GENERAL INFORMATION
SELECTOR CHART

Series	Series Types	Enclosure	Contacts		Nominal Coil Voltage or Current	Operating Power at P.I. (mW)	Applicable Specification Approvals			
							MILITARY		CECC	
			Arrangement	Rating			Mil-PRF-39016/	Mil-PRF-28776/	16101-	16207-
MA	MA	TO-5	DPDT	1A / 28 Vdc	5…30,0 Vdc	130	9			
	MA-D				5…26,5 Vdc		15			
	MA-DD					150	20			
	MA-T					130		1		
MA2		TO-5	DPDT	1A / 28 Vdc	5…30,0 Vdc	130			003	
MCA		TO-5	DPDT	2A / 28 Vdc	5…26,5 Vdc	150				
MS	MS	TO-5	DPDT	1A / 28 Vdc	5…48,0 Vdc	60	11			
	MS-D						16			
	MS-DD					70	21			
	MS-T					60		3		
MS2		TO-5	DPDT	1A / 28 Vdc	5…48,0 Vdc	60			004	
1MA	1MA	TO-5	SPDT	1A / 28 Vdc	5…26,5 Vdc	100	7			
	1MA-D						23			
	1MA-DD					120	24			
	1MA-T					100		5		
1MA1		TO-5	SPDT	1A / 28 Vdc	5…26,5 Vdc	100			005	
1MS	1MS	TO-5	SPDT	1A / 28 Vdc	5…40,0 Vdc	50	10			
	1MS-D						25			
	1MS-DD					40	26			
	1MS-T					50		4		
1MS1		TO-5	SPDT	1A / 28 Vdc	5…40,0 Vdc	50			006	
MGA	MGA	CUBIC .100GRID	DPDT	1A / 28 Vdc	5…26,5 Vdc	130	17			
	MGA-D						18			
	MGA-DD					150	19			
MGAE	MGAE	CUBIC .100GRID	DPDT	1A / 28 Vdc	5…28,0 Vdc	130				801
	MGAE-D									
	MGAE-DD					150				
MGA2	MGA2 / D2	CUBIC	DPDT	1A / 28 Vdc	5…28,0 Vdc	140				007
MGS	MGS	CUBIC .100GRID	DPDT	1A / 28 Vdc	5…48,0 Vdc	60	41			
	MGS-D						42			
	MGS-DD						43			
MGSE	MGSE	CUBIC .100GRID	DPDT	1A / 28 Vdc	5…48,0 Vdc	60				802
	MGSE-D									
	MGSE-DD									
MGS2	MGS2 / D2	CUBIC	DPDT	1A / 28 Vdc	5…48,0 Vdc	60				008
I2K		1/2 CC	DPDT	2A / 28 Vdc	5…26,5 Vdc	250	6			
2K		1/2 CC	DPDT	2A / 28 Vdc	5…48,0 Vdc	250				
2K6600		1/2 CC	DPDT	2A / 28 Vdc	5…48,0 Vdc	250			007,014,021	
							MILITARY Compliance			
							Mil-R-39016/	Mil-R-5757/		
2K7940		1/2 CC	DPDT	2A/ 28 Vdc	6…26,5 Vdc	250	22			
KA	2KA	1/2 CC	DPDT	2A / 28 Vdc	5…48,0 Vdc	100				
HA	2HA	1/2 CC	DPDT	5A / 28 Vdc	5…48,0 Vdc	300				
B	2B	CC	DPDT	2A / 28 Vdc	6…76,0 Vdc	250				
	2BR		DPDT		26,5..115 Vac	370				
2B6660		CC	DPDT	3A / 28 Vdc	6…76,0 Vdc	250			008	
2B7506		CC	DPDT	2A / 28 Vdc	6…26,5 Vdc	250		10		
BS	2BSA	CC	DPDT	2A / 28 Vdc	6…26,5 Vdc	100				
	1BSK		SPDT		3,2…70,6mA	25				
	2BSK		DPDT		4,0…89,2mA	40				
BN	1BN	CC	SPDT	5A / 28 Vdc	6…76,0 Vdc	280				
	2BN		DPDT							
2BC7201		CC	DPDT	2A / 28 Vdc	4,0…90,0mA	40		13		
BCN	1BCN	CC	SPDT	5A / 28 Vdc	6…40,0 Vdc	80				
	2BCN		DPDT							
4B			4PDT	2A / 28 Vdc	6…115 Vdc	400				
T	2T	CC	DPDT	10A / 28 Vdc	6…115 Vdc	500				
	2TR				115 Vac					
TN	2TN	CC	DPDT	15A / 28 Vdc	6…115 Vdc	500				
	2TNR				115 Vac					
2T7188		CC	DPDT	10A / 28 Vdc	6…120 Vdc	500		23		
RFK	RFK	1/2 CC	SPDT	2A / 28 Vdc	6…26,5 Vdc	250				
	2RFK		DPDT							
RFB	RFB	CC	SPDT	2A / 28 Vdc	6…76,5 Vdc	250				
	2RFB		DPDT							
RFBC	RFBC	CC	SPDT	2A / 28 Vdc	4,0…89,2 mA	40				
	2RFBC		DPDT							
4MA		CC	4PDT	1A / 28 Vdc	5,0…30,0 Vdc	260				
4MS		CC	4PDT	1A / 28 Vdc	5,0…48,0 Vdc	120				

TO-5 CASE RELAY
DPDT, HIGH CURRENT

Series MCA

Product Description

A series of ultra miniature hermetically sealed relays constructed in a transistor style case, providing superior performance and established reliability characteristics. Designed for high density PCB mounting is available in a variety of sensitivities. Contact configurations and material improvements to provide a most versatile element to the circuit designer especially for resistive load rated at 2 amperes.
The following construction features ensure the highest reliability in extreme environments :

- All welded relay construction
- Cleaning and sealing techniques ensures maximum internal cleanliness
- 500 mA to 2 Amp. switching
- 2 form C, DPDT contacts, special metal alloy with gold plating
- Frame design and force / mass ratio provides exceptional shock and vibration immunity

Series Type

- **MCA** 2 form C, DPDT

Environmental and Physical Specifications

Temperature (Ambient)	-65°C to + 125°C
Shock	75 g's, 6 msec., half sine wave
Vibration (sinusoidal)	30 g's, 10 to 2000 Hz, 1.5 amplitude peak
Sealing	All welded, Hermetic
Weight	0,09 oz. (2,55 grams) max.
Finish	Bright tin lead plated terminations and case

Electrical Characteristics (over the Temperature range, unless otherwise noted)

Coil Data	See Typical Characteristics chart		
Contact Rating (Note : All ratings with grounded case)	**Type Load**	**Contact Load**	**Cycles min.**
	Resistive	500 mA to 2 Amp / 28 Vdc (note 1)	100.000
		500 mA / 115 Vac, 60 and 400 HZ (case not grounded)	50.000
		250 mA / 115 Vac, 60 and 400 HZ	50.000
	Resistive Overload	2,5 A / 28 Vdc	100
	Inductive	280 mA / 28 Vdc (320 mH)	50.000
Contact Resistance	0,2 ohm max. initial, 0,35 ohm max after life		
Operate Time	3,5 msec. max. at 25°C		
Release Time	2,5 msec. max. at 25°C		
Contact Bounce	2,0 msec. max. at 25°C		
Dielectric Strength	500 Vrms min., 60 Hz, all points, at sea level		
Insulation Resistance	10.000 megohms min. all points at 500 Vdc		
Sensitivity	150 milliwatts at pick-up, 500 milliwatts at nominal rated coil voltage at 25 °C		

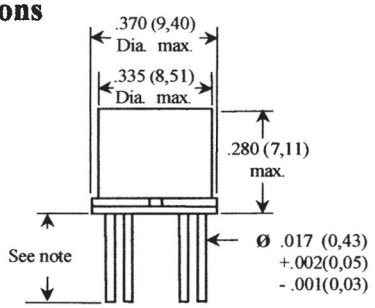
TO-5 CASE RELAY
DPDT, HIGH CURRENT

Series MCA

Typical Characteristics

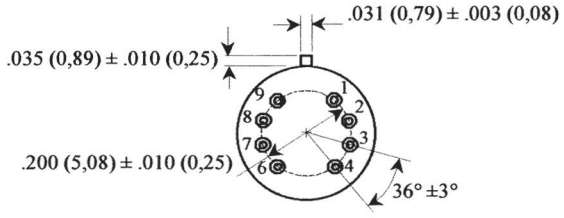
Coil Voltage Code	Coil Voltage V dc		Coil resistance ohm	Operated Voltage V dc Max. at		Release Voltage V dc			
						Non-release at		Must-release at	
	Rated	Max.	± 10% at 25 °C	25 °C	125 °C	25 °C	125 °C	25 °C	- 65 °C
5	5,0	5,8	50	3,0	4,2	1,5	2,5	0,20	0,14
6	6,0	8,0	98	3,8	4,8	2,3	3,5	0,28	0,18
9	9,0	12,0	220	5,5	7,0	3,2	5,1	0,54	0,35
12	12,0	16,0	390	8,0	10,0	4,2	6,8	0,65	0,43
18	18,0	24,0	880	11,0	14,0	6,4	10,4	0,91	0,59
26	26,5	32,0	1560	14,5	18,2	8,2	13,3	1,4	0,9

Outline Dimensions



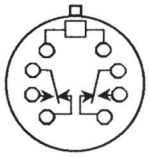
Note :
- Dimensions are shown in inches (millimetres)
- Terminal Variants: - **(C)** Standard Wire Terminal = .500 (12,7) min.
  - **(W)** Long Wire Terminal = 1.500 (38,1) min.
  - **(P)** Pin Terminal = .187 ± .01 (4,75 ± 0,25)

Terminal Locations



Note:
- Dimensions are shown in inches (millimetres)
- Viewed from terminals, numbers are for reference only

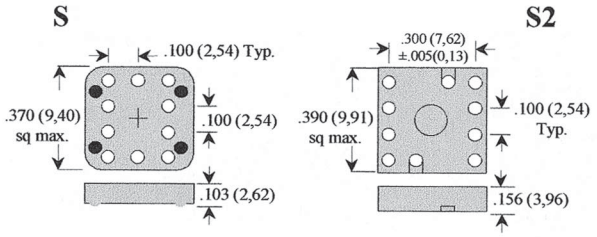
Schematic Diagram



Note :
- Schematics are viewed from terminals.

Spreader Pads

Relays can be supplied with a spreader pad epoxied to the relay header, to prevent the possible shorting of printed circuit board land lines and to facilitate circuit board cleaning. To order relay with pad add. " S " to part number. Example: MCAW-26S



Note : - Dimensions are in inches (millimetres)

Note:

1 Not suitable for use below 500 mA resistive

How to Order (Part Numbering System)

MCA W -26 S

- **MCA** — Series
- **W** — C – Wire terminal; P – Pin terminal; W – Long wire terminal
- **-26** — Coil Voltage Code
- **S** — Spreader Pad (optional)