

**Switch (latching)**

**Switch (non-latching)**

**Light dependent resistor**

**Photodiode**

**Microphone**

**Thermistor**

**Ammeter**

**Voltmeter**

**Ceramic resonator**

**Resistor**

**Variable resistor**

**Potentiometer**

**Capacitor**

**Capacitor (polarised)**

**Semiconductor diode**

**Zener diode**

**Multiplication factors and symbols**

M	mega	1 000 000	(10 <sup>6</sup> )
k	kilo	1000	(10 <sup>3</sup> )
m	milli	0.001	(10 <sup>-3</sup> )
μ	micro	0.000 001	(10 <sup>-6</sup> )

**NPN transistor**

**PNP transistor**

**Field effect transistor (FET)**

**Thyristor**

**Operational amplifier**

**Schmitt inverter**

**AND gate**

**NAND gate**

**OR gate**

**NOR gate**

**NOT gate**

**XOR gate**

**Resistor colour codes**

Black	0	0	Black x1	Silver ±10%
Brown	1	1	Brown x10	Gold ±5%
Red	2	2	Red x100	
Orange	3	3	Orange x1000	
Yellow	4	4	Yellow x10,000	
Green	5	5	Green x100,000	
Blue	6	6	Blue x1,000,000	
Violet	7	7		
Grey	8	8		
White	9	9		

Example shown:  
 blue, grey, brown, gold  
 = 680R ±5%

**Buzzer**

**Loudspeaker**

**Lamp**

**Light emitting diode (LED)**

**Motor**

**Solenoid**

**Relay**

**Piezo sounder**

**Primary cell**

**Battery**

**a.c. supply**

**Transformer**

**Earth**

**Fuse**

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[www.tech-supplies.co.uk](http://www.tech-supplies.co.uk)