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# B&R Relays

B & R Relays Ltd Templefields, Harlow, Essex. CM20 2BG  
Telephone: Harlow (0279) 34561 Telex: 81140

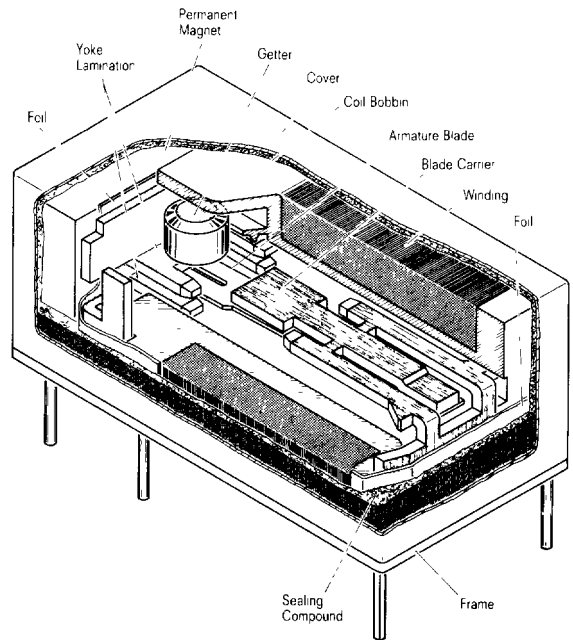


## Siemens miniature low profile fully encapsulated relays

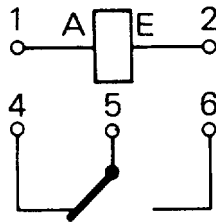
- Contact chamber getter protected
- Mono/Bistable Versions
- Single changeover bifurcated contacts
- Encased in resin with metal cover
- DIL terminations on 0.1" grid :
- TTL compatible
- Power rating up to 30VA
- High voltage proof – contact/coil 1500 Vrms
- Exceptional life :  $10^8$  operation
- 8.2mm Height

The Siemens series of fully-encapsulated low profile relays from B & R combine the high utility of DIL compatible pin-out with exceptional life and high resistance to environmental hazards. The bifurcated contact arrangement enhances contact reliability and reduces contact resistance, and will therefore handle small signals without distortion or significant losses. These advanced performance parameters make the product well suited to measuring equipment, telecommunications and signal-handling circuits. The relay is ideal as the cross-point element in line circuit switching in microcomputer systems, as well as a storage element for analogue IN/OUT components.

For added contact life the contact chamber is getter protected. All versions are fully encapsulated in epoxy resin protected by metal case. (Class IP68 in accordance to DIN 40050).

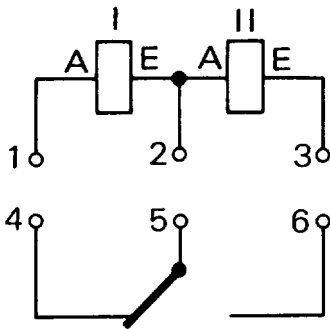


## Relays are available in 3 versions



### Polarised monostable type V23040-AO - with a single winding.

In the OFF position contacts 4 and 5 remain closed, when a positive voltage is applied to terminal 1, the relay assumes the ON position by connecting contacts 5 and 6. As soon as the potential is interrupted, the Contacts revert to the OFF position.



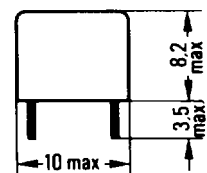
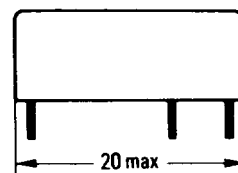
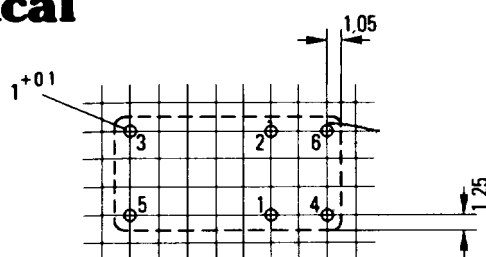
### Polarised bistable (latching) type V23040-CO - with a single winding.

The operation is slightly different in that a negative potential must be applied to terminal 1 to produce the OFF position of 4/5 closed. A positive potential to terminal 1 switches the contacts to the 5/6 ON position. Interruption of supply to terminal 1 will leave the contacts in the last position.

### Polarised bistable (latching) type V23040-BO - with two windings.

When a minus potential is applied at terminal 1, and a plus potential at terminal 2, the relay assumes the OFF position (contacts 4/5 closed). The OFF position also results from negatives on terminal 1 and terminal 2 if terminal 3 is positive potential. When a positive potential is applied to terminal 1, and a minus to terminal 2 (or plus at 2 when terminal 3 is negative), the relay assumes the ON position (contacts 5/6 closed).

## Mechanical Data



# Coils and operating voltage

TABLE 1


Nominal Voltage Vdc	Winding	Operating voltage range at 20°C		Resistance at 20°C	No. of turns	Coil No. for Order Code (Block 2)
		Minimum voltage Vdc	Maximum voltage Vdc			
<b>V23040—A.</b>						
5	I	3.75	9	320 ± 32	3000	001
12	I	9	21.6	1140 ± 170	5500	002
15	I	11.25	27	1850 ± 275	7000	003
24	I	18	43.2	4370 ± 650	10600	004
<b>V23040—B..</b>						
5	I	3.75	9	315 ± 47	2150	101
	II	3.75	9	315 ± 47	2000	
12	I	9	21.6	1110 ± 165	3950	102
	II	9	21.6	1110 ± 165	3750	
15	I	11.25	27	1760 ± 265	4950	103
	II	11.25	27	1760 ± 265	4800	
24	I	18	43.2	2800 ± 420	6700	104
	II	18	43.2	2800 ± 420	5200	
<b>V23040—C..</b>						
5	I	3.75	9	790 ± 120	4600	051
12	I	9	21.6	1850 ± 275	7000	052
15	I	11.25	27	2850 ± 425	8750	053
24	I	18	43.2	5650 ± 845	12000	054

# Characteristics TABLE 2

**Energising side**

Operating voltage range	Vdc	See table 2
Nominal power consumption	mW	30 to 200*
Admissible ambient temperature at operating power	°C	-40 to +70
Maximum temperature	°C	85
Continuous Thermal load at 20°C ambient temperature	mW	850
Thermal resistance at continuous load	K/W	75
Operate time**	ms	approx 2
Release time**	ms	approx 1
Bounce time	ms	<1
Maximum switching rate	ops /sec	100
Test voltage contact/winding	Vrms	1500
winding/cover	Vrms	1000

**Contact side**

Contact No. for order code (Block 3)	B201	B101
Contact material	Rhodium	Gold
Contact arrangement	1C	
Symbol (see also base terminal)		
Max switching voltage	Vdc/Vac	150/125 30
Max switching current	A	1 0.1
Max making/breaking power	W/Va	20/30 2/3
Max continuous current	A	2
Contact force	cN	approx 7
Test voltage open contact/closed contact	Vrms	500
contact/cover	Vrms	1000
Max capacitance value open contact/close contact	pF	approx 5
Mechanical life	ops	>10 <sup>8</sup>

\*According to version and coil \*\*Measured at nominal voltage without series resistor

# Ordering Code

Digit	Block 1						Block 2					Block 3			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Block 1 Digit															
			1)												
			2)												
			3)												
			4)												
			5)												
			6)												
Block 2 Digit			7)												
Digit			8)												
			9)												
			10)												
			11)												
Block 3 Digit			12)												
			13)												
			14)												
			15)												

**Ordering example :**

Miniature relay D1, coil with 1 winding, bistable, 12 V nominal voltage, contact material gold.

V	2	3	0	4	0
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C	0	0	5	2
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B	1	0	1
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