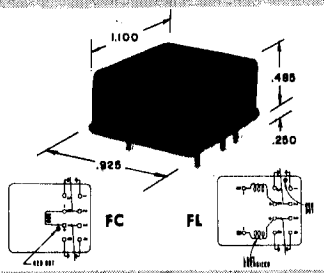


Potter & Brumfield Relays

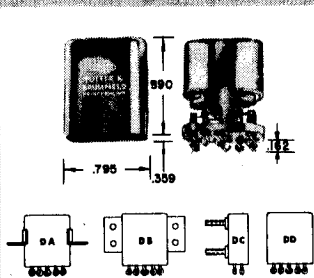
FC SERIES Conventional micro-miniature relay lies flat on printed circuit board. Withstands 100g shock, 400g linear acceleration, 30g vibration to 2000 cps. Ambient temperature range: -85° to $+125^{\circ}\text{C}$. Hermetically sealed. Bifurcated contacts. Plugs in on .2" grid. Meets applicable sect. MIL-R-5757D, and ABMA #PD-R-187. Weight: .75 ozs.

FL SERIES Dual-coil latching relay has same specs as above, except operates by pulsing each coil alternately (observing coil polarity); or connecting the coils in series from a reversing (polarized) source. Remains latched without coil power.



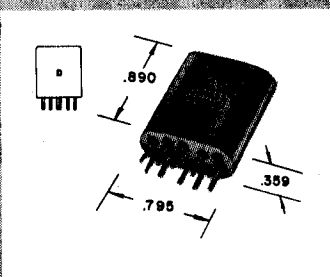
SC SERIES Micro-miniature permanent magnet relay for low power, high shock/vibration applications. 100g shock, 30g vibration to 2000cps with no contact openings. Ambient temperature range: -85°C . to $+125^{\circ}\text{C}$. Features single coil action and conforms to standard micro-miniature coil operation except polarized connections because of magnetic circuit. Positive terminal marked with red dot. Mounting: SC11D*, SCG11D -DA, -DB, DC and DD correspond to similarly designed SL mountings. Weight: 3/4 oz.

*Cinch No. 54A20730 and Arnel No. HRK-1, 8-pin receptacles available from distributors for plug-in applications.



SL SERIES Dual coil micro-miniature magnetic latching relay with same shock/vibration, resistance and ambient temperature range as SC. Coils may be connected in series for polar operation. Mounting: SL11D* for plug-in applications: -DA has shoulder flangers with two .104" x .136" holes on a 1.062" center; -DB has a welded bracket with four .125" dia. holes on 1.062" x .281" centers; -DC has two No. 4-40 NC 2A threaded studs on .488" x .220" diagonal centers; -DD has plain case with hook end solder terminals. SCG-SLG11D have plug-in terminals on .2" grid.

*Viking No. P/N VB10/3DV 1 10-pin receptacles available from distributors for plug-in applications.



SPECIAL PURPOSE RELAYS

TYPE	COILS			CONTACTS		NET
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
FC11D†	6V	60	.5W	DPDT	3*	\$ 16.00
FC11D†	12V	210	.5W	DPDT	3	16.00
FC11D†	24V	900	.5W	DPDT	3	16.00
FL11D†	6V	67.5	.5W	DPDT	3*	18.00
FL11D†	12V	230	.5W	DPDT	3	18.00
FL11D†	24V	1,000	.5W	DPDT	3	18.00
SC11D†	6V	35	1W	DPDT	2*	15.75
SC11D†	12V	135	1W	DPDT	2	15.75
SC11D†	24V	550	1W	DPDT	2	15.75
SC11DA†	6V	35	1W	DPDT	2	15.75
SC11DA†	12V	135	1W	DPDT	2	15.75
SC11DA†	24V	550	1W	DPDT	2	15.75
SC11DB†	6V	35	1W	DPDT	2	15.75
SC11DB†	12V	135	1W	DPDT	2	15.75
SC11DB†	24V	550	1W	DPDT	2	15.75
SC11DC†	24V	550	1W	DPDT	2	15.75
SC11DD†	24V	550	1W	DPDT	2	15.75
SCG11D†	24V	550	1W	DPDT	2	15.75
SL11D†	6V	40	1W	DPDT	2*	17.25
SL11D†	12V	160	1W	DPDT	2	17.25
SL11D†	24V	630	1W	DPDT	2	17.25
SL11DA†	6V	40	1W	DPDT	2	17.25
SL11DA†	12V	160	1W	DPDT	2	17.25
SL11DA†	24V	630	1W	DPDT	2	17.25
SL11DB†	6V	40	1W	DPDT	2	17.25
SL11DB†	12V	160	1W	DPDT	2	17.25
SL11DB†	24V	630	1W	DPDT	2	17.25
SL11DC†	24V	630	1W	DPDT	2	17.25
SL11DD†	24V	630	1W	DPDT	2	17.25
SLG11D†	24V	630	1W	DPDT	2	17.25

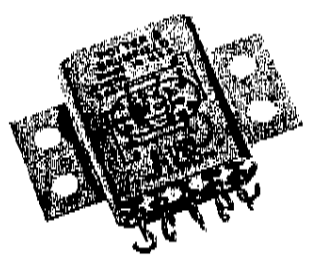
†Sealed Relay

* @ 28VDC

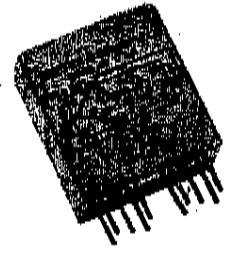


AMF POTTER & BRUMFIELD

SL-SLG
SERIES



SL



SLG

2 AMP MINIATURE MAGNETIC LATCHING RELAYS

ENGINEERING DATA

The SL and SLG are dual coil magnetic latching relays operated by:
 (1) pulsing each coil alternately observing coil polarity or
 (2) connecting the coils in series and operating from a reversing (polarized) power source.

Their ability to remain firmly latched in either armature position without applied coil power can significantly reduce power supply drains of equipment using relays with long "on" times. The SL and SLG require only 230 milliwatts to pull-in at 25°C., and will operate on a 3 millisecond pulse at nominal voltage @ 25°C.

Their coils will carry continuous current if a pulsing source is not available but when this mode of operation is used, some means must be provided to de-energize one coil before energizing the other. For polar operation, this provision is not necessary.

If SL or SLG relays are stacked tightly together their operative points will be altered somewhat. This effect may be minimized by adequate spacing or by magnetic shielding if units are jammed together.

Their manufacture uses closely controlled processes to insure highest quality and maximum reliability. They operate normally in severe missile environments and meet all applicable sections of Mil-R-5757 (the SLG is the preferred version under this specification). They can also be furnished to meet MSFC-SPEC-339 and MSFC-40M37496 if required.

The SL and SLG are available with a wide range of mounting and terminal types (see back page). The plug-in "D" style mount fits the following sockets:

MANUFACTURER	SL (OVAL)	SLG (GRID)
ARMEL ELECTRONICS INC.	HRKB-1	HRT-1
AUGAT BROTHERS	8020-1G1	8022-1G1
BURNDY CORPORATION	MT10R-2	
VIKING	V810/3DV4	
WINCHESTER ELECTRONICS	RL105-1	TYPE RLAC*

FOR REFERENCE ONLY. CONSULT MANUFACTURER BEFORE ORDERING.
 *SPECIAL. PIN SIZE MUST BE SPECIFIED.

GENERAL:

- Insulating Material:** Teflon, ML, and glass.
- Insulation Resistance:** 1,000 megohms min. between contacts and between switching circuits @ +25°C. and between contacts and case.
- Internal Capacitance:** Any contact to contact, or contact to case, less than 3.0 μf.
- Breakdown Voltage @ Sea Level:** 1,000 volts rms 60 Hz between coil and case; between contacts and case; between contact sets. 500 volts rms 60 Hz between open members of same contact set.

No contact openings in either armature position.

- Shock:** 200g for 11 milliseconds.
- Linear Acceleration:** 400g minimum.
- Vibration:** .195" max. excursions from 10 to 55 Hz. 30g from 55 to 2000 Hz. (Ratings up to 100g from 55 to 2,000 Hz and 40g from 2,000 to 3,000 Hz available on special order).

- Temperature Range:** -65°C. to +125°C.
- Coil rise at max. continuous voltage @ +125°C.:** Approximately 30°C.
- Weight:** .5 oz. without mounting bracket.
- Pick-up:** Approximately 230 milliwatts @ +25°C.
- Operate time:** 3 milliseconds max. @ nominal voltage @ +25°C.
- Transfer Time:** Approximately 0.5 millisecond.
- Terminals:** Hook end solder, 3" flexible, or plug-in pins. Available hermetically welded only.

CONTACTS:

- Arrangements:** DPDT.
- Rated Load:** 2 amps @ 30 volts DC; 1 amp* @ 120 volts 60 Hz resistive, 100,000 operations minimum. 3 amps @ 30 volts DC; 1 amp @ 120 volts AC 60 Hz resistive, 100,000 operations minimum, available on special order.
- Contact Resistance:** 50 milliohms before use; 100 milliohms max. after 100,000 operations @ rated load.
- Dry Circuit:** Life expectancy of no misses in excess of 1 million operations @ low level (dry circuit) loads.

*case not grounded.

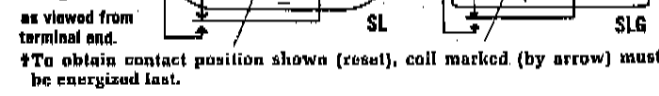
COILS:

- Resistance:** 10,000 ohms per coil maximum.
- Power:** Nominal @ +25°C.; approximately 1 watt.
- Duty:** Continuous or intermittent.
- Bifilar Coils:** (For transient protection) available on special order.

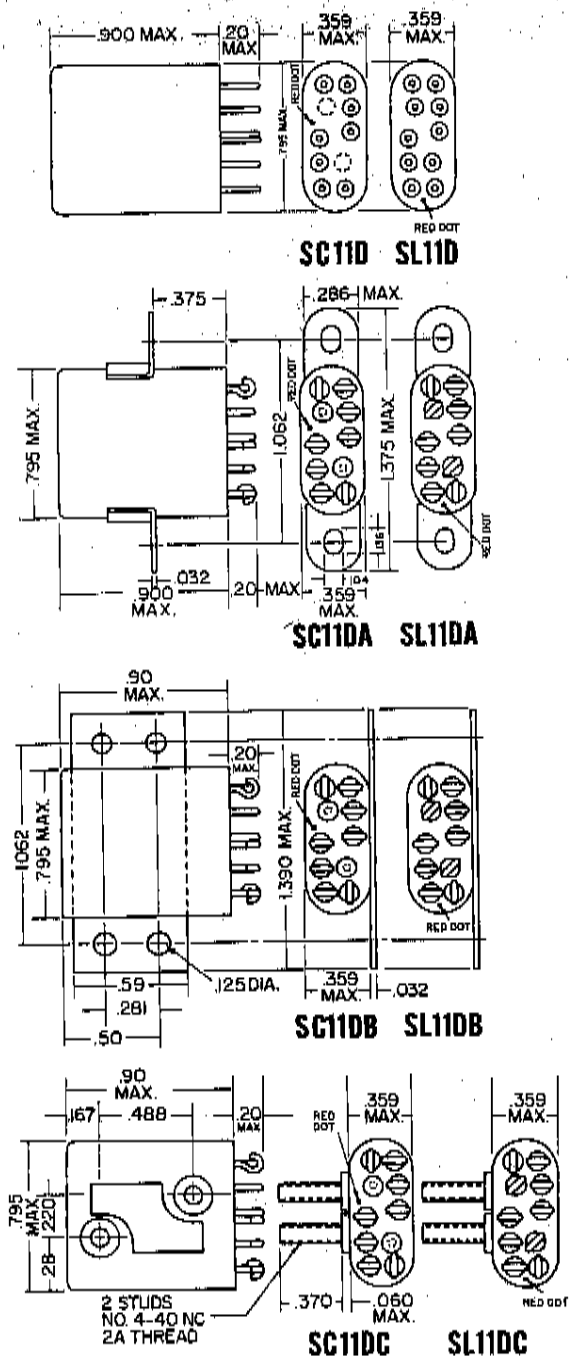
SL AND SLG COIL DATA

Nominal Coil Voltage, DC	6V	12V	24V	36V
Coil Resistance in ohms ±10% @ +25°C.	40	160	630	1400

Relay Circuit Diagram

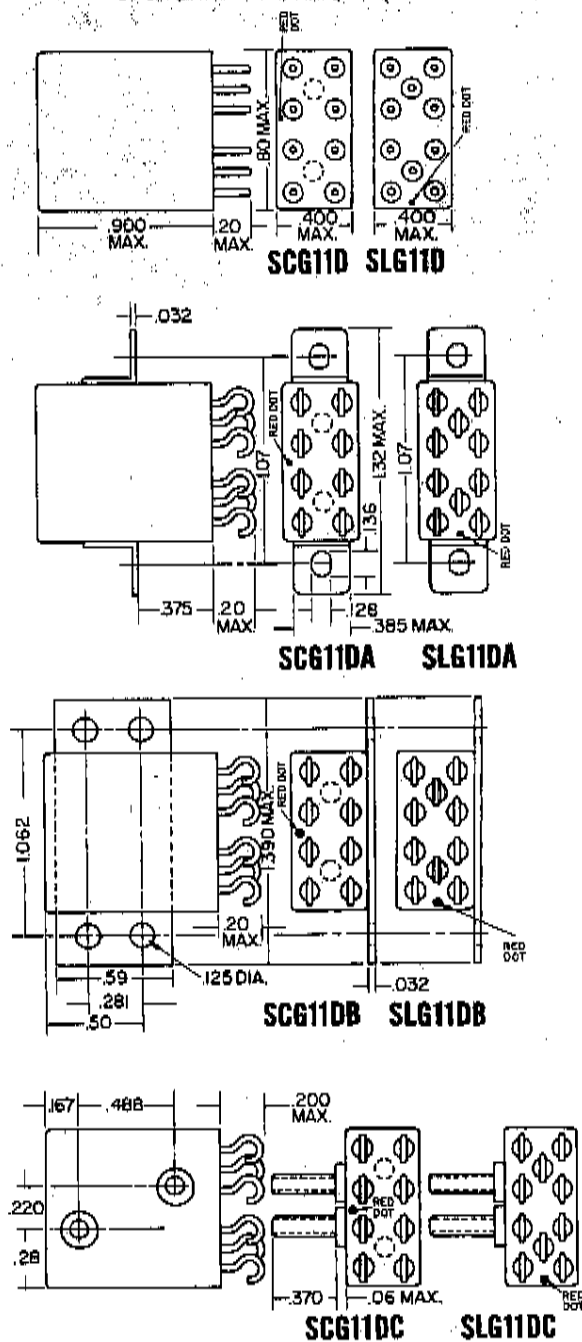


SC-SL MOUNTINGS



SCG-SLG MOUNTINGS

"G" designates 0.2" spaced grid terminals



TOLERANCES: Unless otherwise specified DECIMALS ±.010

MOUNTING	PLAIN CASE	SHOULDER BRACKETS 3/8" FROM BASE	FLAT MOUNTING PLATE WITH 2 HOLES (not shown)	FLAT MOUNTING PLATE WITH 4 HOLES	STUDS ON SIDE OF CASE	WRAP-AROUND SHOULDER BRACKETS WITH OFFSET 0.006 HOLES .135" FROM BASE
PLUG-IN HEADER	D	DF			DG	DP (not shown) (OVAL CAN ONLY)
HOOK-END SOLDER	DD	DA	.125 DIA. ROUND HOLES DH	DB	DC	
3" FLEXIBLE LEADS	DL	DQ	DJ	DN	DM	