



GENERAL INFORMATION SELECTOR CHART

Series	Series Types	Enclosure	Contacts		Nominal Coil Voltage or Current	Operating Power at P.I. (mW)	Applicable Specification Approvals				
			Arrangement	Rating			MILITARY		CECC		
							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						20				
	MA-T							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						21				
	MS-T							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						24				
	1MA-T							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				
	1MS-T						50		4		
1MS1		TO-5	SPDT	1A / 28 Vdc	5...40,0 Vdc	50			006		
	MGA	CUBIC .100GRID	DPDT	1A / 28 Vdc	5...26,5 Vdc	130	17				
	MGA-D						18				
MGA-DD	150										
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		
12K		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		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					



FULL SIZE CRYSTAL CAN RELAY SENSITIVE 25,40 and 100 MILLIWATT

Series
BS

Product Description

This ultra sensitive full size crystal can relay series, offers switching capability of low level signals up 2 amperes under the most extreme environmental conditions. It's low coil sensitivity and high contact current carrying capacity makes these relays ideal for a variety of applications. In a unique design, motor efficiency and the proven contact structure of qualified relays, offer sensitivities from 25 milliwatts with low level switching to 2 amperes. Low profile, proven designs and wide selection of coil values provide the designer with a consistent high quality product for today's and tomorrow design. These series replace the previous BA, BC and BK series.

The following construction features ensure the highest reliability in extreme environments:

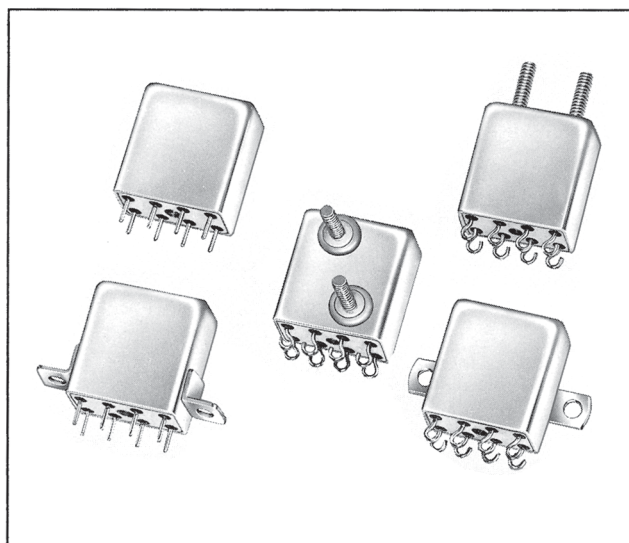
- All welded relay construction
- Cleaning and sealing techniques ensures maximum internal cleanliness
- Low level to 2 amp. switching
- 1 or 2 form C, SPDT or DPDT contacts, special metal alloy with gold plating

Series Types

- 2BSA 2 form C, DPDT, 100 milliwatts sensitivity
- 1BSK 1 form C, SPDT, 25 milliwatts sensitivity
- 2BSK 2 form C, DPDT, 40 milliwatts sensitivity

Environmental and Physical Specifications

Temperature (Ambient)	-65°C to +125°C
Shock	100 g's, 6 msec.
Vibration (sinusoidal)	20 g's, 10 to 2000 Hz
Acceleration	30 g's
Sealing	All welded, Hermetic
Weight	1 oz. (28,35 grams) max.



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		Cycles min.
	Low Level Resistive	10 mA / 30 mV	1.000.000
		2 Amp / 28 Vdc	100.000
	Overload Inductive	1 Amp / 115 Vac, 400 Hz	100.000
		0.3 Amp / 115 Vac, 60 Hz	100.000
		4A / 28 Vdc	100
	0.75 Amp / 28 Vdc (200 mH)	100.000	
Contact Resistance	0,05 ohm max. initial		
Operate Time	6,5 msec. max. at 25°C, series BSA	8.0 msec. max. at 25°C, series BSK	
Release Time	4,0 msec. max. at 25°C, series BSA	4.0 msec. max. at 25°C, series BSK	
Contact Bounce	3,0 msec. max. at 25°C, series BSA	4.0 msec. max. at 25°C, series BSK	
Dielectric Strength	1000 Vrms min., 60 Hz, all points, 500 Vrms min., between open contacts and coil to case, at sea level		
Insulation Resistance	1000 megohms min. all points at 500 Vdc		
Intercontact Capacitance	2.5 pF Between contacts		
Sensitivity	Series BSK: 25 milliwatts SPDT, 40 milliwatts DPDT at pick-up at 25°C Series BSA 100 milliwatts at pick-up, at 25°C		

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

Voltage Code	Coil Voltage Vdc		Coil Resistance ohms ± 10% at 25 °C	Pick-up Vdc Max. at 25 °C	Drop-out Vdc Min. at 25 °C
	Nominal	Max.			
106	6,0	7,2	120	3,5	0,5
112	12,0	14,4	480	7,0	1,0
126	26,5	32,0	2250	15,0	2,0



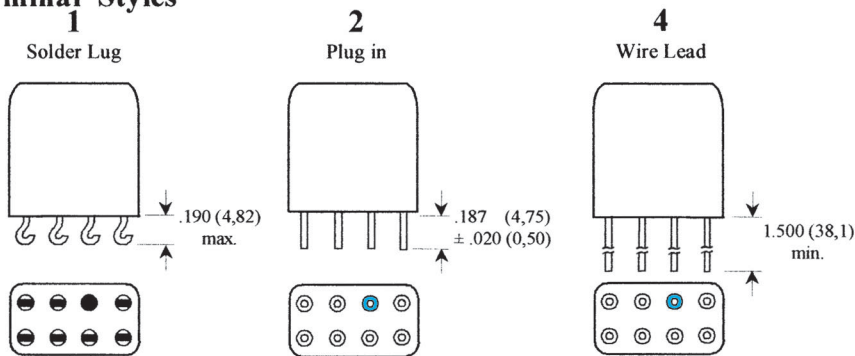
FULL SIZE CRYSTAL CAN RELAY SENSITIVE 25,40 and 100 MILLIWATT

Series
BS

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

Voltage Code	Series Type 2BSK - DPDT - 40 mW					Series Type 1BSK - SPDT - 25 mW			
	Coil Res. ohms at 25 °C ± 10 %	Nominal Coil Voltage Vdc	Nominal Coil Current mA	Pick-up mA Max, at 25°C	Drop-out mA Min, at 25°C	Nominal Coil Voltage Vdc	Nominal Coil Current mA	Pick-up mA Max, at 25°C	Drop-out mA Min, at 25°C
101	20	1,8	89,2	44,6	4,5	1,4	70,6	35,3	3,5
102	30	2,2	73,0	36,5	3,7	1,8	57,6	28,8	2,9
103	50	2,8	56,6	28,3	2,8	2,2	44,6	22,3	2,3
104	75	3,5	46,2	23,1	2,3	2,8	36,6	18,3	1,8
105	100	4,0	40,0	20,0	2,0	3,2	31,6	15,8	1,6
106	200	5,7	28,4	14,2	1,4	4,5	22,4	11,2	1,2
107	300	7,0	23,0	11,5	1,2	5,5	18,2	9,1	0,90
109	500	9,0	17,8	8,9	0,90	7,1	14,2	7,1	0,70
112	875	12,0	13,5	6,8	0,70	9,4	10,7	5,4	0,54
113	1000	12,6	12,6	6,3	0,64	10,0	10,0	5,0	0,50
118	2000	18,0	8,9	4,5	0,50	14,2	7,1	3,6	0,36
120	2500	20,0	8,0	4,0	0,40	15,8	6,3	3,2	0,32
128	5000	28,0	5,6	2,8	0,30	22,5	4,5	2,3	0,23
135	7000	32,0	4,8	2,4	0,24	28,0	3,8	1,9	0,18
140	10000	40,0	4,0	2,0	0,20	32,0	3,2	1,6	0,16

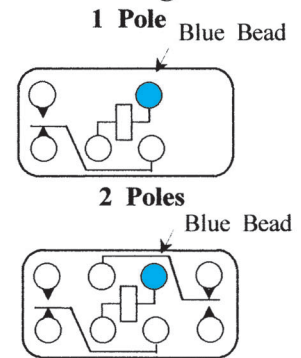
Terminal Styles



Note :

- Dimensions are shown in inches (millimetres)
- Terminal spacing is .200 (5,08). Terminal diameter is .030 (0,76) + .003 (0,07) - .002 (0,05)

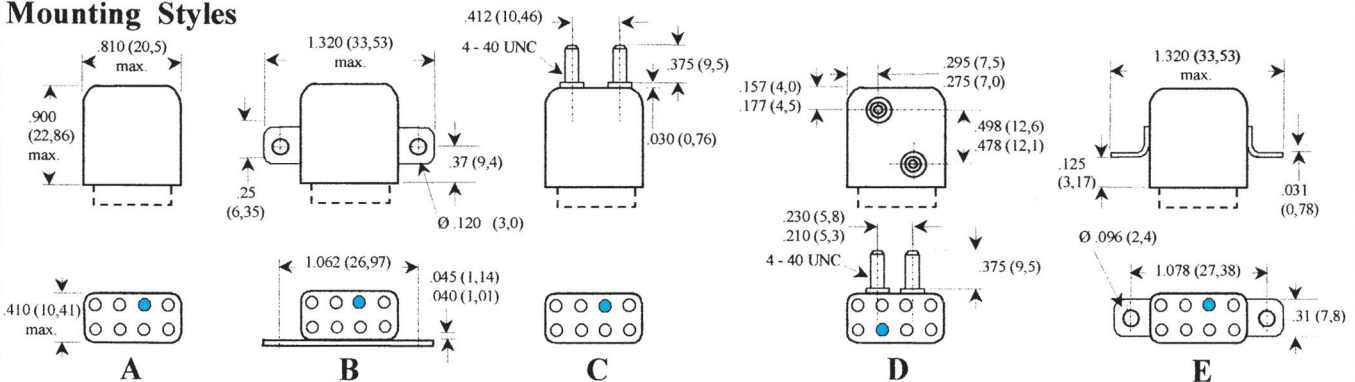
Schematic Diagrams



Note:

Schematics are viewed from terminals

Mounting Styles



Note : -Dimensions are shown in inches (millimetres)

How to Order (Part Numbering System)

Series Type	2BSK	-1	C	-120	P	Insulating pad (optional) see half crystal series
Terminal Style						Voltage code
						Mounting Style