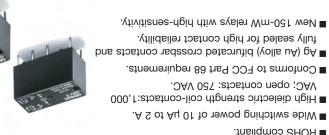
### PCB Signal Relay – G5V-2

## Miniature Relay for Signal Circuits



# DOJ B TL

actual operating conditions.

Note: P level:  $\lambda_{60} = 0.1 \times 10^{-6}$  /operation

mətl ■ Contact Ratings

Failure rate (reference value)

Max. switching power

Max. switching current

Max. switching voltage

Rated carry current

ower consumption

Must release voltage

Must operate voltage

Coil resistance

fated current

Rated voltage

Pigh Sensitivity Models

78.0 PTC outernature OFF 0.57 (H)

Coil inductance Armature OFF 0.18

PCB Signal Relay – G5V-2

egetlov .xeM

Contact material

bsol beteR

реод

This value was measured at a switching frequency of 120 operations/min and the criterion of contact resistance is 1000. This value may vary depending on the switching frequency and operating environment. Always double-check relay suitability under value may vary depending on the switching trequency and operating environment.

62.5 VA, 24 W

0.5 A at 125 VAC; 1 A at 24 VDC

High sensitivity models

Wm 00S Approx.

72.9

27.8

Ω 088,2

Am ££.8

54 ADC

3<sup>.</sup>66

2.90

O96 🗸

Am 8.St

15 ADC

2.33

70. r

₩2070

9 ADC

Am 7.91

.xorqqA Wm 083

(at 23°C) ated voltag 150% of

7.92

1.02

<del></del> 089'Հ

Am 22.8

48 ADC

Signal

Re

A٢

OUVm 01 1s Am 10.0

125 VAC, 125 VDC

0.5 A at 125 VAC; 2 A at 30 VDC

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.

Standard models

26.0

02.0

240 T

Am 82

6 ADC

Resistive load (cosp = 1)

 ${f 3.}$  The maximum voltage is the highest voltage that can be imposed on the relay coil.

180% of rated voltage at 23°C

17.0

97.0

ଫ 7.99↑

Am 0£

5 VDC

5% min. of rated voltage

75% max. of rated voltage

 $\mathbf{2.}$  Operating characteristics are measured at a coil temperature of 23°C.

Wm 021 .xorqqA

Ծ 09

Am 03

3 ADC

W 09 ,AV 8.S8

ΑS

ΑS (yolls UA) pA

ləboM	Enclosure Rating	Contact material	Contact type	Contact form	Classification
G5V-2	Fully sealed	(yolls uA) pA	Bifurcated crossbar	DPDT	Standard
G5V-2-H1					High-sensitivity

## Note: When ordering, add the rated coil voltage to the model number. Example: G5NB-1A-E 12 VDC

- Rated coil voltage

3' 2' 9' 6' 15' 54' 48 ADC 3. Rated Coil Voltage H1: High-sensitivity 2. Classification

.xorpprox. Wm 083 Wm 00č .xorq4 20% of rated voltage at 23°C 5% min. of rated voltage 75% max. of rated voltage 2.63 67.0 6ŀ.0 S0.0 00.01 77.0 11.0 62.7 86.f 74.0 15.0 91.0 60.0 **40.**0 Q 81 Q 000,4 1,152 Q 288 2 162 G 22 G 20 U Am St Am 8.02 Am 7.14 Am E.E8 Am 001 Am 7.881 48 ADC 54 ADC 15 ADC 9 ADC 9 ADC 2 ADC ٨DC

542

- ROHS compliant.
- VAC; open contacts: 750 VAC.
- fully sealed for high contact reliability.
- New 150-mW relays with high-sensitivity.

### Ordering Information -

#### Model Number Legend

Ð



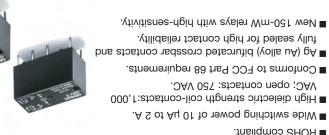
### ■ Coil Rating Specifications -

Standard Models

A	noitqn	Power consun	
ŀ	Aax. voltage		
ç	Must release voltage		
Z	Must operate voltage		
0	NO enuterrnA	(H) (ref. value)	
0	<b>ATO StutemiA</b>	Soil inductance	
ŀ	(W) e	Coil resistance	
L		Rated current	
3		Rated voltage	

### PCB Signal Relay – G5V-2

## Miniature Relay for Signal Circuits



# DOJ B TL

actual operating conditions.

Note: P level:  $\lambda_{60} = 0.1 \times 10^{-6}$  /operation

mətl ■ Contact Ratings

Failure rate (reference value)

Max. switching power

Max. switching current

Max. switching voltage

Rated carry current

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PCB Signal Relay – G5V-2

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Contact material

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This value was measured at a switching frequency of 120 operations/min and the criterion of contact resistance is 1000. This value may vary depending on the switching frequency and operating environment. Always double-check relay suitability under value may vary depending on the switching trequency and operating environment.

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Am 22.8

48 ADC

Signal

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OUVm 01 1s Am 10.0

125 VAC, 125 VDC

0.5 A at 125 VAC; 2 A at 30 VDC

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.

Standard models

26.0

02.0

240 T

Am 82

6 ADC

Resistive load (cosp = 1)

 ${f 3.}$  The maximum voltage is the highest voltage that can be imposed on the relay coil.

180% of rated voltage at 23°C

17.0

97.0

ଫ 7.99↑

Am 0£

5 VDC

5% min. of rated voltage

75% max. of rated voltage

 $\mathbf{2.}$  Operating characteristics are measured at a coil temperature of 23°C.

Wm 021 .xorqqA

Ծ 09

Am 03

3 ADC

W 09 ,AV 8.S8

ΑS

ΑS (yolls UA) pA

ləboM	Enclosure Rating	Contact material	Contact type	Contact form	Classification
G5V-2	Fully sealed	(yolls uA) pA	Bifurcated crossbar	DPDT	Standard
G5V-2-H1					High-sensitivity

## Note: When ordering, add the rated coil voltage to the model number. Example: G5NB-1A-E 12 VDC

- Rated coil voltage

3' 2' 9' 6' 15' 54' 48 ADC 3. Rated Coil Voltage H1: High-sensitivity 2. Classification

.xorpprox. Wm 083 Wm 00č .xorq4 20% of rated voltage at 23°C 5% min. of rated voltage 75% max. of rated voltage 2.63 67.0 6ŀ.0 S0.0 00.01 77.0 11.0 52.7 86.f 74.0 15.0 91.0 60.0 **40.**0 Q 81 Q 000,4 1,152 Q 288 2 162 G 22 G 20 U Am St Am 8.02 Am 7.14 Am E.E8 Am 001 Am 7.881 48 ADC 54 ADC 15 ADC 9 ADC 9 ADC 2 ADC ٨DC

542

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- VAC; open contacts: 750 VAC.
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### Ordering Information -

#### Model Number Legend

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### ■ Coil Rating Specifications -

Standard Models

A	noitqn	Power consun	
ŀ	Aax. voltage		
ç	Must release voltage		
Z	Must operate voltage		
0	NO enuterrnA	(H) (ref. value)	
0	<b>ATO StutemiA</b>	Soil inductance	
ŀ	(W) e	Coil resistance	
L		Rated current	
3		Rated voltage	

Shock resistance Destr Maifu Endurance Eect Eect Ambient temperature Oper		Operating: -25°C to 70°C (with no icing)		
Shock resistance Destr Maifu Endurance Mech Elect	Electrical: 100,000 operations min. (at 1,800 op			
Endurance         Destriction           Endurance         Maifu				
Shock resistance Destr	30 to) dia proitezege 000 000 3t ilegiandeeM	Mechanical: 15,000,000 operations min. (at 36,000 operations/hr) Hechal: 100,000 operations min. (at 1,800 operations/hr)		
	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 200 m/s <sup>2</sup> (approx. 20G)	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 100 m/s <sup>2</sup> (approx. 10G)		
	Destruction: 10 to 55 to 10 Hz, 0.75-um Malfunction: 10 to 55 to 10 Hz, 0.75-um Malfunction: 10 to 55 to 10 Hz, 0.75-um			
00,1 900,100 00,100 00,000000	stopping the lico neewted (sq 031 x 01) V 00, r	(conforms to FCC part 68)		
220 // כסטנק סטינ אוע ככ	1,000 VAC, 50/60 Hz for 1 min between coil and contacts 7,000 VAC, 50/60 Hz for 1 min between 750 VAC, 50/60 Hz for 1 min between contacts of same polarity	1,000 VAC, 50/60 Hz for 1 min between coil and contacts 1,000 VAC, 50/60 Hz for 1 min between contacts of different polarity contacts of same polarity		
Insulation resistance (see note 2) 000.	1,000 MΩ min. (at 500 VDC)			
	Mechanical: 36,000 operations/hr Electrical: 1,800 operations/hr (under rated loa	q)		
Sm 5 3 ms	.xsm 2m 2			
Operate time	.xsm 2m			
Contact resistance (see note 1) 50 m	50 m2 max.	.xsm		
Item	Standard models	elebom viivitienes dgiH		

## Approx. 5 g

 The insulation resistance was measured with a 500VDC megohmeter applied to the same parts as those used for checking the dielectric strength. 1. The contact resistance was measured with 10mA at 1VDC with a voltage drop method.



Contact rating	Coil rating
Gev-2 Gev-2-H1	
25 VAC (general use) O.5 A, 125 VAC (general use) OAV 25	
10 VDC (resistive load) A. Y. 24 VDC (resistive load) VDC (resistive load) VDC (resistive load) VDC (resistive load)	
VDC (resistive load) 1 A, 24 VDC (resistive	



Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

48 ADC

Ambient Temperature vs. Maximum Coil Voltage 55V-2

(°) Ambient temperature

3 to 54 VDC

2 80

<u>1</u>21

091 ge

(%) 80

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age

(%)

G5V-2-H1

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(A) trent (A) Switching (A)

5-VAC resistive load

24-VDC re

(A) trent current (A)

125-VAC resistive load

load

0-VDC

istive load

(V) egettov gnidotiw2

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Maximum Switching Power G5V-2

Engineering Data -

PCB Signal Relay – G5V-2

G5V-2-H1

12.05

(V) egettov gninttiw2

Life

y (x10<sup>3</sup>

300

909

0001

G5V-2-H1

0pg

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) (x103

G5V-2 Endurance

DC re sistive load

(°) Ambient temperature

24 VDC

Signal Rela

## PCB Signal Relay – G5V-2

### Characteristics

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thgiaW

Note: The above values are initial values.

No.14 (File No. LR24825) UL (File No. E41515)/CSA C22.2 No.0, Approved Standards

	Contact form	
e		DPDT

Shock resistance Destr Maifu Endurance Eect Eect Ambient temperature Oper		Operating: -25°C to 70°C (with no icing)		
Shock resistance Destr Maifu Endurance Mech Elect	Electrical: 100,000 operations min. (at 1,800 op			
Endurance         Destriction           Endurance         Maifu				
Shock resistance Destr	30 to) dia proitezege 000 000 3t ilegiandeeM	Mechanical: 15,000,000 operations min. (at 36,000 operations/hr) Hechal: 100,000 operations min. (at 1,800 operations/hr)		
	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 200 m/s <sup>2</sup> (approx. 20G)	Destruction: 1,000 m/s <sup>2</sup> (approx. 100G) Malfunction: 100 m/s <sup>2</sup> (approx. 10G)		
	Destruction: 10 to 55 to 10 Hz, 0.75-um Malfunction: 10 to 55 to 10 Hz, 0.75-um Malfunction: 10 to 55 to 10 Hz, 0.75-um			
00,1 900,100 00,100 00,000000	stopping the lico neewted (sq 031 x 01) V 00, r	(conforms to FCC part 68)		
220 // כסטנק סטינ אוע ככ	1,000 VAC, 50/60 Hz for 1 min between coil and contacts 7,000 VAC, 50/60 Hz for 1 min between 750 VAC, 50/60 Hz for 1 min between contacts of same polarity	1,000 VAC, 50/60 Hz for 1 min between coil and contacts 1,000 VAC, 50/60 Hz for 1 min between contacts of different polarity contacts of same polarity		
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	Mechanical: 36,000 operations/hr Electrical: 1,800 operations/hr (under rated loa	q)		
Sm 5 3 ms	.xsm 2m 2			
Operate time	.xsm 2m			
Contact resistance (see note 1) 50 m	50 m2 max.	.xsm		
Item	Standard models	elebom viivitienes dgiH		

## Approx. 5 g

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VDC (resistive load) 1 A, 24 VDC (resistive	



Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

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48 ADC

Ambient Temperature vs. Maximum Coil Voltage 55V-2

(°) Ambient temperature

3 to 54 VDC

2 80

<u>1</u>21

091 ge

(%) 80

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age

(%)

G5V-2-H1

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(A) trent (A) Switching (A)

5-VAC resistive load

24-VDC re

(A) trent current (A)

125-VAC resistive load

load

0-VDC

istive load

(V) egettov gnidotiw2

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Maximum Switching Power G5V-2

Engineering Data -

PCB Signal Relay – G5V-2

G5V-2-H1

12.05

(V) egettov gninttiw2

Life

y (x10<sup>3</sup>

300

909

0001

G5V-2-H1

0pg

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) (x103

G5V-2 Endurance

DC re sistive load

(°) Ambient temperature

24 VDC

Signal Rela

## PCB Signal Relay – G5V-2

### Characteristics

Œ

thgiaW

Note: The above values are initial values.

No.14 (File No. LR24825) UL (File No. E41515)/CSA C22.2 No.0, Approved Standards

	Contact form	
e		DPDT

cold cleaning bath immediately after soldering.

Relay Handling

.xsm č.†† 11.4 typ.

¢[]

Terminal Arrangement/ Internal Connections (Bottom View)

10.1 max. 9.9 typ.

a water-based solvent or alcohol-based solvent, and keep the solvent temperature to less than  $40^\circ C.$  Do not put the Relay in a

When washing the product after soldering the Relay to a PCB, use

Eight, 1-dia. holes

<u>ф</u>

-0

Tolerance: ±0.1

Bottom View) (Bottom View)

7.62 1<sup>5.08</sup> 5.08

29.7

(z.1)\_\_\_\_

### PCB Signal Relay – G6A

#### for Use in Telecommunications Equipment Fully sealed Relay with High Impulse Dielectric

- ROHS compliant.
- High sensitivity can be driven by digital circuits.
- Impulse withstand voltage meets FCC Part 68 Horizontal design allows use in ½ inch PCB racks.
- requirements.
- Relays can be mounted side-by-side due to
- Single- and double-winding latching relays low magnetic leakage.
- also available.
- Special models available for low thermoelectromotive
- force.

#### Ordering Information

# Single-side Stable Type

tbDL         GeV-51tb-2L-02         GeV-53tb-2L-02           DbD1         GeV-51tb-2L-02         GeV-53tb-2L-02	General purpose
4PDT         G66-434P-ST-US	
DPDT G66-274P-5740-US G66-234P-5740-US	Low-sensitivity
4PDT G66A-474P-ST40-US G6A-474P-ST40-US	

#### Single-winding Latching Type

bslo-uA + b9pA		bslɔ-uA + pA	t	Contac
234P-ST-US	-UAðð	G6AU-274P-ST-US	DPDT	General purpose
434P-ST-US	-UAðð	SU-T2-9474-UA8D	4PDT	

#### Double-winding Latching Type

bslɔ-uA + b٩pA	bslɔ-uA + pA	Contact		
GGAK-234P-ST-US	G6AK-274P-ST-US	DPDT	General purpose	
GGAK-434P-ST-US	G6AK-474P-ST-US	4PDT		
G6AK-234P-ST40-US	G6AK-274P-ST40-US	DPDT	Low-sensitivity	
GGAK-434P-ST40-US	G6AK-474P-ST40-US	4PDT		

Note: When ordering, add the rated coil voltage to the model number.

Model Number Legend

···· ( ···· /· ··· // /										•
ated crossba	Bifurce	3:	б	atchin	l gni	puiw	-əldu	DC	К:	
i-clad) conta	א) pA		f	gnidoti	el Qn	ipuiv	ν-9 βι	iiS	÷	
ated crossba	Bifurce	:7		ə	ldbfa	s əbia	s-əlbr	iiS :e	None	
λbe	T tostr	loD	3.			ι	notior	ın∃ {ı	Rela	٦.
6	8	Z	9	9	4	3	2	ŀ		
	-			-				•	Aði	อ
						DUC	607	00000		~

4. Enclosure Ratings
4. Fully sealed
5. Terminals spar ontact 7. Special Function 6. Stand-off 0.64 mm 46.0 ft 0.64 mm 75.15 mm 75 spar

Rated coil voltage

AgPd (Au-clad) contact LT: Low thermoelectromotive force (Wm 004) (400 multivitisnes-wod

 Bated Coil Voltage
 3, 4.5, 5, 6, 9, 12, 24, 48 VDC US: UL, CSA certified 8. Approved Standards

546

DOJ B TL

Signal Rela

 2. Contact Form

 2:
 DPDT

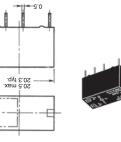
 4:
 4PDT

P: Straight PCB

## PCB Signal Relay – G5V-2

### - snoisnemid

2. Orientation marks are indicated as follows: Note: 1. All units are in millimetres unless otherwise indicated.



#### Precautions -

protection against contact failure or coil burnout. will affect the insulation, causing a film to develop on the contact surfaces. Be sure to use a fail-safe circuit design that provides continuously for long periods (without switching) can lead to unstable contacts because the heat generated by the coil itself Using the Relay in a circuit where the Relay will be ON Long-term Continuously ON Contacts  $\overline{}$ 

CAT. No. K046-E2-03A-X

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