DG57T 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		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 voltage	DC	12V, 24V
Rated power consumption		<0.9W
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.2
Electrical life at full rated load	ops.	$1x10^5$
Mechanical life	ops.	1×10^6
Environmental		
Environmental protection		IP54, IP67
Ambient temperature	operating	-30 to 85°C
	storage	-40 to +125°C
Mechanical shock	functional	20g, ($200m/s^2$)
Vibration resistance	functional	5g ($49m/s^2$), 10Hz-500Hz
Dimensions	L x W x H	26.0 x 26.0 x 25.0mm
Weight	approx.	34g

Ordering code

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

Series

Contact material
70: $AgSnO_2$

Contact arrangement
11: SPDT Function D only
12: SPST-NO

Environmental protection
3: IP67
7: IP54

Connection Mode
6: Flat blades, Plug in, 6.35mm blades

Coil code:
See table 1

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 (fig. 1)
Y: Alternate configuration (fig. 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.)

Notes:
1: All parameters, unless otherwise specified, are measured at ambient temperature of 23°C.

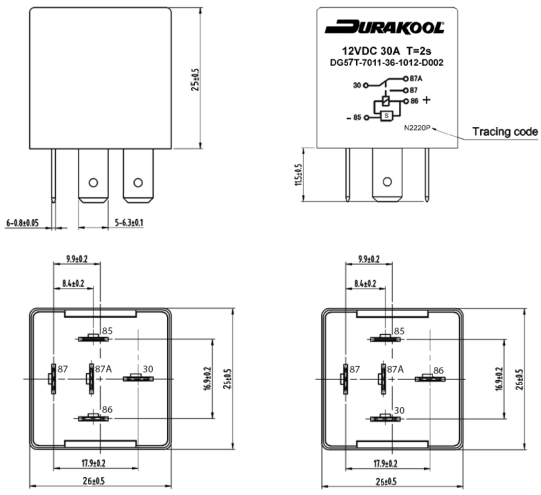
Coil Data — table 1

Coil code	Nominal coil voltage (V DC)	Coil resistance (Ω) ±10%	Must operate voltage max (V DC)	Allowable voltage* (V DC)	Must release voltage min. (V DC)	Optional parallel resistor value
1006	6.0	32.0	3.6	10.4	0.6	170.0
1012	12.0	123.0	7.2	20.4	1.2	680.0
1024	24.0	483.0	14.4	40.4	2.4	2720.0

* At ambient temperature of 85°C, maximum allowable voltage should be reduced by 28%

Dimensions (mm) — fig. 1

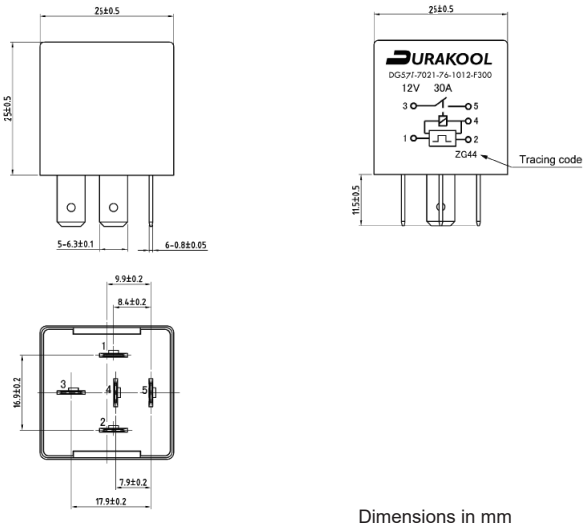
SPDT, Function D



Standard Configuration

Alternate terminal configuration "Y"
Note position of 30 & 86 terminals

SPST-NO, Function F

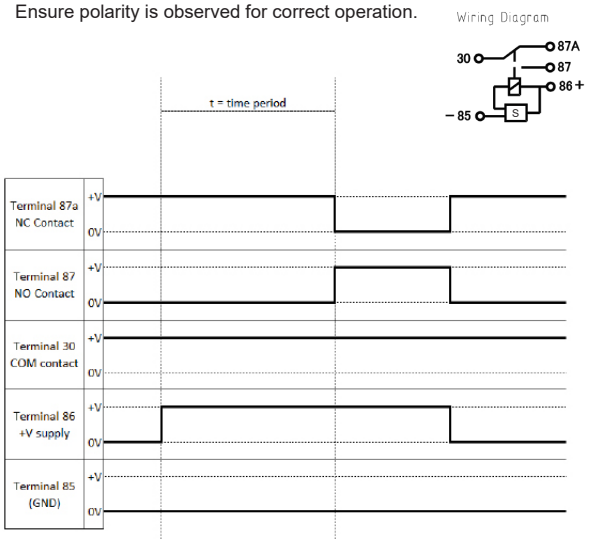


Dimensions in mm

Timer Functions — fig. 2

SPDT, Function D

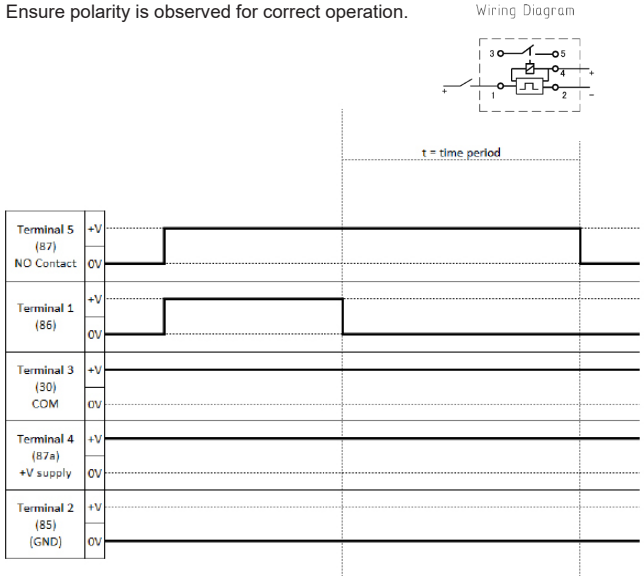
Ensure polarity is observed for correct operation.



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.