

Reed Relays

7

... and how to choose the optimum design:

It's easy. A typical reed relay part number is made up of Series designation followed by (A) Contact Form, (B) Coil Design designation and (C) Options listed in alphabetical order. See part number example immediately below and note how **A B C** data is clearly marked by red bullets in each of the product charts. Choose the package configuration that is right for your application, referring if necessary to Chart B thumbnail product descriptions. Note that the choices available to you range from standard contact specs and traditional coil resistances to the new EI&S low power input coil designs.

RELEAYS

DL	1A	05	D
SERIES	A CONTACT FORM	B COIL DESIGN	C OPTIONS

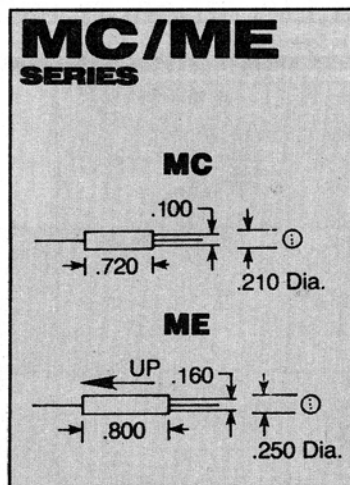
CONTACT ARRANGEMENT DEFINITIONS

1 Form A = SPST	1 Form C = SPDT
2 Form A = DPST	2 Form C = DPDT
3 Form A = 3PST	3 Form C = 3PDT
1 Form B = SPST/NC	1 Form CG = SPDT
2 Form B = DPST/NC	1 Form CH = SPDT
	1 Form CJ = SPDT

NOTES TO ALL

1. Coil designs at 25°C.
2. Pull-in is 80% max, drop-out 10% min of nominal coil voltage.
3. All "footprints" top view.
4. All mercury-wet types (—) must be mounted within 30% of vertical.

M TYPE RELAYS



B Nom Coil Voltage	A CONTACT FORM			
	1A (Fig. 1)		1C (Fig. 2)	
	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)
05	750	33	240	100
12	3800	38	1200	120
24	5500	105	5000	115

C OPTIONS:

- L — Leads formed for 1" x 0.1" grid
- P — Insulated case (clear sleeve)
- S — Electrostatic Shield

Fig. 1 (1 Form A)

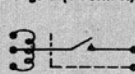


Fig. 2 (1 Form C)

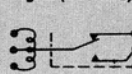
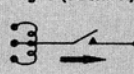
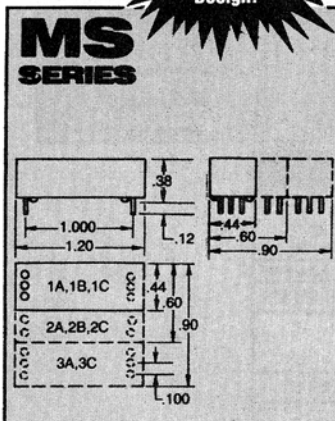


Fig. 3 (1 Form A)



NEW!
Low Power Coil Design!



MS Series

B Nom Coil Voltage	A CONTACT FORM											
	1A (Fig. 4)		2A (Fig. 5)		3A (Fig. 6)		1B (Fig. 7)		2B (Fig. 8)		1C (Fig. 9)	
	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)
05	100	250	85	294	65	385	100	250	85	294	100	250
05X	1000	25	500	50	333	75	1000	25	500	50	1000	25
12	500	288	440	327	340	424	500	288	440	327	500	288
12X	2400	60	2400	60	2000	72	2400	60	2400	60	2400	60
24	2000	288	1750	329	1350	427	2000	288	1750	329	2000	288
24X	4800	120	4800	120	4800	120	4800	120	4800	120	4800	120

"X" DESIGNATION: NEW AND IMPORTANT! "X" INDICATES "OPTIMUM (MIN. POWER) COIL DESIGN."

- C OPTIONS: C — Coil on Pins 1, 2 D — Diode (See footprints for polarity) H — Magnetic Shield R — IR/10¹¹ Ω R1 — IR/10¹² Ω S — Electrostatic Shield (See footprint for pin designation)

Fig. 4 (1 Form A)

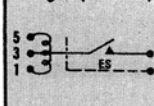


Fig. 5 (2 Form A)



Fig. 6 (3 Form A)



Fig. 7 (1 Form B)

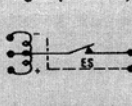


Fig. 8 (2 Form B)



Fig. 9 (1 Form C)

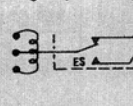


Fig. 10 (2 Form C)

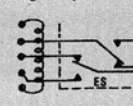
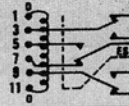
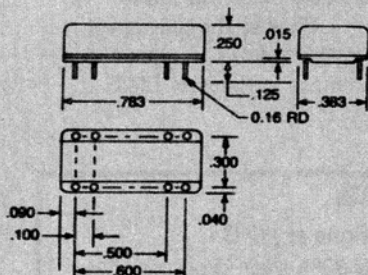


Fig. 11 (3 Form C)



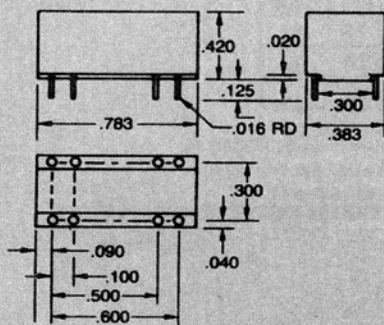
D/DM SERIES

Note: D/DM Series tables at right contain, in addition to current designs, some designs that are no longer standard but are available on special order.



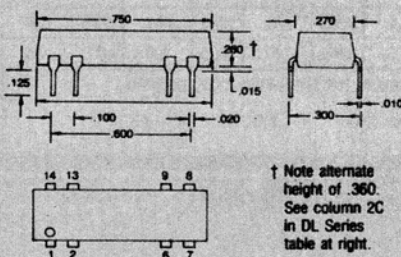
DA SERIES

NEW!
Low Power Coil
Design!



DL/DH SERIES

NEW!
Low Power Coil
Design!



D Series

B Nom Coil Voltage	A CONTACT FORM									
	1A (Fig. 28, 35)		1B (Fig. 29, 36)		1C (37)		1CG (31)		2A (Fig. 33, 38)	
	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)
05 *	500	50 (Fig. 35)	500	50 (Fig. 36)	200	125 (Fig. 37)	200	125 (Fig. 31)	200	125 (Fig. 38)
05C †	500	50 (Fig. 28)	500	50 (Fig. 29)	200	125 (Fig. 30)	200	125 (Fig. 33)		
12 *	1000	144	1000	144	750	190	800	180	200	720
12C †	1000	144	1000	144	750	190	800	180		
24 *	4000	144	4000	144	3000	192	3000	192	800	180
24C †	4000	144	4000	144	3000	192	3000	192		

* Coil on Pin 6 and 13. † Suffix C indicates coil on Pins 2 and 6.
OPTIONS: D — Diode (Pins 2+, 6) (Except R — IR/10¹¹ Ω S — Electrostatic Shield for (*) Diode across Pins 6+, 13) R1 — IR/10¹² Ω (Pin 9; except for 2C/Pin 4)

DA Series

B Nom Coil Voltage	A CONTACT FORM							
	1A (Fig. 28)		1B (Fig. 29)		1C (30)		2A (Fig. 33)	
	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)
05	1000	25	1000	25	1000	25	750	33
12	2400	60	2400	60	2400	60	1800	80
24	4800	120	4800	120	4800	120	3600	160

OPTIONS: Same as Series D above.

Fig. 28 (1 Form A)

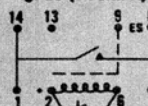
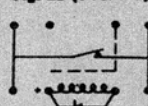


Fig. 29 (1 Form B)



Note that Footprints on this page refer to D/DM and DA Series at top of page and to DL/DH Series at bottom.

Fig. 30 (1 Form C, C1)

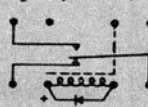


Fig. 31 (1 Form C2)

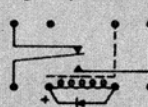


Fig. 32 (1 Form C3)

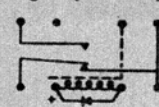


Fig. 33 (1 Form A)



Fig. 34 (2 Form A)

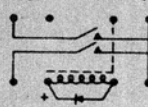


Fig. 35 (2 Form C)

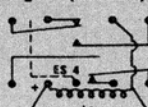


Fig. 36 (1 Form A)



Fig. 37 (1 Form A)



Fig. 38 (1 Form B)



Fig. 39 (1 Form C)

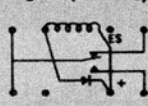


Fig. 40 (2 Form A)



Fig. 41 (1 Form A)



DL Series

B Nom Coil Voltage	A CONTACT FORM									
	1A (Fig. 28)		1B (Fig. 29)		1C (30)		1CG (31)		2A* (Fig. 33)	
	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)	R (Ω)	Pwr(mW)
05	500	50	200	125	200	125	200	125	SEE D SERIES	
05X	1000	25	1000	25	1000	25	750	33		
12	500	288	600	240	600	240	500	288		
12X	2400	60	2400	60	2400	60	1800	80	† .360 HT.	
24	1500	384	1500	384	1500	384	2200	260		
24X	4800	120	4800	120	4800	120	3600	160	† .360 HT.	

OPTIONS: D — Diode S — Electrostatic Shield R — IR/10¹¹ Ω R1 — IR/10¹² Ω *D&S N/A

"X" DESIGNATION: NEW AND IMPORTANT! "X" INDICATES OPTIMUM (MIN. POWER) COIL DESIGN.

FEATURES

- Low Level to 10W Switching
- Low Input Power (33mW/5V Coil)
- Dimensionally Form-Fit to EMR Types
- Optional Shielding, Coil Diode and High IR

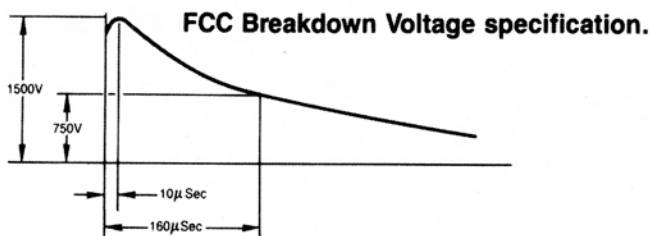
SPECIFICATIONS (@ 25°C Unless Otherwise Specified)

CONTACTS (Maximum Ratings)

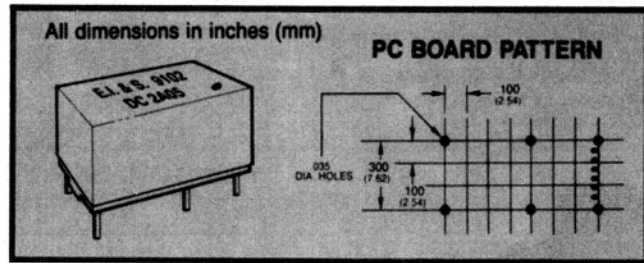
Contact Form	2A	1C	Units
• Switching Current	0.5	0.25	A dc
• Switching Voltage	200	28	V dc
• Switching Power	10	3	W
• Breakdown Voltage	250	200	V dc
• Contact Resistance	0.150	0.200	ohms

GENERAL (Typical Ratings)

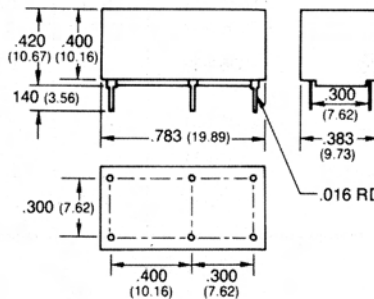
Contact Form	2A	1C	Units
• Timing			
Operate	0.500	0.500	ms
Bounce	0.150	0.500	ms
Release (w/Diode Coil Suppression)	0.100	0.100	ms
• Life Expectancy			
@ Rated Load	10x10 ⁶	5x10 ⁶	opns
@ Low Level	100x10 ⁶	50x10 ⁶	opns
• Breakdown (Coil-Contacts)	2500	2500	V ac
• Insulation Resistance	10 ¹⁰	10 ⁹	ohms
• Temperature Range			
Operating	-30°C to +65°C		
Storage	-55°C to +105°C		



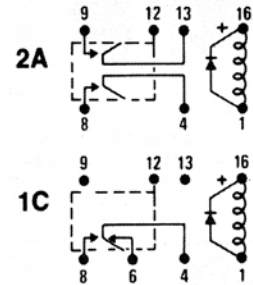
SERIES DC 16-PIN ENCAPSULATED DIP



OUTLINE



SCHEMATIC



CATALOG PART NUMBERS

Cat. No.	Contact Form	Volts	Coil Resist. ± 10%	Max. Pull-in	Min. Drop-out
DC2A05	2A	5	750	3.5V	0.5V
DC2A12	2A	12	1800	8.4V	1.2V
DC2A24	2A	24	3600	16.8V	2.4V
DC1C05	1C	5	750	3.5V	0.5V
DC1C12	1C	12	1800	8.4V	1.2V
DC1C24	1C	24	3600	16.8V	2.4V

FORM-FIT to EMR TYPES:

AROMAT DS	GUARDIAN 1495	MIDTEX 190
AZ G6B	HASCO HAS112	NEC MR602
CLARE LX20/LM44	IDEC RW	OMRON G6A
FUJITSUI FBR244	ITT RA	P & B T82

ORDERING INFORMATION

DC	2A	05	DS
SERIES 16 Pin Dip	CONTACT FORM 2A = DPST 1C = SPDT	COIL VOLTAGE 05 = 5V 12 = 12V 24 = 24V	OPTIONS (Add suffix in alpha order) D = Coil Diode H = Magnetic Shield R = Insulation Resistance 10 ¹² S = Electrostatic Shield