105

Yone: P	nal Form PCB Terminal Quick-connect	(781#) Isnimnət		6. Rated 5, 12, 24	t ADC t coil voltage	
None: F	s ure Ratings Flux protection Fully sealed		.6	None:	noitqmuen Standard High sensitivity	
	of Poles 1 pole (SPST-N	(0)	·þ	None:	functions Standard High capacity	Standard Specifications Contact configuration: SPST- Enclosure ratings: Flux proter Terminal form: PCB terminal
	ber Legend	9 9 1	ΛΦΟ	S		

	lote: 1. When ordering, add the rated coil voltage to the model number. Example: G5C-1 12 VDC							
-	Fully sealed	G5CA-1A4	G5CA-1A4H	-				
ON-TS4S	Flux protection	G5CA-1A	G5CA-1AH	G5CA-1A-E				

———— Rated coil voltage
2. High-capacity models with a Fully sealed structure are not available.
3. Standard or high-sensitivity models with quick-connect terminals are not available.

itienee-dgiH	General purpose	Enclosure ratings	mnof tostnoO
G5CA-1AH	G5CA-1A	Flux protection	ON-TS9S

- noitsmrofnl gaired

terminal models available (#187 load contact

- Fully sealed models and quick-connect
 - UL and CSA approved.

power consumption (150 mW).

- High-sensitivity models available with low
- mm ff x 8f x SS :snoienamib atutainim-duS ■

appliances or for outputs from industrial ■ Ideal for switching power in household

- ROHS compliant.
 - Terminals

Loads with New Quick-connect Flat Relays that Switch 10-A/15-A

PCB Power Relay - G5CA

OMKON 08 Cat 1-302 5/10/07 15:39 Page 102

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23° C with a tolerance of $\pm 10\%$. S. Operating characteristics are measured at a coil temperature of 23° C.

		7,007 7 11. 0.000 7 1. 1
JAgieW		Approx. 8 g (for TP model: Approx. 9.6 g)
Ambient humidity		Operating: 5% to 85%
Ambient temperatu	ıre	Operating: -25°C to 70°C (with no icing)
Endurance		Mechanical: 20,000,000 operations min. at 18,000 operations/hr Ebethreal: 30,000,000 operations min. (100,000 operations min. (100,000 operations min. (100,000 operations min. under rated load of 18 A 01 VAC). (or high-capacity models 0,000 operations min. under load of 16 A 01 T 10,000 operations min. at 1,200 operations min. at 1,200 operations min. at 1,200 operations min. at 1,200 operations with under rated load of 10 k at 30 VDC
Shock resistance		Destruction: 1,000 m/s² Malfunction: 200 m/s²
Vibration resistanc	Э	Destruction: 10 to 55 to 10 Hz, 0.76-mm single amplitude (1.6-mm double amplitude) Malfunction: 10 to 56 to 10 Hz, 0.27-mm single amplitude (1.6-mm double amplitude)
Impulse withstand	voltage	4,500 V (1.2 x 50 µs) between coil and contacts
Tracking Resistanc	(ITO) 9:	520 Λ
Distance	Clearance (Typ)	mm 8.S
noitsluenl	Creepage (Typ)	mm ð.£
Dielectric strength		2,500 VAC, 50/60 Hz for 1 min between coil and contacts 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity
Insulation resistan	əo	.nim ΩM 000,↑
Release time		10 max.
Operate time		10 max. (High-sensitivity type: 15 ms max.)
Contact resistance		30 m2 max. (Quick-connect ferminals type: 100 m2 max.)

■ Characteristics

G5CA-1AE-TP-E Quick-connect

△®

A 61 W 005, AV 008, S	W 06 ,AV 087	W 006, AV 006, S	W 06 ,AV 087	100mA at 5VDC	Max. switching Failure rate (reference value)
	W 06 ,AV 037	W 006 ,AV 003,S	W UE ,AV UC\		Max. switching
	W 06 ,AV 037	W 006 ,AV 008,S	W UE , AV UE \	1	
Acr			/VI 00 V/I 032	W 00E ,AV 00B,S	Max. switching
V = r		A 01	A 01		Max. switching current
			0	250 VAC, 125 VD	Max. switching voltage
A 31		A Of		A 01	Rated carry current
15 A at 110 VAC; 10 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	10 A at 250 VDC; 10 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	10 A at 250 VAC;	bsol besta
nln2gA		nln2gA		nlnSgA	Contact Material
Resistive load	Inductive load (cosp = 0.4, lem T = A'L	Beol evitsiseA	National National		
High-cs or quick-conr	nsitivity	ıəs-q6iH	dard	nst2	mətl
	Pesistive load AgSnIn 15 A at 30 VDC	Or quick-com Inductive load (cosq = 0.4, L/R = 7 ms) AgSnln Ag 250 VDC; 15 A at 30 VDC 3 A at 30 VDC 15 A	Resistive load Inductive load Good = 0.4, Cook = 0.4, L/R = 7 ms) AgSnIn	Materiate load Resistive load Inductive load Resistive load Cose = 0.4, L/R = 7 ms) Ag5nln Ag5nln Ag5nln Ag6 = 0.4c; Ag6	Resistive load Inductive load Resistive load Google = 0.4, L/R = 7 ms) Resistive load Coogle = 0.4, L/R = 7 ms) 10 A at 250 VBC; 3 A at 250 VBC; 3 A at 250 VBC; 3 A at 30 VBC; 3

■ Contact Ratings

Power consumption	Approx. 200 mM	Approx. 200 mW			Wm 051 .xorqqA		
Max. voltage	150% (standard)/130% (high-capacity, quick-connect terminals) of rated voltage (at 23°C)			120% (4t 23°C)			
Must release voltage	10% min. of rate	ed voltage	,				
Must operate voltage	75% max. of rat	75% max. of rated voltage			80% max. of rated voltage		
Coil resistance	125 22 720 22 2,880 22		Ծ 291	ర 096	3,840		
Rated current	Am 04	Am 7.9t	Am £.8	Am 0£	Am 3.St	Am 32.8	
	2 VDC 12 VDC 24 VDC			2 ADC	15 ADC	54 ADC	
mətl		Standard, high-capacity, or quick-connect terminals			High-sensitivity		

■ Coil Ratings

Specifications -

PCB Power Relay - G5CA

105

Yone: P	nal Form PCB Terminal Quick-connect	(781#) Isnimnət		6. Rated 5, 12, 24	t ADC t coil voltage	
None: F	s ure Ratings Flux protection Fully sealed		.6	None:	noitqmuen Standard High sensitivity	
	of Poles 1 pole (SPST-N	(0)	·þ	None:	functions Standard High capacity	Standard Specifications Contact configuration: SPST- Enclosure ratings: Flux proter Terminal form: PCB terminal
	ber Legend	9 9 1	ΛΦΟ	S		

	lote: 1. When ordering, add the rated coil voltage to the model number. Example: G5C-1 12 VDC							
-	Fully sealed	G5CA-1A4	G5CA-1A4H	-				
ON-TS4S	Flux protection	G5CA-1A	G5CA-1AH	G5CA-1A-E				

———— Rated coil voltage
2. High-capacity models with a Fully sealed structure are not available.
3. Standard or high-sensitivity models with quick-connect terminals are not available.

itienee-dgiH	General purpose	Enclosure ratings	mnof tostnoO
G5CA-1AH	G5CA-1A	Flux protection	ON-TS9S

- noitsmrofnl gaired

terminal models available (#187 load contact

- Fully sealed models and quick-connect
 - UL and CSA approved.

power consumption (150 mW).

- High-sensitivity models available with low
- mm ff x 8f x SS :snoienamib atutainim-duS ■

appliances or for outputs from industrial ■ Ideal for switching power in household

- ROHS compliant.
 - Terminals

Loads with New Quick-connect Flat Relays that Switch 10-A/15-A

PCB Power Relay - G5CA

OMKON 08 Cat 1-302 5/10/07 15:39 Page 102

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23° C with a tolerance of $\pm 10\%$. S. Operating characteristics are measured at a coil temperature of 23° C.

		7,007 7 11. 0.000 7 1. 1
JAgieW		Approx. 8 g (for TP model: Approx. 9.6 g)
Ambient humidity		Operating: 5% to 85%
Ambient temperatu	ıre	Operating: -25°C to 70°C (with no icing)
Endurance		Mechanical: 20,000,000 operations min. at 18,000 operations/hr Ebethreal: 30,000,000 operations min. (100,000 operations min. (100,000 operations min. (100,000 operations min. under rated load of 18 A 01 VAC). (or high-capacity models 0,000 operations min. under load of 16 A 01 T 10,000 operations min. at 1,200 operations min. at 1,200 operations min. at 1,200 operations min. at 1,200 operations with under rated load of 10 k at 30 VDC
Shock resistance		Destruction: 1,000 m/s² Malfunction: 200 m/s²
Vibration resistanc	Э	Destruction: 10 to 55 to 10 Hz, 0.76-mm single amplitude (1.6-mm double amplitude) Malfunction: 10 to 56 to 10 Hz, 0.27-mm single amplitude (1.6-mm double amplitude)
Impulse withstand	voltage	4,500 V (1.2 x 50 µs) between coil and contacts
Tracking Resistanc	(ITO) 9:	520 Λ
Distance	Clearance (Typ)	mm 8.S
noitsluenl	Creepage (Typ)	mm ð.£
Dielectric strength		2,500 VAC, 50/60 Hz for 1 min between coil and contacts 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity
Insulation resistan	əo	.nim ΩM 000,↑
Release time		10 max.
Operate time		10 max. (High-sensitivity type: 15 ms max.)
Contact resistance		30 m2 max. (Quick-connect ferminals type: 100 m2 max.)

■ Characteristics

G5CA-1AE-TP-E Quick-connect

△®

A 61 W 005, AV 008, S	W 06 ,AV 087	W 006, AV 006, S	W 06 ,AV 087	100mA at 5VDC	Max. switching Failure rate (reference value)
	W 06 ,AV 037	W 006 ,AV 003,S	W UE ,AV UC\		Max. switching
	W 06 ,AV 037	W 006 ,AV 008,S	W UE , AV UE \	1	
Acr			/VI 00 V/I 032	W 00E ,AV 00B,S	Max. switching
V = r		A 01	A 01		Max. switching current
			0	250 VAC, 125 VD	Max. switching voltage
A 31		A Of		A 01	Rated carry current
15 A at 110 VAC; 10 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	10 A at 250 VDC; 10 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	10 A at 250 VAC;	bsol besta
nln2gA		nln2gA		nlnSgA	Contact Material
Resistive load	Inductive load (cosp = 0.4, lem T = A'L	Beol evitsiseA	National National		
High-cs or quick-conr	nsitivity	ıəs-q6iH	dard	nst2	mətl
	Pesistive load AgSnIn 15 A at 30 VDC	Or quick-com Inductive load (cosq = 0.4, L/R = 7 ms) AgSnln Ag 250 VDC; 15 A at 30 VDC 3 A at 30 VDC 15 A	Resistive load Inductive load Good = 0.4, Cook = 0.4, L/R = 7 ms) AgSnIn	Materiate load Resistive load Inductive load Resistive load Cose = 0.4, L/R = 7 ms) Ag5nln Ag5nln Ag5nln Ag6 = 0.4c; Ag6	Resistive load Inductive load Resistive load Google = 0.4, L/R = 7 ms) Resistive load Coogle = 0.4, L/R = 7 ms) 10 A at 250 VBC; 3 A at 250 VBC; 3 A at 250 VBC; 3 A at 30 VBC; 3

■ Contact Ratings

Power consumption	Approx. 200 mM	Approx. 200 mW			Wm 051 .xorqqA		
Max. voltage	150% (standard)/130% (high-capacity, quick-connect terminals) of rated voltage (at 23°C)			120% (4t 23°C)			
Must release voltage	10% min. of rate	ed voltage	,				
Must operate voltage	75% max. of rat	75% max. of rated voltage			80% max. of rated voltage		
Coil resistance	125 22 720 22 2,880 22		Ծ 291	ర 096	3,840		
Rated current	Am 04	Am 7.9t	Am £.8	Am 0£	Am 3.St	Am 32.8	
	2 VDC 12 VDC 24 VDC			2 ADC	15 ADC	54 ADC	
mətl		Standard, high-capacity, or quick-connect terminals			High-sensitivity		

■ Coil Ratings

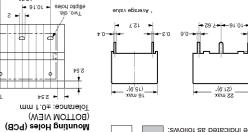
Specifications -

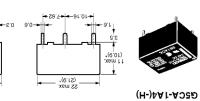
PCB Power Relay - G5CA

PCB Power Relay - G5CA

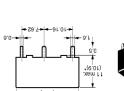
Dimensions –

G5CA-1 A(-E) 2. Orientation marks are indicated as follows: Note: 1. All units are in millimetres unless otherwise indicated.













► S'0





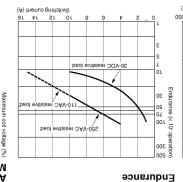
Ambient Temperature vs. Maximum Coil Voltage

000'001

100,000

No of Operations

No of Operations



Maximum Switching Power ■ Engineering Data

G5CA

G5CA

10A, 30VDC (0ms)

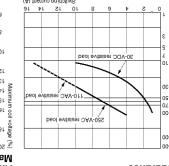
1AP, 125VAC (cosφ = 1.0) 1AP, 250VAC (cosφ = 1.0)

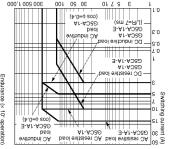
10A, 30VDC (Resistive) 10A, 250VAC (General Purpose) 15A, 250VDC (Resistive)

Contact Rating

15A, 125VAC (General Purpose)

Contact Rating





No of Poles

seloq to oM

■ Approved Standards

PCB Power Relay - G5CA

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UL Standard: UL508 (File No. E41515)

EN Standard/TUV Certificated:

EN61810-1 (Certification No. R50030053)

3' 2' 6' 15'

3 to 100VDC

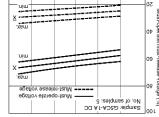
CSA Standard: CSA C22.2 No. 14 (File No. LR31928)

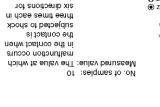
Coil Rating

Coil Rating

Operating Temperature vs. Must-operate/Must-release Voltage

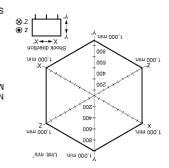
Malfunction Shock

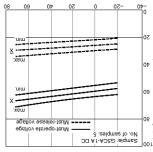




three axes. 200 m/s²

02 09 09





Note: The "maximum voltage" is the maximum voltage that can be applied to the relay coil.

405

(TOP VIEW)

(BOTTOM VIEW)

Terminal Arrangement
Internal Connections

Note: Orientation marks are indicated as follows: [_] ⊠

(BOTTOM VIEW)

Terminal Arrangement
Internal Connections

(No coil polarity)

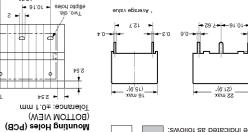
Mounting Holes (BOTTOM VIEW)

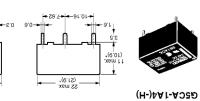
104

PCB Power Relay - G5CA

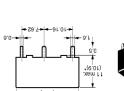
Dimensions –

G5CA-1 A(-E) 2. Orientation marks are indicated as follows: Note: 1. All units are in millimetres unless otherwise indicated.













► S'0





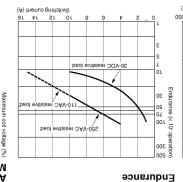
Ambient Temperature vs. Maximum Coil Voltage

000'001

100,000

No of Operations

No of Operations



Maximum Switching Power ■ Engineering Data

G5CA

G5CA

10A, 30VDC (0ms)

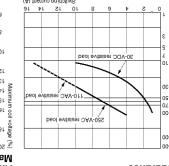
1AP, 125VAC (cosφ = 1.0) 1AP, 250VAC (cosφ = 1.0)

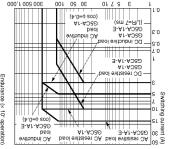
10A, 30VDC (Resistive) 10A, 250VAC (General Purpose) 15A, 250VDC (Resistive)

Contact Rating

15A, 125VAC (General Purpose)

Contact Rating





No of Poles

seloq to oM

■ Approved Standards

PCB Power Relay - G5CA

Omron 08 Cat 1-302 5/10/07 15:39 Page 104

UL Standard: UL508 (File No. E41515)

EN Standard/TUV Certificated:

EN61810-1 (Certification No. R50030053)

3' 2' 6' 15'

3 to 100VDC

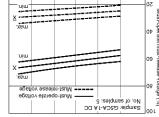
CSA Standard: CSA C22.2 No. 14 (File No. LR31928)

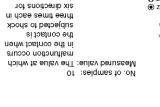
Coil Rating

Coil Rating

Operating Temperature vs. Must-operate/Must-release Voltage

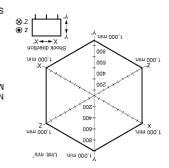
Malfunction Shock

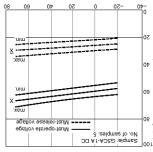




three axes. 200 m/s²

02 09 09





Note: The "maximum voltage" is the maximum voltage that can be applied to the relay coil.

405

(TOP VIEW)

(BOTTOM VIEW)

Terminal Arrangement
Internal Connections

Note: Orientation marks are indicated as follows: [_] ⊠

(BOTTOM VIEW)

Terminal Arrangement
Internal Connections

(No coil polarity)

Mounting Holes (BOTTOM VIEW)

104

90 L

CAT. No. J151-E2-02A-X

To convert millimetres into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.

Note: The numbers shown in parentheses are for air-feeding

()		
(əuld) 6-470S71 9MA		
AMP 172074-5 (green)	(1-32507t) 1-35507t PMA	
(wolley) 4-470271 9MA	(1-32507t) 1-15507t 9MA	
AMP 172074-1 (natural color)	(1-428071) 1-088071 PMA	(mm 27.4 :Atbiw) alsnimət 781#
Positive housing	Type Receptacle terminals (See note.)	Туре

riuld enters the relay.

Other Precautions

Charged Terminals

such as in signal applications.

relay shaded in the following diagram.

performance may be otherwise adversely affected if cleaning

Finxprotection models may maltunction or the relay's

• Use fully sealed models if the relays will require washing.

power loads such as heaters in electric household appliances. Do not use the GSCA to switch micro loads less than 100 mA,

• The G5CA is a power relay designed for applications switching

metal patterns on the section of the PCB facing the portion of the

When the relay is mounted on a PCB, make sure that there are no

the following diagram includes the charged terminals of the relay.

The section marked with dotted circles (indicated by arrows) in

3.9 8

connectors including availability.

recommended. Contact the manufacturer directly for details on The following positive-lock connectors made by AMP are

same time.

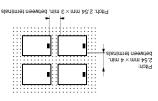
terminals on an angle, or insert/remove multiple terminals at the Insert and remove terminals carefully one at a time. Do not insert

dismounting the Faston receptacle.

apply excessive torce to the terminals when mounting or that are within the allowable range for the load current. Do not leads for connecting Faston receptacles with wire diameters Use only Faston terminals with the specified numbers. Select and are suitable for positive-lock mounting.

- The terminals are compatible with Faston receptacle #187
- contactterminals (quick-connect terminals). • Do not pass current through the PCB of the load

Quick-connect Terminal Connections



malfunctioning.

dissipation. Insufficient heat dissipation may result in the relay installing two or more relays side by side to facilitate heat Make sure that sufficient space is provided between relays when

■ Precautions for Correct Use

Precautions —

PCB Power Relay - G5CA

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2. Contact Form 11: SPST-NO + SPST-NC 21: SPST-NO Single-winding latching Double-winding latching None: Single-side stable Relay Function 1 2 3 4 5 6 7 Gec __ - _ _ _ _ _ _ _ _ _ ADC

7: Flux protection 4: Fully sealed 3. Contact Type
1: Standard
4. Enclosure Ratings

7. Rated Coil Voltage 3, 5, 6, 12, 24 VDC 6. Approved Standards
US: UL/CSA certified P: Straight PCB C: Self-clinching PCB 5. Ierminais

Model Number Legend

Example: G6C-1117P-US 12 VDC Note: When ordering, add the rated coil voltage to the model number.

Double-winding latching	SPST-NO + SPST-NC	G6CK-2117P-US	G6CK-2114P-US	G6CK-2117C-US	G6CK-2114C-US
	ON-TS4S	G6CK-1117P-US	G6CK-1114P-US	G6CK-1117C-US	G6CK-1114C-US
Single-winding latching	SPST-NO + SPST-NC	G6CU-2117P-US	G6CU-2114P-US	G6CU-2117C-US	G6CU-2114C-US
	ON-TS4S	G6CU-1117P-US	G6CU-1114P-US	G6CU-1117C-US	G6CU-1114C-US
	SPST-NO + SPST-NC	G6C-2117P-US	G6C-2114P-US	G6C-2117C-US	G6C-2114C-US
Single-side stable	ON-1848	SU-4/111-795	SU-44111-Jan	SU-7/111-795	SU-74111-795

Classification	Contact form	Straight PCB		Self-clinching PCB	
		Flux protection	Fully sealed	Flux protection	Fully sealed
eldsta ebia-elgn	ON-TS4S	G6C-1117P-US	G6C-1114P-US	G6C-1117C-US	G6C-1114C-US
	SPST-NO + SPST-NC	G6C-2117P-US	G6C-2114P-US	G6C-2117C-US	G6C-2114C-US
gnibniw-əlgn	ON-TS92	G6CU-1117P-US	G6CU-1114P-US	G6CU-1117C-US	G6CU-1114C-US
cyjud	SPST-NO + SPST-NC	G6CU-2117P-US	G6CU-2114P-US	G6CU-2117C-US	G6CU-2114C-US
gnibniw-əldu	ON-TS92	G6CK-1117P-US	@@CK-1114b-N2	G6CK-1117C-US	G6CK-1114C-US
6ujyo:	SPST-NO + SPST-NC	G6CK-2117P-US	G6CK-2114P-US	G6CK-2117C-US	GECK-2114C-US

Ordering Information –

also available

- Single- and double-winding latching types .eounca
- size, magnetic interference, and contact ■ Unique moving loop armature reduces relay
- Flux protection or fully sealed construction
 - Low power consumption: 200 mW.
- Compact: $20 \times 15 \times 10 \text{ mm}$ (L x W x H).
 - ROHS compliant

bsod A-8

SPST-NO + SPST-NC Type Breaks SPST-NO Type Breaks 10-A Loads;

PCB Power Relay - G6C







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