DG34
automotive/ industrial relays

- General purpose automotive or industrial relays
- High resistance to inrush current
- For pcb or chassis mounting
- Flat insert faston terminal options
- AC and DC coils
- High Current automotive optimized version available
- Recognitions, certificates, directives: RoHS,

Contacts

Contact number & arrangement		SPST-NO (1NO), SPST-NC (1NC), SPDT (1 C/O)
Contact material		AgSnOInO, AgCdO
Max. switching voltage		277VAC / 30VDC
Min. switching voltage	AC / DC	10V
Rated Load	AC1	7200VA
	DC1	30A 30V
Min. switching current		10mA
Max. inrush current		80A (SPST-NO), 50A/20A (SPDT)
Rated current		SPST-NO: 30A, SPST-NC: 15A / 277VAC, 10A / 30VDC, SPDT: 20A (NO), 15A (NC)
Max. breaking capacity	AC1	30A
Min. breaking capacity		1W
Resistance		< 50mΩ at 0.1A / 6VDC
Max. operating frequency		
at rated load	AC1	1200 cycles / hour
no load		10,000 cycles / hour

Coil

Rated voltage	AC	12... 220VAC 50/60Hz
	DC	5... 110VDC
Must release voltage		AC: ≥ 0.15U_n DC: ≥ 0.05U_n
Operating range of supply voltage		See Tables 1, 2, 3
Rated power consumption		AC: 2VA (approx.) DC: 1W std, 0.9W sensitive

Insulation

Insulation category	C250
Insulation rated voltage	250VAC
Dielectric strength	
coil - contact	AC Coils: 1500Vrms / 1min DC Coils: 2500Vrms / 1min
contact - contact	1500Vrms / 1 min
pole - pole	
Contact - coil distance	
clearance	3 mm
creepage	3 mm

General data

Operating time (typical value)	≤15msec
Release Time	≤15msec
Electrical Life	
resistive AC1	> 10^5
cos Ø	
Mechanical life	> 10^7
Motor Load	2hp (NO), 1hp (NC)
Dimensions (L x W x H)	various - see dimensional drawings
Weight	20...25g
Ambient Temperature	
storage	-55... + 130°C
operating	-55... + 85°C
Cover protection category	IP00, IP40, IP67 depending on version
Shock resistance	20g, 11ms
Vibration resistance	DA 1.5mm, 20-200Hz

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Coil Data - standard DC voltage version

Table 1

Coil code	Rated voltage V DC	Coil resistance ± 10% at 20ºC Ω	Must Operate Voltage Max VDC	Must Release Voltage Min VDC
1005	5	25	3.75	0.5
1006	6	36	4.50	0.6
1009	9	81	6.75	0.9
1012	12	144	9.00	1.2
1015	15	225	11.25	1.5
1018	18	324	13.50	1.8
1022	22	484	16.50	2.2
1024	24	576	18.00	2.4
1048	48	2304	36.00	4.8
1110	110	12100	82.50	11.0

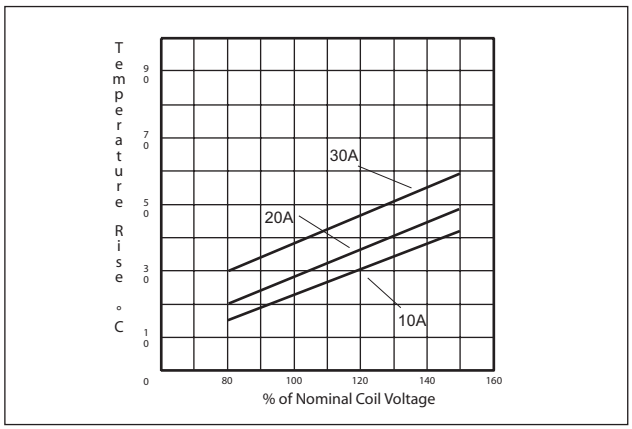
Coil Data - sensitive 0.9W DC voltage version

Table 2

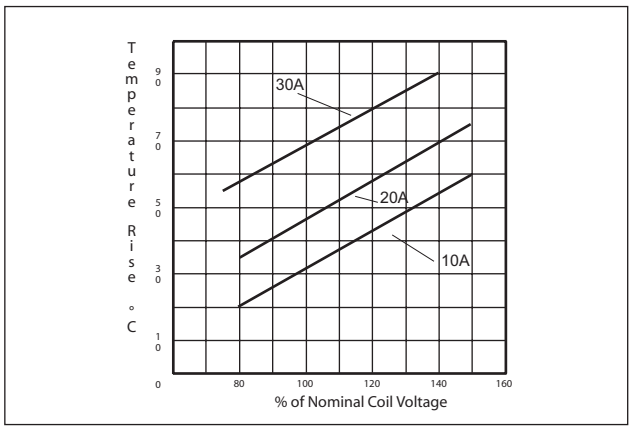
Coil code	Rated voltage V DC	Coil resistance ± 10% at 20ºC Ω	Must Operate Voltage Max VDC	Must Release Voltage Min VDC
S005	5	27	3.75	0.5
S006	6	40	4.50	0.6
S009	9	97	6.75	0.9
S012	**12**	**155**	**9.00**	**1.2**
S015	15	256	11.25	1.5
S018	18	380	13.50	1.8
S022	22	545	16.50	2.2
S024	**24**	**660**	**18.00**	**2.4**
S048	48	2560	36.00	4.8
S110	110	13450	82.50	11.0

Standard coil rated voltages marked with bold type, some types may be subject to special order quantities

Coil Temperature Rise - Open Type



Coil Temperature Rise - Covered type



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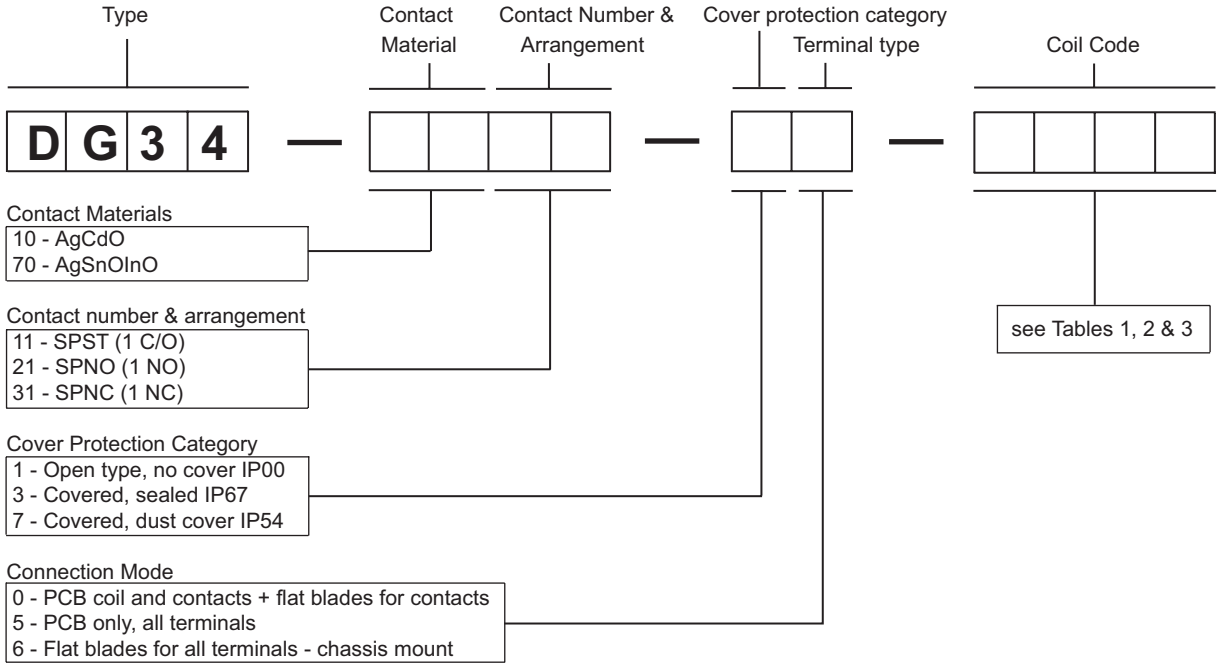
Coil Data - AC 50/60Hz voltage version

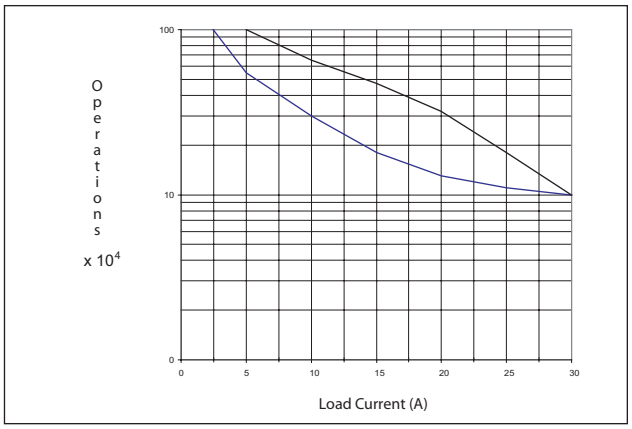
Table 3

Coil code	Rated voltage V DC	Coil resistance ± 10% at 20ºC Ω	Must Operate Voltage Max VDC	Must Release Voltage Min VDC
5012	5	26	10.2	1.8
5024	6	106	20.4	3.6
5110	9	2750	93.5	16.0
5220	12	11000	187.0	33.0

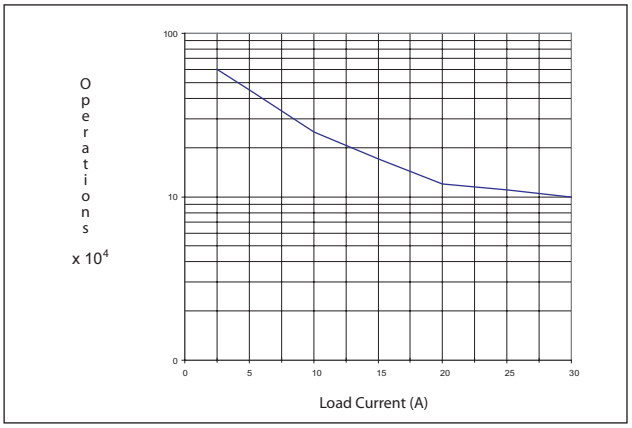
Ordering Codes



Life Expectancy - Open Type



Life Expectancy - Covered type



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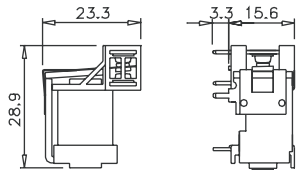
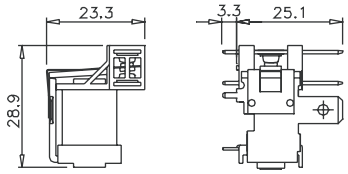
Dimensions

Dimensions in mm

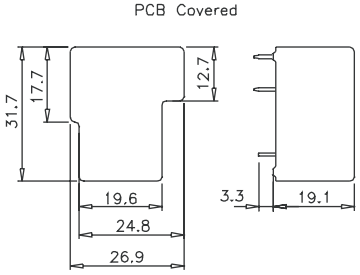
PCB Open



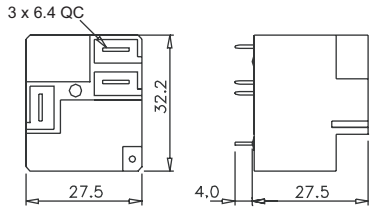
PCB + QC Open



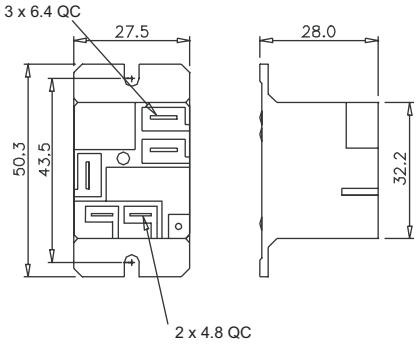
PCB Covered



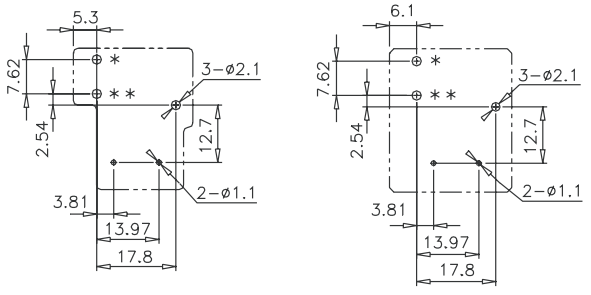
PCB + QC Covered



QCs for All Terminals

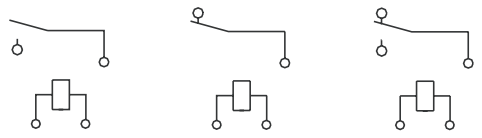


PCB Mounting Holes Dimensions



* mounting hole not needed for SPST-NO
** mounting hole not needed for SPST-NC

Wiring Diagrams



SPST-NO
1 C/O

SPST-NC
1 NO

SPDT
1 NC

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