DURAKOOL
A WT/AEC Brand

DG56A Series
automotive relays



- General purpose automotive or industrial relays.
- Ideal for DC motor control or lights, vehicle alarms, heated windows, sunroof motors.
- Sn plated, copper terminals for high continuous DC current capacity.
- Industry standard Mini-ISO terminals.
- PCB versions available.

ROHS Compliant ✓

Contacts

Contact arrangement		SPST-NO (1 Form A), SPDT (1 Form C),			
		SPST-NC (1 Form B), SPST-DM (1 Form U)			
Contact material		$AgSnO_2$			
Max. switching voltage	DC	75VDC -current dependent. >24VDC Contact factory			
Contact rating (resistive)		SPST-NO	SPST-NC	SPDT	SPST-DM
		40A (14VDC), 20A (24VDC)	30A (14VDC), 20A (24VDC)	40A / 30A (14VDC), 20A / 15A (24VDC)	2x20A (14VDC), 2x15A (24VDC)
Max. switching current (inrush)	make	120A	45A	120A / 45A	40A
Rated power		630W			
Min. switching current		100mA/6VDC			
Initial contact resistance		≤30mΩ, max. at 0.1A/6VDC (IEC 61810-7 / 4.12)			

Coil

Rated voltage	DC	6V, 12V, 24V
Operating range of supply voltage		See coil table 1
Rated power consumption		1.6W (1.8W with resistor)

Insulation

Insulation resistance		100MΩ at 500VDC, 50%RH, 25°C (IEC60255-5 / Item 7)
Dielectric strength	coil to contact	750Vrms / 1 min (IEC 60255-5 Item 6)
	contact to contact	500Vrms / 1 min (IEC 60255-5 Item 6)

General Data

Operating time	ms	≤7
Release time	ms	≤5
Electrical life	ops.	1 x 10^5 (IEC61810-7 / Item 4.30)
Mechanical life	ops.	1 x 10^7 (IEC61810-7 / Item 4.31)

Environmental

Environmental protection		IP54 Dust cover, IP67 Fully sealed (optional)
Ambient temperature	operating	-40 to 125°C (Derate above 85°C - consult factory)
	storage	-40 to 155°C
Shock resistance	functional	98m/s²(10g)
	destructive	196m/s²(20g)
Vibration resistance		1.5mm, 10 to 40Hz
Dimensions	L x W x H	26.5 x 26.5 x 24.5mm (excluding terminals)
Weight	approx.	31 - 36g depending on style and mounting

Ordering Code

D G 5 6 A - 7 0 2 1 - 9 6 - 1 0 2 4 - M 1 D R

Series

Contact material
70: $AgSnO_2$

Contact configuration
11: SPDT (1C/O, 1 Form C)
21: SPST-NO (1N/O, 1 Form A)
31: SPST-NC (1N/C, 1 Form B)
8U: SPST-DM (1 Form U)

Environmental protection
3: Sealed cover IP67
7: Dust cover IP54
9: Dust cover with plastic mounting bracket unless M1 or S1 specified

Coil code:
See table 1

Mounting & terminations
5: For PCB
6: Flat blades
D: Double 87 flat blades

Options 1
Blank: No options
M1: Metal bracket (with cover type 3 or 9)
S1: Metal bracket & skirt (with cover 3 or 9)

Options 2
Blank: No options
R: Parallel resistor
D: Parallel diode +85, -86
DR: Parallel diode -85, +86 (standard for diode)
DD: Double diodes +86 (see fig. 2 for detail)

Specifications are subject to change without notice. E&OE.

DC Coil Data

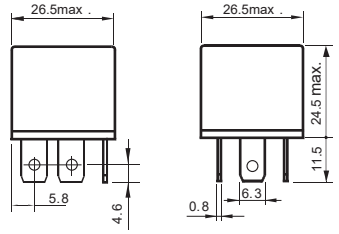
Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ± 10%	Must operate voltage max. (VDC)	Maximum Allowable voltage (VDC)		Must release voltage min. (VDC)	Parallel Resistor (Ω) ± 5% (when fitted)
				23 °C	85 °C		
1006	6	22.5	3.9	10.1	7.6	0.6	180
1012	12	90	7.8	20.2	15.6	1.2	680
1024	24	360	15.6	40.5	31.5	2.4	2700

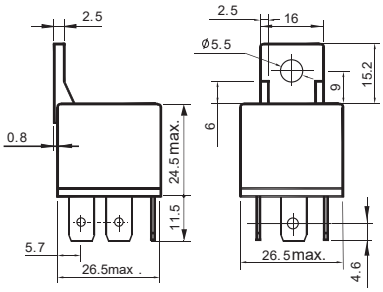
Dimensions mm

Fig. 1

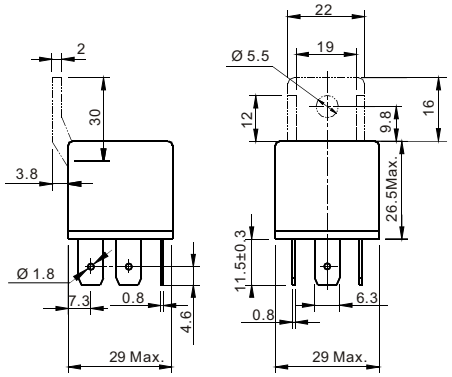
Plug-in



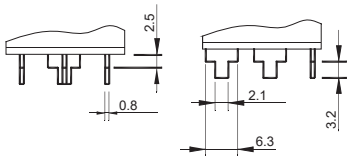
Plug-in with plastic bracket



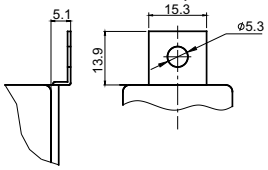
SPST-DM 1 Form U (with or without plastic bracket)



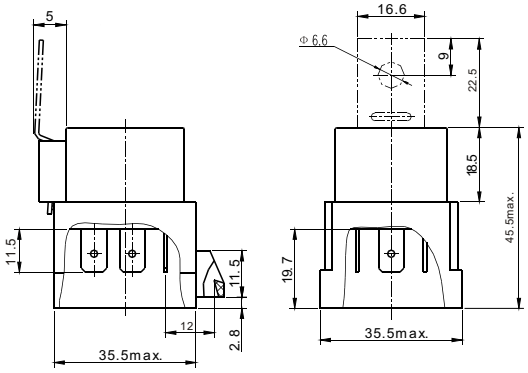
PCB terminals



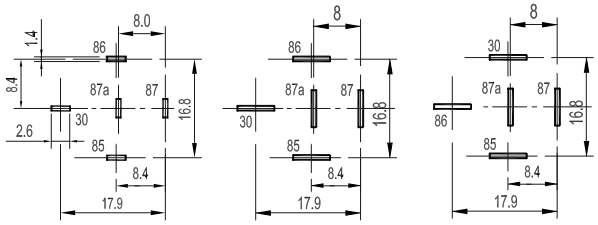
Metal bracket, Option M1



Plug-in with weather skirt and metal bracket, Option S1



Terminal layouts

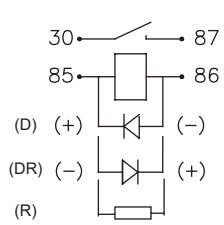


PCB type | Plug in type 1 | Plug in type 2

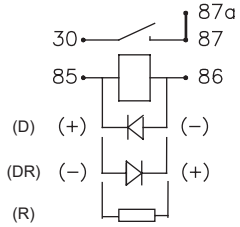
Notes:
Plug in type 1 standard.
Plug in type 2 to special order - consult factory. MOQ's will apply.

Connection diagrams

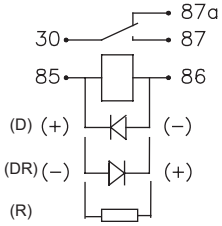
Fig. 2



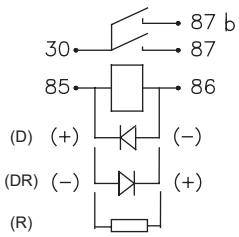
1 Form A



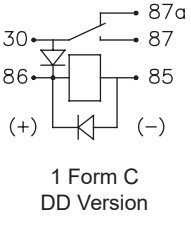
1 Form A
Double 87 Terminals



1 Form C



1 Form U
Plug-in Type 2
See above for terminal assignments & layout



1 Form C
DD Version

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