G-relay

General purpose relay, 2 or 3 pole, 10 A

Features

- Compact plug-in design
- 2 or 3 C/O contacts
- Rated contact switching current 10 A
- Round and silver-plated pins for excellent connection in socket
- Transparent cover
- Standard mechanical indicator and lockable front test lever
- Surge suppression element optional
- Test push button (not latching) optional
- LED indicator optional
- Mounting sockets for 35 mm rail or wall
- Rail sockets with screw terminals or for PCB

Description

G08 and G11 relays are plug-in industrial relays for general applications. They have 2PDT (2 C/O) and 3PDT (3 C/O) contacts arrangement respectively.

The G08 and G11 relays are standard equipped with a mechanical “flag” and a one “push-to-test button/ latching” lever. The “push-to-test” button permits a momentary testing of the relay contacts. The “latching” lever allows the relay contacts to remain closed for longer testing periods until released back to normal.

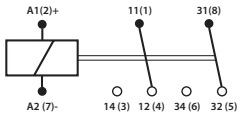
Optionall the G08 and G11 relays can be equiped with a LED position indicator which shows whether the relay is energized and the contacts have changed over and surge a surge suppressing diode or varistor which protects against voltage surges.

Application

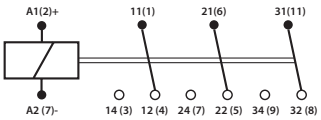
The G08 and G11 relays are mainly used in industrial and power automation systems, in signaling and protection systems and in other control and electric drives systems.

Connection diagram

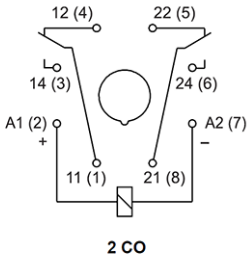
G08



G11



G08



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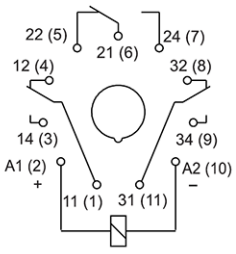
G11



3 CO

Compliancy

EN 60255
EN 60947
EN 60947-5-1
IEC 61810

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Manual test / latching button

The test button can be used in two ways:
1. Push-to-test button: When the test button is pushed, the contacts operate; when the test button is released the contacts return to their previous state.
2. Latching. When the test button is pushed and rotated, the contacts are latched in the operating state, and remain until the test button is rotated back to its former position.

Coil characteristics DC-versions

Operating time at nominal voltage (typical value)	
Pull-in time	18 ms
Release time	7 ms
Operating voltage range in %	0.8 - 1.1 Unom
Nominal power consumption	1.5 W
Must release voltage	0.1 Unom

Type	Rated voltage Un VDC	Coil resistance ±10 % at 20 °C Ω	Coil operating range VDC	
			min. (at 20°C)	max. (at 55°C)
D 012	12	110	9.6	13.2
D 024	24	430	19.2	26.4
D 048	48	1750	38.4	52.8
D 110	110	9200	88	121
D 220	220	37000	176	242

Other voltages on request

Coil characteristics AC-versions (50 Hz/60 Hz)

Operating time at nominal voltage (typical value)	
Pull-in time	12 ms
Release time	10 ms
Operating voltage range in %	0.8 - 1.1 Unom
Nominal power consumption	2.8 VA
Must release voltage	0.15 Unom

Type	Rated voltage Un VAC	Coil resistance ±15 % at 20 °C Ω	Coil operating range VAC	
			min. (at 20°C)	max. (at 55°C)
A 012	12	18.5	9.6	13.2
A 024	24	75	19.2	26.4
A 048	48	305	38.4	52.8
A 115	115	1840	92	126.5
A 230	230	7080	184	253

Other voltages on request

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Contact characteristics

Maximum inrush current	20 A
Maximum continuous current	10 A
Maximum switching voltage	250 VDC, 400 VAC
Minimum switching voltage/current AgNi	5 V / 5 mA
Material	AgNi
Contact resistance	≤100 mΩ

* AgNi/Au 0.2 µm or 5 µm on request

Performance characteristics

Electrical life		≥ 2 x 10^5
Mechanical life		≥ 2 x 10^7 cycles (Unpowered)
Dielectric strength	Pole-pole	2000 VAC
	Cont-coil	2500 VAC
	Contact clearance	1500 VAC
Insulation rated voltage		250 VAC
Max. operating frequency		At rated load 360 cycles/hour (AC1) No load 72000 cycles/hour

Mechanical characteristics

Dimensions (d x w x h)	35 x 35 x 54.4 m
Weight	83 g

Environmental characteristics

Storage temperature	-40 ºC…+70 ºC
Operating temperature	AC -40 ºC…+55 ºC DC -40 ºC…+60 ºC
Shock & vibrations	Shocks: 10 g Vibrations: 5 g, 10-150 Hz
Environment protection	EN 116000-3: RTI
Degree of protection	EN 60529: IP 20

Compliancy

EN 60255	Relay design and environmental conditions
EN 60947	Low voltage switch gear and control gear
EN 60947-5-1	Electromechanical control circuit devices and switching elements
IEC 61810	Electromechanical elementary relays
The relays meet the requirements of the RoHS directive	

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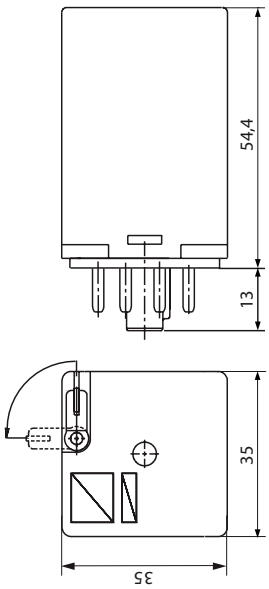
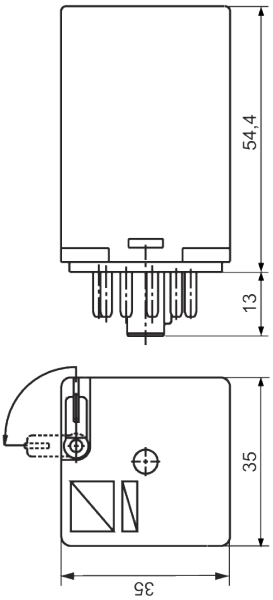
Dimensions (mm)

G08



G11



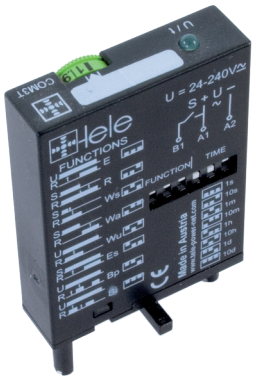
Options

Code	Description
L	LED

** Standard coil is 50 Hz, 60 Hz coil on request*

Timer module

COM- 3TP
Turns a general purpose G- relay into a multifunctional timer relay. Suitable for VG-8T and VG-11T sockets



Function and time setting by dip-switch for fine tuning.

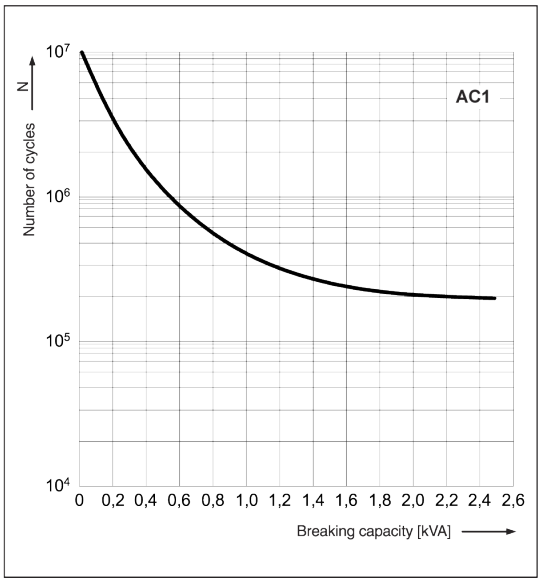
8 different functions

F	Delay - ON
R	Delay - OFF (+ control contact)
Ws	One shot - ON (+ control contact)
Wa	One shot - OFF (+ control contact)
Wu	One shot - ON
Es	Delay - ON (+ control contact)
Bp	Flasher, starting OFF
Bi	Flasher, starting ON

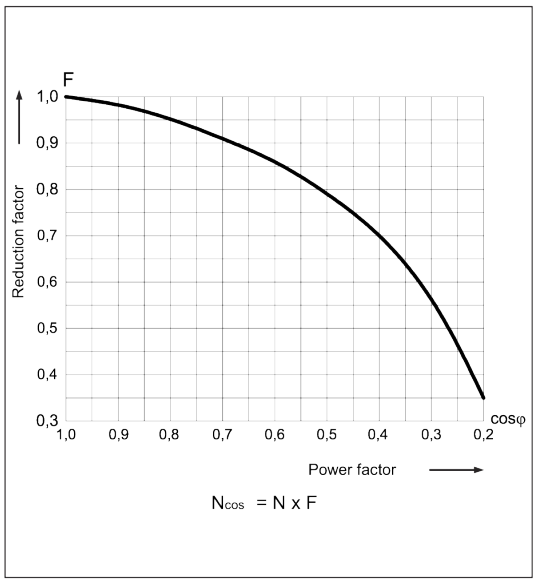
Electrical life expectancy

The life expectancy values shown below are based on factory tests. These values could be different in real life applications as environmental conditions, switching frequencies and duty cycles will influence these values.

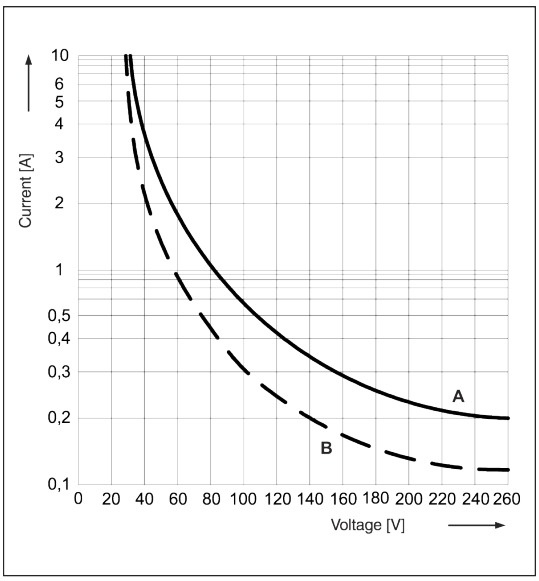
Electrical life at AC resistive load



Electrical life reduction fator at AC inductive load



Max. DC breaking capacity
A = resistive load DC1
B = inductive load L/R = 40 ms



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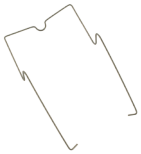
Sockets & accessories

 VG-8T	 VG-11T	 VG-8PCB	 VG-11PCB	
 CG-1	 T-21	 COM-3TP		

Sockets

Art. no.	Type	Applicable for	Connection	Weight (g)	Dimensions (mm)
321000206	VG-8T	G08 relays, 35 mm rail or wall	Screw terminals	59	75 x 38 x 26
321000207	VG-11T	G11 relays, 35 mm rail or wall	Screw terminals	62	75 x 38 x 26
321000209	VG-8PCB	G08 relays	PCB	9	ø 28 x 20
321000210	VG-11PCB	G11 relays	PCB	9	ø 28 x 20

Accessories

Art. no.	Type	Description	Weight (g)	Dimensions (mm)
321000203	CG-1	Relay retaining clip VG-8T & VG-11T sockets, metal		
321000208	T-21	Diode module in VG-8T & VG-11T sockets	6	44 x 34 x 15
321000205	COM-3TP	Timer module for VG-8T & VG-11T sockets	15	54 x 34 x 15

Installation, operation, maintenance

Installation

- Install the socket and connect wiring according the identification on the terminals, plug the relay into the socket
- Reverse installation of socket is not possible due to mechanical blocking by pinning
- Do not reverse the polarity of the coilconnection when a diode is used
- Relays can be mounted tight next to each other
- Warning! Never use silicon near by relays!

Operation

- Before operate always apply voltage to coil to check correct operation
- Also switching the load a few times is advised
- Long term storage may corrode the silver on the relay pins
- By plugging the relay into the socket, the connector receivers will automatically clean the corrosion on the pins and guarantee a good connection
- Do not use the relay in places with flammable gas as the arc generated from switching could ignite gasses

Maintenance

- Correct operation of relay can easily be checked as transparent cover gives good visibility on the moving contacts
- When the relay does not appear to operate correct, please check presence of coil voltage
- Use a multimeter.
- If LED is used coil presence should be indicated, if coil voltage is present but the relay does not work, a short circuit of suppression diode is possible (The coil connection was reversed)
- If relay does not work after inspection, please replace the relay by a similar model

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Ordering codes

G08 relays

G08-D012	12 VDC	321000001
G08-D024	24 VDC	321000002
G08-D048	48 VDC	321000003
G08-D110	110 VDC	321000004
G08-D120	120 VDC	321000010
G08-D220	220 VDC	321000011
G08-A012	12 VAC, 50/60 Hz	321000005
G08-A024	24 VAC, 50/60 Hz	321000006
G08-A048	48 VAC, 50/60 Hz	321000007
G08-A110	110 VAC, 50/60 Hz	321000008
G08-A230	230 VAC, 50/60 Hz	321000009

G08-L relays (+LED)

G08-L-D012	12 VDC	321000051
G08-L-D024	24 VDC	321000052
G08-L-D048	48 VDC	321000053
G08-L-D110	110 VDC	321000054
G08-L-D220	220 VDC	321000060
G08-L-A012	12 VAC, 50/60 Hz	321000055
G08-L-A024	24 VAC, 50/60 Hz	321000056
G08-L-A048	48 VAC, 50/60 Hz	321000057
G08-L-A110	110 VAC, 50/60 Hz	321000058
G08-L-A230	230 VAC, 50/60 Hz	321000059

G11 relays

G11-D012	12 VDC	321000101
G11-D024	24 VDC	321000102
G11-D030	30 VDC	321000111
G11-D048	48 VDC	321000103
G11-D110	110 VDC	321000104
G11-D120	120 VDC	321000110
G11-D220	220 VDC	321000112
G11-A012	12 VAC, 50/60 Hz	321000105
G11-A024	24 VAC, 50/60 Hz	321000106
G11-A048	48 VAC, 50/60 Hz	321000107
G11-A110	110 VAC, 50/60 Hz	321000108
G11-A230	230 VAC, 50/60 Hz	321000109

G11-L relays (+LED)

G11-L-D012	12 VDC	321000151
G11-L-D024	24 VDC	321000152
G11-L-D048	48 VDC	321000153
G11-L-D110	110 VDC	321000154
G11-L-D220	220 VDC	321000160
G11-L-A012	12 VAC, 50/60 Hz	321000155
G11-L-A024	24 VAC, 50/60 Hz	321000156
G11-L-A048	48 VAC, 50/60 Hz	321000157
G11-L-A110	110 VAC, 50/60 Hz	321000158
G11-L-A230	230 VAC, 50/60 Hz	321000159

* other voltages on request

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