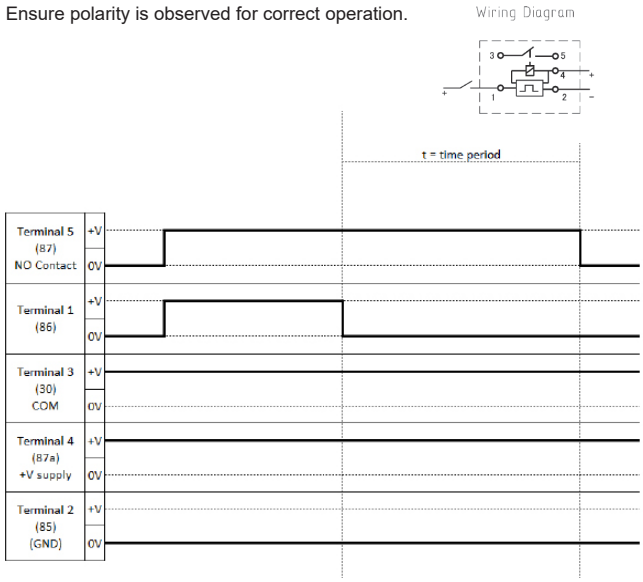
Ensure polarity is observed for correct operation.



NB: Once the contacts have changed state, they will stay in the changed state so long as supply is connected to Terminals 85 & 86. Contacts will revert back to initial state immediately supply is removed from Terminals 85 & 86.

SPST-NO, Function F

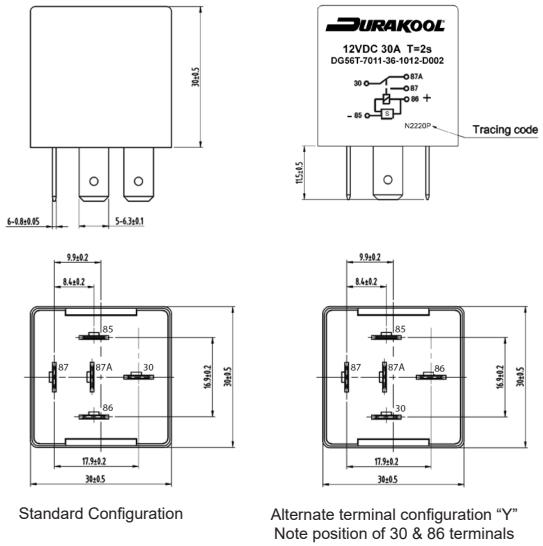
Ensure polarity is observed for correct operation.



NB: If, at anytime, the supply is removed from Terminals 2 & 4, the contacts will open.

Dimensions — Fig 2

SPDT, Function D



SPST-NO, Function F