



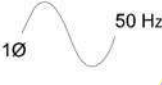

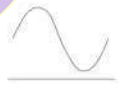

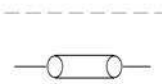
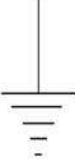
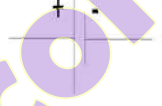
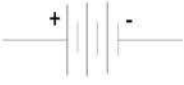
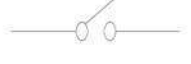
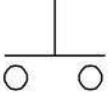
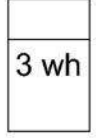


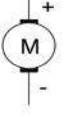


# Engineering Drawing

## Symbolic representation of electrical and electronic elements

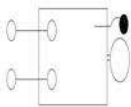

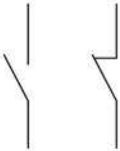
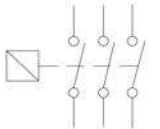

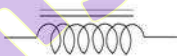
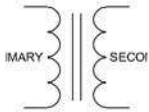
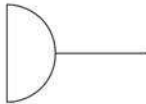
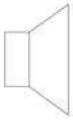


### Conventions used for electrical and electronic elements


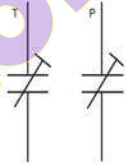
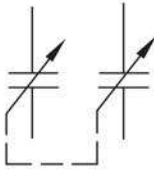
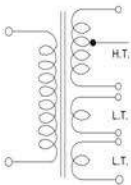
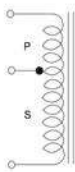
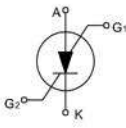



S.No.	Particulars	Symbols
1	D.C.	
2	A.C.	
3	Positive	
4	Negative	
5	Single Phase A.C. 50 Hz	
6	Three Phase A.C., 50 Hz	
7	A.C. / D.C.	
8	3-Phase line	
9	Neutral line	
10	Earth	

S.No.	Particulars	Symbols
11	Cell	
12	Battery	
13	Single pole single throw switch	
14	Push-button switch	
15	Energy meter	
16	Alternator	
17	Generator	
18	D.C. Motor	

S.No.	Particulars	Symbols
19	A.C.Motor Single phase	
20	3-phase squirrel cage motor	
21	3-phase slip ring motor	
22	Capacitor: Fixed, variable	
23	Electrolytic Capacitor	
24	Two-way switch	
25	D.P.D.T. Switch	
26	Fuse: ordinary cartridge	
27	Link	
28	Socket 2 pin, 3 pin	

S.No.	Particulars	Symbols
29	Ceiling Rose 2-pin, 3-pin	
30	Over head line	
31	Aerial	
32	Voltmeter	
33	Ammeter	
34	Ohm Meter	
35	Watt Meter	
36	Lamp	
37	Fan regulator	
38	Electro Magnet	
39	Relay	

S.No.	Particulars	Symbols
40	Electric bell	
41	Buzzer	
42	Contacts - NO, NC	
43	3-phase contactor	
44	Connections: star, Delta	
45	Choke	
46	Transformers	
47	Carbon microphone	
48	Loudspeaker	
49	Resistor : Fixed	
50	Resistor: variable	

S.No.	Particulars	Symbols
51	Rectifier	
52	Trimmer: Padder	
53	Ganged Capacitor	
54	Main transformer with multiple secondary winding	
55	Auto transformer	
56	Silicon Bilateral switch (SBS)	
57	S.C.R.	
58	U.J.T	
59	F.E.T. N-Channel	

S.No.	Particulars	Symbols
60	F.E.T. P-Channel	
61	TRIAC	
62	DIAC	
63	NPN Transistor	
64	PNP transistor	
65	NOT gate	
66	OR gate	
67	NOR gate	

S.No.	Particulars	Symbols
68	AND gate	
69	NAND gate	
70	Ex-OR gate	
71	Operational amplifier	
72	Ex-NOR gate	
73	Flip - flop	
74	Differential Amplifier	
75	Light emitting diode	
76	Photo diode	