

- General purpose automotive or electric vehicle relays
- Up to 20A @ 80VDC switch capability (100K ops.)
- 40A continuous DC current capacity (at 23°C)
- Fits standard Mini-ISO relay sockets
- Made from UL94-V0 approved plastic
- Special terminal arrangement - "ordinary" Mini-ISO relay inserted in DG55M socket will be safe

ROHS
Compliant ✓

Contacts

Contact arrangement	SPST-NO (1 Form A)		
Contact material	AgSnO ₂		
Max. switching voltage	DC	110VDC - current dependent (see Fig. 2)	
Contact rating	12VDC	80VDC	
Max. continuous current*	SPST-NO	40A	20A
Max. switching current - make (inrush)*	SPST-NO	120A	120A
Max. switching current - break*	SPST-NO	60A	20A
Min. switching current	1A/5VDC		
* At ambient 23°C. At ambient 85°C, max. continuous current at 80VDC =8A			
Initial contact resistance	<100mΩ at 0.1A/6VDC		

Coil

Rated voltage	DC	12V (24V - consult factory)
Must release voltage	0.10U _N - see coil table 1 for more information.	
Operating range of supply voltage	See coil table 1	
Rated power consumption	2W	

Insulation

Insulation resistance	100MΩ at 500VDC, 50%RH, 25°C	
Dielectric strength	coil to contact	600Vrms / 1 min

General Data

Operate time	≤ 10msec	
Release time	≤ 12msec	
Electrical Life	ops.	1x10 ⁵ (20A@80VDC, 1sec ON/1sec OFF, resistive)
Mechanical life	ops.	1 x 10 ⁷

Environmental

Environmental protection	IP54 Dust cover	
Ambient temperature	operating	-40 to +85°C - Consult factory for above 85°C
	storage	-40 to +155°C
Shock resistance	destructive	196m/s ² (20g)
	functional	98m/s ² (10g)
Vibration resistance	10 to 40Hz DA 1.27mm; 40 - 70Hz:5g /	
	70-100Hz DA 0.5mm, 100 - 500Hz:5g	
Dimensions	L x W x H	25.9 x 25.9 x 24.9mm (excluding terminals)
Weight	approx.	34g approx.

Ordering Code

D G 5 5 M - 5 0 2 1 - 9 6 - 1 0 1 2 - M 1 - R															
Series				Coil code: See table 1											
Contact material															
50: AgSnO ₂															
Contact arrangement															
21: SPST-NO (1N/O, 1 Form A)															
Mounting & terminations IP54															
7: Dust cover															
9: Dust cover Bracket mount (option M1 only)															
Connection mode															
5: PCB pins															
6: Flat blades (6.35mm)															
Options 1															
Blank: No options															
M1: Metal bracket (Supplied fitted as standard. Consult factory for brackets supplied loose).															
Options 2															
Blank: No options															
R: Integral resistor															
D: Integral diode +85, -86															
DR: Integral diode -85, +86 (Standard)															
NB: This product contains a magnet.															

Coil Data

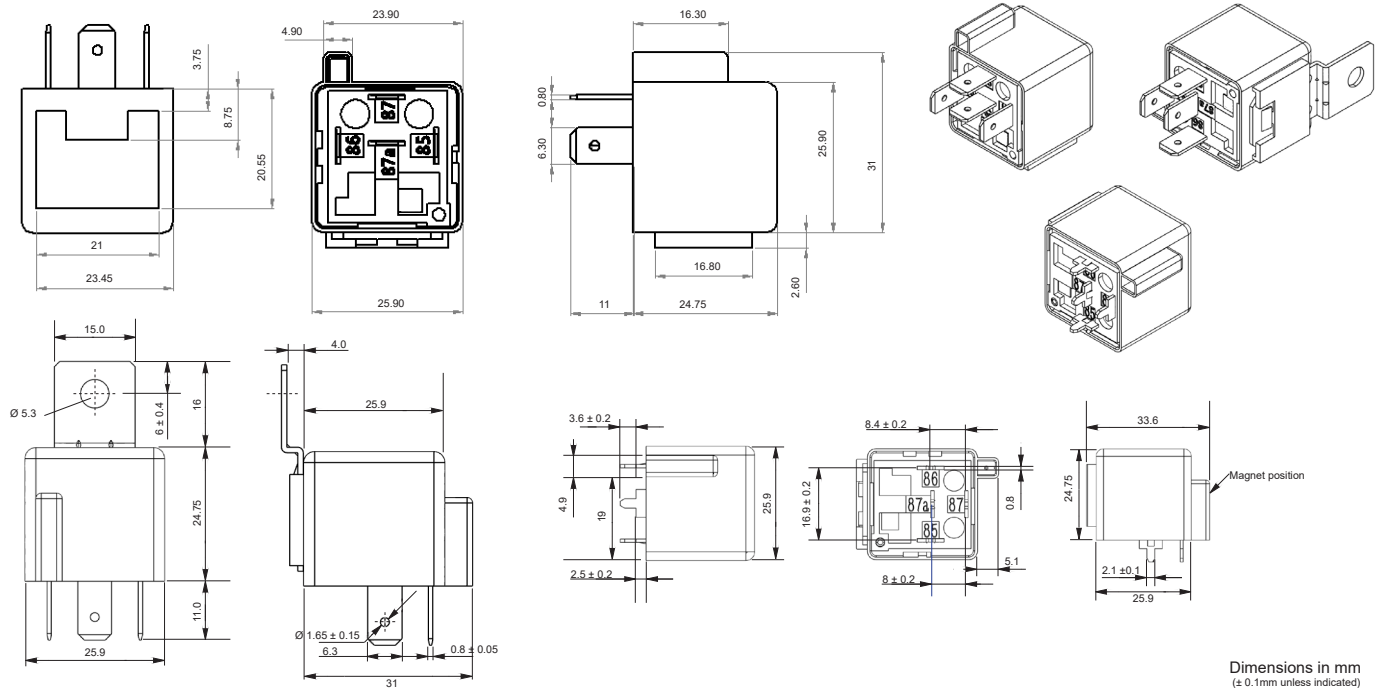
Table 1

Coil code	Nominal voltage (VDC)	Coil resistance (Ω) ± 10%	Must operate volt- age max. (VDC)	Must release voltage min. (VDC)	Max allowable voltage at 23°C (VDC)	Max allowable voltage at 85°C (VDC)
1012	12	72	7.2	1.2	18	14
1024	24	288	14.4	2.4	35	25.2
1048	48	1152	28.8	4.8	70	48

Coil insulation: Class H

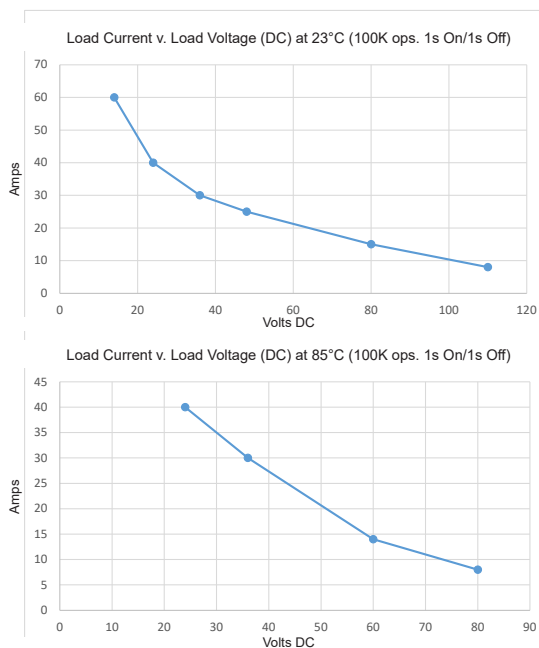
Dimensions

Fig 1



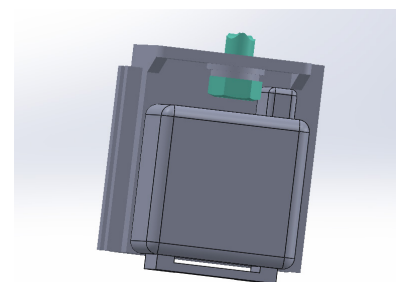
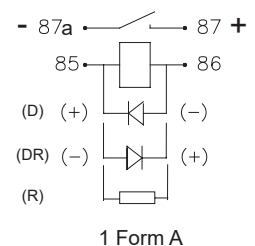
Dimensions in mm
($\pm 0.1\text{mm}$ unless indicated)

Fig. 2



Connection diagram

Important!
Please observe polarity when connecting the load to Terminals 87 and 87a. Incorrect polarity will lead to reduced life.



Top View showing fit on standard socket
(DZ85AB-5-WH2)