

Reed Relays

L-M-W

- Molded surface-mount reed
- 1A, 1B, and 1C
- L: Sensitive Coil M: Miniature W: High Power

DA-DB-DF

- Molded DIP
- 1A, 1B, 1C, 2A
- 4 and 8 pin available

SH-DG

- Molded SIP
- 1A, 1B
- Miniature and Ultraminiature
- 1-1-1 and 2-2-2 pin spacings

SG-SE

- Molded SIP
- 1A, 1B, 1C
- 2-4-2, 3-2-3, and 3-4-3 pin spacings

SD

- SIP package
- 1A and 1C
- High Power contacts available

Z

- 1A, 1C
- RF and Low frequency applications
- Metal can to minimize external interference

PB-PC

- Economy reeds
- Open frame and enclosed packages
- Dry contacts to 3A and 2C

PE

- Molded package
- Dry contacts to 3A and 2C

PA

- Low Thermal EMF
- 1A to 4A
- High insulation resistance
- Metal can to minimize external interference

PG

- High voltage
- 1A, 2A, 1B, 2B, 1A/1B (1D)
- High insulation resistance, up to 15kV breakdown
- PCB mount with metal can to minimize external interference

PM

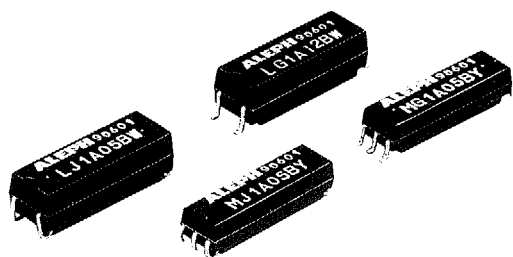
- High voltage with insulated wire terminated coil
- 1A contact form
- Up to 10kV switching and 15kV breakdown

PCS

- Current sensing reed
- 1A contact form
- High coil to contact breakdown
- Metal can to minimize external interference

Greenwich Electronics, Inc
5 Division St. East Greenwich, RI 02818
888-554-5561 * Fax:401-884-4835

Surface Mount Reed Relays



- True SMT process compatibility
- Ultra miniature size
- Sensitive coil (L series)
- Coaxial E. S. shield for RF (M series)

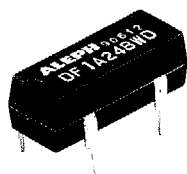
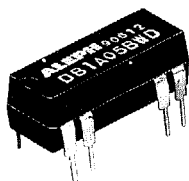
COIL RATINGS (TAMB. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
WJ 1 A ☐ BW WG 1 A ☐ BW	5 12 24	500 1000 2000	3.8 9.0 18.0	0.5 1.0 2.0	
LJ 1 A ☐ BW LG 1 A ☐ BW	5 12	500 1000	3.8 9.0	0.5 1.0	
MJ 1 A ☐ BY MG 1 A ☐ BY	5 12	150 600	3.8 9.0	0.5 1.0	
LJ 1 B ☐ BW LG 1 B ☐ BW	5 12	500 500	3.8 9.0	0.5 1.0	
LJ 1 C ☐ CW LG 1 C ☐ CW	5 12	200 500	3.8 9.0	0.5 1.0	

Note - (E.S.S.) : Electrostatic Shield

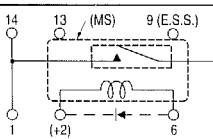
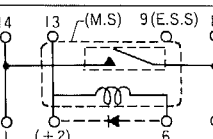
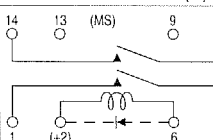
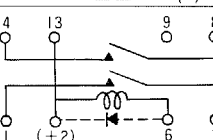
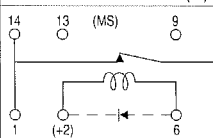
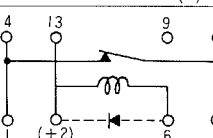
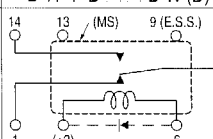
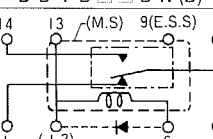
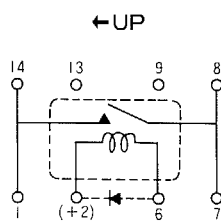
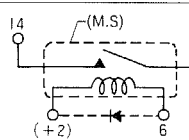
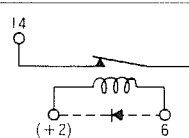
■ **DIMENSIONS** Unit : mm (inch)

DIP Reed Relays



- Industry standard package
- Transfer molded for environmental protection
- Miniature size
- Compatible with DIP handling, sorting and PCB insertion equipment
- Optional shielding and diodes
- UL models available

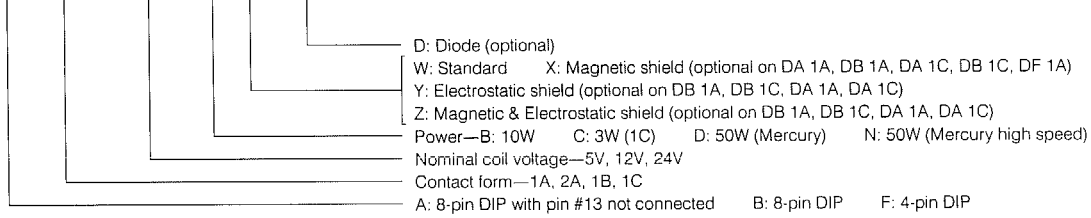
COIL RATINGS (TAMB. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
DB 1 A  BW(D) DA 1 A  BW(D)	5 12 24	500 850 2200	3.8 9.0 18.0	0.5 1.0 2.0	 
DB 2 A  BW(D) DA 2 A  BW(D)	5 12 24	200 500 1750	3.8 9.0 18.0	0.5 1.0 2.0	 
DB 1 B  BW(D) DA 1 B  BW(D)	5 12 24	500 500 1750	3.8 9.0 18.0	0.5 1.0 2.0	 
DB 1 C  CW(D) DA 1 C  CW(D)	5 12 24	200 500 1750	3.8 9.0 18.0	0.5 1.0 2.0	 
DA 1 A  NW(D) <i>(Mercury)</i>	5 12 24	90 360 1440	3.8 9.0 18.0	0.5 1.0 2.0	
DA 1 A  DW(D) <i>(Mercury)</i>	5 12 24	160 500 1440	3.8 9.0 18.0	0.5 1.0 2.0	
DF 1 A  BW(D)	5 12 24	500 850 2200	3.8 9.0 18.0	0.5 1.0 2.0	
DF 1 B  BW(D)	5 12 24	500 500 1750	3.8 9.0 18.0	0.5 1.0 2.0	

Note - (M.S.) : Magnetic Shield (E.S.S.) : Electrostatic Shield

● How to Order

D B 1 A 0 5 B W (D)

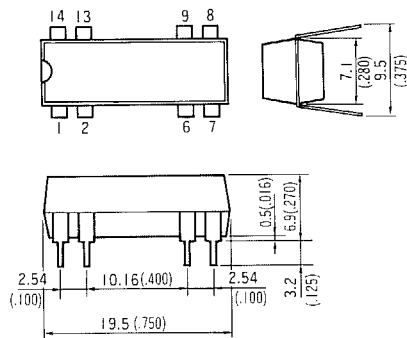


■ CONTACT RATINGS (resistive loads)

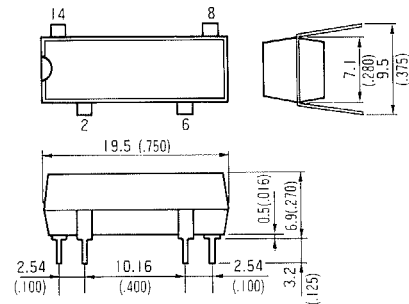
Parameters		DA { 1 A ** BW DB { 2 A ** BW 1 B ** BW	DA { 1 C ** BW DB { 1 C ** BW	DA 1 A ** NW ** DW Mercury	DF 1 A ** BW 1 B ** BW
Power (W) max.		10	3	50	10
Voltage (VDC) max.		200	100	500	200
Switching Current (A) max.		0.5	0.25	2.0	0.5
Carry Current (A) max.		1.0	0.5	2.0	1.0
Contact Resistance (Ω) max. (initial)		0.15	0.15	0.1	0.15 (1A), 0.2 (1B)
Breakdown Voltage (VDC) min.	Open Contact	250	200	1000	250
	Contact to Coil	1500	1500	1500	1500
Insulation Resistance (Ω) min.	Open Contact	10^{10}	10^8	10^{10}	10^{10}
	Contact to Coil	10^{10}	10^{10}	10^{10}	10^{10}
Operate Time (mS) max. (incl. bounce)		1.0	2.0	1.0(NW), 2.0(DW)	1.0
Release Time (mS) max.		0.5	2.5	1.0(NW), 2.0(DW)	0.5
Electrical Life	Low Level	10^8 (10mVDC, 10 μ A)	5×10^8 (10VDC, 4mA)	10^9 (10VDC, 4mA)	10^8 (10mVDC, 10 μ A)
	Rated Load	6×10^5 (20VDC, 0.5A)	2×10^6 (12VDC, 0.25A)	10^6 (50VDC, 1.0A)	6×10^5 (20VDC, 0.5A)

■ DIMENSIONS Unit : mm (inch)

DA • DB Series

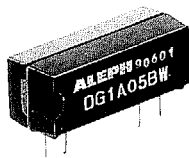


DF Series



* Lead 0.5 × 0.25 (.020 × .010)

SIP Reed Relays



- Ultra miniature size
industry standard footprint (SH series)
- Miniature size
industry standard package (DG series)
- Optional shielding and diodes (DG, SH series)
- UL models available

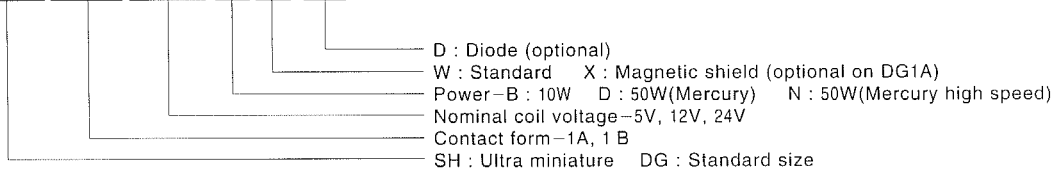
COIL RATINGS (TAMB. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min	Schematics
DG1A12BW (D)	5 12 24	500 850 2200	3.8 9.0 18.0	0.5 1.0 2.0	
DG1B12BW (D)	5 12 24	500 500 1750	3.8 9.0 18.0	0.5 1.0 2.0	
DG1A12NW (D) <i>Mercury</i>	5 12 24	90 360 1440	3.8 9.0 18.0	0.5 1.0 2.0	
DG1A12DW (D) <i>Mercury</i>	5 12 24	160 500 1440	3.8 9.0 18.0	0.5 1.0 2.0	
SH1A12BW (D)	5 12 24	500 1000 1400	3.8 9.0 18.0	0.5 1.0 2.0	

Note—(M.S.) : Magnetic Shield

● How to order

D G 1 A 0 5 B W (D)

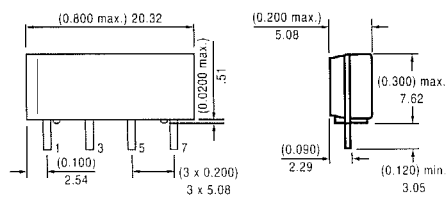


■ CONTACT RATINGS (resistive loads)

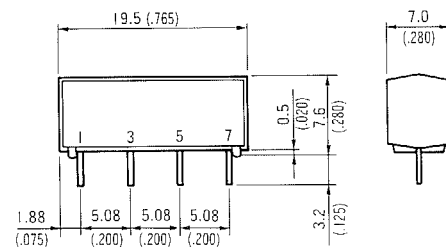
Parameters		D G 1 A * * B W	D G 1 B * * B W	S H 1 A * * B W (D)	D G 1 A * * N W
					D G 1 A * * D W (Mercury)
Power (W) max.			10		50
Voltage (VDC) max.			200		500
Switching Current (A) max.			0.5		2.0
Carry Current (A) max.			1.0		2.0
Contact Resistance (Ω) max. (initial)		0.15	0.20	0.15	0.1
Breakdown Voltage (VDC) min.	Open Contact		250		1000
	Contact to Coil		1500		1500
Insulation Resistance (Ω) min.	Open Contact		10^{10}		10^9 (NW), 10^{10} (DW)
	Contact to Coil		10^{10}		10^{10}
Operate Time (mS) max. (incl. bounce)			1.0		1.0 (NW), 2.0 (DW)
Release Time (mS) max.			0.5		1.0 (NW), 2.0 (DW)
Electrical life	Low Level		10^6 (10mVDC, 10 μ A)		10^6 (10VDC, 4mA)
	Rated Load		6 X 10^5 (20VDC, 0.5A)	10^6 (20VDC, 0.5A)	10^6 (50VDC, 1.0A)

■ DIMENSIONS Unit : mm (inch)

SH Series

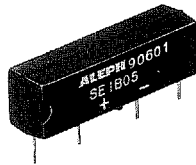
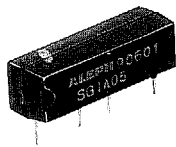


DG Series



* Lead 0.5 x 0.25 (.020 x .010)

SIP Reed Relays



- Various contact configurations
- Some models offer VDE compliance, i.e., 4000 VAC isolation
- Optional shielding and diodes
- UL models available

■ COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
SG 1 A □ □ AWJ(D)	5 12 24	500 850 2200	3.8 9.0 18.0	0.5 1.0 2.0	
SG 1 A □ □ AWR(D) □ □ RWR(D)	5 12 24	500 (350) 850 2200 () = RWR	3.8 9.0 18.0	0.5 1.0 2.0	
SG 1 C □ □ FWS(D)	5 12 24	200 500 2000	3.8 9.0 18.0	0.5 1.0 2.0	
SG 1 A □ □ EWR(D) <i>Mercury</i>	5 12 24	150 500 1440	3.8 9.0 18.0	0.5 1.0 2.0	
SE 1 B □ □ AXJ	5 12	500 500	3.8 9.0	0.5 1.0	
SE 1 B □ □ AXP	5 12	500 500	3.8 9.0	0.5 1.0	

Note — (M.S.) : Magnetic shield

● How to Order

SG1A05AWJ(D)

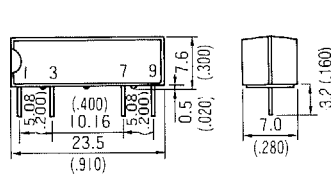
D : Diode (optional)
W : Standard X : Magnetic shield (optional on SG series, standard on SE series)
Power— A : 10W F : 3W (1C) E : 50W (Mercury)
Nominal coil voltage— 5V, 12V, 24V
Contact form— 1A, 1B, 1C

■ CONTACT RATINGS (resistive loads)

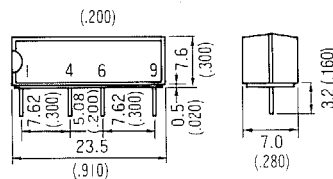
Parameters		SG1A* *AWJ	SG1A* *AWR	SG1A* *RWR	SG1C* *FWS	SG1A* *EWR Mercury	SE1B* *AXJ (* *AXP)
Power (W) max.		10	10	10	3	50	10
Voltage (VDC) max.		200	200	500	100	500	200
Switching Current (A) max.		0.5	0.5	0.5	0.25	2.0	0.5
Carry Current (A) max.		1.0	1.0	1.0	0.5	2.0	1.0
Contact Resistance (Ω) max. (initial)		0.2	0.2	0.2	0.2	0.1	0.2
Breakdown Voltage (VDC) min.	Open Contact	250	250	1000	200	2000	250
	Contact to Coil	1500	4000AC	4000AC	4000AC	4000AC	1500 (2500)
Insulation Resistance (Ω) min.	Open Contact	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ⁸	10 ¹⁰	10 ¹⁰
	Contact to Coil	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ⁹	10 ¹⁰
Operate Time (mS) max. (incl. bounce)		1.0	1.0	1.0	2.0	2.0	0.5
Release Time (mS) max.		0.5	0.5	0.5	2.5	2.0	1.0
Electrical Life	Low Level	10 ⁶ (10mVDC, 10μA)	10 ⁶ (10mVDC, 10μA)	10 ⁶ (10mVDC, 10μA)	5×10 ⁶ (10mVDC, 10μA)	10 ⁶ (10VDC, 4mA)	5×10 ⁷ (10VDC, 4mA)
	Rated Load	6×10 ⁵ (20VDC, 0.5A)	6×10 ⁵ (20VDC, 0.5A)	5×10 ⁵ (500VDC, 20mA)	2×10 ⁶ (12VDC, 0.25A)	10×10 ⁶ (500VDC, 20mA)	5×10 ⁵ (20VDC, 0.5A)

■ DIMENSIONS Unit : mm (inch)

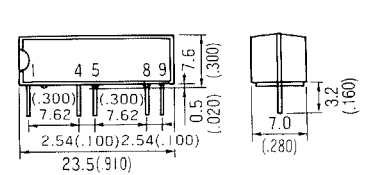
SG1A**AWJ



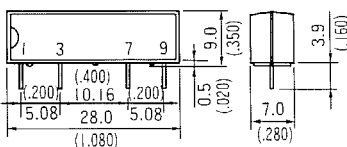
SG1A**AWR, RWR, EWR



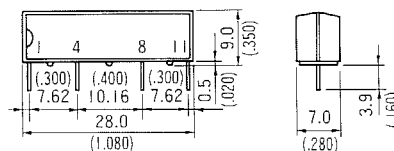
SG1C**FWS



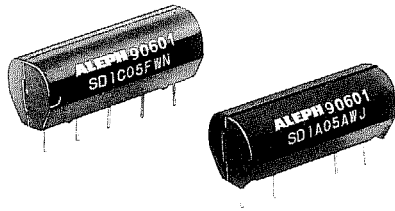
SE1B**AXJ



SE1B**AXP



* Lead 0.5 × 0.25 (.020 × .010)



- Industry standard footprint
- High power contacts on some models
- UL models available

How to Order

SD 1 A 0 5 A W J

J For Form A; N For Form C
 W: Standard X: Magnetic shield (optional)
 Y: Electrostatic shield (optional on SD 1A)
 Z: Magnetic & Electrostatic shield (optional on SD 1A)
 Power—A: 10W C: 50W D: 25W (high voltage) F: 3W (1C)
 Nominal coil voltage—5V, 12V, 24V
 Contact form—1A, 1C

COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
SD 1 A ☐ ☐ A W J ☐ ☐ C W J	5	500	3.8	0.5	
	12	500	9.0	1.0	
	24	2000	18.0	2.0	
SD 1 A ☐ ☐ D W J	5	500	3.8	0.5	
	12	500	9.0	1.0	
	24	2000	18.0	2.0	
SD 1 C ☐ ☐ F W N	5	200	3.8	0.5	
	12	500	9.0	1.0	
	24	2000	18.0	2.0	

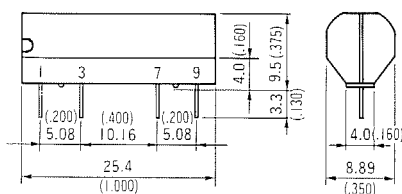
(MS) : Magnetic shield

CONTACT RATINGS (resistive loads)

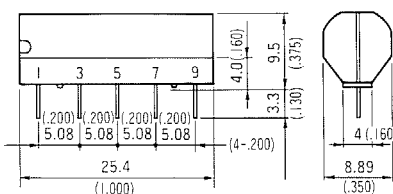
Parameters	SD 1 A ** A W J	SD 1 A ** C W J	SD 1 A ** D W J	SD 1 C ** F W N
Power (W) max.	10	50	25	3
Voltage (VDC) max.	200	200	1000	100
Switching Current (A) max.	0.5	1.0	1.0	0.25
Carry Current (A) max.	1.0	2.0	2.0	0.5
Contact Resistance (Ω) max. (initial)	0.2	0.2	0.2	0.2
Breakdown Voltage (VDC) min.	Open Contact	250	300	1500
	Contact to Coil	1500	1500	1500
Insulation Resistance (Ω) min.	Open Contact	10^{10}	10^{10}	10^{10}
	Contact to Coil	10^{10}	10^{10}	10^{10}
Operate Time (mS) max. (incl. bounce)	1.0	1.0	1.0	2.0
Release Time (mS) max.	0.5	0.5	0.5	2.5
Electrical Life	Low Level	10^8 (10mVDC, 10 μ A)	—	5×10^5 (10VDC, 4mA)
	Rated Load	6×10^5 (20VDC, 0.5A)	5×10^5 (200VDC, 0.25A)	2×10^5 (1000VDC, 10mA)

DIMENSIONS Unit : mm (inch)

SD1A

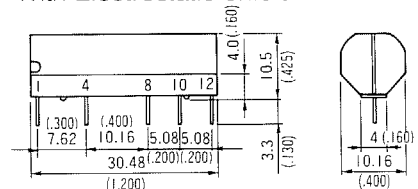


SD1C



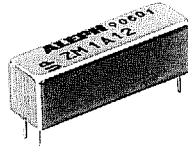
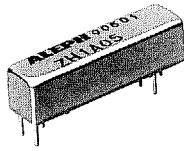
SD1A

With Electrostatic Shield



* Lead 0.5 $\times$ 0.25 (0.020 $\times$ 0.010)

Ultra Compact Reed Relays



- Ultra compact package
- Coaxial shields on some models
- Metal can for interference immunity
- Various contact configurations

■ COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
Z A 1 A □ □ A Z	5 12	150 680	3.8 9.0	0.5 1.0	
Z H 1 A □ □ A Z (for RF applications)	5 12	250 1200	3.8 9.0	0.5 1.0	
Z C 1 C □ □ C Z	5 12	100 250	3.8 9.0	0.5 1.0	
Z A 1 A □ □ N Z <i>Mercury</i>	5 12	100 360	3.8 9.0	0.5 1.0	
Z H 1 A □ □ N Z (for RF applications) <i>Mercury</i>	5 12	100 360	3.8 9.0	0.5 1.0	
Z F 1 A □ □ N X <i>Mercury</i>	5 12	350 1400	4.0 9.0	0.5 1.0	
Z M 1 A □ □ N Z (for 0~200Hz operation) <i>Mercury</i>	5 12	100 500	3.8 9.0	0.5 1.0	

Notes — (M.S.): Magnetic shield (E.S.S.): Electrostatic shield

● How to Order

Z A 1 A 0 5 N Z

X : Magnetic shield (standard on ZF series)
 Z : Magnetic & Electrostatic shield (standard on ZA, ZC, ZH, ZM series)
 Power—A : 10W C : 3W (1C) N : 50W (Mercury)
 Nominal coil voltage—5V, 12V
 Contact form—1A, 1C
 ZA : General applications ZC : Contact form—1C ZF : Magnetic shield only
 ZH : RF applications ZM : Stable high speed operation between 0 to 200Hz

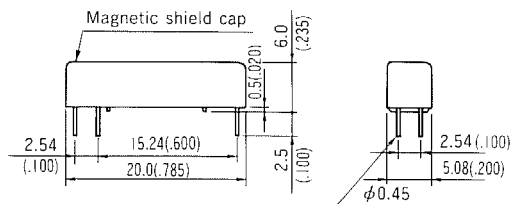
■ CONTACT RATINGS (resistive loads)

Parameters	ZA1A**AZ ZH1A**AZ	ZC1C**CZ	ZA1A**NZ (Mercury)	ZH1A**NZ (Mercury)	ZF1A**NX (Mercury)	ZM1A**NZ (Mercury)
Power (W) max.	10	3	50			
Voltage (VDC) max.	200	100	1000			
Switching Current (A) max.	0.5	0.25	2.0			
Carry Current (A) max.	1.0	0.5	2.0			
Contact Resistance (Ω) max. (initial)	0.15	0.15	0.1			
Breakdown Voltage (VDC) min.	Open Contact	250	1000			
	Contact to Coil	500	1000			
Insulation Resistance (Ω) min.	Open Contact	10^{10}	10^{10}			
	Contact to Coil	10^{10}	10^{10}			
Operate Time (mS) max. (incl. bounce)	1.0	2.0	1.0 (at 10Hz)	1.3 (at 10Hz)	1.0 (at 10Hz)	1.5 (at 0~200Hz)
Release Time (mS) max.	0.5	2.5	1.0 (at 10Hz)	1.3 (at 10Hz)	1.0 (at 10Hz)	1.5 (at 0~200Hz)
Electrical Life	Low Level	10^6 (10mVDC, 10 μ A)	10^9 (10VDC, 4mA)			
	Rated Load	6×10^5 (20VDC, 0.5A)	10^6 (50VDC, 1.0A)			

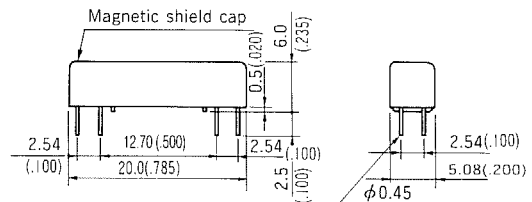
► See next page for RF characteristics (ZH1A**AZ, ZH1A**NZ)

■ DIMENSIONS Unit : mm (inch)

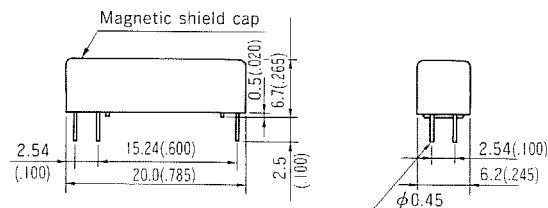
ZA Series



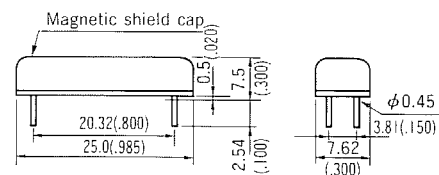
ZH•ZC Series



ZM Series



ZF Series

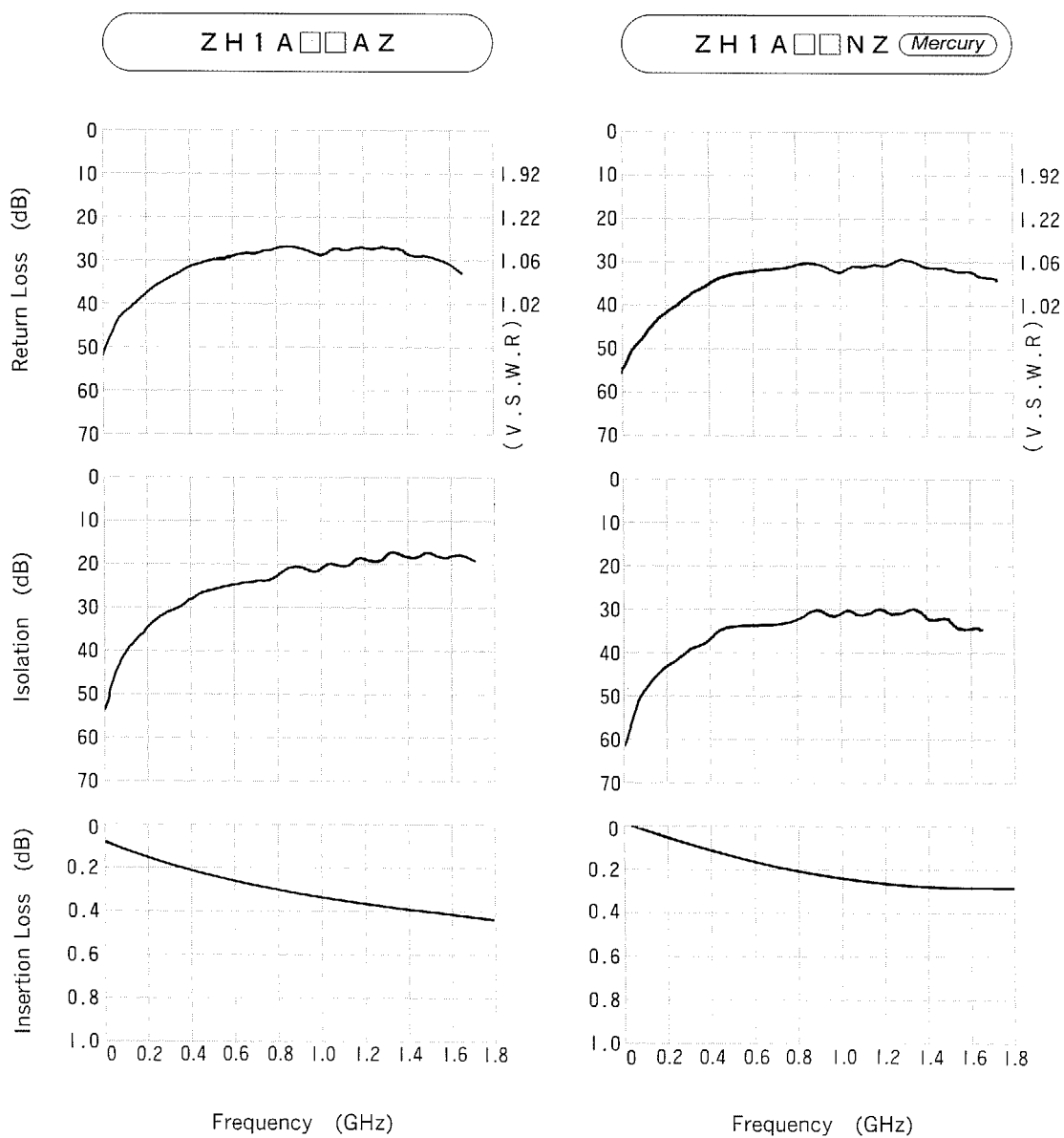


* Lead dia. 0.45 (.018)

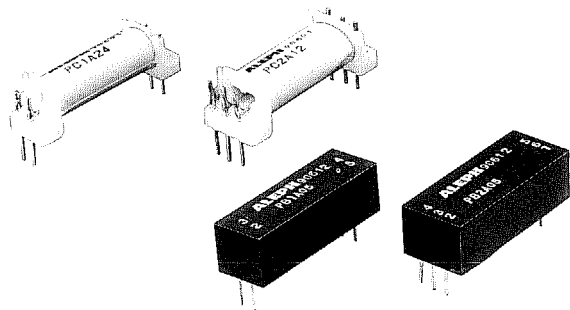
■ **RF CHARACTERISTICS** (at 400MHz, characteristic impedance=50Ω)

Parameters	ZH1A**AZ	ZH1A**NZ <i>Mercury</i>
V. S. W. R.	1.07 max.	1.05 max.
Isolation	27 dB min.	35 dB min.
Insertion Loss	0.3 dB max.	0.3 dB max.

■ **RF CHARACTERISTIC CURVES**



Econo/open Reed Relays



- Open frame and encased package
- Industry standard package style
- Various contact configurations
- Variety of options

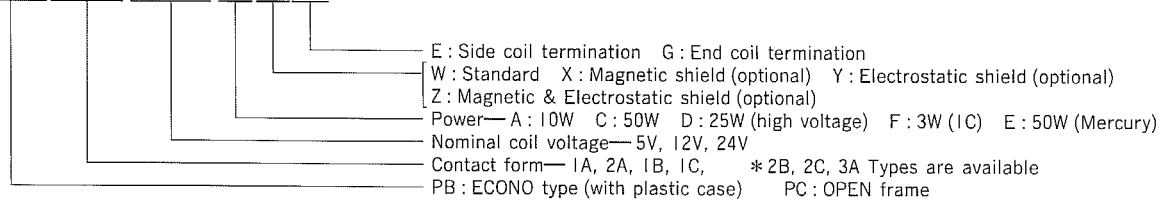
■ COIL RATINGS (Tamb. = +20°C)

Part Number		Nominal Voltage (VDC)	Coil Resistance (Ω) ±10%	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
ECONO	OPEN					
PB1A□□AW□ □□CW□ □□DW□	PC1A□□AW□ □□CW□	5 12 24	250(500) 500 2000 * () : AW type	3.8 9.0 18.0	0.5 1.0 2.0	
PB2A□□AW□ □□CW□ □□DW□	PC2A□□AW□ □□CW□	5 12 24	200 440 1750	3.8 9.0 18.0	0.5 1.0 2.0	
PB1B□□AW□	—	5 12 24	200 440 1750	3.8 9.0 18.0	0.5 1.0 2.0	
PB1C□□FW□	PC1C□□FW□	5 12 24	500 500 2000	3.8 9.0 18.0	0.5 1.0 2.0	
PB1A□□EW□ <i>Mercury</i>	PC1A□□EW□ <i>Mercury</i>	5 12 24	250 500 2000	3.8 9.0 18.0	0.5 1.0 2.0	
PB2A□□EW□ <i>Mercury</i>	PC2A□□EW□ <i>Mercury</i>	5 12 24	100 500 1500	3.8 9.0 18.0	0.5 1.0 2.0	

Notes — (M.S.) : Magnetic shield (E.S.S.) : Electrostatic shield

● How to Order

P B 1 A 0 5 A W E

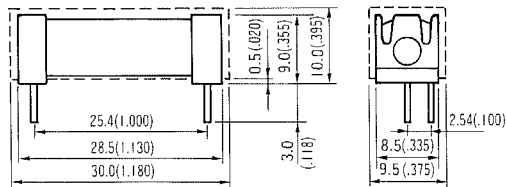


■ CONTACT RATINGS (resistive loads)

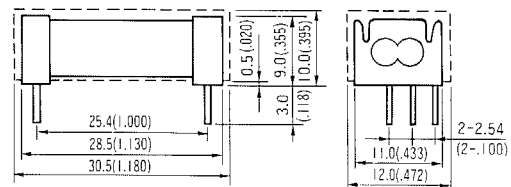
Parameters		PB(PC)1A***AW 2A***AW 1B***AW	PB(PC)1A***CW 2A***CW	PB1A***DW 2A***DW	PB(PC)1C***FW	PB(PC)1A***EW 2A***EW Mercury
Power (W) max.		10	50	25	3	50
Voltage (VDC) max.		200	200	1000	100	500
Switching Current (A) max.		0.5	1.0	1.0	0.25	2.0
Carry Current (A) max.		1.0	2.0	2.0	0.5	2.0
Contact Resistance (Ω) max. (initial)		0.2	0.2	0.2	0.2	0.1
Breakdown Voltage (VDC) min.	Open Contact	250	300	1500	200	1000
	Contact to Coil	500	500	1500	500	500
Insulation Resistance (Ω) min.	Open Contact	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ⁸	10 ¹⁰
	Contact to Coil	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰
Operate Time (mS) max. (incl. bounce)		1.0	1.0	1.0	2.0	3.0
Release Time (mS) max.		0.5	0.5	0.5	2.5	2.0
Electrical Life	Low Level	10 ⁸ (10mVDC, 10μA)	10 ⁷ (10VDC, 4mA)	5×10 ⁷ (10VDC, 4mA)	5×10 ⁶ (10VDC, 4mA)	10 ⁹ (10VDC, 4mA)
	Rated Load	6×10 ⁶ (20VDC, 0.5A)	5×10 ⁵ (200VDC, 1.0A)	2×10 ⁶ (1000VDC, 10mA)	2×10 ⁶ (12VDC, 0.25A)	10 ⁶ (50VDC, 1.0A)

■ DIMENSIONS Unit : mm (inch)

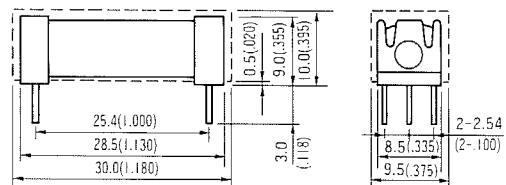
PB(PC)1A



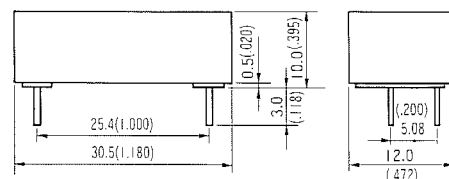
PB(PC)2A



PB(PC)1C



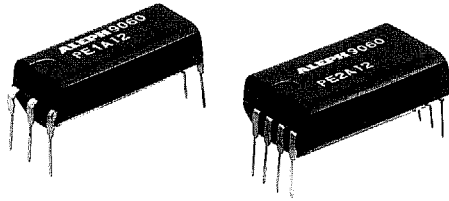
PB1B



* Lead 0.5 × 0.25 (.020 × .010)

* : Dimensions of PB series

TC Reed Relays



- Transfer molded package
- Standard footprint
- Various contact configurations
- Optional shielding

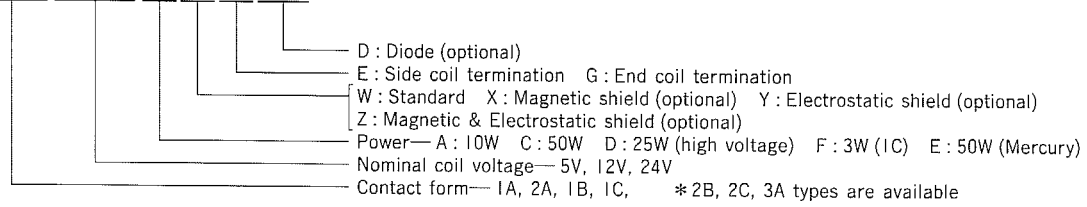
COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
PE 1 A □ □ AWE □ □ CWE □ □ DWE	5 12 24	500 (250) 2000 (500) 4000 (2000) * (): DW type	3.8 9.0 18.0	0.5 1.0 2.0	
PE 2 A □ □ AWE □ □ CWE □ □ DWE	5 12 24	200 440 1750	3.8 9.0 18.0	0.5 1.0 2.0	
PE 1 B □ □ AWE □ □ CWE	5 12 24	200 440 1750	3.8 9.0 18.0	0.5 1.0 2.0	
PE 1 C □ □ FWE	5 12 24	500 2000 4000	3.8 9.0 18.0	0.5 1.0 2.0	
PE 1 A □ □ EWE <i>Mercury</i>	5 12 24	250 500 2000	3.8 9.0 18.0	0.5 1.0 2.0	
PE 2 A □ □ EWE <i>Mercury</i>	5 12 24	50 250 1000	3.8 9.0 18.0	0.5 1.0 2.0	

Notes — (M.S.): Magnetic shield (E.S.S.): Electrostatic shield

● How to Order

PE 1 A 0 5 A W E (D)

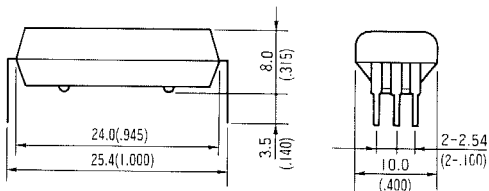


■ CONTACT RATINGS (resistive loads)

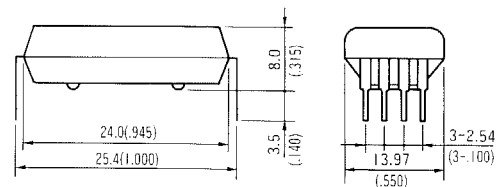
Parameters		PE 1 A ** A W 2 A ** A W 1 B ** A W	PE 1 A ** C W 2 A ** C W 1 B ** C W	PE 1 A ** D W 2 A ** D W	PE 1 C ** F W	PE 1 A ** E W 2 A ** E W Mercury
Power (W) max.		10	50	25	3	50
Voltage (VDC) max.		200	200	1000	100	500
Switching Current (A) max.		0.5	1.0	1.0	0.25	2.0
Carry Current (A) max.		1.0	2.0	2.0	0.5	2.0
Contact Resistance (Ω) max. (initial)		0.15	0.15	0.15	0.2	0.1
Breakdown Voltage (VDC) min.	Open Contact	250	300	1500	200	1000
	Contact to Coil	1500	1500	1500	1500	1500
Insulation Resistance (Ω) min.	Open Contact	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ⁸	10 ¹⁰
	Contact to Coil	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰
Operate Time (mS) max. (incl. bounce)		1.0	1.0	1.0	2.0	3.0
Release Time (mS) max.		0.5	0.5	0.5	2.5	2.0
Electrical Life	Low Level	10 ⁸ (10mVDC, 10μA)	10 ⁷ (10VDC, 4mA)	5 × 10 ⁷ (10VDC, 4mA)	5 × 10 ⁶ (10VDC, 4mA)	10 ⁹ (10VDC, 4mA)
	Rated Load	6 × 10 ⁶ (20VDC, 0.5A)	5 × 10 ⁶ (50VDC, 1.0A)	2 × 10 ⁶ (1000VDC, 10mA)	2 × 10 ⁶ (12VDC, 0.25A)	10 ⁶ (50VDC, 1.0A)

■ DIMENSIONS Unit : mm (inch)

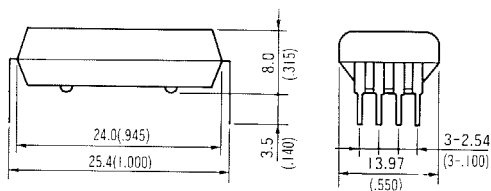
PE1A



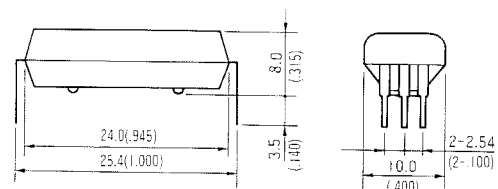
PE2A



PE1B

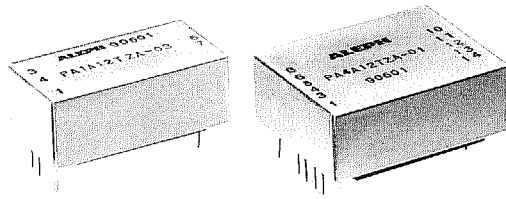


PE1C



* Lead 0.5 × 0.25 (.020 × .010) thickness

Low Thermal Reed Relays



- Thermal EMF lower than $1\mu V$
- High insulation resistance
- Industry standard package
- Various contact configurations
- Standard E. S. & M. shielding

COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance ($\Omega \pm 10\%$)	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
PA 1 A □ □ T Z A	5 12	500 2000	4.0 10.0	0.5 1.0	
PA 2 A □ □ T Z A	5 12	500 2000	4.0 10.0	0.5 1.0	
PA 3 A □ □ T Z A	5 12	300 2000	4.0 10.0	0.5 1.0	
PA 4 A □ □ T Z A	5 12	500 2000	4.0 9.6	0.7 1.2	

Notes — (M.S.): Magnetic shield (E.S.S.): Electrostatic shield

● How to Order

P A 1 A 0 5 T Z A

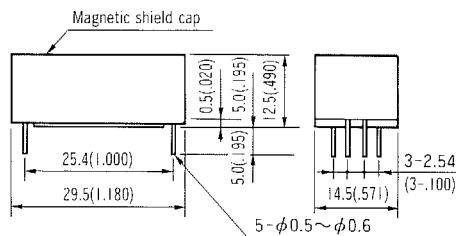
Z : Magnetic & Electrostatic shield (standard)
Nominal coil voltage—5V, 12V
Contact form—1A, 2A, 3A, 4A

■ CONTACT RATINGS (resistive loads)

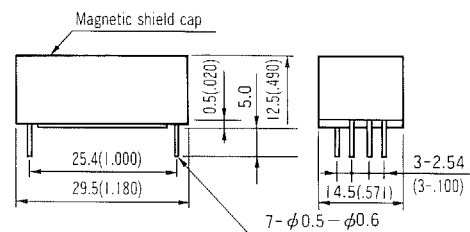
Parameters		PA1A**TZA	PA2A**TZA	PA3A**TZA	PA4A**TZA
Power (W) max.		10			
Voltage (VDC) max.		200			
Switching Current (A) max.		0.5			
Carry Current (A) max.		2.0			
Contact Resistance (Ω) max. (initial)		0.15			
Breakdown Voltage (VDC) min.	Open Contact	500	250		
	Contact to Coil	1000			
Insulation Resistance (Ω) min.	Open Contact	10 ¹¹			
	Contact to Coil	10 ¹¹			
Operate Time (mS) max. (incl. bounce)		1.5			2.5
Release Time (mS) max.		1.0			
Electrical Life	Low Level	5 × 10 ⁷ (10VDC, 4mA)			
	Rated Load	5 × 10 ⁴ (200VDC, 50mA)			
Thermal EMF Ratings max. (30 minutes after coil energization)		1μV between pin # 6 and 7	1μV between pin # 6 and 7 (pin # 2-3 should be connected)	1μV between pin # 7 and 8, 8 and 9 (pin # 3-4, 2-3 should be connected)	1μV between pin # 11 and 12, 13 and 14(pin # 5-6, 4-5, 3-4 should be connected)

■ DIMENSIONS Unit : mm (inch)

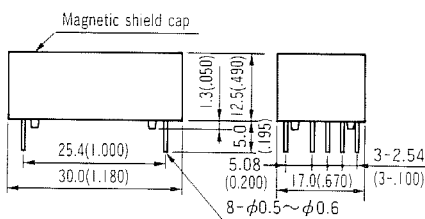
PA1A



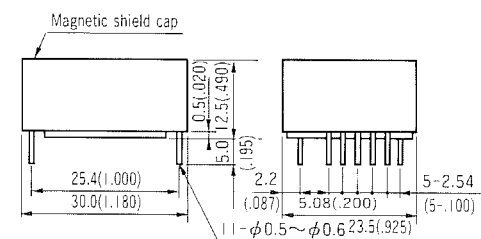
PA2A



PA3A

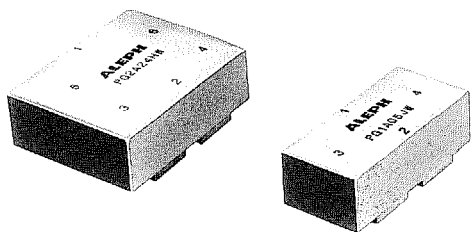


PA4A



* Lead dia. 0.5~0.6 (.020~.025)

High Voltage Reed Relays



- High voltage contacts
- High Coil-to-Contact breakdown
- High Insulation Resistance
- PCB mountable
- Various contact configurations

■ COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematics
PG 1 A□□□W	5 12 24	35 140 530	3.8 9.0 18.0	0.5 1.0 2.0	
PG 1 B□□□W	5 12 24	35 140 530	3.8 9.0 18.0	0.5 1.0 2.0	
PG 2 A□□□W	5 12 24	17.5 70 280	3.8 9.0 18.0	0.5 1.0 2.0	
PG 2 B□□□W	5 12 24	17.5 70 280	3.8 9.0 18.0	0.5 1.2 2.0	
PG 1 D□□□W	5 12 24	17.5 70 280	3.8 9.0 18.0	0.5 1.2 2.0	

● How to Order

PG1A05HW

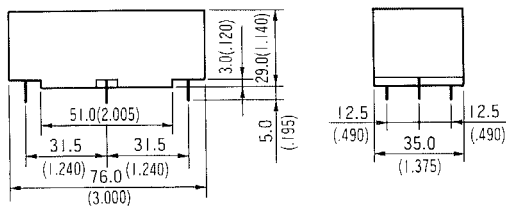
Breakdown voltage(open contact)—H : 5KV J : 10KV K : 15KV M : 10KV(high power-300W)
 Nominal coil voltage—5V, 12V, 24V
 Contact form—1A, 1B, 2A, 2B, 1D(1A & 1B type)

■ CONTACT RATINGS (resistive loads)

Parameters		PG****HW	PG****JW	PG****KW	PG****MW
Power (W) max.		25	25	25	300
Voltage (VDC) max.		2 K	3.5 K	3.5 K	6 K
Switching Current (A) max.		0.5	0.5	0.5	3.0
Carry Current (A) max.		3.0	3.0	3.0	5.0
Contact Resistance (Ω) max. (initial)		0.1	0.1	0.1	0.2
Breakdown Voltage (VDC) min.	Open Contact	5 K	10 K	15 K	10 K
	Contact to Coil	10 K	10 K	15 K	15 K
Insulation Resistance (Ω) min.	Open Contact	10^{10}	10^{10}	10^{10}	10^{10}
	Contact to Coil	10^{10}	10^{10}	10^{10}	10^{10}
Operate Time (mS) max. (incl. bounce)		5.5	5.5	5.5	6.5
Release Time (mS) max.		3.5	3.5	3.5	3.0
Electrical Life	Low Level	10^7 (10VDC, 4mA)	10^7 (10VDC, 4mA)	10^7 (10VDC, 4mA)	5×10^7 (10VDC, 4mA)
	Rated Load	2×10^5 (2KVDC, 2mA)	5×10^5 (3.5KVDC, 1mA)	5×10^5 (3.5KVDC, 1mA)	5×10^5 (5KVDC, 50mA)

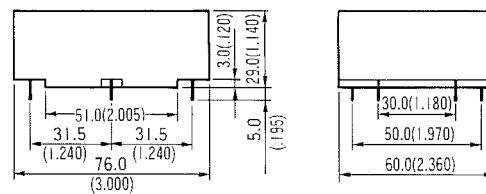
■ DIMENSIONS Unit : mm (inch)

PG1A, 1B



* Coil lead dia. (Pin # 1, 2).....0.6 (.025)
 SW lead dia. (Pin # 3, 4).....1.0 (.040)

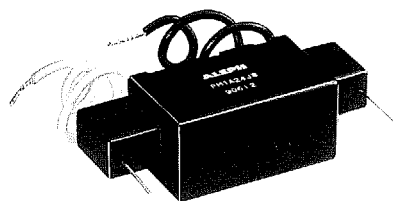
PG2A, 2B, 1D



* Coil lead dia. (Pin # 1, 2).....0.6 (.025)
 SW lead dia. (Pin # 3, 4, 5, 6).....1.0 (.040)

High Voltage Reed Relays

PM Series



- High voltage contacts
- Coil terminated with insulated wires

How to Order

PM 1 A 0 5 H W

Breakdown voltage(open contact)—H : 5KV J : 10KV K : 15KV
Nominal coil voltage—5V, 12V, 24V
Contact form—1A

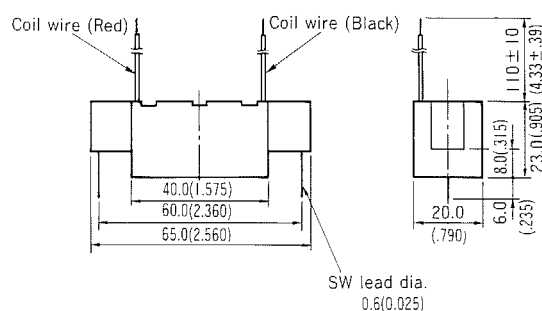
COIL RATINGS (Tamb. = +20°C)

Part Number	Nominal Voltage (VDC)	Coil Resistance (Ω) $\pm 10\%$	Operate Voltage (VDC) max.	Release Voltage (VDC) min.	Schematic
PM 1 A □ □ □ W	5	20	3.8	0.5	
	12	80	9.0	1.0	
	24	300	18.0	2.0	

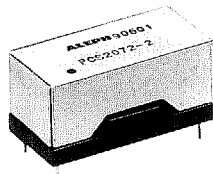
CONTACT RATINGS (resistive loads)

Parameters		PM 1 A * * - HW	PM 1 A * * - JW	PM 1 A * * - KW
Power (W) max.		25	25	50
Voltage (VDC) max.		2 K	3.5 K	10 K
Switching Current (A) max.		0.5	0.5	0.5
Carry Current (A) max.		3.0	3.0	3.0
Contact Resistance (Ω) max. (initial)		0.1	0.1	0.1
Breakdown Voltage (VDC) min.	Open Contact	5 K	10 K	15 K
	Contact to Coil	10 K	10 K	15 K
Insulation Resistance (Ω) min.	Open Contact	10^{11}	10^{11}	10^{11}
	Contact to Coil	10^{11}	10^{11}	10^{11}
Operate Time (mS) max. (incl. bounce)		5.5	5.5	5.5
Release Time (mS) max.		3.5	3.5	3.5
Electrical Life	Low Level	10^7 (10VDC, 4mA)	10^7 (10VDC, 4mA)	10^7 (10VDC, 4mA)
	Rated Load	2×10^5 (2KVDC, 2mA)	5×10^5 (3.5KVDC, 1mA)	5×10^5 (10KVDC, 1mA)

DIMENSIONS Unit : mm (inch)



BOTTOM VIEW



- For telephone line sensing
- High Coil-to-Contact insulation 4000 VAC for European safety regulations
- Choice of coil resistances

■ COIL RATINGS (Tamb. = +20°C)

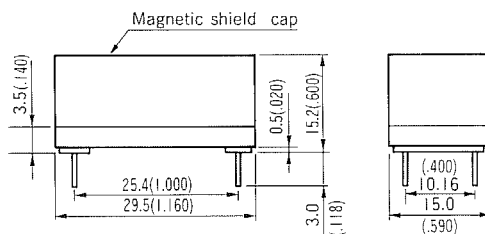
Part Number	Coil Resistance (Ω) $\pm 10\%$	Nominal Current (mA)	Operate Current (mA) max.	Release Current (mA) min.	Max Coil Current (mA) max.	Schematic
1	6			2.0		
PCS2072-2	8	14.0	13.5	2.5	300	
3	10			3.0		

Note — (M. S.) : Magnetic shield

■ CONTACT RATINGS (resistive loads)

Parameters		PCS2072-*
Power (W) max.		5
Voltage (VDC) max.		100
Switching Current (A) max.		0.5
Carry Current (A) max.		1.0
Contact Resistance (Ω) max. (initial)		0.2
Breakdown Voltage (VDC) min.	Open Contact	150
	Contact to Coil	4000AC
Insulation Resistance (Ω) min.	Open Contact	10^{10}
	Contact to Coil	10^{10}
Operate Time (mS) max. (incl. bounce)		1.0
Release Time (mS) max.		0.5
Electrical Life	Low Level	3×10^7 (10VDC, 4mA)
	Rated Load	10^6 (50VDC, 0.1A)

■ DIMENSIONS Unit : mm (inch)



* Lead dia. 0.5~0.6 (.020~.025)