

3. STANDARD CONTACT ARRANGEMENTS AND CASE SIZES

Table 1

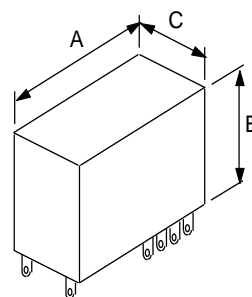
Contact Type		S / TC / 5A / HI				HD			
No. of Poles		2	4	6	8	2	4	6	8
Basic VP Series Case Sizes	M	1	2	2	3	2	3	n/a	n/a
	B	1	2	2	3	2	3	n/a	n/a
	C	1	2	3	n/a	2	3	n/a	n/a
VPR Series Case Sizes	M	1	2	2	n/a	2	3	n/a	n/a
	B	1	2	2	n/a	2	3	n/a	n/a
	C	1	2	n/a	n/a	2	3	n/a	n/a
SEN Options available for all types of Relays except HD and VPR Relays.									
M = make. B = break. C = changeover. S = standard single contact (0.25 or 1 amp). TC = twin contact (0.25 or 1 amp). 5A = 5 amp single contact. HI = High Insulation HD = heavy duty 5A contact (increased pin spacing). n/a = not available.									

- Note that the 5 amp (5A & I) contact material is 90% Silver with 10% Cadmium Oxide (D54X alloy). A relay fitted with 5 amp contacts in a quantity greater than two changeover or four make or four break, will have >0.1% Cadmium Oxide content.

3.1 Case Sizes, Socket & Retaining Clip Order Codes.

Table 2

Case Size	Dimensions (See drawing)			Printed Circuit Socket	Wiring Socket	Retaining Clip
	A	B	C	Order Code	Order Code	Order Code
1	24.4	30.1	18.5	SVP10P01	SVP10W01	SVP10RC01
2	30	30.1	18.5	SVP16P01	SVP16W01	SVP16RC01
3	36.6	30.1	18.5	SVP22P01	SVP22W01	SVP22RC00
An earth clip is supplied with each wiring socket (loose part)						



4. COIL DATA

4.1. BASIC VP SERIES – Table 3.

Short coils (case 1, 2, 3, see tables 1 & 2). The tables below list the characteristics of all standard Basic VP Series relay coils. Note, against 'Minimum Volts' the subheadings refer to various options, i.e. S = Low level or light duty single contacts, TC = twin contacts, 5A = 5 Amp contacts, HD = heavy duty contacts, SEN = sensitive adjustment. The characters below these subheadings refer to the number of poles and contact action, i.e. M = make, B = break, C = changeover.

Table 3

DC Coil (Nominal Voltage)		6	12	14	21	26	34	47	72	90	120				
Max. power at 20°C ambient = 2W															
Resistance (ohm) ±10% (except *±15%)		52	185	280	430	700	1250	2500	5800	*9000	*15000				
Number of Turns		1750	3200	3800	4700	5900	7700	11000	16000	20000	24000				
MAXIMUM VOLTS (40°C ambient)		10	19	23	29	37	49	70	106	128	166				
Min Volts	S	TC	5A	HD	SEN										
	2C					2.6	5.0	6.5	8.0	11.0	15.0	21.0	33.0	42.0	58.0
	4C,6M,6B			2C		4.0	8.0	10.0	11.0	16.0	22.0	31.0	50.0	62.0	86.0
		2C	2C			3.4	6.8	7.7	10.2	13.2	19.0	27.0	41.0	50.0	70.0
					2C	2.3	4.3	5.3	6.4	8.2	11.0	17.0	23.5	30.0	43.0
		4C,6M,6B	4C 6M 6B	4C		4.8	9.6	11.4	14.6	19.0	27.0	38.4	58.0	72.0	100.0
					4C,6M,6B	3.3	6.3	7.7	10.0	12.3	16.5	26.0	35.0	43.5	58.0

4.2. M TYPE COILS – Table 4.

M Type (Short) coils for relays with 6C, 8M or 8B contact actions and for other actions where lower minimum operating voltage is required. Designated in the ordering code by 'M' immediately after the coil voltage.

Table 4

DC Coil (Nominal Voltage)						6M	12M	17M	21M	26M	34M	47M	65M	100M	120M
Resistance (ohm) ±10% (except *±15%)						28	110	220	325	530	890	1700	3200	7600	*11750
Number of Turns						1350	2700	3700	4450	5800	7300	9900	13400	20700	24800
MAXIMUM VOLTS (40°C ambient)						7.4	14.6	20.6	25	32	42	56	77	120	150
Min Volts	S	TC	5A	HD	SEN										
	2C					1.9	3.9	5.4	6.5	8.3	11.0	15.5	21.5	33.0	43.0
	4C,6M,6B			2C		2.82	5.8	8.2	10.1	12.4	17.0	23.8	32.0	51.0	65.0
		2C	2C			2.36	4.9	6.9	8.5	10.6	14.3	20.4	29.0	46.0	59.0
					2C	2.54	3.2	4.4	5.6	6.9	8.9	11.9	19.2	28.0	35.0
		4C,6M,6B	4C,6M,6B	4C	6C,8M,8B	3.3	6.9	9.5	11.7	14.9	19.6	27.2	38.4	60.0	71.0
					4C,6M,6B	2.2	4.6	6.2	7.8	9.6	12.5	18.7	25.0	39.0	50.0
		6C,8M,8B				4.3	8.6	12.4	15.3	19.0	25.0	36.0	50.0	76.0	98.0
	6C,8M,8B	6C,8M,8B			6.0	11.0	17.0	20.0	25.0	33.0	45.0	60.0	90.0	115.0	

4.3. BASIC VP SERIES WITH BUILT-IN RECTIFIERS FOR AC OPERATION – Table 5.

Designated in the ordering code by 'AC' immediately followed by the nominal voltage. Short coils (Case 1, 2 or 3 see tables 1 & 2).

Table 5

Coil Type (Nominal Voltage)	Resistance Ohms ±10%	Voltage @ 50Hz	
		Maximum	Minimum
6AC (Double coil)	26 x 2	6.6	4.8
12AC*	52	13.5	9.5
24AC*	185	27	19
42AC*	700	46	33
50AC*	890	55	45
60AC*	1250	66	48
110AC*	4700	121	88

Coil power: 1.6VA max. 1.3W max.
 Frequency range: 50-120Hz
 Available contact combinations:
 2C & 4C light duty contacts
 2C, 4C, 6M or 6B twin contacts
 2C, 4C, 6M or 6B 5amp contacts
 2C heavy duty contacts (HD)

*12AC to 110AC have a single coil with a series/parallel diode arrangement.

4.4. VPR SERIES BISTABLE POLARISED RELAYS

Short coils (Case 1, 2 or 3 see tables 1 & 2)

These are bistable polarised relays having magnetic latching by means of a ceramic magnet. The relay can be pulsed at 10 milliseconds (minimum) sine or square wave. The physical dimensions and base terminals are identical to the Basic VP Series, and they are available in single or double wound coils.

Data in the tables below apply to available contact arrangements i.e. 2 or 4 pole changeover, 6 pole make or break.

4.4.1. SINGLE WOUND COILS AT 20°C (TERMINALS 1 & 4) – Table 6.

Table 6

Polarity (NC closed)
 To change state
 a) Apply positive to terminal 1
 b) To return to NC closed, apply negative to terminal 1

DC Coil (Nominal Voltage)	3	5	6	12	24	34	47	72	120
Resistance ohms ±10% (except *±15%)	9.6	23	49	200	560	1080	2040	4800	*13300
Number of turns	660	1020	1430	3000	5000	6800	9350	14000	24000
Nominal Voltage	3	5	6	12	24	34	47	72	120
Minimum Voltage	1.9	3	4.5	8.9	15.4	22	30	47	87
Maximum Voltage	4.2	6.5	9.4	19	33	44	60	93	150
Max. Pulse Voltage	6.5	10	16	30	51	72	98	154	280